UNIVERSITY OF MINNESOTA

CLASS SCHEDULE

FALL QUARTER 1983
TWIN CITIES



PUBLISHED IN FALL 1983

© 1983 UNIVERSITY COMMUNICATIONS, INC.

MGL
C569

TABLE OF CONTENTS

Section 1: REGISTRATION Page

Calendar 2
Course Request Forms 4
Registration Queue 6
Steps in Registration 8
Holds 9
The First Week of Class 10
Change of Registration 10
Withdrawal From the University 10
Graduation 12
Administrative Offices 12
Graduate School Registration Instructions 13
College of Liberal Arts Registration Instructions 13
School of Management Courses, Registration Instructions for 14
Institute of Technology Courses, Registration Instructions for 16

Section 2: COURSES

How to Use This Schedule 17
Schedule of Classes 20
Courses Open Through Extension Classes 110

Section 3: CODES & MAPS

Course Designators 111
Directory for Department Offices 115
Building Accessibility/Campus Maps 116

Section 4: TUITION & FEES

Tuition Schedule 1983-84 119
Student Services Fee 120
Health Service and Hospitalization Charges 120
ID Card Replacement 120
Payment of Fees 120
Veterans Certification 122
Refunds 122
Course Fees 122
Special Fees 123
Facility Fees 123
Deposit Cards and Rental Cards 123
Tuition Rates for Staff Members 124

Section 5: EXAMS & GRADES

Final Examination Schedule 125
Regulations Regarding Examinations 126
Submission of Final Grades 126
Grading Policies and Practices 127

NOTE: The advertising appearing in this schedule subsidizes the cost of printing. The University receives no profit from such advertising, nor does the University endorse any of the products or advertisers.

DIRECTORY OF CLASSES
Published By
UNIVERSITY
COMMUNICATIONS, INC.
P.O. BOX 1234
RAHWAY, N.J. 07065
(201) 382-6161

UCI™
A Subsidiary of Ziff-Davis Publishing Company
DIRECTORY OF CLASSES FOR
UNIVERSITY OF MINNESOTA

Publisher: James L. Kopper
Director of National
Advertising: Jerry Koffler
Director of College
Relations: Edward Seyler
President: Andrew C. Citsay

1983

SEPTEMBER

			1	2	3	
4	(5)	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	■26	27	28	29	30	

OCTOBER

						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	25	26	27	28	29

NOVEMBER

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	(24)	(25)	26
27	28	29	30			

DECEMBER

				1	2	3
4	5	6	7	■8	9	□10
11	□12	□13	□14	□15	□16	□17
18	19	20	21	22	(23)	24
25	(26)	27	28	29	(30)	31

1984

JANUARY

1	(2)	■3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY

				1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29			

MARCH

				1	2	3
4	5	6	7	8	■9	10
11	□12	□13	□14	□15	□16	□17
18	(19)	20	21	22	23	24
25	■26	27	28	29	30	31

APRIL

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

MAY

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	(28)	29	30	31		

JUNE

					■1	2
3	□4	□5	□6	□7	□8	□9
10	11	■12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

■ First and Last Days of Instruction
□ Final Examination Dates
○ Classes Excused and Holidays

UNIVERSITY CALENDAR
Twin Cities Campus

Fall Quarter 1983

AUGUST

15 Graduate School application deadline for fall quarter.

22-Sept. 23 Fall registration. Orientation program for new students.

SEPTEMBER

5 Labor Day, holiday.

19-25 Welcome Week

26 *Fall quarter classes begin.*

OCTOBER

15 Homecoming. Twin Cities campus, University of Wisconsin.

21 Last day for undergraduates and students in professional degree programs to pay graduation fees for fall quarter.

NOVEMBER

9 Last day for students in the Graduate School to pay graduation fees for fall quarter.

14 First day of registration for winter quarter.

15 Last day application to most undergraduate colleges and programs or for change of college within the University can be assured a winter quarter admission decision.

24-25 Thanksgiving holiday. Classes excused and University offices closed.

28 Graduate School application deadline for winter quarter.

DECEMBER

8 Last day of instruction.

9 Study day.

10-16 Final examinations.

16 *End of fall quarter.*
Commencement. Individual collegiate graduation events may be held throughout the quarter. Check college office.

23-26 Christmas holiday. University offices closed.

30-Jan. 2 New Year's holiday. University offices closed.

Winter Quarter 1984

JANUARY

3 *Winter quarter classes begin.*

FEBRUARY

6 Last day for undergraduates and students in professional degree programs to pay graduation fees for winter quarter.

9 Last day for students in the Graduate School to pay graduation fees for winter quarter.

15 Last day application to most undergraduate colleges and programs or for change of college within the University can be assured a winter quarter admission decision.

17 First day of registration for spring quarter.

27 Graduate School application deadline for spring quarter.

MARCH

9 Last day of instruction.

10 Study day.

12-17 Final examinations.

17 *End of winter quarter.*
Commencement. Candidates for baccalaureate degrees should check with college offices for information. No Graduate School commencement ceremony.

19 Winter holiday. University offices closed.

Spring Quarter 1984

MARCH

26 *Spring quarter classes begin.*

APRIL

4 Last day for undergraduates and students in professional degree programs to pay graduation fees for spring quarter.

MAY

3 Last day for students in the Graduate School to pay graduation fees for spring quarter.

15 Graduate School application deadline for first term of summer session.

28 Memorial Day, holiday. Classes excused and University offices closed.

JUNE

1 Last day of instruction.

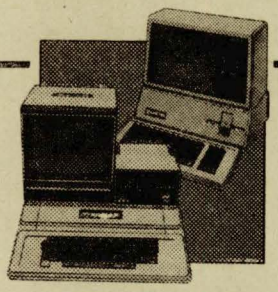
2 Study day.

4-9 Final examinations.

9 *End of spring quarter.*
Graduate School commencement. Candidates for baccalaureate and professional degrees should check with college offices for commencement information.

"TEAM'S GOT IT ALL"

COMPUTERS

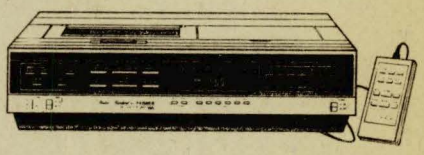


apple computer
Authorized Dealer

APPLE & ATARI

VIDEO RECORDERS

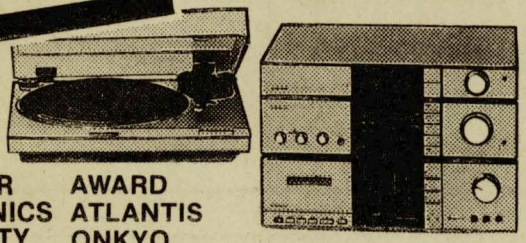
FISHER



HITACHI
SANYO
MAGNAVOX
PANASONIC

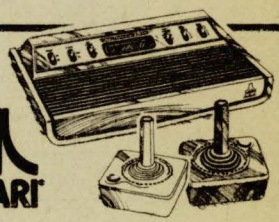
AUDIO

PIONEER®

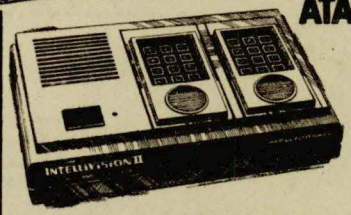


FISHER
TECHNICS
INFINITY
AWARD
ATLANTIS
ONKYO

VIDEO GAMES



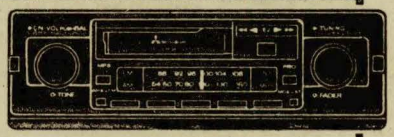
ATARI



TEAM CARRIES "IN-STOCK" A LARGE SELECTION OF THE LATEST VIDEO GAME CARTRIDGES

MATTEL ELECTRONICS®

CAR STEREO



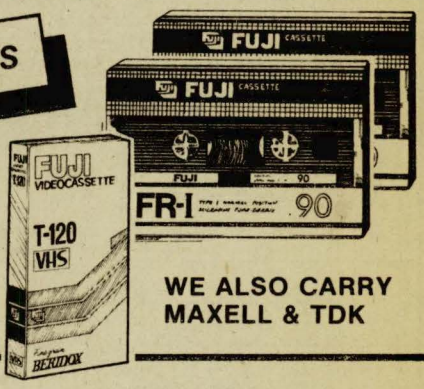
AFS/KRIKET
PIONEER
KENWOOD
SANYO
JENSEN

MITSUBISHI®

WHY TEAM CUSTOMERS RETURN AGAIN AND AGAIN!

Simple reasons...Price, Selection, Helpful Service, 14 Day Money-Back Guarantee, 30 Day Price Protection Plan, Financing Available, TEAM Takes Trades and has 10 Convenient Twin City Locations.

ACCESSORIES



FUJI

WE ALSO CARRY MAXELL & TDK

TEAM ELECTRONICS

Maplewood Mall	770-5512
Ridgedale Center	544-7412
Rosedale Center	636-5147
Burnsville Center	435-7128
Southdale Center	920-4817
2640 Hennepin, Mpls.	377-9840
455 Rice, St. Paul	227-7223
1733 S Robert, W St. Paul	451-1765
1311 4th St SE, Dnkytn	378-1185

ID CARD IMPRINT (if no ID card, print name, ID or Social Security Number)

COURSE REQUEST
University of Minnesota

College of Enrollment	Street Address		Telephone Number
Major	City	State	Zip Code

Term and Year: ☐ Fall ☐ Winter ☐ Spring ☐ Summer Session I ☐ Summer Session II 19___

☐ Original Registration: Number of credits ___ ☐ Cancel/Add: Number of Credits Remaining ___ ☐ Complete Cancel

NOTE: Fill in VARIABLE CREDITS **only** if credits are listed as "ar cr" in the Class Schedule. Fill in GRADE OPTION **only** if mandatory grading is not listed in the Class Schedule.

COURSE(S)—First Choice (original registration)				COURSE(S)—Second Choice (or cancel/add additions)				CANCELLATIONS	
CALL NUMBER	GRADE OPTION	VARIABLE CREDITS	DESIGNATOR, COURSE NUMBER, AND SECTION	CALL NUMBER	GRADE OPTION	VARIABLE CREDITS	DESIGNATOR, COURSE NUMBER, AND SECTION	CALL NUMBER	DESIGNATOR, COURSE NUMBER, AND SECTION

MPIRG (OPTIONAL)
Minnesota Public Interest Research Group is described in the Class Schedule. If you choose NOT to pay the quarterly MPIRG fee of $2 or the summer session fee of $1 per term, initial here → ___
Payment is also refundable.

ADVISER APPROVAL (if needed)

ADDITIONAL APPROVAL (if needed)

(P-724B)

A—22 6/83

ID CARD IMPRINT (if no ID card, print name, ID or Social Security Number)

COURSE REQUEST
University of Minnesota

College of Enrollment | Street Address | Telephone Number

Major | City | State | Zip Code

Term and Year: ☐ Fall ☐ Winter ☐ Spring ☐ Summer Session I ☐ Summer Session II 19___

☐ Original Registration: Number of credits ___ ☐ Cancel/Add: Number of Credits Remaining ___ ☐ Complete Cancel

NOTE: Fill in VARIABLE CREDITS only if credits are listed as "ar cr" in the Class Schedule. Fill in GRADE OPTION only if mandatory grading is not listed in the Class Schedule.

COURSE(S)—First Choice (original registration) | COURSE(S)—Second Choice (or cancel/add additions) | CANCELLATIONS

CALL NUMBER | GRADE OPTION | VARIABLE CREDITS | DESIGNATOR, COURSE NUMBER, AND SECTION | CALL NUMBER | GRADE OPTION | VARIABLE CREDITS | DESIGNATOR, COURSE NUMBER, AND SECTION | CALL NUMBER | DESIGNATOR, COURSE NUMBER, AND SECTION

MPIRG (OPTIONAL)
Minnesota Public Interest Research Group is described in the Class Schedule. If you choose NOT to pay the quarterly MPIRG fee of $2 or the summer session fee of $1 per term, initial here → ___
Payment is also refundable.

ADVISER APPROVAL (if needed)

ADDITIONAL APPROVAL (if needed)

(P-724B)

A—22 6/83

COMPLETING YOUR COURSE ENROLLMENT REQUEST FORM

① Chris R. Student
1234567
ID CARD IMPRINT (if no ID card, print name, ID or Social Security Number)

COURSE REQUEST
University of Minnesota

College of Enrollment	Street Address		Telephone Number
② CLA	④ Territorial Hall		373-4343
Major	City	State	Zip Code
③ History	Minneapolis	MN	55455

⑤ Term and Year: ☒ Fall ☐ Winter ☐ Spring ☐ Summer Session I ☐ Summer Session II 1983

⑥ ☒ Original Registration: Number of credits 17 ☐ Cancel/Add: Number of Credits Remaining ___ ☐ Complete Cancel

NOTE: Fill in VARIABLE CREDITS **only** if credits are listed as "ar cr" in the Class Schedule. Fill in GRADE OPTION **only** if mandatory grading is not listed in the Class Schedule.

COURSE(S)—First Choice (original registration)				COURSE(S)—Second Choice (or cancel/add additions)				CANCELLATIONS	
CALL NUMBER	GRADE OPTION	VARIABLE CREDITS	DESIGNATOR, COURSE NUMBER, AND SECTION	CALL NUMBER	GRADE OPTION	VARIABLE CREDITS	DESIGNATOR, COURSE NUMBER, AND SECTION	CALL NUMBER	DESIGNATOR, COURSE NUMBER, AND SECTION
⑦ Ⓐ	Ⓑ	Ⓒ	Ⓓ	⑧				⑨	
901665			Fren 1104-3	201663			Fren 1104-1		
527928		6	Hist 3970	600347			Biol 1103-1		
601823			Geol 1001-1						
103964	S-N		PE 1035						

MPIRG (OPTIONAL)
Minnesota Public Interest Research Group is described in the Class Schedule. If you choose NOT to pay the quarterly MPIRG fee of $2 or the summer session fee of $1 per term, initial here → _____
Payment is also refundable.
⑩

ADVISER APPROVAL (if needed)
⑪ A. B. Smith

ADDITIONAL APPROVAL (if needed)
⑫

(P-724B)

A—22 6/83

①*If you do not have your student ID card,* print your name and student ID number (or Social Security Number).

②Print the college in which you are enrolled.

③Print your major.

④Print your complete address and phone number.

⑤Indicate the term (fall, winter, spring, summer I, or summer II) and year that you are registering for.

⑥Check the box for original registration if this is your first registration for the quarter or term and fill in the number of credits you are registering for. If you are making changes in your original registration (cancel/adding), check the cancel/add box and fill in the number of credits you will have *after* completing those changes. Check the "Complete Cancel" box if you are cancelling *all* courses.

⑦This section is for your first choice course requests:

Ⓐ Print the six digit call number. (The call number is to the left of each course listing or each section of a course.)

Ⓑ Mark the grading system you are requesting, *only if the course is offered for both A-N and S-N.* See example above and read the paragraph on Grading Option in Section 2 of this *Class Schedule* for further information.

Ⓒ Print the number of credits only if you are registering for a variable credit course (i.e., 1-4 cr.) or an arranged credit course (ar cr). See example above.

Ⓓ Print the designator (department abbreviation—e.g., ACCT, ELEM, HIST), course number, and section number for each course.

⑧This section is for your second choice course requests. Plan alternatives in case your first choice course requests are closed or otherwise unavailable. List course additions in this section when cancel/adding.

⑨Provide the call number, designator, course and section numbers for any courses you are cancelling. Remember to indicate your credit total in section 6.

⑩MPIRG—see instructions on form. The Minnesota Public Interest Research Group (MPIRG) is a nonprofit, nonpartisan, student-run organization funded at the Twin Cities campus by an optional quarterly fee of $2.00. A statewide advocacy group, MPIRG gives students the opportunity to speak out on public issues and work for social change. The fee supports a professional staff for lobbying, litigation, organizing, and research. During the last year, MPIRG worked to stop cuts in financial aid, protect student constitutional rights, freeze nuclear weapons production, protect the environment, and promote renewable energy.

⑪College, Department, and/or Adviser approval, as required.

⑫Additional approval, as required.

BULLETIN USE

The contents of this schedule and other University bulletins, publications, or announcements are subject to change without notice. University offices can provide current information about possible changes.

EQUAL OPPORTUNITY

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, creed, color, sex, national origin, or handicap. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972, by Sections 503 and 504 of the Rehabilitation Act of 1973, and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455, (612/373-7969), or to the Director of the Office of Civil Rights, Department of Education, Washington, D.C. 20202, or to the Director of the Office of Federal Contract Compliance Programs, Department of Labor, Washington, D.C. 20210.

ACCESS TO STUDENT EDUCATIONAL RECORDS

In accordance with regents' policy on access to student records, information about a student generally may not be released to a third party without the student's permission. The policy also permits students to review their educational records and to challenge the contents of those records.

Some student information—name, address, telephone number, dates of enrollment and enrollment termination, college and class, major, adviser, and degrees earned—is considered public or directory information. To prevent release of such information outside the University while in attendance at the University, a student must notify the records office on his or her campus.

Students are notified annually of their right to review their educational records. The regents' policy, including a directory of student records, is available for review at the information booth in Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Coordinator of Student Support Services, 260E Williamson Hall, (612/373-2106).

Stage 1—Graduate, Pharmacy, and Public Health Students and Seniors (135 or more completed credits)

	8:15 a.m.	8:45 a.m.	9:15 a.m.	9:45 a.m.	10:15 a.m.	10:45 a.m.	11:45 a.m.
August 22	OLSF- PARSONS RO	PARSONS RP- PHAM TUNG	PHAM TUNH- RACKLIFFE	RACKLIFFF- RIDLEY JEF	RIDLEY JEG- RUSSELL PA	RUSSELL PB- SCHLUMPBER	SCHLUMPBES- SCHWIEBERT
August 23	TRESCONY Q- VOLLHABER	VOLLHABES- WEISS JEAN	WEISS JEAO- WINCH BRUC	WINCH BRUD- ZASTROW LY	ZASTROW LZ- AMIOT NANC	AMIOT NAND- AXELSON ST	AXELSON SU- BARTLETT S
August 24	CLASS KIN- CURRENT DE	CURRENT DF- DIETZ LOU	DIETZ LOV- EFAH ISAAC	EFAH ISAAD- FARANDA TH	FARANDA TI- FRANK NANC	FRANK NAND- GERONIMO M	GRONIMO N- GORDON SUS
August 25	JAEGER MID- JOHNSON SP	JOHNSON SQ- KEMPENICH	KEMPENICI- KOHEN HARR	KOHEN HARS- LANDRY JOH	LANDRY JOI- LEROY SUZA	LEROY SUZB- LUKASZEWSK	LUKASZEWSL- MAIER REID

Stage 2—Juniors, Sophomores, Freshmen, and Adult Specials

	8:15 a.m.	8:45 a.m.	9:15 a.m.	9:45 a.m.	10:15 a.m.	10:45 a.m.	11:45 a.m.
August 26	KELB- KICKHAFER	KICKHAFES- KLANDERUD	KLANDERUE- KOCHENDERF	KOCHENDERG- KOUATLI OM	KOUATLI ON- KRZYSTAN T	KRZYSTAN U- LAHAMMER D	LAHAMMER E- LANES DAVI
August 29	LINDAMOOE- LONGTINE M	LONGTINE N- LUONG HOAN	LUONG HOAO- MADRIGAL L	MADRIGAL M- MANOWN DIA	MANOWN DIB- MASON DANI	MASON DANJ- MCCLURE CA	MCCLURE CB- MCGINNIS D
August 30	MITZEL PAU- MORGAN GAR	MORGAN GAS- MUNNS JANI	MUNNS JANJ- NEHL LOUIS	NEHL LOUIT- NEMER DONA	NEMER DONB- NGUYEN VIN	NGUYEN VIO- NOREEN HOW	NOREEN HOX- OBRIEN ANG
August 31	PARNELL CP- PEHLING ST	PEHLING SU- PETERSON C	PETERSON D- PFENNING T	PFENNING U- PLAGEMANN	PLAGEMANO- POWELL WIL	POWELL WIM- QUAN TOAN	QUAN TOAO- RAIHALA TH
September 1	ROBINSON K- RORTVEDT D	RORTVEDT E- RUDE MARGA	RUDE MARGB- RYMER PAME	RYMER PAMF- SARGEANT M	SARGEANT N- SCHERER RI	SCHERER RJ- SCHOENBAUE	SCHOENBAUF- SCHROEDER
September 2	SILVERMAO- SLOMANN SU	SLOMANN SV- SNYDER RIL	SNYDER RIM- SPOONER MA	SPOONER MB- STEINHILBE	STEINHILBF- STORMS RIC	STORMS RID- SUNDQUIST	SUNDQUISU- SWANSON KA
September 6	TIMM DONNB- TRAN KIEN	TRAN KIEO- TUCKNER JU	TUCKNER JV- VAHHAJI CY	VAHHAJI CZ- VERMEERSCH	VERMEERSCI- VU KHAM NG	VU KHAM NH- WALLERIUS	WALLERIUT- WANLESS AL
September 7	WILCOX MAM- WILSON RAY	WILSON RAZ- WOLFSON DE	WOLFSON DF- YANEZ THOM	YANEZ THON- ZATS BARBA	ZATS BARBB- AASGAARD J	AASGAARD K- AJEN FRANC	AJEN FRAND- ALLEN GREG
September 8	ASAD DAOUE- BACKBERG D	BACKBERG E- BARBER DAW	BARBER DAX- BAUER BRIA	BAUER BRIB- BELAIR BEA	BELAIR BEB- BERG SUSAN	BERG SUSAO- BIANCHI TI	BIANCHI TJ- BISSONNETT
September 9	BRANT JULJ- BROCK TAMS	BROCK TAMT- BRUNS DAVI	BRUNS DAVJ- BURKETT LO	BURKETT LP- CAHILL JEF	CAHILL JEG- CARLSON JA	CARLSON JB- CASSELBERR	CASSELBERS- CHANTHAKHO
September 12	CORAZZO PB- CROTEAU HA	CROTEAU HB- DAHLKE DAV	DAHLKE DAW- DAVIS JOHN	DAVIS JOHO- DEMARS FRA	DEMARS FRB- DIGIOVANNI	DIGIOVANNJ- DORF SCOTT	DORF SCOTU- DOWNING TI
September 13	ELLSWORTI- ERICKSON J	ERICKSON K- EWERT REBE	EWERT REBF- FELKNOR MA	FELKNOR MB- FISCHMAN J	FISCHMAN K- FOJTIK JEA	FOJTIK JEB- FRANCIS JO	FRANCIS JP- FREDERICK
September 14	GIACOMINJ- GLASS ANTH	GLASS ANTI- GOPLEN ANN	GOPLEN ANO- GRAY ANNAL	GRAY ANNAM- GROETTUM E	GROETTUM F- GUSTAFSON	GUSTAFSOO- HAGEN MARK	HAGEN MARL- HALL DENIS
September 15	HASBROOK N- HEBL SANDR	HEBL SANDS- HENCE SHAR	HENCE SHAS- HESLA KARE	HESLA KARF- HINDERAKER	HINDERAKES- HOGG IAN J	HOGG IAN K- HONG TUAN	HUONG TUAO- HOROVITZ R
September 16	IWEN MATTI- JAMES MICH	JAMES MICI- JENSEN SUS	JENSEN SUT- JOHNSON DA	JOHNSON DB- JOHNSON MA	JOHNSON MB- JOHNSON VI	JOHNSON VJ- JOST KIMBE	JOST KIMBF- JUNG MARK

Stage 1—Graduate, Pharmacy, and Public Health Students and Seniors (135 or more completed credits)

	12:15 p.m.	12:45 p.m.	1:15 p.m.	1:45 p.m.	2:15 p.m.	2:45 p.m.	3:15 p.m.	3:45 p.m.
August 22	SCHWIEBERU- SHERIDAN D	SHERIDAN E- SMITH ALYS	SMITH ALYT- SPINDLER N	SPINDLER O- STEVENS KE	STEVENS KF- SUNDELL TI	SUNDELL TJ- TARTEBOOTH	TARTEBOOTI- THOMSON DI	THOMSON DJ- TRESCONY P
August 23	BARTLETT T- BENSON DAV	BENSON DAW- BISHOP JAN	BISHOP JAO- BOUTACOFF	BOUTACOFG- BROKAW JEF	BROKAW JEG- BURSACK JO	BURSACK JP- CARLSON NA	CARLSON NB- CHASE THOM	CHASE THON- CLASS KIM
August 24	GORDON SUT- GUERTIN DA	GUERTIN DB- HAMMEL STE	HAMMEL STF- HARTWELL N	HARTWELL O- HEMENWAY J	HEMENWAY K- HILL KENNE	HILL KENNF- HOLT SALLY	HOLT SALLZ- HUMPHRIES	HUMPHRIET- JAEGER MIC
August 25	MAIER REIE- MARVINNEY	MARVINNEZ- MCGREEVY M	MCGREEVY N- MENSAH ISA	MENSAH ISB- MILLER KAT	MILLER KAU- MOORMAN CY	MOORMAN CZ- NASH GREGO	NASH GREGP- NIEDORF MA	NIEDORF MB- OLSEZZZZZZ

Stage 2—Juniors, Sophomores, Freshmen, and Adult Specials

	12:15 p.m.	12:45 p.m.	1:15 p.m.	1:45 p.m.	2:15 p.m.	2:45 p.m.	3:15 p.m.	3:45 p.m.
August 26	LANES DAVJ- LARSON ELI	LARSON ELJ- LATIMER RO	LATIMER RP- LEADER KRI	LEADER KRJ- LEECE THOM	LEECE THON- LENNON KEV	LENNON KEW- LEVITT ALA	LEVITT ALB- LIEN ARON	LIEN AROO- LINDAMOOD
August 29	MCGINNIS E- MCLAUGHLIN	MCLAUGHLIO- MEAGHER TH	MEAGHER TI- MENTEK MOH	MENTEK MOI- MEYER NANN	MEYER NANO- MIKKALSON	MIKKALSOO- MILLER LOU	MILLER LOV- MINNICH RE	MINNICH RF- MITZEL PAT
August 30	OBRIEN ANH- OGUNFOLAMI	OGUNFOLAMJ- OLSON ARTH	OLSON ARTI- OLSON MICH	OLSON MICI- OPSAL LORI	OPSAL LORJ- OSWALD KAR	OSWALD KAS- PAHL ANTHO	PAHL ANTHP- PAN ALAN S	PAN ALAN T- PARNELL CO
August 31	RAIHALA TI- RASMUSSEN	RASMUSSEO- RECKIN MAR	RECKIN MAS- REILING MA	REILING MB- RERAT MONI	RERAT MONJ- RICHARDS N	RICHARDS O- RIEKE BONN	RIEKE BONO- RIVERA KEN	RIVERA KEO- ROBINSON J
September 1	SCHROEDES- SCHUMER BO	SCHUMER BP- SCHWIRTZ M	SCHWIRTZ N- SEGAR STEV	SEGAR STEW- SEOK JUNG	SEOK JUNH- SHANDLEY G	SHANDLEY H- SHEETS FOR	SHEETS FOS- SHRELL ETT	SHRELL ETU- SILVERMAN
September 2	SWANSON KB- SWERDFIGER	SWERDFIGES- TAN IGNATI	TAN IGNATJ- TAYLOR KEV	TAYLOR KEW- TERWILLIGE	TERWILLIGF- THOLE JEFF	THOLE JEFG- THOMPSON J	THOMPSON K- THORNTON R	THORNTON S- TIMM DONNA
September 6	WANLESS AM- WATERMAN D	WATERMAN E- WECKWERTH	WECKWERTI- WEITNAUER	WEITNAUES- WENTZLAFF	WENTZLAFG- WESTLAKE A	WESTLAKE B- WHITACRE D	WHITACRE E- WHITWAM BR	WHITWAM BS- WILCOX MAL
September 7	ALLEN GREH- AMEY CLAUD	AMEY CLAUE- ANDERSON C	ANDERSON D- ANDERSON J	ANDERSON K- ANDERSON P	ANDERSON Q- ANDERSON W	ANDERSON X- ANTON MARK	ANTON MARL- ARMS MICHA	ARMS MICHB- ASAD DAOUD
September 8	BISSONNETU- BLAKESLEE	BLAKESLEF- BLOOMBERG	BLOOMBERH- BOETTCHER	BOETTCHES BOOK MARK	BOOK MARL- BOSSERT GE	BOSSERT GF- BOYCE DAVI	BOYCE DAVJ- BRAFORD KE	BRAFORD KF- BRANT JULI
September 9	CHANTHAKHP- CHHABRA SU	CHHABRA SV- CHRISTENSE	CHRISTENSF- CILEK WALL	CILEK WALM- CLAUSON MA	CLAUSON MB- COERBER RO	COERBER RP- COLLISON S	COLLISON T- CONOLLY CO	CONOLLY CP- CORAZZO PA
September 12	DOWNING TJ- DRISCOLL K	DRISCOLL L- DUGAN TIMO	DUGAN TIMP- DURHMAN SU	DURHMAN SV- EASTENSON	EASTENSOO- EDLUND MAR	EDLUND MAS- EIBS THEOD	EIBS THEOE- ELDESOUKI	ELDESOUKJ- ELLSWORTH
September 13	FREDERICL- FRIEDMAN S	FRIEDMAN T- FUGATE JOH	FUGATE JOI- GAETZ PETE	GAETZ PETF- GARBRECHT	GARBRECHU- GASTLER SU	GASTLER SV- GEHLEN MAR	GEHLEN MAS- GERHARDT L	GERHARDT M- GIACOMINI
September 14	HALL DENIT- HALVORSEN	HALVORSEO- HANDKE DAN	HANDKE DAO- HANSEN ERI	HANSEN ERJ- HANSON KAR	HANSON KAS- HARA PATRI	HARA PATRJ- HARPER KER	HARPER KES- HARRYPAUL	HARRYPAUM- HASBROOK M
September 15	HOROVITZ S- HOUSE SUSA	HOUSE SUSB- HOZOURI SI	HOZOURI SJ- HUGHES CAS	HUGHES CAT- HUNT DAVID	HUNT DAVIE- HUTCHINSON	HUTCHINSOO- HYUN JONG	HYUN JONH- IRVINE JAM	IRVINE JAN- IWEN MATTH
September 16	JUNG MARL- KAERCHER C	KAERCHER D- KALIN JASO	KALIN JASP- KAMPA PAUL	KAMPA PAUM- KAPCZYNSKI	KAPCZYNSKJ- KARLEN JAN	KARLEN JAO- KASMA MARK	KASMA MARL- KATZENMAIE	KATZENMAIF KELAZZZZZZ

section 1 registration

You will be held accountable for all information contained in this *Class Schedule*. Registration is your personal responsibility. You will receive credit only for those courses in which you are properly registered. Likewise, you will be held responsible for every course for which you register unless you officially cancel. To prevent misunderstandings and errors in registration, you should register in person. If you cannot register in person, you may have somebody else register for you *only* with your *written permission and ID card*. There are no provisions for registering by mail.

☞ RECENT CHANGES ☜

If you are a continuing or returning student, the following recent changes in procedures or policy will be of special interest to you:

Registration queue, fall quarter ..... p. 6
Holds, instructions for clearing ..... p. 9
Students status, graduate registration for .... p. 13
Thesis credits ..... p. 13
1983-84 tuition rates ..... p. 119
Per-credit tuition, upper division assessment of .. p. 119
Tuition and fees paid by various agencies .. p. 121
Regents' scholarships, registration with ..... p. 121
Payroll deduction procedures ..... p. 121
Refund policies ..... p. 122
Financial aid refund policy ..... p. 122
Graduate assistant authorization for resident tuition ..... p. 124
Fall quarter grades ..... p. 126

Because this Class Schedule is prepared in June, scheduling changes may also occur prior to or during registration. Your registration terminal always contains the most current and accurate information. Hour and day changes are also published in the Official Daily Bulletin, a column printed in the *Minnesota Daily* and posted on campus bulletin boards. Room changes are posted on classroom doors.

STEPS IN REGISTRATION

Step 1—Find out when you will register. Queued registration for fall quarter begins August 22 and ends September 16. The first stage of the queue (August 22-25) is reserved for graduate students and seniors. (**Note**: to qualify for registration as a senior, you must have *completed* 135 or more credits.)

- *If you are a continuing student,* your registration time is on your Registration Status Notice or on the queue on pages 6-7. You must have all holds listed on this notice cleared in order to register. (For more information, see Holds, below.)
- *If you were not in attendance spring quarter 1983 or if you did not receive a Registration Status Notice,* check the queue on pages 6-7 to find out when you can register.

You must complete registration by September 23 to avoid a late registration fee. Students who register from September 26 through October 7 will be charged a $10 late registration fee. Students who register on or after October 10 will be charged a $20 late registration fee.

Step 2—If you are a student in the Graduate School, or if you intend to register for courses in the College of Liberal Arts, the School of Management, or the Institute of Technology, read the special instructions in this *Class Schedule* that apply to those units.

Step 3—If you are not a citizen of the United States and if you are registering for the first time at the University, read the paragraphs on initial interview and health clearance under International Students, page 9.

Step 4—Fill out a Course Request form. Several forms are included on page 4 in this schedule. You should cut out and use one of these forms; save the second form for any changes in registration.

- Check the Section Status Report (posted outside of 101 Fraser Hall, 18 Johnston Hall, 4 Mechanical Engineering, 170 Anderson Hall, and 130 Coffey Hall) to see if space is available in your limited enrollment courses (**R** precedes the course number).
- Complete your form using the guide on page 5.

Step 5—Have your program approved by your college office, if required. Obtain any Registration Override Permits necessary for admittance to your courses (see sample below). Only approved Registration Override Permits that have been signed, filled out with your name, ID number, course, term, year, and call number, and checked for override type and authority will be accepted. *No handwritten notes will be accepted.*

ID CARD IMPRINT (if no ID card: print name, ID or Social Security Number)

REGISTRATION OVERRIDE PERMIT
University of Minnesota

This form may be used for one override only. Please check term and year, the college or course override, and the authority. For a course override, indicate the course designator, course number, section number, and call number. Sign or stamp beside the override permitted.

Term and Year: ☐ Fall ☐ Winter ☐ Spring ☐ Summer Session I ☐ Summer Session II 19____

COLLEGE OVERRIDE	COLLEGE APPROVAL (signature or stamp)
☐ Registration Time	
☐ College Hold	
☐ Maximum Credit	

COURSE OVERRIDE	Course Designator	Course Number	Section Number	Call Number	APPROVAL (signature or stamp)
☐ Closed Class Authorized by ☐ Department ☐ Instructor					
☐ Course Entry Requirements Authorized by ☐ College ☐ Graduate School ☐ Department ☐ Instructor					

In general, Registration Override Permits must be provided for:

- *registration for any course where # appears in the prerequisite statement;*
- *registration for any course where △ appears in the prerequisite statement* (see Symbols, Section 2, for further information);
- *registration in a limited course that has closed;*
- *registration for any courses or groups of students as described in registration instructions* for the College of Liberal Arts, the School of Management, or the Institute of Technology;
- *other courses which may be restricted by individual units, schools, or colleges.*

Step 6—Bring your Course Request form to your registration center.

- *Students in Minneapolis-based colleges go to 202 Fraser Hall* (150 Williamson Hall for students with

mobility impairments). You should report first to the *validation station* for your college, where your record will be checked to verify your eligibility to register. Next report to the *registration terminal* for your college, where you will be enrolled in your courses and receive a fee statement and course confirmation document.

- *Students in St. Paul-based colleges report to 130 Coffey Hall* where both steps in registration—validation and enrollment—are done at the same terminal.

Step 7—Pay your tuition and fees. Continuing fall quarter 1983 there will be an Installment Payment Plan: you will have the option of paying 50% (or more) of the tuition and fees assessed by the Registration Center by the due date(s) printed on the bottom of your fee statement(s). You will be billed for the balance of all your tuition and fees, *plus a $10 installment payment fee*, all of which will be due on the Friday of the fifth week of the quarter—October 28 for fall 1983. You will be charged only one $10 installment payment fee per quarter, even if you choose the installment payment plan for more than one fee statement. (You may not use this plan for courses for which you register through Continuing Education and Extension.)

- For example, if your tuition and fees are $500, you may choose to pay $250 by the due date. You will be billed for the balance—the remaining $250 plus the $10 installment payment fee—and this amount ($260) will be due October 28.
- You may choose this option for one, some, all, or none of your fee statements. For each fee statement, you should either make a payment of at least 50% by the due date—and thereby choose the installment plan—or pay the amount in full by the due date.
- *This new option, in effect, establishes two fee payment dates for each fee statement: the original date on each fee statement and October 28 for the balance of all your remaining tuition and fees.* **If you choose this option, you will now have at least two fee due dates, and you can be charged a $20 late payment fee for each due date you miss.** For example, if you pay after the date on your fee statement, you will be charged a $20 late payment fee, and if you pay after the second payment date of October 28, you will be charged a $20 late payment fee. If you miss the October 28 payment date, you will also have a hold placed on your record and will not be able to register for the next quarter. If you choose to pay 100% of your tuition and fees, you must also pay by the due date(s) on your fee statement(s) to avoid $20 late payment fees.
- **NOTE: October 7 is a critical date.** If you make your second installment payment on or before October 7, you will not be charged the $10 installment payment fee. On the other hand, if you have made *no* payment on your tuition and fees by October 7, you will be placed on the Installment Payment plan: you will be billed for your tuition and fees, plus a $20 late payment fee, plus the $10 installment payment fee. You will need to pay tuition and fees plus these charges by October 28 to avoid an additional late payment fee and a hold on your record.
- *Financial Aid recipients*—if you present a restrictively endorsed financial aid check in payment of tuition and fees, it will be applied in full toward the total amount of tuition and fees assessed. If your check is 100% or more of your tuition and fees, you are not eligible for the Installment Payment plan. If your financial aid check is less than 100% but at least 50% of your tuition and fees, you can participate in the installment plan—your check, *in full*, would be your first payment and your balance would be due October 28. If your financial aid check is less than 50% of your tuition and fees, you can participate in the installment plan by using other funds to complete the first (50%) payment.
- *Veterans and certain other students*—if you need to be certified as having paid tuition and fees in full by the beginning of the quarter, you may not be able to use the Installment Payment plan. Check with the Certification Service, 155 Williamson Hall, for further information.
- Once you turn in your Course Request form and receive a fee statement, *you will be held responsible for tuition and fees for all courses listed on your registration unless you formally cancel, even if you never attend class.* See Section 4 for important information on tuition and payment of fees.

HOLDS

If you have a hold on your record, you may not register or, in many cases, obtain transcripts until that hold is cleared with the office imposing the hold. A hold may be imposed for financial indebtedness to the University (e.g., for unpaid library fines, unpaid tuition or fees, or delinquent health service payments) or for disciplinary or scholastic reasons. You will usually be notified of an existing or impending hold by the department or office authorizing the hold. Notice of any hold, including the name of the department or office where it may be cleared, also appears on your Registration Status Notice. It is possible that a hold may be placed on your record *after* you receive your Registration Status Notice; you will be informed of any recent holds when you attempt to register.

To remove a hold from your record, you must first pay the debt owed, correct the scholastic deficiency, or be cleared by the Special Counseling Office. For most debts, you will receive a billing statement, which you will submit with payment at the Bursar's Office; you may present the receipted billing statement to the department or office that authorized the hold as evidence that the debt has been paid.

When you clear any hold *in advance of registration*, the unit imposing the hold must notify the Records Office (150 Williamson Hall in Minneapolis, 130 Coffey Hall in St. Paul) that the hold may be removed from your record. *If you have not cleared holds in advance*, you may be given a hold release to take with you to the Registration Center. If you are given a *permanent hold release*, you must leave the release form with the operator when you are validated to register. On occasion, units may issue *temporary hold releases*. A temporary release will allow you to register or receive transcripts only during the quarter in progress. Because a hold remains on your record until it is permanently cleared, you must show the temporary release each time you return to the Registration Center or with every request for a transcript. **If you are issued a temporary hold release, be sure it is returned to you after you have been validated to register.**

INTERNATIONAL STUDENTS

Initial Interview—If you hold a non-immigrant visa (designated F, J, or H) and if you are registering for the first time at the University, you should go to the International Student Adviser's Office, 717 East River Road, Minneapolis, for an initial interview and an appraisal of English language requirements. Bring your passport and INS form I-94 to this interview.

Health Clearance—If you are not a citizen of the United States and if you are registering for the first time at the University, you will be required to present proof of health clearance. This health clearance is obtained at Boynton Health Service, 410 Church Street, Minne-

apolis, and most often requires *two* visits—the first visit for a skin test for tuberculosis and the second, 48 hours later, for evaluation of the test. If your test results are positive, you will be required to have a chest x-ray. To avoid delay, begin your health clearance at least several days before you wish to register. Note: if you have been tested elsewhere during the past year *and can bring proof of test results to Boynton Health Service*, you will not need to repeat the test.

THE FIRST WEEK OF CLASS

- Fall quarter classes begin Monday, September 26.
- *You must attend the first class meeting of every course in which you are registered*, unless you have already notified your instructors or the appropriate department offices of your intention to be absent. Registered students who miss the first day without prior instructor approval may forfeit their places in the class to other students. Students who wish to remain enrolled in classes from which they have been absent the first day without permission should contact their instructors as soon as possible; instructors have the right to deny such students admission if their classes are full. Registered students must officially cancel any classes to which they are thus denied admission.
- *If you wish to gain admission to a closed class*, you should first seek permission from the main office in the department offering the course, where you may be put on a waiting list or be referred to the instructor for permission to register for the course. Students who are on a waiting list or who need the instructor's permission to register should attend the first class meeting to see whether the instructor will admit any more students. To obtain space in a closed course, you must have a signed Permission to Register form from the instructor.
- *If you are 62 or older and are eligible for tuition-free registration through the Senior Citizen Education Program*, you may register on Tuesday, September 27 for classes in which spaces are still available. Call 376-1680 for more information.

CHANGE OF REGISTRATION

Subject to certain limitations, students may add or cancel classes or may change grading systems. Course cancellations and changes to or from S-N grading are generally allowed without written permission and without penalty during the first two weeks of the quarter or before. Addition of a course after the first five days, however, generally requires the instructor's signature on your Course Request form. For specific college policies regarding changes of registration, see your college bulletin or check with your college office.

Graduate students must obtain their adviser's signature on a Course Request form for any change in registration. Changes after the sixth week require the instructor's signature as well. Changes after the last day of class will not be permitted except with the approval of the Graduate School.

Note: If you decide to stop attending a class or classes for which you are registered, *you must officially cancel*. Only by filing a *properly approved Course Request form* can you be released from your responsibility for courses listed on your registration. Unless you *officially cancel*, you will be held responsible for full tuition and fees for all classes on your registration. You will receive billing statements from Student Accounts Receivable for your tuition and fees, including a $20 late payment fee and a $10 installment payment fee. Unless you make full payment by Friday of the fifth week of the quarter, you will be charged an additional $20 late payment fee and a hold will be placed on your record. Failure to attend class does not by itself constitute cancellation. If you decide before the quarter begins not to attend the classes for which you are registered, cancel officially *before the first day of classes*.

Check with your college for specific regulations governing cancellations and additions in your program.

To change your program or grading system, you should:

- Fill out a Course Request form. Use the extra form in this schedule or obtain a form from your college office or Registration Center. Check the box indicating cancel/add and note the number of credits you will have after this change. If you are cancelling *all* courses, check the appropriate box.
- Obtain instructor, adviser, and/or college office approval if required.
- Turn in the Course Request form at your Registration Center, where you will get a revised fee statement. In Minneapolis, you must report to your college validation station before reporting to the registration terminal. Remember that each fee statement you receive has its own due date. Later fee statements do not extend the due date(s) on earlier fee statements.

Note: There will be no additional tuition charge when any course cancellation is balanced at the same time by a course addition, i.e., an addition of credits equal to the number of credits being cancelled *or* a cancellation and course addition that keeps the total number of credits within the 14-18 credit plateau (*where applicable*). For example, if you are registered for 12 credits and cancel a 5-credit course *while at the same time* adding a 5-credit course, you will not be charged additional tuition. Likewise, if you are registered for 15 credits and later cancel a 4-credit course *while at the same time* adding a 5-credit course, your tuition and fees (excluding course fees) will remain the same, *if you qualify for the plateau*, because your total number of credits after cancel/adding will remain within the 14-18 credit plateau.

Additional tuition is charged on a per-credit basis for all changes in registration that increase your credit load, *except for those credits that fall within the 14-18 credit plateau (where applicable)*. For example, if you add a 4-credit course, increasing your credit load from 12 to 16 credits, you will be charged for your 13th and 14th credit, but will not be charged for your 15th and 16th credit, *if you qualify for the plateau*, because they fall within the plateau.

Refunds are issued on a per-credit basis for all changes in registration that decrease your credit load, *except for those credits that fall within the 14-18 credit plateau (where applicable)*. For example, if you are registered for 14 credits and cancel a 3-credit course, lowering your credit load to 11, you will receive a refund for 3 credits. However, if you are registered for 18 credits and cancel 3 credits, lowering your credit total to 15, you will *not* be issued a refund, *if you qualify for the plateau*, because your total number of credits remains within the plateau.

All refunds are based on the refund rate that applies to the effective date of the cancellation. For additional information on the 14-18 credit tuition plateau and refunds, see Section 4.

WITHDRAWAL FROM THE UNIVERSITY

If you intend to withdraw from the University, you must officially cancel all courses in which you are registered. Before leaving, you must turn in all University property such as library books; military, athletic, or band equipment; laboratory materials; locker keys or locks, and athletic tickets. Veterans must also notify the Certification Service, 155 Williamson Hall. A 100% refund of tuition and course fees after the first day of class requires a Final Attendance Verification form for each course (signed by the instructor) or a signed statement, from the instructor for each course, certifying that you have never attended class (note: these statements *must* be written on official University stationery).



Could You use up to $4,000.00 for TUITION ASSISTANCE ??

The Minnesota Army National Guard has such a program available on a limited basis — first come, first serve. The Guard can also repay Student Loans — up to $10,000!

Find out more — call 1-800-652-9032 in Minnesota.

GRADUATION

For December graduation you must file a form called "Application for Degree" at the Registration Center in 202 Fraser Hall in Minneapolis (150 Williamson Hall for students with mobility impairments, or 130 Coffey Hall for St. Paul students). Most colleges expect their students to apply at least two quarters before they intend to graduate. You should check with your college office regarding the last date for applications. For fall quarter graduation, a graduation fee is due October 21 if you are an undergraduate or if you are enrolled in a professional program (e.g., M.Ed.), and November 9 if you are registered in the Graduate School. Failure to pay this fee by the due date listed on the graduation fee statement will make it impossible for you to graduate before the next succeeding quarter.

If you expect to graduate anytime within the year (through August 1984), file your formal Application for Degree now. If you are a graduate student, you should file as soon as your application is available; the Graduate School distributes the form to Ph.D. and Plan A master's students at the time of thesis registration and to Plan B master's students when they pick up their final examination form. For further information on Graduate School commencement deadlines, see the Graduate School registration instructions in this *Class Schedule*.

ADMINISTRATIVE OFFICES

Registration services are available at the following locations:

- **Registration Center**
  202 Fraser Hall, Minneapolis
  Monday-Friday 8:15-4:15 (during registration)
  Monday-Friday 8:30-3:30 (after 2nd week of quarter)

  For turning in scholarships, registration materials, cancel-add materials, and Application for Degree forms and obtaining fee statements

- **Registration, Student Records, and Scheduling**
  150/155 Williamson Hall

  Student Relations (150)
  Monday-Friday 8-4:15
  376-1680 (9-12, 1-1:30 only)

  For assistance with individual student record problems, questions; registration services for students with mobility impairments; name and address changes; student loan deferments

  Certification Service (155)
  Monday-Friday 9-3:30

  For certification letters and Veterans certification

  Transcript Quick-Service (155)
  Monday-Friday 9-2:30

  For mailed copies of official transcripts ($2 charge) and quick-service for unofficial copy of student records (limit one copy per day)

- **St. Paul Admissions and Records**
  130 Coffey Hall
  Monday-Friday 8:15-4:15 (during registration)
  Monday-Friday 9-3:30 (after 2nd week of quarter)

  Registration Service

  For turning in registration materials and cancel-add materials, and obtaining fee statements

  Student Contact Area

  For registration services for students with disabilities
  For assistance with individual student record problems and questions; for certifications; for turning in Application for Degree forms and name and address changes
  For mailed copies of official transcripts—$2 charge (quick-service for unofficial copy of student records available in 190 Coffey Hall from 9-2:30)

- **Student Accounts Receivable**
  B1 Fraser Hall
  Monday-Friday 8:30-3:30
  130 Coffey Hall
  Monday-Friday 10:30-12, 1-3:15

  For obtaining refund vouchers, processing payroll deductions, obtaining fee payment verifications, receiving assistance with student billing problems, questions (concerning only quarters from spring 1982 on)

- **Bursar's Office**
  145 Williamson Hall, East Bank
  Blegen Hall ground level, West Bank
  107 Coffey Hall, St. Paul
  Monday-Friday 8:15-3:30 (West Bank closed 12-12:45)

  For paying tuition and fees, cashing refund vouchers and checks (ID card and paid fee statement necessary for check cashing), purchasing deposit cards and ID card authorizations

- **ID Card Office**
  248 Williamson Hall
  Monday-Friday 8-12, 1-4:15

  For obtaining new ID cards (open through the noon hour during registration)

- **Information Booth**
  first floor concourse,
  Williamson Hall

  For obtaining college bulletins (during controlled registration reference copies only are available), maps, MTC information, and miscellaneous publications and information; lost ID cards turned in; no *Class Schedules* issued

GRADUATE SCHOOL REGISTRATION INSTRUCTIONS

NEW STUDENTS

- If you are registering for the first time in the Graduate School, obtain your registration materials in 307 Johnston Hall.

PREVIOUSLY REGISTERED STUDENTS

- Follow these steps to clear any Graduate School holds:

MAST PGM	Bring signed master's program to 316 Johnston Hall.
DOCT PGM	Bring signed doctoral program to 316 Johnston Hall.
SPEC PGM	Bring signed specialist program to 316 Johnston Hall.
THES TITLE	Bring signed thesis title to 316 Johnston Hall.
TRANSCRIPT	Bring bachelor's transcript, showing degree awarded, to 306 Johnston Hall.
PROJ TITLE	Bring project title to 316 Johnston Hall.
GPA	Bring letter releasing hold from major field director of graduate studies to 316 Johnston Hall.
INCOMPLETE	Bring letter releasing hold from major field director of graduate studies to 316 Johnston Hall.
DEAN'S HLD	Come to 306 Johnston Hall for explanation and instructions for clearing.
DOCT CAND	Come to 316 Johnston Hall for explanation and instructions for clearing.
GRAD ASST	Come to 411 Johnston Hall for explanation and instructions for clearing.

- Read this page and Section 1 of this *Class Schedule*.
- Have your adviser sign your Course Request form.
- If you are a nonresident and hold a graduate assistant appointment that entitles you to resident fee privileges, see Tuition Rates for Staff Members, Section 4, for information on how to obtain a certification of appointment slip. See Payment of Fees, Section 4, for information on how to obtain the graduate assistant payroll deduction privilege.
- Pay your fees. See Payment of Fees, Section 4, for further information.

THESIS CREDITS—Effective fall 1983 new students in the Graduate School will be required to register, *prior to receiving their degree*, for a standard number of thesis (or dissertation) credits—16 thesis credits for Plan A Master's and M.Eng. students and 36 thesis credits for Ph.D., Ed.D., and D.M.A. students. Tuition for thesis credits will be the same as the per-credit resident Graduate School rate. Thesis credits will not be counted for the assessment of the student services fee.

STUDENT STATUS—Effective fall quarter 1983, there will be a new special registration category for students who are required to register (e.g., to satisfy requirements of an assistantship or fellowship) but who are not enrolled in courses and are not eligible for continuous registration. This student status category is a no credit, no grade registration. Tuition is equivalent to one credit charged at the resident Graduate School rate. Student status registration replaces the thesis-only and examination-only categories.

OFFICIAL DOCTORAL CANDIDATES—The Graduate School will mail registration materials to students who have passed the preliminary oral examination.

MAXIMUM CREDITS—The maximum credit load for fall, winter, and spring quarters is 16. Refer questions to an Assistant to the Dean, 306 Johnston Hall.

GRADING OPTION—Two grading systems, A-B-C-D-N and S-N, are used in the Graduate School. You must designate your grading option for each course at registration. However, if either A-N only or S-N only is printed after the prerequisite statement for a course, you *must* register for that grading system.

CHANGE OF REGISTRATION—You must obtain your adviser's signature on a Course Request form for any change in registration. Changes after the sixth week require your instructor's signature as well. Changes after the last day of class will not be permitted except with the approval of the Graduate School.

COMMENCEMENT DEADLINES	*Fall 83*	*Winter 84*
Thesis Registration[1]	Oct. 12	Jan. 19
Final Examination Report[2]	Nov. 9	Feb. 9
Bound thesis or project[3]	Nov. 23	Feb. 23
Degree Award Date	Dec. 16	Mar. 17

For *all* degree candidates: Application for Degree submitted to and diploma fee assessed at the Registration Center (202 Fraser Hall, or 150 Williamson Hall for students with mobility impairments); Commencement Attendance Card filed with the Graduate School Office (316 Johnston Hall).

[1]Plan A Master's, M.Engr., Ed.D., and Ph.D. students *must* register a typed draft of the thesis (or project) with the Graduate School approximately one month before the examination.

[2]All other forms and fees must be submitted. For Ed.D., and Ph.D. students only: Thesis Release Card, Survey of Earned Doctorates, 2 copies of Thesis Abstract, microfilming forms and fee, continuous registration fee, final quarter fee. **Effective July 1, 1983, Plan A Master's and M.Eng. students must also complete the Thesis Release Card.**

[3]2 copies must be submitted to Graduate School (Plan A Master's, M.Engr., Ed.D., and Ph.D.).

If you have questions on the above deadlines, call (612) 373-5129.

DOCTORAL ORAL EXAMINATIONS—You must schedule your preliminary and final oral examinations *at least one week in advance* in 316 Johnston Hall (373-7912). These examinations will not be scheduled from the beginning of second term of summer session to the opening of fall quarter unless members of the assigned committee can be assembled without substitution.

COLLEGE OF LIBERAL ARTS REGISTRATION INSTRUCTIONS for Continuing or Previously Registered Students

BEFORE PROCEEDING WITH REGISTRATION:

- You may not register until all holds have been cleared from your record. To clear CLA holds follow these steps:

ADV APP	Your adviser must sign your Course Request form.
CLA	This usually (but not always) means a scholastic committee action. Contact your college office.
DEPT APP	Your Course Request form must be approved by your major department.
MAJ PROG	You must bring an approved program from your major department to your college office.
ORIENT MTG	Contact the office named.

PM ORIENT — Contact your college office, make an appointment, and attend this orientation.

REASSIGN — Report to 214 Johnston Hall, for a new adviser assignment. Students with 39 or more credits will be asked to declare a major.

- Read official CLA communications—you are responsible for knowing their contents:
  All CLA students— any material available at your *Class Schedule* distribution point.
  Honors students— (admitted to the Honors Program)—honors course listings available in 115 Johnston.
- Read the CLA instructions on these pages.
- Check the Section Status Reports in Johnston Hall, ground floor, or in your college office.

PROGRAM APPROVAL

Adviser signature needed: as stipulated on your Registration Status Notice. You should get your adviser's approval *at least 24 hours before you register.*

- If you were assigned to a premajor office when last registered, you must get college approval for fall registration at window C, 216 Johnston Hall—August 18 through September 23. Give the clerk your ID card, Course Request form, and College Office Infomation Card. If you have 39 or more credits, you will be asked to declare a major. You will be given your adviser and college office assignments for the next year and clearance to register.
- If you have 36 or more credits and you are a pre-IT student or if you need scholastic committee approval for your registration, you must go to B33 Johnston Hall before reporting to window C, 216 Johnston.

Scholastic committee approval needed for:

- *registration for more than 19 credits;*
- *freshman registration* in 3000- and 5000-level courses;
- *sophomore registration* in 5000-level courses;
- *registration for courses not listed in the CLA Bulletin;*
- *late registration or late additions to your registration* (scholastic committee approval required after the tenth day of class). For further information about changes in registration, see the *CLA Bulletin* and this *Class Schedule.*
- *cancellation of a course after the sixth week of the quarter.*

  All additions and cancellations are subject to the rules that apply to the original registration.

Upper Division students get scholastic committee approval in their college offices. Premajor students get approval in B33 Johnston Hall—August 22 through September 23.

College approval needed for:

- *registration for independent study, extra credit, directed study, directed research, and directed instruction*—also requires written approval from the department; forms are available in the department. *Before you register,* bring the signed approval form and your completed Course Request form to 214 Johnston Hall for college approval.

Graduate School approval needed for:

- *all registration in 8000-level courses*—must be approved by the instructor, director of graduate studies, and the Graduate School. Approval forms are available in college offices.

FOLLOW THE REGISTRATION STEPS EXPLAINED IN SECTION 1.

S-N REGISTRATION

- *Changes from or to S-N registration* may be made through the tenth day of the quarter. Students wishing to make such a change should follow the cancel-add procedure outlined in Section 1.
- For *sophomores, juniors, seniors,* and *adult specials,* there is no limit on the number of S-N courses in one quarter; *freshmen* may take no more than *half* of a quarter's credits S-N.
- *The number of S-N credits applying to a CLA degree is limited.* See the *CLA Bulletin* for details.
- *Courses in departmental majors* may be taken S-N only if the department has approved such a policy. Otherwise, S-N registration is allowed in all courses listed in the *CLA Bulletin.*
- Ask in your college office about restrictions on the use of S-N credits in pre-medicine, pre-dentistry, pre-pharmacy, and all interdepartmental programs (such as American Studies, International Relations, Social Welfare, and Urban Studies). **IF YOU ARE IN A PREPROFESSIONAL PROGRAM, YOU SHOULD FOLLOW THE REQUIREMENTS OF THE COLLEGE THAT YOU PLAN TO ENTER.**

REGISTRATION INSTRUCTIONS FOR SCHOOL OF MANAGEMENT COURSES

UNDERGRADUATE COURSES

- *Undergraduate and adult special students enrolled in the School of Management* may register for 3000- and 5000-level School of Management courses on or after their queue time.
- *School of Management undergraduates* may not register for more than 20 credits without approval from an adviser in the undergraduate studies office, 225 Management/Economics.
- *Degree-seeking students who have completed at least 74 credits prior to registration* may also register during the two-stage alphabetical queue for undergraduate School of Management courses required for their degree *if they are majors in one of these specifically approved units*: College of Agriculture; College of Education, business and distributive education and park, recreation, and leisure studies; College of Forestry; College of Home Economics; College of Liberal Arts journalism, urban studies, BIS (if business prerequisites have been completed and grade point averages met); Institute of Technology computer science and industrial engineering; University College ICP (if officially admitted for a business concentration). These students should consult their advising offices for further information.
- *Other non-School of Management undergraduates and graduates who have earned at least 74 credits* may register for undergraduate School of Management courses on or after September 19. It is possible to petition for permission to register in many non-core (elective) courses that may have closed. You must file a Closed Course Petition form in 225 Management/Economics on or after September 19; *proof of 74 completed credits will also be required.*
- *All accounting courses except Acct 1024, 1025, and 3001 are reserved for accounting majors.* Students who are not accounting majors must file a Closed Course Petition form in 225 Management/Economics to obtain permission to register in accounting courses other than 1024, 1025, and 3001. Petitions from School of Management students will be accepted throughout the two-stage queue period. Petitions from others will be accepted on or after September 19, and

west bank co-op

west bank co-op

Your Full Service Consumer Coop

Grocery
417 Cedar Ave.
338-2720

- Complete Line of canned, packaged, and frozen goods
- Fresh meats & lunch meats
- Cheese
- Over 45 varieties of fresh coffee and tea
- Over 80 basic bulk items
- Over 50 bulk spices
- Fresh produce
- Diary

Pharmacy
427 Cedar Ave.
333-6328

- Free Prescription Delivery in area
- Copy machine – Keys made
- Bus Passes – All You Can Ride!
- Utility Bill Payments
- Notary & Photo Finishing
- Large Selection of Vitamins & Generic Products
- Natural Health &Beauty Products
- School supplies – Books – magazines
- Gift items & Gift wrapping
- House wares

PHONE: 333-6328 333-6329

Shop Co-op

THESIS

COPYING 6¢ PER COPY

75% RAG BOND PAPER 7¢

BINDING $8.75 PER COPY

- MEETS ALL GRAD SCHOOL STANDARDS
- NO ADDITIONAL CHARGE FOR COLLATING
- ALL IN ONE CONVENIENT LOCATION
- FREE PARKING
- INTER-CAMPUS BUS SERVICE
- PAMPHLET BINDING $5.00
- ON CAMPUS DELIVERY

HOURS:
7 a.m.-noon
12:30 p.m.-3:30 p.m.
Call 373-2843
for complete information

University of Minnesota
University Bindery
P & GA Building, Room 180
2818 Como Avenue S.E.
Mpls, Mn. 55414

MONEY FOR SCHOOL

$4,000,000,000 FINANCIAL AID UNCLAIMED EACH YEAR

SEND $1.00 FOR MORE INFORMATION TODAY

SCHOLARSHIPS • GRANTS
FOLLOWSHIPS
STIPENDS • LOANS
FOREIGN STUDY

Call or send your request to:
EDUCATION ASSISTANT RESEARCHERS, INC.
129 Lake Street
Minneapolis, MN 55408
(612) 827-3523
Out of state 800-328-5055

Please Send Me Information on Getting Financial Assistance.

PLEASE PRINT OR TYPE Enclosed $1.00 is deductable from our service fees.

Name _____
Addres _____
City _____ State _____ Zip _____
Phone ( ) _____ Age _____
No. of reports requested _____
School now attending _____
HS _____ Vo-tech _____ Undergraduate _____ Graduate _____

EDUCATION ASSISTANCE RESEARCHERS, INC.
129 West Lake Street
Minneapolis, MN 55408
(612) 827-5055
Out of State 800-328-5055

EAR is looking for campus and area representatives: I am interested in more information ( ) please check.

proof of 74 completed credits will be required. It is not possible to petition into Acct 1024, 1025, and 3001. For Acct 1024 or 1025, check the Section Status Report daily to see if places may have opened up as other students cancel. Acct 3001 does not reopen once it has closed *even* if students cancel.

- *Adult special students not enrolled in the School of Management* may register for undergraduate School of Management courses on or after September 19 and must obtain an authorized Registration Override Permit from 225 Management/Economics in order to register. *Proof of 74 completed credits will be required.*

GRADUATE COURSES

- *Graduate students enrolled in the School of Management or Industrial Relations program* may register for most School of Management courses on or after their queue time. (MBA courses are restricted to students enrolled in the MBA program.)
- *Non-School of Management graduate students* may register for School of Management graduate courses **with approval** after the first stage of the queue. Approval for IR graduate courses must be obtained from the Director of Graduate Study in Industrial Relations, 537 Management/Economics. Approval for all other School of Management courses must be obtained from the Director of Graduate Studies, 334 Management/Economics.
- *Adult special students may generally not register for graduate courses.* Any exceptions must be approved by the Director of Graduate Study in Industrial Relations, 537 Management/Economics for IR courses or by the Director of Graduate Studies, 334 Management/Economics for all other School of Management graduate courses.

REGISTRATION INSTRUCTIONS FOR INSTITUTE OF TECHNOLOGY COURSES

- Registration for more than 19 credits requires college approval. Apply for this approval in 105 Lind Hall *before you register.*
- If you are **not** enrolled in the Institute of Technology you may not register for any engineering course without an approved and signed Registration Override Permit form from the department offering the course.

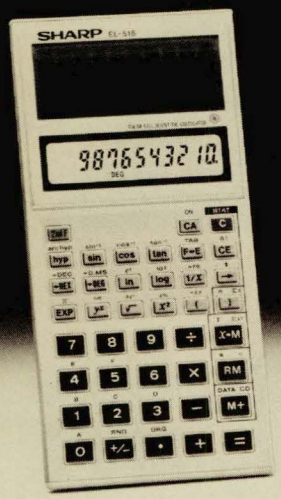
MAYBELLINE INTRODUCES THE

SHINE

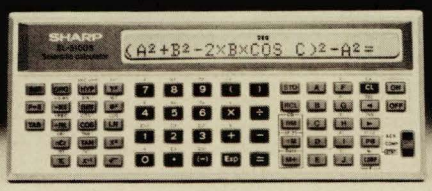


ANOTHER TECHNOLOGICAL ADVANCE FROM SHARP.

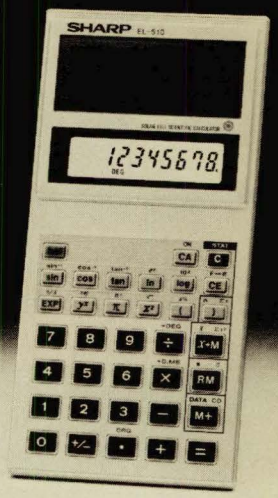
EVERY STUDENT BODY WANTS A SHARP MIND.



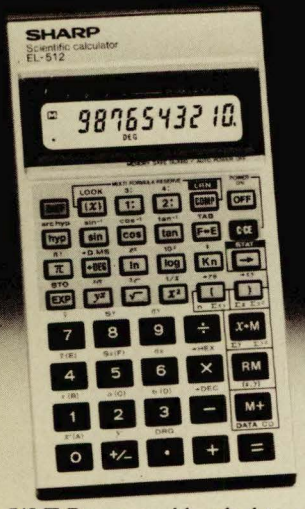
EL-515 T. Solar powered. Never needs batteries. With 50 scientific and statistical functions. 10-digit display. With wallet.



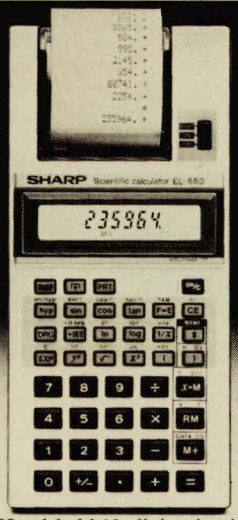
EL-5100 ST. Full-formula display. Stores up to 80 program steps. 10 data memories with memory retention. And 24-digit dot matrix alphanumeric display. With wallet.



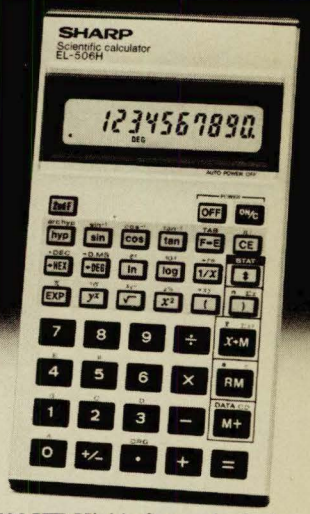
EL-510 T. Solar powered. Batteries never required. With 35 scientific and statistical functions. 8-digit display. Wallet included.



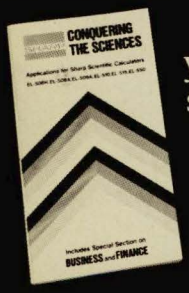
EL-512 T. Programmable calculator with 61 scientific functions. Stores up to 128 program steps. With wallet.



EL-550. Hand-held 10-digit scientific calculator/printer. 46 scientific functions. Complete with wallet and paper rolls.



EL-506 HT. Highly featured calculator with 48 scientific and statistical functions. 10-digit LCD readout. With wallet.



It's no wonder today's student body is Sharp-minded. Because Sharp offers you a wide range of scientific calculators that fit every student need. And every student budget.

There are economical Sharp scientifics with 25 functions. And others with as many as 61. There are Sharp solar-powered calculators that never need batteries. And Sharp pocket-printers that keep records. Plus a Sharp scientific with full-formula display.

This year, Sharp adds still another unique feature to its line of scientific calculators: The Sharp "Applications Textbook." It's an easy-to-understand instruction manual that keeps student and calculator in top form. Student body. Sharp mind. Look out world.

SHARP®

FROM SHARP MINDS COME SHARP PRODUCTS

Sharp Electronics Corp., 10 Sharp Plaza, Paramus, NJ 07652

courses. Nor do colleges generally allow you to repeat an audited course for credit. For further information, check with your college office.

To register as an auditor once you have received any necessary approval, list the course on your Course Request form and place a V in the grading option column for that course.

GRADING OPTION—If either A-N only or S-N only is printed after the prerequisite statement for a course, you must register for that grading system. If no grading system is listed, you may often register for either A-N or S-N grading. For information on courses offered for S-N grading and any degree or quarter limits on credits taken under this system, consult both your own college office and the college offering the course. **You may not change your grading option after the second week of classes.**

HOURS AND DAYS—This schedule lists both a starting time and an ending time for all classes, using a 24-hour clock. Refer to the table below for help in interpreting these times. To convert any time between 1:00 p.m. and 12:00 midnight from standard time to the 24-hour clock, add 1200 (for example, 3:45 p.m. + 1200 = 1545). To convert from the 24-hour clock to standard time, subtract 1200 (for example, 1615 – 1200 = 4:15 p.m.).

24-hour clock	0800	0900	1000	1100	1200	1300
Standard Time	8:00 a.m.	9:00 a.m.	10:00 a.m.	11:00 a.m.	12:00 noon	1:00 p.m.
24-hour clock	1400	1500	1600	1700	1800	1900
Standard Time	2:00 p.m.	3:00 p.m.	4:00 p.m.	5:00 p.m.	6:00 p.m.	7:00 p.m.

Classes in Minneapolis usually start 15 minutes after the hour. In St. Paul they usually start on the hour. In both Minneapolis and St. Paul, classes continue for 45 minutes after the start time.

The University Senate approved the above 45-minute class periods with the understanding that classes may continue for 50 minutes after the starting time whenever students' schedules permit.

There are also standard approved 75-minute periods, usually meeting on Tuesday and Thursday. In Minneapolis, times for these classes are 0815-0930; 0945-1100; 1115-1230; 1245-1400; 1415-1530; 1545-1700. Corresponding St. Paul times are 0800-0915; 0930-1045; 1100-1215; 1230-1345; 1400-1515; 1530-1645.

Days of the week are abbreviated M, T, W, Th, F, and S.

NO TIME OR PLACE—When hours and days or the place of meeting are missing, consult the instructor or department offering the course.

BUILDING ABBREVIATIONS AND CAMPUS MAPS—Refer to Section 3 for complete building names, locations, and accessibility information.

CHOICE OF CLASSES—When section numbers precede the hours and days listed, you may choose the section in which you wish to enroll (see the first example below). Many courses have a choice of laboratory or recitation periods, but only a single lecture period, in which all students taking the course are automatically registered (see the second example below). If laboratory or recitation sections are distributed under different lecture hour headings (as in the third example below), then your choice of laboratory or recitation hours determines which lecture you are automatically registered in. Occasionally there will be a choice of both lecture and laboratory or recitation periods. If the sections are listed after two or more lecture hour headings (as in the fourth example below), then you must register for and attend any one lecture and any one lab or recitation section.

Example 1

315330—1 0815-0900 TThS
115331—2 0915-1000 MWF
015332—3 1115-1200 TThS

Example 2

★LECT 1015-1100 MWF
815333—1 LAB 1215-1400 M
615334—2 LAB 1215-1400 W

Example 3

★LECT 0915-1000 T
415335—1 LAB 1015-1200 T
215336—2 LAB 1015-1200 Th
★LECT 0915-1000 Th
115337—3 LAB 1315-1500 T
645742—4 LAB 1315-1500 Th

Example 4

♦837302—1 LECT 0815-0900 T
♦637303—2 LECT 0915-1000 Th
437304—1 REC 1015-1200 T
237305—2 REC 1315-1500 T
137306—3 REC 1015-1200 Th
937307—4 REC 1315-1500 Th

WINTER AND SPRING LISTINGS—*The Preliminary Winter/Spring Schedule,* which you received with your *Class Schedule,* lists the courses that will be offered during the subsequent winter and spring quarters, the probable times, and the probable areas of campus on which they will be scheduled. The winter and spring sections are provided to help you to plan a tentative schedule for the coming academic year while you are planning your fall quarter registration. You should not use this information for actual winter and spring registration, because all course and time listings are subject to change.

COLLEGE BULLETINS—Courses are listed in this *Class Schedule* with a minimum of information—title, prerequisites, day and time, location, and sometimes instructor. For more information about a course, you should consult your college bulletin, where course listings include descriptions of course content. You should not choose your classes on the basis of title alone.

Most college bulletins are available from the information booth in Williamson Hall; some are available only in college offices. No bulletins will be distributed at the information booth during the two-stage alphabetical queue; you may consult bulletins outside the Williamson Hall information booth, outside the Student Ombudsman Service on the first floor of Johnston Hall, in the libraries, and in college and department offices, but they may not be removed.

COURSE CHANGES—Your registration terminal always contains the most current and accurate information. Hour and day changes are also published in the Official Daily Bulletin, a column printed in the *Minnesota Daily* and posted on campus bulletin boards. Room changes are posted on classroom doors.

SECTION STATUS NOTICE—The Section Status Report (closed course list) provides information on the number of spaces available in limited courses and sections (**R** precedes the course number). These reports are posted on a daily basis throughout the registration period outside the following locations: 101 Fraser Hall, 18 Johnston Hall, 4 Mechanical Engineering, 170 Anderson Hall, and 130 Coffey Hall. Check these reports before you fill out your Course Request form.

section 2 courses

HOW TO USE THIS SCHEDULE

CALL NUMBER—This six-digit number appears to the left of each course or each section of a course. You must use the course numbers and these *specific call numbers* when you fill out your Course Request form.

PREREQUISITES—In order to enroll in some courses, you must either complete or concurrently enroll in certain other courses or possess some particular qualifications or class standing. These requirements, known as prerequisites, are listed inside the parentheses after the course titles. If no prerequisites are listed, there are usually none, except for the class standing requirement indicated by the course number.

- Class standing requirements, unless otherwise noted, are indicated by course numbers as follows:

0000 to 0998	noncredit courses
1000 to 1998	introductory courses—primarily for freshmen and sophomores
3000 to 3998	intermediate courses—primarily for juniors and seniors, but sometimes open to others with a C average overall and in prerequisites
5000 to 5998	advanced courses—open to juniors, seniors, and graduate students
8000 to 8998	graduate courses—open to graduate students only

- When courses that must be taken in sequence are prerequisites, only the last course of the sequence is listed.
- When no course designator precedes the course number listed as a prerequisite (e.g., 'prereq 3221'), that course is in the same department as the course being offered. Likewise, a prerequisite reading "6 cr" means 6 credits in courses offered by the same department.
- Work equivalent to a prerequisite course (having either the same content or requiring the same competence) is ordinarily accepted in lieu of that prerequisite. An instructor may, in some instances, waive prerequisites at his or her discretion. See your college bulletin for further information.
- A comma always means "and."

In addition to the prerequisites listed above and expressed in the symbols listed below, departments and colleges may use the registration system to help place certain categories of qualified students into courses or sections on a priority basis (seniors, majors, etc.). **If you meet all stated prerequisites for the course, including class standing, you may also need to meet other qualifications established at the time of registration.** For this reason, it is helpful to list both first *and* second course choices on your Course Request form.

SYMBOLS—The following symbols are used throughout this schedule:

- † All courses preceding the dagger must be completed before credit will be granted for any quarter of the sequence.
- § Credit will not be granted if the equivalent course listed after the section mark has been taken for credit.
- ¶ Concurrent registration is allowed (or required) in the course listed after the paragraph mark.
- # Registration Override Permit, completed and signed by the instructor, is required for registration.
- △ Registration Override Permit, completed and signed by the department, division, or school offering the course, is required for registration.
- **E** Courses open to Evening Master of Business Administration students *only*.
- H Honors course.
- **R** The letter **R** preceding the course number indicates limited enrollment.
- ★ This symbol designates a part of a course (e.g., lecture) for which a student is automatically registered when registering for a corresponding part of the same course (e.g., lab).
- ♦ This symbol will precede the call number of a course with multiple section types (e.g., LECT, LAB, REC) without automatic registration. The student must select and register for one of each of the parts of the course.

NUMBER OF CREDITS—The number of credits approved for a particular course or section of a course appears at the end of the time and room information for each course or course section: e.g., 1015-1100 MWF, BlegH 450, Brown, *4 cr*. You must register for the number of credits indicated; you may not, for example, take a 4-credit course for either more or fewer than the approved 4 credits. A few courses are offered for a variable number of credits, as indicated by the notation "ar cr" (credits arranged) or by an optional-credit notation (e.g., "3-4 cr"). In such cases, you may register for the number of credits agreed upon by you and the instructor.

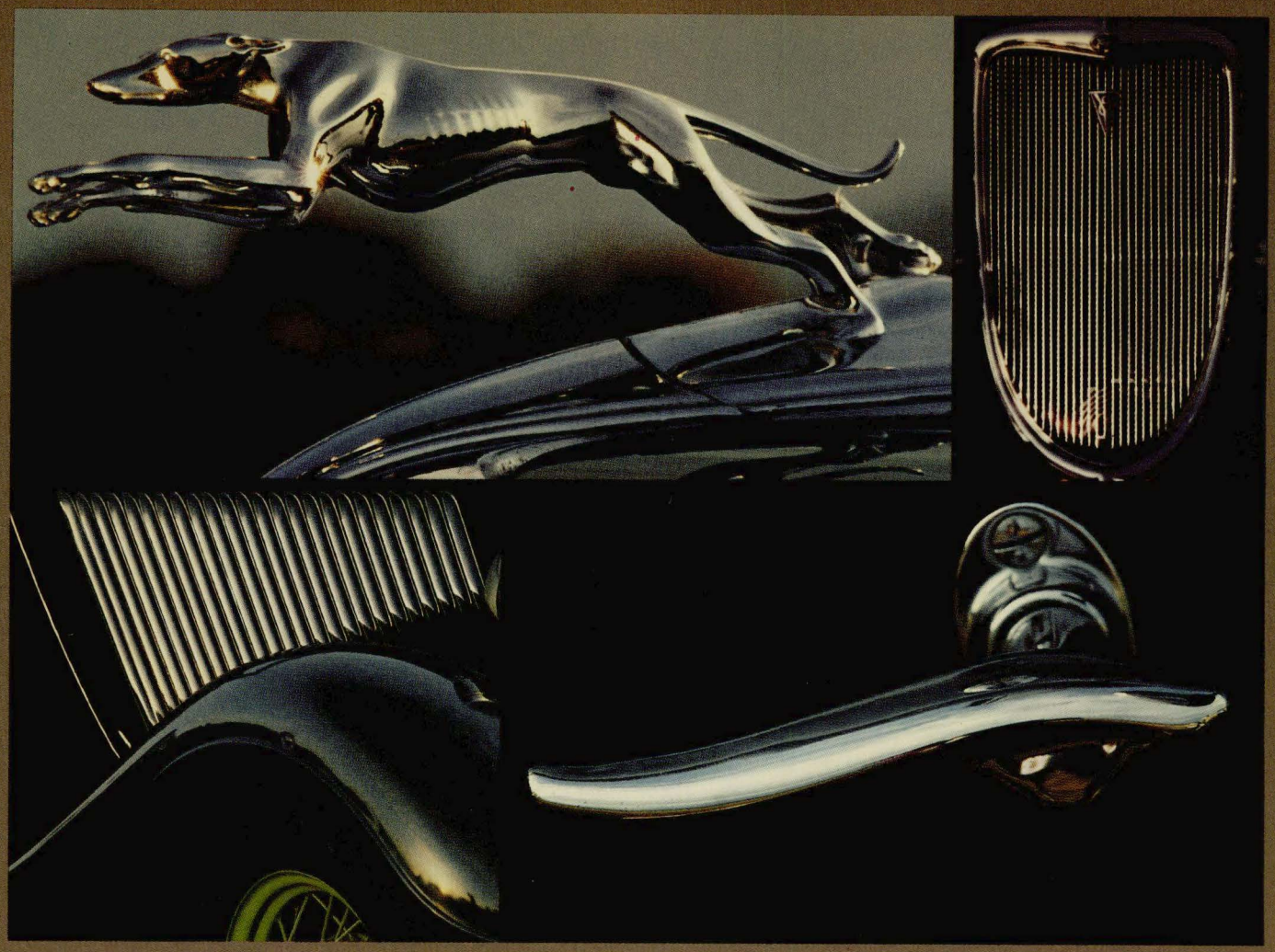
REGISTERING FOR TOPICS COURSES—A number of departments offer "topics" courses. A "topics" course usually is assigned a single course number (e.g., 3910), but subjects, course titles, and number of credits may change from quarter to quarter. Besides the usual prerequisites, there sometimes are limitations on registration for these courses. A student usually may not register for the same topics course (number) more than a certain number of times over a series of quarters. In the course listing, this restriction appears as part of the prerequisite information inside the parenthesis: "(max 12 cr; prereq. . .)," for example, means a student's total registrations in the course may not exceed a maximum total of 12 credits.

X AND Y REGISTRATION—Most colleges permit X and Y registration (directed or independent study) in their regular courses. Through X registration, you can earn extra credits (with a limit of 3) in a course by arranging with the instructor to complete additional work or explore a subject in more depth. Through Y registration, you can complete a course by studying independently under the instructor's guidance without attending class. Regular fees, deadlines, and grading policies apply, and you must register only for the number of credits approved for the course. Requirements for completing the course must be agreed upon by you and your instructor.

Both types of registration require instructor and department approval. **When you receive this approval you must also obtain a call number with which to register for the course** (call numbers for X and Y registrations are not available at the Registration Centers). For further information, check with your college or department office.

AUDITING COURSES—Most colleges permit auditing in their courses. As an auditor, you enroll in, pay tuition and fees for, and attend classes, but do not complete assignments or take examinations. You receive no credit for the course, but it will be placed on your transcript with the symbol V (Visitor) to indicate your special registration status. Although you do not receive credit, the credit value for the course counts in determining the credit total for the student services fee.

Colleges may have additional requirements for you to meet before you register as an auditor. It may be necessary to have approval from your adviser, instructor, and/or special scholastic committees. Many colleges do not permit registration as an auditor in required



See beyond the ordinary.

The Canon A-1 is no ordinary camera. It is a creative tool. Conceived as the ultimate in automatic SLR's, the A-1 is unsurpassed in providing exposure control options. There are six, to be precise, allowing you to select the one best suited to your subject. Choose a shutter speed to control and interpret action. Select a lens opening and blur away a background.

In the programmed mode, the



A-1 makes both of these decisions for you so you can really concentrate on your subject. You just focus, compose and shoot.



And create. A bright digital display in the viewfinder shows the speed and aperture being selected in any automatic mode.

The A-1 provides the versatility to match your imagination. Add any of over fifty Canon FD lenses. A Canon Speedlite for automatic flash. You can shoot at up to five frames-per-second with the optional Motor Drive MA. But most important, the A-1 does everything automatically. Freeing you to shoot a special subject in your own special way, and make a picture that nobody else saw.

The Canon A-1. It's half of what you need to turn photography into fine art.



The Official 35mm Camera of the 1984 Olympic Games

Canon® A-1

Canon USA, Inc., One Canon Plaza, Lake Success, New York 11042
140 Industrial Drive, Elmhurst, Illinois 60126 / 6380 Peachtree Industrial Blvd., Norcross Georgia 30071
123 Paularino Avenue East, Costa Mesa, California 92626 / 2035 Royal Lane, Suite 290, Dallas, Texas 75229
Bldg. B-2, 1050 Ala Moana Blvd., Honolulu, Hawaii 96814 / Canon Canada, Inc., Ontario

© 1983 Canon USA, Inc.



FEED YOUR CURIOSITY

Satisfy your yen for information, news and entertainment. Get the latest on Sports. Business. Personalities. Science. Personal finance. World events.

Whatever your taste, we've got the fare you're looking for—in top quality magazines from Time Incorporated. At the LOWEST PRICES AVAILABLE ON CAMPUS!

Use the 75% Savings Card in this issue. Or call 1-800-621-8200 (in Illinois 1-800-972-8302) and save up to 75% OFF the cover price!

SAVE 74%! TIME

Colorful, credible, captivating review of the world's week from the #1 newsmagazine. Just 45¢ an issue (instead of the 87¢ regular subscribers pay or the $1.75 cover price). T79976

SAVE 75%! FORTUNE

Fascinating way to get a head start in developing business savvy. Just 75¢ an issue (instead of the $1.38 regular subscribers pay or the $3.00 cover price). F79730

SAVE 40%! MONEY

Plan on making money? Learn the secrets of investing, spending, saving and enjoying it. Just $1.50 an issue (instead of the $2.00 cover price). M3EBC8

SAVE 74%! SPORTS ILLUSTRATED

Packed with color-action photos and thrilling sports coverage. Just 45¢ an issue (instead of the 87¢ regular subscribers pay or the $1.75 cover price). S79998

SAVE 48%! PEOPLE

Star-studded entertainment and habit-forming fun every week. Just 69¢ an issue (instead of the 87¢ regular subscribers pay or the $1.25 cover price). P49521

SAVE 37%! DISCOVER

A readable and exciting exploration of science's most intriguing new discoveries and inventions. Just $1.50 an issue (instead of the $2.00 cover price). D38274

Frequently Called Numbers

name	area code	number	name	area code	number
ABC			**MNO**		
DEF			**PQR**		
GHI			**STUV**		
JKL			**WXYZ**		

FREE™

LOOK



Now you can free yourself from the shiny look of oily skin. Maybelline's new Shine Free™ cosmetics contain special oil control ingredients to keep you looking shine free for hours and hours. Every Shine Free cosmetic ... powder blush, cover stick, translucent pressed powder, and makeup — stays on without streaking or caking to leave you looking beautifully natural. After all, you were meant to be Shine Free!

New Shine Free™ Oil Control Cosmetics from Maybelline®

©1983 Maybelline Co.

41100 104524

STORE COUPON

50¢

SHINE FREE™ 50¢ OFF

Translucent Pressed Powder

Makeup

Powder Blush



Cover Stick

50¢

DEALER: To receive reimbursement of 50¢ plus 7¢ for handling on a consumer's purchase of any full size Shine-Free™ Cosmetic Product by Maybelline, mail this coupon to Maybelline Co., P.O. Box 1510, Clinton, Iowa 52734. Invoices evidencing purchase of sufficient stock to cover coupons presented for redemption must be shown on request. Failure to do so will void applicable coupons. Coupons transferable only to Maybelline. Use of this coupon not in compliance with the terms hereof will void applicable coupons. Sales tax must be paid by consumer. Void where prohibited, taxed or restricted. Cash value is 1/20th cent. Facsimiles or copies are void. Good only in U.S.A. Limit one coupon per purchase.

COUPON EXPIRES: December 31, 1984

Maybelline®

2 For the first time a music system and the listening environment have been designed together.

Second in a series on how Delco Electronics and Bose technology contribute to your enjoyment of driving.

The performance of even the best home music systems is limited by the acoustics of the environment, the placement of the speakers and the location of the listeners. These important factors are beyond the control of the designer.

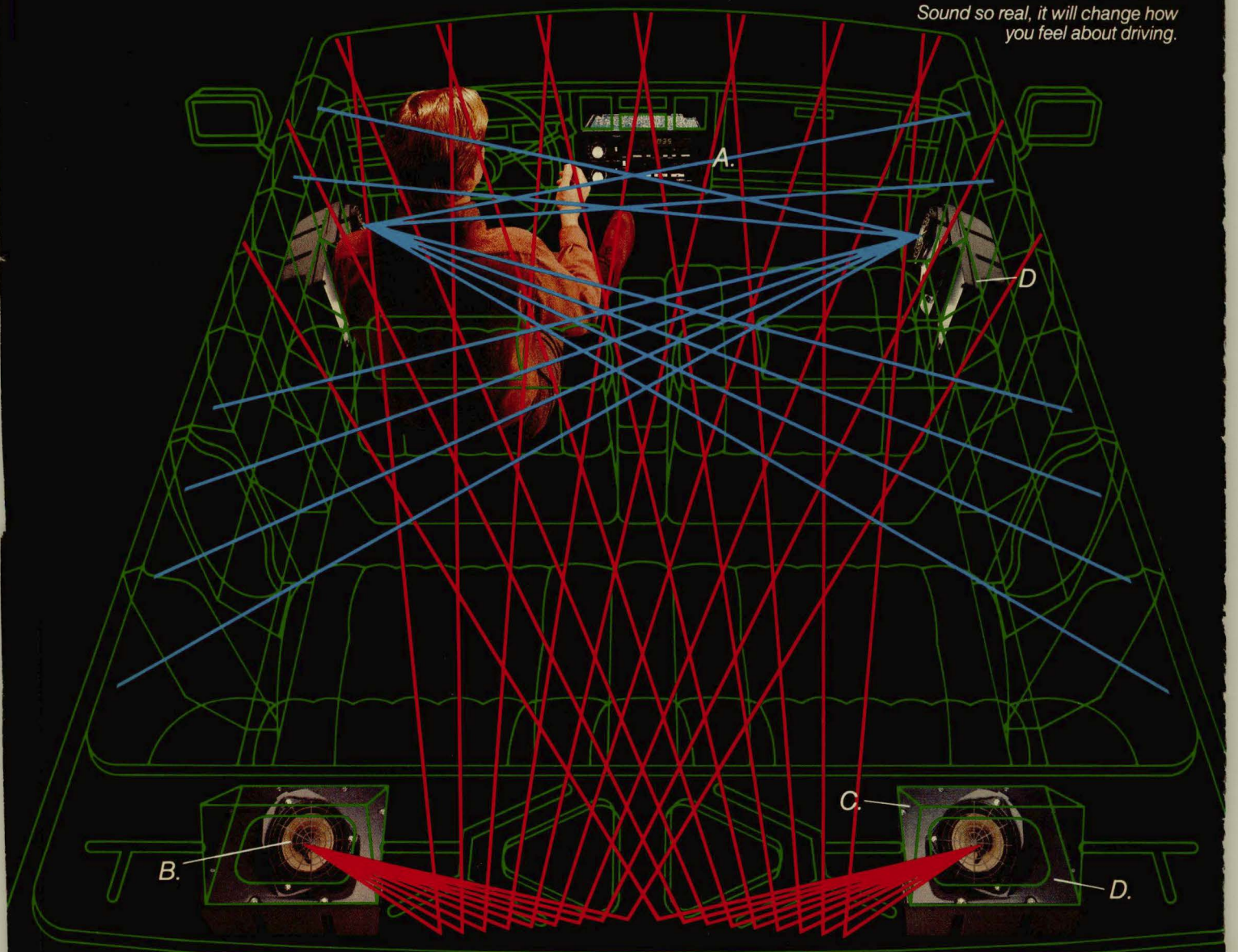
Three years ago Delco Electronics, General Motors Car Divisions and Bose Corporation began research to design a music system with, and for, its environment. The acoustics of the car were measured, the speakers precisely placed, and the known locations of the listeners were considered in the design. The result is a music system designed differently for each automobile body, but with one element in common—the performance!

And how much difference does this new design concept make? We let hundreds of people listen to the Delco-GM/Bose Music System during its development. From musicians to people who had not believed that music was important in their lives, the reaction was the same.

But if we say more we might bias the experience you will have when you visit your GM dealer. Just try not to get excited!*

Delco GM BOSE

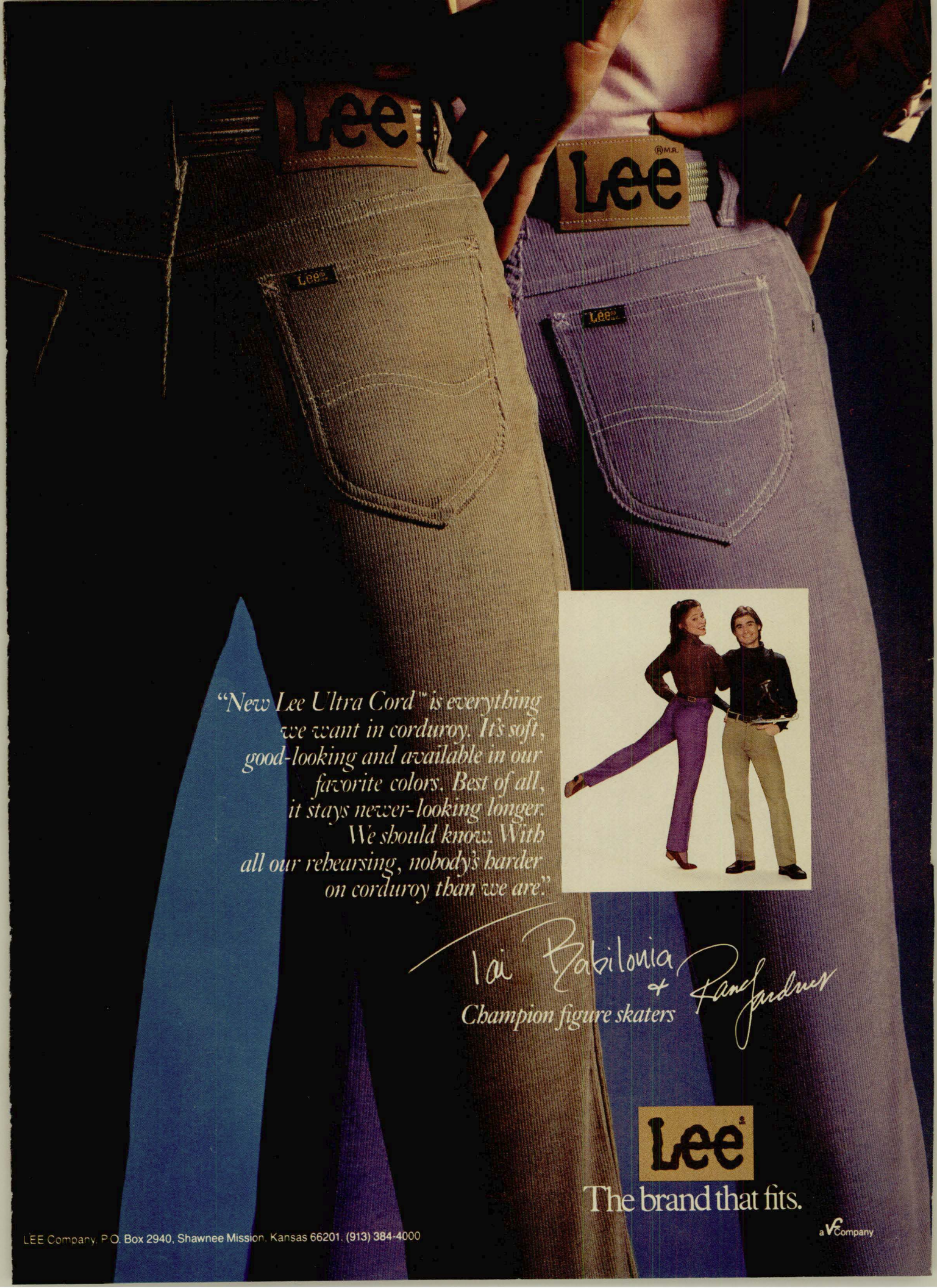
Sound so real, it will change how you feel about driving.



A. *(ETR) Electronically tuned receiver.* ***B.*** *Helical voice coil speaker.* ***C.*** *"Digital mode" amplifier built into each enclosure.* ***D.*** *Reflex enclosure.*

*Available as a factory-installed option on Cadillac Seville and Eldorado, Buick Riviera, Oldsmobile Toronado, and Corvette by Chevrolet.

A totally new class of music systems from Delco-GM.



"New Lee Ultra Cord™ is everything we want in corduroy. It's soft, good-looking and available in our favorite colors. Best of all, it stays newer-looking longer. We should know. With all our rehearsing, nobody's harder on corduroy than we are."

Tai Babilonia & Randy Gardner

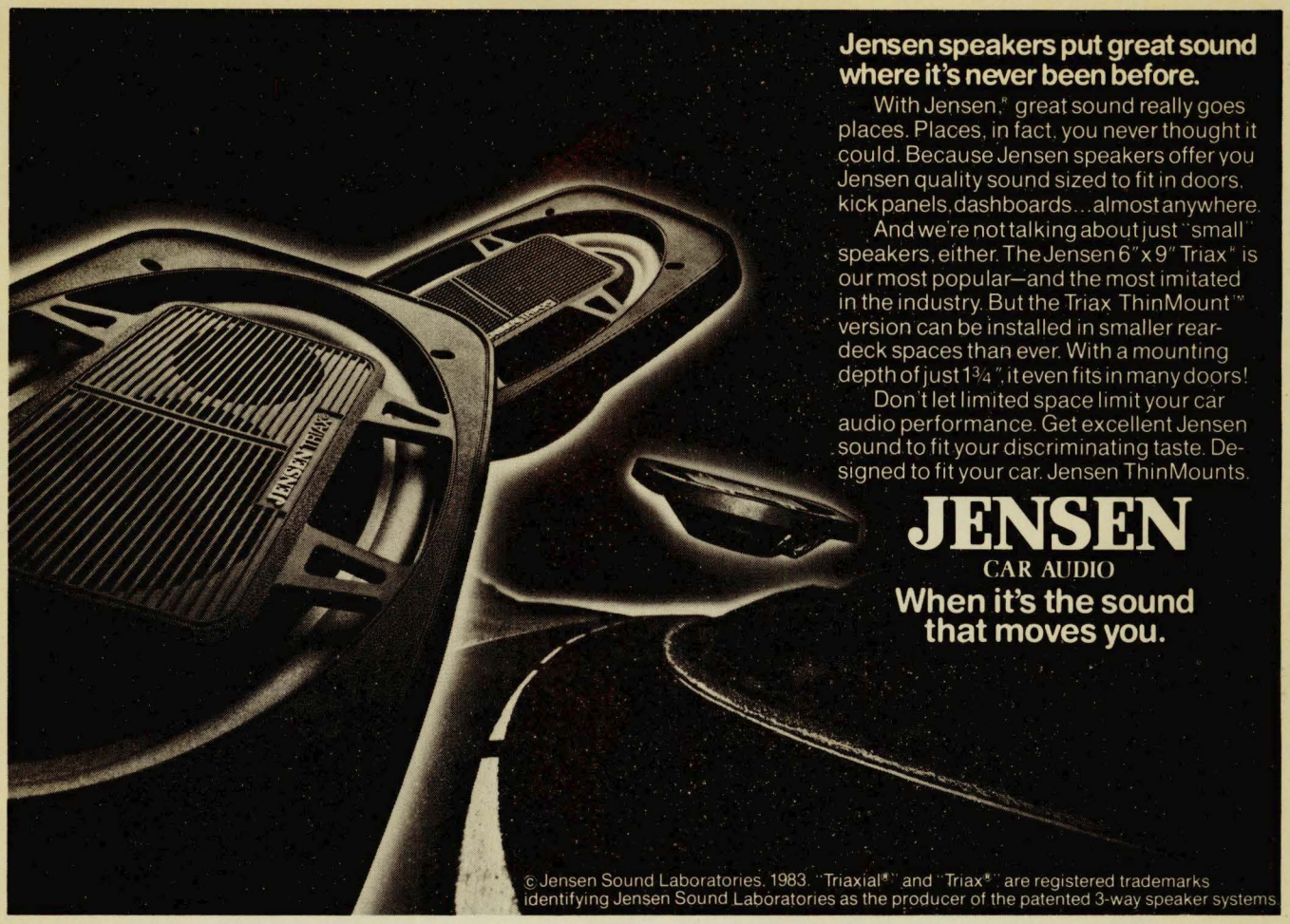
Champion figure skaters

Lee®

The brand that fits.

LEE Company, P.O. Box 2940, Shawnee Mission, Kansas 66201. (913) 384-4000

a VF Company



Jensen speakers put great sound where it's never been before.

With Jensen,® great sound really goes places. Places, in fact, you never thought it could. Because Jensen speakers offer you Jensen quality sound sized to fit in doors, kick panels, dashboards...almost anywhere.

And we're not talking about just "small" speakers, either. The Jensen 6" x 9" Triax® is our most popular—and the most imitated in the industry. But the Triax ThinMount™ version can be installed in smaller rear-deck spaces than ever. With a mounting depth of just 1¾", it even fits in many doors!

Don't let limited space limit your car audio performance. Get excellent Jensen sound to fit your discriminating taste. Designed to fit your car. Jensen ThinMounts.

JENSEN
CAR AUDIO
When it's the sound that moves you.

© Jensen Sound Laboratories, 1983. "Triaxial®" and "Triax®" are registered trademarks identifying Jensen Sound Laboratories as the producer of the patented 3-way speaker systems.

SCHEDULE WORKSHEET

TIMETABLE

PERIOD OR TIME	MON	TUES	WED	THURS	FRI	SAT

COURSES

COURSE NO.	TITLE	INSTRUCTOR



Introducing the Aero.™ It's as smart as it looks.

Introducing the Honda Aero.™ An aerodynamic blend of form and function that's turning heads wherever it goes.

It's a way of arriving that says you've arrived. It's fashionable without being a fad. Fun without being frivolous.

And talk about easy to ride. If you can steer, you're on your way. Both the Aero™ 50 and Aero™ 80* are completely automatic so there's no shifting—and they start with the push of a button.



The Aero is reliable because it's a Honda. Engineered by the people famous for two-wheel innovation.

It's one scooter that really scoots, too. With the Aero 80, you can even carry a friend on the back.† And thanks to its splashguards, you'll both look as good as your Aero when you arrive.

To find out the name of your local Honda Aero dealer, just call 800-447-4700. It just could be the smartest call you've ever made.

The Honda Aero

*Aero 80 not available in California. Aero 50 not available in Maryland. †Maximum load capacity 300 pounds.

ALWAYS WEAR A HELMET AND EYE PROTECTION. Specifications and availability subject to change without notice. ©1983 American Honda Motor Co., Inc.

For a free brochure, see your authorized Honda Aero dealer. Or write: American Honda, Dept. 558, Box 9000, Van Nuys, CA 91409.



The all-new 1984 Ford Tempo

Style and technology in total harmony.

Form follows function.

In its creation of Tempo, Ford set out to design a car that would prove that a spacious interior, comfort and performance could be compatible with fuel efficiency. Ford engineers began with a sound design principle: Form follows function. First came completely new functional ideas. And then Tempo's pleasing form followed–naturally.

An acknowledged world leader in aerodynamic design, Ford used this expertise in creating Tempo. And it has a profound effect on the overall performance of the car. For example, aerodynamics helps Tempo hug the road because airflow is directed to reduce lift for improved stability and directional control.

Tempo is equipped with the world's most advanced automotive computer: the EEC-IV (Electronic Engine Control). It monitors and controls seven vital functions of Tempo's new 2300 HSC engine for optimum power response and fuel efficiency.

Fuel economy rates high on Tempo's list of pluses. The standard F.S. (Fuel Saver) powertrain with 4-speed manual transaxle is rated at 43 estimated hwy. and 28 EPA estimated mpg.*



Available in 2-door and 4-door (above).

TEMPO FEATURES

Front-wheel drive: All-weather traction, precise handling.

Four-wheel independent suspension: Responsive handling and a smooth ride.

EEC-IV computer: Instantly monitors and controls seven vital engine functions for optimum power/output and fuel efficiency.

2300 HSC engine: New High Swirl Combustion engine designed for quick power response.

Transaxle: Available with manual 4-speed, 5-speed or automatic transaxle.

Computer refined interior: Seats five passengers. More rear passenger room than a Mercedes 300D.

Quality is Job 1: Body fit tolerances that can be compared with European Sports Sedans.

Pick up the Tempo of your life.

To obtain a brochure with more information on Ford's all-new sedan, see your Ford Dealer or call 1-800-772-2100.

*For comparison and applicable only to sedans without A/C. Your mileage may differ depending on speed, distance and weather. Actual highway mileage and California ratings will probably be lower.

Get it together–Buckle up.

Have you driven a Ford... lately?

Ford

PREPARE FOR
MCAT · LSAT · GMAT
SAT · ACT · DAT · GRE · CPA
Our 44th Year

- Permanent Centers open days, evenings and weekends.
- Low hourly cost. Dedicated full-time staff.
- Complete TEST-N-TAPE® facilities for review of class lessons and supplementary materials.
- Classes taught by skilled instructors.
- Opportunity to make up missed lessons.
- Voluminous home-study materials constantly updated by researchers expert in their field.
- Opportunity to transfer to and continue study at any of our over 105 centers.

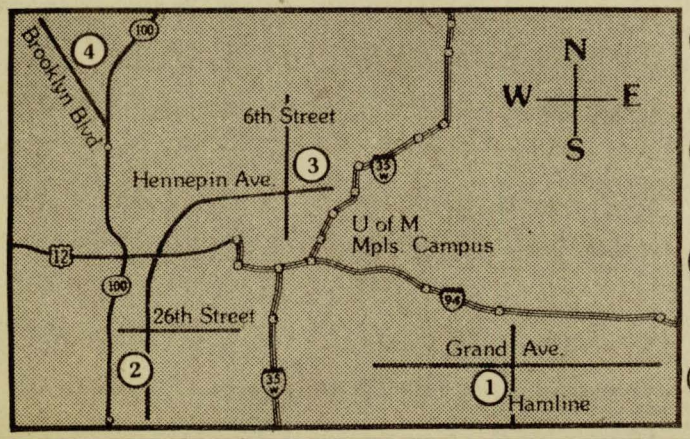
OTHER COURSES AVAILABLE
GRE·PSYCH & BIO · MAT · PCAT · OCAT · VAT · TOEFL
MSKP · NMB · VQE · ECFMG · FLEX · NDB · RN BDS
SSAT · PSAT · SAT ACHIEVEMENTS
SPEED READING

Call Days, Eves & Weekends
Stanley H. KAPLAN
EDUCATIONAL CENTER
TEST PREPARATION SPECIALISTS SINCE 1938
378-9191.
328 E. Hennepin
Near U of M
For Information About Other Centers Outside N.Y. State CALL TOLL FREE 800-223-1782

U. of M.* HONORS COURSES

*Ultimate of Mastications

- The Twin Cities **#1 Rated Flat Pizza.**
- The Twin Cities **#1 Rated Chicago-style Deep Pan Pizza.**
- The *Soon-to-be* **#1 Rated Stuffed Pizza.**
- Introducing the Twin Cities **First Gourmet Pizzas.**
- Complete menu of salad, soups, sandwiches, seafood and speciality entrees.

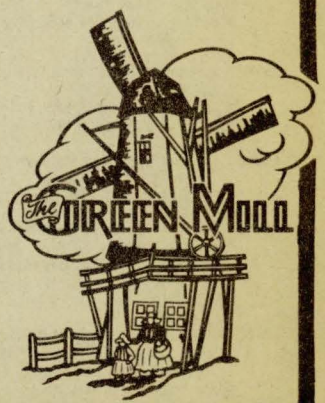


① **St. Paul**
Hamline & Grand
698-0353

② **Uptown**
2626 Hennepin So.
374-2131

③ **Downtown**
6th & Hennepin So.
333-7305

④ **Brooklyn Center**
5400 Brooklyn Blvd.
560-2500



ACCOUNTING (Acct)
Management

R1024 Principles of Financial Accounting I (§1050; prereq 3rd qtr freshman) (A-N only)
131232 –1 0815-0900 MWF, BlegH 110, 3 cr
931233 –2 0815-0900 MWF, BlegH 125, 3 cr
731234 –3 0915-1000 MWF, BlegH 125, 3 cr
531235 –4 0915-1000 MWF, BlegH 110, 3 cr
331236 –5 1015-1100 MWF, BlegH 110, 3 cr
131237 –6 1015-1100 MWF, BlegH 125, 3 cr
031238 –7 1115-1200 MWF, BlegH 125, 3 cr
831239 –8 1115-1200 MWF, BlegH 110, 3 cr
131240 –9 1215-1300 MWF, BlegH 110, 3 cr
031241 –10 1215-1300 MWF, BlegH 125, 3 cr
831242 –11 1215-1300 MWF, BlegH 220, 3 cr
631243 –12 1215-1300 MWF, BlegH 230, 3 cr
431244 –13 1315-1400 MWF, BlegH 110, 3 cr
231245 –14 1315-1400 MWF, BlegH 125, 3 cr
131246 –15 1415-1500 MWF, BlegH 125, 3 cr
931247 –16 1415-1500 MWF, BlegH 110, 3 cr

R1025 Principles of Financial Accounting II (§1050; prereq 1024) (A-N only)
731248 –1 0815-0900 MWF, BlegH 420, 3 cr
531249 –2 0915-1000 MWF, BlegH 420, 3 cr
931250 –3 1015-1100 MWF, BlegH 420, 3 cr
310788 –4 1115-1200 MWF, BlegH 420, 3 cr
310791 –5 1215-1300 MWF, BlegH 420, 3 cr
010793 –6 1215-1300 MWF, BlegH 240, 3 cr
610795 –7 1315-1400 MWF, BlegH 435, 3 cr
210797 –8 1315-1400 MWF, BlegH 420, 3 cr
110798 –9 1415-1500 MWF, BlegH 420, 3 cr

R3001 Managerial Accounting (prereq 1025) (A-N only)
425993 –1 0920-1020 MWF, AndH 310, 4 cr
908826 –2 1035-1135 MWF, AndH 310, 4 cr
708827 –3 1430-1530 MWF, AndH 310, 4 cr

R3101 Accounting Theory and Practice I (§8101; prereq 1025) (A-N only)
800007 –1 0815-0915 MWF, BlegH 220, 4 cr
400009 –2 0930-1030 MWF, BlegH 220, 4 cr
400012 –3 1315-1415 MWF, BlegH 220, 4 cr
100014 –4 1430-1530 MWF, BlegH 220, 4 cr
700016 –5 1545-1645 MWF, BlegH 220, 4 cr

R3102 Accounting Theory and Practice II (§8102; prereq 3101) (A-N only)
500020 –1 0815-0915 MWF, BlegH 240, 4 cr
100022 –2 1315-1415 MWF, BlegH 230, 4 cr

R3299 Internship in Industrial Accounting (prereq 3102, #) (S-N only)
200061 3 cr

R5125 Auditing Principles and Procedures (prereq 3102, 3201) (A-N only)
400026 –1 0930-1030 MWF, BlegH 240, 4 cr
200027 –2 1045-1145 MWF, BlegH 240, 4 cr
308829 –3 1630-1800 TTh, BlegH 420, 4 cr

R5127 EDP Auditing (prereq 5125, MIS 3100, MIS 3098 or ¶MIS 3098) (A-N only)
708830 –1 1315-1445 TTh, BlegH 230, 4 cr
308832 –2 1315-1445 TTh, BlegH 230, 4 cr (MBA only)

R5135 Income Tax Accounting (prereq 1051) (A-N only)
200030 –1 1315-1415 MWF, BlegH 145, 4 cr
900032 –2 1430-1530 MWF, BlegH 145, 4 cr
008834 –3 1800-1945 MW, BlegH 205, 4 cr (MBA only)

R5180 Advanced Accounting (prereq 3102) (A-N only)
500034 –1 0815-0945 MW, BlegH 145, 4 cr
610800 –2 1430-1600 MW, BlegH 230, 4 cr

R5300 Current Topics in Managerial Accounting (prereq 3201) (A-N only)
135023 1430-1600 TTh, BlegH 220, 4 cr

R5310 Current Topics in Financial Accounting (prereq 3102) (A-N only)
608836 –1 1700-1830 MW, BlegH 225, 4 cr
237014 –2 1700-1830 MW, BlegH 225, 4 cr (MBA only)

R8101 Accounting Theory and Practice I (§3101; prereq 8051, grad mgmt/IR student or grad SMgt approval) (A-N only)
208838 1800-1945 MW, BlegH 225, 4 cr

R8215 Behavioral Accounting (prereq 8201, grad SMgt approval) (A-N only)
100062 1800-2130 M, BlegH 255, 4 cr

R8810 Financial Accounting: Seminar II (prereq #, PhD student, grad SMgt approval) (A-N only)
335027 1115-1300 MW, BlegH 225, 4 cr

R8990 Readings in Accounting (prereq #, grad SMgt approval) (A-N only)
900063 –1 1515-1700 TTh, Law 35, ar cr
416694 –2 ar cr

ADULT AND TEACHER EDUCATION (Educ)
Curriculum And Instruction
Education

5103 Adult Education Workshop: Learning Styles (max 12 cr; prereq practicing adult educator or #) (A-N only)
308006 0900-1200 S, PeikH 315, Williams, Bruning, 1 cr (Nov 5, 19)

5104 Survey of Adult Education (prereq sr) (A-N only)
529680 1830-2100 M, PeikH 46, Copeland, 3 cr

5180 Analysis of the Teaching Process (prereq teaching experience or #) (A-N only)
711923 1615-1800 T, FolH 302, E Anderson, 3 cr

5201 Introduction to the Undereducated Adult (A-N only)
329681 1615-1815 Th, PeikH 25, Park, 3 cr

5205 Field Experience in Adult Education (max 8 cr; prereq #) (A-N only)
129682 –1 Bruning, 4-8 cr
008011 –2 Copeland, 4-8 cr
208015 –3 Park, 4-8 cr
908017 –4 Williams, 4-8 cr
508019 –5 Willie, 4-8 cr

5401 Adult Learning and Development Through Life Span (A-N only)
029683 –1 1615-1815 M, PeikH 31, Williams, 3 cr
608013 –2 1800-2100 W, Williams, 3 cr (Rochester)

R5411 Strategies for Teaching Adults (A-N only)
829684 1615-1800 T, PeikH 25, Willie, 3 cr

R5440 Multidisciplinary Perspectives on Aging (§CPsy 5305, HSU 5009, PA 5671, SW 5010, Soc 5960) (A-N only)
229687 1615-1800 MW, VinH 16, Copeland, 4 cr

5603 International Education and Development (A-N only)
429686 1615-1800 T, PeikH 31, Paige, 3 cr

8284 Problems: Teacher Education (prereq #)
225994 Howey, Willie, 3-9 cr

8302 Problems: Adult Education (prereq #)
629685 –1 Bruning, 1-9 cr
708021 –2 Copeland, 1-9 cr
308023 –3 Park, 1-9 cr
808026 –4 Williams, 1-9 cr
408028 –5 Willie, 1-9 cr

ADULT PSYCHIATRY (AdPy)
Medical School

5104 Adult Outpatient Psychiatry for Health Care Psychology Interns (prereq #)
408031 Sines, ar cr

5105 Adult Inpatient Psychiatry for Health Care Psychology Interns (prereq #)
108033 Sines, ar cr

5109 Externship in Clinical Psychiatry: Duluth Hospital (prereq regis med)
708035 Olson, 9 cr

5110 Contemporary Hospital Psychiatry: St. Luke's Hospital, Duluth (prereq regis med)
508036 Cowan, 9 cr

5120 Clinical Experience in Interviewing and Diagnostic Skills: Veterans Administration Hospital (prereq regis med)
308037 Magraw, 9 cr

5222 Preceptorships in Psychiatry (prereq regis med)
008039 Erickson, Tuason, ar cr

5500 Combined Inpatient and Crisis Intervention Center: Hennepin County Medical Center (prereq regis med)
308040 Dean, 9 cr

5501 Clinical Psychiatry: St. Paul Ramsey Hospital (prereq regis med)
008042 Tuason, 9 cr

5506 Adult Outpatient Psychiatry: University Hospitals (prereq Phase D med student)
808043 Pyle, Mitchell, 9 cr

5507 Clinical Research in Psychiatry: University Hospitals (prereq regis med)
408045 Heston, 9 cr

5508 Adult General Psychiatry: University Hospitals (prereq regis med)
108047 Kroll, 9 cr

5511 Psychiatry in Medicine: Consultation-Liaison: University Hospitals (prereq regis med)
708049 Popkin, MacKenzie, 9 cr

5514 Substance Abuse and Associated Psychiatric Disorders (max 18 cr; prereq Phase D medical student)
813291 Westermeyer, Van Walkenberg, 9 cr

5515 Neuropsychology: University Hospitals (prereq regis med)
500972 Meier, 9 cr

5516 St. Mary's Extended Care Center, Alcoholic Treatment Unit (prereq regis med)
508053 Mann, 4.5-9 cr

5518 Community Psychiatry: Braham, MN (prereq regis med)
108055 Kollmorgen, 9 cr

5519 Clinical Psychiatry: Abbott-Northwestern Hospital (prereq regis med)
008056 Mayberg, 9 cr

5521 Community Psychiatry: Dakota County Mental Health Center (prereq regis med)
808057 Nagobads, 9 cr

5530 Independent Study (prereq regis med)
400978 Heston, ar cr

5602 Clinical Psychopharmacology Seminar (prereq regis med)
200979 Abuzzahab, 1 cr

5800 Case Conference: Psychiatry in Medicine (prereq MD or #)
600980 Popkin, MacKenzie, 1 cr

5801 Consultation-Liaison Psychiatry (prereq MD)
408059 Popkin, MacKenzie, ar cr

8201 Clinical Psychiatry (prereq MD)
808060 Miner, ar cr

8203 Advanced Clinical Psychiatry (prereq MD, 8201)
608061 Miner, ar cr

8205 Special Assignments (prereq MD, 8201, 8203)
701022 Miner, 1 cr

8206 Research (prereq #)
501023 ar cr

8229 Comparison of Group Techniques (prereq #)
408062 Lykken, others, 1 cr

8239 Continuous Case Seminar: Psychoanalytically Oriented Psychotherapy (max 3 cr; prereq #)
901018 London, 1 cr

8243 Seminar: Introduction to Clinical Theory of Psychoanalysis (prereq #)
125995 Horton, 3 cr

8248 Introduction to Psychopharmacology (prereq grad or #)
925996 Abuzzahab, 1 cr

Men's Intercollegiate Athletics
UNIVERSITY OF MINNESOTA

THE GOPHERS ARE ON THE MOVE!



Follow the Gophers

- *BASKETBALL*
- *FOOTBALL*
- *HOCKEY*
- *BASEBALL*
- *GYMNASTICS*
- *SWIMMING*
- *TRACK*
- *WRESTLING*

ATHLETIC TICKET OFFICE

For information and schedule call or write:

205 Bierman Field Athletic Building
516 15th Avenue S.E.
University of Minnesota
Minneapolis, MN 55455 Phone (612) 373-3181

THE EARLY BIRD...



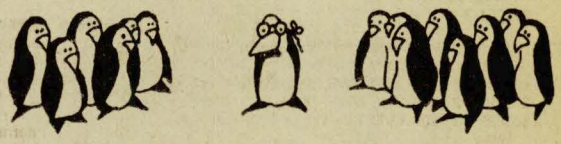
GMAT

- Permanent Centers open days, evenings and weekends.
- Low hourly cost. Dedicated full-time staff.
- Complete TEST-n-TAPE℠ facilities for review of class lessons and supplementary materials.
- Small classes taught by skilled instructors.
- Opportunity to make up missed lessons.
- Voluminous home-study materials constantly updated by researchers expert in their field.
- Opportunity to transfer to and continue study at any of our over 85 centers.

Stanley H. KAPLAN
Educational Center
TEST PREPARATION SPECIALISTS SINCE 1938

Call Days Evenings & Weekends
378-9191
328 East Hennepin Ave.
Near U of M

WE STAND OUT FROM THE CROWD



MSA Store is Non-Profit. That means great savings for you on your school, entertainment and personal needs. Compare our prices on items like clothes, records, backpacks, calculators, school supplies, film processing, gifts and health & beauty supplies. You'll see why MSA Store is the Minnesota Students' Alternative!

Students Helping Students.

Open M-F, 8-7
Saturday 11-5
Ground Floor Coffman

NON-PROFIT
MSA STORE
STUDENT-OWNED & OPERATED

8264 Presentations on Current, Appropriate Literature Pertaining to all Phases of Medical Health Care (prereq #)
725997 Magraw, 1 cr

8265 Readings in Psychosomatic Medicine, Consultation-Liaison Psychiatry (max 3 cr; prereq MD, #)
601014 Popkin, ar cr

8970 Directed Studies (max 9 cr)
201016 ar cr

AEROSPACE ENGINEERING AND MECHANICS (AEM)
Institute of Technology

R1001 Aerospace Engineering Orientation (prereq first qtr freshman who may be interested in aerospace engineering) (S-N only)
501121 1315-1400 F, SciCB 325, 1 cr

R1015 Statics (prereq Phys 1271, Math 1231, IT stu) (A-N only)
035032 –1 1215-1300 MTWThF, MoosT 2690, 4 cr
635034 –2 1415-1500 MTWThF, OwreH 2230, 4 cr

R3016 Deformable Body Mechanics (prereq 1015, ¶Math 3221, IT stu) (A-N only)
★LECT 0915-1000 MWF, OwreH 2230
800086 –1 REC 0915-1000 TTh, AkerH 21, 4 cr
400088 –2 REC 0915-1000 TTh, AkerH 211, 4 cr
600090 –3 REC 0915-1000 TTh, AkerH 215, 4 cr
400091 –4 REC 0915-1000 TTh, AkerH 313, 4 cr
110873 –5 REC 0915-1000 TTh, AkerH 317, 4 cr
735042 –6 REC 0915-1000 TTh, AkerH 209, 4 cr

R3036 Dynamics (prereq 1015, ¶Math 3221, IT stu) (A-N only)
★LECT 1315-1400 MWF, Phys 133
335044 –1 REC 1315-1400 TTh, AkerH 211, 4 cr
135045 –2 REC 1315-1400 TTh, AkerH 215, 4 cr
035046 –3 REC 1315-1400 TTh, AkerH 313, 4 cr
835047 –4 REC 1315-1400 TTh, AkerH 317, 4 cr
635048 –5 REC 1315-1400 TTh, AkerH 21, 4 cr

R3200 Introduction to Engineering Fluid Mechanics (§CE 3400; prereq 1015, Math 3221, Phys 1271, IT stu)
★LECT 0915-1000 MWF, AkerH 209
031448 –1 LAB 1115-1300 M, AkerH 30, 4 cr
031451 –2 LAB 1415-1600 M, AkerH 30, 4 cr
831452 –3 LAB 1115-1300 W, AkerH 30, 4 cr
631453 –4 LAB 1415-1600 W, AkerH 30, 4 cr
131450 –5 LAB 1115-1300 F, AkerH 30, 4 cr
431454 –6 LAB 1415-1600 F, AkerH 30, 4 cr

R3401 Introduction to Dynamical Systems (§ME 3201; prereq 3036, IT stu)
301122 1315-1400 MTWThF, Arch 5, 4 cr

R5200 Kinematics and Dynamics of Fluid Flow (prereq math differential equations, linear algebra, upper div IT stu)
001124 1015-1100 MTWThF, Arch 5, 4 cr

R5319 Dynamic Stability of Aerospace Craft (prereq 5206, 3401)
914710 1515-1700 MW, AkerH 209, 4 cr

R5329 Fundamentals of Aircraft Design (prereq AEM sr, 5300 or #)
435049 1215-1400 MW, AkerH 209, 4 cr

R5371 Aerodynamics of V/Stol Flight (prereq 5206)
110890 0815-0900 TWThF, AkerH 225, 4 cr

R5438 Intermediate Dynamics (prereq 3036)
601126 1015-1100 MWThF, AkerH 225, 4 cr

R5580 Introduction to the Mechanics of Solids (prereq 3016 or #)
201128 0915-1000 MTWF, AkerH 309, 4 cr

R5645 Aeromechanics Laboratory I (prereq 3016, 5200, aerospace engineering maj)
★LECT 0815-0900 M, AkerH 209
800119 –1 LAB 0815-1200 T, AkerH 30A, 30B, 30, 2 cr
000121 –2 LAB 1315-1700 T, AkerH 30A, 30B, 30, 2 cr
600123 –3 LAB 0815-1200 Th, AkerH 30A, 30B, 30, 2 cr
810875 –4 LAB 1315-1700 Th, AkerH 30A, 30B, 30, 2 cr

R5687 Introduction to Acoustics and Environmental Noise (prereq Phys 1291, Math 3221)
131442 1115-1200 MTWF, AkerH 225, 4 cr (lab ar)

5800 Problems in Mechanics and Materials (prereq △)
401130 1-4 cr

5810 Problems in Fluid Mechanics (prereq △)
101132 1-4 cr

5838 Summer Engineering Employment (prereq completion of 3rd yr, △)
701134 1-4 cr

5840 Industrial Assignment (prereq regis in engineering intern program, △)
301136 2 cr

5842 Industrial Assignment (prereq regis in engineering intern program, △)
808320 2 cr

5843 Industrial Assignment (prereq regis in engineering intern program, △)
001138 2 cr

8001 Seminar: Aerospace Engineering and Mechanics (prereq consent of director of graduate studies)
801139 1415-1600 F, AkerH 225, 1 cr

R8201 Fluid Mechanics I (prereq undergrad fluid mechanics, vector analysis)
001141 1415-1500 MTWTh, AkerH 225, 4 cr

8220 Rheological Fluid Mechanics I (prereq 8201 or 8510 or #)
835050 1515-1700 TTh, AkerH 227, Joseph, 3 cr

8260 Nonlinear Waves in Mechanics I (prereq 8201 or 8510 or #)
635051 1015-1100 MWF, AkerH 227, Lundgren, 3 cr

8410 Advanced Dynamics (prereq 5438 or #)
710884 1115-1200 MTWF, AkerH 227, 4 cr

8510 Continuum Mechanics I (prereq #)
801142 1515-1700 MW, AkerH 227, 4 cr

8595 Elastostatics II (prereq 8594)
235053 1215-1300 MWF, AkerH 227, 3 cr

8800 Selected Topics in Mechanics and Materials (prereq △)
601143 1-4 cr

8810 Selected Topics in Fluid Mechanics (prereq △)
401144 1-4 cr

8880 Plan B Project (max 4 cr; prereq grad aerospace engineering or mechanics maj, △) (S-N only)
937596 1-4 cr

AEROSPACE STUDIES (Air)

R1104 U.S. Air Force
031207 –1 0915-1000 TTh, Armory 205, Beachem, 1 cr
831208 –2 1015-1100 TTh, Armory 205, Beachem, 1 cr
631209 –3 1315-1400 TTh, Armory 12, Beachem, 1 cr

R1204 Early History of Air Power
031210 –1 0815-0900 T, 0815-0945 Th, Armory 12, Holden, 2 cr
831211 –2 1315-1400 T, 1315-1445 W, Armory 116, Holden, 2 cr

R3301 Military Management
600137 –1 0815-0930 TTh, Armory 6, McNally, 3 cr
200139 –2 1015-1130 TTh, Armory 6, McNally, 3 cr
631212 –3 1315-1430 TTh, Armory 6, McNally, 3 cr

R3402 Seminar: Formulation and Implementation of U.S. Defense Policy (§Pol 5323)
525998 –1 0915-1030 T, Armory 12, Patrick, 1 cr
135031 –2 1115-1230 T, Armory 12, Patrick, 1 cr

R3404 Flight Instruction Program (prereq △)
529033 1415-1500 MTWThF, 5 cr (Anoka Airport)

AFRO-AMERICAN STUDIES (Afro)
Liberal Arts

1015 Black Protest from Colonial Times to the Present
430563 1115-1230 TTh, BlegH 105, Ward, 5 cr

1021 Introduction to Africa
230564 1315-1400 MWF, BlegH 260, Coifman, 4 cr

1025 Black Americans: Socialization, Personality, and Behavior
930566 0945-1100 TTh, BlegH 105, Taborn, 4 cr

1301 The Music of Black Americans
730570 0915-1000 MWF, AndH 210, Buckner, 4 cr

1441 Afro-American History and Culture
330572 0945-1100 TTh, BlegH 135, Plummer, 4 cr

3001 Introduction to West African History: Early Times to 1800
435097 1015-1100 MWF, BlegH 360, Coifman, 4 cr

3072 Racism: Social Psychological Consequences for Black Americans (§5072)
130573 1145-1300 TTh, BlegH 225, Taborn, 4 cr

3910 Topics in Afro-American/African Studies: Blues and Reggae: Socio-Political Dimensions
210914 1115-1200 MWF, SocSci 208, Southall, 4 cr

3970 Directed Studies (prereq #, △, college approval)
030574 1-15 cr

5001 Law and Society: A Minority Point of View (prereq Pol 1001 or #)
830575 1415-1530 TTh, Mgmt/Econ 128, Ward, 5 cr

5201 Black Composers: Contributions to Western Music and Culture (prereq 1301 or 3105 or 3301, Mus 3708 or 3709, grad or #)
235098 0915-1000 MWF, Law 1, Southall, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
430577 1-6 cr

AGRICULTURAL AND APPLIED ECONOMICS (AgEc)
Agriculture

1000 Orientation to Agricultural and Applied Economics (S-N only)
126068 1200-1245 T, ClaOff B45, Welsch, 1 cr

R1020 Principles of Macroeconomics (§Econ 1001)
700145 –1 0830-0945 MWF, ClaOff B45, Helmberger, 5 cr
300147 –2 1300-1415 MWF, ClaOff B45, Helmberger, 5 cr

1250 Principles of Accounting
109280 1100-1230 MWF, ClaOff B35, Thompson, 5 cr

1400 Agricultural Markets and Prices (prereq 1030)
229043 0900-0945 MTWTh, FScN 15, Hammond, 4 cr

R3040 Economic Development of American Agriculture (prereq 1030)
129044 1100-1145 MWF, ClaOff B25, Sundquist, 4 cr

3420 Grain Marketing Economics (prereq 1400)
929045 0900-0945 MWF, ClaOff B35, R Dahl, 3 cr

3500 Farm and Agribusiness Finance (prereq 1030, 1250 or Acct 1024, 1025 or equiv)
729046 1400-1530 MWF, ClaOff B35, Thompson, 5 cr

3610 Community Resource Development (prereq 1020, 1030 or Econ 1001, 1002 or #)
235084 1500-1600 MWF, ClaOff B42, Easter, Rose, 4 cr

R3820 Farm Management Economics (prereq 1030)
329048 1300-1430 TTh, ClaOff B35, Apland, 4 cr

3850 Farm Business and Enterprise Analysis (prereq 1030, 3820 or #)
209276 0745-0845 MTWTh, ClaOff B25, Welsch, 4 cr

3900 Special Topics in the Economics of Public Services (prereq 1020 or #)
129049 1350-1455 TTh, ClaOff 31, Nelson, 3 cr

5000 Professional Experience Program (prereq #) (S-N only)
329051 4 cr

5099 RCD Interdisciplinary Seminar I (5099-5100†, §RCD 5099, AgET 5099, LA 5099, Soil 5099; prereq RCD sr or #)
735087 1500-1645 TTh, AlderH 310, 4 cr

5580 Economic Organization of the Household (prereq 1030 or Econ 1002)
029053 0900-1030 TTh, ClaOff B30, Kinsey, 3-4 cr

5620 Regional Economic Analysis (prereq 1030 or Econ 1002)
429056 0830-0945 TTh, ClaOff B36, Maki, 3-4 cr

5640 Financing State and Local Governments (prereq 3101 or Econ 3101)
135093 1330-1500 MF, ClaOff B42, Waldo, 3-4 cr

5670 Economics of Agricultural Transportation (prereq 3101-3102 or Econ 3101-3102, Tran 3054 or #)
210931 1400-1530 TTh, ClaOff B36, Fruin, 3-4 cr

5790 World Food Supply Problems (§Agro 5200, PlPa 5220, Soc 5675, LACS 5280, FScN 5643; prereq agri, pre-vet med, home econ or soc sci maj or #; AgEc grad with #)
635972 1800-2100 W, ClaOff B35, 4 cr

5860 Economics of Agricultural Production (prereq 21 cr economics or agricultural economics)
229057 1500-1615 MW, ClaOff B36, Welsch, 3-4 cr

5990 Special Topics and Independent Study in Agricultural and Applied Economics (prereq #)
909278 ar cr

8200 Advanced Topics in Agricultural and Appied Economics
129058 1-9 cr

8205 Research Methodology in Agricultural Economics
535088 Sundquist, 3 cr

8231 Agricultural Prices (prereq Econ 5151, 5152)
335089 1600-1645 MWF, ClaOff 27, 3 cr

8264 Resource Economics (prereq Econ 5162 or ¶ or #)
929059 0900-0945 MWF, ClaOff 27, Graham-tomasi, 3 cr

8278 Agricultural and Economic Development (prereq Econ 5301)
229060 1000-1130 TTh, ClaOff 230, Ruttan, 3 cr

8345 Seminar: Agricultural Marketing
735090 Roe, Hammond, others, 3 cr

8360 Seminar: Land Economics and Tenure
129061 1930-2130 W, ClaOff 230, Raup, 3 cr

8591 Consumption Economics (prereq 5000-level microeconomic theory, basic regression analysis)
335092 1100-1230 MW, ClaOff B36, Senauer, 3 cr

AGRICULTURAL EDUCATION (AgEd)
Vocational And Technical Education Education

1001 Introduction to Agricultural Education (A-N only)
130243 1200-1245 W, VoTech R385, Marvin, 1 cr

1010 History and Philosophy of Vocational and Community Education (A-N only)
730245 0800-0845 MWF, VoTech R385, Swanson, 3 cr

R3010 Organization and Direction of FFA Activities (A-N only)
530246 1200-1245 TF, VoTech R385, Leske, 2 cr

3029 Directed Experience in Agricultural Education (prereq △) (A-N only)
330247 1200-1245 M, VoTech R385, Leske, 1-3 cr

3031 Student Teaching in Agriculture (prereq jr, 5028, SeEd 3155, #) (A-N only)
130248 1200-1345 Th, VoTech R385, Persons, 8 cr

3041 Practicum: Agricultural Education Technology (max 5 cr; prereq △) (A-N only)
000166 –1 1300-1445 T, VoTech R385, Leske, 1-3 cr
600168 –2 Peterson, 1-3 cr

5021 Education Through Extension Methods (§HEEd 5021; prereq grad or #) (A-N only)
030249 1500-1730 Th, VoTech R385, Norenberg, 3 cr

5026 Extension Administration (§HEEd 5026; prereq #) (A-N only)
330250 1500-1730 T, VoTech R385, Borich, 3 cr

5027 Practicum: Placement for Extension Experiences (max 9 cr, §HEEd 3605, 5027) (S-N optional)
130251 Norenberg, 2-9 cr

5028 Teaching Methods in Agricultural Education (prereq SeEd 3155 or ¶) (A-N only)
030252 0900-0945 MTWThF, VoTech R385, Peterson, 5 cr

5071 Supervised Occupational Experiences in Agriculture (A-N only)
830253 1000-1145 MTThF, VoTech R385, Leske, 3 cr

5072 Practicum: Agricultural Business and Industry (max 9 cr; prereq 5071 or #) (A-N only)
200240 0800-0845 T, VoTech R385, Leske, 1-3 cr (lab ar)

5090 Independent Study (prereq sr) (A-N only)
630254 1-3 cr

5095 Independent Study (prereq MEd student in agricultural education) (A-N only)
230256 3 cr

5200 Seminar: Working with Youth Through Adults (max 9 cr including HEEd 5200 and YoSt 5200; prereq △) (S-N optional)
427324 Leske, 1-3 cr

8001 Research in Agricultural Education (prereq 15 cr educ)
930258 ar cr

8010 Current Issues in Agricultural Education (prereq #)
130260 1600-1745 M, VoTech R385, Persons, ar cr

AGRICULTURAL ENGINEERING (AgEn)
Institute of Technology

1060 Agricultural Engineering Orientation (S-N only)
201145 1500-1645 Th, AgEng 303, Gustafson, 1 cr

1071 Introduction to Agricultural Engineering (prereq Math 1211 or 1142, lower div IT stu)
★LECT 1400-1445 T, AgEng 105, Jordan, 2 cr
208063 –1 LAB 1400-1645 Th, AgEng 105

3970 Directed Studies in Agricultural Engineering (prereq #)
101146 1300-1345 T, AgEng 221, 2-5 cr

5050 Intern Reports (prereq IT stu)
011006 Flikke, 2 cr

R5060 Processing (prereq 3052, ME 5342, IT upper div or grad IT)
★LECT 0900-0945 MWF, AgEng 16B, Morey, 4 cr
708066 –1 LAB 1400-1645 T, AgEng 102

5130 Food Engineering (prereq thermodynamics, 3060 or #, IT upper div or grad IT)
501149 1000-1045 MWThF, AgEng 105, Thompson, 4 cr

5191 Special Problems (prereq #)
701148 2-5 cr

5192 Special Problems (prereq 5191, #)
901147 2-5 cr

5330 Agricultural Machinery (prereq ME 3203, knowl of actions of agri mech as assessed by instr, IT upper div or grad)
★LECT 1300-1430 T, 1300-1345 Th, AgEng 33, Schertz, 4 cr
235036 –1 LAB 1400-1645 Th, AgEng 33

5540 Erosion Control, Watershed Engineering (prereq 3052 or CE 3300, CE 5401 or #, IT upper div or grad IT)
★LECT 1030-1145 TTh, AgEng 16B, Larson, 4 cr
108069 –1 LAB 1300-1545 Th, AgEng 42

8100 Seminar (prereq #, grad IT maj)
901150 Flikke, 1 cr

8190 Advanced Problems and Research (prereq 5191, 5192, △)
701151 2-6 cr

8191 Advanced Problems and Research (prereq 5191, 5192, △)
301153 2-6 cr

8192 Advanced Problems and Research (prereq 5191, 5192, △)
501152 2-6 cr

AGRICULTURAL ENGINEERING TECHNOLOGY (AgET)
Agriculture

R1020 Agricultural Shop-Metalwork (prereq Chem 1004 or #)
★LECT 1300-1345 MW, AgEng 42, Bear, 4 cr
529064 –1 LAB 1400-1645 MW, AgEng 20

1090 Directed Studies (prereq #)
729063 ar cr

3091 Special Problems in Agricultural Engineering (prereq #)
929062 2-5 cr

R3215 Machinery and Equipment (prereq Math 1111, Phys 1041)
★LECT 1300-1345 MWF, AgEng 108, Chaplin
131215 –1 LAB 1400-1645 T, AgEng 108, 4 cr
931216 –2 LAB 1400-1645 W, AgEng 108, 4 cr

3800 Rural Sanitation and Water Supply (prereq Phys 1041, Chem 1005)
★LECT 1230-1345 TTh, AgEng 303, Goodrich, 4 cr
129066 –1 LAB 0900-1145 W, AgEng 303

5000 Professional Experience Program (prereq #) (S-N only)
011037 Flikke, 4 cr

5020 Program Planning and Instructional Methods in Agricultural Mechanics (prereq 10 cr in agri eng tech, AgEd 3031 or ¶)
★LECT 0800-0945 MTTh, AgEng 42, Bear, 4 cr
829068 –1 LAB 0800-1145 W, 0800-0945 F, AgEng 20

5021 Mechanics of Agricultural Systems (prereq Math 1142, Phys 1042)
629072 0800-0845 MWThF, AgEng 102, Janni, 4 cr

R5027 Appropriate Technology for International Development (prereq Math 1111, Chem 1001 or 1004, Phys 1041)
★LECT 0900-0945 MWF, AgEng 102, Slack, 4 cr
108265 –1 LAB 1400-1645 T, AgEng 16B
035029 –2 LAB 1400-1645 Th, AgEng 16B

5035 Metal Fabrication Materials and Techniques (prereq 5020 or #)
135028 Bear, 1-3 cr

5091 Special Problems in Agricultural Engineering (prereq #)
429073 2-5 cr

5092 Special Problems in Agricultural Engineering (prereq 5091)
129075 2-5 cr

5099 RCD Interdisciplinary Seminar I (5099-5100†; prereq resource and community development sr or #)
335030 1500-1645 TTh, AlderH 310, Clanton, 4 cr

AGRICULTURAL JOURNALISM (AgJo)
Agriculture

R3111 Journalistic Techniques (prereq completion of Rhet 1101 and 1102 or equiv, C average, typing ability required)
808270 1000-1145 TTh, HckrH 329, Wells, 5 cr

R3159 **Publications Editing** (§Jour 3155; prereq freshman comp plus adv comp, 3530 or equiv jour course or #, △)
★LECT 1400-1445 MWF, HckrH 111, Dueber, 4 cr
608268 –1 LAB 1500-1630 W, HckrH 111, Dueber

3530 **Publicity** (prereq compl of rhetoric communication requirement)
529078 0800-0845 MWF, CentLib 4, Swanson, 4 cr

3936 **Special Problems** (prereq 3530 or #)
729080 ar cr

5000 **Professional Experience Program** (no grad cr; prereq #) (S-N only)
329082 Swanson, 4 cr

R5301 **Functional Photography** (35 mm camera required)
911337 1400-1615 MW, CentLib 4, Breneman, 4 cr

5534 **Rural Communication Media** (prereq 3530 or equiv in journalism or #)
029084 1400-1530 TTh, CentLib 8, Swanson, 4 cr

R5600 **Transfer of Technology** (prereq work experience in scientific/technical communication or #)
829085 1600-1845 M, HckrH 302, Schuelke, 4 cr

5936 **Special Problems in Agricultural Communications** (prereq #)
629086 Breneman, Swanson, others, ar cr

AGRICULTURE (Agri)
Agriculture

R1000 **Academic Enrichment and Honors Program: Special Projects** (prereq acceptance for Special Opportunity Grant, agriculture maj only, #) (S-N only)
629251 Wharton, 1-15 cr

R1001 **Leadership Development: Project LEAD** (max 6 cr; prereq agriculture maj, #) (S-N only)
429252 Wharton, 2 cr

AGRONOMY AND PLANT GENETICS (Agro)
Agriculture

1001 **Seminar: Orientation to Agronomy** (S-N only)
429087 1600-1645 T, Agr 408, Simmons, 1 cr

R1010 **Principles of Agronomy** (§3010, 3020, 3030)
229088 1100-1145 MWThF, FScN 15, Cardwell, 4 cr

R1011 **Principles of Agronomy-Discussion** (prereq ¶1010) (S-N only)
300181 –1 0800-0845 W, Agr 202, Cardwell, 1 cr
000183 –2 1400-1445 W, Agr 202, Cardwell, 1 cr
600185 –3 0900-0945 Th, Agr 202, Cardwell, 1 cr
200187 –4 1300-1345 Th, Agr 202, Cardwell, 1 cr

1020 **Special Problems** (prereq 5 cr agronomy, #)
129089 Cardwell, 1-3 cr

R1100 **Morphology and Identification of Crops and Weeds**
★LECT 0800-0845 TTh, ClaOff B35, Strand
700193 –1 LAB 1200-1345 MW, Agr 104, 106, Strand, 4 cr
300195 –2 LAB 1500-1645 MW, Agr 104, 106, Strand, 4 cr
100196 –3 LAB 1000-1145 TTh, Agr 104, 106, Strand, 4 cr

R3030 **Maturation, Harvest, and Storage of Field Crops** (prereq Biol 1009, Chem 1005)
131702 1000-1045 MWF, AnScVM 135, Smith, 4 cr (lab ar)

R3031 **Maturation, Harvest, and Storage of Field Crops-Discussion** (prereq ¶3030) (S-N only)
831225 –1 1300-1345 M, Agr 202, Smith, 1 cr
631226 –2 1000-1045 T, Agr 202, Smith, 1 cr
431227 –3 1100-1145 T, Agr 202, Smith, 1 cr
231228 –4 1400-1445 T, Agr 202, Smith, 1 cr

3150 **Advanced Seed and Grain Evaluation** (prereq 1100 or #...1110 rec)
429090 1300-1645 TTh, Agr 104, Goodding, 4 cr

R3200 **Seminar** (prereq jr or sr, #)
229091 1530-1700 Th, Agr 408, Cardwell, Simmons, 1 cr

5000 **Professional Experience Program** (prereq #) (S-N only)
129092 Smith, 4 cr

5001 **Problems in Agronomy for Advanced Students** (prereq 20 cr agronomy, #)
929093 Smith, 1-5 cr

R5130 **Maturation, Harvest, and Storage of Field Crops** (§3030; prereq Biol 1009, Chem 1005)
★LECT 1000-1045 MWF, AnScVM 135, Smith, 4 cr (lab ar)
729094 –1 REC 1400-1445 M, Agr 202, Smith

5200 **World Food Supply Problems** (§AgEc 5790, FScN 5643, Soc 5675, LACS 5280; prereq sr or grad with #)
835033 1800-2100 W, ClaOff B35, Cardwell, 4 cr

8000 **Supervised Teaching Experience in Agronomy** (prereq #) (S-N only)
529095 0800-0945 T, Agr 408, Simmons, 2 cr

8010 **Research in Agronomy** (prereq #)
329096 ar cr

8020 **Seminar: Agronomy**
129097 1600-1700 W, Agr 408, Simmons, 1 cr

R8050 **Physiology of Field Crops** (prereq 5120, PlPh 5131 or #)
029098 0900-0945 MWF, Agr 202, Jones, 3 cr

8230 **Cytogenetics** (prereq GCB 5031 or #)
811346 1000-1045 MWF, Agr 202, Phillips, 4 cr (lab ar)

8270 **Seminar: Plant Breeding**
829099 1600-1700 M, Agr 408, Orf, 1 cr

8310 **Orientation to Field Crop Breeding** (prereq 5020 or #)
529100 Stuthman, 1 cr

8320 **Orientation to Agronomy and Soils Field Research Techniques** (§Soils 8320; prereq 5040 or #) (S-N only)
329101 Goodding, 1 cr

8330 **Research in Plant Genetics**
129102 ar cr

AKKADIAN (Akka)
Near And Middle Eastern Studies
Liberal Arts

R5011 **Elementary Akkadian** (prereq adv undergrads by permission only, grads)
208287 0815-0900 MWF, FolH 108, Paradise, 4 cr

AMERICAN INDIAN STUDIES (AmIn)
Liberal Arts

1021 **Beginning Ojibwe**
226000 1115-1200 MTWThF, SocSci 101, Northbird, 5 cr

1023 **Beginning Ojibwe** (prereq 1022)
511356 0915-1000 MTWThF, BlegH 255, Oakgrove, 5 cr

1031 **Beginning Dakota**
011359 1115-1200 MTWThF, SocSci 628, Schommer, 5 cr

1771 **Introduction to American Indian Studies**
735056 0945-1100 TTh, BlegH 230, Beaulieu, 4 cr

3024 **Intermediate Ojibwe** (prereq 1023)
111361 1215-1300 MTWThF, SocSci 883, Northbird, 5 cr

3026 **Ojibwe History and Culture**
708844 1415-1500 MWF, BlegH 360, Oakgrove, 4 cr

3034 **Intermediate Dakota** (prereq 1033)
230578 1315-1400 MTWThF, SocSci 815, Schommer, 5 cr

5341 **Contemporary Indian Movements**
208841 1245-1400 TTh, BlegH 260, Beaulieu, 4 cr

AMERICAN STUDIES (AmSt)
Liberal Arts

R1001 **American Culture: Origins to Mid-19th Century**
036925 1115-1200 MWF, MechE 302, 4 cr

R1002 **American Culture: Mid-19th Century to 1920s**
836926 1015-1100 MWF, MechE 302, Delattre, 4 cr

R1003 **American Culture: 1920s to the Present**
136924 0915-1000 MWF, MechE 302, 4 cr

3251 **American Popular Culture: The 19th Century**
435066 1115-1230 TTh, LindH 215, L May, 4 cr

R3301 **Proseminar: American Studies** (prereq American Studies sr)
130579 1415-1645 T, LindH 215, L May, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
430580 1-15 cr

R5101 **Religion and American Culture**
911371 0815-0930 TTh, LindH 217, Delattre, 4 cr

5920 **Topics in American Studies** (max 12 cr; prereq #)
635065 1315-1400 MWF, BlegH 205, Noble, 4 cr

R8201 **Introduction to American Studies** (prereq MA candidate)
108377 1415-1530 TTh, LindH 305, Martin, 4 cr

8311 **Seminar: American Studies** (prereq PhD candidate)
135068 1415-1645 T, LindH 325, Vizenor, 3 cr

8312 **Seminar: American Studies** (prereq PhD candidate)
808379 1015-1200 M, MoosT 15264, Born, 3 cr

8801 **Dissertation Seminar** (prereq PhD student)
408384 1515-1700 W, LindH 225A, Yates, 2 cr

8970 **Readings in American Civilization** (prereq △)
230581 ar cr

ANATOMY (Anat)
Medical School

R3001 **Elementary Anatomy** (prereq one qtr college biology)
★LECT 0750-0900 TTh, Botany B6, Coulter, 5 cr
937260 –1 LAB 0815-1000 W, JacH 5163, 5165
737261 –2 LAB 1015-1200 W, JacH 5163, 5165
537262 –3 LAB 1315-1500 W, JacH 5163, 5165
337263 –4 LAB 1515-1700 W, JacH 5163, 5165

3058 **Extremities** (prereq regis PT, 1004)
★LECT 1315-1400 MTTh, ChRC R204, Pohtilla, 5 cr
508408 –1 LAB 1415-1600 MWF, JacH 5161

3970 **Special Problems** (prereq #)
300228 2 cr

5100 **Gross Human Anatomy** (prereq regis med fr, anat grad or grad with #)
★LECT 0815-0900 MWF, 1515-1600 W, PWB 2470, Parsons, Robertson, (Sept 7-Dec 16)
708410 –1 LAB 0915-1200 MWF, JacH 5163, 10-11 cr

5103 **Human Histology** (prereq regis med fr, anat grad or grad with #)
★LECT 0815-0900 TTh, 1515-1600 WF, PWB 2470, Erlandsen, (Sept 7-Dec 16)
100215 –1 LAB 0915-1200 T, 1415-1700 Th, JOAd 2112, 3-7 cr
000216 –2 LAB 1415-1700 T, 0915-1200 Th, JOAd 2112, 3-7 cr

5105 **Dental Microscopic Anatomy**
★LECT 1315-1400 MTWF, MoosT 2620, Bauer, 8 cr
008414 –1 LAB 1415-1700 MWF, OwreH 2114

5106 **Human Embryology** (prereq regis med fr, anat grad or grad with #)
500230 1415-1500 TWF, PWB 2470, Hamilton, 4-5 cr (Sept 7-Dec 16)

5190 **Advanced Anatomy** (prereq regis med, 5103, #)
300231 2 cr

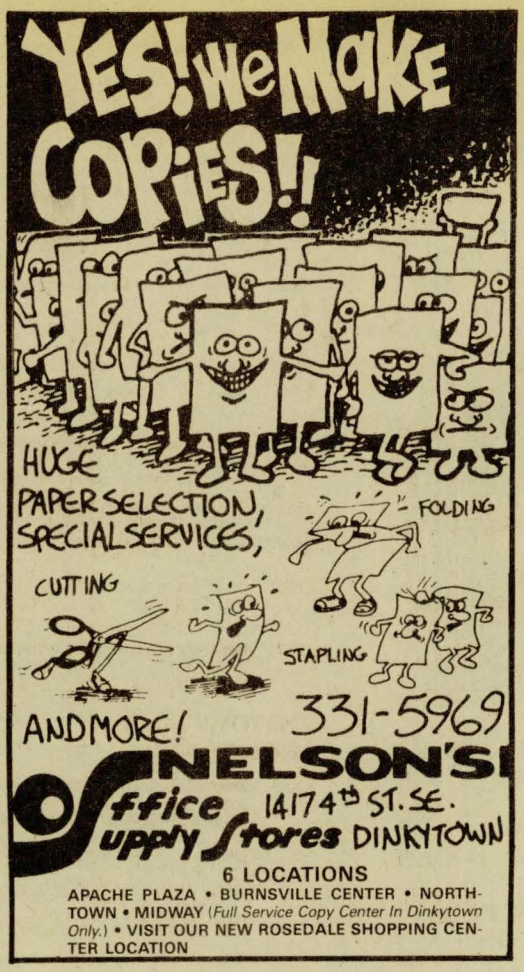
5301 **Surgical Anatomy for Oral Surgeons** (prereq participation in the Oral Surgery residency program)
915033 Robertson, 5 cr

5500 **General Gross Anatomy** (prereq Phase D)
100232 Robertson, 3-4.5 cr

5501 **The Extremities** (prereq Phase D)
000233 Robertson, 3-4.5 cr

5502 **Head and Neck** (prereq Phase D)
800234 Robertson, 3-4.5 cr

5504 **The Endocrine System** (prereq Phase D)
108386 Hamilton, 3-4.5 cr



MORE MUSIC,
MORE WINNERS

KJO/104

CONTEST LINE
989-2104

11320 VALLEY VIEW ROAD
EDEN PRAIRIE, MN 55344
(612) 941-5774

KJJO FM 104 STEREO — MPLS/ST. PAUL

The Institute for Paralegal Training works. So do its graduates.

Four months of intensive training at The Institute for Paralegal Training can add market value to your college degree.

A sampling of jobs our graduates hold:
LEGISLATIVE RESEARCHER, REAL ESTATE MARKETING DIRECTOR, MUNICIPAL BOND PARALEGAL, ESTATES & TRUSTS LEGAL ASSISTANT, ENERGY SPECIALIST, PUBLIC ADVOCACY ASSISTANT, ANTITRUST SPECIALIST, CORPORATE BENEFITS PLANNER, ENVIRONMENTAL LAW SPECIALIST

- Through our corporate contacts, our national search team and our computerized placement service, we have placed over 5,000 of our graduates in law firms, banks and corporations nationwide.
- You can specialize in one of seven areas of the law.
- All courses include training in computer applications to legal practice.
- If we cannot secure a job for you in the city of your choice, we provide a substantial tuition refund.
- You can study in Philadelphia or in Houston.
- Financial aid and housing are available.

To learn more, **call collect: (215) 567-4811**. Or, return the coupon.

THE INSTITUTE FOR PARALEGAL TRAINING PHILADELPHIA HOUSTON

Save this:
We'll be at your campus on April 10.
Contact your placement director to see our resource book on law-related careers and to arrange for a group presentation or a personal interview.

DUMN
Mail this coupon to:
The Institute for Paralegal Training,
1926 Arch Street, Philadelphia, PA 19103

Please send a free copy of your catalogue.
☐ Philadelphia ☐ Houston

Name_____
Address _____
City _____ State _____ Zip _____
College_____ (yr. of grad.)
Phone _____
(present phone) (home phone)

5508 The Thorax (prereq Phase D)
400236 Robertson, 3-4.5 cr

5509 The Abdomen (prereq Phase D)
200237 Robertson, 3-4.5 cr

5510 Perineum, Genital-Urinary System and Pelvis (prereq Phase D)
900239 Robertson, 3-4.5 cr

5765 Hematology (prereq 5103 or #)
★LECT 1315-1400 TTh, MoosT 2520, Sundberg, 4 cr
100229 –1 LAB 1415-1600 TTh, MoosT 3317

8153 Advanced Anatomy (prereq #)
900242 1-6 cr

8201 Research in Anatomy (prereq #)
500244 1-10 cr

8205 Seminar: Anatomy (prereq #)
300245 1215-1300 W, JOAd 5137, Hamilton, 1 cr

ANCIENT NEAR EASTERN AND JEWISH STUDIES (ANEJ)
Near And Middle Eastern Studies
Liberal Arts

R**3501 Ancient Israel** (§5501, no knowl of Hebr req)
735025 0815-0900 MWF, FolH 50, Reisman, 4 cr

R**5970 Directed Studies** (prereq #, △, CLA approval)
311388 1-4 cr

ANCIENT STUDIES (AnSt)
Liberal Arts

5100 Topics in Ancient Studies (prereq enrollment in AnSt or #)
730584 –1 1515-1700 M, 1615-1700 Th, ExpE 219, Gibbon, 4 cr (Approaches to Ancient Texts)
812500 –2 1415-1600 Th, NMA 232, McNally, 3 cr (Studies in Methodology-Ancient Lamps)

8001 Basic Seminar: Approaches to Ancient Texts (prereq grad maj or #)
308300 1515-1700 M, 1615-1700 Th, ExpE 219, Gibbon, 3 cr

8200 Directed Readings (prereq #)
930583 ar cr

8300 Directed Research (prereq #)
130582 ar cr

8400 Colloquium (prereq enrollment in AnSt)
608299 1515-1700 W, FolH 108, Gibbon, 2 cr

ANESTHESIOLOGY (Anes)
Medical School

R**3107 Individual Study in Respiratory Therapy** (prereq #)
311391 1415-1500 W, Mayo C559, Larsen, ar cr

5015 Directed Study, Anesthesia Topics/Project Course Development (prereq CRNA, regis B.S. in nurs anes, #)
000247 ar cr

5181 Externship in Clinical Practice of Anesthesiology (prereq regis med)
800248 Anderson, 4.5-9 cr

5186 Clinical Practice in Anesthesia (prereq CRNA, regis B.S. in nurs anes, 5086, #)
000250 Buckley, 15 cr

5268 Seminar in Anesthesia (prereq CRNA, regis B.S. in anes)
800251 1500-1700 F, Mayo B580, Buckley, 2 cr

5286 Directed Study, Anesthesia Topics/Project: Clinical (prereq CRNA, regis B.S. in nurs anes, #)
600252 Bell, ar cr

5386 Education in Nurse Anesthesia (prereq CRNA, regis B.S. in nurs anes, #)
200254 Bell, 1 cr

5486 Nurse Anesthesia: Education/Management, the Affective Domain (prereq CRNA, regis B.S. in nurs anes, #)
900256 1615-1900 W, MoosT 2520, Bell, 4 cr

8265 General Anesthesia
700257 Buckley, 12 cr

8266 Regional Anesthesia
500261 Buckley, 4 cr

8267 Pre-Postanesthetic Evaluation
100263 1530-1800 MTWTh, Mayo B580, Buckley, 2 cr

8268 Seminar: Anesthesia
800265 1500-1700 F, Mayo B580, Buckley, 2 cr

8269 Research in Anesthesia
200268 Buckley, ar cr

ANIMAL SCIENCE (AnSc)
Agriculture

1100 Introductory Animal Science
029103 0900-0945 MTWThF, PetH 110, Goodrich, Otterby, others, 5 cr

R**1107 Swine Practicum** (prereq #) (S-N only)
829104 1400-1445 T, PetH 200, Moser, 1 cr

1120 Livestock and Meat Evaluation
★LECT 1400-1600 M, AnAren, 1400-1545 F, ABLMS 125, Meiske, Allen
500258 –1 LAB 1400-1500 W, ABLMS 125, Meiske, Allen, 4 cr
300262 –2 LAB 1500-1600 W, ABLMS 125, Meiske, Allen, 4 cr
711436 –3 LAB 1600-1700 W, ABLMS 125, Meiske, Allen, 4 cr

R**1601 Horse Equitation and Management** (facility fee)
600266 1400-1600 Th, PetH 200 (first day), Jordan, 1 cr (Hennepin County Vo-Tech, Eden Prairie)

R**1603 Beef Practicum** (prereq soph, #) (S-N only)
311438 1400-1445 T, HckrH 70, Meiske, 2 cr (3 hrs ar)

3130 Beginning Livestock Judging (prereq soph or #...1120 rec)
635079 1500-1745 TTh, AnAren 115, Hawton, 2 cr

3143 Meats Judging and Grading (prereq 1120 or ¶)
629105 1600-1745 MF, ABLMS 125, Epley, 2 cr

3220 Principles of Animal Breeding (GCB 3022 rec)
429106 1000-1045 MTWThF, PetH 110, Rempel, 5 cr

R**3301 Systemic Physiology** (prereq Biol 1011, BioC 1301)
★LECT 1100-1145 MTWThF, PetH 110, Hunter, El Halawani
200271 –1 LAB 1400-1645 W, AnScVM 164, 6 cr
100272 –2 LAB 0800-1045 Th, AnScVM 164, 6 cr
300276 –3 LAB 1300-1545 Th, AnScVM 164, 6 cr

3401 Principles of Animal Nutrition (§1401; prereq Chem 1002 or BioC 1301 or Chem 3301)
526004 0800-0845 MWF, PetH 110, Pettigrew, 3 cr

5000 Professional Experience Program (prereq #) (S-N only)
229107 Moser, 4 cr

R**5322 Physiology of Reproduction** (prereq 6 cr systemic physiology)
129108 1400-1445 MThF, 1400-1545 TW, HckrH 100, Crabo, 5 cr

R**5401 Swine Nutrition and Feeding** (prereq 1401 or 3401)
★LECT 1300-1345 MWF, PetH 110, Moser, Pettigrew
935072 –1 REC 1300-1345 T, HckrH 70, Pettigrew, Moser, 4 cr
535074 –2 REC 1400-1445 W, HckrH 70, Pettigrew, Moser, 4 cr
135076 –3 REC 1300-1345 Th, HckrH 70, Pettigrew, Moser, 4 cr

5602 Sheep Production (prereq 1401 or 3401...3220, 5403 rec)
929109 1300-1345 MTWTh, PetH 108, Jordan, 4 cr

5605 Poultry Production (§5615; prereq 1401 or 3401...5405 rec)
129111 1400-1545 TTh, PetH 108, Hamre, 4 cr

R**5703 Literature and Seminar** (prereq jr)
000281 –1 1400-1445 MW, PetH 108, Donker, 2-3 cr
200285 –2 1500-1545 MW, PetH 108, Donker, 2-3 cr

5710 Special Problems (prereq #)
529114 ar cr

5715 Tutorial (prereq #)
129116 ar cr

8220 Advanced Animal Breeding (prereq GCB 3022, Stat 5021)
029117 1100-1145 MWF, PetH 108, Boylan, 3 cr

8603 Graduate Seminar (prereq #)
311441 1200-1245 M, PetH 108, Hunter, 1 cr

8750 Concepts and Developments in Meat Science and Technology (prereq #)
829118 1 cr

8810 Research in Animal Science (prereq #)
629119 ar cr

8820 Research in Animal Genetics (prereq #)
029120 ar cr

8830 Research in Animal Physiology (prereq #)
829121 ar cr

8840 Research in Animal Nutrition (prereq #)
629122 ar cr

8850 Research in Muscle Chemistry and Physiology (prereq #)
429123 ar cr

ANTHROPOLOGY (Anth)
Liberal Arts

R**1101 Human Origins**
★LECT 1245-1400 TTh, SciCB 375, Johnson
700288 –1 REC 0815-0900 T, FordH 15, 5 cr
900290 –2 REC 0915-1000 T, FordH 15, 5 cr
500292 –3 REC 0915-1000 T, FordH 60, 5 cr
100294 –4 REC 1015-1100 T, SmithH 315, 5 cr
800296 –5 REC 0815-0900 Th, FordH 15, 5 cr
200299 –6 REC 0915-1000 Th, FordH 15, 5 cr
835243 –7 REC 0915-1000 Th, FordH 70, 5 cr
635244 –8 REC 1015-1100 Th, FordH 120, 5 cr

R**1101H Honors Course: Human Origins** (prereq B avg or #)
★LECT 1245-1400 TTh, SciCB 375, Johnson
611087 –80 REC 1015-1100 W, FordH 15, Johnson, 5 cr

R**1102 Introduction to Social and Cultural Anthropology** (§1115)
★LECT 0915-1000 MWF, NichH 45, Rowe
600302 –1 REC 0815-0900 T, FordH 20, 5 cr
900306 –2 REC 0915-1000 T, FordH 20, 5 cr
500308 –3 REC 0915-1000 T, FordH 70, 5 cr
300312 –4 REC 1015-1100 T, FordH 15, 5 cr
000314 –5 REC 1015-1100 T, FordH 20, 5 cr
200318 –6 REC 1115-1200 T, FordH 20, 5 cr
100322 –7 REC 1115-1200 T, FordH 285, 5 cr
300326 –8 REC 0815-0900 Th, FordH 20, 5 cr
100330 –9 REC 0915-1000 Th, FordH 60, 5 cr
435245 –10 REC 0915-1000 Th, FordH 20, 5 cr
235246 –11 REC 1015-1100 Th, FordH 15, 5 cr
135247 –12 REC 1015-1100 Th, FordH 20, 5 cr
935248 –13 REC 1115-1200 Th, FordH 15, 5 cr
735249 –14 REC 1115-1200 Th, FordH 20, 5 cr

R**1102H Introduction to Social and Cultural Anthropology** (prereq GPA 3.0 or #)
★LECT 0915-1000 MWF, NichH 45, Rowe
211089 –80 REC 1015-1100 T, FordH 60, Rowe, 5 cr

R**3002 Primate, Human Evolution** (prereq 1101 or intro biol course or #)
130601 1015-1100 MWF, FordH 55, Murrill, 4 cr

R**3201 Methods and Theory in Cultural and Social Anthropology** (prereq 1102 or #)
211450 1245-1400 TTh, FordH 175, Prell-Foldes, 5 cr

3251 Islamic Culture Sphere (prereq 1102 or #)
935251 1115-1200 MWF, FordH 285, Spencer, 4 cr

3281 Culture and Society in China, Japan (prereq 1102 or #)
909071 0915-1000 MWF, FordH 285, Spencer, 4 cr

3291 Peoples and Cultures: Polynesia and Micronesia (prereq 1102 or #)
735252 1315-1400 MWF, FordH 285, Ogan, 4 cr

3377 Laboratory Techniques in Archaeology (prereq 3376 or #)
135250 1415-1600 MW, ShepLab 504, Hastorf, 4 cr

3592 History of Archaeology (prereq 15 cr in anth)
535253 0915-1000 MWF, FordH 160, Gibbon, 4 cr

3970 Directed Studies (prereq #, △, college approval)
730603 ar cr

5114 Structural Anthropology (prereq 1102 or 5102, 3201 or #)
330605 1315-1500 M, FordH 60, Penn, 4 cr

5115 Economic Anthropology (prereq 1102 or 5102, 3201 or #)
036682 0815-0900 MWF, FordH 285, Rivera, 4 cr

5131 Anthropology of Religion (prereq 1102 or 5102 or #)
836683 0945-1100 TTh, FordH 160, Prell, 4 cr

5141 Culture and Personality (prereq 1102 or 5102 or #, waived for public hlth, nurs, psy, soc, social work majs)
935265 1115-1230 TTh, FordH 130, Ingham, 4 cr

5162 Kinesics (prereq #)
009076 0945-1100 TTh, FordH 447, Sarles, 4 cr

5185 Medical Anthropology (prereq 1102 or 5102, 3001, # or intro biol, intro social sci course, #)
630609 1115-1230 TTh, FordH 175, Etkin, 4 cr

5413 Field Methods in Anthropological Lingustics (prereq #)
735266 1245-1400 TTh, FordH 256, Dunnigan, 4 cr

5910 Topics in Anthropology: Social Aspects of Development
335268 1415-1530 TTh, FordH 285, Epstein, 4 cr

5920 Topics in Anthropology
135269 –1 1115-1200 MWF, FordH 70, Hastorf, 4 cr (Andean Archaeology)
535270 –2 1215-1300 MWF, FordH 285, Rowe, 4 cr (Anthropology of Gender: Class, Race and Ethnicity)

R5960 Senior Seminar: Distributional Analysis in Archaeology (prereq sr maj)
630612 1415-1645 Th, FordH 235, Johnson, 4 cr

5970 Directed Readings (prereq #, △, CLA approval) (A-N only)
809077 2-4 cr

8001 Core Seminar: Cultural Anthropology (prereq anth grad student or #)
830611 1415-1645 T, FordH 235, Ogan, 3 cr

8510 Seminar: Archaeology
535267 1415-1645 Th, FordH 235, Johnson, 3 cr

8710 Seminar: Linguistic Anthropology
512314 1415-1645 W, FordH 235, Sarles, 3 cr

8950 Directed Studies (prereq #)
030610 ar cr

ARABIC (Arab)
South And Southwest Asian Studies
Liberal Arts

1101 Beginning Arabic
100098 1215-1300 MTWThF, FolH 105, Barker, 5 cr

3011 Intermediate Arabic (prereq 1103 or #)
500101 1015-1200 TTh, FolH 305, 4 cr

5011 Advanced Literary Arabic and Composition (prereq 3013 or #)
126006 5 cr

5970 Directed Readings (prereq #, △, CLA approval)
131397 ar cr

ARCHITECTURE (Arch)
Architecture & Landscape Architecture
Institute of Technology

R1010 Introduction to Architecture, Drawing
313352 1315-1700 TTh, Arch 40, Zuber, 4 cr

R1021 History of Environmental Development: Architecture (§LA 1021)
801156 1115-1300 TTh, NichH 45, Winterowd, 4 cr

R1041 Architectural Graphics (prereq student in pre-architecture, architecture or #)
613356 1820-2050 W, Arch 35, Grebner, 2 cr

R3001 Environmental Design: Man and Environment (§LA 3001)
508439 1315-1500 TTh, Arch 50, LaVine, 4 cr

R3061 Building Systems (prereq 3081 or ¶ or #, arch maj or adult special)
101154 1015-1200 TTh, Arch 25, Graffunder, 4 cr

R3064 Environmental Management and Control (prereq 3062, arch maj or adult special)
001155 1015-1200 TTh, Arch 50, Diedrich, 4 cr

R3081 Architectural Design (prereq 2nd yr for IT or CLA students, △, arch maj or adult special)
★LECT 1315-1700 MWF, Arch 40, Lockhart, others, 6 cr
108430 –1 LAB 1315-1700 MWF, Arch 135, Lockhart

R3091 Architectural Design (prereq 3083, arch maj or adult special)
★LECT 1315-1700 MWF, Arch 50, Stageberg, others, 6 cr
008431 –1 LAB 1315-1700 MWF, Arch 220

R3092 Architectural Design (prereq 3091)
★LECT 1315-1700 MWF, Arch 50, Stageberg, others, 6 cr
808432 –1 LAB 1315-1700 MWF, Arch 220

R3093 Architectural Design (prereq 3092)
★LECT 1315-1700 MWF, Arch 50, Stageberg, others, 6 cr
308426 –1 LAB 1315-1700 MWF, Arch 220

R3970 Directed Study (prereq 3081 or △)
601157 ar cr

R5051 Ancient Architecture (prereq 1021)
435102 1015-1200 MW, Arch 25, Winterowd, 4 cr

R5061 Contemporary Architecture (prereq arch maj, 1022, 3083 or #) (A-N only)
401158 1015-1200 WF, Arch 35, Dittmar, 4 cr

R5111 Architectural Design (prereq 3093, 3064-3065 or ¶, CE 3600-3601-3602 or ¶, IT arch maj or adult special)
★LECT 1315-1700 MWF, Arch 25, Weeks, others, 6 cr
008428 –1 LAB 1315-1700 MWF, Arch 230

R5112 Architectural Design (prereq 5111)
★LECT 1315-1700 MWF, Arch 25, Weeks, others, 6 cr
608433 –1 LAB 1315-1700 MWF, Arch 230

R5113 Architectural Design (prereq 5112)
★LECT 1315-1700 MWF, Arch 25, Weeks, 6 cr
208435 –1 LAB 1315-1700 MWF, Arch 145

R5115 Structure and Form in Architecture (prereq 3093, CE 3602, arch maj or adult special)
201159 1315-1700 T, Arch 25, Michelson, 4 cr

R5121 Architectural Design (prereq 5133, CE 3602, arch maj) (A-N only)
★LECT 1315-1700 MWF, Arch 35, Grebner, others, 6 cr
108436 –1 LAB 1315-1700 MWF, Arch 240

R5122 Architectural Design (prereq 5121, arch maj)
★LECT 1315-1700 MWF, Arch 35, Grebner, others, 6 cr
908437 –1 LAB 1315-1700 MWF, Arch 240

R5123 Architectural Thesis (prereq 5122, submit thesis plan qtr prior to writing, 800 hrs practical exp, arch maj)
913363 1315-1700 MTWThF, Arch 240, Rapson, 12 cr

R5127 Law for Architects (prereq 3093 or △)
601160 1715-1900 T, Arch 50, Heins, 4 cr

R5137 Planning: Urban Function and Structure (prereq #, arch maj or adult special)
401161 0815-1000 TTh, Arch 25, Showalter, 4 cr

R5141 Historic Preservation Process (prereq 1021 or #)
201162 1715-1845 TTh, Arch 40, Dunwiddie, 4 cr

R5850 Topics in Theory (prereq arch maj or adult special)
513348 2 cr

R5854 The Language of Architecture: Semiotics, Symbolism, and Metaphor (prereq 3083 or #, arch maj or adult special)
813341 1515-1700 Th, Arch 50, Rockcastle, 3 cr

R5950 Topics in Architecture (prereq 3093, 3067 or #)
736580 2 cr

R5951 Architecture and Behavior (prereq 3083 or #, arch maj or adult special)
135104 0915-1100 M, 0915-1000 W, Arch 15, Robinson, 3 cr

R5961 Computer-Aided Architectural Design (prereq architecture maj, 3083 or #)
235103 1315-1500 T, Arch 15, Anderson, 4 cr

R5970 Directed Study (prereq #)
801108 ar cr

R8201 Special Research: Architectural History (prereq 5056 or #)
601109 Winterowd, ar cr

R8251 Architectural Design (prereq grad status in architecture) (A-N only)
513365 1315-1700 MWF, Arch 210, Rauma, others, 6 cr

R8252 Architectural Design (prereq grad status in architecture) (A-N only)
113367 1315-1700 MWF, Arch 210, Rauma, others, 6 cr

R8253 Architectural Design (prereq grad status in architecture) (A-N only)
813369 1315-1700 MWF, Arch 210, Rauma, others, 6 cr

R8254 Architectural Design (prereq grad status in architecture) (A-N only)
013371 1315-1700 MWF, Arch 210, Thompson, others, 6 cr

R8255 Architectural Design (prereq grad status in architecture) (A-N only)
613373 1315-1700 MWF, Arch 210, Thompson, others, 6 cr

R8256 Architectural Design (prereq grad status in architecture) (A-N only)
913380 1315-1700 MWF, Arch 210, Thompson, others, 6 cr

R8261 Selected Problems in Architecture (prereq grad status in architecture)
613387 1315-1700 MWF, Arch 210, Michelson, others, 1-9 cr

R8262 Selected Problems in Architecture (prereq grad status in architecture)
313397 1315-1700 MWF, Arch 210, Michelson, others, 1-9 cr

R8263 Selected Problems in Architecture (prereq grad status in architecture)
513401 1315-1700 MWF, Arch 210, Michelson, others, 1-9 cr

R8271 Problems in City and Community Design
813405 1315-1700 MWF, Arch 210, Showalter, others, 9 cr

R8272 Problems in City and Community Design
313416 1315-1700 MWF, Arch 210, Showalter, others, 9 cr

R8273 Problems in City and Community Design
113426 1315-1700 MWF, Arch 210, Showalter, others, 9 cr

R8274 Problems in City and Community Design
613437 1315-1700 MWF, Arch 210, Showalter, others, 9 cr

R8275 Problems in City and Community Design
413441 1315-1700 MWF, Arch 210, Showalter, others, 9 cr

R8276 Problems in City and Community Design
113443 1315-1700 MWF, Arch 210, Showalter, others, 9 cr

ART EDUCATION (ArEd)
Curriculum And Instruction
Education

R3000 Art of Children (A-N only)
129688 1315-1500 TTh, WullH 220, 240, 3 cr

R3001 Survey of Art Activities (prereq non art education maj) (A-N only)
431311 –1 0915-1100 MWF, WullH 210, 220, Slettehaugh, 4 cr
231312 –2 1415-1600 MWF, WullH 210, 220, Park, 4 cr

R3009 Weaving Without A Loom (A-N only)
929689 1515-1700 MWF, WullH 240, 340, Smits, 4 cr

R3010 Introduction to Weaving (A-N only)
229690 1315-1500 MWF, WullH 340, Smits, 4 cr

R3020 Contemporary Crafts (A-N only)
129691 0915-1200 MW, WullH 110, 120, Park, 4 cr

R3110 Curriculum Development in Art (prereq educ stu) (A-N only)
929692 1015-1200 TTh, WullH 210, 240, Russell, 3 cr

R3200 Field Experiences in Art Education (prereq educ stu) (S-N only)
529694 1615-1800 T, WullH 110, Russell, 3-9 cr

3309 Independent Study (max 4 cr; prereq #) (A-N only)
329695 1-4 cr

3600 Student Teaching and Supervision of Art (prereq 3120, 3130, sr in art educ, SeEd 3150, Elem 3101, ¶3610) (S-N only)
129696 3-12 cr

R3610 Teaching Art in the Schools (prereq ¶3600) (A-N only)
029697 1615-1830 TTh, WullH 120, 3 cr

R5020 Advanced Contemporary Crafts (prereq 3020) (A-N only)
135099 0915-1200 MW, WullH 110, 120, Park, 4 cr

5316 Intercultural Education Through Art (A-N only)
835100 1615-1830 W, WullH 110, Slettehaugh, 3 cr

5386 Improving Art Programs in the Schools (prereq teaching experience or #) (A-N only)
635101 1615-1900 T, WullH 220, 240, DiBlasio, 4 cr

5600 Internship (prereq #) (A-N only)
829698 Slettehaugh, 3-9 cr

5605 Practicum (prereq #) (A-N only)
629699 DiBlasio, Slettehaugh, 3-9 cr

5900 Professional Problems (prereq MEd student, #) (A-N only)
329700 DiBlasio, Slettehaugh, 3 cr

8900 Problems: Art Education (prereq #)
129701 DiBlasio, Slettehaugh, ar cr

ART HISTORY (ArtH)
Liberal Arts

R1002 Introduction to the History of Art
511468 1015-1100 MWF, WilleyH 125, Steyaert, Marling, Stoughton, 4 cr

R1015 Art in Western Civilization
935105 0945-1100 TTh, FraserH 102, Waldfogel, 4 cr

R3008 History of Ancient Art (§1008)
430613 0915-1000 MWF, FraserH 102, Gunter, 4 cr

R3009 History of Medieval Art
735106 1215-1300 MWF, FraserH 102, Steyaert, 4 cr

R3011 History of Renaissance and Baroque Art
535107 1015-1100 MWF, FraserH 102, Canedy, 4 cr

R3013 Introduction to Far Eastern Art (§1016, EAS 3013)
335108 0945-1100 TTh, JonesH 207A, Poor, 4 cr

R3162 Roman Art and Archaeology (§Clas 3162)
536919 1115-1200 MWF, JonesH 207A, McNally, 5 cr

R3303 Baroque and Rococo Painting in France
108394 1215-1300 MWF, JonesH 207B, Stoughton, 4 cr

R3468 Modern Expressionism: Van Gogh to Beckmann
135109 1245-1400 TTh, FraserH 102, Simon, 4 cr

R3579 The Arts in America: Great Depression to the Present
535110 1315-1400 MWF, FraserH 102, Marling, 4 cr

3970 Directed Studies (prereq #, △, college approval)
130615 1-5 cr

3971 Major Project (prereq art history maj, 3895, #)
112333 1 cr

3975 Directed Museum Experience (prereq # Director of Undergrad Studies, Director of Museology or a faculty supervisor) (S-N only)
012334 1-3 cr

R5111 Bronze Age Art and Architecture in Greece, ca. 3000-1100 B.C. (§Clas 5111; prereq one ancient art or archaeology course)
135112 1115-1200 MWF, JonesH 207B, Gunter, 4 cr

R5307 15th Century Italian Architecture, Sculpture, and Painting (prereq 3011 or #)
035113 1215-1300 MWF, JonesH 207A, Canedy, 4 cr

R5347 Baroque Art in France, England, and Lowlands (prereq 3011 or grad student or #)
835114 0815-0900 MWF, JonesH 207B, Stoughton, 5 cr

R5442 The Advent of Modernism: Later 19th Century French Painting (prereq one 3xxx level art history course or grad student or #)
635115 1245-1400 TTh, JonesH 207B, Waldfogel, 5 cr

R5463 Early 20th Century Painting (prereq one American or modern art course or #)
435116 0945-1100 TTh, JonesH 207B, Simon, 5 cr

R5643 Prehistoric Art of Northern Europe (prereq one art hist course or #)
235117 1115-1230 TTh, JonesH 207A, Nelson, 4 cr

R5774 The Art of Asia: Perspective and Problems (prereq grad or #) (A-N only)
936934 1315-1400 MWF, JonesH 207B, Asher, 5 cr

R5895 Methods and Research in Art History (§3895, 8801; prereq art hist sr maj, #)
930616 1215-1400 T, JonesH 1, Poor, 4 cr

5970 Directed Readings (prereq sr, #, △, CLA approval)
730617 1-5 cr

5990 Directed Research (prereq sr, #, △, CLA approval)
811492 1-5 cr

R8992 Museology I: Museum Principles and Practices (8992-8993†; prereq △)
908406 1415-1630 T, JonesH 1, 4 cr

8995 Museology II (prereq △)
211495 Smith, 5 cr

R8996 Museology III (prereq 8995)
727331 Smith, 5 cr

ART STUDIO (ArtS)
Liberal Arts

Note:
Materials Fees are assessed at the time of registration for many Studio Arts courses. For course numbers and fee amounts, see Section 4, Course Fees.

R1101 Drawing I
000376 –1 0815-1000 MWF, ArtB 160, 4 cr (Arts, ArEd, Dsgn majs only)
600378 –2 0815-1000 MWF, ArtB 141, 4 cr (ArtS, ArEd, Dsgn majs only)
800380 –3 1015-1200 MWF, ArtB 150, Gray, 4 cr (Arts, ArEd, Dsgn majs only)
600381 –4 1215-1400 MWF, ArtB 160, 4 cr (ArtS, ArEd, Dsgn majs only)
308703 –5 0915-1200 TTh, ArtB 161, Hendler, 4 cr (ArtS, ArEd, Dsgn majs only)
008705 –6 0915-1200 TTh, ArtB 160, Cowette, 4 cr (ArtS, ArEd, Dsgn majs only)
408708 –7 1315-1600 TTh, ArtB 160, 4 cr (ArtS, ArEd, Dsgn majs only)
608707 –8 0815-1000 MWF, ArtB 160, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
408711 –9 0815-1000 MWF, ArtB 141, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
208709 –10 1015-1200 MWF, ArtB 150, Gray, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
633249 –11 1215-1400 MWF, ArtB 160, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
033250 –12 0915-1200 TTh, ArtB 161, Hendler, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
833251 –13 0915-1200 TTh, ArtB 160, Cowette, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
633252 –14 1315-1600 TTh, ArtB 160, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
433253 –15 0815-1000 MWF, ArtB 160, 4 cr
233254 –16 0815-1000 MWF, ArtB 141, 4 cr
133255 –17 1015-1200 MWF, ArtB 150, Gray, 4 cr
933256 –18 1215-1400 MWF, ArtB 160, 4 cr
733257 –19 0915-1200 TTh, ArtB 161, Hendler, 4 cr
533258 –20 0915-1200 TTh, ArtB 160, Cowette, 4 cr
333259 –21 1315-1600 TTh, ArtB 160, 4 cr

R1102 Drawing II (prereq 1101)
200383 –1 0815-1000 MWF, ArtB 150, Gray, 4 cr (ArtS, ArEd, Dsgn majs only)
900385 –2 0815-1000 MWF, ArtB 150, Gray, 4 cr
500387 –3 0915-1200 TTh, ArtB 150, 4 cr (ArtS, ArEd, Dsgn majs only)
208712 –4 0915-1200 TTh, ArtB 150, 4 cr

R1105 Beginning Painting
300391 –1 0915-1200 MW, ArtB 151, Feinberg, 4 cr (ArtS, ArEd, Dsgn majs only)
000393 –2 0915-1200 MW, ArtB 151, Feinberg, 4 cr
308717 –3 1315-1600 TTh, ArtB 161, Hendler, 4 cr (ArtS, ArEd, Dsgn majs only)
008719 –4 1315-1600 TTh, ArtB 161, Hendler, 4 cr

R1301 Sculpture
200402 –1 0915-1200 MW, ArtB 65, Potratz, 4 cr (ArtS, ArEd, Dsgn majs only)
100403 –2 0915-1200 MW, ArtB 65, Potratz, 4 cr
531364 –3 0915-1200 TTh, ArtB 65, Lucey, 4 cr (ArtS, ArEd, Dsgn majs only)
211531 –4 0915-1200 TTh, ArtB 65, Lucey, 4 cr
108721 –5 1315-1600 TTh, ArtB 65, Baldwin, 4 cr (ArtS, ArEd, Dsgn majs only)
008722 –6 1315-1600 TTh, ArtB 65, Baldwin, 4 cr

R1302 Sculpture
900404 –1 0915-1200 MW, ArtB 50, Rose, 4 cr (ArtS, ArEd, Dsgn majs only)
500406 –2 0915-1200 MW, ArtB 50, Rose, 4 cr
331365 –3 1315-1600 MW, ArtB 50, Potratz, 4 cr (ArtS, ArEd, Dsgn majs only)
808723 –4 1315-1600 MW, ArtB 50, Potratz, 4 cr
608724 –5 0915-1200 TTh, ArtB 50, Baldwin, 4 cr (ArtS, ArEd, Dsgn majs only)
208726 –6 0915-1200 TTh, ArtB 50, Baldwin, 4 cr

R1401 Introduction to Studio Arts
530618 1515-1700 TTh, WilleyH 125, 4 cr

R1404 Color (§1104; prereq 1101)
936500 –1 0915-1200 MW, ArtB 140, Somberg, 4 cr (ArtS, ArEd, Dsgn majs only)
736501 –2 0915-1200 MW, ArtB 140, Somberg, 4 cr
536502 –3 1315-1600 MW, ArtB 140, Feinberg, 4 cr (ArtS, ArEd, Dsgn majs only)
336503 –4 1315-1600 MW, ArtB 140, Feinberg, 4 cr

R1510 Printmaking: Intaglio (max 8 cr)
330619 –1 0915-1200 TTh, ArtB 170, Myers, 4 cr (ArtS, ArEd, Dsgn majs only)
708732 –2 0915-1200 TTh, ArtB 170, Myers, 4 cr

R1520 Printmaking: Lithography (max 8 cr)
730620 –1 0915-1200 MW, ArtB 176, Krepps, 4 cr (ArtS, ArEd, Dsgn majs only)
308734 –2 0915-1200 MW, ArtB 176, Krepps, 4 cr

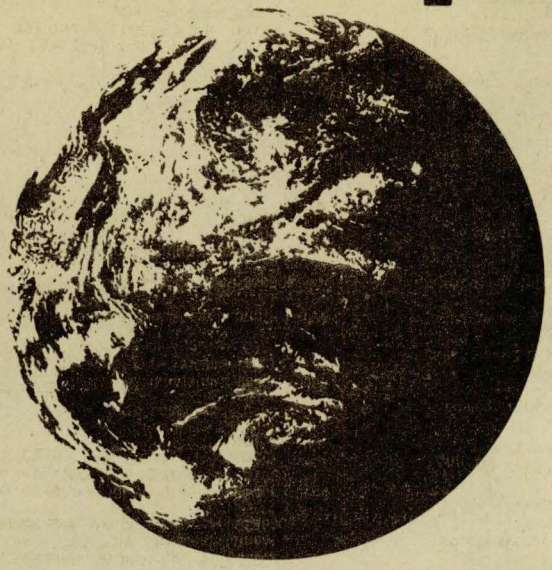
R1530 Printmaking: Relief (max 8 cr)
826008 –1 0915-1200 MW, ArtB 175, Bethke, 4 cr (ArtS, ArEd, Dsgn majs only)
008736 –2 0915-1200 MW, ArtB 175, Bethke, 4 cr

R1701 Photo Medium
100408 –1 0915-1200 MW, ArtB 120, Henkel, 4 cr (ArtS, ArEd, Dsgn majs only)
300410 –2 0915-1200 MW, ArtB 120, Henkel, 4 cr (CLA students only)
026007 –3 0915-1200 TTh, ArtB 120, Hallman, 4 cr (ArtS, ArEd, Dsgn majs only)
608738 –4 0915-1200 TTh, ArtB 120, Hallman, 4 cr (CLA students only)

R1811 Ceramics: Handbuilding
111546 –1 0915-1200 MW, ArtB 10, Lane, 4 cr (ArtS, ArEd, Dsgn majs only)
711548 –2 0915-1200 MW, ArtB 10, Lane, 4 cr
408739 –3 0915-1200 TTh, ArtB 10, Hoard, 4 cr (ArtS, ArEd, Dsgn majs only)
608741 –4 0915-1200 TTh, ArtB 10, Hoard, 4 cr

R3110 Drawing (max 12 cr; prereq 1102, 1401)
000412 –1 0915-1200 TTh, ArtB 140, Rowan, 4 cr (ArtS, ArEd, Dsgn majs only)
600414 –2 0915-1200 TTh, ArtB 140, Rowan, 4 cr
208743 –3 1315-1600 TTh, ArtB 140, Caglioti, 4 cr (ArtS, ArEd, Dsgn majs only)
908745 –4 1315-1600 TTh, ArtB 140, Caglioti, 4 cr

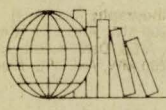
The Global Campus



Explore the University of Minnesota's global campus with a study abroad program through the Extension Classes Office of Study Abroad (ECOSA).

ECOSA programs are cosponsored by University of Minnesota academic departments offering courses in several disciplines. In most cases, credits can be applied to distribution requirements, second language requirements, or major requirements for University degree programs.

Information meetings are held throughout the year to acquaint students with study abroad programs; call **(612) 376-5049** to be placed on the mailing list. Once you apply and are accepted into a program, orientation meetings with instructors and staff help you prepare to live and to study in your host country.



Anthropology in Mexico
Art Education in Europe
Family Issues in Scandinavia
Forestry Seminar in Scandinavia
French in Montpellier
German in Graz
Hebrew Ulpan in Israel
International Program in Toledo, Spain
Literature in London
Minnesota Studies in International Development
Spanish in Cuernavaca
Studio Arts in China
Swedish in Växjö

For more information, contact
Extension Classes Office of Study Abroad
University of Minnesota, 202 Wesbrook Hall
77 Pleasant Street S.E., Minneapolis, MN 55455
(612) 376-5049

Continuing Education and Extension

An equal opportunity educator and employer

University of Minnesota



ARE YOU A BUDGET BRIDE AND GROOM?

50% student discount on wedding rings.

MORGAN'S
FINE JEWELRY

Suite 1740, Midwest Federal Bldg.
801 Nicollet Mall, 332-0453

R3120 **Painting** (max 12 cr; prereq 1104, 1105, 1401, 4 cr of 3110 or #)
200416 –1 0915-1200 MW, ArtB 151, Roode, 4 cr (ArtS, ArEd, Dsgn majs only)
900418 –2 0915-1200 MW, ArtB 151, Roode, 4 cr
508747 –3 1315-1600 MW, ArtB 151, Somberg, 4 cr (ArtS, ArEd, Dsgn majs only)
308748 –4 1315-1600 MW, ArtB 151, Somberg, 4 cr

R3140 **Drawing and Painting** (max 6 cr; prereq 1101 or 1109 or #, arch student)
100420 –1 1700-1900 MW, ArtB 160, 2 cr
700422 –2 1700-1900 TTh, ArtB 150, 2 cr

R3160 **Watercolor** (max 12 cr; prereq 1101, 1104, 1401 or #)
530621 0915-1200 TTh, ArtB 141, Caglioti, 4 cr (ArtS, ArEd, Dsgn majs only)

R3302 **Sculpture: Plastics Media** (prereq 1301, 1302, 1401)
330622 –1 1315-1600 MW, ArtB 50, Rose, 4 cr (Arts, ArEd, Dsgn majs only)
808754 –2 1315-1600 MW, ArtB 50, Rose, 4 cr

R3304 **Sculpture: Wood and Stone** (prereq 1301, 1302, 1401)
333276 –1 1315-1600 TTh, ArtB 50, Lucey, 4 cr (ArtS, ArEd, Dsgn majs only)
133277 –2 1315-1600 TTh, ArtB 50, Lucey, 4 cr

3403H Honors Workshop (prereq honors candidate, 1401, #, △)
611090 2-4 cr

3404H Honors Workshop (prereq honors candidate, 1401, #, △)
211092 2-4 cr

3405H Honors Thesis (prereq 1401, #)
111093 2-4 cr

3406H Honors Thesis (prereq 1401, #)
711095 2-4 cr

R3430 **Paper: Pulp to Plastic Expression** (max 12 cr; prereq 1401, 1xxx level studio arts)
212808 –1 0915-1200 TTh, ArtB 176, Krepps, 4 cr (ArtS, ArEd, Dsgn majs only)
412810 –2 0915-1200 TTh, ArtB 176, Krepps, 4 cr

R3510 **Printmaking: Intaglio** (max 12 cr; prereq 1401, 4 cr of 1510 or #)
630626 –1 1315-1600 TTh, ArtB 170, Myers, 4 cr (ArtS, ArEd, Dsgn majs only)
208760 –2 1315-1600 TTh, ArtB 170, Myers, 4 cr

R3520 **Printmaking: Lithography** (max 12 cr; prereq 1401, 4 cr of 1520 or #)
830625 –1 1315-1600 MW, ArtB 176, Krepps, 4 cr (ArtS, ArEd, Dsgn majs only)
908762 –2 1315-1600 MW, ArtB 176, Krepps, 4 cr

R3530 **Printmaking: Relief** (max 12 cr; prereq 1401, 4 cr of 1530 or #)
511535 –1 1315-1600 MW, ArtB 175, Bethke, 4 cr (ArtS, ArEd, Dsgn majs only)
508764 –2 1315-1600 MW, ArtB 175, Bethke, 4 cr

R3710 **Photography** (max 12 cr; prereq 1401, 1701 or Jour 1301 or #)
130623 –1 1315-1600 MW, ArtB 120, Henkel, 4 cr (ArtS, ArEd, Dsgn majs only)
308765 –2 1315-1600 MW, ArtB 120, Henkel, 4 cr (CLA students only)

R3810 **Intermediate Ceramics** (max 12 cr; prereq 1401, 1811, 1812 or #)
030624 –1 0915-1200 MW, ArtB 10, MacKenzie, 4 cr (ArtS, ArEd, Dsgn majs only)
108766 –2 0915-1200 MW, ArtB 10, MacKenzie, 4 cr

R3820 **Glassworking** (max 12 cr; prereq 1401, 1811 or 1301 or 1302)
133280 1315-1600 MW, ArtB 186, Lane, 4 cr

3830 Glass: Introduction to Neon (max 12 cr; prereq 1401)
912388 1315-1600 MW, ArtB 186, Lane, 4 cr

3970 Directed Study (max 8 cr; prereq 24 cr studio arts, #, △, college approval)
430627 –1 Baldwin, 1-5 cr
816689 –2 Bethke, 1-5 cr
736126 –3 Caglioti, 1-5 cr
536127 –4 Cowette, 1-5 cr
336128 –5 Feinberg, 1-5 cr
136129 –6 Gray, 1-5 cr
536130 –7 Hallman, 1-5 cr
336131 –8 Hendler, 1-5 cr
136132 –9 Henkel, 1-5 cr
036133 –10 Hoard, 1-5 cr
836134 –11 Krepps, 1-5 cr
636135 –12 Lane, 1-5 cr
436136 –13 Lucey, 1-5 cr
236137 –14 MacKenzie, 1-5 cr
136138 –15 Myers, 1-5 cr
936139 –16 Potratz, 1-5 cr
236140 –17 Roode, 1-5 cr
136141 –18 Rose, 1-5 cr
936142 –19 Rowan, 1-5 cr
736143 –20 Somberg, 1-5 cr
536144 –21 Brooks, 1-5 cr

3980 Directed Instruction (max 8 cr; prereq #, △, college approval)
230628 –1 Baldwin, 1-5 cr
636149 –2 Bethke, 1-5 cr
036150 –3 Caglioti, 1-5 cr
836151 –4 Cowette, 1-5 cr
636152 –5 Feinberg, 1-5 cr
436153 –6 Gray, 1-5 cr
236154 –7 Hallman, 1-5 cr
136155 –8 Hendler, 1-5 cr
736157 –9 Henkel, 1-5 cr
936156 –10 Hoard, 1-5 cr
536158 –11 Krepps, 1-5 cr
336159 –12 Lane, 1-5 cr
736160 –13 Lucey, 1-5 cr
536161 –14 MacKenzie, 1-5 cr
336162 –15 Myers, 1-5 cr
136163 –16 Potratz, 1-5 cr
036164 –17 Roode, 1-5 cr
836165 –18 Rose, 1-5 cr
636166 –19 Rowan, 1-5 cr
436167 –20 Somberg, 1-5 cr
236168 –21 Brooks, 1-5 cr

R5110 **Drawing** (max 16 cr; prereq 12 cr of 3110)
800430 –1 1315-1600 TTh, ArtB 141, Rowan, 4 cr
400432 –2 4 cr (sr, grad only, written permission req)

R5120 **Painting** (max 16 cr; prereq 12 cr of 3120 or #)
100434 –1 1315-1600 TTh, ArtB 151, Cowette, 4 cr
700436 –2 4 cr (sr, grad only, written permission req)

R5160 **Watercolor** (max 16 cr; prereq 12 cr of 3160 or #)
111523 –1 0915-1200 TTh, ArtB 141, Caglioti, 4 cr (ArtS, ArEd, Dsgn majs only)
611526 –2 4 cr (sr, grad only, written permission req)

5190 Drawing and Painting (max 16 cr; prereq #, non maj)
130629 3-4 cr

R5320 **Sculpture: Plastics Media** (max 16 cr; prereq 3302)
430630 1315-1600 MW, ArtB 50, Rose, 4 cr

R5340 **Sculpture: Wood and Stone** (max 16 cr; prereq 3304)
033278 1315-1600 TTh, ArtB 50, Lucey, 4 cr

5390 Sculpture (max 16 cr; prereq #, non maj)
530635 Baldwin, Lucey, others, 3-4 cr

R5400 **Concepts in Contemporary Art** (prereq sr, studio art maj or #)
330636 1615-1700 TTh, Law 15, Roode, 4 cr

R5430 **Paper: Pulp to Plastic Expression** (max 16 cr; prereq 12 cr, # or △)
112812 0915-1200 TTh, ArtB 176, Krepps, 4 cr

R5510 **Printmaking: Intaglio** (max 16 cr; prereq 12 cr of 3510 or #)
030638 1315-1600 TTh, ArtB 170, Myers, 4 cr

R5520 **Printmaking: Lithography** (max 16 cr; prereq 12 cr of 3520 or #)
130637 1315-1600 MW, ArtB 176, Krepps, 4 cr

R5530 **Printmaking: Relief** (max 16 cr; prereq 12 cr of 3530 or #)
111537 1315-1600 MW, ArtB 175, Bethke, 4 cr

5590 Printmaking (max 16 cr; prereq #, non maj)
830639 Bethke, 3-4 cr

R5710 **Photography** (max 16 cr; prereq 12 cr of 3710 or #)
830642 1315-1600 TTh, ArtB 120, Hallman, 4 cr

5790 Photography (max 16 cr; prereq #, non maj)
030641 Henkel, 3-4 cr

R5810 **Advanced Ceramics** (max 16 cr; prereq 12 cr of 3810 or #)
130640 1315-1600 TTh, ArtB 10, Hoard, 4 cr

R5820 **Glass Working** (max 16 cr; prereq 3823 or 12 cr of 3820 or #)
130646 1315-1600 MW, ArtB 186, Lane, 4 cr

R5830 **Glass: Neon** (max 16 cr; prereq 12 cr of 3830)
112381 1315-1600 MW, ArtB 186, Lane, 4 cr

5890 Ceramics and Glass Working (max 16 cr; prereq #)
730648 3-4 cr

5970 Directed Studies (max 12 cr; prereq 24 cr studio arts, #, △, CLA approval)
530649 –1 Baldwin, 1-5 cr
936173 –2 Bethke, 1-5 cr
736174 –3 Caglioti, 1-5 cr
536175 –4 Cowette, 1-5 cr
336176 –5 Feinberg, 1-5 cr
136177 –6 Gray, 1-5 cr
036178 –7 Hallman, 1-5 cr
836179 –8 Hendler, 1-5 cr
136180 –9 Henkel, 1-5 cr
036181 –10 Hoard, 1-5 cr
836182 –11 Krepps, 1-5 cr
636183 –12 Lane, 1-5 cr
436184 –13 Lucey, 1-5 cr
236185 –14 MacKenzie, 1-5 cr
136186 –15 Myers, 1-5 cr
936187 –16 Potratz, 1-5 cr
736188 –17 Roode, 1-5 cr
536189 –18 Rose, 1-5 cr
936190 –19 Rowan, 1-5 cr
736191 –20 Somberg, 1-5 cr
536192 –21 Brooks, 1-5 cr

R8110 **Drawing** (max 12 cr; prereq #)
800444 –1 1315-1600 TTh, ArtB 141, Rowan, 4 cr
100448 –2 4 cr (grad only)

8120 Painting (max 24 cr; prereq #)
930650 4 cr

R8300 **20th Century Art Theories in Sculpture** (max 6 cr; prereq #)
730651 1615-1800 M, ArtB 75, Potratz, 1 cr

8320 Sculpture: Plastics Media (max 12 cr; prereq #)
830656 1315-1600 MW, ArtB 50, Rose, 4 cr

R8340 **Sculpture: Wood, Stone** (max 12 cr; prereq #)
833279 1315-1600 TTh, ArtB 50, Lucey, 4 cr

8510 Printmaking (max 32 cr; prereq #)
530652 4 cr

8710 Photography (max 24 cr; prereq #)
130654 4 cr

8810 Ceramics (max 24 cr; prereq #)
630643 4 cr

8820 Glassworking (max 24 cr; prereq #)
430644 4 cr

ASTRONOMY (Ast)
Institute of Technology

R1011 **Descriptive Astronomy** (§1021)
900449 –1 0915-1000 MTWTh, Phys 150, Kennicutt, 4 cr
100451 –2 1015-1100 MTWTh, Phys 166, Kennicutt, 4 cr
700453 –3 1215-1300 MTWF, Phys 150, Stein, 4 cr
100456 –4 1415-1500 MTWTh, Phys 166, Ney, 4 cr
800458 –5 1830-2015 MW, Phys 166, Davidson, 4 cr

R1015 **Descriptive Astronomy Laboratories** (§1025H; prereq high school algebra...high school trigonometry rec)
611574 TJ Jones, 1 cr (Lab time assigned first 2 days of quarter, Phys 450)

1021H Introduction to Astronomy (§1011; prereq high school trigonometry, physics or chemistry)
511096 1315-1400 MTWTh, Phys 131, Jones, 4 cr

R1025H **Introduction to Astronomy Laboratory** (§1015, 1015H; prereq high school algebra, trigonometry, physics or chemistry)
311097 –80 LAB 1515-1700 M, Phys 157, TJ Jones, 1 cr (min one night obs req)
111098 –81 LAB 1830-2030 Th, Phys 157, TJ Jones, 1 cr

3051 Introduction to Astronomy and Astrophysics (prereq 1 yr calculus, Phys 1106 or 1291 or #)
035242 1415-1500 MWF, Phys 210, Rudnick, 4 cr

3970 Directed Studies (prereq #, △)
308412 1-5 cr

5321 Radiation Processes in Astrophysics (prereq Phys 5024, 5102 or #)
626009 1015-1130 MW, Phys 236A, Jones, 4 cr

5970 Directed Studies (prereq #, △)
011572 1-5 cr

5990 Directed Research (prereq #, △)
601465 ar cr

8200 Seminar
201467 1530-1630 Th, Phys 210, Humphreys, 1-3 cr

8481 Topics in Astrophysics: Seminar on Correlation and Signal Processing in Radio Astronomy (prereq #)
135241 1015-1130 TTh, Phys 236A, Dickey, 3 cr

8990 Research in Astronomy and Astrophysics (prereq #)
201470 ar cr

BIOCHEMISTRY (BioC)
Biological Sciences

1301 Elementary Biochemistry I (§Chem 1002, 3301; prereq Chem 1001 or 1005)
129262 0900-0945 MTWThF, PalmC 10, Jenness, 5 cr

3960 Research Topics in Biochemistry (S-N only)
029263 1600-1645 Th, GorL 239, Nelsestuen, 1 cr

R5025 Laboratory in Biochemistry (prereq Biol 5001 or ¶)
★LECT 1200-1245 T, PalmC 10, Wood, 2 cr
129299 –1 LAB 0800-1145 T, SnH 122, 128
829300 –2 LAB 1300-1645 T, SnH 122, 128
★LECT 1730-1815 T, SnH 122, Warner, 2 cr
629301 –3 LAB 1815-2200 T, SnH 122, 128

5271 Vitamins (prereq 5752 or 5002 or #)
335125 0730-0840 TTh, BioSci 12, Henderson, 3 cr

5522 Physical Biochemistry: Solution Structure and Intermolecular Forces (§Chem 5522, MdBc 5522; prereq 2 qtrs physical chemistry...Biol 5001 desirable)
829264 1230-1400 MW, BioSci 12, Bloomfield, Woodward, 4 cr

5751 General Biochemistry (§MdBc 5751; prereq 3 qtrs organic chem, 2 qtrs phys chem, 1 qtr biochem or #)
629265 0800-0900 MWF, Zoology 313, Howard, Lipscomb, 4 cr (Mpls)

5970 Directed Studies (prereq #, △)
229267 ar cr

5990 Directed Research (prereq #, △)
108422 ar cr

8094 Research and Literature Reports
129268 1200-1245 F, GorL 239, 1 cr

8194 Graduate Seminar (prereq △)
929269 1600-1715 W, PalmC 10, Warner, 1 cr

8210 Advanced Topics in DNA Biochemistry (§MdBc 8210; prereq 5753 or #) (A-N only)
436816 1515-1600 MWF, MoosT 2520, Livingston, 3 cr

8290 Current Research Techniques (prereq grad maj in biochem, △)
229270 1-3 cr

8990 Graduate Research (prereq #)
129271 2-5 cr

BIOCHEMISTRY, MEDICAL (MdBc)
Medical School

1030 Physiological Chemistry for Dental Hygiene, Nursing Students (§3050)
900273 0915-1000 MTWTh, PWB 2470, Adolph, Oegema, 4 cr

3050 Physiological Chemistry for Nurses (§1030)
100277 1015-1100 MTWTh, MoosT 2620, Edstrom, Roon, 4 cr

5053 Problems in Biochemistry (prereq 5100 or 5751)
800282 1-10 cr

5100 Medical Biochemistry (prereq regis med fr)
★LECT 1315-1400 MWThF, PWB 2470, Livingston, Carr, others, 5 cr (Sept 7-Dec 16)
831418 –1 LAB 1415-1500 M, MoosT 2520, 1415-1700 M, MoosT 2164, 2191, 2193, Van Pilsum, Roon
431423 –2 LAB 0915-1000 T, MoosT 2520, 0915-1200 T, MoosT 2164, 2191, 2193, Van Pilsum, Roon
313545 –3 LAB 0915-1000 Th, MoosT 2520, 0915-1200 Th, MoosT 2164, 2191, 2193, Van Pilsum, Roon

5202 Biochemistry for Dental Students
236817 0900-0945 MTWThF, MoosT 2620, Singer, Carr, others, 6 cr (Sept 8-Dec 9)

5203 Topics: Dental Biochemistry
236607 0800-0945 M (Nov 28, Dec 5), 0800-0845 W (Sept 7-Nov 9), 0800-0945 W (Nov 16-Dec 7), 0800-0845 F (Oct 21-Dec 9), MoosT 2690, 3 cr

5300 Biochemistry (prereq phys, organic chem, med tech)
000295 0815-0900 MTWThF, OwreH 2210, Tan, Ungar, 5 cr

5522 Physical Biochemistry: Solution Structure and Intermolecular Force (§BioC 5522, Chem 5522; prereq 2 qtrs physical chemistry...Biol 5001 desirable)
111814 1230-1400 MW, BioSci 12, Bloomfield, Woodward, 4 cr (StP)

5750 General Biochemistry Laboratory (prereq 5100 or 5752)
136818 0815-1100 TTh, 1300-1600 TTh, MoosT 2167, Adolph, Oegema, 4 cr

5751 General Biochemistry (§BioC 5751; prereq 3 qtrs organic chem, 2 qtrs physical chem, 1 qtr biochem or #)
600297 0800-0900 MWF, Zoology 313, Howard, Lipscomb, 4 cr

8150 Seminar: Biochemistry (S-N only)
811816 1215-1300 Th, OwreH 4218, Ungar, 1 cr

8206 Advanced Endocrinology and Steroid Chemistry (prereq 5100 or 5753)
935167 1315-1400 MWF, MoosT 2580, Ungar, 3 cr

8210 Advanced Topics in DNA Biochemistry (§BioC 8210; prereq 5753 or #)
936819 1515-1600 MWF, MoosT 2520, Fuchs, Livingston, 3 cr

8290 Current Research Techniques (prereq grad maj in biochem, #) (S-N only)
000300 1-3 cr

8300 Research
411821 ar cr

BIOLOGY (Biol)
Biological Sciences

R1008 Introductory Biology: An Evolutionary Approach
★LECT 1215-1300 MWF, MoosT 2650, Tordoff
535365 –1 REC 0915-1000 M, FordH 60, 4 cr
335366 –2 REC 1015-1100 M, FordH 160, 4 cr
135367 –3 REC 1115-1200 M, MinMet 124, 4 cr
035368 –4 REC 1315-1400 M, MoosT 2520, 4 cr
835369 –5 REC 0815-0900 W, FordH 160, 4 cr
135370 –6 REC 0915-1000 W, FordH 60, 4 cr
035371 –7 REC 1015-1100 W, FordH 160, 4 cr
835372 –8 REC 1115-1200 W, MinMet 124, 4 cr
635373 –9 REC 1315-1400 W, MinMet 124, 4 cr
435374 –10 REC 0915-1000 F, FordH 60, 4 cr
235375 –11 REC 1015-1100 F, FordH 160, 4 cr
135376 –12 REC 1115-1200 F, MinMet 124, 4 cr
935377 –13 REC 1315-1400 F, MinMet 124, 4 cr

R1008H Introductory Biology: An Evolutionary Approach
★LECT 1015-1100 MWF, Zoology 102, Gilbertson
513561 –81 REC 1115-1200 M, Zoology 102, 4 cr
114737 –82 REC 1115-1200 W, Zoology 102, 4 cr

R1009 General Biology (§1011)
★LECT 0815-0900 MWF, WilleyH 125, Kirkwood
008848 –1 LAB 0815-1000 TTh, KoltH S167, 5 cr
108850 –2 LAB 0815-1000 TTh, KoltH S170, 5 cr
808852 –3 LAB 1015-1200 TTh, KoltH S167, 5 cr
408854 –4 LAB 1015-1200 TTh, KoltH S170, 5 cr
108856 –5 LAB 1315-1500 TTh, KoltH S160, 5 cr
708858 –6 LAB 1315-1500 TTh, KoltH S167, 5 cr
908860 –7 LAB 1315-1500 TTh, KoltH S170, 5 cr
508862 –8 LAB 1515-1700 TTh, KoltH S160, 5 cr
108864 –9 LAB 1515-1700 TTh, KoltH S167, 5 cr
008865 –10 LAB 1015-1200 WF, KoltH S160, 5 cr
808866 –11 LAB 1015-1200 WF, KoltH S167, 5 cr
408868 –12 LAB 1315-1500 WF, KoltH S160, 5 cr
608870 –13 LAB 1315-1500 WF, KoltH S167, 5 cr
208872 –14 LAB 1515-1700 WF, KoltH S160, 5 cr
908874 –15 LAB 1515-1700 WF, KoltH S167, 5 cr
★LECT 1215-1300 MWF, WilleyH 175, Simmons
308877 –16 LAB 0815-1000 TTh, KoltH S177, 5 cr
008879 –17 LAB 0815-1000 TTh, KoltH S179, 5 cr
308880 –18 LAB 0815-1000 TTh, KoltH S183, 5 cr
108881 –19 LAB 1015-1200 TTh, KoltH S177, 5 cr
808883 –20 LAB 1015-1200 TTh, KoltH S179, 5 cr
408885 –21 LAB 1015-1200 TTh, KoltH S183, 5 cr
608920 –22 LAB 1015-1200 TTh, KoltH S187, 5 cr
208922 –23 LAB 1315-1500 TTh, KoltH S177, 5 cr
908924 –24 LAB 1315-1500 TTh, KoltH S179, 5 cr
508926 –25 LAB 1315-1500 TTh, KoltH S183, 5 cr
108928 –26 LAB 1315-1500 TTh, KoltH S187, 5 cr
308930 –27 LAB 1515-1700 TTh, KoltH S170, 5 cr
008932 –28 LAB 1515-1700 TTh, KoltH S177, 5 cr
808933 –29 LAB 1515-1700 TTh, KoltH S179, 5 cr
408935 –30 LAB 1515-1700 TTh, KoltH S183, 5 cr
108937 –31 LAB 0815-1000 WF, KoltH S160, 5 cr
908938 –32 LAB 0815-1000 WF, KoltH S167, 5 cr
108940 –33 LAB 0815-1000 WF, KoltH S170, 5 cr
908941 –34 LAB 0815-1000 WF, KoltH S177, 5 cr
508943 –35 LAB 0815-1000 WF, KoltH S179, 5 cr
308944 –36 LAB 0815-1000 WF, KoltH S183, 5 cr
108945 –37 LAB 1015-1200 WF, KoltH S170, 5 cr
008946 –38 LAB 1015-1200 WF, KoltH S177, 5 cr
808947 –39 LAB 1015-1200 WF, KoltH S179, 5 cr
608948 –40 LAB 1015-1200 WF, KoltH S183, 5 cr
408949 –41 LAB 1315-1500 WF, KoltH S170, 5 cr
808950 –42 LAB 1315-1500 WF, KoltH S177, 5 cr
408952 –43 LAB 1315-1500 WF, KoltH S179, 5 cr
108954 –44 LAB 1315-1500 WF, KoltH S183, 5 cr
708956 –45 LAB 1315-1500 WF, KoltH S187, 5 cr
308958 –46 LAB 1515-1700 WF, KoltH S170, 5 cr
508960 –47 LAB 1515-1700 WF, KoltH S177, 5 cr
108962 –48 LAB 1515-1700 WF, KoltH S179, 5 cr
★LECT 1800-1910 TTh, AndH 210
408966 –49 LAB 1920-2100 TTh, KoltH S183, 5 cr

R1009H General Biology (§1011H; prereq honors division or 3-4 yrs high school math, high school chem, △)
★LECT 1215-1300 MWF, WilleyH 175, Simmons
213571 –81 LAB 0815-1000 TTh, KoltH S160, 5 cr
813579 –82 LAB 1015-1200 TTh, KoltH S160, 5 cr

R1101 Heredity and Human Society (§GCB 3002, no cr if taken after 5003 or GCB 3022)
813484 1115-1200 MWThF, WilleyH 175, V Woodward, 4 cr

R1102 Microbes and Man
309589 0915-1045 TTh, Zoology 313, Fuchs, 4 cr

R1106 General Zoology (prereq 1009)
★LECT 0815-0900 MWF, Botany B6, Underhill
700503 –1 LAB 0915-1200 M, KoltH P168, P170, 5 cr
300505 –2 LAB 1215-1500 M, KoltH P168, P170, 5 cr
000507 –3 LAB 0815-1100 T, KoltH P168, P170, 5 cr
600509 –4 LAB 1215-1500 T, KoltH P168, P170, 5 cr
800511 –5 LAB 0915-1200 W, KoltH P168, P170, 5 cr
400513 –6 LAB 1215-1500 W, KoltH P168, P170, 5 cr

R1951 Biology Colloquium (prereq 1009 or ¶, #) (S–N only)
929272 1415-1600 M, OwreH 2210, 1 cr

R3011 Animal Biology (§1106; prereq 1009, Chem 1005)
★LECT 0950-1050 MWF, PalmC 10, Kerr, (StP)
700517 –1 LAB 0900-1045 TTh, SnH 13, 5 cr (StP)
300519 –2 LAB 1200-1345 TTh, SnH 13, 5 cr (StP)
500521 –3 LAB 1400-1545 TTh, SnH 13, 5 cr (StP)
100523 –4 LAB 1300-1445 WF, SnH 13, 5 cr (StP)
★LECT 1730-1900 TTh, BioSci 6, Kerr, (StP)
235361 –5 LAB 1900-2045 TTh, SnH 13, 5 cr (StP)

R3012 Plant Biology (§1103; prereq 1009, Chem 1005)
★LECT 1200-1245 MWF, HodsonH 495, Wetmore, (StP)
908969 –1 LAB 1000-1145 MW, BioSci 163, 5 cr (StP)
108971 –2 LAB 1000-1145 MW, BioSci 151, 5 cr (StP)
908972 –3 LAB 1300-1445 MW, BioSci 163, 5 cr (StP)
508974 –4 LAB 1500-1645 MW, BioSci 163, 5 cr (StP)

3111 Animal Biology (§3011; prereq 1009, 1106, Chem 1005)
013838 –1 0950-1050 MWF, PalmC 10, Kerr, 4 cr (StP)
135362 –2 1730-1900 TTh, BioSci 6, Kerr, 4 cr (StP)

R3950H Undergraduate Seminar (prereq # or △) (S–N only)
011099 –81 1500-1645 M, BioSci 115, Frenkel, 2 cr (The Future of the World's Food Supply) (Bot)
511101 –82 2 cr (EBB)

3960H Honors Seminar (prereq △) (S–N only)
712070 –81 1600-1700 M, BioSci 70, 1 cr (StP)
312072 –82 1600-1700 T, BioSci 70, 1 cr (StP)

3980 Directed Instruction (prereq #)
729273 1–5 cr

5001 Biochemistry (§3021, BioC 5001; prereq 1009, 12 cr organic chem or #)
000541 –1 1100-1145 MWThF, ClaOff B45, Liener, 4 cr (StP)
600543 –2 1730-1900 MW, PalmC 10, Henderson, 4 cr (StP)

5003 Genetics (§GCB 3022, 5022; prereq 5001)
329275 –1 1400-1500 MWF, PalmC 10, R Herman, 4 cr (StP)
935363 –2 1830-2000 MW, Zoology 102, V Woodward, 4 cr

5004 Cell Biology (prereq 5001)
129276 1300-1345 MWF, PalmC 10, Rosenberg, 3 cr (StP)

R5013 Microbiology (§MicB 3103, 5105, VPB 3103; prereq 5001)
★LECT 1015-1130 TTh, MoosT 2690, Crawford, 5 cr
926033 –1 LAB 1315-1500 TTh, MoosT 2252

R5041 Ecology (§3401; prereq Math 1142 or 1211, Biol 1103, 1106 or 3011 or 3012) (A–N only)
★LECT 1115-1200 MTWF, Zoology 313, Davis, Tilman
137600 –1 REC 1315-1400 M, Phys 143, 4 cr
937601 –2 REC 0815-0900 T, FordH 150, 4 cr
737602 –3 REC 0815-0900 Th, FordH 150, 4 cr
537603 –4 REC 1315-1400 F, FordH 349, 4 cr

R5125 Recombinant DNA Laboratory (prereq #)
735378 1300-1600 TTh, SnH 28, Messing, 4 cr

R5950 Special Topics (prereq △)
426030 1–5 cr

R8710 Tutorial in Developmental Biology (prereq #, △)
529274 3 cr

R8970 Special Topics (prereq #, △)
029280 1–3 cr

BIOPHYSICAL SCIENCES (BPhy)
Institute of Technology

5138 Seminar: Biophysical Sciences
801593 1530-1630 W, MIrdH 5276, Ackerman, ar cr

5155 Biophysics (prereq 28 cr between physics, biology, #...physical chemistry, physiology rec)
401595 1315-1500 TTh, TNCE 220, Schmitt, 3 cr

5170 Basic Radiological Physics (§Rad 5170, TRad 5170; prereq #)
101597 1600-1730 F, 1630-1730 W, Khan, 3 cr

5174 Physics of Diagnostic Radiology (§Rad 5714, TRad 5174; prereq 5170 or #)
712487 1600-1730 TTh, Mayo B167, Morin, 3 cr

8221 Research
701599 ar cr

8296 Seminar
401600 1415-1600 F, TNCE 220, Schmitt, ar cr

BOTANY (Bot)
Biological Sciences

R1012 Plants Useful to Man
229320 1115-1300 TTh, Botany B6, Jonas, 4 cr (Mpls)

R3109 Plant Anatomy (prereq Biol 1103 or Biol 3012)
★LECT 1000-1045 MWF, BioSci 12, Hall
431230 –1 LAB 0800-0945 MWF, BioSci 107, 5 cr
231231 –2 LAB 1100-1245 MWF, BioSci 107, 5 cr

3131 Survey of Plant Physiology (§5131, PlPh 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 5001)
129321 1200-1245 MTWF, AnScVM 135, Soulen, 4 cr

3950 Undergraduate Proseminar (prereq #)
929322 1 cr

5131 Survey of Plant Physiology (§3131, PlPh 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 5001)
111635 1200-1245 MTWThF, AnScVM 135, Soulen, 4 cr

R5132 Plant Physiology Laboratory (prereq 3131 or 5131 or ¶)
231553 1300-1545 T, BioSci 198, Frenkel, 2 cr

5211 Survey of Angiosperm Families (prereq 3201 or #)
035211 1300-1545 MWF, BioSci 176, Morley, 5 cr

5960 Special Topics (prereq #, △)
329325 ar cr

R5970 Directed Studies (prereq #, △)
129326 ar cr

5990 Directed Research (prereq #, △)
808446 ar cr

8950 Seminar: Current Studies in the Development of the Fungi (prereq #)
029327 1500-1645 W, BioSci 756, Charvat, 1 cr

8990 Research Problems (prereq #)
526066 ar cr

BUSINESS ADMINISTRATION (BA)
Management

R3998 Independent Study (prereq #)
500065 ar cr

R8200 Library Access for Business Research (prereq SMgt PhD student or #, grad SMgt approval) (S–N only)
812058 0800-1000 Th, OMWL 201, Wells, 1 cr (Business Reference Lib)

BUSINESS AND MARKETING EDUCATION (BME)
Vocational And Technical Education Education

1100 Introduction to Marketing Education (§BDE 1100) (A–N only)
536712 1300-1445 TTh, VoTech 220, Ashmun, 4 cr

R1501 Basic Keyboarding/Typewriting (§BDE 1501, S-N optional for non majors)
336713 –1 1000-1045 MWF, VoTech 240, Sormunen, 3 cr
136714 –2 1300-1345 MWF, VoTech 230, Bertelson, 3 cr
036715 –3 1400-1445 MWF, VoTech 240, Bertelson, 3 cr
836716 –4 1700-1845 TTh, VoTech 240, Davison, 3 cr

R1502 Intermediate Typewriting (§BDE 1502; prereq 1501 or proficiency exam) (A–N only)
636717 1300-1345 MWF, VoTech 230, 240, Bertelson, 3 cr

R1503 Advanced Typewriting (§BDE 1503; prereq 1502 or proficiency exam) (A–N only)
436718 1300-1345 MWF, VoTech 230, 240, Bertelson, 3 cr

1504 Introduction to Business Education (§BDE 1504) (A–N only)
236719 1300-1445 TTh, VoTech R285, McLean, 4 cr

3302 Teaching Basic Business Subjects (§BDE 3302; prereq SeEd 3155 or ¶) (A–N only)
636720 1500-1645 TTh, VoTech R285, Hopkins, 3 cr

R3603 Student Teaching in Business or Marketing Education (prereq SeEd 3155, △) (S-N optional)
436721 1700-1845 T, VoTech R285, Ashmun, Hopkins, 4 cr

R3604 Student Teaching in Business or Marketing Education (prereq SeEd 3155, △) (S-N optional)
236722 1700-1845 T, VoTech R285, Ashmun, Hopkins, 4 cr

R3605 Student Teaching in Business or Marketing Education (prereq SeEd 3155, △) (S-N optional)
136723 1700-1845 T, VoTech R285, Ashmun, Hopkins, 4 cr

5157 Materials and Methods in Office Education (§BDE 5157) (A–N only)
936724 1700-1930 T, VoTech 230, McLean, 4 cr

R5160 Word Processing Practicum (§BDE 5160) (A–N only)
736725 0800-0845 MWF, VoTech 230, Sormunen, 2 cr

R5310 Introduction to Microcomputer Applications in Business and Marketing Education (§BDE 5310) (A–N only)
536726 1600-1845 M, VoTech 230, Lambrecht, 3 cr

5353 Curriculum Construction in Business and Marketing Education (§BDE 5353) (A–N only)
336727 1600-1830 W, VoTech R285, Klaurens, 4 cr

5357 Research Procedures in Business and Marketing Education (§BDE 5357) (A–N only)
136728 1700-1930 Th, VoTech R285, Lambrecht, 4 cr

R5359 Occupational Experience (prereq #) (S-N optional)
036729 1800-2000 Th, VoTech 220, Klaurens, 1–18 cr (addnl hrs ar)

R5370 Special Topics in Instruction: School/Model Store (A–N only)
336730 1100-1245 TTh, VoTech 220, Klaurens, 4 cr

R5390 Special Topics in Technical Updating: Professional Sales Education (A–N only)
136731 0800-0945 T, VoTech 220, Ashmun, 3 cr

5600 School-Based Projects in Business and Marketing Education (max 12 cr; prereq #) (A–N only)
036732 1–12 cr

R5900 Directed Study in Business and Marketing Education (max 6 cr; prereq △) (S-N optional)
836733 –1 1800-1930 T, VoTech 220, Klaurens, 1–6 cr
636734 –2 1–6 cr

HOW MUCH IS TOO MUCH TO DRINK IF YOU'RE DRIVING?

USING THIS CHART MAY HELP YOU KNOW YOUR LIMIT.

First, you should understand that drinking any amount of alcohol can impair your ability to drive.

The generally accepted way to measure intoxication is by your Blood Alcohol Concentration (BAC). In most areas, the legal definition of intoxication is .10 percent BAC and above. However, long before you reach .10 BAC, your judgment and motor skills deteriorate rapidly. In fact, some states include the definition of impaired driving ability, which usually begins at .05 percent.

Important factors to keep in mind are how much you've drunk in a given period of time, how much you weigh and whether you've been eating. Your age, individual metabolism and experience with drinking are also factors. However, it simply is not true that beer or wine is less likely to make you drunk than so-called "hard" drinks. A 6-ounce glass of wine, a 12-ounce can of beer or 1½ ounces of 86-proof whiskey have about the same amount of alcohol and will have about the same effect on you.

How to estimate your Blood Alcohol Concentration. Although the effects of alcohol vary a great deal, the average effects are shown in the accompanying chart prepared by the National Highway Traffic Safety Administration. Find your weight in the left-hand column and then refer to the number of drinks you have had or intend to have over a two-hour period. For example, if you weigh 160 pounds and have had four beers over the first two hours you're drinking, your Blood Alcohol Concentration would be dangerously beyond .05 percent, and your driving ability would be seriously impaired—a dangerous driving situation. Six beers in the same period would give you a BAC of over .10 percent—the level generally accepted as proof of intoxication.

It is easier to get drunk than it is to get sober. The effects of drinking do taper off as the alcohol passes through your body, but the drop is slow. In the example above, the person who had six beers would still have significant traces of alcohol in his blood six hours later.

Even if you're not drinking, other drivers may be. Your best protection is still the seat belts in your car. Accidents do happen, and wearing lap and shoulder belts doubles your chances of coming through one alive.

DRINKS (TWO-HOUR PERIOD)

Weight	1½ ozs. 86° Liquor or 12 ozs. Beer											
100	1	2	3	4	5	6	7	8	9	10	11	12
120	1	2	3	4	5	6	7	8	9	10	11	12
140	1	2	3	4	5	6	7	8	9	10	11	12
160	1	2	3	4	5	6	7	8	9	10	11	12
180	1	2	3	4	5	6	7	8	9	10	11	12
200	1	2	3	4	5	6	7	8	9	10	11	12
220	1	2	3	4	5	6	7	8	9	10	11	12
240	1	2	3	4	5	6	7	8	9	10	11	12

BE CAREFUL DRIVING BAC TO .05%

DRIVING IMPAIRED .05-.09%

DO NOT DRIVE .10% & UP

Source: NHTSA

The chart shows average responses. Younger people generally become impaired sooner, while older people have more vision problems at night. Tests show a wide range of responses even for people of the same age and weight. For some people, one drink may be too many.

Having a full stomach will postpone somewhat the effects of alcohol, but it will not keep you from becoming drunk.

Black coffee, cold showers, or walking around outdoors will do nothing to make you sober. Of course, someone who claims, "I'll be okay as soon as I get behind the wheel," may be making a fatal misjudgment.

At General Motors, we have developed a device which tests a driver's reflexes and motor responses before it allows the car to start. The Department of Transportation is now testing it in California as a deterrent to repeat offenders. Today, you, the driver, have to know your limits and when you've gone beyond them. If you have any doubts, don't drive.

This advertisement is part of our continuing effort to give customers useful information about their cars and trucks and the company that builds them.

GM
MARK OF EXCELLENCE

Chevrolet • Pontiac
Oldsmobile • Buick
Cadillac • GMC Truck

BOOKSTORE CHECKLIST

COURSE	TEXTBOOK TITLE	AUTHOR
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

SUPPLIES

☐	☐	☐
☐	☐	☐
☐	☐	☐

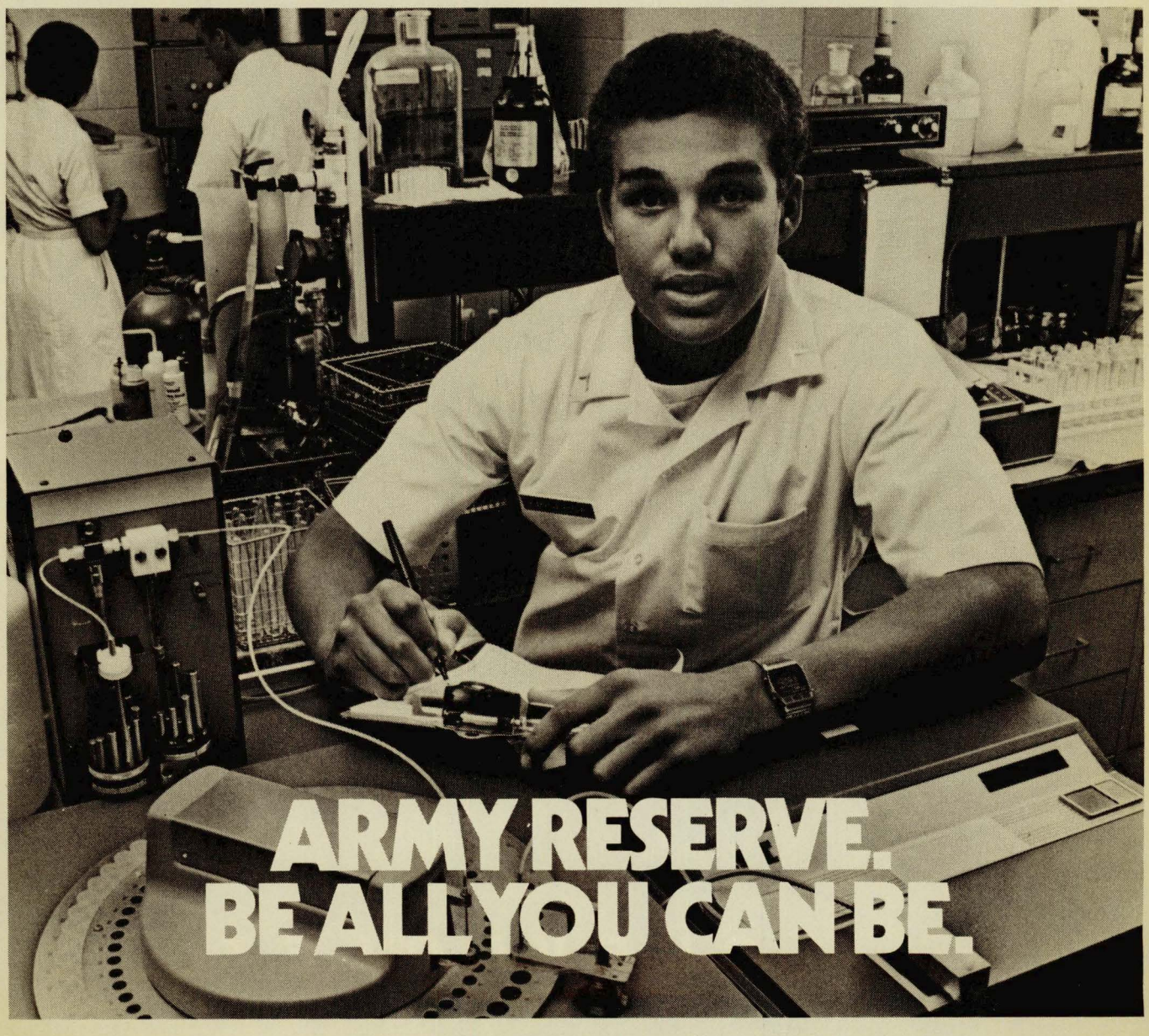
MAKE $12,200 FOR COLLEGE WHILE YOU'RE GOING TO COLLEGE.

Want a part-time job that doesn't hurt your grades? Or campus life? Give your local Army Reserve unit a weekend a month and a couple of summers during college, and they'll give you over $12,200 for college.

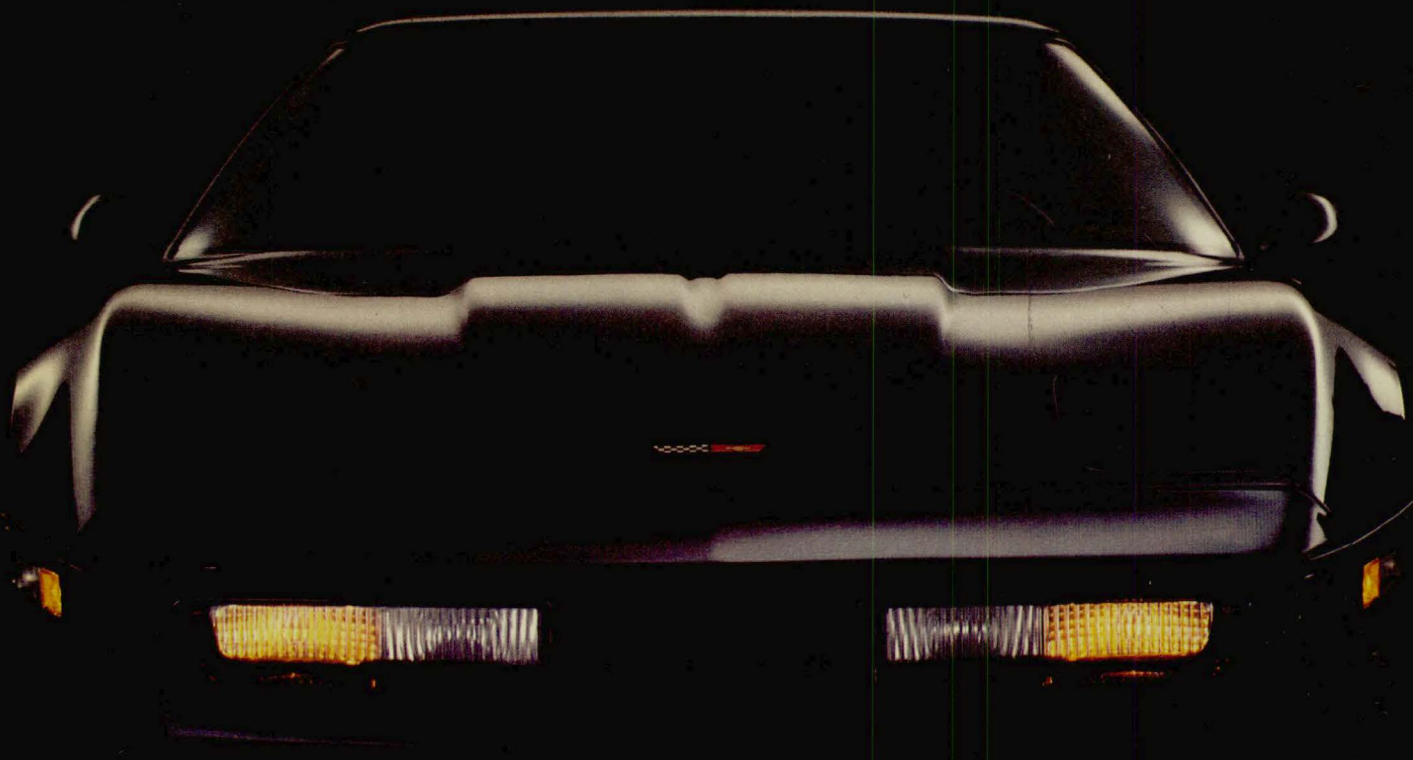
Up to $4,000 in college aid is yours just for joining most units. Another $6,000 for four years of monthly weekends and two-week summer stints. Plus over $2,200 that you'll earn during two summer training periods. All while you're getting the most out of college. And doing the most you can part-time for your country.

You don't have to wait for college to join the Army Reserve. If you're 17 or older and a junior or senior in high school, join us now! There's no better part-time job in town.

Interested? Call your local Army Reserve recruiter. For the number, call toll free 800-421-4422. In California, 800-252-0011. In Alaska or Hawaii, 800-423-2244.



The Rewards of a Higher Education.



GM

CHEVROLET

taking charge.

8300 Seminar: Research in Business, Marketing, and Economic Education (prereq #)
436735 1 cr

8600 Internship: Business and Marketing Education (prereq #)
236736 1-12 cr

8900 Problems: Business and Marketing Education (max 9 cr; prereq #)
136737 1-9 cr

BUSINESS LAW (BLaw)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for BLaw courses.

R**3058 Introduction to Law, and the Law of Contracts and Agency** (§8158; prereq Econ 1002) (A-N only)
★LECT 1115-1200 Th, WilleyH 125, Andrews
200609 –1 LAB 0815-0900 TTh, BlegH 240, Eastlund, 4 cr
100613 –2 LAB 0815-0900 TTh, BlegH 425, Andrews, 4 cr
700615 –3 LAB 0915-1000 TTh, BlegH 240, Eastlund, 4 cr
100618 –4 LAB 0915-1000 TTh, BlegH 425, Andrews, 4 cr
000622 –5 LAB 1015-1100 TTh, BlegH 425, Andrews, 4 cr
600624 –6 LAB 1015-1100 TTh, BlegH 240, Eastlund, 4 cr

R**8158 Introduction to Law, and the Law of Contracts and Agency** (§3058; prereq Econ 1002, grad mgmt/IR student or grad SMgt approval) (A-N only)
★LECT 1115-1200 Th, WilleyH 125, Andrews
211691 –1 LAB 1015-1100 TTh, BlegH 425, Andrews, 4 cr

BUSINESS, GOVERNMENT AND SOCIETY (BGS)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for BGS courses.

R**3001 Managerial Economics** (§Econ 3101, 3105; prereq Econ 1002) (A-N only)
100070 0815-0945 MW, Law 35, Hastings, 4 cr

R**3002 Business and Society** (prereq jr, sr) (A-N only)
★LECT 1415-1530 TTh, AndH 310, Quinn
811671 –1 LAB 1315-1400 T, BlegH 415, 4 cr
111675 –2 LAB 1545-1630 T, BlegH 415, 4 cr
711677 –3 LAB 1545-1630 Th, BlegH 415, 4 cr

R**3004 International Business**
308779 –1 1015-1145 MW, BlegH 130, Hastings, 4 cr
708780 –2 1315-1445 MW, BlegH 130, Hastings, 4 cr
135210 –3 1315-1445 TTh, BlegH 130, Holloway, 4 cr

R**3019 Topics in Business, Government and Society** (prereq 3002)
611669 1015-1145 TTh, BlegH 130, Holloway, 4 cr

CHEMICAL ENGINEERING (ChEn)
Chemical Engineering & Materials Science
Institute of Technology

3090 Industrial Employment
611882 1-2 cr

R**5101 Principles of Chemical Engineering I** (prereq chem engr or mat sci maj)
★LECT 0915-1000 MWF, Botany B6, Ranz
800640 –1 REC 0815-0900 TTh, AmundH 158, 4 cr
400642 –2 REC 0915-1000 TTh, AmundH 158, 4 cr
100644 –3 REC 0915-1000 TTh, FordH 50, 4 cr
135157 –4 REC 1015-1100 TTh, AmundH 162, 4 cr
300651 –5 REC 1015-1100 TTh, AmundH 158, 4 cr
000653 –6 REC 1415-1500 TTh, AmundH 158, 4 cr
437108 –7 REC 1415-1500 TTh, MinMet 116, 4 cr
237109 –8 REC 1515-1600 TTh, AmundH 158, 4 cr

R**5104 Unit Operations and Separation Processes** (prereq 5101, upper division chem engr or mat sci maj)
★LECT 0815-0900 MWF, AmundH 240, Dahler
900659 –1 REC 0815-0900 TTh, AmundH 162, 4 cr
900662 –2 REC 1215-1300 TTh, AmundH 158, 4 cr
500664 –3 REC 1215-1300 TTh, AmundH 162, 4 cr
800668 –4 REC 1415-1500 TTh, AmundH 162, 4 cr
800671 –5 REC 1515-1600 TTh, AmundH 162, 4 cr

R**5301 Chemical Reactor Analysis** (prereq 5202, upper division chem engr or mat sci maj)
★LECT 1215-1300 MWF, AmundH 240, Aris
100675 –1 REC 0815-0900 TTh, AmundH 154, 4 cr
500678 –2 REC 0915-1000 TTh, AmundH 162, 4 cr
500681 –3 REC 1115-1200 TTh, AmundH 158, 4 cr
000684 –4 REC 1215-1300 TTh, AmundH 154, 4 cr
400687 –5 REC 1415-1500 TTh, AmundH 154, 4 cr
015119 –6 REC 1515-1600 TTh, AmundH 154, 4 cr

R**5402 Chemical Engineering Laboratory** (prereq 5103, upper division chem engr or mat sci maj)
★LECT 0815-0900 M, FordH 55, Evans
211870 –1 LAB 1315-1700 M, AmundH 356, 2 cr
911872 –2 LAB 0815-1200 T, AmundH 356, 2 cr
511874 –3 LAB 1315-1700 T, AmundH 356, 2 cr
811878 –4 LAB 1315-1700 W, AmundH 356, 2 cr
111876 –5 LAB 0815-1200 Th, AmundH 356, 2 cr
011880 –6 LAB 1315-1700 F, AmundH 356, 2 cr

5751 Biological Engineering Analysis (prereq #)
101292 1315-1400 MWF, AmundH 158, Cussler, 3 cr

R**5755 Biochemical Engineering** (prereq 5754)
326067 1415-1600 MW, AmundH 158, Greenfield, 4 cr

R**5757 Principles of Artificial Internal Organ Design** (prereq #)
637110 1530-1700 MW, MinMet 124, 3 cr

R**5902 Special Topics**
901293 ar cr

8101 Intermediate Fluid Mechanics (prereq 5103, #)
701294 0815-0900 MWF, AmundH 158, Scriven, 3 cr

8201 Advanced Mathematics for Chemical Engineers (prereq #)
501295 0815-1000 TTh, MinMet 124, Davis, 3 cr

8301 Physical and Chemical Thermodynamics (prereq 5202 or #)
301296 1315-1400 MWF, MinMet 120, Fredrickson, 3 cr

8403 Chemical Reaction Kinetics-Advanced Topics (prereq #)
526049 1115-1200 MWF, MinMet 120, Griffin, Schmidt, 3 cr

8601 Molecular Theory of Equilibrium and Nonequilibrium Processes (prereq #)
101297 1015-1100 MWF, AmundH 158, Carr, 3 cr

8801 Seminar
001298 1315-1600 TTh, AmundH 240, 1 cr

8901 Research in Chemical Engineering
801299 1415-1700 MF, AmundH 162, ar cr

8903 Research in Chemical Engineering
501300 ar cr

CHEMISTRY (Chem)
Institute of Technology

Note:
For 1000-level recitation sections, rooms will be posted outside SmithH 211 (PalmC 10 for St. Paul sections) two days before the first day of classes.
Each student registering for a laboratory course must purchase a blue Chemistry Deposit Card from the bursar and present that card to the instructor in order to be admitted to a lab section. Students without cards will not be permitted to check into lab and will forfeit their desk assignments. A student with a deposit card used in a previous chemistry lab must have at least a $10 balance remaining on that card to use it again; if the balance is less than $10, the student must purchase a second card.
SEE SECTION 4, DEPOSIT CARDS.
Every student who checks into a lab must check out of the lab before the end of the quarter, even if he or she drops the course, or be charged a $10.00 check-out fee.

R**1001 Chemical Principles and Covalent Systems** (1001-1002†, §1004, 1014, 1031, no IT stu; prereq 2 yrs high schl math...high schl chem rec)
★LECT 1415-1500 TWThF, SciCB 175, Brasted, 5 cr
927893 –1 REC 1215-1300 M,
527895 –2 REC 1315-1400 M,
★LAB 1415-1700 M, SmithH 210
127897 –3 REC 0815-0900 T,
★LAB 0915-1200 T, SmithH 210
027898 –4 REC 0815-0900 F,
★LAB 0915-1200 F, SmithH 210

R**1003 Physical World, Chemistry** (§any other college chem course; prereq 1 yr high school algebra...high school chem rec)
★LECT 1115-1200 MWThF, SciCB 375, Wilson, 5 cr
527900 –1 REC 1415-1500 M,
★LAB 1515-1700 M, SmithH 249
327901 –2 REC 1415-1500 T,
★LAB 1515-1700 T, SmithH 249
127902 –3 REC 1415-1500 Th,
★LAB 1515-1700 Th, SmithH 249

R**1004 General Principles of Chemistry** (1004-1005†, §1001-1002, 1014, 1031-1032; prereq hs chem or equiv, placement Index of Y or predicted Math GPA 1.90 on ACT or Math 0009 or college course in algebra...high school physics, 4 yrs high school math rec)
♦813520 –1 LECT 0815-0900 MWThF, SciCB 325, Mead, 5 cr (Registration for one of the rec/lab sections is also required)
♦800721 –2 LECT 0915-1000 MTWF, SciCB 375, Reynolds, 5 cr (Registration for one of the rec/lab sections is also required)
♦400723 –3 LECT 1215-1300 MTThF, SciCB 325, Reynolds, 5 cr (Registration for one of the rec/lab sections is also required)
♦100725 –4 LECT 1315-1400 MTWTh, SciCB 325, Mead, 5 cr (Registration for one of the rec/lab sections is also required)
♦500728 –5 LECT 0800-0845 MWThF, PalmC 10, Wilson, 5 cr (StP) (Registration for one of the rec/lab sections is also required)
911967 –1 REC 1215-1300 M,
911970 –2 REC 1315-1400 M,
★LAB 1415-1700 M, SmithH 110
411978 –3 REC 0815-0900 T,
★LAB 0915-1200 T, SmithH 110
211982 –4 REC 1215-1300 T,
011989 –5 REC 1315-1400 T,
★LAB 1415-1700 T, SmithH 110
811993 –6 REC 1215-1300 W,
411995 –7 REC 1315-1400 W,
★LAB 1415-1700 W, SmithH 110
711999 –8 REC 0815-0900 Th,
★LAB 0915-1200 Th, SmithH 110
212002 –9 REC 1215-1300 Th,
012009 –10 REC 1315-1400 Th,
★LAB 1415-1700 Th, SmithH 110
212016 –11 REC 1215-1300 F,
712022 –12 REC 1315-1400 F,
★LAB 1415-1700 F, SmithH 110
312024 –13 REC 1300-1345 M, (StP)
★LAB 1400-1645 M, SnH 222, (StP)
012026 –14 REC 1300-1345 T, (StP)
★LAB 1400-1645 T, SnH 222, (StP)
612028 –15 REC 1300-1345 W, (StP)
★LAB 1400-1645 W, SnH 222, (StP)
612031 –16 REC 1300-1345 Th, (StP)
★LAB 1400-1645 Th, SnH 222, (StP)

R1005 General Principles of Chemistry (1004-1005†, §1001-1002, 1014, 1031-1032; prereq 1004)
★LECT 1415-1500 MTWTh, SciCB 375, W Miller, 5 cr
012205 –1 REC 0815-0900 T, ★LAB 0915-1200 T, SmithH 210
612207 –2 REC 0815-0900 Th, ★LAB 0915-1200 Th, SmithH 210
212209 –3 REC 1215-1300 F,
712215 –4 REC 1315-1400 F, ★LAB 1415-1700 F, SmithH 210

R1006 Principles of Solution Chemistry (prereq 1005 or 1032)
★LECT 1015-1100 MWF, SciCB 375, Conroy, 4 cr
112082 –1 LAB 1315-1700 M, SmithH 210
912083 –2 LAB 0815-1200 T, SmithH 210
512085 –3 LAB 1315-1700 T, SmithH 210
312086 –4 LAB 1315-1700 W, SmithH 210
112087 –5 LAB 0815-1200 Th, SmithH 210
012088 –6 LAB 1315-1700 Th, SmithH 210

R1008 Physical World, Chemistry (§any other college chem course; prereq 1 yr high school algebra...high school chem rec)
801304 1115-1200 MWThF, SciCB 375, Wilson, 4 cr

R1014 Concepts of Chemistry (§1001-1002, 1004-1005, 1031-1032; prereq Phys 1105 or 1281 or #, IT stu or △)
601305 1415-1500 MWThF, SciCB 325, Lumry, 4 cr

R1031 Chemical Principles I (1031-1032†, §1001-1002, 1004-1005, 1014; prereq chem or chem engr maj or #, hs chem or equiv, 4 yrs hs math, Placement Index of Y or predicted Math GPA 1.90 on ACT or Math 0009 or college course in algebra...high school physics rec)
★LECT 0815-0900 MWThF, SciCB 375, Britton, 5 cr
★REC 0815-0900 T,
801710 –1 LAB 0915-1200 T, SmithH 310
331253 –2 LAB 0915-1200 Th, SmithH 310
131254 –3 LAB 1115-1400 F, SmithH 310
031255 –4 LAB 1415-1700 F, SmithH 310

R3100 Quantitative Analysis Lecture (3100-3101†; prereq 1005 or 1032, non-chem maj)
401306 1215-1300 MWF, SciCB 375, Swofford, 3 cr

R3101 Quantitative Analysis Laboratory (3100-3101†; prereq 3100 or ¶)
900760 –1 1315-1700 MW, SmithH 310, Lodge, 2 cr
300763 –2 1315-1700 TTh, SmithH 310, Lodge, 2 cr

R3301 Elementary Organic Chemistry I (§3331; prereq 1005 or 1032)
600767 –1 0815-0900 TWThF, SmithH 100, Leete, 4 cr
600770 –2 1015-1100 TWThF, SciCB 325, Farneth, 4 cr
900774 –3 1315-1400 TWThF, SmithH 225, Que, 4 cr
300777 –4 1100-1145 MWThF, PalmC 10, Livinghouse, 4 cr (StP)

R3302 Elementary Organic Chemistry II (prereq 3301, 3305 or ¶)
201307 0915-1000 TWThF, SciCB 325, Noland, 4 cr

R3303 Elementary Organic Chemistry III (prereq 3302, 3306 or ¶)
101308 1015-1100 MTWF, SmithH 325, Hoye, 4 cr

R3305 Elementary Organic Chemistry Laboratory I (prereq 3301 or ¶)
♦200786 –1 LECT 0815-0900 M, SmithH 100, E Miller, 2 cr
♦900788 –2 LECT 1015-1100 M, SciCB 325, E Miller, 2 cr
♦700792 –3 LECT 1315-1400 M, SmithH 225, E Miller, 2 cr
♦312413 –4 LECT 1100-1145 T, PalmC 10, E Miller, 2 cr (StP)
100795 –1 LAB 1315-1700 M, SmithH 349
400799 –2 LAB 1315-1700 M, SmithH 349
800802 –3 LAB 1315-1700 M, SmithH 349
100806 –4 LAB 0915-1300 T, SmithH 349
500809 –5 LAB 0915-1300 T, SmithH 349
300813 –6 LAB 0915-1300 T, SmithH 349
800816 –7 LAB 0915-1300 T, SmithH 349
600820 –8 LAB 0915-1300 T, SmithH 349
200822 –9 LAB 1315-1700 T, SmithH 349
500826 –10 LAB 1315-1700 T, SmithH 349
100828 –11 LAB 1315-1700 T, SmithH 349
000832 –12 LAB 1315-1700 T, SmithH 349
600834 –13 LAB 1315-1700 W, SmithH 349
100837 –14 LAB 1315-1700 W, SmithH 349
900838 –15 LAB 1315-1700 W, SmithH 349
100840 –16 LAB 1315-1700 Th, SmithH 349
900841 –17 LAB 1315-1700 Th, SmithH 349
700842 –18 LAB 1315-1700 Th, SmithH 349
300844 –19 LAB 1315-1700 Th, SmithH 349
000846 –20 LAB 1300-1645 T, SnH 322, (StP)
600848 –21 LAB 1300-1645 T, SnH 328, (StP)
800850 –22 LAB 1300-1645 Th, SnH 322, (StP)
400852 –23 LAB 1300-1645 Th, SnH 328, (StP)

R3306 Elementary Organic Chemistry Laboratory II (prereq 3302 or ¶)
★LECT 0915-1000 M, SciCB 325, Noland
700856 –1 LAB 1315-1700 M, KoltH 398, 2 cr
300858 –2 LAB 1315-1700 T, KoltH 398, 2 cr
500860 –3 LAB 1315-1700 W, KoltH 398, 2 cr
100862 –4 LAB 1315-1700 Th, KoltH 398, 2 cr
800864 –5 LAB 1315-1700 F, KoltH 398, 2 cr

R3331 Introductory Organic Chemistry I (§3301; prereq 1133 or 1 yr college chem)
501314 0815-0900 MTWThF, SciCB 175, Fristad, 5 cr

3499 Senior Thesis (prereq #, 4th yr)
701313 ar cr

3970 Directed Studies (prereq #)
101311 ar cr

3991 Special Topics in Chemistry (prereq #)
926050 ar cr

R5122 Advanced Analytical Chemistry (prereq 1 yr organic chem, course in thermodynamics)
201310 1015-1100 TTh, 1115-1300 S, KoltH S132, Stankovich, 4 cr

R5133 Chemical Instrumentation and Analysis Lecture (prereq 1133, 5534, 5533 or ¶5533) (A-N only)
237191 1215-1300 MWF, SmithH 315, Swofford, 3 cr

R5139 Chromatography and Separation Science (prereq 5133, 5134 or equiv or #, chem maj or grad) (A-N only)
535401 0915-1000 TTh, 1015-1100 S, KoltH S137, Carr, 3-4 cr

5301 Spectral Methods of Organic Qualitative Analysis (§8302; prereq 3303 or 3333)
901309 0915-1000 TTh, 0915-1100 S, SmithH 315, Barbara, 4 cr

5309 Applications of Molecular Orbital Theory in Organic Chemistry (prereq 5536 or Phys 3501 or #)
335402 1215-1300 MWF, KoltH S137, Dixon, 4 cr

R5365 Organic Qualitative Analysis (prereq 3303 or 3333)
100876 1315-1400 TTh, SmithH 315, Fenton, 4 cr (lab ar)

R5520 Elementary Physical Chemistry (prereq 1 yr college chem, Phys 1291 or ¶ or 1106 or #, Math 3211)
101316 0915-1000 MWF, SmithH 225, Crawford, 3 cr

5522 Physical Biochemistry of Solutions (§BioC 5522; prereq 2 qtrs physical chemistry...BioC 5001 or Biol 3021 desirable)
001320 1230-1400 MW, BioSci 12, Bloomfield, 4 cr (StP)

R5533 Quantum Chemistry (prereq 1 yr college chemistry, Phys 1291 or ¶ or 1106 with #, Math 3211)
726051 1015-1100 MWThF, SmithH 315, Lipsky, 4 cr

R5534 Chemical Thermodynamics (prereq 1 yr college chem, Math 3211, Phys 1291 or ¶ or 1106 with #)
801318 1115-1200 MTWF, SciCB 325, Wertz, 4 cr

R5610 Polymer Science (§8610, MatS 5610; prereq phys chem or MatS 5011 or #)
★LECT 1015-1100 MWF, MurH 308, W Miller, Tirrell
500888 –1 LAB 1315-1700 T, SmithH 249B, 4 cr
700890 –2 LAB 1315-1700 W, SmithH 249B, 4 cr
300892 –3 LAB 1315-1700 F, SmithH 249B, 4 cr

R5731 Inorganic Chemistry I (prereq 5533 or ¶ or 5534 or ¶)
★LECT 1015-1100 TWF, SmithH 225, Brasted, 3 cr
109867 –1 REC 1015-1100 Th, SmithH 225

R5734 Inorganic Chemistry Laboratory I (prereq 5731 or ¶ or #)
★LECT 1015-1100 M, SmithH 225, Pignolet
400897 –1 LAB 1415-1600 MW, KoltH 250, 2 cr
100899 –2 LAB 1415-1600 MF, KoltH 250, 2 cr
600901 –3 LAB 1415-1600 TTh, KoltH 250, 2 cr
900905 –4 LAB 1415-1600 WF, KoltH 250, 2 cr

5751 Physical Inorganic Chemistry I (prereq 5732 or #)
601322 0815-0900 MWThF, SmithH 315, Mann, 4 cr

5761 Organometallic Chemistry (prereq 5732 or #)
201324 1115-1200 MTWF, SmithH 315, Ellis, 4 cr

5991 Selected Topics (prereq △, sr)
901326 ar cr

8100 Survey of Analytical Chemistry
501328 1 cr

8133 Modern Electroanalytical Techniques, Principles and Practice (prereq 8129 or #)
701330 1215-1300 MWF, KoltH S136, Evans, 3 cr

8190 Seminar: Modern Problems in Chemical Instrumentation and Analysis (prereq 8129)
301332 Lodge, 1 cr

8300 General Survey of Organic Chemistry
001334 1 cr

8301 Advanced Organic Chemistry I (prereq 3303 or 3333)
601336 0915-1000 MWF, SmithH 325, Gassman, 4 cr

8302 Interpretation of Organic Spectra (prereq 1 yr undergrad organic chem or #)
101342 0915-1000 TTh, 0915-1100 S, SmithH 315, Barbara, 4 cr

8390 Seminar: Organic Chemistry
201338 1930-2300 W, SmithH 325, 1 cr

8401 Bioorganic Chemistry I (prereq 3303 or 3333 or equiv)
809693 1015-1100 MWF, KoltH S132, Barany, 4 cr

8500 General Survey of Physical Chemistry
401340 1 cr

8531 Introductory Quantum Mechanics and Spectroscopy (prereq 1 yr undergrad physical chemistry or #)
★LECT 1115-1200 MWF, SmithH 111, Moscowitz, 4 cr
026055 –1 REC 1115-1200 T, SmithH 111

8541 Thermodynamics, Statistical Mechanics, and Kinetics (prereq 1 yr undergrad physical chem or #)
★LECT 0815-0900 MWF, KoltH S137, Prager, 4 cr
509865 –1 REC 0815-0900 T, KoltH S137

8571 Advanced Quantum Mechanics (prereq 8533 or #)
109691 0915-1000 MWF, SmithH 111, Hexter, 3 cr

8590 Seminar: Physical Chemistry
801349 1615-1800 M, SmithH 225, Barbara, 1 cr

8610 Polymer Science (§5610, MatS 5610; prereq phys chem or MatS 5011 or #)
701358 1015-1100 MWF, MurH 308, W Miller, Tirrell, 3 cr

8700 General Survey of Inorganic Chemistry
401354 1 cr

8790 Seminar: Modern Problems in Inorganic Chemistry (prereq △)
801352 1630-1830 Th, SmithH 325, 1 cr

8990 Research in Chemistry (prereq △)
101350 ar cr

8991 Special Topics in Chemistry (prereq △)
901360 1115-1200 MWF, KoltH S137, 3 cr

8994 Special Topics in Chemistry (prereq △)
526052 ar cr

CHICANO STUDIES (Chic)
Liberal Arts

1105 Introduction to Chicano Studies: The Beginnings
335156 0915-1000 MWThF, FordH 130, Vallejos, 4 cr

3211 Chicano Philosophy
735154 Cisneros, 4 cr

Computer Science might be easier if you lived with a terminal.

If you don't know it by now, you will by mid-quarters, you need your own terminal.

And no one can get you a terminal as easily and inexpensively as we can. For example, the RCA VP3501 leases for $85.00 complete per quarter.

We also sell a complete line of computers, modems, software and peripherals.

Call 379-0204, or stop by our new showroom. There's nothing we enjoy more than talking about computers.

STUDENT COMPUTER SERVICES
327 14th Ave. S.E. Upstairs Market (Above Grays)

THE EARLY BIRD...



MCAT

- Permanent Centers open days, evenings and weekends.
- Low hourly cost. Dedicated full-time staff.
- Complete TEST-n-TAPE℠ facilities for review of class lessons and supplementary materials.
- Small classes taught by skilled instructors.
- Opportunity to make up missed lessons.
- Voluminous home-study materials constantly updated by researchers expert in their field.
- Opportunity to transfer to and continue study at any of our over 85 centers.

Stanley H. KAPLAN
Educational Center
TEST PREPARATION SPECIALISTS SINCE 1938

Call Days Evenings & Weekends
378-9191
328 East Hennepin Ave.
Near U of M

PEKING GARDEN RESTAURANT

★ GOURMET WEEKDAY LUNCH SPECIALS AT FAST FOOD PRICES ★

- EXCELLENT REVIEWS AND REMARKS FROM THE MPLS. STAR & TRIBUNE, ST. PAUL PIONEER PRESS, MPLS./ST. PAUL MAGAZINE AND TWIN CITIES TODAY.



北京園

- TRY OUT HOT & SPICY HUNAN & SZECHUAN DISHES OR SMOOTH PEKING & CANTONESE DISHES.
- EXCELLENT DECOR & SECLUDED ATMOSPHERE
- AMPLE FREE PARKING

HOURS: SUNDAY-THURSDAY 11:00 to 10:00
FRIDAY-SATURDAY 11:00 to 11:00

2324 UNIVERSITY AVE. S.E.
623-3989/623-3992

master charge VISA AMERICAN EXPRESS

3405 Spanish for the Spanish Speaking: Intermediate Conversation and Composition (prereq 1201, 1202, 1203 or one yr Span)
113703 1015-1100 MWF, FordH 50, Cisneros, 4 cr

3428 History of Relations Between the United States and Mexico, 1821 to Present (§Hist 3428)
826056 1115-1200 MWF, FordH 60, Valdes, 4 cr

3441 The Spanish-Mexican Borderlands and the Chicano Experience to 1900 (§Hist 3441)
626057 0915-1000 MWF, FordH 50, Valdes, 4 cr

3507 Introduction to Chicano Literature
630674 1215-1300 MWF, FordH 150, Vallejos, 4 cr

3617 Chicanos as a National Minority
535155 4 cr

3970 Directed Studies (prereq #, △, college approval)
130680 ar cr

5970 Directed Studies (prereq #, △, CLA approval)
730682 ar cr

CHILD AND ADOLESCENT PSYCHIATRY (CAPy)
Medical School

5201 Diagnostic Practicum in Child and Adolescent Psychiatry (prereq #)
308443 Erbaugh, 1-5 cr

5203 Child and Adolescent Psychiatry for Psychology Interns (prereq #)
001012 Erbaugh, 1-5 cr

5204 Diagnostic Methods in Child and Adolescent Psychiatry (prereq med student, #)
301010 Lawton, Greenberg, 1 cr

5500 Pediatric Psychiatry Liaison (prereq regis med student)
101008 Pearson, 9 cr

5501 Pediatric, Pediatric Neurology: Psychiatric Liaison (prereq med student, #)
714904 9-18 cr

5520 Outpatient Clinical Child and Adolescent Psychiatry for Primary Care Trainees (prereq med student, #)
501006 Jensen, ar cr

5602 Introductory Readings in Child and Adolescent Psychopathology (prereq med student or MD, #)
201002 3 cr

5603 Inpatient Clinical Child Psychiatry for Primary Care Physicians (prereq med student, #)
601000 Realmuto, ar cr

5608 Introduction to Family Therapy: Theory and Practice (prereq MD and/or #, basic psychopath course, cur supervised involvement treatment of cases)
700999 Miner, 3 cr

5609 Child Development (prereq MD and/or #)
100997 3 cr

8100 Readings in Child, Adolescent, and Family Psychiatry (prereq MD, #)
800993 Miner, 1 cr

8110 Diagnostic Methods in Child, Adolescent, and Family Psychiatry (prereq MD, #)
400995 1 cr

8120 Therapeutic Methods in Child and Adolescent Psychiatry (prereq MD, #)
100991 Greenberg, Stocking, 1 cr

8200 Outpatient Clinical Child and Adolescent Psychiatry (prereq MD, #)
100983 Jensen, 3 cr

8212 Clinical Inpatient Child Psychiatry (prereq MD, #)
900984 Realmuto, 3 cr

8216 Pediatric Psychiatry Liaison (prereq MD, #)
100988 Pearson, 3 cr

8223 Family Therapy (prereq MD, #)
804736 Miner, 1 cr

8228 Research in Child and Adolescent Psychiatry (prereq MD, #)
604737 Yellin, 1 cr

8233 Mental Health Administration, Training Seminar (prereq MD, #)
204739 Greenberg, Miner, 1 cr

8248 Residential Child and Adolescent Treatment (prereq MD, #)
406134 Greenberg, Miner, 3 cr

8253 Child and Adolescent Community Psychiatry (prereq MD, #)
204742 Miner, 2 cr

8301 Seminar in Child, Adolescent, and Family Psychiatry (prereq MD, #)
000989 1 cr

CHILD PSYCHOLOGY (CPsy)
Education

1301 Introductory Child Psychology (§5301; prereq 5 cr introductory psychology)
700971 –1 1015-1100 MWF, Botany B6, Charlesworth, 4 cr
100974 –2 1820-2050 T, ElH N119, Yonas, 4 cr

R1970 Directed Study (prereq #)
329664 ar cr

3302 Infancy (prereq 1301 or #)
835386 1115-1200 MWF, Arch 40, Yonas, 4 cr

3303 Adolescent Psychology (§5303; prereq 5 cr introductory psychology)
129665 1820-2050 W, MoosT 2620, Williams, 4 cr

R3308 Research Methods in Child Psychology (S-N optional; prereq 1301, Psy 1004)
635387 0930-1100 TTh, ChDev 216, A Pick, 4 cr

3311 Behavioral and Emotional Problems (§5311; prereq 1301 or equiv)
029666 1115-1200 MWF, Botany B6, Egeland, 4 cr

R3330 Directed Experiences (prereq 1301 or equiv) (S-N optional)
536581 –1 0900-1030 MW, VoTech R380, Finstad, 1-4 cr (StP) (HEEd students only)
909135 –2 1820-2050 T, ChDev 218, Adolf, 1-4 cr (addnl hrs ar) (Observation, Participation in Early Childhood)

3331 Processes of Socialization of Children (§5331; prereq 1301 or equiv)
829667 1015-1100 MWF, BuH 120, Gunnar, 4 cr

R3980 Directed Instruction (max 4 cr; prereq #) (S-N only)
629668 1-4 cr

5301 Advanced Child Development (§1301, 8301; prereq 5 cr introductory psychology)
111935 1315-1400 MWF, ChDev 216, Breslow, 4 cr

5303 Adolescent Psychology (§3303; prereq 5 cr introductory psychology)
429669 1820-2050 W, MoosT 2620, Williams, 4 cr

5305 Multidisciplinary Perspectives on Aging (§Educ 5440, HSU 5009, PA 5671, Soc 5960, SW 5010)
829670 1615-1800 MW, VinH 16, Perlmutter, 4 cr

5311 Behavioral and Emotional Problems (§3311; prereq 1301 or equiv)
429672 1115-1200 MWF, Botany B6, Egeland, 4 cr

5331 Processes of Socialization of Children (§3331; prereq 1301 or equiv)
229673 1015-1100 MWF, BuH 120, Gunnar, 4 cr

5339 Parent-Child Relations (prereq 3331 or 5331)
435388 1820-2050 T, BuH 120, Motti, 4 cr

R5970 Directed Study (prereq #)
929675 ar cr

R5990 Directed Research (prereq #)
729676 ar cr

8310 Seminar: History of Child Development (prereq #)
329678 2000-2200 M, Hartup, H Pick, 1 cr

R8333 Advanced Social Development I (prereq #)
109134 1445-1600 MW, ChDev 218, Collins, Gunnar, 3 cr

8345 Advanced Language Development (prereq Ling 5001, 12 cr child psy or psy, #)
635390 1545-1700 TTh, ChDev 216, Maratsos, 3 cr

8347 Advanced Cognitive Development II (prereq Psy 5013 or #)
435391 1415-1545 TTh, ChDev 218, Dolgin, 3 cr

8360 Seminar: Developmental Psychology (prereq #)
631310 H Pick, others, ar cr

8605 Developmental Psychopathology (prereq 8333, #)
235389 1315-1430 MW, ChDev 218, Sroufe, Egeland, 3 cr

8970 Independent Study (prereq #)
129679 ar cr

8990 Research Problems (prereq #)
629671 ar cr

CHINESE (Chn)
East Asian Studies
Liberal Arts

R1011 Beginning Modern Chinese
426058 –1 LECT 0915-1000 TTh, FolH 303, Cass
226059 –2 LECT 1115-1200 TTh, FolH 107, Cass
♦608643 –1 REC 0815-0900 MTWThF, FolH 305, 5 cr
♦108668 –2 REC 1015-1100 MTWThF, JonesH 4, 5 cr
♦808656 –3 REC 1215-1300 MTWThF, FolH 107, 5 cr

3021 Intermediate Modern Chinese (prereq 1013)
130721 1115-1200 MTWThF, FolH 207, Huters, 5 cr

3031 Introductory Classical Chinese (prereq 1013)
130727 0915-1000 MWF, FolH 307, Wang, 4 cr

3041 Third Year Modern Chinese (prereq 3023)
730729 1115-1200 MWF, FolH 104, Wang, 4 cr

3090H Honors Tutorial (prereq △)
111103 1-4 cr

3163 20th Century Literature in English
108646 1315-1400 MWF, FolH 207, Huters, 4 cr

3201 Heritage of China: Early Period
235232 1015-1100 MTWTh, FolH 110, Mather, 5 cr

3970 Directed Studies (prereq #, △, college approval)
930731 1-4 cr

5041 Third Year Modern Chinese (prereq 3023)
530733 1115-1200 MWF, FolH 104, Wang, 4 cr

5051 Advanced Chinese Conversation and Composition (§3051; prereq 3023 or #, grad)
635230 1415-1500 MWF, FolH 105, Liu, 4 cr

5101 Readings in Modern Chinese Prose (prereq 3043 or #)
708651 1115-1200 MWF, FolH 111, Liu, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
430739 1-4 cr

CIVIL ENGINEERING (CE)
Civil And Mineral Engineering
Institute of Technology

1001 Orientation (S-N only)
501362 1515-1700 T, Phys 133, 1 cr

R3100 Introduction to Surveying and Mapping (prereq Math 1211, IT stu) (A-N only)
★LECT 0915-1000 MWF, MechE 18, Johnson
101003 –1 LAB 1315-1600 T, CivMinE 194, 4 cr
701005 –2 LAB 1415-1700 W, CivMinE 194, 4 cr
301007 –3 LAB 0915-1200 Th, CivMinE 194, 4 cr
001009 –4 LAB 1315-1600 Th, CivMinE 194, 4 cr
931457 –5 LAB 1415-1700 F, CivMinE 194, 4 cr

R3200 Introduction to Transportation Engineering (prereq Phys 1271, IT stu) (A-N only)
711887 1015-1100 MTWF, CivMinE 212, Huber, 4 cr



THE SCHOLARSHIP THAT LEADS ENGINEERING STUDENTS RIGHT INTO MANAGEMENT.

There's a lot more to an Army ROTC scholarship than tuition, books, lab fees, supplies and up to $1,000 per school year for living expenses.

There's leadership. You start sharpening your ability to lead while you're still in engineering school. So when you graduate as a second lieutenant, you're ready to take charge.

You're trim, fit. You know how to motivate people. And you're capable of managing the thousands of dollars worth of equipment you're in charge of.

And as you progress, you'll discover increasing opportunities to advance your engineering skills, to attend graduate school, while you serve your country.

All the while, you'll be acquiring the management skills that industry leaders look for.

So look into an Army ROTC scholarship. Talk it over with the Professor of Military Science on your campus. Or write: Army ROTC, Dept. JC, P.O. Box 9000, Clifton, N.J. 07015.

And start your move into engineering and management.

ARMY ROTC. BE ALL YOU CAN BE.

R3301 Soil Mechanics Laboratory (prereq 3300, IT stu) (A-N only)
235411 –1 LAB 0915-1200 M, CivMinE 350, Haitjema, 1 cr
135412 –2 LAB 1315-1600 M, CivMinE 350, Haitjema, 1 cr
935413 –3 LAB 0915-1200 T, CivMinE 350, Haitjema, 1 cr
135403 –4 LAB 1315-1600 T, CivMinE 350, Haitjema, 1 cr

R3400 Fluid Mechanics (§AEM 5200; prereq Math 3221, AEM 1015 or 3016, IT stu or forest products maj) (A-N only)
★LECT 1215-1300 MWF, Arch 50, Gulliver
801013 –1 LAB 1415-1700 M, CivMinE 277, Farell, 4 cr
101017 –2 LAB 1415-1700 T, CivMinE 277, Farell, 4 cr
101020 –3 LAB 1415-1700 W, CivMinE 277, Farell, 4 cr
301024 –4 LAB 1415-1700 Th, CivMinE 277, Farell, 4 cr
101025 –5 LAB 1415-1700 F, CivMinE 277, Farell, 4 cr

R3500 Introduction to Environmental Engineering Problems and Analysis (prereq Chem 1005)
801366 1115-1200 MTWTh, AkerH 209, Brezonik, 4 cr

3600 Structural Design for Architects (prereq architecture maj or adult special, AEM 3092, 3093) (A-N only)
401368 0915-1000 MTWThF, Arch 5, Cerny, 4 cr

R5002 Engineering Economics (prereq jr or sr IT stu or adult special or grad) (A-N only)
601370 1115-1200 TTh, CivMinE 212, Huber, 2 cr

5097 Advanced Design, Analysis, Research or Tutorial in Civil Engineering (prereq approval of faculty adviser) (A-N only)
701375 ar cr

R5210 Introduction to Transportation Systems Analysis (prereq #)
301377 1515-1700 TTh, CivMinE 214, Stephanedes, 4 cr

R5401 Water Resources Engineering (prereq 3400 or #, IT or grad stu) (A-N only)
★LECT 0815-0900 MWF, CivMinE 212, Bowers
501068 –1 LAB 1415-1700 M, CivMinE 202, 4 cr
501071 –2 LAB 1415-1700 W, CivMinE 202, 4 cr
001074 –3 LAB 0815-1100 Th, CivMinE 202, 4 cr

R5410 Open Channel Hydraulics (prereq 3400, 5401 or #, IT or grad stu) (A-N only)
★LECT 0915-1000 MWF, CivMinE 205, Song
101079 –1 LAB 1315-1600 T, HL 305, 4 cr
201081 –2 LAB 1315-1600 Th, HL 305, 4 cr

5435 Intermediate Fluid Mechanics with Applications (prereq 3400, IT or grad stu) (A-N only)
101373 1615-1800 TF, CivMinE 213, Arndt, 4 cr

R5500 Analysis and Design of Water Supply Systems (prereq 3400 or #, IT or grad stu) (A-N only)
★LECT 0915-1000 MWF, CivMinE 212, Maier
835405 –1 LAB 1315-1500 T, CivMinE 213, 4 cr
635406 –2 LAB 1315-1500 W, CivMinE 213, 4 cr
435407 –3 LAB 1315-1500 Th, CivMinE 213, 4 cr

R5506 Environmental Water Chemistry (prereq Chem 1006 or #, IT or grad stu) (A-N only)
735574 0915-1100 TTh, CivMinE 205, Eisenreich, 4 cr

5610 Design of Metal Structures (prereq 5600, IT stu or grad) (A-N only)
626060 1115-1200 MTWF, CivMinE 205, Goodman, 4 cr

5611 Design of Reinforced Concrete Structures (prereq 5600, IT or grad stu) (A-N only)
401371 1015-1100 MTWF, Arch 55, Cerny, 4 cr

R5612 Design of Metal Structures: Intermediate (prereq 5610, IT or grad stu) (A-N only)
001379 1615-1800 MW, CivMinE 205, Galambos, 4 cr

8097 Civil Engineering Research (prereq #) (A-N only)
101381 1-5 cr

8200 Theory of Traffic Flow (prereq #)
311889 1515-1700 MW, CivMinE 214, Michalopoulos, 4 cr

8413 Mechanics of Sediment Transport (prereq 5401 or #)
235408 1515-1700 MW, CivMinE 213, G Parker, 3 cr

8435 Topics: Hydrodynamics Theory (prereq #)
601384 3 cr

8440 Flow Effects on Structures (prereq 5435 or #)
135409 1315-1400 MWF, CivMinE 205, Farell, 4 cr

8497 Advanced Hydraulic Laboratory (prereq #)
201386 Bowers, 2 cr

8500 Physical and Chemical Processes for Water and Wastewater Treatment (prereq 5500, 5501 or #)
901388 1115-1200 MWF, CivMinE 213, Semmens, 3 cr

8560 Seminar: Special Topics in Environmental Engineering (prereq #)
901391 1515-1600 Th, CivMinE 205, Chiesa, 1 cr

8608 Advanced Theory of Structures (prereq #)
435410 1315-1500 TTh, CivMinE 205, Goodman, 4 cr

8697 Seminar: Structures (prereq #)
001396 1315-1400 F, CivMinE 213, ar cr

CLASSICAL CIVILIZATION (ClCv)
Liberal Arts

3970 Directed Studies (prereq #, △, college approval)
135152 1-15 cr

3990 Directed Research (prereq #, △, college approval)
935153 1-15 cr

CLASSICS (Clas)
Classics
Liberal Arts

R1003 Age of Alexander
135448 1215-1300 MWF, Arch 25, Coulson, 4 cr

R1042 Greek and Roman Mythology
030686 1215-1300 MWF, NichH 45, 4 cr

1045 Greek and Latin Elements in English: Introduction (§3045; prereq ¶1048, 3046)
101106 2 cr (Orientation 0815-0900 M, Sept 26, Armory 116 or 0915-1000 T, Sept 27, FolH 308 or 0815-0900 M, Oct 3, Armory 116. Independent study ar)

1048 Greek and Latin Terminology in the Medical and Biological Sciences (§3048; prereq 1045 or ¶)
701120 2 cr (Orientation 0815-0900 M, Sept 26, Armory 116 or 0915-1000 T, Sept 27, FolH 308 or 0815-0900 M, Oct 3, Armory 116. Independent study ar)

1141 Greek and Latin Terminology for Nursing (§1048)
101123 3 cr (Orientation 0815-0900 M, Sept 26, Armory 116 or 0915-1000 T, Sept 27, FolH 308 or 0815-0900 M, Oct 3, Armory 116. Independent study ar)

3046 Advanced Etymology: Vocabulary of the Sciences and Humanities (prereq 1045 or ¶)
101129 2 cr (Orientation 0815-0900 M, Sept 26, Armory 116 or 0915-1000 T, Sept 27, FolH 308 or 0815-0900 M, Oct 3, Armory 116. Independent study ar)

3073 Roman Religion and Early Christianity (§5073; prereq jr)
035449 1115-1200 MWF, FolH 303, Miller, 4 cr

3082 Greek Tragedy in Translation (§5082; prereq 8 cr Engl lit beyond Engl 1002 or foreign lit or △)
135451 1315-1400 MWF, FolH 110, Belfiore, 4 cr

R3162 Roman Art and Archaeology (§ArtH 3162)
136964 1115-1200 MWF, JonesH 207A, McNally, 5 cr

3970 Directed Studies (prereq #, △, college approval)
108579 1-5 cr

5073 Roman Religion and Early Christianity (§3073; prereq #)
335450 1115-1200 MWF, FolH 303, Miller, 4 cr

5082 Greek Tragedy in Translation (§3082; prereq 8 cr Engl lit beyond Engl 1002 or in foreign lit or △)
035452 1315-1400 MWF, FolH 110, Belfiore, 4 cr

5111 Bronze Age Art and Architecture in Greece, ca. 3000-1100 B.C. (§ArtH 5111; prereq one ancient art or archaeology course)
236963 1115-1200 MWF, JonesH 207B, Gunter, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
408580 1-5 cr

5980 Directed Instruction (prereq #, △, CLA approval)
108582 4 cr

5990 Directed Research (prereq #, △, CLA approval)
708584 4 cr

COLLEGE HONORS SEMINAR (CHS)
Honors Program
Liberal Arts

R3764 Theatre as a Weapon (prereq jr, sr, reg honors div)
635955 1515-1700 M, Mgmt/Econ 128, Jean Congdon, 4 cr

R3765 Freedom of Communication (prereq jr, sr, reg honors div)
435956 1015-1200 F, JohH 125, Theo L Glasser, 4 cr

R3766 Peasants, The State and Social Protest in the Third World (prereq jr, sr, reg honors div)
235957 1315-1500 T, Mgmt/Econ 130, Allen Isaacman, 4 cr

R3767 Teaching Apes to Communicate (prereq jr, sr, reg honors div)
135958 1515-1700 T, PtH 102, Joe E Reichle, 4 cr

R3768 Ethics, Population, and Environment (prereq jr, sr, reg honors div)
935959 1515-1700 W, FordH 359, Rolf Sartorius, 4 cr

R3782 Confessions of Sinners and Criminals: The Historical Function of Picaresque Literature
636684 1315-1500 Th, JohH 125, Anthony Zahareas, 4 cr

R3783 Families and Sexuality (prereq jr, sr, reg honors div)
436685 1515-1700 Th, Eli Coleman, Philip Colgau, 4 cr (Research East Conference Room)

COMMUNICATION DISORDERS (CDis)
Liberal Arts

R3100 Clinical and Research Observation (prereq department written permission) (S-N only)
230693 2 cr

3101 Introduction to Speech Pathology and Audiology
130694 1015-1200 TTh, FolH 303, Martin, others, 4 cr

5301 Introduction to Acoustics
730696 0915-1100 MW, 0915-1000 F, FolH 303, Speaks, 5 cr

5302 Anatomy and Physiology of Speech and Hearing Mechanisms
330698 0815-1000 TTh, BuH 120, Lassman, McDermott, 4 cr

5303 Phonetics Laboratory
111795 1215-1300 MW, FolH 303, Broen, 2 cr

5305 Language Development and Retardation
730701 1315-1500 MW, FolH 303, Siegel, 4 cr

5507 Cleft Palate, Oral-Facial Anomalies and Speech
330703 1615-1800 MW, FolH 303, Starr, Moller, 4 cr

5702 Advanced Audiometry (prereq 5701 or #)
★LECT 1015-1200 M, 1015-1100 W, ShevH 119, Yanz, 5 cr
909006 –1 LAB 1015-1300 F, ShevH 119, Yanz

5706 Hearing Aids (prereq 5701 or #)
709007 1415-1600 T, 1415-1500 Th, ShevH 119, Van Tasell, 3 cr

5900 Topics in Communication Disorders (prereq #)
411799 –1 0815-0900 MTWThF, FolH 303, Ward, 4 cr (Musical Perception and the Auditory System)
535379 –2 1700-2000 Th, FolH 303, Reichle, 4 cr (Augmentative Communication Systems)

5970 Directed Studies (prereq #, △, CLA approval)
130704 ar cr

8502 Seminar: Stuttering (prereq 5502 or #)
309009 1415-1600 Th, FolH 302, Martin, 3 cr

R8504 Seminar: Articulation (prereq 5504 or #)
030705 1115-1300 W, LindH 216, McDermott, 3 cr

8506 Seminar: Aphasia (prereq 5506 or #)
830706 1630-1900 T, FolH 103, Brookshire, 3 cr

R8507 Seminar: Cleft Palate (prereq 5507 or #)
709010 0815-1000 Th, MoosT 6274, Starr, 3 cr

R8512 Seminar: Language Retardation (prereq 5305 or #)
630707 0915-1200 F, FolH 103, Broen, Siegel, 3 cr

8520 Clinical Education in Speech/Language Pathology (prereq #)
430708 2-6 cr

8521 Clinical Education in Speech/Language Pathology (prereq #)
935380 2-6 cr

8715 Seminar: Hearing (prereq #)
509011 1515-1800 Th, Ward, 3 cr (118 Research East, 2630 University Ave SE)

8720 Clinical Education in Audiology (prereq #)
430711 2-6 cr

8721 Clinical Education in Audiology (prereq #)
735381 2-6 cr

8990 Research (prereq #)
230712 ar cr

COMPARATIVE LITERATURE (CLit)
Liberal Arts

3215 Cinema and Ideology (§Hum 3755)
035161 1415-1600 MW, MurH 105, Mowitt, 4 cr

5221 Basic Concepts of Cinema
013404 1415-1600 TTh, FolH 50, Bensmaia, 4 cr

5970 Directed Readings (prereq #, △, CLA approval)
816031 1-4 cr

8910 Advanced Comparative Literature Seminar (prereq grad or #)
730715 –1 1215-1400 TTh, FolH 301, Weber, 4 cr (Interpretation and Institution)
137555 –2 1515-1700 W, FolH 103, Sonkowsky, 4 cr (Classical and Medieval Latin Drama)

8951 Seminar in Comparative Literature (8951-8952-8955†)
530716 1415-1700 M, FolH 301, Godzich, 4 cr

8970 Directed Reading (prereq grad student in comparative lit, △)
330717 1-4 cr

COMPOSITION AND COMMUNICATION (Comp)
Liberal Arts

R0011 Preparation for Writing Practice (prereq assignment to category 4; # after first day of class) (S-N only) (course fee)
009255 –1 0815-0900 MWF, VinH 209, 0 cr
809256 –2 0915-1000 MWF, PtH 102, 0 cr
409258 –3 0915-1000 MWF, VinH 20, 0 cr
609260 –4 1015-1100 MWF, FordH 60, 0 cr
209262 –5 1115-1200 MWF, Arch 15, 0 cr
109263 –6 1115-1200 MWF, KoltH S140, 0 cr (ESL, MLK only)
709265 –7 1215-1300 MWF, AmundH 154, 0 cr
309267 –8 1215-1300 MWF, VinH 209, 0 cr
109268 –9 1315-1400 MWF, VinH 209, 0 cr
415349 –10 1415-1500 MWF, MinMet 104, 0 cr

R1011 Writing Practice I (prereq assignment to category 2 or 3)
009269 –1 LECT 0815-0900 MWF, VinH 206, 5 cr
109271 –2 LECT 0915-1000 MWF, FordH 40, 5 cr
009272 –3 LECT 1015-1100 MWF, AkerH 215, 5 cr
809273 –4 LECT 1115-1200 MWF, FordH 115, 5 cr
609274 –5 LECT 1215-1300 MWF, MinMet 124, 5 cr
409275 –6 LECT 1315-1400 MWF, SmithH 111, 5 cr
★LAB 0815-0930 TTh, NichH 45
709282 –7 LECT 0815-0900 MWF, FordH 70, 5 cr
309284 –8 LECT 0915-1000 MWF, ChDev 216, 5 cr
009286 –9 LECT 1015-1100 MWF, FordH 70, 5 cr
609288 –10 LECT 1115-1200 MWF, EltH N119, 5 cr
809290 –11 LECT 1215-1300 MWF, LindH 229, 5 cr
409292 –12 LECT 1315-1400 MWF, PtH 215, 5 cr
109294 –13 LECT 1415-1500 MWF, ChDev 105, 5 cr
★LAB 0815-0930 TTh, FraserH 102
709296 –14 LECT 0815-0900 MWF, VinH 301, 5 cr
509297 –15 LECT 0915-1000 MWF, KoltH S137, 5 cr
109299 –16 LECT 1015-1100 MWF, FordH 349, 5 cr
709301 –17 LECT 1115-1200 MWF, AmundH 162, 5 cr
309303 –18 LECT 1215-1300 MWF, LindH 303, 5 cr
609307 –19 LECT 1315-1400 MWF, PtH 214, 5 cr
209309 –20 LECT 1415-1500 MWF, MinMet 120, 5 cr
★LAB 0945-1100 TTh, Botany B6
109313 –21 LECT 0815-0900 MWF, VinH 364, 5 cr
909345 –22 LECT 0915-1000 MWF, VinH 301, 5 cr
509347 –23 LECT 1015-1100 MWF, AkerH 21, 5 cr
109349 –24 LECT 1115-1200 MWF, SmithH 225, 5 cr
309351 –25 LECT 1215-1300 MWF, LindH 325, 5 cr
009353 –26 LECT 1315-1400 MWF, LindH 229, 5 cr
★LAB 0945-1100 TTh, AmundH 240
809354 –27 LECT 0815-0900 MWF, VinH 20, 5 cr
609355 –28 LECT 0915-1000 MWF, SmithH 315, 5 cr
209357 –29 LECT 1015-1100 MWF, EltH N119, 5 cr
909359 –30 LECT 1115-1200 MWF, AkerH 215, 5 cr
209360 –31 LECT 1215-1300 MWF, PtH 214, 5 cr
909362 –32 LECT 1315-1400 MWF, Arch 30, 5 cr
709363 –33 LECT 1415-1500 MWF, PtH 214, 5 cr
★LAB 0945-1100 TTh, OwreH 2230
309365 –34 LECT 0815-0900 MWF, FordH 60, 5 cr
109366 –35 LECT 0915-1000 MWF, AkerH 215, 5 cr
809368 –36 LECT 1015-1100 MWF, PtH 215, 5 cr
009370 –37 LECT 1115-1200 MWF, VinH 301, 5 cr
609372 –38 LECT 1215-1300 MWF, KoltH S139, 5 cr
409373 –39 LECT 1315-1400 MWF, PeikH 315, 5 cr
109375 –40 LECT 1415-1500 MWF, ChDev 216, 5 cr
★LAB 1115-1230 TTh, FraserH 102
909376 –41 LECT 0815-0900 MWF, VinH 213, 5 cr
509378 –42 LECT 0915-1000 MWF, FordH 447, 5 cr
709380 –43 LECT 1015-1100 MWF, Armory 116, 5 cr
309382 –44 LECT 1115-1200 MWF, PtH 215, 5 cr
009384 –45 LECT 1215-1300 MWF, KoltH S138, 5 cr
609386 –46 LECT 1315-1400 MWF, FordH 170, 5 cr
★LAB 1115-1230 TTh, AmundH 240
409387 –47 LECT 1015-1100 MWF, KoltH S134, 5 cr (ESL only)
109389 –48 LECT 1115-1200 MWF, ChDev 218, 5 cr (ESL only)
209391 –49 LECT 1315-1400 MWF, FordH 160, 5 cr (ESL only)
★LAB 1115-1230 TTh, PillsH 110
909393 –50 LECT 0815-0900 MWF, FordH 175, 5 cr
709394 –51 LECT 0915-1000 MWF, FordH 175, 5 cr (honors students only)
309396 –52 LECT 1015-1100 MWF, VinH 301, 5 cr
009398 –53 LECT 1015-1100 MWF, ChDev 218, 5 cr
809399 –54 LECT 1115-1200 MWF, Armory 116, 5 cr
309401 –55 LECT 1215-1300 MWF, SmithH 111, 5 cr
009403 –56 LECT 1315-1400 MWF, AkerH 215, 5 cr (Pre-bus maj only)
★LAB 1245-1400 TTh, AndH 210
609405 –57 LECT 0815-0900 MWF, MinMet 120, 5 cr
409406 –58 LECT 0915-1000 MWF, VinH 314, 5 cr
109408 –59 LECT 1015-1100 MWF, AkerH 313, 5 cr
209410 –60 LECT 1115-1200 MWF, FordH 349, 5 cr
909412 –61 LECT 1215-1300 MWF, FordH 170, 5 cr
709413 –62 LECT 1315-1400 MWF, AkerH 313, 5 cr
★LAB 1245-1400 TTh, Phys 133
309415 –63 LECT 0815-0900 MWF, MinMet 124, 5 cr
109416 –64 LECT 0915-1000 MWF, FordH 349, 5 cr
809418 –65 LECT 1015-1100 MWF, MinMet 120, 5 cr
009420 –66 LECT 1215-1300 MWF, FordH 70, 5 cr
609422 –67 LECT 1315-1400 MWF, MRRC 211, 5 cr (MLK only)
409423 –68 LECT 1415-1500 MWF, JonesH 1, 5 cr
109425 –69 LECT 1415-1500 MWF, MRRC 211, 5 cr
★LAB 1245-1400 TTh, SciCB 175
709427 –70 LECT 0815-0900 MWF, AkerH 317, 5 cr
309429 –71 LECT 0915-1000 MWF, AmundH 54, 5 cr
709430 –72 LECT 1015-1100 MWF, VinH 364, 5 cr
309432 –73 LECT 1215-1300 MWF, FordH 160, 5 cr
009434 –74 LECT 1215-1300 MWF, FordH 60, 5 cr
809435 –75 LECT 1415-1500 MWF, AmundH 154, 5 cr
409437 –76 LECT 1415-1500 MWF, Arch 30, 5 cr
★LAB 1415-1530 TTh, FraserH 102
109439 –77 LECT 0815-0900 MWF, ChDev 218, 5 cr
409440 –78 LECT 0915-1000 MWF, AkerH 21, 5 cr
209441 –79 LECT 1015-1100 MWF, VinH 209, 5 cr
109442 –100 LECT 1015-1100 MWF, PillsH 110, 5 cr
713686 –101 LECT 1215-1300 MWF, KoltH S140, 5 cr
513687 –102 LECT 1415-1500 MWF, Arch 15, 5 cr
113689 –103 LECT 1415-1500 MWF, LindH 229, 5 cr
★LAB 1415-1530 TTh, Botany B6

R1012 Writing Practice and Literature (prereq assignment to category 2)
709444 –1 0915-1000 MWF, AkerH 211, 4 cr
509445 –2 1315-1400 MWF, Arch 15, 4 cr
109447 –3 0945-1100 TTh, KoltH S140, 4 cr
009448 –4 1115-1230 TTh, KoltH S132, 4 cr
109450 –5 1245-1400 TTh, LindH 305, 4 cr

R1013 Writing Practice II (prereq grade of X in 1011 or 1012, △) (S-N only)
635454 4 cr

R1027 Intermediate Expository Writing (prereq compl Writing Practice requirement; pre-Fall 1982 students:1001 or Comm 1001 or eqv)
202022 –1 0815-0900 MWF, LindH 203, 4 cr
502026 –2 0915-1000 MWF, MinMet 124, 4 cr
102028 –3 0915-1000 MWF, KoltH S140, 4 cr
002032 –4 1015-1100 MWF, KoltH S140, 4 cr
602034 –5 1115-1200 MWF, AmundH 158, 4 cr
202036 –6 1215-1300 MWF, LindH 340, 4 cr
902038 –7 1315-1400 MWF, Arch 20, 4 cr
102040 –8 1315-1400 MWF, LindH 217, 4 cr
926081 –9 1415-1500 MWF, MinMet 124, 4 cr
726082 –10 1415-1500 MWF, LindH 215, 4 cr
526083 –11 0815-0930 TTh, KoltH S140, 4 cr
326084 –12 0815-0930 TTh, VinH 213, 4 cr
131389 –13 0815-0930 TTh, FordH 160, 4 cr
231391 –14 0945-1100 TTh, LindH 303, 4 cr
131392 –15 0945-1100 TTh, VinH 213, 4 cr
931393 –16 1115-1230 TTh, LindH 229, 4 cr
009451 –17 1115-1230 TTh, BuH 125, 4 cr
609453 –18 1115-1230 TTh, LindH 217, 4 cr
409454 –19 1245-1400 TTh, LindH 217, 4 cr
109456 –20 1245-1400 TTh, LindH 302, 4 cr
013614 –21 1245-1400 TTh, Phys 236A, 4 cr

R3011 Writing About Literature (prereq fulfillment of writing practice req, jr, written permission of major advisor)
509459 –1 0815-0930 TTh, FordH 447, 4 cr
709461 –2 1115-1230 TTh, FolH 302, 4 cr

R3012 Writing About Non-Fiction Texts (prereq fulfillment of writing practice req, jr, written permission of major advisor)
309463 –1 0815-0930 TTh, FordH 170, 4 cr
009465 –2 1245-1400 TTh, LindH 303, 4 cr

R3013 Writing for Arts other than Literature (prereq fulfillment of writing practice req, jr, written permission of major advisor)
809466 –1 1015-1100 MWF, SmithH 111, 4 cr
409468 –2 0945-1100 TTh, SmithH 111, 4 cr

R3014 Writing for the Quantitative Social Sciences (prereq fulfillment of writing practice req, jr, written permission of major advisor)
609470 –1 0815-0930 TTh, LindH 303, 4 cr
409471 –2 1115-1230 TTh, ElectE 115, 4 cr

R3015 Writing about Science (prereq fulfillment of writing practice req, jr, written permission of major advisor)
109473 –1 0915-1000 MWF, ElectE 115, 4 cr
435455 –2 1115-1200 MWF, ElectE 115, 4 cr

R3027 Advanced Expository Writing (prereq fulfillment of writing practice req, jr, written permission of major advisor)
309477 –1 0815-0900 MWF, BlegH 260, 4 cr
009479 –2 1215-1300 MWF, Mgmt/Econ 130, 4 cr
109481 –3 1315-1400 MWF, Mgmt/Econ 130, 4 cr
809483 –4 0945-1100 TTh, BlegH 235, 4 cr
235456 –5 0945-1100 TTh, Mgmt/Econ 160, 4 cr
135457 –6 1115-1230 TTh, BlegH 350, 4 cr

R3031 Technical Writing for Engineers (prereq fulfillment of Writing Practice req, jr, written permission of major advisor)
609484 –1 0815-0900 MWF, ElectE 115, 4 cr
209486 –2 0915-1000 MWF, AkerH 313, 4 cr
909488 –3 0915-1000 MWF, AkerH 317, 4 cr (ESL only)
709489 –4 1015-1100 MWF, FordH 447, 4 cr
109490 –5 1015-1100 MWF, FordH 175, 4 cr
709492 –6 1215-1300 MWF, ElectE 115, 4 cr
413617 –7 1315-1400 MWF, ElectE 115, 4 cr
213618 –8 0815-0930 TTh, ElectE 115, 4 cr
213621 –9 0945-1000 TTh, ElectE 115, 4 cr
735459 –10 1115-1230 TTh, VinH 213, 4 cr
935458 –11 1245-1400 TTh, VinH 213, 4 cr

R3032 Pre-Professional Writing for Business (prereq fulfillment of Writing Practice req, jr, written permission of major advisor)
309494 –1 0815-0900 MWF, Mgmt/Econ 136, 4 cr
109495 –2 0915-1000 MWF, Mgmt/Econ 136, 4 cr
809497 –3 1115-1200 MWF, Mgmt/Econ 136, 4 cr
609498 –4 1215-1300 MWF, Mgmt/Econ 136, 4 cr
109500 –5 0945-1100 TTh, RarigC 616, 4 cr
809502 –6 1115-1230 TTh, BlegH 115, 4 cr
409504 –7 1245-1400 TTh, BlegH 115, 4 cr
113627 –8 1415-1530 TTh, BlegH 120, 4 cr

R3080 Special Projects in Advanced Composition (max 6 cr; prereq fulfillment of writing practice req, jr, written perm of major advisor, △)
209505 2 cr (CLA stu/honors only)

R3085 Conference Course in Advanced Composition (prereq fulfillment of Writing Practice req, jr, written permission of major advisor, △)
709251 1-4 cr (CLA majs only)

COMPUTER SCIENCE (CSci)
Institute of Technology

R3101 A FORTRAN Introduction to Computer Programming (prereq non-computer science maj, Math 1111 or 1201 or equiv or #)
113328 –1 0815-0900 MWF, MechE 212, Frankowski, 4 cr
213330 –2 0915-1000 MWF, MurH 311, Bruell, 4 cr
913332 –3 1015-1100 MWF, MurH 311, Carlis, 4 cr
513334 –4 1115-1200 MWF, AkerH 309, Rosen, 4 cr
113336 –5 1215-1300 MWF, CivMinE 212, Berzins, 4 cr
813338 –6 1415-1500 MWF, MechE 302, Du, 4 cr
614734 –7 1315-1400 MWF, MechE 221, 4 cr
414735 –8 1515-1600 MWF, Arch 30, 4 cr

R3102 Introduction to Pascal Programming (prereq non-computer science maj, Math 1111 or 1201 or equiv or #)
013340 –1 0815-0900 MWF, MurH 311, Frankowski, 4 cr
635275 –2 1015-1100 MWF, MinMet 116, Thompson, 4 cr
413343 –3 1215-1300 MWF, MechE 221, Borgwardt, 4 cr

R3104 Introduction to Programming and Problem Solving (prereq Math 1211 or equiv or #)
★LECT 1415-1530 MW, SmithH 100
512572 –1 LAB 1115-1200 TTh, MechE 302, 5 cr (CSci maj only)
112574 –2 LAB 1215-1300 TTh, MechE 302, 5 cr (CSci maj only)
012575 –3 LAB 1315-1400 TTh, ExpE 193, 5 cr (CSci maj only)
612577 –4 LAB 1415-1500 TTh, ExpE 193, 5 cr (CSci maj only)
913346 –5 LAB 0915-1000 WF, ExpE 193, 5 cr
713347 –6 LAB 1015-1100 WF, Arch 45, 5 cr
313349 –7 LAB 1115-1200 WF, ExpE 193, 5 cr
513351 –8 LAB 1215-1300 WF, ExpE 193, 5 cr

R3105 Fundamentals of Algorithms and Languages I (prereq 3101 or 3102 or 3104 or #)
101168 –1 1115-1200 MWF, ApH 150, McCall, 4 cr (CSci maj only)
113353 –2 1115-1200 MWF, ApH 150, McCall, 4 cr

R3107 Introduction to the Structure and Programming of Computer Systems (§5101; prereq computer science maj, 3104 or #)
001169 1315-1400 MWF, FordH 120, 4 cr

R3400 Discrete Structures of Computer Science (prereq computer science maj, Math 1231 or 1331 or #)
301170 1115-1230 TTh, MechE 108, 212, Stein, 4 cr

R5001 Theory and Application of Linear Programming Algorithms (prereq CLA or upper division IT computer science maj, 5301 or #)
001172 1615-1730 TTh, MechE 108, Rosen, 4 cr

R5101 Structure and Programming of Software Systems I (§3107; prereq non computer science maj, 3101 or 3102 or 3104 or #)
401175 1315-1400 MWF, FordH 120, 4 cr

R5102 Structure and Programming of Software Systems II (prereq 3107 or 5101 or #)
101177 1415-1530 TTh, Arch 35, Borgwardt, 4 cr

R5106 Structure of Higher Level Languages (prereq CLA or upper division IT computer science maj, 5102, 5121 or #)
401189 1215-1300 MWF, MechE 108, 4 cr

R5107 Computer Graphics I (prereq CLA or upper division IT computer science maj, 3107 or 5101, 5121 or #)
201193 0815-0930 TTh, MechE 302, Miller, 4 cr

R5121 Introduction to Data Structures (prereq CLA or upper division IT computer science maj, 3106, 3400 or #)
501197 –1 0815-0930 TTh, MechE 108, Du, 4 cr
314730 –2 0815-0930 TTh, VinH 16, Larson, 4 cr

R5180 Software Engineering (prereq CLA or upper division IT computer science maj, 5106 or #)
413357 0815-0930 MW, MechE 102, 1315-1400 TTh, Arch 30, Gray, 5 cr

R5201 Introduction to Computer Architecture (prereq 3400, 3107 or 5101 or #)
101199 1015-1130 MW, WullH 230, Afshari, 4 cr

R5301 Numerical Analysis (prereq Math 3142 or equiv or #...a knowledge of Pascal or FORTRAN is assumed)
301203 1245-1400 TTh, MechE 108, Munro, 4 cr

R5400 Introduction to Automata Theory (prereq CLA or upper division IT computer science maj, 3105, 3400 or #)
201209 0945-1100 TTh, VinH 16, Ibarra, 4 cr

R5502 Introduction to Operating Systems (prereq 5102, 5121 or #)
309544 1015-1130 TTh, FordH 55, Bruell, 4 cr

R5504 Introduction to Compilers (prereq CLA or upper division IT computer science maj, 5106 or #)
715082 0945-1100 TTh, MechE 108, Maly, 4 cr

R5702 The Principles of Database Systems (prereq 5122 or #)
901214 –1 1415-1530 TTh, MechE 102, Carlis, 4 cr
014732 –2 1645-1800 MW, MechE 221, Larson, 4 cr

R8101 Computer Operating Systems: Modeling and Analysis (prereq 5502 or #)
426061 1545-1700 TTh, MechE 102, Bruell, 3 cr

R8399 Seminar: Numerical Analysis (prereq #)
437027 1-3 cr

R8799 Seminar: Information Sciences (prereq #)
613471 –1 1515-1630 TTh, LindH 203, Carlis, 1-3 cr
237028 –2 1330-1530 WF, MinMet 116, Yeh, 1-3 cr

R8899 Computer Science Colloquium (prereq grad) (S-N only)
113359 1530-1630 M, MechE 108, 1 cr

CURRICULUM AND INSTRUCTIONAL SYSTEMS (CISy)
Curriculum And Instruction Education

5001 Educational Technology: Instructional Media (§SeEd 5102 or 5001) (A-N only)
029702 1615-1800 T, EdHAn 62, 1 cr

R5003 Educational Technology: Computers in the Classroom (§SeEd 5003 or 5102) (A-N only)
311858 –1 1015-1200 M, PeikH 355, 1 cr
711856 –2 1615-1800 W, PeikH 355, 1 cr
235201 –3 0915-1215 S, PeikH 355, 1 cr (Oct 1, 15, 29)

R5006 Educational Technology: Instructional Computer Programming (A-N only)
135202 1015-1215 T, PeikH 355, 1 cr

5203 Resource Management in Instructional Programs (§SeEd 5203; prereq 5000 or SeEd 5000 or #) (A-N only)
629704 1615-1815 M, PeikH 355, 3 cr

R5205 Applications of Computers in Education (§SeEd 5205; prereq 5003 or SeEd 5003) (A-N only)
429705 1015-1215 Th, PeikH 355, Tennyson, 3 cr

R5206 Microcomputer Uses in Elementary Classrooms (§Elem 5140) (A-N only)
935203 1615-1900 T, PeikH 355, Stochl, 3 cr

5505 Finding Educational Information (§SeEd 5115) (A-N only)
736837 1315-1400 TTh, WaLib 102, Jordan, 3 cr

5509 Directed Individual Study (max 6 cr; prereq △) (A-N only)
229706 Ahlgren, Kimpston, others, 1-6 cr

R5600 Introduction to Curriculum Systems (§SeEd 5113) (A-N only)
129707 1615-1815 T, BuH 120, Kimpston, 3 cr

R8100 Curriculum and Instruction Core: Curriculum (prereq PhD student or △)
735204 1615-1800 Th, EdHAn 64, Ahlgren, 2 cr

R8101 Curriculum and Instruction Core: Instruction (prereq PhD student or △)
535205 1615-1800 T, EdHAn 64, Tennyson, 2 cr

8416 Curriculum and Instructional Systems Seminar (prereq △)
729709 1015-1115 T, ChDev 218, Tennyson, Kimpston, 2 cr

8501 Problems: Instructional Systems (prereq △)
129710 Ahlgren, Kimpston, others, ar cr

8700 Curriculum and Instructional Systems Field Experience (max 6 cr; prereq #)
929711 Kimpston, 3-6 cr

8800 Problems: Secondary School Supervision (prereq △)
729712 E Anderson, ar cr

WHY PAY MORE!

1-800-356-9514

We Carry All CP/M Compatible Software

Over 100 Brands Like:

- Amdek
- Atari
- Cardco
- Commodore
- Creative Software
- Data Soft
- Discwasher
- Epson
- Maxell
- Okidata
- Panasonic
- Star Micronics
- Taxan
- Texas Instruments
- Timex
- USI

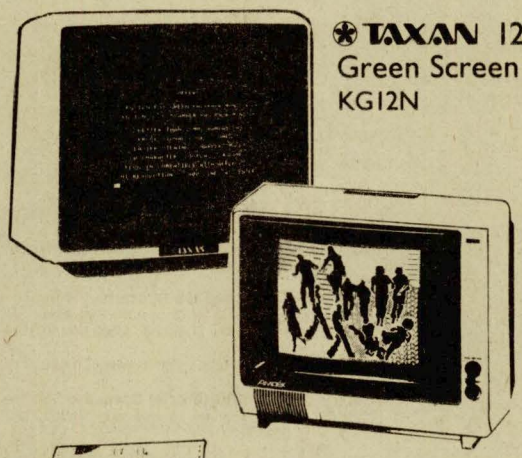
master charge | VISA

C.O.D.

Weekdays 9-9
Saturday 9-5

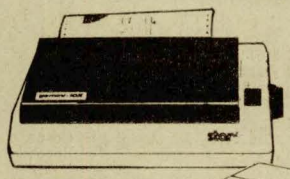
WDS

WISCONSIN DISCOUNT SALES
2417 W. badger rd. madison, wi 53713
1 608 271-6889

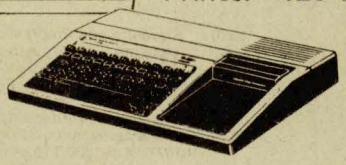


TAXAN 12" 80 Column Green Screen Monitor KG12N **$139**

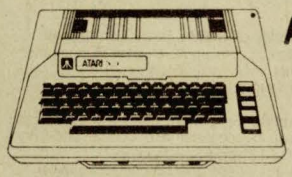
AMDEK CORP Color I Color Monitor With Audio — 260 — 300 Line Resolution **$288**



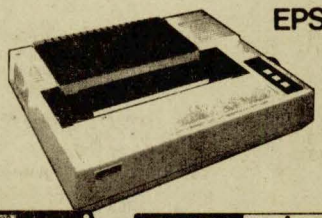
star Gemini 10 9x9 Dot Matrix Printer - 120 cps. **$329**



TEXAS INSTRUMENTS 99/4A **$97** * *After $50 Factory Rebate



ATARI 800 **$299** * *After $100 Factory Rebate



EPSON RX80 100 cps 9x9 Dot Matrix Printer **CALL FOR PRICE**



TIMEX sinclair 1000 With Built-In Math & Engineering Functions **$39**

HEWLETT PACKARD

HP12C	HP15C	HP41CV
$93	$93	$199

DANCE (Dnce)
School of Physical Ed, Rec, School Health Ed
Education

R1022 Ballroom Dance
531316 –1 1115-1200 MWF, NorrisH M151, Lampe, 1 cr (men only)
331317 –2 1115-1200 MWF, NorrisH M151, Lampe, 1 cr (women only)
035175 –3 1415-1510 TTh, NorrisH M151, Jette, 1 cr (men only)
635180 –4 1415-1510 TTh, NorrisH M151, Jette, 1 cr (women only)

R1023 Folk and Square Dance
131318 –1 1315-1410 TTh, NorrisH M151, Stern, 1 cr (men only)
031319 –2 1315-1410 TTh, NorrisH M151, Stern, 1 cr (women only)

R1024 Modern Dance
315523 –1 1315-1400 MW, NorrisH M151, Cheng, 1 cr
115502 –2 1115-1210 TTh, NorrisH M153A, M153, Jette, 1 cr

R1025 Ballet
015525 –1 0815-0910 TTh, PeikG G65, Atwood, 1 cr
315506 –2 0915-1010 TTh, PeikG G65, Atwood, 1 cr

R1124 Modern Dance (prereq 1024)
329826 1315-1410 TTh, PeikG G65, Bonsignore, 1 cr

R1515 Modern Dance Technique and Improvisation I (prereq 1324 or equiv, △) (A-N only)
129827 0915-1100 TThF, NorrisH 67, Cheng, 2 cr

R1518 Ballet I (prereq dance maj, △) (A-N only)
029828 1115-1300 MW, NorrisH 67, Savino, 2 cr

R3181 Dance Therapy (A-N only)
829829 1315-1410 TTh, NorrisH 67, Jette, 2 cr

R3185 Dance Notation (S-N optional for non maj)
935184 0815-0900 MWF, NorrisH 3, 67, Maud, 3 cr

R3281 Modern Dance Technique and Improvisation IV (prereq 1715 or #) (A-N only)
115510 0915-1100 MTWTh, NorrisH M153A, M153, Fargnoli, 3 cr

R3284 Ballet IV (prereq 1718 or #) (A-N only)
415514 1115-1300 F, PeikG G65, Savino, 1 cr

R3381 Modern Dance Technique and Improvisation (prereq 3283, dance maj, △) (A-N only)
129830 0915-1100 MTWThF, NorrisH M151, NMA 100, 5 cr

R3391 Dance Composition (prereq 3390, △) (A-N only)
735185 1115-1300 MW, NorrisH M153A, M153, Jasmin, 2 cr

R3396 Dance Repertory Theatre (max 9 cr; prereq audition, △) (A-N only)
029831 1315-1600 TTh, NorrisH M153A, M153, Fargnoli, 3 cr

R3398 Dance Composition (prereq 3391, 3395, △)
915517 1115-1300 TTh, NorrisH 67, Cheng, 2 cr

R3400 Senior Dance Seminar (max 9 cr; prereq △) (A-N only)
515519 1515-1730 W, NorrisH 3, 67, Hauser, 3 cr

R3608 Student Teaching: College Modern Dance (prereq 1715, △, 13326) (A-N only)
715521 0815-0900 T, NorrisH 3, Jette, 1 cr

DANISH (Dan)
Scandinavian Languages
Liberal Arts

R1101 Beginning Danish
630903 1115-1200 MTWThF, FolH 203, 5 cr

1104 Intermediate Danish (prereq 1103)
230905 1245-1400 TTh, FolH 52, Houe, 5 cr

3670 Readings in Danish Literary Texts (max 28 cr; prereq 3101)
930907 1245-1400 TTh, FolH 52, Houe, 4 cr

DENTAL HYGIENE (DH)
Dentistry

1001 Dental Anatomy (A-N only)
★LECT 1315-1445 M, MoosT 5181, Fellows, 3 cr
301184 –1 LAB 1315-1445 W, MoosT 5140, Fellows
601188 –2 LAB 1500-1630 W, MoosT 5140, Fellows

1091 Dental Hygiene Core I (A-N only)
★LECT 0800-0845 TTh, MoosT 2520, Grayden, 6 cr
208483 –1 LAB 1015-1215 T, MoosT 5140, Grayden
★CLN 1330-1600 T, Grayden
108484 –2 LAB 1015-1215 Th, MoosT 5140, Grayden
★CLN 1330-1600 Th, Grayden

1230 Applied Nutrition in Clinical Dental Hygiene (A-N only)
★LECT 0845-0930 Th, MoosT 5125, Sander, 2 cr
331723 –1 LAB 0745-0830 W, Sander
131724 –2 LAB 0845-0930 W, Sander

1301 Concepts in Community Dentistry (prereq PubH 3001) (A-N only)
★LECT 0745-0930 M, MoosT 5125, 3 cr
335464 –1 LAB 0745-0830 W
135465 –2 LAB 0845-0930 W

3002 Head and Neck Anatomy (A-N only)
636992 0900-0945 F, MoosT 5181, Aker, 2 cr

3094 Dental Hygiene Core IV (prereq 1093) (A-N only)
912648 –1 LAB 1315-1500 T, MoosT 5140, Lowe
112650 –2 LAB 1515-1700 T, MoosT 5140, Lowe
★CLN 1330-1600 Th, Lowe, 3 cr

3175 Oral Histology and Embryology (A-N only)
912780 0800-0845 MWF, MoosT 2620, Sedano, 2 cr

3192 Dental Hygiene Clinic II (prereq 3191) (A-N only)
★LECT 0745-0830 Th, MoosT 5125, Stoltenberg, 8 cr
935461 –1 CLN 0945-1200 MTWThF, Stoltenberg
735462 –2 CLN 1315-1600 MWF, Stoltenberg

3200 Periodontics for the Dental Hygienist (prereq 1051 or 1092) (A-N only)
031272 0745-0930 T, MoosT 5125, Hinrichs, 2 cr

3277 Oral Radiology II (A-N only)
831273 0745-0930 F, MoosT 5125, Brand, 2 cr

3399 Independent Study
712795 ar cr

DENTISTRY (Dent)
Dentistry

5001 Fixed Prosthodontics Technic
★LECT 1315-1400 M, MoosT 2690, Keck, 4 cr
629380 –1 LAB 1415-1700 MW, MoosT 4210A, Keck

5005 Fixed Prosthodontics: Independent Study
429381 Donahue, ar cr

5010 Fixed Prosthodontics Clinic
229382 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 9139, Donahue, 3 cr

5015 Fixed Prosthodontics Clinic
500891 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 9139, Donahue, ar cr

5030 Health Ecology: Update
108573 0800-0845 TTh, OwreH 2230, Martens, 2 cr (Oct 4-Dec 8)

5036 Organization and Management of Dental Practice I
★LECT 0745-0930 MTWThF, MoosT 2530, Martens, 3 cr (Sept 7-19)
200898 –1 REC 0945-1145 MTWThF, MoosT 2530, (Sept 8-23)

5052 Dental Auxiliary Utilization Clinic (DAU I)
100893 0945-1215 MTWThF, MoosT 8223, DiAngelis, 0 cr

5055 Health Ecology: Independent Study
800895 Martens, ar cr

5060 General Dentistry Clinic (Team II)
800900 Martens, 2 cr

5070 Health Ecology Elective
400902 Martens, ar cr

5075 Rural Dental Preceptorship Program
100904 Martens, 2 cr

5080 Dental Auxiliary Utilization Clinic
700906 DiAngelis, 1 cr

5091 Organization and Management of Dental Practice IV
100909 0745-0930 MTWThF, OwreH 2230, DiAngelis, ar cr (Sept 7-27)

5092 Professional Problem Solving
614197 Bebeau, 0 cr

5095 Professional Problem Solving
214199 Bebeau, 0 cr

5102 Human and Oral Genetics: Independent Study
500907 Witkop, ar cr

5151 Operative Dentistry I (prereq 5150)
300908 1315-1400 TTh, MoosT 2690, Hill, 1 cr

5154 Operative Dentistry Laboratory (prereq 5153)
113037 1415-1700 TTh, MoosT 4210A, Hill, 4 cr

5158 Operative Dentistry: Independent Study
500910 Geistfeld, ar cr

5161 Operative Clinic
300911 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 8150, Geistfeld, 3 cr

5165 Clinical Operative Dentistry
100912 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 8150, Geistfeld, ar cr

5170 Seminar: Operative Denistry
000913 Geistfeld, 1 cr

5171 Class III Direct Gold Restorations (prereq 5160, 5163)
814313 Larson, 1 cr

5172 Esthetic Direct Anterior Restoratives (prereq 5160)
414315 Larson, 1 cr

5173 Clerkship in Operative Dentistry (prereq 5160, 5165)
214316 Larson, 2 cr

5174 Dental Caries: Etiology, Pathology and Prevention
114317 Jensen, 1 cr

5175 Esthetic Dentistry Clinic (prereq 5172)
214820 Larson, 1 cr

5250 Oral Pathology: Independent Study
800914 Gorlin, ar cr

5255 Medicine for the Dentist
613017 0800-0845 MF, OwreH 2230, King, 1 cr (Oct 3-Dec 9)

5258 Laboratory Medicine the Dentist Can Use
600915 King, 1 cr

5310 Oral Surgery I
008574 0845-0930 F, MoosT 2530, Jaspers, 1 cr (Sept 30-Dec 9)

5316 Oral Surgery Clinic Rotation
400916 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 7407, Waite, 1 cr

5317 Anesthesia
200917 1315-1400 WF, MoosT 2690, Gatto, 2 cr (Sept 7-Nov 11)

5320 Oral Surgery: Independent Study
900919 Waite, ar cr

5322 Office Emergencies
200920 Waite, 1 cr

5325 Office Emergencies
413021 0800-0845 MF, OwreH 2230, Gatto, 1 cr

5371 Orthodontics I
126063 0745-0830 MWF, MoosT 2530, Speidel, 3 cr (Sept 26-Dec 9)

5376 Orthodontic Laboratory
100921 Speidel, 1 cr

5380 Orthodontics
415030 Speidel, 2 cr

5381 Head and Neck Anatomy Review
900922 Cavanaugh, 1 cr

5385 Orthodontics: Independent Study
700923 Bevis, ar cr

5402 Pediatric Dentistry II
600929 0800-0845 M, MoosT 2690, Till, 1 cr (Sept 12-Nov 14)

5404 Pediatric Dentistry III
713025 0800-0845 W, OwreH 2230, Till, 1 cr (Oct 5-Dec 7)

5405 Pediatric Hospital Dentistry
914822 Till, ar cr

5406 Advanced Pediatric Dentistry Clinic (prereq 5404)
914318 Till, ar cr

5407 Minor Tooth Movement
300925 Till, 1 cr

5408 Pediatric Dentistry Elective
100926 Till, 1 cr

5409 Clinical Pediatric Dentistry
026069 1330-1600 TWF, MoosT 6125, Till, 0 cr

5413 Clinical Pediatric Dentistry
108587 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 6125, Till, 0 cr

5420 Pediatric Dentistry: Independent Study
000927 Till, ar cr

5460 Periodontology: Independent Study
800928 Bakdash, ar cr

5463 Periodontology Technique I
808589 1000-1230 M, MoosT 4210, Carlson, 0 cr

5466 Clinical Periodontology III
000930 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 7336, Bandt, 1 cr

5469 Clinical Periodontology IV
326070 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 7336, Bandt, 1 cr

5553 Removable Prosthodontics: Independent Study
800931 Morstad, ar cr

5560 Removable Prosthodontics III
600932 0945-1130 W (Sept 7), 0745-0930 TWThF (Sept 20-23), MoosT 2530, Petersen, 1 cr

5562 Removable Prosthodontics Clinic
400933 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 9160, Morstad, 3 cr

5565 Removable Prosthodontics Clinic
200934 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 9160, Morstad, ar cr

5568 Review: Partial Removable Prosthetics
100935 Baker, 1 cr

5569 Removable Prosthetics
900936 Petersen, ar cr

5575 Maxillofacial Prosthodontics and Implantology
514824 Petersen, 1 cr

5577 Review of Complete Denture Prosthetics
114826 Petersen, 1 cr

5602 Biomaterials: Independent Study
700937 Douglas, ar cr

5603 Biomaterials Update (prereq completion of first three years of undergrad prog)
714319 Douglas, 1 cr

5623 Endodontics Technic
★LECT 0800-0845 F, MoosT 2690, Jensen, (Sept 9-Oct 14)
500938 –1 LAB 1000-1230 F, MoosT 4210A, Quan, ar cr

5625 Endodontics
300939 0745-0830 TTh, MoosT 2530, Jensen, 2 cr (Sept 27-Dec 8)

5626 Endodontic Clinic
700940 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 8127, Jensen, Quan, 1 cr

5630 Endodontics: Independent Study
500941 Jensen, ar cr

5631 Surgical Endodontics Elective
300942 Jensen, ar cr

5632 Advanced Molar Endodontics
114320 Jensen, ar cr

5633 Update in Endodontics
914321 Jensen, ar cr

5642 Hospital Dentistry
100943 Gatto, 1 cr

5649 Oral Anatomy
★LECT 0800-0845 TTh (Sept 8-Dec 8), 0800-0845 MF (Sept 9-16), 1000-1045 W (Sept 14, 21), MoosT 2620, Noble, 6 cr
036701 –1 LAB 1000-1230 TTh (Sept 8-Dec 8), 1415-1700 T (Sept 13, 20, 27), MoosT 4144A

5654 Oral Anatomy: Independent Study
000944 Noble, ar cr

5670 Introduction to Oral Biology
800945 1315-1500 MWF, MoosT 2620, Shapiro, 1 cr (Sept 9-21)

5677 Dental Research Training
600946 Legler, ar cr

5680 Oral Biology: Independent Study
400947 Shapiro, ar cr

5725 Oral Histology and Embryology
★LECT 0800-0845 MWF, MoosT 2620, Sedano, (Sept 23-Dec 9)
200948 –1 LAB 1000-1230 MWF, MoosT 8425, ar cr

5755 Occlusion: Independent Study
100949 Schulte, 2 cr

5760 Public Communication
400950 Smith, 1 cr

5776 Oral Radiology II
200951 0800-0845 TTh, MoosT 2690, Kuba, 2 cr (Sept 8-Nov 15)

5778 Clinical Roentgenology
126071 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 7221, Kuba, ar cr

5781 Advanced Clinical Roentgenology
114818 Kuba, ar cr

5784 TMJ Pathology and Facial Pain
100952 Brand, 1 cr

5785 Oral Radiology: Independent Study
900953 Kuba, ar cr

5800 Treatment Planning Clinic I
700954 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 7555, Little, 0 cr

5804 Treatment Planning Clinic II
026072 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 7555, Little, 1 cr

5807 Treatment Planning: Independent Study
500955 Little, ar cr

5971 General Practice Seminar II
313304 Simmons, ar cr

5975 General Practice Clinical Administration II
814814 Simmons, ar cr

5981 General Practice Clinic II
013306 Simmons, ar cr

5985 General Practice Clinic VI
414816 Simmons, ar cr

5989 Advanced Clinical Geriatric Dentistry (prereq #)
827336 ar cr

5990 Field Experience: Administration in a Multidisciplinary Health Center (prereq #)
627337 ar cr

5992 Oral Health Services for Older Adults (prereq #)
625989 ar cr

5995 Advanced Clinical Restorative Dentistry
300956 Geistfeld, ar cr

5999 Dental Clinic
100957 Jensen, ar cr

8140 Topics: Restorative Dentistry
000958 Geistfeld, ar cr

8150 Research: Restorative Dentistry
800959 Geistfeld, ar cr

DERMATOLOGY (Derm)
Medical School

5181 Clinical Problems in Dermatology (prereq regis med)
700307 1515-1630 WF, MoosT 2580, Gentry, 4.5 cr (addnl hrs ar, Manick)

5182 Preceptorship in Dermatology (prereq regis med)
300309 Manick, 4.5 cr

5183 Advanced Dermatology (prereq regis med)
500311 Manick, ar cr

5184 Special Course in Dermatology
100313 Manick, ar cr

5185 Research in Dermatology (prereq 5181)
800315 Dahl, 9 cr

8225 Clinical Dermatology
400317 Goltz, Gentry, ar cr

8226 Clinical Seminar
100319 1315-1700 WF, PWB 4272, Goltz, ar cr

8227 Histology of the Skin
200321 1500-1700 M, PWB 4272, Goltz, ar cr

8228 Research
900323 Zelickson, ar cr

8229 Electron Microscopy in Dermatology
500325 Zelickson, ar cr

8230 Functional Biology of the Skin
100327 Dahl, ar cr

8231 Clinics in Dermatology for Non-Dermatologists
800329 Goltz, ar cr

8232 Seminar: Dermatologic Histopathology and Mycology
800332 Goltz, ar cr

DESIGN (Dsgn)
Home Economics

R1501 Introduction to Design
129786 1100-1145 MWF, McNH 33, Blade, 3 cr

R1521 Design Process: Color (prereq △)
608562 –1 LAB 0900-1045 MWF, McNH 262, 4 cr
208564 –2 LAB 1000-1145 MWF, McNH 258, 4 cr
108565 –3 LAB 0900-1145 TTh, McNH 262, Bagley, 4 cr

R1523 Design Process: Visual Presentations (prereq △)
708567 –1 LAB 0800-0945 MWF, McNH 258, Larkin, 4 cr
508568 –2 LAB 1300-1445 MWF, McNH 262, 4 cr
708570 –3 LAB 1300-1545 TTh, McNH 258, 4 cr

R1525 Design Process: Two Dimensional Design (prereq △)
508571 1300-1445 MWF, McNH B3, Blade, 4 cr

R1531 Surface Fabric Design (prereq 1521, 1523, 1525 or #, △)
935914 0900-1145 MW, McNH B9, Abell, 4 cr

R1533 Metalsmithing: Introduction to Techniques (prereq 1521, 1523, 1525 or #, △)
608576 1000-1145 MWF, McNH 10, Ordos, 4 cr

R1541 Costume Design I (prereq 1521, 1523 or 1525 or #, △)
929787 1300-1445 MWF, McNH 212, Shenoi, 3 cr

R1552 Introduction to Housing, Interior Design (§1551; prereq soph)
729788 1400-1445 MWF, McNH 33, Nagle, 3 cr

R1554 Interior Design I: Spatial Design Experiences (prereq 1501, 1521, 1523, 1552, Ind 1600, △)
308586 0900-1145 TTh, McNH 316, Scudder, 3 cr

R1555 Interior Design I: Interior Design Problems (prereq 1554, △)
108590 1300-1445 MWF, McNH 316, Ginthner, 3 cr

R3523 Design Process: Visual Presentation II (prereq 1523 or equiv, △)
535916 –1 LAB 1300-1545 MW, McNH B9, Abell, 4 cr
237529 –2 LAB 1300-1545 TTh, McNH 262, Bagley, 4 cr

R3527 Design Process: Three Dimensional Design (prereq 1525, 1521, 1523 or #, △)
608593 1000-1145 MWF, McNH B3, Kim, 4 cr

R3541 Costume Design II (prereq 1543, 1544, △)
908602 0900-1145 TTh, McNH 205, 212, Amir-Fazli, 4 cr

R3550 Interior Design Presentation (prereq 1555, pass portfolio review, △)
108606 1300-1545 TTh, McNH 316, Birkeland, 3 cr

R3553 Interior Design II (prereq 3550 or #, △)
808608 1000-1145 MWF, McNH 316, 4 cr

R3557 Interior Design Resources and Materials (prereq 1555, TexC 3621)
411852 0900-1145 TTh, McNH 33, Ginthner, 3 cr

3562 Real Estate Practice (prereq 1551, 1552 or #)
215000 1810-2110 Th, AndH 270, 3 cr

R3570 Senior Seminar in Housing (prereq sr in housing maj) (S–N only)
529789 1300-1345 M, McNH 216, Franklin, 1 cr

R3575 Senior Seminar: Interior Design (to be taken last two qtrs prior to graduation or #) (S–N only)
929790 1200-1245 W, McNH 216, Erickson, 1 cr

R3580 Internship in Housing (max 15 cr; prereq completion one-half professional sequence, #) (S–N only)
729791 1200-1245 M, McNH 212, Franklin, 5–15 cr

R3581 **Field Experience in Interior Design: Retail or Community Service** (prereq 3553, Psy 1001) (S-N only)
529792 1200-1245 M, McNH 216, Ginthner, 3 cr

R3583 **Field Experience in Costume Design** (prereq completion of at least one-half of professional sequence or #) (S-N only)
329793 4 cr

R3584 **Field Experience in Design** (max 15 cr; prereq #, plan to be submitted, approved in advance by adviser, employer) (S-N only)
129794 ar cr

3586 **Design Problems**
516203 1-3 cr

R5512 **History of European Furniture and Interiors** (prereq 5505 or equiv)
029795 0900-0945 MWF, McNH 33, Erickson, 4 cr

R5533 **Metalsmithing: Combined Techniques** (prereq 3533, △)
808639 1300-1445 MWF, McNH 10, Ordos, 4 cr

R5541 **Costume Design III** (prereq 3541, TexC 3604 or #, △)
108615 0900-1045 MWF, McNH 205, 212, Amir-Fazli, 3 cr

R5552 **Interior Design III: Residential Design** (prereq 3553, 3557, TexC 3621, FSoS 1401 or #, △...ForP 3310, TexC 3622 rec)
808625 1300-1445 MWF, McNH 305, Erickson, 4 cr

R5554 **Interior Design IV: Contract Design** (prereq 3553, 3557, TexC 3621 or #, △...ForP 3310, TexC 3622 rec)
408630 0900-1145 TTh, McNH 305, 4 cr

R5555 **Honors Thesis: Interior Design** (prereq completion of all other professional courses, # program committee approval)
829796 15 cr

R5568 **Housing Problems of the Family** (prereq 1551 or 1555, 3563 or #)
629797 1200-1445 TTh, McNH 216, Franklin, 5 cr

R5584 **Readings in Design** (no srs; prereq #)
429798 1-3 cr

5585 **Problems in Design: General** (max 12 cr; prereq #, △)
229799 2-4 cr

R5586 **Problems in Design: Housing and/or Interiors** (max 12 cr; prereq #, △)
029800 2-4 cr

R5587 **Problems in Design: Jewelry** (max 12 cr; prereq #, △, passed portfolio review)
829801 3-4 cr

R5588 **Problems in Design: Textiles** (max 12 cr; prereq #, △, passed portfolio review)
629802 3-4 cr

R5589 **Problems in Design: Costume** (max 12 cr; prereq 5518 or equiv, #, passed portfolio review)
429803 3-4 cr

R8523 **Design Process: Drawing** (prereq 1501, 1521, 1523, 1525, 3527, 5505 or equiv, △)
708634 1300-1445 MWF, McNH 258, Larkin, 4 cr

R8576 **Seminar: Design Instruction** (max 6 cr)
129805 1200-1245 W, McNH 240K, Larkin, Bagley, 1 cr

R8584 **Readings in Design** (prereq #)
929806 1-3 cr

R8585 **Problems in Design** (prereq #)
729807 1-5 cr

R8586 **Problems in Interior Design** (prereq #)
529808 1-5 cr

R8587 **Problems in Design** (prereq #)
329809 1-5 cr

8588 **Directed Study in Design** (prereq #) (A-N only)
135918 -1 Abell, Blade, Cook, Erickson, Franklin, Alexander, Ginthner, Angell, 1-5 cr
837557 -2 1500-1545 W, McNH 262, Bagley, 1-5 cr
637558 -3 1500-1545 W, McNH 258, Larkin, 1-5 cr

DUTCH (Dtch)
German
Liberal Arts

R1101 **Beginning and Intermediate Dutch: Classroom Reading, Listening, Writing, Speaking** (§1110)
537181 1215-1300 MTWThF, FolH 207, Van Kampen, 5 cr

R1110 **Beginning Dutch: Individualized Reading, Listening, Writing** (first 3 cr must be completed as a unit, max 15 cr, §1101-1102-1103)
230743 1115-1200 T, WaLib 204, Wakefield, 1-15 cr (1st meeting) (addnl hrs ar)

R3011 **Conversation and Composition** (prereq 1105 or #)
337182 1615-1800 T, 1715-1800 Th, FolH 203, van Kerkwijk, 4 cr

R3012 **Conversation and Composition** (prereq 3011)
137183 1615-1800 T, 1715-1800 Th, FolH 203, van Kerkwijk, 4 cr

3510 **Topics in Dutch Culture** (no knowledge of Dutch req)
037184 1615-1800 M, 1615-1700 Th, FolH 208, van Kerkwijk, 4 cr

3970 **Directed Studies** (prereq 1105, #, △, college approval)
708424 van Kerkwijk, 1-5 cr

EAST ASIAN STUDIES (EAS)
East Asian Studies
Liberal Arts

1463 **Introduction to East Asia in Modern Times** (§Hist 1463, 3463)
208600 1315-1400 MWF, BlegH 415, Farmer, Marshall, 4 cr

3001 **Chinese-Japanese Calligraphy**
508604 1315-1400 MWF, FolH 302, Matsumoto, 4 cr

3013 **Introduction to Far Eastern Art** (§ArtH 3013)
535236 1115-1230 TTh, JonesH 207B, Poor, 4 cr

3211 **East Asia** (§Geog 3211)
935234 1015-1100 MWF, BlegH 205, Hsu, 4 cr

3281 **Culture and Society in China and Japan** (§Anth 3281)
335237 0915-1000 MWF, FordH 285, Spencer, 4 cr

3468 **People's Republic of China: The Communist Revolution, 1900 to Present** (§Hist 3468)
135233 0945-1100 TTh, BlegH 120, Farmer, 4 cr

3472 **Early Modern Japan** (§Hist 3472, 5472)
735235 1115-1200 MWF, BlegH 205, Marshall, 4 cr

ECOLOGY AND BEHAVIORAL BIOLOGY (EBB)
Biological Sciences

R5014 **Ecology of Plant Communities** (prereq 3004 or Biol 3041, 1 qtr statistics or #) (course fee)
★LECT 1215-1300 MWF, Zoology 313, Cushing. (Field trip one of the following: Oct 8-9, 15-16, 22-23)
101347 -1 LAB 1315-1730 Th, Zoology 101B, 5 cr
001348 -2 LAB 1315-1730 F, Zoology 101B, 5 cr

R5044 **Evolution** (prereq Biol 1106 or 3011)
008610 0915-1000 MWF, Zoology 102, Merrell, 4 cr

R5129 **Mammalogy** (§FW 5129; prereq Biol 1106 or 3011 or #)
★LECT 0915-1000 MWF, Zoology 313, Birney
201355 -1 LAB 0815-1100 T, Zoology 101D, 5 cr
101356 -2 LAB 1015-1300 W, Zoology 101D, 5 cr

R5321 **Evolution of Social Behavior** (prereq Biol 1106 or 3011 or #)
★LECT 1315-1400 MWF, Zoology 108, McKinney
701361 -1 REC 1515-1700 M, Zoology 102, 4 cr
301363 -2 REC 1515-1700 T, Zoology 102, 4 cr

R5601 **Limnology** (§Geo 5601; prereq Chem 1005 or #)
829328 1215-1300 MWF, PillsH 110, Shapiro, 4 cr

R5604 **Biological Limnology** (prereq 5601 or 5612 or #)
035466 0915-1100 TTh, Zoology 108, Megard, 3 cr

R5605 **Laboratory in Biological Limnology** (prereq 5601 or 5812 or #)
835467 1315-1600 WF, Zoology 101A, Megard, 2 cr (2 field trips ar)

R5607 **Ecology of Animal Plankton** (prereq Biol 3041, EBB 5601 or #)
★LECT 1315-1400 MWF, Zoology 108, McNaught
435469 -1 LAB 1415-1700 M, Zoology 101C, 4 cr

5970 **Directed Studies** (prereq #, △)
629329 ar cr

5990 **Directed Research** (prereq #, △)
508621 ar cr

8390 **Graduate Seminar** (prereq #)
029330 ar cr

8391 **Advanced Work in Ecology and Behavioral Biology** (prereq #)
829331 ar cr

8990 **Graduate Research** (prereq #)
629332 ar cr

ECONOMICS (Econ)
Liberal Arts

R1001 **Principles of Macroeconomics** (§1004; prereq 3rd qtr fr or CDS student, knowledge of elem algebra at level of Math 0006)
★LECT 1115-1200 T, WilleyH 125, 175, Heller
201369 -1 REC 0815-0900 MWF, BlegH 215, 4 cr
201372 -2 REC 0915-1000 MWF, BlegH 215, 4 cr
901374 -3 REC 1015-1100 MWF, BlegH 215, 4 cr
101378 -4 REC 1115-1200 MWF, BlegH 215, 4 cr
301380 -5 REC 1215-1300 MWF, BlegH 215, 4 cr
001382 -6 REC 1315-1400 MWF, BlegH 215, 4 cr
801383 -7 REC 1415-1500 MWF, BlegH 215, 4 cr
★LECT 0815-0930 TTh, 1115-1200 T, WilleyH 175, Heller
401385 -8 REC 0815-0900 M, BlegH 115, 5 cr
101387 -9 REC 1215-1300 M, BlegH 115, 5 cr
701389 -10 REC 0815-0900 W, BlegH 205, 5 cr
101390 -11 REC 0915-1000 W, BlegH 225, 5 cr
301394 -12 REC 1215-1300 W, BlegH 115, 5 cr
101395 -13 REC 0815-0900 F, BlegH 115, 5 cr
601398 -14 REC 0915-1000 F, BlegH 115, 5 cr
101400 -15 REC 1015-1100 F, BlegH 115, 5 cr
001401 -16 REC 1115-1200 F, BlegH 130, 5 cr
531378 -17 REC 1215-1300 F, BlegH 115, 5 cr

R1001H **Honors Course: Principles of Macroeconomics** (§1004, 1014; prereq 3rd qtr fr, knowl of elem algebra at level Math 0006...B average rec)
★LECT 1115-1200 T, WilleyH 175, Heller
811105 -80 REC 1215-1300 MWF, BlegH 435, 5 cr

R1002 **Principles of Microeconomics** (§1015, 1005, 3001, 3002; prereq 3rd qtr freshman, knowl of elem algebra at level Math 0006)
901407 -1 1215-1300 MWF, WilleyH 125, 0815-0900 M, BlegH 205, 4 cr
501409 -2 1215-1300 MWF, WilleyH 125, 0815-0900 W, BlegH 335, 4 cr
701411 -3 1215-1300 MWF, WilleyH 125, 0915-1000 W, BlegH 335, 4 cr
301413 -4 1215-1300 MWF, WilleyH 125, 1315-1400 W, BlegH 255, 4 cr
101414 -5 1215-1300 MWF, WilleyH 125, 0815-0900 F, BlegH 205, 4 cr
801416 -6 1215-1300 MWF, WilleyH 125, 0915-1000 F, BlegH 150, 4 cr
401418 -7 1215-1300 MWF, WilleyH 125, 1015-1100 F, BlegH 150, 4 cr
601420 -8 1215-1300 MWF, WilleyH 125, 1115-1200 F, BlegH 440, 4 cr
401421 -9 0815-0900 MWF, BlegH 135, 4 cr
201422 -10 0915-1000 MWF, BlegH 135, 4 cr
101423 -11 1015-1100 MWF, BlegH 135, 4 cr
701425 -12 1115-1200 MWF, BlegH 135, 4 cr
301427 -13 1215-1300 MWF, BlegH 135, 4 cr
001429 -14 1215-1300 MWF, FordH 115, 4 cr
137533 -15 1315-1400 MWF, Law 15, 4 cr

R1002H **Honors Course: Principles of Microeconomics** (§1005, 1015; prereq 3rd qtr fr, knowl of elem alegebra at level of Math 0006...B avg rec)
211111 1215-1300 MWF, BlegH 105, 5 cr

R1004 **Principles of Macroeconomics** (§1001; prereq 1 qtr calculus)
630805 1315-1400 MWF, VinH 1, 4 cr

R1005 **Principles of Microeconomics** (§1002; prereq 1 qtr calculus)
430806 1415-1500 MWF, VinH 1, 4 cr

R3001 **Economic Problems of American Economy** (§1001, 1002, 1004, 1005, 1014, 1015, not available to econ majs at 3xxx-level cr)
130808 1315-1400 MWF, BlegH 120, Smith, 4 cr

R3101 **Microeconomic Theory** (§3105, 5151, no cr SMgt student; prereq 1001, 1002, Math 1111 or 1131 or equiv)
012303 –1 0815-0900 MWF, BlegH 120, 4 cr
901438 –2 1015-1100 MWF, BlegH 105, 4 cr
101440 –3 1115-1200 MWF, BlegH 120, 4 cr
701442 –4 1215-1300 MWF, Law 15, 4 cr

R3102 **Macroeconomic Theory** (prereq 1001, 1002, Math 1111 or 1131 or equiv...3101 rec)
001446 –1 0915-1000 MWF, BlegH 230, 4 cr
801450 –2 1215-1300 MWF, BlegH 155, 4 cr
431387 –3 1315-1400 MWF, BlegH 235, 4 cr

R3103 **Welfare Economics** (prereq 3101 or 3101H)
609078 0915-1000 MWF, AndH 330, Coen, 4 cr

R3105 **Managerial Economics** (§3101, BGS 3001; prereq pre-Mgmt or SMgt student, 1001, 1002, 1 qtr calculus)
★LECT 0945-1100 TTh, AndH 210, Meurer
412340 –1 REC 0815-0900 M, BlegH 435, 4 cr
112342 –2 REC 1315-1400 M, BlegH 115, 4 cr
712344 –3 REC 0815-0900 W, BlegH 435, 4 cr
112347 –4 REC 1215-1300 W, BlegH 150, 4 cr
112350 –5 REC 1315-1400 W, BlegH 115, 4 cr
612353 –6 REC 0815-0900 F, BlegH 435, 4 cr
212355 –7 REC 1215-1300 F, AndH 230, 4 cr

R3701 **Money and Banking** (§5721, 5701; prereq 1001, 1002, non maj)
★LECT 0815-0930 TTh, WilleyH 125
809080 –1 REC 0815-0900 W, BlegH 415, 4 cr
409082 –2 REC 0815-0900 F, BlegH 440, 4 cr
109084 –3 REC 0915-1000 F, BlegH 440, 4 cr
909085 –4 REC 1015-1100 F, BlegH 130, 4 cr
709086 –5 REC 1115-1200 F, BlegH 435, 4 cr
309088 –6 REC 1215-1300 F, AndH 330, 4 cr
109089 –7 REC 1315-1400 F, BlegH 115, 4 cr

R3801 **Elements of Public Finance** (§5821; prereq 1001, 1002, non maj)
130816 0915-1000 MWF, BlegH 130, 4 cr

R3960 **Topics in Economics: Economic Growth** (prereq 3102, 3103, 1 qtr calculus)
435908 1315-1400 MWF, BlegH 440, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
630819 ar cr

R5113 **Introduction to Mathematical Economics** (prereq 3101 or #, Math 3142, 3211)
830821 0945-1100 TTh, BlegH 125, Ito, 4 cr

R5151 **Elements of Economic Analysis: Firm and Household** (§3101; prereq 1001, 1002, 1 qtr calculus, grad student or #)
630822 1245-1400 TTh, BlegH 420, Richter, 3 cr

5161 **Microeconomic Theory** (no grad cr; prereq 3103, Math 3211, #...1 qtr linear algebra rec)
012320 0945-1100 TTh, BlegH 250, 5 cr

5164 **Macroeconomic Theory** (no grad cr; prereq 3102, 3103, Math 3211, #...1 qtr linear algebra rec)
★LECT 1415-1530 TTh, BlegH 235, Ito, 5 cr
509090 –1 REC 1700-1800 W, BlegH 155

5261 **Applied Econometrics** (no grad cr; prereq 3101, 3102, Stat 5122, 1 qtr linear algebra, #)
★LECT 1415-1530 MW, BlegH 120, Porter, 5 cr
109092 –1 REC 1415-1530 F, BlegH 120

5315 **Economics of Asia** (prereq 3101, 3102 or #...1 qtr calculus rec)
635910 1415-1530 TTh, BlegH 215, Ito, 4 cr

R5401 **International Economics** (§5431; prereq 1001, 1002, non maj)
230824 1415-1500 MWF, BlegH 155, Smith, 4 cr

R5431 **International Economics** (§5401; prereq 3102, 3103 or equiv or #)
212792 0815-0900 MWF, BlegH 425, 4 cr

R5431H **International Economics** (§5431, 5401; prereq 3101, 3102, 3103)
435911 0915-1000 MWF, BlegH 120, 5 cr

5461 **International Trade and Payments Theory** (no grad cr; prereq 3102, 3103, Math 3211, #...1 qtr linear algebra rec)
912794 1115-1230 TTh, BlegH 125, Chipman, 5 cr

R5531 **Labor Economics** (§3501; prereq 3101, 3102)
330832 1245-1400 TTh, BlegH 120, Simler, 4 cr

R5561 **Wages and Employment** (no grad cr; prereq 3102, 3103, 1 qtr calculus, #)
914805 1415-1530 TTh, BlegH 240, Rosenzweig, 5 cr

R5623 **Housing Markets and Public Policy in the United States** (prereq 1001, 1002)
109098 1115-1230 TTh, BlegH 240, Swan, 4 cr

R5631H **Honors Course: Industrial Organization, Antitrust Policy** (prereq 3103...B average rec)
337246 1115-1200 MWF, BlegH 155, Porter, 5 cr

5671 **Industrial Organization and Government Regulation** (no grad cr; prereq 3103, Math 3211, familiarity with regression analysis, #)
135913 1115-1200 MWF, BlegH 425, Prescott, 5 cr

R5721 **Money and Banking** (§3701, 5701; prereq 3102)
426075 1115-1200 MWF, BlegH 220, 4 cr

R5731 **Macroeconomic Policy** (§3711; prereq 3102)
226076 1115-1230 TTh, BlegH 230, 4 cr

R5821 **Elements of Public Finance** (§3801; prereq 3101...3103 rec)
230841 1015-1100 MWF, BlegH 255, 4 cr

R5831 **Cost-Benefit Analysis** (prereq 3101...3103 rec)
235912 1215-1300 MWF, BlegH 425, 4 cr

5861 **Public Finance** (no grad cr; prereq 3102, 3103, Math 3142, 3211, #)
130842 1545-1700 TTh, BlegH 350, Brownlee, 5 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
530845 ar cr

8101 **Microeconomic Theory** (prereq 3101 or 5151, Math 3211...1 qtr linear algebra rec)
★LECT 0945-1100 TTh, BlegH 250, Richter, 4 cr
926078 –1 REC 1545-1645 MW, BlegH 155

8104 **Macroeconomic Theory** (prereq 3102, Math 3211 or equiv...1 qtr linear algebra rec)
★LECT 1415-1530 TTh, BlegH 235, Sims, 4 cr
809094 –1 REC 1700-1800 MW, BlegH 155

8111 **Introduction to Mathematical Economics** (prereq Math 3142, 3211, ¶5161, Math 5612...Math 5243 rec)
314310 0945-1100 TTh, BlegH 260, Jordan, 3 cr

8181 **Advanced Topics in Microeconomics** (prereq 8103)
637074 1115-1230 TTh, BlegH 360, Hurwicz, 3 cr

8191 **Workshop in Mathematical Economics** (prereq #)
130850 1515-1700 M, BlegH 330, Richter, ar cr

8201 **Applied Econometrics** (prereq 3101, 3102, Stat 5122, 1 qtr linear algebra)
★LECT 1415-1530 MW, BlegH 120, Porter, 4 cr
409096 –1 REC 1415-1530 F, BlegH 120

8211 **Econometrics** (prereq 5151, 5152, Stat 5133 or 5122, Math 5243 or equiv, #)
630853 0915-1030 MW, BlegH 260, Lee, 3 cr

8291 **Workshop in Econometrics** (prereq #)
335383 Sims, ar cr

8401 **International Trade and Payments Theory** (prereq 8102, 8104)
012804 1115-1230 TTh, BlegH 125, Chipman, 3 cr

8491 **Workshop in Trade and Development** (prereq #)
130856 1530-1700 T, BlegH 115, ar cr

R8501 **Wages and Employment** (prereq 8101, 8104)
514774 1415-1530 TTh, BlegH 240, Rosenzweig, 3 cr

8601 **Industrial Organization and Government Regulation** (prereq 8101)
335917 1115-1200 MWF, BlegH 425, Prescott, 3 cr

8691 **Workshop in Applied Microeconomics** (prereq #)
209102 1530-1700 W, SocSci 1383, ar cr

8701 **Monetary Economics** (prereq 8102, 8105)
930860 1245-1400 TTh, BlegH 360, Sargent, 3 cr

8781 **Advanced Topics in Monetary Economics** (prereq #)
909104 1115-1230 TTh, BlegH 235, Jordan, 3 cr

8791 **Workshop in Macroeconomics** (prereq #)
730861 1415-1600 F, Mgmt/Econ 130, ar cr

8801 **Public Finance** (prereq 8102, 8105)
130864 1545-1700 TTh, BlegH 350, Brownlee, 3 cr

8990 **Individual Research**
030865 ar cr

EDUCATIONAL ADMINISTRATION (EdAd)
Educational Policy And Administration
Education

5103 **Supervision and Administration of Special Education** (§SpEd 5160 or PsyS 5160) (A-N only)
729810 1615-1800 M, FolH 110, Weatherman, 3 cr

5120 **Practicum: Post Secondary Administration** (max 6 cr) (A-N only)
529811 1830-2030 M, BuH 123, Morgan, 3-6 cr

5127 **Workshop: Policy Development for School Managers** (A-N only)
835470 1615-1800 Th, PeikH 355, Ammentorp, 3 cr

5128 **Workshop: Educational Administration: Supervisory Techniques for School Building Administration** (S-N optional)
635471 1830-2030 Th, PeikH 225, Nickerson, 3 cr

5200 **Design and Management of Education Services** (A-N only)
329812 1830-2030 Th, BuH 123, Ammentorp, 3 cr

5201 **Formal Organizations in Education** (§8201) (A-N only)
435472 1615-1800 T, FolH 207, Popper, 3 cr

5202 **Politics of Education** (§8202, SPFE 8202, 5202) (A-N only)
235473 1615-1800 M, FolH 105, Mazzoni, 3 cr

5203 **The Community School** (§8203) (A-N only)
836635 1000-1145 S, PeikH 225, Popper, 3 cr

5210 **Financing Elementary and Secondary Schools** (§8210) (A-N only)
135474 1615-1800 T, FolH 105, Mueller, 3 cr

5224 **Legal Implications of Acts by School Boards, Administrators, and Teachers** (§8224) (A-N only)
935475 1830-2030 M, BlegH 135, Hooker, 3 cr

5227 **Public School Personnel Programs** (§8227) (A-N only)
735476 1830-2030 T, PeikH 225, Alkire, 3 cr

5230 **Public Relations for School Organizations** (§8230) (A-N only)
535477 1615-1800 Th, PtH 111, Popper, 3 cr

5250 American Higher Education (§Educ 5250, HIEd 5250) (S-N optional)
108632 1515-1700 W, BuH 240, Corcoran, 4 cr

5274 Two-Year Postsecondary Institutions (§VoEd 5274) (A-N only)
012141 1615-1800 Th, VoTech 320A, Morgan, 3 cr

5292 The Law and Postsecondary Educational Institutions (§HiEd 5292) (A-N only)
335478 1830-2030 Th, BlegH 210, Hooker, 3 cr

8212 School Budgeting (prereq 5210)
135479 1830-2030 T, PeikH 315, Sederberg, 3 cr

8215 Elementary School Principalship
829815 1615-1800 Th, ChDev 105, Lambert, 3 cr

8220 Quantitative Foundations for Management Methods
629816 1615-1800 W, BuH 123, Hendrix, 3 cr

8228 Problems: Higher Education (§HiEd 8228; prereq #)
412497 ar cr

8238 Seminar: Theory and Research (prereq 8218, 8235, educ admin maj or #)
929823 1615-1800 M, BuH 240, Hendrix, Mueller, 3 cr

8241 Seminar: Internship
729824 1315-1500 Th, PtH 214, Alkire, Nickerson, 0-9 cr

8247 Seminar: School District Politics (prereq 8202)
108623 1830-2030 W, PeikH 315, Mazzoni, 3 cr

8253 Administration in Higher Education (§HiEd 8255; prereq 5250 or HiEd 5250)
529825 1615-1800 T, BuH 240, Hearn, 3 cr

8264 Secondary School Principalship
408627 1615-1800 W, PtH 111, Nickerson, 3 cr

8270 Problems: Elementary School Administration (prereq #)
129819 ar cr

8271 Problems: Secondary School Administration (prereq #)
429820 ar cr

8272 Problems: Educational Administration
229821 1-3 cr

8273 Field Study (prereq #)
129822 0-10 cr

8341 Analysis of Education Policy Systems (prereq 8340)
535480 1830-2030 W, PeikH 355, Ammentorp, 3 cr

ELECTRICAL ENGINEERING (EE)
Institute of Technology

R1400 Circuits Laboratory (prereq 3009 or ¶, IT maj)
335481 –1 LAB 1515-1700 M, ElectE 121, 1 cr
135482 –2 LAB 0815-1000 T, ElectE 121, 1 cr
035483 –3 LAB 0815-1000 Th, ElectE 121, 1 cr
835484 –4 LAB 1315-1500 Th, ElectE 121, 1 cr

R3002 Electric Machinery and Power Distribution (no EE majs; prereq Math 3221 or equiv, Phys 1291 or equiv, IT stu)
709671 –1 LECT 1015-1100 MTWF, ExpE 193, 5 cr (lab ar)

R3003 Circuits and Electronics (no EE majs; prereq IT student, Phys 1291, Math 3221 or ¶)
712893 1315-1400 MTWF, SmithH 100, 4 cr

R3004 Circuits and Electronics Laboratory (no EE majs; prereq IT student, 3003 or ¶)
136583 –1 LAB 1115-1300 M, ElectE 118, 1 cr
012897 –2 LAB 1515-1700 M, ElectE 118, 1 cr
612899 –3 LAB 1015-1200 T, ElectE 118, 1 cr
112901 –4 LAB 1515-1700 T, ElectE 118, 1 cr
036584 –5 LAB 0915-1100 W, ElectE 118, 1 cr
412905 –6 LAB 1115-1300 W, ElectE 118, 1 cr
112907 –7 LAB 1515-1700 W, ElectE 118, 1 cr
712909 –8 LAB 0815-1000 Th, ElectE 118, 1 cr
912911 –9 LAB 1015-1200 Th, ElectE 118, 1 cr
512913 –10 LAB 1215-1400 Th, ElectE 118, 1 cr
312914 –11 LAB 1415-1600 Th, ElectE 118, 1 cr
112915 –12 LAB 1515-1700 F, ElectE 118, 1 cr

R3010 Linear Circuits II (prereq IT student, at least C grades in 3009, Math 3221, Phys 1291 or ¶Phys 1291)
★LECT 1215-1300 TWThF, Arch 40, 4 cr
935573 –1 REC 1415-1500 T, MechE 212
101518 –2 REC 1515-1600 T, MechE 212
201520 –3 REC 1615-1700 T, MechE 221

R3011 Signal Analysis (prereq 3010, upper division elec engr maj)
★LECT 0915-1000 MWThF, SciCB 175, 4 cr
435486 –1 REC 1315-1400 M, AkerH 211
235487 –2 REC 1415-1500 M, AkerH 211
135488 –3 REC 1515-1600 M, AkerH 211
935489 –4 REC 1615-1700 M, AkerH 211
235490 –5 REC 1315-1400 T, MechE 302
135491 –6 REC 1415-1500 T, MechE 302

R3012 Circuits, Signals, and Systems III (prereq 3011, elec engr or mech engr maj)
312122 0915-1000 MTWF, Arch 55, 4 cr

R3052 Electronics III (prereq 3051, 3012 or ¶, elec engr or mech engr maj)
112129 1315-1400 MTWF, Arch 55, 4 cr

R3060 Semiconductor Devices (prereq 3010 or ¶, Phys 1291, upper division elec engr or mech engr maj)
★LECT 1115-1200 MWF, PWB 2470, 1115-1200 Th, OwreH 2230, 4 cr
735493 –1 REC 1315-1400 W, AkerH 211
535494 –2 REC 1415-1500 W, AkerH 211
335495 –3 REC 1515-1600 W, AkerH 211
135496 –4 REC 1615-1700 W, AkerH 211
035497 –5 REC 1315-1400 Th, MechE 202
835498 –6 REC 1415-1500 Th, MechE 302

R3352 Microprocessors (prereq soph IT maj) (A-N only)
★LECT 1315-1400 MWF, MechE 18, 4 cr
335500 –1 REC 1415-1500 W, MechE 221
135501 –2 REC 1515-1600 W, MechE 302
035502 –3 REC 1615-1700 W, MechE 302
◆835503 –1 LAB 1015-1200 T, ElectE 210
◆635504 –2 LAB 1315-1500 T, ElectE 210
◆435505 –3 LAB 1515-1700 T, ElectE 210
◆235506 –4 LAB 0915-1100 Th, ElectE 210
◆135507 –5 LAB 1515-1700 Th, ElectE 210
◆935508 –6 LAB 1515-1700 F, ElectE 210

R3400 Junior Electrical Engineering Laboratory (prereq IT stu, 1400, 3060 or ¶3060) (A-N only)
★LECT 1215-1300 M, MoosT 2620
101566 –1 LAB 1415-1700 M, ElectE 21, 2 cr
901567 –2 LAB 1415-1700 M, ElectE 21, 2 cr
701568 –3 LAB 0815-1100 T, ElectE 21, 2 cr
501569 –4 LAB 0815-1100 T, ElectE 21, 2 cr
701571 –5 LAB 1115-1400 T, ElectE 21, 2 cr
501572 –6 LAB 1115-1400 T, ElectE 21, 2 cr
301573 –7 LAB 1415-1700 T, ElectE 21, 2 cr
001575 –8 LAB 1415-1700 T, ElectE 21, 2 cr
601577 –9 LAB 1415-1700 W, ElectE 21, 2 cr
601580 –10 LAB 1415-1700 W, ElectE 21, 2 cr
901584 –11 LAB 1415-1700 Th, ElectE 21, 2 cr
101588 –12 LAB 1415-1700 Th, ElectE 21, 2 cr
001592 –13 LAB 1415-1700 F, ElectE 21, 2 cr

R3402 Junior Electrical Engineering Laboratory (prereq IT stu, 3401, 3012 or ¶, 3052 or ¶)
★LECT 1215-1300 W, SciCB 325
901598 –1 LAB 0815-1100 Th, ElectE 21, 2 cr
201601 –2 LAB 0815-1100 Th, ElectE 21, 2 cr
901603 –3 LAB 1115-1400 Th, ElectE 21, 2 cr
501605 –4 LAB 1115-1400 Th, ElectE 21, 2 cr
412080 –5 LAB 1415-1700 F, ElectE 21, 2 cr

R3470 Summer Engineering Employment (prereq completion of 2nd or 3rd yr work, declaration of intention before end of spr qtr, #)
901178 Riaz, 1-3 cr

R3471 Summer Engineering Employment (prereq 3470, #)
701179 Riaz, 1-3 cr

R5051 Logic Design and Microprocessors (prereq 3051 or #, IT stu or grad IT maj)
101185 1115-1200 MTWF, OwreH 2230, 4 cr

R5052 Logic Design and Microprocessor Laboratory (prereq ¶5051, IT stu or grad IT maj)
309611 –1 LAB 1315-1500 M, ElectE 216, 1 cr
009613 –2 LAB 1515-1700 M, ElectE 216, 1 cr
809614 –3 LAB 0815-1000 T, ElectE 216, 1 cr
409616 –4 LAB 1315-1500 T, ElectE 216, 1 cr
109618 –5 LAB 1515-1700 T, ElectE 216, 1 cr
209620 –6 LAB 0815-1000 W, ElectE 216, 1 cr
109621 –7 LAB 1315-1500 W, ElectE 216, 1 cr
709623 –8 LAB 1515-1700 W, ElectE 216, 1 cr
309625 –9 LAB 0815-1000 Th, ElectE 216, 1 cr
009627 –10 LAB 1015-1200 Th, ElectE 216, 1 cr
809628 –11 LAB 1315-1500 Th, ElectE 216, 1 cr
009630 –12 LAB 1515-1700 Th, ElectE 216, 1 cr
836862 –13 LAB 1315-1500 F, ElectE 216, 1 cr
636863 –14 LAB 1515-1700 F, ElectE 216, 1 cr
436864 –15 LAB 0815-1000 S, ElectE 216, 1 cr
236865 –16 LAB 1015-1200 S, ElectE 216, 1 cr

R5055 Instrumentation and Control Electronics (prereq 3012 or ¶, 3052 or #, IT stu or grad IT maj)
909670 1215-1300 MTThF, Arch 5, 4 cr

R5056 Electronic Circuits Laboratory (prereq 3401, ¶5055, IT stu or grad IT maj)
609632 –1 LAB 1315-1700 M, ElectE 240, 1 cr (alt M)
209634 –2 LAB 1315-1700 T, ElectE 240, 1 cr (alt T)
909636 –3 LAB 1315-1700 W, ElectE 240, 1 cr (alt W)
509638 –4 LAB 0815-1200 Th, ElectE 240, 1 cr (alt Th)

R5100 Electromagnetic Fields III (prereq 3101, IT stu or grad IT maj)
712134 1015-1100 MTWF, AkerH 209, 4 cr

R5101 Electromagnetic Fields Laboratory (prereq 3401, 5100 or ¶5100, IT stu or grad IT maj)
709640 –1 LAB 1315-1700 M, ElectE 323, 1 cr (alt M)
309642 –2 LAB 1315-1700 M, ElectE 323, 1 cr (alt M)
009644 –3 LAB 1315-1700 T, ElectE 323, 1 cr (alt T)
609646 –4 LAB 1315-1700 T, ElectE 323, 1 cr (alt T)
209648 –5 LAB 1315-1700 W, ElectE 323, 1 cr (alt W)
409650 –6 LAB 1315-1700 W, ElectE 323, 1 cr (alt W)
109660 –7 LAB 0815-1200 Th, ElectE 323, 1 cr (alt Th)
809662 –8 LAB 0815-1200 Th, ElectE 323, 1 cr (alt Th)
735509 –9 LAB 1315-1700 Th, ElectE 323, 1 cr (alt Th)
135510 –10 LAB 1315-1700 Th, ElectE 323, 1 cr (alt Th)
935511 –11 LAB 1315-1700 F, ElectE 323, 1 cr (alt F)
735512 –12 LAB 1315-1700 F, ElectE 323, 1 cr (alt F)

R5150 Electrical Engineering Materials (prereq 3101, Phys 3501 or #, IT stu or grad IT maj)
301217 0915-1000 MTWF, LindH 229, 4 cr

R5300 Electromechanics (prereq 3011, 3101 or #)
101218 0815-0900 MTWF, Arch 55, 4 cr

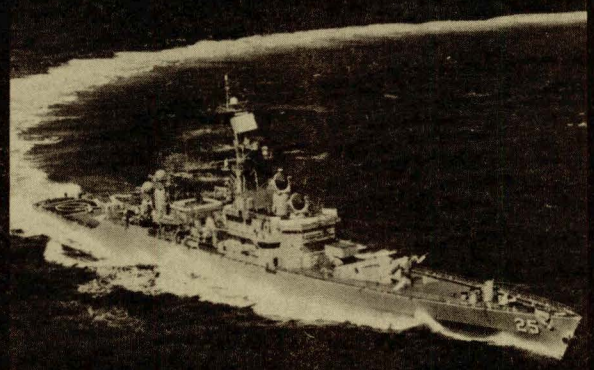
R5470 Directed Study (prereq △)
001222 ar cr

R5478 Industrial Assignment III (5478-5479†; prereq 3477, regis in intern program) (A-N only)
601224 2 cr

R5479 Industrial Assignment IV (5478-5479†; prereq 5478)
101227 2 cr

R5490H Honors Project (prereq △)
211125 1315-1600 Th, Arch 45, 3 cr

The Most Sophisticated Training Ground For Nuclear Engineering Isn't On The Ground.



It's on a Navy ship.

The Navy has more than 1,900 reactor-years of nuclear power experience—more than anyone else in America. The Navy has the most sophisticated nuclear equipment in the world. And the Navy operates over half of the nuclear reactors in America.

With a nuclear program like that, you know the Navy also offers the most comprehensive and sophisticated nuclear training.

Every officer in the Nuclear Navy completes a full year of graduate level technical training. Outside the Navy, this kind of program would cost you thousands. In the Navy, you're paid while you learn.

Then, as a nuclear-trained officer, you supervise highly trained personnel in the operation of the most advanced nuclear propulsion plants ever developed. You get a level of technical and management experience unequalled anywhere else.

You get important responsibilities and you get them fast. Because in the Navy, as your knowledge grows, so do your responsibilities.

Today's Nuclear Navy is one of the most challenging and rewarding career choices a man can make. And that choice can pay off while you're still in school. Qualified juniors and seniors earn approximately $1,000/month while they finish school.

As a nuclear-trained officer, after 4 years with regular promotions and pay increases, you can be earning as much as $40,500. That's on top of a full benefits package that includes medical and dental care, and 30 days' vacation earned each year.

As a nuclear-trained officer, you also earn a place among this nation's most qualified and respected professionals. So, if you're majoring in math, engineering or the physical sciences, send in the coupon. Find out more about the most sophisticated training ground for nuclear engineering. Today's Nuclear Navy.

NAVY OPPORTUNITY INFORMATION CENTER
P.O. Box 5000, Clifton, NJ 07015

W225

☐ Please send me more information about becoming an officer in the Nuclear Navy. (ØN)

Name_____
First (Please Print) Last

Address_____ Apt. #_____

City_____ State_____ Zip_____

Age_____ †College/University_____

‡Year in College_____ ♦GPA_____

▲Major/Minor_____

Phone Number_____
(Area Code) Best Time to Call

This is for general recruitment information. You do not have to furnish any of the information requested. Of course, the more we know, the more we can help to determine the kinds of Navy positions for which you qualify.

DC 83/84

Navy Officers Get Responsibility Fast.

R5500 Synthesis of Active and Passive Networks (prereq 5012 or grad standing or #)
535513 –1 0945-1100 TTh, MechE 102, 3 cr

R5511 Digital Filters and Signal Processing (prereq 5002 or #)
101230 –1 1415-1500 MWF, MechE 108, 3 cr

R5560 Biomedical Instrumentation (prereq #)
200903 –1 LECT 1315-1400 MWF, MechE 202, 4 cr (lab ar)

R5571 VLSI Systems (prereq IT sr, grad, elec engr adult special or #)
912925 0915-1100 M, 0915-1000 W, MechE 108, 3 cr

R5574 VLSI Technology (prereq IT sr, grad, adult special or #)
512927 1015-1100 W, 0915-1100 F, MechE 108, 3 cr

R5625 Fourier Optics (prereq 5100 or Phys 3012 or #)
901231 1415-1600 M, 1415-1500 WF, MechE 102, 4 cr

R5650 Dynamical Methods in Electrical Engineering (prereq #)
137564 TS Lee, 3 cr

R5654 High-Speed, Compound Semiconductor Devices I (prereq ¶5660 or #)
637088 0815-0900 MWF, Arch 45, 3 cr

R5660 Semiconductor Properties and Devices (prereq 3101 or #)
701232 1115-1200 MWF, MechE 102, 3 cr

R5666 Magnetic Properties of Materials and Applications (prereq #)
709668 1115-1230 TTh, Arch 30, 3 cr

R5702 Stochastic Processes and Optimum Filtering (prereq Stat 3091, grad standing or #)
301234 1115-1300 T, 1115-1200 Th, MechE 102, 3 cr

R5750 Topics in Systems Analysis (prereq grad standing or #)
101235 1115-1200 MWF, Arch 30, 3 cr

R5805 Electric Power Systems Engineering (prereq #)
635518 1415-1500 MWF, ElectE 115, 3 cr

R5852 Digital Computer Systems (prereq 5851, CSci 3101 or CSci 1101 or #)
136860 1115-1200 MWF, MechE 108, 3 cr

R8090 Seminar: Electronics (prereq #)
401239 1515-1700 F, MechE 102, Warner, ar cr

8191 Seminar: Surface Physics (prereq #)
201243 Cohen, ar cr

8211 Coding Theory (§5701; prereq 5700 or #)
435519 0815-0930 TTh, LindH 215, 3 cr

8250 Advanced Control Topics (prereq #)
835520 1245-1400 TTh, ElectE 115, 3 cr

R8290 Seminar: Control Theory (prereq #)
501247 1415-1500 Th, MechE 108, ar cr

8340 Seminar: Surface Power (prereq #)
726079 Albertson, ar cr

8451 Advanced Topics in Electrical Engineering (prereq #)
636586 ar cr

8460 Plan B Project (prereq #)
001253 4 cr

ELEMENTARY EDUCATION (Elem)
Curriculum And Instruction Education

R3100 Psychological Foundation of Elementary Education (prereq 5 cr introductory psychology) (A–N only)
★LECT 1115-1200 MWF, FordH 155, Samuels
501667 –1 LAB 1215-1300 W, PtH 111, 4 cr
301668 –2 LAB 1215-1300 W, ChDev 216, 4 cr
501670 –3 LAB 1215-1300 W, ChDev 218, 4 cr
101672 –4 LAB 1215-1300 W, PeikH 315, 4 cr

R3101 Introduction to Elementary School Teaching (prereq ¶3100, elementary education maj) (A–N only)
★LECT 1315-1400 MWF, BuH 120, Humphreys
735526 –1 LAB 1215-1300 F, ChDev 216, 3 cr
535527 –2 LAB 1215-1300 F, ChDev 218, 3 cr
335528 –3 LAB 1215-1300 F, PeikH 315, 3 cr
135529 –4 LAB 1215-1300 F, PeikH 225, 3 cr

3103 The Teacher and the Elementary School (§3101; prereq 3102) (A–N only)
635521 1615-1800 W, PeikH 315, Stochl, 2 cr

R3300 Children's Literature (A–N only)
301685 –1 1315-1400 TTh, BuH 123, 3 cr
101686 –2 1315-1400 TTh, BuH 125, Odland, 3 cr (IIIA)

R3316 Teaching English in the Elementary School (prereq 3100, 3101, Engl 3851) (A–N only)
001690 –1 0915-1000 MWF, BuH 125, Monson, 3 cr (IIIA)
201694 –2 1015-1100 MWF, BuH 125, Taylor, 3 cr (Block V) (¶sec 2, 3331)

R3331 Teaching Reading in the Elementary School (prereq 3100, 3101) (A–N only)
501698 –1 1015-1100 MWF, BuH 123, Manning, 3 cr (IIIA)
701702 –2 1115-1200 MWF, BuH 125, Taylor, 3 cr (Block V) (¶sec 2, 3316)

R3346 Teaching Science in the Elementary School (prereq 3100, 3101, 10 cr in natural science) (A–N only)
529713 1015-1200 MWF, PeikH 375, 3 cr (Block U) (¶3361, 3391)

R3361 Teaching Social Studies in the Elementary School (prereq 3100, 3101) (A–N only)
329714 0915-1000 MWF, PeikH 375, Ellis, 3 cr (Block U) (¶3346, 3391)

R3376 Nursery School-Kindergarten Curriculum I (prereq 3100) (A–N only)
029716 1315-1500 TTh, PtH 215, Hansen, 3 cr

R3377 Nursery School-Kindergarten Curriculum II (prereq 3376) (A–N only)
436587 1545-1645 TTh, ChDev 102, Weigand, 3 cr

R3391 Teaching Mathematics in the Elementary School (prereq 3100, 3101, Math 1005, 1006) (A–N only)
129715 0815-0900 MWF, PeikH 375, Jackson, 3 cr (Block U) (¶3346, 3361)

3600 Student Teaching in the Elementary School, Half Days (prereq 12 cr methods, △) (S–N only)
629718 6 cr

3603 Student Teaching in the Kindergarten (prereq 6 cr elem student tchg, △) (S–N only)
429719 6 cr

3604 Student Teaching in the Nursery School (prereq approval of major adviser, director student teaching) (S–N only)
829720 3-6 cr

3605 Student Teaching in Elementary School: Half Days, Full Days (prereq 15 cr methods, △) (S–N only)
629721 9 cr

3607 Student Teaching in Elementary School: Full Days (prereq 18 cr methods, △) (S–N only)
429722 12 cr

3621 Junior Practicum in Elementary Education (max 6 cr; prereq elementary education maj) (S–N only)
229723 1–2 cr

3630 Student Teaching in Elementary School Literature (prereq 10 cr in elem student tchg, △) (S–N only)
129724 3 cr

3631 Student Teaching in Elementary School English (prereq 10 cr in elem student tchg, △) (S–N only)
929725 3 cr

3633 Student Teaching in Elementary School Reading (prereq 10 cr in elem student tchg, △) (S–N only)
729726 3 cr

3634 Student Teaching in Elementary School Science (prereq 10 cr in elem student tchg, △) (S–N only)
529727 3 cr

3636 Student Teaching in Elementary School Social Studies (prereq 10 cr in elem student tchg, △) (S–N only)
329728 3 cr

3639 Student Teaching in Elementary School Mathematics (prereq 10 cr in elem student tchg, △) (S–N only)
129729 3 cr

3900 Directed Study (max 6 cr; prereq elementary maj, △) (A–N only)
529730 1–3 cr

R5100 Elementary School Curriculum (prereq 3101) (A–N only)
329731 1615-1830 W, ChDev 216, Ellis, 3 cr

R5107 Diagnosis and Treatment of Learning Difficulties (A–N only)
408644 1615-1800 T, PtH 214, Schreiner, 3 cr

R5108 Supervision and Improvement of Instruction (prereq 9 cr in education) (A–N only)
813324 1615-1800 W, FolH 105, Lambert, 3 cr

R5140 Microcomputer Uses in Elementary Classrooms (§CISy 5206) (A–N only)
413326 1615-1900 T, PeikH 355, Stochl, 3 cr

5145 Classroom Management (§SeEd 5145; prereq teaching or administrative experience or #) (A–N only)
435522 1615-1900 M, PeikH 315, Hansen, 3 cr

R5300 Literature for the Elementary School (A–N only)
129732 1615-1800 M, BuH 123, Odland, 3 cr

5319 Teaching Second Languages and Cultures in Elementary Schools (A–N only)
935525 0900-1200 S, PeikH 215, Jorstad, 3 cr

5331 Teaching and Supervision of Reading in Elementary School (prereq 9 cr in education) (A–N only)
029733 1615-1800 M, Manning, 3 cr (Osseo)

5350 Elementary School Science: Materials and Resources (prereq 5349) (A–N only)
235523 –1 1615-1900 Th, PeikH 385, Johnson, 3 cr
135524 –2 Johnson, 3 cr (Morris)

R5361 Teaching Social Studies in the Elementary School (prereq 3101 or equiv) (A–N only)
429736 1615-1800 M, PeikH 165, Cogan, 3 cr

R5376 Current Trends in Early Childhood Education (prereq teaching experience in kindergarten or primary or #) (A–N only)
229737 1615-1900 T, PtH 215, Hansen, 3 cr

5378 Contemporary Programs for Young Children (max 3 cr; prereq MEd student in early childhood education) (A–N only)
129738 Moore, 1–3 cr

R5602 Practicum: Improvement of Teaching (prereq MEd student in elementary education, #) (S–N only)
929739 3 cr

R8916 Problems: Teaching English (prereq #)
501720 Dykstra, ar cr

R8931 Problems: Teaching Reading (prereq 5331 or SeEd 5344, #)
101722 ar cr

R8961 Problems: Teaching Social Studies (prereq 5361 or SeEd 5155 or 8104, #)
801724 ar cr

R8976 Problems: Teaching Kindergarten (prereq #)
229740 Hansen, 3 cr

R8991 Problems: Improvement of Instruction (prereq #)
401726 ar cr

ENDODONTICS (Endo)
Dentistry

5300 Advanced Clinical Endodontics
429591 Eldeeb, ar cr

5304 Advanced Clinical Endodontics
229592 Eldeeb, ar cr

5310 Endodontic Emergency Problems
129593 Jensen, 1 cr

5314 Endodontic Emergency Problems
929594 Jensen, 1 cr

5320 Treatment Planning
111725 Jensen, 1 cr

5324 Treatment Planning
711727 Jensen, 1 cr

5330 Review of Cases
729595 Jensen, 1 cr

5334 Review of Cases
529596 Jensen, 1 cr

8001 Research in Endodontics
329597 Messer, ar cr

8005 Research in Endodontics
129598 Messer, ar cr

8310 Seminar: Endodontics
029599 Eldeeb, Jensen, Messer, 2 cr

8314 Seminar: Endodontics
729600 Eldeeb, Jensen, Messer, 2 cr

8320 Advanced Endodontic Lectures
529601 Jensen, 1 cr

8324 Adanced Endodontic Lectures (prereq 8323, DDS degree)
329602 Jensen, 1 cr

8330 Diagnosis and Treatment Planning
129603 Jensen, ar cr

8331 Topics in Endodontics
029604 Jensen, ar cr

ENGLISH AS A SECOND LANGUAGE (ESL)
Linguistics
Liberal Arts

R0100 English as a Second Language (prereq △)
701781 –1 0815-0900 MTWThF, MinMet 104, 0 cr
301783 –2 0915-1000 MTWThF, MinMet 104, 0 cr
001785 –3 0915-1000 MTWThF, KoltH S139, 0 cr
601787 –4 1015-1100 MTWThF, MinMet 104, 0 cr
201789 –5 1015-1100 MTWThF, KoltH S139, 0 cr
012186 –6 1115-1200 MTWThF, KoltH S139, 0 cr
401791 –7 1315-1400 MTWThF, MinMet 104, 0 cr

R0110 English as a Second Language (prereq △)
101793 –1 0815-0900 MTWThF, KoltH S139, 0 cr
012091 –2 0915-1000 MTWThF, KoltH S138, 0 cr
501796 –3 1015-1100 MTWThF, KoltH S138, 0 cr
135532 –4 1115-1200 MTWThF, AmundH 154, 0 cr
001799 –5 1115-1200 MTWThF, KoltH S138, 0 cr
501801 –6 1115-1200 MTWThF, MRRC 211, 0 cr
528254 –7 1315-1400 MTWThF, KoltH S138, 0 cr
101803 –8 1315-1400 MTWThF, KoltH S139, 0 cr
801805 –9 1415-1500 MTWThF, KoltH S139, 0 cr
812190 –10 1415-1500 MTWThF, KoltH S138, 0 cr
401807 –11 1415-1500 MTWThF, LindH 340, 0 cr
712196 –12 1415-1500 MTWThF, AkerH 21, 0 cr

R0120 English as a Second Language (prereq △)
112199 –1 0815-0900 MTWThF, LindH 340, 0 cr
101812 –2 0915-1000 MTWThF, LindH 340, 0 cr
701814 –3 0915-1000 MTWThF, FolH 108, 0 cr
301816 –4 0915-1000 MTWThF, MRRC 211, 0 cr
001818 –5 1015-1100 MTWThF, LindH 340, 0 cr
312203 –6 1115-1200 MTWThF, LindH 325, 0 cr
812092 –7 1115-1200 MTWThF, KoltH S133, 0 cr
601823 –8 1315-1400 MTWThF, LindH 340, 0 cr
101826 –9 1415-1500 MTWThF, KoltH S133, 0 cr

R0130 English as a Second Language (prereq △)
035533 –1 0815-0900 MTWThF, KoltH S138, 0 cr
831371 –2 0915-1000 MTWThF, LindH 325, 0 cr
835534 –3 1015-1100 MTWThF, MRRC 211, 0 cr
631372 –4 1015-1100 MTWThF, LindH 325, 0 cr
431373 –5 1015-1100 MTWThF, AmundH 154, 0 cr
231374 –6 1115-1200 MTWThF, FordH 447, 0 cr
131375 –7 1315-1400 MTWThF, LindH 325, 0 cr
631369 –8 1415-1500 MTWThF, FordH 447, 0 cr
535530 –9 1515-1600 MTWThF, KoltH S138, 0 cr
335531 –10 1515-1600 MTWThF, KoltH S139, 0 cr

ENGLISH LANGUAGE AND LITERATURE (Engl)
Liberal Arts

R1009 Introduction to the Study of Literature
931376 –1 0815-0900 MWF, LindH 215, Cronan, 4 cr
731377 –2 1315-1400 MWF, LindH 215, Herndl, 4 cr
735414 –3 1515-1600 MWF, LindH 215, Schmidt, 4 cr
535415 –4 1545-1700 TTh, LindH 302, Anderson, 4 cr

R1016 Introduction to American Literature
101745 –1 0815-0900 MWF, LindH 302, Paulson, 4 cr
937579 –2 1215-1300 MWF, LindH 302, Przybylowicz, 4 cr

R1017 Introduction to Modern Poetry
126085 1115-1200 MWF, LindH 215, Firchow, 4 cr

R1018 Introduction to Modern Fiction
301749 0815-0900 MWF, LindH 217, Kaufmann, 4 cr

R1020 Introduction to Literature: Topics: Major Women Fiction Writers
135417 1415-1530 TTh, LindH 302, Garner, 4 cr

R1030 Introduction to Literature: Great Plays
035418 0945-1100 TTh, MechE 18, Leyasmeyer, 4 cr

R1101 Introduction to Fiction Writing (prereq compl of writing practice or equiv)
835419 0945-1100 TTh, LindH 305, Sullivan, 4 cr

R1104 Introduction to Poetry Writing (prereq compl of writing practice or equiv)
135420 0945-1100 TTh, LindH 215, 4 cr

R1241 Introduction to Shakespeare
713588 1115-1230 TTh, Phys 170, Clayton, 4 cr

R3104 Intermediate Poetry Writing
035421 1115-1230 TTh, LindH 303, Browne, 4 cr

R3111 Survey of English Literature
430658 1015-1100 MWF, LindH 305, Rosendahl, 4 cr

R3112 Survey of English Literature
735445 1515-1600 MWF, LindH 203, Savage, 4 cr

R3115 The Middle Ages
109108 1115-1200 MWF, LindH 217, Savage, 4 cr

R3118 The Romantic Age
835422 1415-1500 MWF, LindH 302, Luke, 4 cr

R3241 Shakespeare (§3243)
101753 –1 0915-1000 MWF, LindH 302, Madden, 4 cr
801755 –2 1015-1100 MWF, LindH 302, Wright, 4 cr
101759 –3 1115-1200 MWF, LindH 229, Unger, 4 cr
901763 –4 1415-1500 MWF, LindH 305, Rosendahl, 4 cr
301766 –5 0815-0930 TTh, LindH 302, Reed, 4 cr
001768 –6 0945-1100 TTh, LindH 302, Clayton, 4 cr
635423 –7 0945-1100 TTh, LindH 217, Garner, 4 cr
435424 –8 1115-1230 TTh, LindH 302, Hirsch, 4 cr

R3242 Shakespeare (§3243)
001771 –1 1015-1100 MWF, LindH 229, Luke, 4 cr
601773 –2 1215-1300 MWF, LindH 215, Luke, 4 cr

R3355 Modern British Literature, 1885-1914
230659 1015-1100 MWF, LindH 203, Firchow, 4 cr

R3411 Survey of American Literature to 1850
630660 0915-1000 MWF, Arch 10, Roth, 4 cr

R3635 Autobiography
235425 1115-1200 MWF, LindH 305, Madden, 4 cr

R3710 Topics in Literary Criticism: Principles of Feminist Criticism (max 12 cr)
135426 1015-1100 MWF, FordH 115, Gohlke, 4 cr

R3851 The English Language (§5851)
901777 1245-1400 TTh, VinH 16, Brown, 4 cr

R3852 Aspects of the English Language
009112 0915-1000 MWF, LindH 203, Escure, 4 cr

R3910H Topics in English and American Literature: Saul Bellow and Robert Lowell (prereq consent of Engl undergrad advisor, Engl honors advisor, △)
935427 1215-1300 MWF, LindH 217, Solotaroff, 4 cr

R3960 Junior-Senior Seminar: The Fictions of Kurt Vonnegut (prereq consent of director of undergrad studies, △)
031384 1115-1230 TTh, LindH 305, Reed, 4 cr

3963H Honors Thesis (prereq honors candidacy in Engl, consent of Engl honors adviser)
111134 4 cr

3970 Directed Studies (prereq #, △, college approval)
230662 1–15 cr

3980 Directed Instruction (prereq #, △, college approval)
930664 ar cr

R5101 Advanced Fiction Writing (prereq △) (S–N only)
735428 1415-1700 Th, FordH 50, Hampl, 4 cr

R5104 Advanced Poetry Writing (prereq △) (S–N only)
535429 1415-1700 T, LindH 315, Browne, 4 cr

R5109 Memoir Writing (prereq △)
136101 1415-1700 W, LindH 325, Hampl, 4 cr

R5211 Old English: Anglo-Saxon
130668 0915-1030 MWF, LindH 215, Kendall, 5 cr

R5312 Romantic Writers: Keats and Hazlitt
935430 1115-1200 MWF, LindH 203, Fruman, 4 cr

R5363 James Joyce
735431 0815-0930 TTh, LindH 203, Anderson, 4 cr

R5451 American Novel
109117 1315-1400 MWF, LindH 305, Roth, 4 cr

R5471 American Drama
813601 1315-1400 MWF, LindH 203, Geffen, 4 cr

R5481 Folklore
535446 0815-0930 TTh, LindH 305, Stekert, 4 cr

R5651 Techniques of Poetry
535432 1315-1400 MWF, LindH 302, Wright, 4 cr

R5815 History of English Language
135434 1015-1100 MWF, LindH 217, MacLeish, 4 cr

R5843 American Social Dialects
035435 1115-1200 MWF, LindH 302, Escure, 4 cr

R5860 Studies in the English Language (prereq 5851 or #)
835436 –1 1115-1200 MWF, LindH 303, Ward, 4 cr (Old Irish I)
635437 –2 1315-1400 MWF, LindH 303, Escure, 4 cr (Topics in English Phonology)

R5910 Topics in English and American Literature: The Celtic World
435438 1415-1500 MWF, LindH 203, Ward, 4 cr

5970 Directed Study in Writing (prereq #, △, CLA approval)
235439 1–4 cr

R8050 Studies in Special Subjects: Victorian Social Theory: Macaulay, Marx, Mill and others (prereq #)
635440 1245-1445 Th, LindH 215, M Durham, 4 cr

R8114 Proseminar in 18th Century Studies
330684 1415-1530 TTh, LindH 303, Leyasmeyer, 4 cr

R8210 Medieval Studies
435441 1315-1515 W, LindH 216, Kendall, 4 cr

R8250 Seminar in 17th Century Studies: Nature and Artifice in *Paradise Lost*
235442 1415-1615 W, LindH 315, L Durham, 4 cr

R8480 Studies in Folklore: Folklore and Literature
135443 1245-1445 Th, LindH 216, Stekert, 4 cr

R8610 **Studies in 20th-Century British and American Literature**
901780 –1 1415-1615 M, LindH 216, Unger, 4 cr (The Poetry of William Butler Yeats)
935444 –2 1415-1615 M, LindH 315, Solotaroff, 4 cr (Hemingway)

R8710 **Studies in Criticism**
809127 –1 1415-1615 T, LindH 216, Hancher, 4 cr (Pragmatics and Literature)
636667 –2 1415-1615 W, LindH 217, Przybylowicz, 4 cr (Marxist Approaches to Literature)

R8720 **Studies in Feminist Criticism**
826087 1415-1615 W, LindH 303, Gohlke, 4 cr

8970 **Independent Readings** (prereq #)
630688 1-15 cr

ENTOMOLOGY (Ent)
Agriculture

R1005 **Economic Entomology** (prereq Biol 1011 or #)
★LECT 1100-1145 MWF, HodsonH 495, Cutkomp
602051 –1 LAB 0800-0945 TTh, HodsonH 485, 4 cr
902055 –2 LAB 1000-1145 TTh, HodsonH 485, 4 cr
302058 –3 LAB 1300-1445 TTh, HodsonH 485, 4 cr

3100 **Entomological Techniques** (prereq 3175 or equiv or #)
229124 ar cr

R3175 **Introductory Entomology** (prereq Biol 1011)
★LECT 0900-0945 MWF, HodsonH 490, Price, 5 cr
129125 –1 LAB 1000-1145 MWF, HodsonH 485

5000 **Professional Experience Program** (prereq #) (S-N only)
611803 4 cr

5001 **Basic Entomology** (prereq #)
929126 ar cr

R5025 **Insect Morphology** (prereq 3175 or #)
★LECT 0800-0845 TTh, HodsonH 480, Cook, 5 cr
729127 –1 LAB 0900-1145 TTh HodsonH 480

5133 **Insect Taxonomy** (prereq 3175)
★LECT 1300-1345 MWF, HodsonH 480, Cook, Price, 5 cr
529128 –1 LAB 1400-1545 MWF, HodsonH 480

5300 **Chemicals and Insect Behavior** (prereq 3178 or EBB 5112, 12 cr organic chemistry)
035158 1300-1345 TTh, HodsonH 542, Jones, 2 cr

5350 **Insect Pathology** (prereq 5027)
109585 0900-0945 MWF, HodsonH 542, Brooks-Wallace, 3 cr

5425 **Special Lectures in Entomology**
329129 ar cr

5901 **Special Problems in Entomology** (prereq #)
529131 ar cr

8200 **Seminar** (prereq #)
329132 ar cr

8500 **Research in Entomology** (prereq #)
129133 ar cr

FAMILY PLANNING ADMINISTRATION (FPAd)
Medical School

5243 **Topics in Family Planning** (prereq #)
600333 Foreman, 3-12 cr

5245 **History and Development of Family Planning** (prereq #)
400334 Foreman, 3 cr

FAMILY PRACTICE AND COMMUNITY HEALTH (FPCH)
Medical School

5500 **Preceptorship in Clinical Practice** (prereq regis med)
201954 McConnell, 9 cr

5501 **Rural Physician Associate Program** (prereq completion of Phase A and B U/MN Med School curriculum)
601966 Verby, 0-18 cr

5502 **Physician as Counselor in Marriage and Family Problems** (prereq regis 5501)
201968 Schaffer, 2 cr

5503 **RPAP Research Paper** (prereq 5501 or Med 5592) (S-N only)
401970 Verby, 1 cr

5515 **Preceptorship in Gerontology Community Health** (prereq regis med)
201971 Connolly, 9 cr

5516 **Research in Human Sexuality** (prereq #)
501975 Satterfield, ar cr

5520 **Rural Health Care Model-Onamia, MN** (prereq regis med)
301976 Jacobson, 9 cr

5525 **Management of Patients with Cardiovascular Problems by the Family Physician** (prereq regis med)
101980 Nesvacil, 9 cr

5530 **Clinical Problems in Family Practice** (prereq regis med)
912438 Daly, 9 cr

5535 **Community Health in Family Practice** (prereq regis med or #)
801982 Thorson, 9 cr

5560 **Alcohol and Drug Addiction Treatment Center** (prereq regis med)
201985 Nesvacil, 4.5 cr

5562 **Interviewing, Physical Examination and Patient Counseling** (prereq regis med)
501992 Verby, others, ar cr

5570 **Practicum in Counseling Techniques** (prereq compl of 1st yr residency)
401998 Conroe, 1 cr

5582 **Practice Management Workshop** (prereq 2nd or 3rd yr of residency)
626088 Ciriacy, 2 cr

5583 **Personal, Financial Planning**
512636 Ciriacy, others, 2 cr

5585 **Sexual Problems in Clinical Practice** (prereq med student, #)
602003 Satterfield, ar cr

5590 **Emergency Medicine for Family Physicians**
426089 Lilja, 9 cr

5595 **Research in Family Practice: Independent Study**
312637 Holloway, 4 cr

5599 **Undergraduate Independent Study**
102054 Ciriacy, ar cr

5903 **Community Health Rotation** (prereq #)
302111 Ciriacy, ar cr

5951 **Research in Human Sexuality** (prereq #)
208368 ar cr

5955 **Directed Study** (prereq #)
502124 Satterfield, 1-15 cr

5956 **Advanced Topics in Human Sexuality** (prereq #, college level introductory course in human sexuality)
608366 Satterfield, others, 3 cr

5960 **Basic Research Methods Seminar and Practicum**
108369 –1 Holloway, others, 4 cr
113930 –2 4 cr

5963 **Introduction to Preventive Medicine** (prereq 1st yr of family practice residency)
736675 Krogh, 2 cr

5965 **Seminar on Psychological Medicine: Principles of Human Development Through Life Cycles** (prereq 1st yr family practice residency)
214770 Houge, Cole, ar cr

8201 **Clinical Family Medicine**
002130 Ciriacy, others, ar cr

8205 **Medical Records Systems**
702137 Asp, 2 cr

8207 **Seminar: Common Diseases Seen in Family Practice**
702140 Connolly, 1 cr

8208 **Family Medicine Conferences**
302142 Connolly, 1 cr

8209 **Family Medicine X-Ray Conference**
102143 Ciriacy, 1 cr

8210 **Family Medicine Grand Rounds**
802145 1630-1800 W, McConnell, 0-1 cr (2nd week per month, Campus Club)

8212 **Clinical Psychiatry Rounds** (prereq 1st yr resident in family practice)
402147 Kelly, 1 cr

8217 **Seminar in Counseling** (prereq 5567, 8212 or #)
402150 1400-1530 W, PWB 6248, Nelson, Carlson, 2 cr

8225 **Medical Sociology**
102152 Kelly, 3 cr

8226 **Seminar: Medical Sociology**
902153 2 cr

8228 **Seminar: Interdisciplinary Health** (prereq #)
702154 Kelly, 2 cr

8243 **Family Medicine in Rural Area**
502155 Hunt, ar cr

8245 **Analysis of Instruction, Educational Evaluation**
302156 Houge, ar cr

8250 **Quantitative Strategies in Health Care Practice and Research II** (prereq 8204)
102157 Weckwerth, 2 cr

8253 **Research Problems**
802159 O'Leary, ar cr

FAMILY SOCIAL SCIENCE (FSoS)
Home Economics

R1001 **Dynamics of Family Relationships** (§1002)
002158 –1 1100-1215 TTh, McNH 197, Kwiecien, 3 cr
002161 –2 0845-1000 MW, BlegH 440, Barnes, 3 cr (Mpls)
802162 –3 0915-1030 TTh, MinMet 116, Leach, 3 cr (Mpls)

R1003 **Survey of Family Social Science** (S-N only)
708794 1230-1345 W, McNH 69, Barnes, 2 cr

R1401 **Household Equipment** (prereq soph or #...GC 1163 or Phys 1001 or 1041 rec)
430207 1300-1430 TTh, McNH 180, Yust, 4 cr (lab ar)

3240 **Special Topics** (max 9 cr; prereq soph or above)
230208 3 cr

R3500 **Consumer and the Market System** (prereq Soc 1001, Psy 1001, AgEc 1030...3260 rec)
308796 1500-1730 T, McNH 69, Gage, 3 cr

R5001 **Human Sexual Behavior** (prereq 15 cr psychology or sociology)
130209 1015-1130 TTh, Law 20, Neubeck, 4 cr (Mpls)

5200 **Family Relationships** (prereq Psy 1001, Soc 1001)
230211 1400-1530 MW, HodsonH 495, Hey, 5 cr

R5201 **Family, American Social Structure** (prereq 5200, 25 cr in social science courses exclusive of economics or #)
212050 0900-1100 TTh, BioSci 12, Berry, 4 cr

R5202 **Introduction to Social Psychology with Applications to the Family** (§Soc 5201; prereq Psy 1001, introductory sociology or #)
235134 1000-1130 MW, AlderH 310, Rosenblatt, 5 cr

5230 **Independent Study in Family Social Science** (max 16 cr; prereq #)
130212 1-5 cr

5231 **Internship: Planning** (prereq #)
930213 Yust, 1 cr

5232 **Internship: Work Experience** (prereq 5231)
730214 Yust, 5 cr

5233 **Internship: Evaluation** (prereq 5232)
530215 Yust, 1 cr

R5240 **Special Topics in Family Social Science** (max 16 cr)
130217 1715-1930 Th, MoosT 2650, Maddock, Terrel, others, 2-6 cr (Mpls)

R5249 **Field Work: Directed Community Work Experience** (max 15 cr; prereq 5200, #)
702171 –1 1400-1600 M, McNH 180, Yust, 3-5 cr
302173 –2 1600-1730 T, McNH 197, Berry, 3-5 cr
002175 –3 0900-1030 W, McNH 198, Berry, 3-5 cr

R5255 **Public Social Policy, the American Family**
008798 1300-1600 Th, McNH 198, Zimmerman, 4-5 cr

R5260 **Dynamics of Family Decision Making** (prereq 3260 or #)
135135 1630-1730 TTh, McNH 198, Hogan, 3 cr

8216 Marriage and Family Counseling III (§Psy 8216; prereq #)
935136 1400-1800 W, McNH 198, Olson, 4 cr

8221 Internship in Teaching College Level Family Courses I (prereq 12 cr in FSoS, #)
735137 1400-1530 W, McNH 197, Neubeck, 3-6 cr

8230 Directed Study (prereq #)
030218 1-5 cr

8251 Problems: Family Social Science (prereq #)
830219 1-5 cr

8252 Problems: Family Social Science (prereq #)
130220 4 cr

8255 Conceptual Frameworks in the Family (prereq 5200 or equiv, #) (A-N only)
030221 1500-1630 TTh, McNH 377, Hogan, 4 cr

8261 Process Seminar for Family I (prereq #)
830222 1600-1800 M, Berry 103, Hey, 2 cr

8270 Practicum: Family Research (prereq #)
630223 1-5 cr

8551 Marriage and Family Counseling Internship I (prereq 8214, 8215, 8216, #)
430224 1500-1630 M, Berry 103, Boss, ar cr

8666 Dissertation Research (max 15 cr; prereq #) (S-N only)
535138 1-5 cr

FINANCE (BFin)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for BFin courses.

R3000 Finance Fundamentals (§MBA 8040; prereq Acct 3001 or Acct 1051) (A-N only)
★LECT 1110-1210 MWF, AndH 210, Rosko
311827 –1 LAB 1215-1300 Th, BlegH 215, 4 cr
111840 –2 LAB 1315-1400 Th, BlegH 215, 4 cr
611834 –3 LAB 1015-1100 F, BlegH 230, 4 cr
211836 –4 LAB 1230-1315 F, AndH 350, 4 cr
911838 –5 LAB 1330-1415 F, AndH 350, 4 cr
★LECT 1315-1415 MWF, BlegH 245, Rosko
708987 –6 LAB 1215-1300 F, Law 20, 4 cr

R3100 Financial Management (prereq 3000) (A-N only)
902184 1415-1530 TTh, BlegH 415, 4 cr

R3300 Investment Management and Financial Markets (§8300; prereq 3000)
502186 –1 1415-1530 MW, BlegH 415, 4 cr
737020 –2 4 cr

R8150 Theory of Financial Management (prereq MBA 8040, grad mgmt/IR student or grad SMgt approval) (A-N only)
537021 –1 1245-1400 TTh, BlegH 330, Alexander, 4 cr
337022 –2 1415-1530 TTh, BlegH 330, Alexander, 4 cr

R8200 International Financial Management (prereq 3000 or MBA 8040, grad mgmt/IR student or grad SMgt approval)
826090 0945-1100 TTh, Law 35, Eun, 4 cr

R8300 Investment Analysis and Management (prereq 3000 or MBA 8040, grad mgmt/IR student or grad SMgt approval)
002192 1415-1530 MW, BlegH 260, Resnick, 4 cr

8990 Readings and Research in Finance (prereq consent of advisor, #, grad SMgt approval)
000068 –1 1415-1700 M, BlegH 205, Richardson, ar cr (PhD seminar I)
216051 –2 1415-1700 F, Mgmt/Econ 136, Ulman, ar cr (PhD seminar III)

FINNISH (Fin)
Scandinavian Languages
Liberal Arts

R1101 Beginning Finnish
530909 1415-1500 MTWThF, Arch 60, 5 cr

1104 Intermediate Finnish (prereq 1103)
730911 1015-1100 MTWThF, FolH 108, Vahamaki, 5 cr

3670 Readings: Finnish Texts (max 28 cr; prereq 3101)
530912 1115-1230 TTh, FolH 52, Vahamaki, 4 cr

FISHERIES AND WILDLIFE (FW)
Forestry

1001 Orientation in Fisheries and Wildlife
029134 0900-0945 TTh, HodsonH 495, Frenzel, 2 cr

3052 Introduction to Fisheries and Wildlife Biology and Management (§5451, 5561; prereq EBB 3004)
829135 1000-1045 MWThF, HodsonH 495, Adelman, Frenzel, 4 cr

R3167 Techniques of Forest Wildlife Management (given at Cloquet)
629136 Gullion, 1 cr

5000 Professional Experience Program (prereq #) (S-N only)
911807 4 cr

5103 Basic Fishery Biology (prereq #)
429137 ar cr

5106 Basic Wildlife Biology (prereq #)
229138 ar cr

R5129 Mammalogy (§EBB 5129; prereq Biol 1106 or 3011 or #)
★LECT 0915-1000 MWF, Zoology 313, Birney
102197 –1 LAB 0815-1100 T, Zoology 101C, 5 cr
902198 –2 LAB 1015-1300 W, Zoology 101C, 5 cr
702199 –3 LAB 1415-1700 F, Zoology 101C, 5 cr

5278 Special Lectures in Wildlife
129139 ar cr

5279 Special Lectures in Fisheries
429140 ar cr

5393 Special Problems in Fishery Biology (prereq #)
229141 ar cr

5398 Special Problems in Wildlife Biology (prereq #)
129142 ar cr

5451 Ecology of Fish Populations (prereq EBB 3004 or EBB/Geo 5601, EBB 5136, Stat 5022 or #)
929143 0800-0945 T, 0800-1045 Th, HodsonH 490, Spangler, 5 cr

8200 Seminar (prereq #)
729144 ar cr

8364 Research in Fishery Biology (prereq #)
529145 ar cr

8377 Research in Wildlife Biology (prereq #)
329146 ar cr

8457 Environmental Biology of Fishes (prereq EBB 3004, 5136 or equiv courses in ecology, icthyology)
335139 Adelman, 3 cr

FOOD SCIENCE AND NUTRITION (FScN)
Agriculture & Home Econ

R1020 Introductory Microbiology (prereq 3rd qtr fr or #)
★LECT 1300-1345 MWF, ABLMS 125, McKay, Busta
402214 –1 LAB 1100-1145 T, FScN 218, 4 cr
102216 –2 LAB 1200-1245 T, FScN 218, 4 cr
702218 –3 LAB 1300-1345 T, FScN 218, 4 cr

3110 Food Chemistry (prereq BioC 1302 or Biol 5001)
029148 0800-0845 MTWF, FScN 15, Reineccius, 4 cr

R3112 Food Chemistry Laboratory (prereq 3110 or ¶)
212906 –1 LAB 0900-1045 TTh, ABLMS 135, Smith, 2 cr
112910 –2 LAB 1100-1345 TTh, ABLMS 135, 2 cr

R3123 Microbiology of Foods (§MicB 3103, VPB 3103; prereq Biol 1009, 10 cr college chem or 1020 or #)
★LECT 1300-1445 TTh, ClaOff B25, Tatini, 5 cr
829149 –1 LAB 1500-1545 T, 1500-1645 Th, FScN 218

R3272 Introduction to Food Decision Making (prereq 3600)
413620 0900-0945 MW, McNH 69, Asp, 2 cr

R3472 Principles of Food Purchasing (prereq 5 cr in food sci, nutrition)
129150 1200-1245 MTWTh, McNH 33, Asp, 4 cr

R3600 Principles of Nutrition (prereq Biol 1009, Chem 1004 or equiv)
★LECT 0900-0945 MWF, ABLMS 125, Savaiano
112820 –1 REC 0800-0845 F, ABLMS 222, 4 cr
412838 –2 REC 1000-1045 F, ABLMS 222, 4 cr
215093 –3 REC 1500-1545 F, ABLMS 222, 4 cr
612823 –4 REC 1300-1345 F, ABLMS 222, 4 cr

3662 Introduction to the Clinical Practice of Dietetics (prereq 12 cr in food science, nutrition, regis in coordinated undergrad prog in dietetics)
029151 0900-1045 W, ABLMS 222, Hanson, 2 cr

R3730 Quantity Food Production Management (prereq 1212 or 3403, 3472)
★LECT 1200-1245 TTh, DinC 152, Mullan
629153 –1 LAB 0800-1145 TTh, DinC 152, 5 cr

R5100 General Seminar (prereq sr or #) (S-N only)
802226 –1 1200-1245 M, FScN 153, 1 cr (CUP students only)
402228 –2 1200-1245 T, ABLMS 222, 1 cr
602230 –3 1200-1245 W, ABLMS 222, 1 cr
902234 –4 1200-1245 Th, ABLMS 222, 1 cr
502236 –5 1200-1245 F, HckrH 210, 1 cr

5111 Independent Study in Food Science and Nutrition (prereq △)
329180 1-5 cr

5135 Food Process Engineering (prereq 1102 or ¶, Math 1142, Phys 1041-1042)
★LECT 1200-1245 MW, FScN 15, Bakshi
012852 –1 LAB 1400-1645 T, FScN 15, 4 cr

R5321 Independent Study in Food Microbiology (prereq sr, △)
129181 1200-1245 T, FScN 218, Tatini, 1-5 cr (1st meeting)

R5360 Sensory Evaluation of Food Quality (prereq 3110, Stat 3081 or 5021 or equiv, consumer food science sr or #)
★LECT 0800-0845 MWF, McNH 146, Vickers
726096 –1 LAB 1200-1445 F, McNH 134, 4 cr
315327 –2 LAB 1300-1545 Th, McNH 134, 4 cr

R5406 Current Literature in Foods (max 6 cr; prereq 5413, △)
029182 1000-1045 M, ABLMS 222, Gordon, 2-4 cr (1st meeting)

5412 Physiochemistry of Foods (prereq 3110)
829183 1500-1545 MWF, AnScVM 125, Gordon, 3 cr

R5523 Technology of Fermented Dairy Products (prereq 3112, 5123)
★LECT 0800-0945 T, ABLMS 222, 0800-0845 Th, FScN 15, Morris, 4 cr
326103 –1 LAB 0900-1145 Th, FScN 150

5530 Industrial Processing of Fruits and Vegetables (prereq 3110, 5120, 5135 or #)
126099 1000-1145 T, 1300-1645 Th, FScN 15, Breene, 4 cr

R5540 Fats and Oils Chemistry and Technology (prereq 3112 or #)
★LECT 1300-1445 M, 1300-1345 W, ABLMS 222, Csallany, 4 cr
335920 –1 LAB 1400-1645 W, FScN 109, Csallany

R5642 Field Experience in Community Nutrition (prereq course in human nutrition, #)
429185 Gormican, 3-18 cr

5643 Seminar: World Food Supply Problems (§AgEc 5790, Agro 5200, Soc 5675, LACS 5280; prereq sr or grad student with #)
635924 1800-2100 W, ClaOff B35, Savaiano, Busta, 4 cr

R5664 Field Experience in Clinical Nutrition (prereq course in human nutrition, #)
402245 –1 0900-0945 M, ABLMS 222, Hanson, 3-18 cr (CUP students only)
102247 –2 1430-1545 Th, ABLMS 222, Hanson, 3-18 cr
012902 –3 Gormican, 3-18 cr

5665 Applied Clinical Nutrition I (prereq Biol 5001 or ¶; Phsl 3051 or 1002; LaMP 5177, Phcl 1009 or ¶ or demonstrated equiv)
229186 1600-1745 Th, AnScVM 125, Gormican, 2 cr

R5675 Clinical Nutrition Laboratory I (prereq 5665 or ¶) (S-N only)
135921 –1 1300-1345 T, ABLMS 222, Gormican, 1 cr
035922 –2 1600-1645 W, AnScVM 135, Gormican, 1 cr

8101 Research Seminar (prereq #) (S-N only)
129187 Swan, 1 cr

8205 General Seminar (prereq #) (S-N only)
929188 1600-1645 M, FScN 15, Breene, 1 cr

8401 Independent Study: Food Science (prereq △)
835923 1-5 cr

8621 Independent Study: Nutrition (prereq #)
327610 1-9 cr

FOREIGN STUDY (FoSt)
Liberal Arts

0900 Study Abroad (prereq permission of study abroad advisor) (S-N only)
830690 Peterson, 0 cr

0910 Study Abroad (prereq permission of study abroad advisor) (S-N only)
630691 Peterson, 0 cr

3110 HECUA Scandinavian Urban Studies Term (prereq #)
911189 1-24 cr

3120 HECUA South American Urban Semester (prereq #)
111191 1-24 cr

3210 Kansas Program in Costa Rica (prereq #)
711193 1-54 cr

3220 Kansas Program in Erlangen, Germany (prereq #)
311195 1-54 cr

3230 Kansas Program in Great Britain (prereq #)
011197 1-54 cr

3240 Kansas Program in Korea (prereq #)
611199 1-54 cr

3250 Kansas Program at Tsukuba University, Japan (prereq #)
313707 1-54 cr

3410 IES Program in Durham, England (prereq #)
111201 1-45 cr

3420 IES Program in London (prereq #)
811203 1-54 cr

3430 IES Program in Nantes, France (prereq #)
411205 1-54 cr

3440 IES Program in Paris (prereq #)
111207 1-54 cr

3450 IES Program in Madrid (prereq #)
711209 1-54 cr

3460 IES Program in Vienna (prereq #)
911211 1-54 cr

3470 IES Program in Freiburg, Germany (prereq #)
711212 1-54 cr

3480 IES European Community Program in Germany (prereq #)
311214 1-27 cr

3490 IES Comparative European Literature Program (prereq #)
011216 1-54 cr

3610 Exchange Study at University of Essex, England (prereq #)
108654 1-54 cr

3810 Bologna Cooperative Studies Program, Italy (prereq #)
037573 1-54 cr

FOREST PRODUCTS (ForP)
Forestry

R1301 Wood as a Raw Material
★LECT 1300-1345 MWF, KaufL 302, Bowyer
102255 –1 LAB 0800-0945 T, KaufL 65, 4 cr
802257 –2 LAB 1400-1545 Th, KaufL 65, 4 cr

3310 Wood Frame Building Systems and Materials (prereq AgET 1015, Phys 1001 or equiv)
★LECT 1500-1545 MWF, KaufL 302, Erickson, Petersen, 4 cr
108470 –1 REC 1600-1645 W, KaufL 302

3325 Directed Study Experience (prereq #)
830348 1-5 cr

5300 Wood-Fluid Relationships (prereq 1301)
630349 1400-1445 MWF, KaufL 125, Erickson, 3 cr

5303 Wood Deterioration (prereq 1301 or #)
★LECT 1000-1045 TTh, KaufL 125, Schmidt, Kulman, 3 cr
708472 –1 LAB 1300-1445 T, KaufL 125

5304 Wood Drying and Preservation Processes (prereq 5300, 5303)
★LECT 0835-0945 TTh, KaufL 125, Erickson, 4 cr
308474 –1 LAB 1400-1545 Th, KaufL 30

5306 Manufacturing Process (prereq 1301 or #...3300, ¶Rhet 3562X rec)
030350 1100-1210 TTh, KaufL 302, Bowyer, 3 cr (writing workshop 1300-1345 Th)

5331 Senior Seminar (prereq sr, ¶Rhet 3562X) (A-N only)
830351 1500-1645 T, KaufL 125, Schmidt, 2 cr (writing workshop 1300-1345 Th)

5353 Wood Chemistry II (prereq 5302 or #)
535141 Sarkanen, 2 cr

5401 Senior Topics (prereq sr)
630352 ar cr

8300 Research Problems
430353 ar cr

8301 Research Problems
130355 ar cr

8302 Research Problems
730357 ar cr

FOREST RESOURCES (FR)
Forestry

R1100 Dendrology (prereq Biol 1103)
★LECT 1100-1145 MWF, GrnH 120, Mohn
202263 –1 LAB 1400-1645 M, GrnH 206, 4 cr
902265 –2 LAB 0900-1145 T, GrnH 206, 4 cr
502267 –3 LAB 1400-1645 T, GrnH 206, 4 cr
102269 –4 LAB 1400-1645 W, GrnH 206, 4 cr
302271 –5 LAB 0900-1145 Th, GrnH 206, 4 cr

R1200 Introduction to Forest Resources
★LECT 1100-1145 TTh, GrnH 120, Vogt, 3 cr
008476 –1 LAB 1400-1545 Th, GrnH 120

R1202 Farm and Small Woodlands Forestry (non-majors 3 cr, majors 2 cr, or 3 cr with paper; prereq for maj 1100 or ¶)
126569 –1 LECT 1100-1145 TTh, GrnH 211, Scholten, 2-3 cr (majors only)
★LECT 1100-1145 TTh, GrnH 211, Scholten, 3 cr
602275 –1 LAB 1300-1445 T, GrnH 211, (non-majors only)
202277 –2 LAB 1500-1645 T, GrnH 211, (non-majors only)

3103 Meteorology and Climatology for Resource Managers (prereq Phys 1001, 1005 or #)
330359 0800-0845 TTh, GrnH 120, Perry, 2 cr

3104 Forest Ecology (prereq Itasca session)
135143 1300-1345 MWF, GrnH 211, Kurmis, 3 cr

3225 Directed Study Experience (prereq #)
330362 1-5 cr

R5101 Field Silviculture I (prereq 5100, ¶5104, 5115, 5126, 5220, 5236, 5248, FW 3167, college approval, at Cloquet)
030364 Alm, 4 cr

R5104 Field Silviculture II (prereq 5100, ¶5101, 5115, 5126, 5220, 5236, 5248, FW 3167, college approval, at Cloquet)
608478 B Brown, 1 cr

R5115 Forest Hydrology, Field Applications (prereq 5114 or #, ¶FR 5101, 5126, 5220, 5236, 5248, FW 3167, △, given at Cloquet)
630366 Brooks, 2 cr

R5126 Field Forest Soils (prereq 3220, 5114, ¶5101, 5115, 5220, 5236, 5248, FW 3167, △, given at Cloquet)
230368 B Brown, 2 cr

R5220 Remote Sensing, Forest Resources Inventory (prereq 3220, 5200, 5212, ¶5101, 5115, 5126, 5236, 5248, FW 3167, △, given at Cloquet)
430370 Ek, Meyer, 4 cr

5233 Principles of Outdoor Recreation Design and Planning (§LA 5010; prereq 5232 or #)
730374 0800-0845 MWF, AlderH 310, Knopp, Hard, 4 cr

R5236 Forest Recreation Planning (prereq 5232, ¶5101, 5115, 5126, 5220, 5248, FW 3167, △, given at Cloquet)
812450 Knopp, 1 cr

R5248 Harvesting and Engineering (prereq AgET 1400, ¶5101, 5115, 5126, 5220, 5236, FW 3167, △, given at Cloquet)
330376 Reed, 3 cr

5259 Analysis of Outdoor Recreation Behavior (prereq 5232, RRM maj or grad student or #)
030378 0930-1045 TTh, GrnH 14, Knopp, 3 cr

5269 Interdisciplinary Seminar I
335142 1500-1645 TTh, AlderH 394, Knopp, 4 cr

5401 Senior Topics (prereq sr in forestry or #)
130380 1-5 cr

8100 Research Problems: Silviculture
830382 Alm, B Brown, others, ar cr

8101 Research Problems: Forest Tree Physiology
430384 Sucoff, ar cr

8102 Problems: Forest Tree Genetics
130386 Mohn, ar cr

8103 Research Problems: Forest Hydrology
930387 Brooks, ar cr

8107 Seminar: Forest Resources
730388 1500-1645 M, GrnH 211, 1 cr

8200 Research Problems: Forest Management
930390 B Brown, Hallgren, others, ar cr

8201 Research Problems: Forest Economics
730391 Ellefson, Gregersen, ar cr

8202 Research Problems: Forest Biometry
330393 Ek, ar cr

8203 Research Problems: Forest Recreation
030395 Knopp, ar cr

8204 Research Problems: Forest Policy
830396 Ellefson, Irving, others, ar cr

8205 Research Problems: Remote Sensing
630397 Meyer, ar cr

FRENCH (Fren)
French And Italian
Liberal Arts

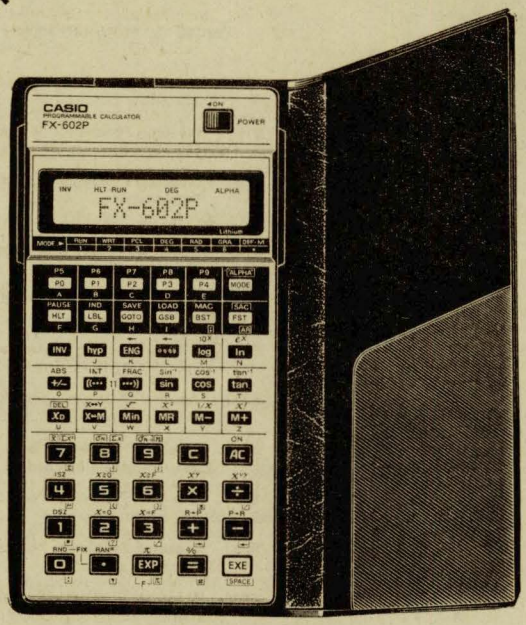
R1101 Beginning French
802288 –1 0815-0900 MTWThF, Arch 60, 5 cr
002290 –2 0815-0900 MTWThF, LindH 325, 5 cr
012169 –3 0815-0900 MTWThF, KoltH S132, 5 cr
602292 –4 0915-1000 MTWThF, Arch 60, 5 cr
402293 –5 0915-1000 MTWThF, LindH 320, 5 cr
202294 –6 0915-1000 MTWThF, MinMet 120, 5 cr
502298 –7 1015-1100 MTWThF, Arch 60, 5 cr
102300 –8 1015-1100 MTWThF, LindH 320, 5 cr
702302 –9 1015-1100 MTWThF, MinMet 124, 5 cr
302304 –10 1115-1200 MTWThF, Arch 60, 5 cr
102305 –11 1115-1200 MTWThF, LindH 320, 5 cr
002306 –12 1215-1300 MTWThF, Arch 60, 5 cr
402309 –13 1215-1300 MTWThF, LindH 320, 5 cr
412175 –14 1315-1400 MTWThF, Arch 60, 5 cr
335710 –15 1315-1400 MTWThF, KoltH S133, 5 cr
102314 –16 1315-1400 MTWThF, LindH 320, 5 cr

R1102 Beginning French (prereq 1101 or one year high school Fren)
102319 –1 0815-0900 MTWThF, KoltH S133, 5 cr
302321 –2 1015-1100 MTWThF, KoltH S133, 5 cr
002323 –3 1115-1200 MTWThF, KoltH S135, 5 cr

R1103 Beginning French (prereq 1102, 1122 or two yrs high school Fren)
602325 –1 0815-0900 MTWThF, KoltH S135, 5 cr
202327 –2 0815-0900 MTWThF, KoltH S136, 5 cr
902329 –3 1015-1100 MTWThF, Arch 20, 5 cr

SAVE 10%
ORDER BY OCT. 1st

STUDENT AID FROM CASIO



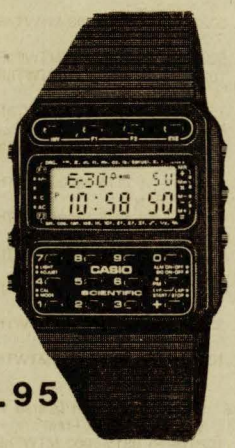
$89.95 **FX 602P**

- 50 FUNCTIONS
- 86 CHARACTERS
- 512 PROGRAM STEPS
- 88 MEMORIES

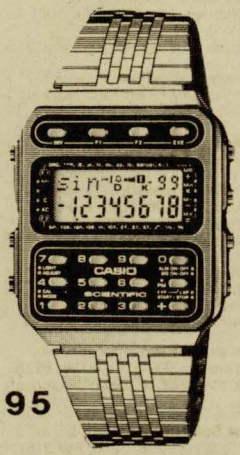


$39.95 **FX 8100**

- 44 FUNCTIONS
- STOPWATCH
- COUNTDOWN ALARM
- CLOCK
- ALARM



$39.95 **CFX 20**



$49.95 **CFX 200**

- CALCULATOR MODE
- SCIENTIFIC FUNCTIONS
- METRIC CONVERSIONS
- 3 CONSTANT MEMORIES
- STOPWATCH
- DAILY ALARM
- HOURLY CHIME
- CALENDAR

To Order, Please Call 645–4197

Sur-Savers Inc. P.O. 4613 St. Paul, MN. 55104

R1104 Intermediate French (prereq 1103 or three yrs high school Fren)
302335 –1 0815-0900 MTWThF, BuH 123, 5 cr
135711 –2 0915-1000 MTWThF, KoltH S133, 5 cr
802338 –3 1115-1200 MTWThF, AkerH 313, 5 cr
002340 –4 1215-1300 MTWThF, AkerH 211, 5 cr

R1105 Intermediate French (prereq 1104)
602342 –1 0815-0900 MTWThF, LindH 320, 5 cr
202344 –2 0915-1000 MTWThF, KoltH S135, 5 cr

R1114 Decelerated Beginning French (prereq 1113 with passing grade)
108900 1215-1300 MTWThF, BuH 123, 4 cr

R3015 French Composition and Conversation (prereq 1105)
702347 –1 1115-1300 MW, KoltH S132, 5 cr
502348 –2 1415-1600 MW, FolH 107, Waldauer, 5 cr
302349 –3 1415-1600 TTh, FolH 306, Reeve, 5 cr

R3016 Advanced French Composition and Conversation (prereq 3015 or #)
702350 –1 0915-1100 TTh, FolH 302, 5 cr
302352 –2 1315-1500 TTh, FolH 108, Waldauer, 5 cr

R3017 Stylistics Through Translation (prereq 3016 or superior achievement in 3015, #)
430692 1315-1500 TTh, FolH 103, 5 cr

R3101 Introduction to French Literary Texts (prereq 3015)
412161 0915-1100 MW, FolH 302, Robinson, 5 cr

R3102 French Literary Texts: Theatre (prereq 3101)
412127 1515-1700 MW, FolH 104, 5 cr

R3103 French Literary Texts: Novel (prereq 3101)
112132 1015-1200 TTh, FolH 204, Reeve, 5 cr

R3501 French Civilization and Culture (prereq 1105)
035712 1115-1300 TTh, FolH 108, Caplan, 5 cr

R3601 Literature in English Translation (no cr maj, knowledge of French helpful but not necessary)
930695 1215-1300 MTWTh, AndH 370, Akehurst, 5 cr

3970 Directed Readings (prereq undergrad student, #, △, college approval)
130699 –1 1-5 cr
214929 –2 1-5 cr

3980 Directed Instruction (prereq 3015, #, △, college approval)
930700 3-5 cr

R5443 Classical Comedy: Moliere (prereq 3209 or above)
335707 1315-1500 TTh, FolH 308, Renaud, 5 cr

R5900 Topics of French Literature (max 15 cr; prereq 3209 or above)
137581 1415-1600 MW, FolH 207, Weber, 5 cr

R5999 Teaching College French: Theory and Practice (prereq grad student or #)
308894 1315-1500 MW, FolH 103, Barnes, 5 cr

8970 Directed Readings
230709 1-5 cr

8980 Directed Teaching (prereq #, △)
630710 1-5 cr

FRENCH AND ITALIAN (FrIt)
French And Italian
Liberal Arts

R5587 French and Italian Utopian Literature
736806 1415-1500 T, 1415-1600 Th, FolH 305, Pipa, 5 cr

FRESHMAN-SOPHOMORE COLLOQUIA (HCol)
Honors Program
Liberal Arts

R1010 Honors Colloquium (prereq fr, soph, reg honors div)
031367 2-4 cr

R1020 Honors Colloquium (prereq fr, soph, reg honors div)
111773 2-4 cr

R1030 Honors Colloquium (prereq fr, soph, reg honors div)
511776 2-4 cr

R1040 Honors Colloquium (prereq fr, soph, reg honors div)
111778 2-4 cr

R1050 Honors Colloquium (prereq fr, soph, reg honors div)
311780 2-4 cr

R1060 Honors Colloquium (prereq fr, soph, reg honors div)
611784 2-4 cr

R1070 Honors Colloquium (prereq fr, soph, reg honors div)
111787 2-4 cr

R1080 Honors Colloquium (prereq fr, soph, reg honors div)
435536 2-4 cr

R1970 Honors Colloquium: Directed Studies (prereq fr or soph, reg honors div)
636958 1-4 cr

GENERAL COLLEGE (GC)

General College restricts some sections to certain groups of students. Check at NichH 20 for these restrictions before attempting to register.

R1111 Science in Context: Weather and Climate
000264 1215-1300 MTWThF, SciCB 125, A Johnson, 5 cr (lab ar)

R1112 Science in Context: Human Uses of the Environment (§1113)
030400 1115-1200 MTWThF, SciCB 125, Hatch, 5 cr

R1131 Biological Science: Principles
002354 –1 0815-0900 MTWTh, SciCB 125, Dearden, 5 cr (lab ar)
602356 –2 1315-1400 MTWTh, SciCB 125, Hatch, 5 cr (lab ar)

R1132 Biological Science, Human Body
202358 –1 0915-1000 MTWThF, SciCB 125, Dearden, 5 cr
402360 –2 1415-1500 MTWThF, SciCB 125, 5 cr

R1137 Biological Science: Laboratory (prereq 1131 or 1132)
102362 –1 1015-1200 MW, ApH 206, 2 cr
236025 –2 1215-1400 MW, ApH 206, 2 cr

R1138 Special Topics (prereq 1405 or 1421, math level B or higher)
114714 1015-1100 TTh, NichH 302, Dearden, 5 cr

R1161 Astronomy-Solar System
112535 1215-1300 MTWThF, Phys 131, Policoff, 5 cr (lab or independent study ar)

R1166 Physical Science: Principles of Chemistry
630402 1115-1200 MTWThF, SciCB 175, Schwabacher, 5 cr

R1167 Astronomy Laboratory (prereq prior or ¶ astronomy course)
230404 1900-2300 Th, Phys 131, Policoff, 2 cr

R1171 Earth Science: Physical Geology
109831 1015-1100 MTWThF, SciCB 175, Uthe, 5 cr (lab ar)

R1211 People and Problems
130405 1215-1300 MTWThF, NichH 211, F Johnson, 5 cr

R1212 Urban Problems
302366 0815-0900 M, 0815-1000 WF, NichH 109, N Smith, 5 cr

R1221 Minnesota History (§1223, 1224)
509736 1115-1200 MTWThF, NichH 213, Moen, 5 cr

R1230 United States: Recent History
513821 0915-1000 MTWThF, NichH 207, Moen, 5 cr

R1233 United States: Government and Politics
930406 1015-1100 MTWThF, SciCB 125, Hathaway, 5 cr

R1235 United States: Law in Society
802369 –1 1315-1500 MW, 1315-1400 F, AkerH 309, Kahn, 5 cr
002371 –2 0815-1000 TTh, 0915-1000 F, JonesH 4, Hower, 5 cr

R1237 United States: Juvenile Delinquency
330412 1115-1200 MTWTh, NichH 207, Harris, 4 cr

R1241 Historical Biography: Lincoln and the Civil War
936027 1015-1100 MTWTh, NichH 207, Buckley, 4 cr

R1251 World History
030414 1215-1300 MTWThF, SmithH 325, Jones, 5 cr

R1252 International Relations
830415 1415-1500 MTWThF, NichH 213, Jones, 5 cr

R1281 Psychology in Modern Society
★LECT 0915-1000 MWF, NichH 211, Brothen
109738 –1 LAB 0915-1000 TTh, NichH 254, Brothen, 5 cr
309740 –2 LAB 1015-1100 TTh, NichH 254, Brothen, 5 cr
109741 –3 LAB 1015-1100 TTh, NichH 304, Brothen, 5 cr
009742 –4 LAB 1115-1200 TTh, NichH 254, Brothen, 5 cr
809743 –5 LAB 1115-1200 TTh, NichH 304, Brothen, 5 cr
736028 –6 LAB 1215-1300 TTh, NichH 254, Brothen, 5 cr
536029 –7 LAB 1215-1300 TTh, NichH 304, Brothen, 5 cr
936030 –8 LAB 1315-1400 TTh, NichH 254, Brothen, 5 cr
736031 –9 LAB 1415-1500 TTh, NichH 254, Brothen, 5 cr

R1283 Psychology of Human Development
430417 1415-1500 MTWThF, NichH 211, Latts, 5 cr

R1284 Behavior Problems of Children (§1723)
230418 0815-1000 MW, BuH 120, Latts, 4 cr

R1285 Cultural Anthropology
130419 0915-1000 MTWThF, ApH 150, F Johnson, 5 cr

R1291 The World Today: Geography at Home and Abroad
430420 1015-1100 MTWThF, NichH 213, Steinhauser, 5 cr

R1295 Economic Perspectives: Micro Principles and History
230421 0815-0900 MTWThF, NichH 211, Killen, 5 cr

R1296 Economic Perspectives: Macro Principles and History
130422 1115-1200 MTWThF, NichH 211, Killen, 5 cr

R1311 Art: General Arts (§3311)
902377 –1 0815-0900 MWThF, NichH 111, Byrne, 4 cr
502379 –2 0915-1000 MWThF, NichH 111, Gates, 4 cr
702381 –3 1315-1400 MWThF, NichH 111, MacInnes, 4 cr
631341 –4 1115-1300 TTh, NichH 111, Byrne, 4 cr
409745 –5 1415-1600 TTh, NichH 111, 4 cr

R1312 Art Today I (S-N only)
213831 1115-1200 MWF, NichH 111, Gates, 3 cr

R1331 Instrumental Music and Its Traditions
930423 1015-1100 MWThF, NichH 111, Byrne, 4 cr

R1351 Philosophy: Functions and Problems
437562 1015-1200 TTh, NichH 209, 4 cr

R1355 Philosophy: Problems of Ethics
★LECT 1215-1300 MWF, NichH 213
002385 –1 REC 1215-1300 T, JonesH 4, 4 cr
602387 –2 REC 1215-1300 Th, JonesH 4, 4 cr

R1357 Philosophy: World Religious Beliefs
730424 0815-0900 MTWThF, NichH 213, Yahnke, 5 cr

R1363 Literature for Children
913833 –1 1115-1200 TWThF, Arch 10, Adamson, 4 cr
536032 –2 1115-1200 TWThF, Arch 10, Adamson, 4 cr

R1365 Literature of the United States
113837 0915-1000 MWThF, NichH 213, Gidmark, 4 cr

R1371 Literature: Reading Short Stories
202389 1315-1400 MWF, NichH 213, Rathburn, 3 cr

R1374 Literature of the Theater: Film and Drama
530425 1215-1400 TTh, NichH 213, C Miller, 4 cr

R1375 Humanities: Modern Living I
209746 1015-1200 TTh, NichH 216, Koch, 4 cr

R1401 Improving Study Skills, Reading Comprehension, and Vocabulary (§1406 prior to Fall, 1981)
202392 –1 1–3 cr (Individual instruction ar, NichH 1)
814716 –2 1–3 cr (Individual instruction ar, NichH 1)
414718 –3 1–3 cr (Individual instruction ar, NichH 1)

R1402 Vocabulary Development (§1401 prior to Fall, 1981)
309558 –1 0815-0900 MWF, NichH 209A, Stockdale, 3 cr
302397 –2 0915-1000 MWF, NichH 209A, 3 cr
002399 –3 1215-1300 MWF, FolH 305, 3 cr
831337 –4 1315-1400 MWF, NichH 209A, Yahnke, 3 cr
014357 –5 1415-1500 MWF, NichH 209A, Kurak, 3 cr

R1403 Reading, Comprehension, and Study Skills (§1402 prior to Fall, 1981)
★LECT 0815-0900 MW, NichH 122
636037 –1 REC 0815-0900 Th, NichH 201, 3 cr
436038 –2 REC 0815-0900 F, NichH 201, 3 cr
★LECT 1015-1100 MW, NichH 209A
636040 –3 REC 1015-1100 Th, NichH 201, 3 cr
436041 –4 REC 1015-1100 F, NichH 201, 3 cr
★LECT 1115-1200 MW, NichH 209A, Gidmark
136043 –5 REC 1115-1200 Th, NichH 201, Gidmark, 3 cr
736045 –6 REC 1115-1200 F, NichH 201, Gidmark, 3 cr
★LECT 1215-1300 MW, NichH 209A, Gidmark
136048 –7 REC 1215-1300 Th, NichH 201, Gidmark, 3 cr
036049 –8 REC 1215-1300 F, NichH 201, Gidmark, 3 cr
★LECT 1515-1600 MW, NichH 122
136051 –9 REC 1515-1600 Th, NichH 201, 3 cr
036052 –10 REC 1515-1600 F, NichH 201, 3 cr

R1404 Vocabulary in Context (§1407 prior to Fall, 1981)
836053 –1 3 cr (Individual instruction ar, NichH 1)
436055 –2 3 cr (Individual instruction ar, NichH 1)

R1405 Technical Reading: Tables and Graphs
231343 1–2 cr (Individual instruction ar, NichH 1)

R1411 Fundamentals of Usage and Style (§1405 prior to Fall, 1981)
309754 –1 0915-1100 TTh, PeikH 225, 3 cr
113854 –2 1015-1200 TTh, FordH 115, 3 cr
813856 –3 1215-1400 TTh, NichH 209, 3 cr
413858 –4 1215-1400 TTh, NichH 209A, 3 cr
236056 –5 0915-1100 WF, NichH 209, 3 cr
613860 –6 3 cr (Individual instruction ar, NichH 1)
113863 –7 3 cr (Individual instruction ar, NichH 1)

R1412 Writing Grammatical Sentences and Developing Organized Paragraphs (§1404 prior to Fall, 1981)
113877 –1 1215-1400 WF, Phys 143, 1–2 cr
136057 –2 1215-1400 WF, BuH 125, 1–2 cr
936058 –3 1–2 cr (Individual instruction ar, NichH 1)
736059 –4 1–2 cr (Individual instruction ar, NichH 1)

R1417 Improving Spelling and Punctuation (§1403 prior to Fall, 1981)
615558 –1 1215-1400 WF, Phys 143, 1–2 cr
136060 –2 1215-1400 WF, BuH 125, 1–2 cr
936061 –3 1–2 cr (Individual instruction ar, NichH 1)
736062 –4 1–2 cr (Individual instruction ar, NichH 1)

R1421 Writing Laboratory: Personal Writing (§1412 prior to Fall 1981)
702400 –1 0815-1000 M, 0815-0900 WF, NichH 216, 4 cr
302402 –2 0815-1000 M, 0815-0900 WF, NichH 209, 4 cr
536063 –3 0915-1100 MW, PeikH 315, 4 cr
002404 –4 1015-1200 M, 1115-1200 WF, NichH 216, 4 cr
402407 –5 1015-1200 M, 1115-1200 WF, NichH 209, 4 cr
102409 –6 1215-1400 M, 1215-1300 WF, NichH 209, 4 cr
902413 –7 1215-1400 M, 1215-1300 WF, NichH 216, 4 cr
502415 –8 1415-1600 M, 1515-1600 WF, NichH 209, 4 cr
002418 –9 0815-1000 TTh, NichH 209A, 4 cr
102420 –10 0815-1000 TTh, NichH 209, 4 cr
336064 –11 0915-1100 TTh, VinH 311, 4 cr
602423 –12 0915-1100 TTh, PeikH 315, 4 cr
136065 –13 1015-1200 TTh, NichH 209A, 4 cr
102426 –14 1015-1200 TTh, PtH 111, 4 cr
036066 –15 1115-1300 TTh, PeikH 315, 4 cr
131344 –16 1015-1200 TTh, FordH 115, 4 cr
109778 –17 1115-1300 TTh, KoltH S137, 4 cr
931345 –18 1215-1400 TTh, JonesH 10, 4 cr
731346 –19 1215-1400 TTh, NichH 209A, 4 cr
531347 –20 1315-1500 TTh, PeikH 315, 4 cr
331348 –21 1315-1500 TTh, Phys 143, 4 cr
131349 –22 0815-1000 WF, PeikH 225, 4 cr
836067 –23 0815-1000 WF, AmundH 162, 4 cr
636068 –24 0815-1000 WF, JonesH 10, 4 cr
713865 –25 0915-1100 WF, NichH 209, 4 cr
614264 –27 1115-1300 WF, VinH 311, 4 cr
436069 –28 1215-1400 WF, BuH 125, 4 cr
836070 –29 1215-1400 WF, Phys 143, 4 cr

R1422 Writing Laboratory: Communicating in Society (§1423; prereq 1421)
702428 –1 0815-1000 MW, JonesH 1, 4 cr
902430 –2 1015-1200 MW, PtH 111, 4 cr
702431 –3 1015-1200 MW, PeikH 225, 4 cr
302433 –4 1315-1500 MW, PtH 102, 4 cr
636071 –5 0815-1000 TTh, JonesH 1, 4 cr
531350 –6 0815-1000 TTh, NichH 209A, 4 cr
914271 –7 0815-1000 TTh, NichH 209, 4 cr
331351 –8 1015-1200 TTh, JonesH 1, 4 cr
309785 –9 1215-1400 TTh, PtH 111, 4 cr
436072 –10 1415-1600 TTh, NichH 209A, 4 cr
009787 –11 1415-1600 TTh, NichH 209, 4 cr
236073 –12 1415-1600 TTh, NichH 216, 4 cr
136074 –13 1315-1500 WF, NichH 209, 4 cr

R1426 Information Strategies and Research Methods (§1408, 3408, 3426)
312539 1015-1100 TTh, WaLib 102, 2 cr

R1431 Basic Mathematics I (§1434; prereq GCPP math level A)
937100 –1 1015-1200 MWF, FolH 124, 2 cr
737101 –2 1315-1500 TThF, FolH 124, 2 cr
537102 –3 1315-1500 TThF, FolH 124, 2 cr

R1433 Basic Mathematics: Programmed Study (max 10 cr; prereq GCPP math level A, B or C or 1431 or 1432 or 1434, # or △ for 4+ cr/qtr)
936075 1015-1200 TTh, FolH 124, 1–10 cr

R1434 Mathematics Skills Review (§1431, 1432; prereq GCPP math level B)
131352 –1 0915-1000 MTWThF, FolH 124, 4 cr
031353 –2 0915-1000 MTWThF, FolH 102, 4 cr
831354 –3 1215-1300 MWF, 1115-1300 TTh, FolH 124, 4 cr
314274 –4 1215-1300 MTWThF, FolH 102, 4 cr
609789 –5 1315-1400 MTWThF, EltH N119, 4 cr
512541 –6 1315-1500 MWF, FolH 124, 4 cr
736076 –7 1315-1500 MWF, FolH 124, 4 cr

R1435 Elementary Algebra (prereq GCPP math level C or 1432 or 1434)
631355 –1 0815-0900 MTWThF, FolH 102, 5 cr
431356 –2 1015-1100 MTWThF, FolH 102, 5 cr
814277 –3 1115-1200 MTWThF, FolH 102, 5 cr
814280 –4 1315-1500 MTWThF, FolH 102, 5 cr
809791 –5 1315-1500 MTWThF, FolH 102, 5 cr
112543 –6 1515-1600 MTWThF, FolH 102, 5 cr

R1442 Functions and Problems of Logic
★LECT 0915-1000 MWF, PtH 214, Zanoni, 4 cr
109836 –1 REC 0915-1000 T, PtH 214
809838 –2 REC 0915-1000 Th, PtH 214

R1445 Intermediate Algebra (§1443, 1444; prereq GCPP math level D or 1435)
602437 –1 0815-0900 MTWThF, FolH 124, 5 cr
202439 –2 0915-1100 MTWThF, MechE 212, 5 cr
402441 –3 1315-1500 MTWThF, ApH 150, 5 cr
214283 –4 1515-1600 MTWThF, FolH 124, 5 cr

R1454 Statistics (prereq GCPP math level D or elementary algebra)
102443 1015-1100 MTWThF, PtH 102, Garfield, 5 cr

R1461 Oral Communication: Basic Principles
628651 –1 0815-0900 MTWThF, NichH 107, 5 cr
536077 –2 0915-1100 MW, 0915-1000 F, NichH 107, Amram, 5 cr
302447 –3 1015-1100 MTWThF, WullH 130, 5 cr
109795 –4 1115-1300 MW, 1115-1200 F, NichH 107, 5 cr

R1464 Oral Communication: Group Process and Discussion
915095 –1 0815-1000 TTh, FolH 209, 4 cr
336078 –2 1015-1200 TTh, NichH 122, Amram, 4 cr
136079 –3 1115-1300 TTh, NichH 107, 4 cr

R1465 Oral Communication: Interpersonal Communication
002449 –1 1015-1100 MW, 1015-1200 F, NichH 122, 4 cr
536080 –2 1115-1300 MW, NichH 122, 4 cr
102451 –3 1315-1400 MW, 1215-1400 F, NichH 122, 4 cr
336081 –4 1415-1500 MW, 1415-1600 F, NichH 122, 4 cr
131358 –5 0915-1100 TTh, NichH 107, Hansen, 4 cr
931359 –6 1215-1400 TTh, NichH 122, Hansen, 4 cr
109800 –7 1415-1600 TTh, NichH 122, 4 cr
036083 –8 0915-1100 WF, FordH 150, 4 cr

R1471 Creativity: Creative Problem Solving-innovation Techniques
509834 1415-1500 MWThF, NichH 109, Amram, 4 cr

R1472 Introduction to American Sign Language and the Deaf Community—Level 1 (§1468 Fall 1982 or 1473 Fall 1982)
237563 4 cr

R1481 Creativity: Art Laboratory: Experiences in the Media (max 9 cr)
202456 –1 0815-1000 MW, NichH 102, 3 cr (1 hr ar)
902458 –2 1215-1400 MW, NichH 102, 3 cr (1 hr ar)
102460 –3 0815-1000 TTh, NichH 102, 3 cr (1 hr ar)
902461 –4 1215-1400 TTh, NichH 102, 3 cr (1 hr ar)

R1483 Creativity: Music Laboratory-How to Read and Write Music (max 6 cr)
502463 –1 1215-1300 MWF, NichH 111, 3 cr
102465 –2 1415-1500 MWF, NichH 111, 3 cr

R1502 Career Planning
002466 –1 1015-1200 M, NichH 35, Wood, 2 cr
802467 –2 1015-1200 T, NichH 35, Wood, 2 cr
231360 –3 1015-1200 W, NichH 35, Wood, 2 cr
131361 –4 1015-1200 Th, NichH 35, Wood, 2 cr

R1511 Introduction to Modern Business
602468 –1 0815-1000 MW, 0915-1000 F, LindH 305, Kroll, 5 cr
909801 –2 1115-1200 M, 1115-1300 TTh, Arch 35, 5 cr
514306 –3 1115-1300 MW, 1215-1300 F, MinMet 116, Nelson, 5 cr

R1513 Principles of Small Business Operation
836084 1115-1300 TTh, PtH 102, 5 cr

R1517 Business Internship in Cooperative Education (prereq #, △)
636085 1700-1930 W, NichH 107, 6 cr

R1533 Financial Mathematics: Procedures and Applications (prereq GCPP math level C or 1432 or 1434 or elementary algebra)
114311 0815-0900 MTWThF, NichH 207, 5 cr

R1534 Practical Law
602471 –1 1015-1200 MW, 1015-1100 F, NichH 109, O'Hare, 5 cr
202473 –2 1115-1300 TTh, 1115-1200 F, MinMet 116, Hower, 5 cr
436086 –3 1315-1500 TTh, 1415-1500 F, AkerH 309, Kahn, 5 cr

R1535 Introduction to Data Processing (prereq GCPP math levl D or 1435 or algebra)
509803 1515-1600 MTWTh, Arch 10, Giese, 4 cr

R1536 Introduction to Commercial Art (max 9 cr; prereq previous art experience or #)
702476 –1 1015-1200 MW, NichH 102, 3 cr
502477 –2 1415-1600 TTh, NichH 102, MacInnes, 3 cr

R1537 Salesmanship
009840 1015-1200 TTh, NichH 109, Nelson, 3 cr

R1540 Accounting Fundamentals I
102479 –1 1115-1300 MW, PtH 102, 4 cr
302481 –2 1215-1400 TTh, NichH 207, 4 cr
109805 –3 1415-1600 TTh, NichH 207, 4 cr

R1551 Marketing: Introduction
136107 1115-1300 MW, 1115-1200 F, MechE 212, Peterson

R1553 Marketing: Principles of Management (prereq 1551 or #)
236087 1415-1600 MW, 1415-1500 F, NichH 207, Peterson, 5 cr

R1580 An Introduction to Paralegal Careers (S-N only)
609811 1730-1900 M, NichH 216, Templeton, 1 cr (first 5 weeks)

R1701 Psychology of Personal Effectiveness
830446 1315-1500 MW, NichH 254, Willmore, 4 cr

R1702 Survival Seminar I: Introduction to Higher Education (prereq #, △) (S-N only)
226112 –1 0915-1100 M, NichH 302, 2 cr
126113 –2 1015-1200 M, NichH 214, 2 cr
212548 –3 0915-1100 T, NichH 201, 2 cr
412550 –4 0915-1100 T, NichH 214, 2 cr
112552 –5 1215-1400 T, NichH 201, 2 cr
712554 –6 0915-1100 W, NichH 302, 2 cr
312556 –7 0915-1100 F, NichH 302, 2 cr
136088 –8 0915-1100 F, NichH 254, 2 cr

R1705 Psychology and the Management of Stress: Theory and Application (prereq 1281 or #)
209813 1215-1400 TTh, NichH 109, Romano, 4 cr

R1722 Home Life: Parent-Child Relationships
230449 1315-1400 MTWTh, NichH 211, Thoen, 4 cr

R1733 Contemporary Sex Roles
630450 0915-1000 M, 0815-1000 TTh, NichH 109, Thoen, 5 cr

R1813 American Indian People in Contemporary Minnesota (prereq △)
926114 1115-1200 MWF, VinH 1, Wiger, 3 cr

R1815 Afro-American Studies
930454 1215-1300 M, 1215-1400 WF, NichH 207, N Smith, 5 cr

R1816 Afro-American Literature
114762 1015-1200 TTh, VinH 1, 4 cr

R1833 Topics in American Indian Studies (prereq #, △)
726115 1315-1400 MWF, NichH 109, Lundy, 3 cr

R1835 Asian-American Experience (prereq #, △) (A-N only)
126118 1415-1600 TTh, Arch 5, Tsuchida, 4 cr

R1894 Planning a General College Baccalaureate Program (prereq 75 cr) (S-N only)
709556 1415-1600 W, PtH 215, 1 cr (first 5 weeks)

R3134 Nature and Its Impact on the Mind (S-N only)
936089 1315-1630 T, Arch 45, Schwabacher, 4 cr

R3211 Statutory Definitions of Law: Minnesota Criminal Code
326117 1315-1500 TTh, MurH 311, Dwyer, 4 cr

R3217 Community Service Internship (prereq #, △)
414217 –1 1415-1600 T, NichH 152, Harris, 6-12 cr
236090 –2 1415-1600 W, NichH 152, Foat, 6-12 cr
136091 –3 1730-2000 W, NichH 152, Detzner, 6-12 cr
337103 –4 1415-1600 Th, NichH 152, Harris, 6-12 cr

R3286 Topical Seminar in Psychology (prereq #, △)
530456 Brothen, 4 cr

R3311 Art: General Arts (§1311)
202487 –1 0815-0900 MWThF, NichH 111, Byrne, 4 cr
902489 –2 0915-1000 MWThF, NichH 111, Gates, 4 cr
202490 –3 1315-1400 MWThF, NichH 111, MacInnes, 4 cr
931362 –4 1115-1300 TTh, NichH 111, Byrne, 4 cr
509817 –5 1415-1600 TTh, NichH 111, 4 cr

R3342 Moral Issues in Business
330457 0915-1100 WF, NichH 216, Kurak, 4 cr

R3423 Writing the Research or Survey Report (prereq 1421...1422 rec)
109819 1015-1200 MW, NichH 201, Stockdale, 4 cr

R3426 Information Strategies and Research Methods (§1408 or 3408 in Spring, 1981, §1426)
012561 1015-1100 TTh, WaLib 102, Oberman, 2 cr

R3464 Communication in Organizations (prereq 1461 or 1465, 5 cr in psychology)
030459 1315-1500 MW, NichH 107, Hansen, 4 cr

R3517 Advanced Business Internship in Cooperative Education (prereq #, △)
214350 1700-1930 Th, NichH 207, 6 cr

R3531 Writing for Business and the Professions (prereq 1422)
902492 –1 0815-1000 TTh, NichH 216, Adamson, 4 cr
502494 –2 1215-1400 TTh, NichH 216, Kurak, 4 cr
102496 –3 1315-1500 WF, NichH 216, Adamson, 4 cr

R3532 Legal Writing (prereq 1421, △...1422 rec)
309821 1615-1845 W, NichH 122, C Miller, 4 cr (paralegal students only)

R3560 Personnel Administration
009823 0815-1000 MW, JonesH 4, Kroll, 4 cr

R3584 Legal Studies: Litigation Trial Practice (prereq 1235, 1534, 1540, paralegal student or #)
714336 1730-2000 T, Law 35, Templeton, 4 cr (paralegal students only)

R3586 Legal Studies: Legal Research (prereq 1235, 1534, 1540, paralegal student or #)
130461 1730-2000 W, Law 35, Marchesani, 4 cr (paralegal students only)

R3587 Legal Studies: Internship (prereq paralegal student, △) (S-N only)
002497 Templeton, ar cr (paralegal students only)

R3597 Legal Studies: Corrections Internship (prereq #) (S-N only)
030462 ar cr

R3602 Applied Supervision (prereq 45 cr, 1511, one course in psychology and sociology or #)
736093 0815-1000 TTh, PtH 102, Kroll, 4 cr

R3605 Interviewing (prereq #, △)
536094 –1 1115-1300 MW, 1115-1200 F, NichH 304, Wambach, 5 cr
137104 –2 1415-1500 M, 1415-1600 WF, NichH 302, Skovholt, 5 cr

R3612 Mental Health: Principles and Practices (prereq #, △)
336095 1015-1200 MW, NichH 254, Skovholt, 4 cr

R3616 Creativity: Crafts (prereq soph or above, enrolled in RSG or HSG or pre-OT or #)
630464 1015-1200 TTh, NichH 102, Gates, 4 cr

R3642 Seminar: Small Group Facilitation (prereq HSG student, #, △)
602499 1730-2000 M, NichH 304, Foat, 4 cr

R3725 The Individual, Sexuality and Society
136096 0915-1100 TTh, PillsH 110, Latts, 4 cr

R3726 Dynamics of Family Interaction
114342 1115-1200 MTWTh, MechE 221, Thoen, 4 cr

R3823 Toward a Good Life: Humanities (prereq jr or sr or #, ¶3824, ¶3825)
215546 1730-2100 TTh, NichH 111, MacInnes, 3 cr

R3824 Toward A Good Life: Social Science (prereq jr or sr or #, ¶3823, ¶3825)
115550 1730-2100 TTh, NichH 111, Hathaway, 3 cr

R3825 Toward A Good Life: Natural Science (prereq jr or sr or #, ¶3823, ¶3824)
315554 1730-2100 TTh, NichH 111, 3 cr

R3831 Conflict and Personal Change: Humanities (prereq ¶3832, 3833)
036097 1730-2100 MW, NichH 109, Koch, 3 cr

R3832 Conflict and Personal Change: Social Sciences (prereq ¶3831, 3833)
836098 1730-2100 MW, NichH 109, Wambach, 3 cr

R3833 Conflict and Personal Change: Natural Sciences (prereq ¶3831, 3832)
636099 1730-2100 MW, NichH 109, 3 cr

R3841 Minnesota Resources
330474 1515-1600 MTWThF, NichH 213, Flynn, 5 cr

R3894 Planning Your GC Baccalaureate Senior Report (prereq 135 credits, #, △...3423 rec) (S-N only)
336100 1415-1600 Th, NichH 107, Giese, 1 cr

GENETICS AND CELL BIOLOGY (GCB)
Biological Sciences

3002 Human Genetics, Social Affairs (§3022, Biol 1101, 5003)
429333 1015-1100 MWF, Zoology 313, Anderson, 3-4 cr (Mpls)

3008 The Biology of Cancer (prereq Biol 1009)
208905 1415-1530 TTh, Zoology 313, Sheppard, 3 cr (Mpls)

R3022 Genetics (§Biol 5003; prereq Biol 1009, non-biology maj)
★LECT 1330-1445 TTh, ClaOff B45, Snyder
202506 –1 REC 1200-1245 T, BioSci 12, 4 cr
902508 –2 REC 1500-1545 T, BioSci 12, 4 cr
102510 –3 REC 0915-1000 W, MMA 100, 4 cr (Mpls)
702512 –4 REC 1015-1100 W, MMA 100, 4 cr (Mpls)

3960 Research Topics (prereq Biol 5001) (S-N only)
835727 1400-1445 M, BioSci 260, V Woodward, 1 cr

5001 Scanning Electron Microscopy Lab (prereq #) (S-N only)
035726 4 cr

R5022 Genetics (§3022, Biol 5003, not open to grad students in genetics)
★LECT 1330-1445 TTh, ClaOff B45, Snyder
802520 –1 REC 1200-1245 T, BioSci 12, 3 cr
402522 –2 REC 1500-1545 T, BioSci 12, 3 cr
102524 –3 REC 0915-1000 W, MMA 100, 3 cr (Mpls)
702526 –4 REC 1015-1100 W, MMA 100, 3 cr (Mpls)

5042 Quantitative Genetics (prereq 5033...Stat 5301 rec) (S-N only)
708908 0930-1045 TTh, BioSci 70, Enfield, 4 cr (1 hr ar)

5043 Human Genetics (prereq 3022 or Biol 5003 or #)
529341 1415-1500 MWF, Zoology 313, Anderson, 3 cr (Mpls)

5048 Advanced Cell Biology I (prereq Biol 5001)
229334 0815-0945 TTh, BioSci 6, Iwanij, 4 cr

5114 General Physiology (prereq Biol 3011, 5001, Phys 1109 or 1295)
908910 1000-1045 MWF, ClaOff B45, Goldstein, 3 cr

R5605 Cell Biology Laboratory (prereq Biol 5004 or ¶ or #)
508912 1400-1615 MW, BioSci 245, Lefebvre, 2 cr

5606 Biological Electron Microscopy (prereq Biol 5004 or #)
129335 1245-1400 TTh, BioSci 18, Cunningham, 3 cr

5970 Directed Studies (prereq #, △)
808916 ar cr

5990 Directed Research (prereq #, △)
408918 ar cr

8060 Current Topics
108914 2 cr

8900 Seminar (S-N only)
729337 1530-1700 Th, BioSci 70, 1 cr

8910 Journal Clubs (prereq △) (S-N only)
031224 1 cr

8920 Special Topics (prereq △) (S-N only)
529338 1-5 cr

8970 Directed Studies (prereq #, △)
329339 ar cr

8990 Research (prereq #)
729340 ar cr

GEO-ENGINEERING (GeoE)
Civil And Mineral Engineering
Institute of Technology

R5437 Computer Applications in Geo and Mineral Engineering (prereq IT stu or grad IT) (A-N only)
901164 1115-1200 MTWF, CivMinE 202, Crouch, 4 cr

5660 Special Geo-Engineering Problems (prereq IT sr or #) (A-N only)
701165 ar cr

8352 Advanced Rock Mechanics II (prereq 5302)
435052 1315-1500 TTh, CivMinE 214, Cundall, 4 cr

Is Labor Day. . .

A. Your signal to head indoors and curl up until spring?

B. The beginning of another season to be outdoors?

C. The day you put snow tires on your car?

If you picked answer "B", **THE OUTDOOR STORE** has everything you need to enjoy autumn. We carry a complete line of cotton and wool sweaters, parkas, wool shirts, footwear, camping equipment and accessories, bicycle touring accessories and canoes.

THE OUTDOOR STORE is a buying association for students, staff and faculty. We bring you the best in outdoor equipment and clothing for less. We're in the St. Paul Student Center, check us out!

OUTDOOR STORE

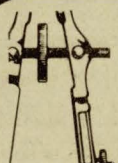
373-1404 — St. Paul Student Center
M-F 8-5 Wed til 8 Sat 9-4

DON'T CRAM

Pace your studying when preparing for your important admissions test. Let the Stanley H. Kaplan Educational Center show you how. 44 years of experience · Always up to date · Call or visit · 378-9191 · 328 E. Hennepin

Stanley H. KAPLAN Educational Center

Centers in More than 105 Major U.S. Cities



AIR FORCE ROTC — HERE ARE THE FACTS

When you're discussing something as important as your future, it's urgent that you get the straight facts . . . and that you understand them. Air Force ROTC can be an important part of your future. We would like to outline some of the facts and invite you to look into gathering more.

It's a fact: the Air Force needs highly-qualified, dedicated officers. . . men and women. It's a fact: we need people in all kinds of educational disciplines. It's a fact: we're prepared to offer financial help to those who can qualify for an Air Force ROTC scholarship.

Get together with an AFROTC representative and discuss the program. We'll give you all the facts. It could be one of the most important talks you've ever had with anyone about your educational plans.

For more information, contact:
Major Richard Holden, Room 3
Armory, (612) 373-2205

AIR FORCE ROTC

Gateway to a great way of life.

ARTISTS, DRAFTING ENGINEERING & ARCHITECTS SUPPLIES

ART MATERIALS
INCORPORATED

315 14th Ave. S.E. 331-6864

3018 Lyndale Ave. S.E. 827-5301

8601 Seminar: Geo-Engineering (prereq #) (S-N only)
501166 ar cr

8612 Geo-Engineering Research Problems (prereq #) (A-N only)
301167 ar cr

GEOGRAPHY (Geog)
Liberal Arts

R1301 Human Geography
★LECT 0915-1000 MWF, WilleyH 125, Schwartzberg
202537 –1 REC 0815-0900 TTh, BlegH 430, 5 cr
902539 –2 REC 0815-0900 TTh, BlegH 460, 5 cr
102541 –3 REC 0915-1000 TTh, BlegH 415, 5 cr
702543 –4 REC 0915-1000 TTh, BlegH 215, 5 cr
302545 –5 REC 0915-1000 TTh, BlegH 430, 5 cr
102546 –6 REC 0915-1000 TTh, BlegH 460, 5 cr
113491 –7 REC 1015-1100 TTh, BlegH 215, 5 cr
313495 –8 REC 1115-1200 TTh, BlegH 215, 5 cr
013497 –9 REC 0815-0900 WF, BlegH 430, 5 cr
231388 –10 REC 0815-0900 WF, BlegH 460, 5 cr
431390 –11 REC 1015-1100 WF, BlegH 210, 5 cr
731394 –12 REC 1015-1100 WF, BlegH 430, 5 cr
613499 –13 REC 1015-1100 WF, BlegH 460, 5 cr
113501 –14 REC 1115-1200 WF, RarigC 616, 5 cr
813503 –15 REC 1215-1300 WF, BlegH 330, 5 cr

R1401 Physical Geography (§NSci 1501)
835226 –1 LECT 1015-1100 MWF, AndH 210, Brown, Skaggs
635227 –2 LECT 1215-1300 MWF, BlegH 5, Brown, Skaggs
♦002550 –1 REC 1015-1100 TTh, BlegH 430, 5 cr
♦802551 –2 REC 1015-1100 TTh, BlegH 445, 5 cr
♦602552 –3 REC 1015-1100 TTh, BlegH 460, 5 cr
♦402553 –4 REC 1115-1200 TTh, BlegH 430, 5 cr
♦202554 –5 REC 1115-1200 TTh, BlegH 445, 5 cr
♦902556 –6 REC 1115-1200 TTh, BlegH 460, 5 cr
♦502558 –7 REC 1215-1300 TTh, BlegH 430, 5 cr
♦702560 –8 REC 1215-1300 TTh, BlegH 445, 5 cr
♦302562 –9 REC 1215-1300 TTh, BlegH 460, 5 cr
♦435228 –10 REC 0915-1000 WF, BlegH 430, 5 cr
♦802565 –11 REC 0915-1000 WF, BlegH 460, 5 cr
♦402567 –12 REC 1115-1200 WF, BlegH 445, 5 cr
♦102569 –13 REC 1115-1200 WF, BlegH 460, 5 cr
♦202571 –14 REC 1115-1200 WF, BlegH 430, 5 cr
♦902573 –15 REC 1215-1300 WF, BlegH 430, 5 cr
♦113510 –16 REC 1215-1300 WF, BlegH 460, 5 cr
♦713512 –17 REC 1315-1400 WF, BlegH 430, 5 cr
♦313514 –18 REC 1315-1400 WF, BlegH 445, 5 cr
♦235229 –19 REC 1415-1500 WF, BlegH 430, 5 cr
♦435231 –20 REC 1415-1500 WF, BlegH 445, 5 cr

R1425 Introduction to Meteorology (§Soil 1262)
★LECT 0800-0845 MWF, Soils 215, Baker, Skaggs, (StP)
102577 –1 LAB 0815-0900 TTh, BlegH 445, Baker, Skaggs, 4 cr
802579 –2 LAB 0915-1000 TTh, BlegH 445, Baker, Skaggs, 4 cr

R1973 Twin Cities (§3973)
030719 1115-1230 TTh, AndH 250, Borchert, 4 cr

3001 Introduction to Geographic Inquiry
635213 1115-1200 MWF, BlegH 360, Sheppard, 4 cr

R3101 Geography of United States and Canada
435214 1015-1100 MWF, BlegH 10, Hart, 4 cr

3121 Latin America
037122 1315-1400 MWF, AndH 250, 4 cr

3181 Soviet Union
235215 0915-1000 MWF, BlegH 425, R Adams, 4 cr

3211 East Asia (§5211)
135216 1015-1100 MWF, BlegH 205, Hsu, 4 cr

3212 South Asia (§5212)
330720 1315-1400 MWF, BlegH 105, Schwartzberg, 4 cr

3331 Introduction to Economic Geography
109148 1820-2050 M, BlegH 425, R Adams, 4 cr

3371 Introduction to Urban Geography
630724 0815-1000 TTh, BlegH 350, J Adams, 4 cr

3431 Introduction to Plant and Animal Geography (prereq non biology maj)
430725 1215-1300 MWF, AndH 250, Squires, 4 cr

R3441 Landform Geography
230726 0815-0900 MWF, BlegH 445, Brown, 4 cr

R3511 Introduction to Cartography (prereq 5 cr in geog or #)
★LECT 1315-1500 M, AndH 330, Andrews
602583 –1 REC 1515-1700 M, BlegH 455, 5 cr
202585 –2 REC 1315-1500 T, BlegH 455, 5 cr
531395 –3 REC 1315-1500 W, BlegH 455, 5 cr

R3551 Introduction to Remote Sensing (prereq 8 cr in geography or #)
★LECT 0945-1100 TTh, BlegH 420, Miller
709153 –1 REC 0915-1100 M, BlegH 430, 5 cr
509154 –2 REC 1315-1500 T, BlegH 445, 5 cr
835212 –3 REC 1315-1500 Th, BlegH 445, 5 cr

3940 Directed Field Study (prereq #) (A-N only)
935217 2-4 cr

3950 Undergraduate Seminar (prereq 10 cr geog or #)
837123 4 cr

3970 Directed Readings (prereq #, △, college approval)
930728 1-15 cr

R3973 Geography of Twin Cities (§1973)
130730 1115-1230 TTh, AndH 250, Borchert, 4 cr

5101 Historical Geography of North America
637124 0815-0930 TTh, BlegH 435, Lukermann, 4 cr

5112 Western United States
735218 0945-1100 MF, BlegH 445, Mather, 4 cr

5113 Canada and Alaska
313528 1215-1400 MF, BlegH 255, Mather, 4 cr

5143 Geography of West Africa
437125 0915-1000 MWF, RarigC 616, Scott, 4 cr

5181 U.S.S.R. Regions and Planning
535219 0915-1000 MWF, BlegH 425, R Adams, 4 cr

5211 East Asia: Regional Analysis (§3211; prereq 5 cr geog or #)
935220 1015-1100 MWF, BlegH 205, Hsu, 4 cr

5212 South Asia (§3212)
730732 1315-1400 MWF, BlegH 105, Schwartzberg, 4 cr

5376 American Metropolitan Regions
735221 1820-2050 T, BlegH 435, Borchert, 4 cr

5382 Applied Locational Models (prereq 3331 or #)
535222 1315-1400 MWF, BlegH 425, Sheppard, 4 cr

5701 Field Research: Twin Cities Metropolitan Area and Environs (prereq 12 cr geog, #)
709167 1415-1530 TTh, BlegH 430, Andrews, 4 cr (Sat field trips ar)

5811 Environmentalism, Environment, and the Quality of Life
335223 1115-1200 MWF, AndH 350, Tuan, 4 cr

8120 Seminar: Historical Geography (prereq #)
130735 1820-2050 W, BlegH 430, Miller, 1-3 cr

8125 Seminar: Historical Geography of Public Lands (prereq #)
136608 1415-1600 Th, BlegH 460, Squires, 1 cr

8300 Geographical Writing (prereq #)
135224 1315-1500 M, BlegH 430, Hart, 3 cr

8400 Seminar: Physical Geography (prereq #)
509168 1515-1700 W, BlegH 445, Brown, Skaggs, 1-3 cr

8850 Seminar: Attitudes to Environment (prereq #)
035225 1315-1500 T, BlegH 460, Tuan, 1-3 cr

8970 Directed Readings
630741 1-5 cr

8990 Research Problems
430742 ar cr

GEOLOGY AND GEOPHYSICS (Geo)
Institute of Technology

R1001 Physical Geology
♦902587 –1 LECT 1015-1100 MTWF, SmithH 100, Mooers, 5 cr
♦502589 –2 LECT 1115-1200 MWThF, SmithH 100, Ito, 5 cr
♦702591 –3 LECT 1200-1345 TTh, HodsonH 495, Banerjee, Ito, 5 cr (StP)
302593 –1 LAB 0815-1000 M, FordH 185
835730 –2 LAB 1215-1400 M, FordH 185
802596 –3 LAB 1315-1500 M, FordH 180
402598 –4 LAB 1415-1600 M, FordH 185
635731 –5 LAB 0815-1000 T, FordH 180
802601 –6 LAB 1115-1300 T, FordH 185
602602 –7 LAB 1315-1500 T, FordH 185
202604 –8 LAB 1515-1700 T, FordH 185
902606 –9 LAB 0815-1000 W, FordH 185
502608 –10 LAB 1315-1500 W, FordH 180
702610 –11 LAB 1515-1700 W, FordH 185
302612 –12 LAB 0815-1000 Th, FordH 180
435732 –13 LAB 1015-1200 Th, FordH 185
802615 –14 LAB 1015-1200 Th, FordH 185
235733 –15 LAB 1215-1400 Th, FordH 185
202618 –16 LAB 1215-1400 Th, FordH 180

R1012 Earth as a Planet
801187 1315-1500 TTh, PillsH 110, Alexander, 4 cr

3099 Problems in Geology and Geophysics (prereq #, △)
601191 1-6 cr

R3110 Sedimentary Petrology (prereq 3102, upper division geology, geophysics, geo-engr or mining engr maj or #)
★LECT 1115-1200 MWF, PillsH 110
826123 –1 LAB 0915-1100 MW, PillsH 125, 5 cr
626124 –2 LAB 1215-1400 MW, PillsH 125, 5 cr
227602 –3 LAB 1015-1200 TTh, PillsH 125, 5 cr
116097 –4 LAB 0815-1000 WF, PillsH 125, 5 cr
716099 –5 LAB 1615-1800 MW, PillsH 125, 5 cr

R3112 Earth History (prereq 1111 or #)
★LECT 1315-1400 MWF, PillsH 110, Hartman
012284 –1 LAB 0915-1100 TTh, PillsH 105, 5 cr
212288 –2 LAB 1115-1300 TTh, PillsH 105, 5 cr
112292 –3 LAB 1315-1500 TTh, PillsH 105, 5 cr

5099 Senior Thesis (prereq geology or geophysics maj with 4th yr standing, #)
912309 Stout, 2 cr

R5251 Geomorphology (prereq 1001, Math 1111 or #)
★LECT 0915-1000 TTh, 1315-1400 TTh, PillsH 125, Hooke
709329 –1 LAB 1015-1100 Th, 4-5 cr (Field trips first six weeks, 0800-1800 Th)

5261 Glacial Geology (5 cr with term paper or map lab; prereq 1002 or 3112)
901195 0915-1000 MWF, PillsH 110, Wright, 4-5 cr (Field trips Oct 1, 15-16, 29-30)

R5311 General Geochemistry I (prereq 2 qtr college chemistry or #)
912813 1315-1400 MWF, PillsH 207C, Seyfried, 4 cr

5314 Geochronology and Radiogenic Isotope Geochemistry (prereq 5312 or #)
435729 0815-1000 TTh, PillsH 121, Alexander, 4 cr

R5351 Economic Geology: Metal Sulfide Deposits (prereq 3401 or 5404, 3103 or #)
★LECT 1415-1500 MWF, PillsH 110, Sawkins
509316 –1 LAB 1415-1600 TTh, PillsH 125, 4–5 cr

R5404 Mineral Systems I (§3401, 5004; prereq 1 qtr chemistry)
★LECT 1115-1200 MWF, PillsH 121, Zoltai, 4 cr
109318 –1 LAB 1115-1400 Th, PillsH 100

5452 Igneous and Metamorphic Petrology (prereq 3102, Chem 5520 or 5521, Math 3211 or #)
★LECT 1115-1200 MWF, PillsH 207C, Stout, 5 cr
309320 –1 LAB 1415-1600 MW, PillsH 125, Stout

R5505 Physics and Chemistry of the Earth I (prereq 1111, Phys 1295)
009322 1015-1100 MWF, PillsH 207C, Mooney, 4 cr

R5511 Principles of Gravity and Magnetic Exploration (prereq Phys 1291)
001205 1015-1100 TTh, PillsH 207C, Chase, 3 cr

R5541 Geomagnetism (prereq one qtr each of geology, physics, mathematics)
809323 0915-1000 TTh, PillsH 207C, Banerjee, 3 cr

R5601 Limnology (§EBB 5601; prereq Chem 1005 or equiv)
601207 1215-1300 MWF, PillsH 110, Shapiro, 4 cr

R5652 Sedimentary Petrology (§3110; prereq 3102)
★LECT 1115-1200 MWF, PillsH 110, (Field trips Oct 8, 22-23)
527640 –1 LAB 0915-1100 MW, PillsH 125, 5 cr
127642 –2 LAB 1215-1400 MW, PillsH 125, 5 cr
827644 –3 LAB 1015-1200 TTh, PillsH 125, 5 cr
416100 –4 LAB 0815-1000 WF, PillsH 125, 5 cr
116102 –5 LAB 1615-1800 MW, PillsH 125, 5 cr

8098 Seminar: Current Topics in Geology and Geophysics (prereq #)
401211 1–6 cr

8099 Research in Geology and Geophysics (prereq #)
101213 1–6 cr

8454 Igneous Petrology (prereq 5452)
635728 1415-1500 MWF, PillsH 207C, Weiblen, 3 cr

R8531 Theory of Elastic Wave Propagation I (prereq 5505 or 5512, 1 yr calculus)
209326 0815-0900 MWF, PillsH 207C, Mooney, 3 cr

R8611 Transport Phenomena in Natural Porous Media (prereq CE 3400 or Chem 5520 or #)
501216 1515-1700 W, PillsH 121, Pfannkuch, 2–3 cr

GERMAN (Ger)
German
Liberal Arts

R1010 Beginning German: Individualized Reading, Listening (first 3 cr must be completed as a unit, max 15 cr, §1101-1102-1103, 1110, 1201-1203, 1210)
209715 –1 1215-1300 W, Armory 116, Baker, 1–15 cr (1st meeting) (addnl hrs ar)
835713 –2 1215-1300 Th, BuH 120, Mueller, 1–15 cr (1st meeting) (addnl hrs ar)

R1101 Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking (§1010, 1110, 1201-1202-1203-1204-1205, 1210)
702655 –1 0815-0900 MTWThF, FolH 107, Stephens, 5 cr
635714 –2 0915-1000 MTWThF, FolH 110, Steckel, 5 cr
302657 –3 1015-1100 MTWThF, AkerH 211, Hennings, 5 cr
002659 –4 1115-1200 MTWThF, FolH 110, Hirschbach, 5 cr
302660 –5 1215-1300 MTWThF, FolH 110, 5 cr

R1103 Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1102)
902671 –1 0915-1000 MTWThF, KoltH S134, Rauch, 5 cr
702672 –2 1015-1100 MTWThF, AkerH 309, Oberle, 5 cr

R1104 Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1103, 15 cr of 1110 or #)
313559 –1 0915-1000 MTWThF, KoltH S136, Hennings, 5 cr
713560 –2 1115-1200 MTWThF, AkerH 21, Bryant-Bertail, 5 cr

R1105 Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1104)
013564 –1 0815-0900 MTWTh, AkerH 211, Peters, 4 cr
613566 –2 1215-1300 MTWTh, PtH 215, Michel, 4 cr

R1110 Beginning German: Individualized Reading, Listening, Writing (first 3 cr must be completed as one unit, max 15 cr, §1010, 1101-1103, 1201-1203, 1210)
013578 –1 1215-1300 M, Armory 116, Rusch, 1–15 cr (1st meeting) (addnl hrs ar)
313576 –2 1215-1300 T, Arch 25, Nelson, 1–15 cr (1st meeting) (addnl hrs ar)

R1201 Beginning and Intermediate German: Classroom Reading, Listening, Writing (§1010, 1101-1102-1103-1104-1105, 1110, 1210)
135725 1115-1200 MTWThF, VinH 2, Winter, 5 cr

R1204 Beginning and Intermediate German: Classroom Reading, Listening, Writing (§1010, 1101-1105, 1110, 1210; prereq 1103, 1203, 15 cr of 1010, 10 cr of 1210 or #)
435715 1015-1100 MTWThF, FolH 209, Metcalf, 5 cr

1210 Reading and Listening: Independent Study (§1010, 1102-1103-1104, 1110, 1202-1203-1204; prereq 1201)
709721 1215-1300 T, BuH 120, Jarvis, 1–15 cr (1st meeting) (addnl hrs ar)

R3011 Conversation and Composition (prereq 1105 or placement)
402679 –1 1315-1400 MTWF, FolH 105, Duroche, 4 cr
602681 –2 0915-1000 TWThF, FolH 105, Ulbrich, 4 cr

R3012 Conversation and Composition (prereq 3011)
113572 1115-1200 MTWTh, JonesH 10, Michel, 4 cr

R3013 Conversation and Composition (prereq 3012)
113580 1015-1100 MTWTh, Arch 30, Brewster, 4 cr

R3014 Conversation and Composition (prereq 3013 or #)
930745 0915-1000 MWF, ChDev 105, Michel, 4 cr

R3104 Reading and Analysis of Prose (prereq 1105 or #)
730746 1515-1600 MWF, FolH 205, Duroche, 4 cr

R3310 Studies in German Authors: Franz Kafka (prereq 3104, 3105)
235716 1115-1200 MWF, FolH 107, Taraba, 4 cr

R3341H Proseminar in German (prereq #, non honors students may enroll with #)
611137 1515-1700 W, FolH 110, Taraba, 4 cr

3342 Senior Project in German (prereq #) (A–N only)
113474 2 cr

3342H Senior Project in German (prereq #) (A–N only)
611140 2 cr

R3401 Medieval Literature (prereq 3104, 3105)
135717 0945-1100 TTh, MechE 302, Firchow, 4 cr

R3511 German Civilization and Culture: Middle Ages to the Renaissance (prereq 3104, 3105, one additional 3xxx German course)
935718 1415-1500 MW, 1415-1600 F, FolH 306, Weiss, 4 cr

3590 Directed Studies: German-Speaking Countries (prereq 3501, #)
009725 5 cr

R3601 German Literature in Translation: Medieval Literature (no knowledge of German req; prereq non maj or minor)
809726 0945-1100 TTh, MechE 302, Firchow, 4 cr

R3610 German Authors and/or Topics in Translation (max 12 cr, no knowledge of German req; prereq non maj or minor)
126135 –1 0815-0900 MWF, FolH 209, Brewster, 4 cr (Thomas Mann)
609727 –2 1415-1500 MWF, FolH 110, Hirschbach, 4 cr (Bertolt Brecht)

3970 Directed Studies (prereq 3104 or 3105, #, △, college approval)
409700 1–5 cr

R5011 Advanced Composition and Conversation (prereq 3013)
130752 1415-1500 MWF, FolH 104, Achberger, 4 cr

R5510 Topics in Contemporary German Culture: Modern Urban Space (max 8 cr; prereq 3513 or equiv)
735719 1515-1700 Th, FolH 108, Weiss, 4 cr (addnl hrs ar)

5970 Directed Studies (prereq 3104, 3105, 3 addnl German literature courses, #, △, CLA approval)
209701 1–5 cr

8100 Proseminar in German Literature (prereq 1st or 2nd yr grad student)
135720 1515-1700 T, FolH 108, Liberman, 4 cr

8321 The 19th-Century Drama
935721 1515-1700 M, FolH 103, Taraba, 4 cr

8345 Austrian Literature: 20th Century
735722 1515-1700 W, FolH 305, Achberger, 4 cr

8721 Middle High German Language
535723 1245-1400 TTh, FolH 302, Firchow, 4 cr

8731 Old High German (prereq 8723 or #)
335724 1515-1700 F, FolH 302, Liberman, 4 cr

8990 Reading and Research (prereq #)
609713 3–6 cr

GRADUATE SCHOOL (Grad)

0000 Student Status (prereq graduate student)
937582 0 cr

8777 Thesis Credits: Masters (open to graduate students admitted for Fall, 1983 or later)
737583 1–16 cr

8888 Thesis Credits: Doctoral (open to graduate students admitted for Fall, 1983 or later)
537584 1–16 cr

GREEK (Grk)
Classics
Liberal Arts

R1101 Beginning Classical Greek (1101-1102†)
102684 –1 0815-0900 MTWThF, FolH 203, 5 cr
702686 –2 0915-1000 MTWThF, FolH 203, Belfiore, 5 cr

R1104 Greek Prose (§3051-3052; prereq 1103 or 2 yrs high school Greek or △)
630657 1015-1100 MTWThF, FolH 52, Coulson, 5 cr

1111H Honors Course: Beginning Classical Greek (prereq regis honors division or high ability as indicated by college entrance records)
511146 0915-1000 MTWThF, FolH 52, Sheets, 5 cr

1120 Individualized Introduction to Biblical Greek (max 15 cr, 2-10 cr in any one qtr, §1101-1102-1103, 1110; prereq #)
208662 1–15 cr

3051 Beginning Ancient Greek: Accelerated (3051-3052†, §1101, 1102, 1103, 1104)
430661 0915-1000 MTWThF, FolH 52, Sheets, 5 cr

3455 Advanced Undergraduate Greek: Aristophanes (prereq 3106 or 5 cr of 3120 or 3 yrs high school Greek or △)
135734 1115-1200 MWF, FolH 302, Sheets, 5 cr

3960H Honors Tutorial (prereq △)
312041 5 cr

3970 Directed Studies (prereq #, △, college approval)
908664 1–5 cr

5970 Directed Studies (prereq #, △, CLA approval)
708665 1–5 cr

5980 Directed Teaching (prereq #, △, CLA approval)
508666 ar cr

5990 Directed Research (prereq #, △, CLA approval)
308667 ar cr

8120 Greek Text Course (prereq 3052 or △)
826137 1115-1200 MWF, FolH 302, Sheets, 4 cr

HEALTH SCIENCE UNITS (HSU)
Health Sciences

R5009 Multidisciplinary Perspectives on Aging
301069 1615-1800 MW, VinH 16, 4 cr

R5013 Systems Approach to Design of Instruction (§CISy 5201)
735736 1615-1800 M, EdHAn 64, Carrier, 3 cr

R5025 Human Sexuality for the Health and Helping Professionals I (prereq enrollment in public health, social work, family social science or education or #)
101073 1715-1930 Th, MoosT 2650, Terrell, Larson, others, 3-4 cr

R5033 Fundamentals of Alcohol and Drug Problems (§PubH 5033)
801075 1315-1400 T, 1315-1500 Th, MoosT 2580, Kincannon, Rothenberger, 3 cr

5210 Terminology of the Health Sciences (§Phar 5210)
601076 Bast, 2 cr

HEBREW (Hebr)
Near And Middle Eastern Studies
Liberal Arts

R1012 Beginning Hebrew for Students with Prior Exposure (§1101-1102-1103, total 15 cr for students who complete the sequence)
230595 1315-1400 MTWThF, FolH 203, 5 cr

1101 Beginning Hebrew (prereq # if Hebr studied previously)
102692 1115-1200 MTWThF, BuH 123, 5 cr

R1104 Introduction to Biblical Hebrew
130596 1615-1800 TTh, FolH 107, 5 cr

R3011 Intermediate Hebrew (prereq 1103, qualified freshman or #)
930597 1115-1200 MTWThF, JonesH 4, 5 cr

R3015 Advanced Modern Hebrew (prereq 3013 or #)
730598 1315-1400 MWF, FolH 104, 4 cr

3111 Rabbinical Texts (prereq 3013 or 3017 or 3202 or #)
335397 1415-1530 TTh, FolH 107, 4 cr

R3201 Readings in Biblical Hebrew (prereq 1103 or 1104 or #)
412273 1615-1800 MW, FolH 107, 4 cr

R3204 A Book of the Bible (prereq 3013 or #)
609016 0915-1000 MWF, FolH 209, 4 cr

3204H A Book of the Bible (prereq 3013 or #)
414962 4 cr

3304 Modern Hebrew Short Story (prereq 3017 or #)
535396 1015-1100 MWF, FolH 208, 4 cr

3980 Directed Instruction (prereq #, △, college approval)
530599 1-5 cr

5970 Directed Readings (prereq 3013, #, △, CLA approval)
230600 ar cr

HIGHER EDUCATION (HiEd)
Educational Policy And Administration
Education

5250 American Higher Education (§Educ 5250, EdAd 5250) (S-N optional)
215496 1515-1700 W, BuH 240, Corcoran, 4 cr

5292 The Law and Postsecondary Educational Institutions (§EdAd 5292) (A-N only)
535737 1830-2030 Th, BlegH 210, Hooker, 3 cr

8228 Problems: Higher Education (§EdAd 8228; prereq #)
112356 ar cr

8230 Seminar: Dissertation Research in Higher Education (prereq #)
312363 1615-1800 M, BuH 240, Corcoran, 1 cr

8255 Administration in Higher Education (§EdAd 8253; prereq 8250 or EdAd 5250)
012429 1615-1800 T, BuH 240, Hearn, 3 cr

HINDI (Hndi)
South And Southwest Asian Studies
Liberal Arts

1101 Beginning Hindi
900113 –1 1315-1400 MTWThF, KoltH S135, Staneslow, 5 cr
236588 –2 1615-1800 MTh, 1615-1700 W, FolH 207, Staneslow, 5 cr

3031 Intermediate Hindi (prereq 1103 or #)
700114 1415-1500 MTWThF, KoltH S135, Staneslow, 5 cr

5101 Beginning Hindi (§1101)
800122 1315-1400 MTWThF, KoltH S135, Staneslow, 5 cr

5131 Intermediate Hindi (§3031; prereq 1103 or 5103 or #)
500129 1415-1500 MTWThF, KoltH S135, Staneslow, 5 cr

5161 Advanced Hindi (prereq 3033 or 5133 or #)
900130 1015-1200 TTh, KlaCt 196, Junghare, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
300133 Junghare, Staneslow, ar cr

5990 Directed Research (prereq #, △, CLA approval)
100134 Junghare, Staneslow, ar cr

8990 Directed Research (prereq #)
800136 Junghare, Staneslow, ar cr

HISTORY (Hist)
Liberal Arts

R1001 Introduction to Modern European History Since the Middle Ages (§1001H, 3001, not open to jrs, srs)
★LECT 0945-1030 TTh, WilleyH 125, Kieft
102703 –1 REC 1015-1100 M, BlegH 210, 4 cr
502706 –2 REC 1215-1300 M, BlegH 330, 4 cr
102708 –3 REC 0815-0900 T, BlegH 335, 4 cr
302710 –4 REC 1215-1300 T, BlegH 245, 4 cr
102711 –5 REC 1315-1400 T, BlegH 125, 4 cr
802713 –6 REC 0915-1000 W, SocSci 307, 4 cr
402715 –7 REC 0815-0900 Th, BlegH 205, 4 cr
102717 –8 REC 1215-1300 Th, BlegH 205, 4 cr
702719 –9 REC 1215-1300 F, BlegH 225, 4 cr

R1001H Honors Course: Introduction to Modern European History Since the Middle Ages (§1001, 3001, not open to jrs, srs; prereq #)
★LECT 0945-1030 TTh, WilleyH 125, Kieft
111165 –80 REC 1315-1400 Th, Mgmt/Econ 160, Kieft, 4 cr

R1003 Introduction to Modern European History Since the Middle Ages (§1003H, 3003, not open to jrs, srs)
★LECT 1015-1100 MWF, AndH 230, Rath
235635 –1 REC 0815-0900 W, BlegH 210, 4 cr
135636 –2 REC 0915-1000 F, BlegH 225, 4 cr
935637 –3 REC 1215-1300 F, BlegH 360, 4 cr

R1051 Ancient Civilization (§3051)
★LECT 1215-1300 MWF, AndH 270, Kelly
402732 –1 REC 1015-1100 Th, BlegH 205, 4 cr
102734 –2 REC 1215-1300 Th, BlegH 245, 4 cr
902735 –3 REC 0915-1000 F, BlegH 245, 4 cr
702736 –4 REC 1315-1400 F, RarigC 616, 4 cr

R1101 Introduction to Medieval History
★LECT 0915-1000 MWF, BlegH 10, Bachrach
302738 –1 REC 1215-1300 M, BlegH 340, 4 cr
302741 –2 REC 1115-1200 T, BlegH 245, 4 cr
002743 –3 REC 0815-0900 W, BlegH 245, 4 cr
626138 –4 REC 1115-1200 Th, BlegH 245, 4 cr
426139 –5 REC 1015-1100 F, BlegH 245, 4 cr
826140 –6 REC 1215-1300 F, BlegH 145, 4 cr

R1151 English History to the 17th Century (§3151)
★LECT 1115-1200 MWF, BlegH 5, Lehmberg
335643 –1 REC 1115-1200 T, BlegH 145, 4 cr
135644 –2 REC 0815-0900 F, BlegH 225, 4 cr
035645 –3 REC 1215-1300 F, RarigC 616, 4 cr

R1301 American History (§1301H)
★LECT 0915-1000 MWF, WilleyH 175, Noble
902749 –1 REC 0815-0900 M, BlegH 255, 4 cr
102751 –2 REC 1215-1300 M, BlegH 145, 4 cr
702753 –3 REC 1315-1400 M, BlegH 360, 4 cr
502754 –4 REC 0815-0900 T, BlegH 255, 4 cr
802758 –5 REC 1215-1300 T, BlegH 145, 4 cr
002760 –6 REC 1315-1400 T, BlegH 145, 4 cr
602762 –7 REC 0815-0900 W, BlegH 255, 4 cr
402763 –8 REC 1015-1100 W, BlegH 335, 4 cr
102765 –9 REC 1215-1300 W, BlegH 145, 4 cr
702767 –10 REC 1315-1400 W, Mgmt/Econ 128, 4 cr
302769 –11 REC 0815-0900 Th, BlegH 255, 4 cr
502771 –12 REC 1215-1300 Th, BlegH 145, 4 cr
102773 –13 REC 1315-1400 Th, BlegH 145, 4 cr
802775 –14 REC 0815-0900 F, BlegH 255, 4 cr
131408 –15 REC 1015-1100 F, BlegH 435, 4 cr

R1301H Honors Course: American History (§1301; prereq #)
★LECT 0915-1000 MWF, WilleyH 175, Noble
111174 –80 REC 1315-1500 T, SocSci 628, Noble, 4 cr

R1302 American History (§1302H)
★LECT 1115-1200 MWF, WilleyH 125, Spear
202781 –1 REC 0815-0900 M, BlegH 105, 4 cr
702784 –2 REC 1215-1300 M, BlegH 415, 4 cr
302786 –3 REC 0815-0900 T, BlegH 105, 4 cr
002788 –4 REC 1215-1300 T, BlegH 415, 4 cr
102790 –5 REC 1415-1500 T, BlegH 145, 4 cr
802792 –6 REC 0815-0900 W, BlegH 105, 4 cr
402794 –7 REC 1215-1300 W, BlegH 415, 4 cr
102796 –8 REC 1315-1400 W, BlegH 360, 4 cr
202800 –9 REC 0815-0900 Th, BlegH 105, 4 cr
502804 –10 REC 1215-1300 Th, BlegH 415, 4 cr
102806 –11 REC 0815-0900 F, BlegH 105, 4 cr
002807 –12 REC 1215-1300 F, BlegH 415, 4 cr

R1302H Honors Course: American History (§1302; prereq #)
★LECT 1115-1200 MWF, WilleyH 125, Spear
411186 –80 REC 1315-1400 W, SocSci 101, Spear, 4 cr

R1401 Survey of Latin American History: Colonial Period to 1800 (§3401)
★LECT 1115-1230 TTh, AndH 230, Schwartz
202814 –1 REC 1015-1100 M, BlegH 335, 4 cr
902816 –2 REC 1315-1400 T, BlegH 135, 4 cr

1421 The World and the West (§3421)
814148 0945-1100 TTh, BlegH 220, Kopf, 4 cr

1431 History of Africa to 1800 (§3431)
630755 1115-1230 TTh, BlegH 220, Isaacman, 4 cr

332-4691

THERE'S A NEW JEWISH STUDENT CENTER AT THE HILLEL HOUSE.

***NEW DELI RESTAURANT SERVING M-F, 11:15-1:30*

***VIDEO ARCADE: GAMES, PINBALL, PING PONG, POOL TABLES, POPCORN MACHINE.*

***FREE USE OF ELECTRIC TYPEWRITER*

***ISRAEL ACTION COMMITTEE*

***CAMPUS JEWISH APPEAL*

***RAINBOW SIGN: A NATIONAL JEWISH PROJECT TO PREVENT NUCLEAR WAR*

1521 UNIVERSITY AVE. SE, MPLS

SOME QUARTER
IN THE NEAR FUTURE . . .
YOU COULD BE REGISTERING
FOR CLASSES IN **PARIS, RIO, TUNIS** OR **HONG KONG!**

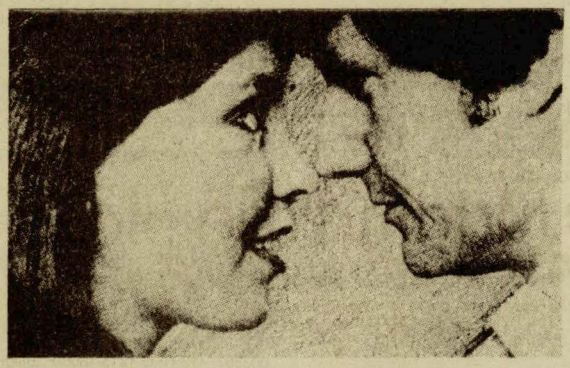
(Or 1001 other intriguing places around the world.)

Our brochures, staff, and complete reference library will inform you about all the possibilities, including **U OF M EXCHANGE YEAR ABROAD** programs, which will begin soon to take applications for 1984-85.
Plan to travel over winter or spring break? Check with us on int'l flights & low-cost air/land programs.

istc
INTERNATIONAL STUDY & TRAVEL CENTER –
44 Coffman Union
373-0180

istAgency
INTERNATIONAL STUDY/ TRAVEL AGENCY –
42 Coffman Union
376-9495

University Optique in Dinkydale



Soft Contact Special Only $120. Complete.
-Full Selection of lightweight frames
-Eye exams by registered optometrist

331-7100

Now offering Extended Wear Soft Contact lenses

UNIVERSITY OPTIQUE AND CONTACT LENS
Serving the community since 1965
Hard contact lenses polished
Dinkydale Arcade **331-7100**

UM USLS

University Student

LEGAL SERVICE

Any student enrolled at U of M, Twin Cities campus and paying the student service fee is eligible for our services. **USLS** provides **legal advice** and **representation** by a staff of licensed attorneys without charge to fee-paying students for a wide range of legal problems including landlord-tenant, consumer, divorce, DWI and immigration. We also provide **referral** to other resources.

USLS
160 West Bank Union Skyway
376-5237
Call for an appointment

1463 Introduction to East Asia in Modern Times (§3463, EAS 1463)
230760 1315-1400 MWF, BlegH 415, Marshall, 4 cr

R1951 World Military History: A Survey (§Mil 1011)
530764 0815-0900 TTh, Armory 116, Westhaus, 2 cr

1957 Early History of Air Power (§Air 1204; prereq #)
115595 –1 0815-0900 T, 0815-0945 Th, Armory 12, Holden, 2 cr
715597 –2 1315-1400 T, 1315-1445 W, Armory 116, Holden, 2 cr

R3001 Introduction to Modern European History Since the Middle Ages (§1001, 1001H)
★LECT 0945-1030 TTh, WilleyH 125, Kieft
502821 –1 REC 0915-1000 M, BlegH 225, 4 cr
102823 –2 REC 0815-0900 T, BlegH 215, 4 cr
002824 –3 REC 1215-1300 T, BlegH 215, 4 cr
127634 –4 REC 0915-1000 W, SocSci 628, 4 cr
035631 –5 REC 1315-1400 Th, BlegH 125, 4 cr
835632 –6 REC 0815-0900 F, BlegH 145, 4 cr

R3003 Introduction to Modern European History Since the Middle Ages (§1003, 1003H)
★LECT 1015-1100 MWF, AndH 230, Rath
735638 –1 REC 0915-1000 W, Mgmt/Econ 160, 4 cr
535639 –2 REC 1215-1300 W, BlegH 360, 4 cr
935640 –3 REC 0815-0900 F, BlegH 210, 4 cr

R3031 Medicine and Disease in History (§HMed 3001)
330765 0915-1000 MWF, MinMet 116, Eyler, 4 cr

R3051 Ancient Civilization (§1051)
★LECT 1215-1300 MWF, AndH 270, Kelly
402830 –1 REC 1315-1400 Th, BlegH 135, 4 cr
102832 –2 REC 1115-1200 F, BlegH 225, 4 cr

R3151 English History to the 17th Century (§1151)
★LECT 1115-1200 MWF, BlegH 5, Lehmberg
835646 –1 REC 0815-0900 W, BlegH 225, 4 cr
635647 –2 REC 1215-1300 W, RarigC 616, 4 cr
435648 –3 REC 1115-1200 Th, BlegH 145, 4 cr

3244 History of Eastern Europe to the Early 19th Century
235649 1115-1230 TTh, BlegH 210, Rudolph, 4 cr

3281 Intellectual and Cultural History of Modern Europe
336999 1215-1300 MWF, BlegH 205, Thayer, 4 cr

3347 Women in Colonial, Victorian America: 1600-1890
635650 0945-1100 TTh, BlegH 10, S Evans, 4 cr

R3401 Survey of Latin American History: Colonial Period to 1800 (§1401)
★LECT 1115-1230 TTh, AndH 230, Schwartz
802839 –1 REC 0815-0900 T, BlegH 245, 4 cr
002841 –2 REC 1415-1500 W, BlegH 205, 4 cr
602843 –3 REC 1315-1400 Th, BlegH 415, 4 cr
202845 –4 REC 1215-1300 F, BlegH 350, 4 cr

3421 The World and the West (§1421)
714157 0945-1100 TTh, BlegH 220, Kopf, 4 cr

3428 History of Relations Between United States and Mexico, 1821 to Present (§Chic 3428)
814425 1115-1200 MWF, FordH 60, Valdes, 4 cr

3431 History of Africa to 1800 (§1431)
430756 1115-1230 TTh, BlegH 220, Isaacman, 4 cr

3441 The Spanish-Mexican Borderlands and the Chicano Experience to 1900 (§Chic 3441)
237000 0915-1000 MWF, FordH 50, Valdes, 4 cr

3463 Introduction to East Asia in Modern Times (§1463, EAS 1463)
930762 1315-1400 MWF, BlegH 415, Marshall, 4 cr

3468 People's Republic of China: The Communist Revolution, 1900 to Present (§5468)
435651 0945-1100 TTh, BlegH 120, Farmer, 4 cr

3472 Early Modern Japan (§5472)
235652 1115-1200 MWF, BlegH 205, Marshall, 4 cr

3480 Topics in the History of India: Gandhi: Popular Image and Historical Reality
135653 0815-0930 TTh, Law 35, Kopf, 4 cr

3541 History of the Arabs (§MESA 3541)
935654 0915-1000 MWF, BlegH 415, Farah, 4 cr

3616 France in the High Middle Ages
735655 1115-1230 TTh, BlegH 135, Reyerson, 4 cr

3623 The Reformation in Germany
830768 0815-0900 MWF, AndH 350, Tracy, 4 cr

3637 Russian History from the Origins to the Present
535656 1015-1100 MWF, BlegH 155, Stavrou, 4 cr

3651 Henry VIII and the English Reformation
630769 0945-1100 TTh, BlegH 145, Lehmberg, 4 cr

3707 Social and Economic History of Modern Europe
335657 0945-1100 TTh, BlegH 155, Rudolph, 4 cr

3721 Europe in the Era of World War I
135658 0915-1000 MWF, BlegH 235, Munholland, 4 cr

R3747 Habsburg Austria from 1526 to World War I
030770 1315-1430 TTh, BlegH 255, Wright, 4 cr

3754 History of Italy: From the Middle Ages to the 16th Century
010051 0915-1000 MWF, BlegH 210, Thayer, 4 cr

3821 United States in the 20th Century: 1890-1917
335660 1015-1100 MWF, AndH 370, Noble, 4 cr

3837 Minnesota History
630772 0915-1000 MWF, AndH 250, Berman, 4 cr

3841 American Business History
109943 0815-0900 MWF, BlegH 150, Green, 4 cr

3881 History of American Foreign Relations
135661 1115-1200 MWF, AndH 230, Brauer, 4 cr

R3955 Introduction to Writing History (prereq △)
715101 –1 1315-1500 M, Mgmt/Econ 160, Spear, 4 cr
014164 –2 1315-1500 F, SocSci 307, Green, 4 cr

3960 Internship (prereq #, △, college approval)
836358 4-5 cr

3961 Major Paper (prereq △)
430773 1215-1300 MW, SocSci 710, Vecoli, 5 cr (1st meeting)

3970 Directed Study (prereq #, △, college approval)
230774 1-15 cr

3990 Directed Research (prereq #, △, college approval)
209990 1-15 cr

5015 Libraries and Archives as Resources for Research
509994 1415-1530 TTh, BlegH 350, Grigg, 2 cr

5061 History of Greece to 600 B.C.
214171 1115-1200 MWF, BlegH 260, Kelly, 4 cr

5284 Diplomatic History of Europe, 1789-1871
930776 1115-1230 TTh, BlegH 250, Kieft, 4 cr

5331 American Constitutional History
835663 1015-1100 MWF, BlegH 225, Murphy, 4 cr

5336 Criminal Justice in American History (prereq jr, sr or grad)
114177 0815-0930 TTh, Law 15, Samaha, 4 cr

5349 Social Welfare in America
130775 1115-1230 TTh, BlegH 155, Chambers, 4 cr

5468 People's Republic of China: The Communist Revolution, 1900 to Present (§3468)
635664 0945-1100 TTh, BlegH 120, Farmer, 4 cr

5472 Early Modern Japan (§3472)
435665 1115-1200 MWF, BlegH 205, Marshall, 5 cr

5571 Proseminar: Roman History (5571-5572-5573†; prereq #)
235666 Kelly, 3 cr

5621 Proseminar: The Italian Renaissance (prereq #)
935668 1315-1500 T, BlegH 210, Tracy, 3 cr

5720 Introductory Proseminar in Contemporary Europe: French Third Republic (prereq #)
735669 1515-1700 Th, SocSci 628, Munholland, 4 cr

5744 Proseminar: Topics in Modern German History (prereq #)
135670 1315-1500 Th, SocSci 101, Maynes, 3 cr

5777 Proseminar: History of the Habsburg Monarchy (5777-5778†, §8244; prereq #)
210010 1515-1700 Th, SocSci 101, Rath, Wright, 4 cr

5805 Proseminar: The American Revolution (prereq #)
935671 1315-1500 W, SocSci 628, Howe, 4 cr

5831 Proseminar: American Political and Constitutional History (5831-5832†; prereq #)
710013 1515-1700 W, SocSci 628, Murphy, 4 cr

5857 Proseminar: Social History of American Women (5857-5858†; prereq #)
735672 1315-1600 T, SocSci 101, S Evans, 4 cr

5881 Proseminar: American Foreign Relations (prereq #)
535673 1315-1500 F, SocSci 628, Brauer, 4 cr

5901 Proseminar: Latin American History (prereq reading knowledge of Spanish, #)
335674 1415-1600 Th, BlegH 420, Schwartz, 4 cr

5930 Proseminar: Topics in Comparative Third World History: Colonial Epistemologies (prereq #)
135675 1315-1500 T, Law 35, Lelyveld, 4 cr

5932 Proseminar: African Historiography (prereq #)
835680 1315-1500 W, SocSci 307, Kaba, 4 cr

5957 Proseminar: Social History of Anglo-American Law (prereq #)
635681 0945-1130 T, Law 1, Samaha, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
730780 1-15 cr

5990 Directed Research (prereq #, △, CLA approval)
330779 1-15 cr

8011 Social History as Social Science (prereq #)
035676 1315-1500 Th, SocSci 628, Isaacman, 4 cr

8015 Scope and Methods of Historical Studies (prereq #)
530778 –1 Rudolph, 4 cr
813243 –2 1315-1500 M, 1515-1700 Th, SocSci 307, Green, 4 cr

R8113 Medieval History (8111-8112-8113†; prereq 8112)
835677 1315-1600 T, SocSci 307, Reyerson, 3 cr

8141 Medieval French History (8141-8142-8143†; prereq #)
635678 1315-1530 W, SocSci 680, Bachrach, 3 cr

8244 History of Habsburg Monarchy (8244-8245†, §5777; prereq #)
415108 1515-1700 Th, SocSci 101, Rath, Wright, 3 cr

8344 American Labor History (8344-8345-8346†; prereq #)
435679 1315-1500 M, SocSci 628, Berman, 3 cr

8501 Archives Practicum (prereq #)
810021 Klaasen, 4 cr

8970 Directed Studies (prereq #)
330782 1-15 cr

8990 Directed Research (prereq #)
530781 1-15 cr

HISTORY OF MEDICINE (HMed)
Medical School

3001 Doctors and Disease in History (§Hist 3031, primarily for CLA students)
100336 0915-1000 MWF, MinMet 116, Eyler, 4 cr

5400 Early History of Medicine
700338 1515-1630 TTh, DiehlH 555, Wilson, 4 cr

5410 Seminar: Emergence of Modern Medicine 1750-1900 (prereq 3001, 3002, 3003, Hist 3031, 3032, 3033 or 5400, 5401, 5402)
900340 Wilson, 3 cr

8230 Readings: History of Science
700341 Wilson, 3 cr

8630 Directed Study (prereq #)
500342 3-15 cr

HISTORY OF SCIENCE AND TECHNOLOGY (HSci)
Liberal Arts

R**1711 Technology and Western Civilization: Ancient and Medieval** (§3711)
★LECT 1315-1400 MWF, Botany B6, Layton
102871 –1 REC 1415-1500 T, FordH 60, 4 cr
802873 –2 REC 1015-1100 W, FordH 170, 4 cr
402875 –3 REC 1215-1300 W, Phys 157, 4 cr
102877 –4 REC 1015-1100 Th, Phys 143, 4 cr
212100 –5 REC 1315-1400 Th, FordH 115, 4 cr
912102 –6 REC 1115-1200 F, Phys 236A, 4 cr

R**1811 Introduction to History of Science: Ancient** (§3811)
★LECT 0915-1000 MWF, AmundH 240, Shapiro
902881 –1 REC 1115-1200 M, ExpE 193, 4 cr
502883 –2 REC 0915-1000 T, MechE 202, 4 cr
102885 –3 REC 1315-1400 W, FordH 60, 4 cr
802887 –4 REC 0915-1000 Th, Phys 157, 4 cr
612482 –5 REC 1215-1300 Th, Phys 143, 4 cr
612479 –6 REC 1015-1100 F, Phys 236A, 4 cr

3201 History of Biology: Antiquity to 1700 (§5201)
035760 1245-1400 TTh, LindH 229, Kottler, 4 cr

R**3711 Technology and Western Civilization: Ancient and Medieval** (§1711)
★LECT 1315-1400 MWF, Botany B6, Layton
802890 –1 REC 1415-1500 T, FordH 60, 4 cr
402892 –2 REC 1015-1100 W, FordH 170, 4 cr
902895 –3 REC 1215-1300 W, Phys 157, 4 cr
502897 –4 REC 1015-1100 Th, Phys 143, 4 cr
712103 –5 REC 1315-1400 Th, FordH 115, 4 cr
512104 –6 REC 1115-1200 F, Phys 236A, 4 cr

R**3811 Introduction to History of Science: Ancient** (§1811)
★LECT 0915-1000 MWF, AmundH 240, Shapiro
702901 –1 REC 1115-1200 M, ExpE 193, 4 cr
302903 –2 REC 0915-1000 T, MechE 202, 4 cr
102904 –3 REC 1315-1400 W, FordH 60, 4 cr
802906 –4 REC 0915-1000 Th, Phys 157, 4 cr
912486 –5 REC 1215-1300 Th, Phys 143, 4 cr
212484 –6 REC 1015-1100 F, Phys 236A, 4 cr

5201 History of Biology: Antiquity to 1700 (§3201)
835761 1245-1400 TTh, LindH 229, Kottler, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
130783 1-15 cr

5990 Directed Research (prereq #, △, CLA approval)
209732 1-15 cr

8970 Directed Study (max 15 cr; prereq #)
909734 1-5 cr

8990 Directed Research (max 15 cr; prereq #)
709735 1-5 cr

HOME ECONOMICS EDUCATION (HEEd)
Vocational And Technical Education Education

1500 Introduction to Home Economics Education (prereq soph) (A-N only)
130288 1200-1245 TTh, VoTech R370, McClelland, 2 cr

3331 Children and Parenting: Curriculum Methods and Materials (prereq on sec for home econ majs is ¶CPsy 3330 or #) (A-N only)
709850 0900-1030 MW, VoTech R380, Cooke, 2 cr (addnl hrs ar)

3530 Home Economics Curriculum and Instruction: Affective Learning (prereq 3520 or #, SeEd 3150, 3155 or ¶) (A-N only)
135398 0900-1145 TTh, VoTech R380, Jackman, 4 cr

3620 Curriculum Management (prereq 3530 or ¶) (A-N only)
309852 1400-1530 MW, VoTech R380, Thomas, 3 cr

5021 Education Through Extension Methods (§AgEd 5021; prereq grad or #) (A-N only)
230290 1500-1730 Th, VoTech R385, Norenberg, 3 cr

5026 Extension Administration (§AgEd 5026; prereq #) (A-N only)
130291 1500-1730 T, VoTech R385, Borich, 3 cr

5027 Practicum: Placement for Extension Experiences (max 9 cr, S-N optional, §HEEd 3605 or AgEd 5027)
930292 0900-1600 MTWThF, VoTech 325A, Cooke, 2-9 cr

5100 Service Occupations Education (max 12 cr, §5331) (A-N only)
009854 1600-1830 Th, VoTech R370, Jackman, 3 cr

5102 Service Occupations Work Experience (max 12 cr, §5336; prereq #)
209858 McClelland, 3-6 cr

5200 Seminar: Working with Youth Through Adults (max 9 cr including AgEd 5200 and YoSt 5200; prereq △) (S-N optional)
326120 Olson, 1-3 cr

5320 Adult Education in Home Economics (A-N only)
730293 1600-1830 M, VoTech R380, Rossmann, 3 cr

5325 Trends in Home Economics Education (max 12 cr) (A-N only)
035399 1600-1915 W, VoTech R380, Rossmann, 4 cr

5405 Child Development and Parent Education (max 12 cr) (A-N only)
636796 1600-1915 T, VoTech R280, Cooke, 1-4 cr

5500 Proseminar: Home Economics Education (A-N only)
530294 1600-1745 Th, VoTech R380, Plihal, 2 cr

5920 Directed Studies (prereq #) (S-N optional)
836795 1-6 cr

8515 Seminar: Teacher Education (prereq 5300, 8300, Educ 8285)
735400 1600-1745 T, VoTech R370, Plihal, 2 cr

8530 Seminar: Home Economics Education (max 3 cr)
109862 1900-2100 M, VoTech R380, McClelland, 1 cr

HORTICULTURAL SCIENCE (Hort)
Agriculture

R**1010 Home Horticulture** (no cr for maj or min)
★LECT 1000-1045 MWF, AlderH 415, Hard
602910 –1 LAB 1100-1245 F, HrG 172, Hard, 4 cr
202912 –2 LAB 1300-1445 F, HrG 172, Hard, 4 cr

R**1021 Woody Plant Materials**
★LECT 1400-1445 TTh, AlderH 415, Mullin
502916 –1 LAB 1200-1345 TTh, AlderH 415, Mullin, 5 cr
102918 –2 LAB 1500-1645 TTh, AlderH 415, Mullin, 5 cr

1099 Orientation to Horticulture (S-N only)
729189 0800-0845 WF, AlderH 415, 1 cr

R**1100 Biology of Horticultural Production** (prereq Biol 1103)
129190 1400-1545 MF, HrG 172, 1400-1445 W, AlderH 415, Mullin, 4 cr

R**3031 Fruit Science** (prereq 1100, Soil 1122)
929191 1300-1545 W, HrG 172, 1100-1145 MWF, AlderH 415, 4 cr

3033 Post Harvest Handling and Physiology of Horticultural Crops (prereq 1100)
729192 1300-1345 T, 1300-1545 Th, AlderH 310, Munson, 3 cr

3097 Horticulture Practicum (prereq upper division horticulture maj)
529193 4 cr

3098 Undergraduate Research Project (prereq 8 cr upper division horticulture courses)
329194 2-6 cr

3099 Seminar (max 2 cr; prereq jr)
129195 1200-1245 MW, AlderH 415, Carter, 1 cr

5000 Professional Experience Program (prereq #) (S-N only)
029196 4 cr

5006 Systematics of Temperate and Tropical Horticultural Food Crops
335738 0800-0945 TTh, HrG 172, Davis, 4 cr

5026 Landscape Management
409017 0800-1045 TTh, HrG 174, Hard, 5 cr

5031 Fruit Science for Advanced Students (§3031; prereq #)
829197 1300-1545 W, HrG 172, 1100-1145 MWF, AlderH 415, 2 cr

5042 Turfgrass Science (prereq 3072, PlPa 1001, PlPh 3131)
★LECT 1300-1345 MWF, HrG 174, White
909023 –1 LAB 1400-1645 M, HrG 174, White, 5 cr

5046 Nursery Management and Production I (5045, 5048†; prereq 1021, 1036, 1099) (A-N only)
★LECT 0900-0945 MWF, AlderH 415, Swanson
509025 –1 LAB 1300-1600 T, HrG 172, Swanson, 4 cr

R**5052 Commercial Floriculture, Fall Crops** (prereq 1016)
★LECT 1100-1145 TTh, HrG 172, Widmer
629198 –1 LAB 1400-1645 Th, HrG 172, Widmer, 3 cr

5090 Special Problems (prereq #)
429199 1-4 cr

8007 Extension Horticulture Practicum (max 6 cr; prereq 12 grad cr)
129200 1-5 cr

8023 Evolution of Crop Plants (prereq 13 grad cr)
029201 1400-1545 M, 1400-1445 WF, AlderH 394, Ascher, 3 cr

8042 Horticultural Seminar (prereq 9 cr in horticulture)
829202 1600-1645 W, AlderH 415, Markhart, 1 cr

8051 Advanced Problems in Horticultural Crop Breeding (prereq #)
629203 3-9 cr

8052 Advanced Problems in Physiology of Horticultural Crops (prereq #)
429204 3-9 cr

8060 Discussions in Potato Research
229205 Lauer, 1 cr

☆ SPORTS SCHEDULE ☆

1983 UNIVERSITY OF MINNESOTA FOOTBALL SCHEDULE BROUGHT TO YOU BY

Panasonic.
just slightly ahead of our time.

Rice at Houston	Sept. 10
NEBRASKA	Sept. 17
PURDUE	Sept. 24
Ohio State at Columbus	Oct. 1
Indiana at Bloomington	Oct. 8
WISCONSIN (Homecoming)	Oct. 15
Northwestern at Evanston	Oct. 22
Michigan State at East Lansing	Oct. 29
ILLINOIS	Nov. 5
MICHIGAN	Nov. 12
Iowa at Iowa City	Nov. 19

SPORTSPORTSPORTS



Step ahead of your time to a Panasonic portable stereo system that actually shapes the sound for the space you're in.

The big "plus" in this Panasonic Platinum Plus™ portable is a built-in 5-band graphic equalizer that lets you be your own audio engineer. Brighten up a passage here. Heavy up the bass there. Create the sound to suit the space.

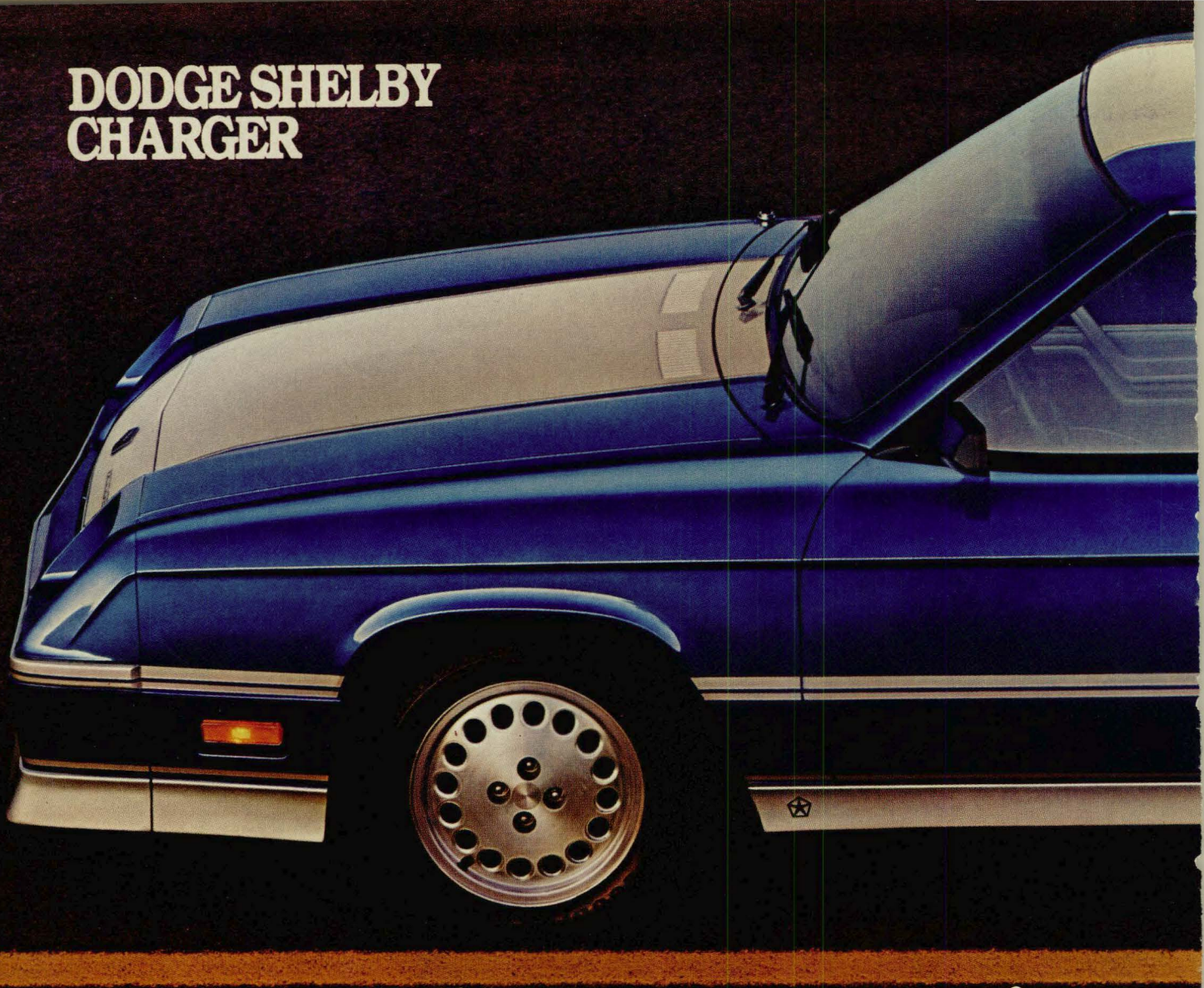
Whether that space is your own living room or the great outdoors, Platinum Plus sounds right at home. It's a compact AM/FM stereo cassette recorder with amazingly powerful 2-way speakers. They simply detach from the main unit for maximum sound separation.

All of this sound is controlled by an incredible array of audio technology including soft-touch controls, metal tape capability, 5-LED meter system, automatic tape stop and much more.

Whether you choose the RX-C45 (shown) or one of four other models, Platinum Plus can take you and your music to a place you've never been.

Panasonic®
just slightly ahead of our time.

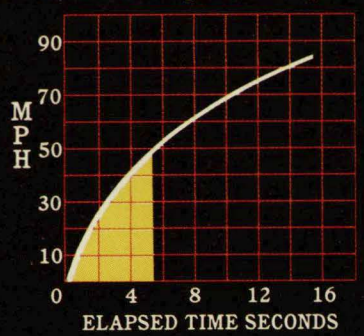
DODGE SHELBY CHARGER



Beneath the shimmering Santa Fe blue acrylic and subtle silver graphic trim, there's an awesome amount of racing-bred fine tuning that puts this Dodge Shelby Charger on a higher plateau than most performance iron.

$8290*

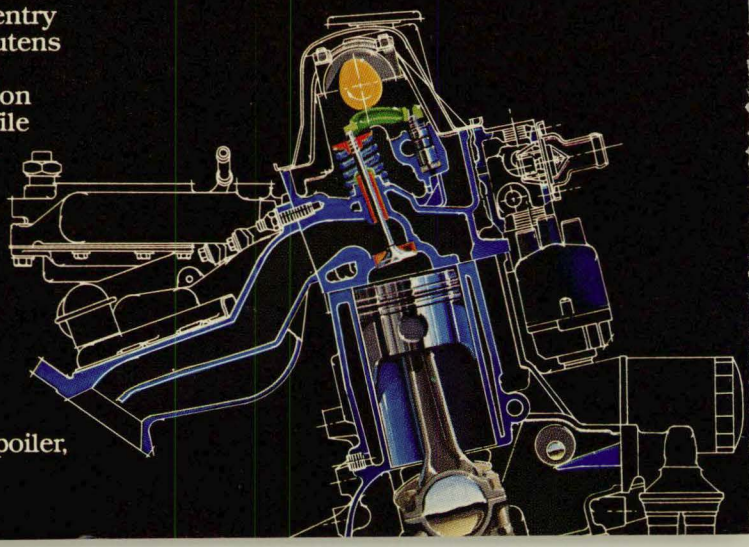
For a remarkably reasonable $8290, you get a beautifully balanced machine. The specially tweaked 2.2 liter, 4-cylinder OHC engine produces 107 hp at 5600 rpm.

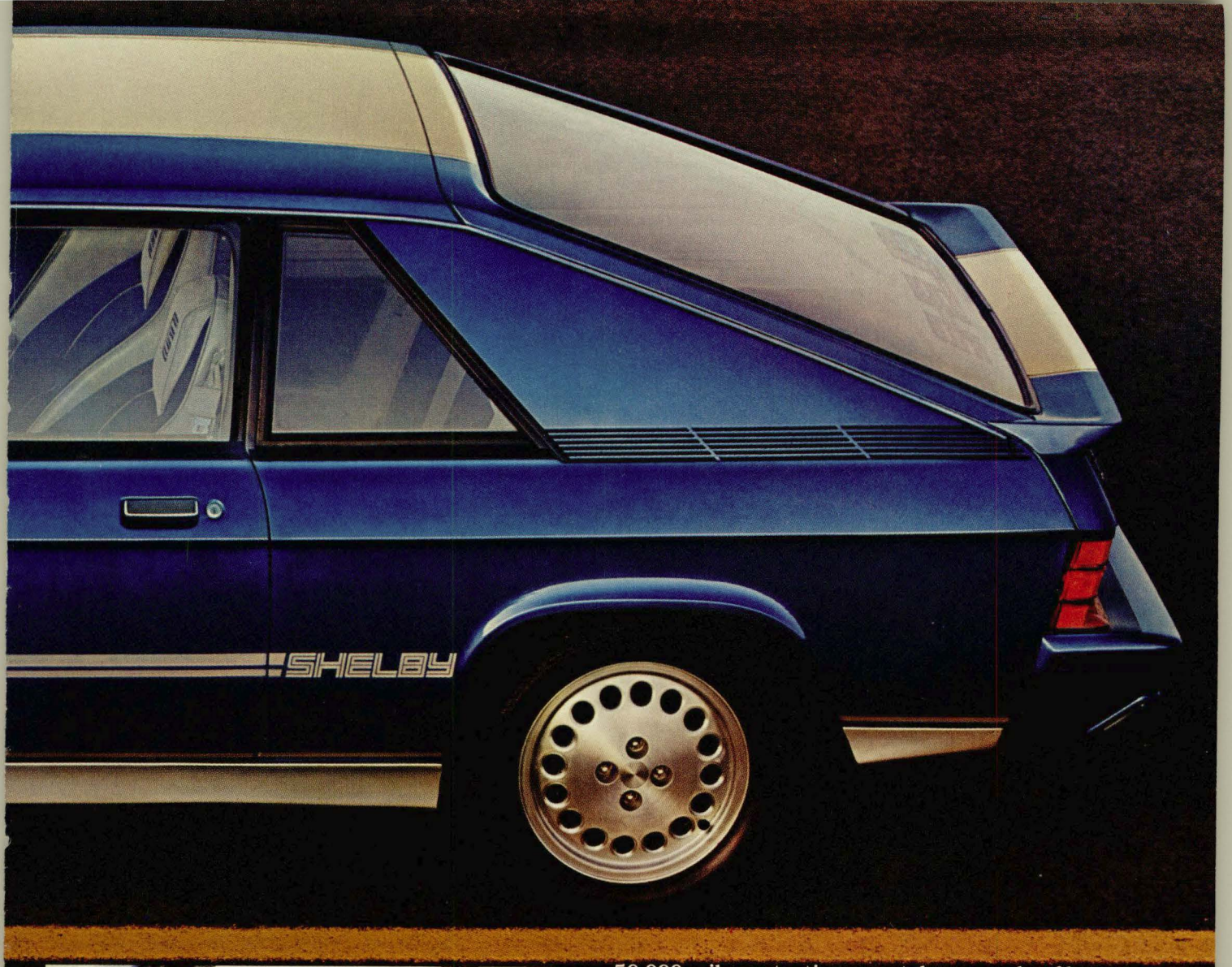


And 127 ft. lb. torque at 3600 rpm. A new 5-speed transaxle blends with an overall top gear ratio of 2.78 to produce zero-to-50 mph times of 5.5 seconds.**

Quick as a quarter horse, but agile as a cutting pony. Because Carroll Shelby doesn't put his brand on a machine that doesn't corner and brake as well as it moves out. Special componentry lowers the car and tautens an already superbly responsive suspension system. New low-profile 15-inch, 50-series tires are a part of the deal. Higher rate springs are matched to higher capacity brakes for startling all around road-course, skid-pad, and slalom capability. Ground-effect skirts, a new, unique air dam and spoiler,

IT AIN'T JUST PAINT.







and quicker responding steering lets you handle the whole package in a most satisfying way.

40 EST. HWY. **25** EPA EST. MPG:***

But we at Dodge demur at undisciplined performance. That's why this Shelby, like all Dodge machinery, will produce responsible fuel usage: 40 est. hwy. 25 EPA est. mpg.

5/50 PROTECTION PLAN†

Furthermore, we flat reject the notion that performance machinery is by its very nature unreliable. Which is precisely the reason we're comfortable enough with any Dodge to extend our 5 year/50,000 mile protection plan umbrella to the Shelby Charger. See your dealer for details about this unique coverage.

Remember, "It ain't just paint." And, in the Texas hill country vernacular of former 3-time SCCA national driving champion and LeMans winner, Carroll Shelby, "There's no hitch in this thing's git-a-long."

Get along, yourself, to your local Dodge dealer and buy or lease† a Shelby Charger. Buckle up and take a couple of laps around the showroom block. When you're through, we think you'll be trembling like a roped yearling.

*1983 sticker price excludes taxes and destination charges.

**Based on acceleration tests performed by NHRA on vehicle with standard engine and transmission.

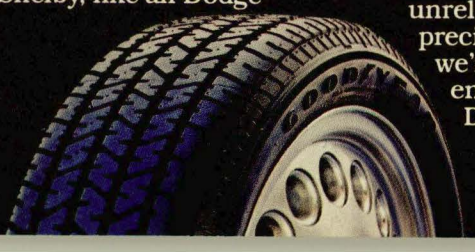
***Use EPA est. mpg. for comparison. Your mileage may vary depending on speed, weather and trip length. Actual hwy. mileage probably lower.

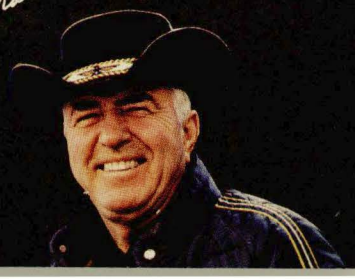
†Excludes leases. 5 years/50,000 miles, whichever comes first. Limited warranty on outer body rust-through, engine and powertrain. Deductible may be required.

Dodge

AMERICA'S DRIVING MACHINES

Carroll Shelby







Now Technics stops distortion before it starts. Introducing Computer-Drive Receivers.

The conventional stereo receiver isn't capable of reducing amplifier distortion before it occurs. Before distortion has become part of your music.

The Technics New Class A™ receivers take a more logical approach. With Computer-Drive. This means Technics receivers have a built-in computer in the amplifier section. To give them the intelligence and sophistication to analyze and adjust the internal operating conditions that can cause distortion. Before they cause distortion. So whatever you listen to takes on a clarity that is nothing short of breathtaking.

Technics computer technology is applied to other critical receiver functions, too. Tuning is accomplished with a microprocessor-controlled, quartz synthesis system. The most accurate tuning system in the world. For the kind of locked-in reception only quartz synthesis can deliver.

There's also Random Access Preset Tuning with auto-memory. It stores up to 16 of your favorite FM or AM stations. And any of these stations can be retrieved and tuned in any sequence at the touch of a button.

And even beyond all of these features and technological achievements, Technics offers more: the future. Because each Technics Computer-Drive receiver is ready for digital. They will be able to reproduce the flawless sound of digital sources soon to come.

Technics Computer-Drive New Class A Receivers. For today, for tomorrow. Hear them for yourself.

Technics

The science of sound

October 1983

SEPTEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

NOVEMBER

S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

8061 Discussions in Incompatibility (prereq #)
129206 Ascher, 1 cr

8062 Discussions in Plant Hardiness (prereq #)
929207 Li, 1 cr

8063 Discussions in Plant Breeding (prereq #)
729208 Lauer, 1 cr

8066 Discussions in Horticulture Research (prereq #)
529209 Stadelmann, 1 cr

HUMANITIES (Hum)
Liberal Arts

R1001 Humanities in the Modern World I (§3001, Rhet 1301)
302920 –1 1115-1200 MTWTh, FordH 120, Cromwell, 5 cr
002922 –2 1415-1500 MTWTh, FordH 55, Powell, 5 cr
413861 –3 1015-1200 TTh, MurH 105, Mowitt, 5 cr
213862 –4 1115-1200 MTWTh, FordH 120, Cromwell, 5 cr (business and pre-business majs only)
635616 –5 1415-1500 MTWTh, FordH 55, Powell, 5 cr (business and pre-business majs only)
435617 –6 1015-1200 TTh, MurH 105, Mowitt, 5 cr (business and pre-business majs only)

R1003 Humanities in the Modern World III (§3003, Rhet 1303)
627886 –1 1415-1600 MW, FordH 120, Tapp, 5 cr
513866 –2 1415-1600 MW, FordH 120, Tapp, 5 cr (business and pre-business majs only)

1004 Humanities in the Modern World IV (§3004, Rhet 3381)
235618 1415-1600 TTh, FordH 115, Furia, 5 cr

R1301 Life of the Mind: Introduction to Methods in the Humanities
809564 –1 0915-1000 MTWTh, FordH 115, Thomas, 5 cr
409566 –2 1015-1100 MTWTh, FordH 130, Cromwell, 5 cr
109568 –3 1515-1600 MTWTh, FordH 160, Powell, 5 cr
909569 –4 1315-1500 TTh, FolH 303, Herschbell, 5 cr

R3002 Humanities in the Modern World (§1002, Rhet 1302)
030784 –1 1315-1500 MW, FordH 155, Fruman, 5 cr
113868 –2 1315-1500 MW, FordH 155, Fruman, 5 cr (business and pre-business maj only)

R3003 Humanities in the Modern World (§1003, Rhet 1303)
135619 –1 1315-1500 MW, FordH 115, Kliger, 5 cr
435620 –2 1315-1500 MW, FordH 115, Kliger, 5 cr

3111 European Heritage: Greece (prereq jr or sr)
235621 1015-1100 MTWTh, FordH 285, Lincoln, 5 cr

3201 The Heritage of China I: The Early Period (§Chn 3201)
135622 1015-1100 MTWTh, FolH 110, Mather, 5 cr

3677 Self-Realization in 20th Century Literature (prereq jr or sr)
935623 1315-1500 TTh, FordH 150, Kliger, 5 cr

R3755 Cinema and Ideology (§CLit 3215)
735624 1415-1600 MW, MurH 105, Mowitt, 4 cr

3813 Medieval Russian Culture: The Life Styles of Old Russia (prereq jr or sr or #)
535625 1115-1200 MWF, BlegH 230, Noonan, 5 cr

3944H Honors Thesis (prereq sr, candidate for magna or summa honors in humanities, △)
335626 4 cr

3970 Directed Studies (prereq #, △, college approval)
830785 ar cr

R5930H Honors Course: Humanities Proseminar: Music and Literature (prereq honors candidate in humanities, others overall grade average of B or better, sr, #)
135627 1415-1600 M, FordH 50, Thomas, 3 cr

INDUSTRIAL EDUCATION (Ind)
Vocational And Technical Education Education

1300 Introduction to Industrial Education Teaching (A–N only)
330295 1400-1545 M, VoTech R280, Summers, 2 cr

R1600 Drafting (A–N only)
731332 1200-1345 MWF, VoTech 110, Quistad, 3 cr

R1604 Industrial Materials and Measurement (A–N only)
030297 1000-1045 M, 1000-1145 WF, VoTech 125, Donnerberg, 3 cr (1 hr ar)

R1610 Construction Technology I (prereq 1600, 1604, 1606) (A–N only)
810097 1200-1345 MWF, VoTech 120, Donnerberg, 3 cr

R1620 Graphic Communications I (prereq 1600, Math 1111) (A–N only)
630299 0800-0945 MWF, VoTech 110, Weber, 3 cr

R1630 Manufacturing I, Processes (prereq 1604, 1606) (A–N only)
410099 1300-1545 TTh, VoTech 130, Summers, 3 cr

R1642 Power and Energy Systems (prereq 1640) (A–N only)
936626 0900-1145 TTh, VoTech 139, Druker, 3 cr

R1650 Transportation I (prereq 1604, 1606) (A–N only)
330300 1400-1545 MWF, VoTech 140, 3 cr

1800 Career Planning Practicum I (prereq △) (A–N only)
130301 1200-1245 Th, VoTech R280, Schoonmaker, 1 cr

1801 Career Planning Practicum II (prereq 1800, △) (A–N only)
030302 1200-1245 Th, VoTech R280, Schoonmaker, 1 cr

1802 Career Planning Practicum III (prereq 1801, △) (A–N only)
830303 1200-1245 Th, VoTech R280, Schoonmaker, 1 cr

3110 Construction: Intermediate (prereq 1612, #) (A–N only)
630304 Miletich, 3–9 cr

3111 Construction: Advanced (prereq 3110, #) (A–N only)
430305 Miletich, 3–9 cr

R3120 Graphic Communication: Intermediate (prereq 1622, #) (A–N only)
130307 –1 Miletich, 3–9 cr
135613 –2 0800-0945 MWF, VoTech 110, Cote, 3 cr
035614 –3 0900-1145 TTh, VoTech 110, Quistad, 3 cr
835615 –4 1300-1545 TTh, VoTech 110, Weber, 3 cr

3121 Graphic Communication: Advanced (prereq 3120, #) (A–N only)
730309 Miletich, 3–9 cr

3130 Manufacturing: Intermediate (prereq 1632, #) (A–N only)
130310 Miletich, 3–9 cr

3131 Manufacturing: Advanced (prereq 3130, #) (A–N only)
930311 Miletich, 3–9 cr

3140 Power and Energy: Intermediate (prereq 1642, #) (A–N only)
331334 Miletich, 3–9 cr

3141 Power and Energy: Advanced (prereq 3140, #) (A–N only)
730312 Miletich, 3–9 cr

3150 Transportation: Intermediate (prereq 1652, #) (A–N only)
530313 Miletich, 3–9 cr

3151 Transportation: Advanced (prereq 3150, #) (A–N only)
330314 Miletich, 3–9 cr

3700 Student Teaching (prereq 1300, 5360, △) (S–N only)
130315 Schoonmaker, 3 cr

3701 Seminar: Student Teaching (prereq ¶3700, 3702, 3704, 3706) (S–N only)
030316 1400-1545 F, VoTech R280, Schoonmaker, 1–3 cr

3702 Student Teaching (prereq 1300, 5360, △) (S–N only)
830317 Schoonmaker, 3 cr

3704 Student Teaching (prereq 1300, 5360, △) (S–N only)
630318 Schoonmaker, 3 cr

3706 Student Teaching (prereq △) (S–N only)
430319 Schoonmaker, 3 cr

3900 Independent Study (prereq #) (A–N only)
830320 3 cr

3901 Independent Study (prereq #) (A–N only)
630321 3 cr

3902 Independent Study (prereq #) (A–N only)
430322 3 cr

R5100 Communications Occupational Experience (max 15 cr; prereq #) (A–N only)
230323 Miletich, 1–5 cr

R5101 Production/Manufacturing Occupational Experience (max 15 cr; prereq #) (A–N only)
930325 Miletich, 1–5 cr

R5102 Power/Energy Occupational Experience (max 15 cr; prereq #) (A–N only)
530327 Miletich, 1–5 cr

R5103 Construction Occupational Experience (max 15 cr; prereq #) (A–N only)
130329 Miletich, 1–5 cr

5112 Construction: Specialization (prereq △) (A–N only)
530330 Miletich, 1–9 cr

5122 Graphic Communications: Specialization (prereq △) (A–N only)
130332 Miletich, 1–9 cr

5132 Manufacturing: Specialization (prereq △) (A–N only)
030333 Miletich, 1–9 cr

5142 Power and Energy: Specialization (prereq △) (A–N only)
630335 Miletich, 1–9 cr

5152 Transportation: Specialization (prereq △) (A–N only)
430336 Miletich, 1–9 cr

R5303 Instructional Aids (prereq educ or grad stu) (A–N only)
230337 1600-1845 Th, VoTech R250, Kavanaugh, 3 cr

5305 Critical Issues in Industrial Education (prereq educ or grad stu) (A–N only)
130338 1600-1845 M, VoTech R280, Miletich, 3 cr

5330 Industrial Course Construction (prereq educ or grad stu) (A–N only)
930339 1600-1845 W, VoTech R280, Kavanaugh, 3 cr

5360 Industrial Instruction (A–N only)
230340 1600-1845 T, VoTech R280, Schoonmaker, 3 cr

R5900 School-Based Project in Industrial Education (max 12 cr; prereq 5305, 5325, MEd student) (S–N optional)
130341 1–6 cr

8700 Seminar: Industrial Education
930342 1200-1245 T, VoTech R280, 0 cr

8900 Research Problems (prereq approval of candidacy)
730343 3–9 cr

8901 Research Problems (prereq approval of candidacy)
530344 3–9 cr

INDUSTRIAL ENGINEERING/OPERATIONS RESEARCH (IEOR)
Mechanical Engineering
Institute of Technology

R5000 Introduction to Industrial Engineering Analysis (prereq Math 1231, IT stu...ME 3900 rec)
101406 0915-1000 MWThF, Arch 45, 4 cr

R5010 Introduction to Work Analysis (prereq 5000, IT or grad)
★LECT 1015-1100 MWF, MechE 202, 4 cr
208466 –1 LAB 1415-1700 M, MechE 202

R5020 Engineering Cost Accounting, Analysis and Control (prereq 5000, IT or grad...ME 3900 rec)
112499 1215-1300 MWThF, Arch 20, 4 cr

R5030 Quality Control and Reliability (prereq Math 1231, ME 3900, IT or grad...IEOR 5000 rec)
701408 1115-1200 MWThF, Arch 20, 4 cr

R5040 Introduction to Operations Research (prereq Math 1231, IT or grad...IEOR 5000 rec)
901410 0915-1000 MWThF, MechE 202, 4 cr

R5050 Engineering Economics Analysis (prereq 5000 or #, IT or grad)
212503 0815-0900 MWThF, MechE 202, 4 cr

R5070 Introduction to Human Factors Engineering (prereq #, IT stu or grad)
★LECT 1115-1200 MWF, MechE 202, 4 cr
908468 –1 LAB 1415-1500 W, MechE 202

R5180 Applied Industrial Engineering (prereq 5000, 5010, 5020, 5030, 5040)
501412 3-5 cr

R5254 Design Morphology with Applications (prereq completion of sequences ME 3201/3 or 5, ME 3303 or 5342, upper div mech engr maj)
★LECT 1315-1400 TTh, Arch 20, 4 cr
213604 –1 LAB 1415-1700 TTh, MechE 327

8773 Graduate Seminar (S–N only)
001415 1515-1630 W, MechE 108, 212, 1 cr

8774 Graduate Seminar (S–N only)
601417 1515-1630 W, MechE 108, 212, 1 cr

8775 Graduate Seminar (S–N only)
201419 1515-1630 W, MechE 108, 212, 1 cr

INDUSTRIAL RELATIONS (IR)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for IR courses.

R3000 Topics in Industrial Relations
100084 Bognanno, ar cr

R3002 Industrial Relations Systems: Labor Markets and the Management of Human Resources (§8002; prereq Econ 1001, 1002, Psy 1001)
★LECT 0815-0900 MWF, BlegH 5, Fossum
302934 –1 REC 0915-1000 M, BlegH 205, 4 cr
102935 –2 REC 1115-1200 M, BlegH 210, 4 cr
802937 –3 REC 1215-1300 M, BlegH 260, 4 cr
402939 –4 REC 0915-1000 W, BlegH 205, 4 cr
602941 –5 REC 1115-1200 W, BlegH 210, 4 cr
402942 –6 REC 1215-1300 W, BlegH 260, 4 cr
102944 –7 REC 0915-1000 F, BlegH 205, 4 cr
902945 –8 REC 1115-1200 F, BlegH 210, 4 cr
502947 –9 REC 1215-1300 F, BlegH 260, 4 cr

R3007 Collective Bargaining Negotiations and Modern Labor Relations
302948 –1 1430-1600 MW, BlegH 245, Seltzer, 4 cr
502950 –2 0915-1045 TTh, BlegH 245, Gagala, 4 cr

R3010 Human Relations and Applied Organization Theory
002953 –1 1315-1445 MW, BlegH 240, Smythe, 4 cr
802954 –2 1415-1545 TTh, BlegH 125, Smythe, 4 cr

R8001 Quantitative Methods in Industrial Relations (prereq 8002, Stat 5021, computer access course or # and IR grad student or △)
★LECT 1015-1200 MW, BlegH 350, Ahlburg, 4 cr
335187 –1 LAB 1015-1200 F, BlegH 350

R8002 An Introduction to Industrial Relations (§3002; prereq Econ 1001, 1002, Psy 1001, IR grad student or △)
402956 –1 1515-1700 MW, BlegH 225, Gagala, 4 cr
736854 –2 1315-1500 TTh, BlegH 225, Azevedo, 4 cr

R8003 Staffing, Training and Development (prereq 8002 or # and IR grad student or △)
135188 0815-1000 MWF, BlegH 360, Pinto, 4 cr

R8004 Organization Theory and Analysis (prereq 8002 or # and IR grad student or △)
035189 0815-1000 TTh, BlegH 360, Miller, 4 cr

R8005 Employee Compensation and Reward (prereq 8002 or # and IR grad student or △)
612496 1315-1500 MWF, BlegH 225, Fossum, 4 cr

R8006 Labor Markets Analysis (prereq 8002 or # and IR grad student or △)
335190 1515-1700 MWF, BlegH 350, Ahlburg, 4 cr

R8012 Industrial Relations Systems (prereq completion of the core sequence in IR or # and IR grad student or △)
035192 1515-1700 TTh, BlegH 245, Seltzer, 4 cr

R8023 Training and Development (prereq 8003 or # and IR grad student or △)
112459 1515-1700 MWF, BlegH 360, Pinto, 4 cr

R8027 Methods for Dispute Resolution (prereq 8007 or # and IR grad student or △)
835193 1515-1700 TTh, BlegH 225, Flagler, 4 cr

R8802 Seminar: Industrial Relations Systems (prereq completion of the industrial relations core or # and IR grad student or △)
435195 1015-1200 TTh, Mgmt/Econ 128, Zaidi, 4 cr

R8990 Independent Study in Industrial Relations (prereq #)
500096 Bognanno, ar cr

INSTITUTE OF TECHNOLOGY (IofT)
Institute of Technology

R1020 Leadership and Management Development (prereq △)
101602 Clausen, 1-3 cr

1811H Science and Technology in Society (prereq college approval) (A–N only)
214476 1415-1545 M, Arch 45, Holt, Johnson, 2 cr

R5003 Earth Sheltered Space Use and Design (prereq AEM 3093 or 3016)
701604 1600-1800 TTh, ApH 150, Sterling, 4 cr

R5211 Information Sources for Science and Technology
911810 0915-1000 TTh, Phys 236A, Marion, 2 cr

INSURANCE (Ins)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for Ins courses.

R3100 Risk Management and Insurance (§8100) (A–N only)
502964 –1 0930-1030 MWF, BlegH 250, Williams, 4 cr
102966 –2 1045-1145 MWF, BlegH 250, Cho, 4 cr
731251 –3 1200-1300 MWF, BlegH 250, Whitman, 4 cr

R3220 Property and Liability Insurance (§8220; prereq 3100 or equiv)
735199 1315-1400 MWF, BlegH 250, Whitman, 4 cr

R8100 Risk Management and Insurance I (§3100; prereq grad mgmt/IR student or grad SMgt approval)
002970 –1 0930-1030 MWF, BlegH 250, Williams, 4 cr
802971 –2 1045-1145 MWF, BlegH 250, Cho, 4 cr
112462 –3 1200-1300 MWF, BlegH 250, Whitman, 4 cr
412466 –4 1700-1930 M, BlegH 210, Whitman, 4 cr

R8220 Property and Liability Insurance (§3220; prereq 3100 or 8100, grad mgmt/IR student or grad SMgt approval)
435200 1315-1400 MWF, BlegH 250, Whitman, 4 cr

8990 Readings in Risk Management and Insurance (prereq consent of advisor, #, grad SMgt approval)
135197 ar cr

8995 Graduate Research in Risk Management and Insurance (prereq grad SMgt approval)
935198 ar cr

INTERDEPARTMENTAL STUDY (ID)
Liberal Arts

R1001 Social Science Colloquium (prereq ¶Anth 1101 or 1102 or Geog 1301 or 1401 or any 1xxx level history course or Soc 1001) (S–N only)
037508 1515-1700 T, Arch 30, 1-3 cr

3970 Directed Studies (prereq consult with Office for Special Learning Opportunities, JohH 220, college approval)
700050 1-15 cr

R5402 Ecology, Technology and Society
936691 1115-1200 MWF, MurH 308, Anderson, 4 cr

INTERDISCIPLINARY MEDICINE (InMd)
Medical School

5101 Clinical Medicine II (prereq regis med, 5100) (S–N only)
337053 0815-1000 MT, 0815-1200 WF, 0815-1400 Th, 1315-1400 T, 1315-1500 F, MoosT 2650, Petzel, 4 cr

5201 Pathophysiology I (prereq regis med) (S–N only)
437058 0815-1000 MT, 0815-1200 WF, 0815-1400 Th, 1315-1400 T, 1315-1500 F, MoosT 2650, Soltis, 12 cr

5202 Pathophysiology II (prereq regis med) (S–N only)
237059 0815-1000 MT, 0815-1200 WF, 0815-1400 Th, 1315-1400 T, 1315-1500 F, MoosT 2650, Soltis, 11 cr

INTERNATIONAL RELATIONS (IntR)
Liberal Arts

3091H Honors Course: Supervised Research Paper (prereq sr honors candidate in international relations, △)
811198 Job, 3 cr

R3101 Introduction to International Relations (prereq maj in international relations or #)
★LECT 0915-1000 MW, AndH 270, Job
535740 –1 REC 0845-0930 Th, BlegH 335, 4 cr
335741 –2 REC 1015-1100 Th, BlegH 255, 4 cr
135742 –3 REC 0815-0900 F, BlegH 415, 4 cr
035743 –4 REC 0915-1000 F, Law 15, 4 cr
835744 –5 REC 1315-1400 F, BlegH 135, 4 cr

R3101H Honors Course: Introduction to International Relations (prereq international relations maj or #) (A–N only)
★LECT 0915-1000 MW, AndH 270, Job
536046 –80 REC 0915-1000 F, BlegH 435, Job, 4 cr

3105 Nuclear Weapons and Nuclear War
636054 1315-1500 MW, Law 20, Hopmann, 4 cr

3970 Directed Studies (prereq #, △, college approval)
630786 1-15 cr

5701 Theories of International Development (prereq international relations maj or #)
237210 0945-1100 TTh, Law 15, Knudson, Miller, 4 cr

R5900 Topics in International Relations: The United States and the European Community (prereq international relations maj or #)
008784 1415-1600 TTh, BlegH 260, Featherstone, 4 cr

5910 Topics in International Policy Analysis (prereq international relations maj or #)
135739 1245-1400 TTh, BlegH 335, 4 cr

5930 Topics in International Development: MSID Internship Orientation (prereq acceptance into MSID overseas internship for Winter, 1984)
136589 –1 1415-1600 TTh, BlegH 110, 4 cr (Columbia)
737051 –2 1415-1600 TTh, BlegH 110, 4 cr (Kenya)
537052 –3 1415-1600 TTh, BlegH 110, 4 cr (Senegal)

ITALIAN (Ital)
French And Italian
Liberal Arts

R1101 **Beginning Italian**
902976 –1 0915-1000 MTWThF, ChDev 218, 5 cr
502978 –2 1015-1100 MTWThF, KoltH S137, 5 cr
702980 –3 1115-1200 MTWThF, KoltH S136, 5 cr

1103 **Beginning Italian**
035208 1115-1200 MTWThF, FolH 105, 5 cr

R1104 **Intermediate Italian** (prereq 1103)
130713 1115-1200 MTWThF, FolH 105, Martinez, 5 cr

R3015 **Intermediate Italian Conversation and Composition** (prereq 1105 or 1104 with A, recommendation of instructor)
716121 1415-1600 MW, FolH 204, Pipa, 5 cr

R3016 **Advanced Italian Composition, Conversation** (prereq 3015 or #)
408790 1415-1600 MW, FolH 204, Pipa, 5 cr

R3031 **Writing Techniques** (prereq 3015 or #)
335206 1015-1200 MW, FolH 103, Pipa, 5 cr

R3219 **Renaissance and Post-Renaissance Literature** (prereq 3015)
135207 1315-1500 TTh, FolH 207, Martinez, 5 cr

3970 **Directed Readings** (prereq undergrad, #, △, college approval)
930714 1-5 cr

JAPANESE (Jpn)
East Asian Studies
Liberal Arts

R1011 **Beginning Japanese**
313142 –1 LECT 0915-1000 TTh, FolH 104, Jacobsen
712697 –2 LECT 1115-1200 TTh, FolH 104, Jacobsen
♦302982 –1 REC 0815-0900 MTWThF, FolH 104, 5 cr
♦002984 –2 REC 1015-1200 MTWThF, FolH 104, 5 cr
♦108802 –3 REC 1215-1300 MTWThF, FolH 104, 5 cr

3021 **Intermediate Japanese** (prereq 1013)
530747 0915-1000 MTWThF, FolH 204, 5 cr

3031 **Third Year Japanese** (prereq 3023)
130749 0915-1000 MWF, FolH 104, 5 cr

3051 **Advanced Japanese Conversation and Composition** (§5051; prereq 3033 or #)
808804 1215-1300 MWF, FolH 302, Jacobsen, 4 cr

3090H **Honors Course: Tutorial** (prereq △)
311200 1-4 cr

3970 **Directed Study** (prereq 3032, #, △, college approval)
530750 –1 1-4 cr
516119 –2 1-4 cr

5041 **Classical Japanese** (prereq 3033)
030753 1415-1500 MWF, FolH 113, Shohara, 5 cr

5051 **Advanced Japanese Conversation and Composition** (§3051; prereq 3033 or #))
208807 1215-1300 MWF, FolH 302, Jacobsen, 4 cr

5361 **Readings in Modern Japanese Literature I** (prereq 3033)
835209 1115-1200 MWF, FolH 52, Copeland, 4 cr

5970 **Directed Studies in Japanese** (prereq #, △, CLA approval)
830754 1-4 cr

JEWISH STUDIES (JwSt)
Near And Middle Eastern Studies
Liberal Arts

R1034 **Introduction to Judaism**
212677 1415-1500 MWF, Arch 55, 4 cr

R3034 **Introduction to Judaism**
112681 1415-1500 MWF, Arch 55, Zahavy, 4 cr

R5970 **Directed Readings** (max 12 cr; prereq #, △, CLA approval)
312685 1-12 cr

JOURNALISM AND MASS COMMUNICATION (Jour)
Liberal Arts

R1001 **Introduction to Mass Communication** (prereq △...completion of freshman composition rec) (A-N only)
211626 1215-1300 TTh, MurH 105, Brovald, 2 cr

R1002 **Visual Communication** (prereq △) (A-N only)
035628 1315-1500 TTh, MurH 105, 2 cr

R1003 **Producting Mass Media Messages** (prereq freshman composition or exemption, △) (A-N only)
★LECT 0915-1000 TTh, MurH 105, Ward, 4 cr
410118 –1 LAB 1015-1100 M, MurH 435
210119 –2 LAB 1115-1200 M, MurH 435
110131 –3 LAB 1215-1300 M, MurH 435
410121 –4 LAB 1015-1100 W, MurH 435
010132 –5 LAB 1115-1200 W, MurH 435
210122 –6 LAB 1215-1300 W, MurH 435
910124 –7 LAB 1015-1100 F, MurH 435
510126 –8 LAB 1115-1200 F, MurH 435

R1004 **Information for Mass Communication** (prereq freshman composition or exemption, △) (A-N only)
310113 1315-1400 MWF, MurH 105, K Hansen, Jones, 4 cr

R3007 **The Media in American History and Law: Case Studies** (prereq 1001, △) (A-N only)
810133 1115-1200 MWF, MurH 105, Gillmor, Dicken-Garcia, 4 cr

R3101 **Reporting** (prereq prof jour maj status, type 25 wpm, △) (A-N only)
410135 –1 0915-1200 M, 0915-1300 W, MurH 212, Glasser, 4 cr
813906 –2 1315-1600 T, 1315-1700 Th, MurH 212, 4 cr

R3121 **Public Affairs Reporting** (prereq 3101, type 40 wpm, △) (A-N only)
102989 –1 1015-1200 MW, MurH 430, Ismach, 4 cr
202991 –2 1315-1500 TTh, MurH 430, 4 cr

R3155 **Publications Editing** (prereq 3101, △) (A-N only)
502995 –1 1215-1500 MW, MurH 206, 4 cr (1 hr ar)
835629 –2 0915-1200 TTh, MurH 206, Dicken-Garcia, 4 cr (1 hr ar)

R3173 **Magazine Writing and Editing** (prereq 3101, △) (A-N only)
230788 0915-1000 MWF, MurH 430, Roberts, 4 cr

3201 **Principles of Advertising** (prereq maj status for prof jour, mass comm stu; 1001, study plan filed for intended MC min) (A-N only)
210136 0815-0900 MWF, MurH 105, Wackman, 4 cr

R3241 **Advertising Copywriting** (prereq prof jour maj status, 3201 or #, △) (A-N only)
★LECT 1115-1230 MW, MurH 30, 4 cr
110106 –1 LAB 1115-1200 T, MurH 212

R3301 **Photojournalism** (prereq professional jour maj status, △) (A-N only)
130789 0915-1200 TTh, MurH 20, 4 cr

R3321 **Basic Media Graphics** (prereq 3101 or 3201 or 3301, professional jour maj status, △) (A-N only)
237241 –1 LECT 1315-1400 TTh, MurH 308, Wilson, 4 cr
★LECT 1315-1400 TTh, MurH 308, Wilson
337229 –1 LAB 0915-1100 MW, MurH 315, 320, Wilson, 4 cr
737230 –2 LAB 1315-1500 MW, MurH 315, 320, Wilson, 4 cr

R3341 **Basic Cinematography** (prereq professional journalism or speech maj status, △) (A-N only)
937467 0915-1200 TTh, MurH 207, Ettema, 4 cr

R3451 **Television and Radio News** (prereq 3101 or maj status in spch with #, △) (A-N only)
031398 1315-1500 TTh, MurH 207, Fang, 4 cr (lab ar)

R3776 **Mass Communication Law** (A-N only)
230791 0915-1000 MWF, MurH 105, Gillmor, 4 cr

R3970 **Directed Studies** (prereq maj status for prof jour, mass comm students, #, △, college approval) (A-N only)
130792 1-4 cr

R5133 **Interpretive Reporting About Science** (prereq 3121 or #, △) (A-N only)
312718 1415-1500 MWF, VinH 20, Tichenor, 4 cr

R5261 **Advertising: Media Analysis** (prereq prof jour maj status, 3201 or #, △) (A-N only)
029005 1415-1600 TTh, MurH 308, Jones, 4 cr

R5263 **Advertising Campaign Planning and Media Strategy** (prereq prof jour maj status, 3241, 5261, Mktg 3000 or #, △) (A-N only)
112722 0915-1100 TTh, MurH 311, J Busterna, 4 cr

5316 **Theories of Visual Communication** (A-N only)
237465 1315-1500 MW, MurH 311, Schwartz, 4 cr

R5322 **Newspaper Design** (prereq 3321, △) (A-N only)
537231 0915-1100 TTh, MurH 315, 320, Wilson, 4 cr

R5442 **Advanced Television News** (prereq 3451, △) (A-N only)
135630 1315-1500 MW, MurH 207, Fang, 4 cr (1 hr ar)

5501 **Communication and Public Opinion I** (prereq 16 cr in social science depts) (A-N only)
530795 1215-1300 MWF, MurH 105, Tichenor, Lee, 4 cr

5549 **Public Relations** (prereq 16 cr in social science depts) (A-N only)
330796 0915-1000 MWF, MurH 308, Lindsay, 4 cr

5601 **History of Journalism** (A-N only)
130797 1015-1100 MWF, MurH 105, Emery, 4 cr

5721 **Mass Media in a Dynamic Society** (prereq 16 crs in social science depts) (A-N only)
030798 1415-1500 MWF, MurH 308, Ismach, 4 cr

5801 **International Communication** (prereq 16 crs in social science depts) (A-N only)
830799 1115-1200 MWF, MurH 311, Lindsay, 4 cr

R5970 **Advanced Projects in Journalism** (max 8 cr; prereq maj status for prof jour, mass comm students, B avg, #, △, CLA approval) (A-N only)
530800 1-4 cr

R5970H **Honors Course: Advanced Projects in Journalism** (max 8 cr; prereq maj status for prof jour, mass comm students, B avg, #, △, CLA approval) (A-N only)
011202 1-4 cr

8101 **Perspectives on Mass Communication** (A-N only)
330801 1515-1700 MF, MurH 311, Ettema, Glasser, 4 cr

R8723 **Communication Agencies as Social Institutions** (prereq 5721 or equiv or #, △) (A-N only)
910141 Ward, 4 cr

8801 **Seminar: Problems in International Communication Research** (prereq 5801 or 5825 or #) (A-N only)
130802 1515-1700 TTh, MurH 30, Carter, Lee, 4 cr

R8970 **Advanced Projects in Mass Communication** (max 8 cr; prereq grad maj or min in mass comm, #, △) (A-N only)
812352 1-4 cr

R8990 **Special Problems in Mass Communication** (prereq #, △) (A-N only)
726129 4 cr

LABORATORY MEDICINE (LMed)
Laboratory Medicine And Pathology
Medical School

5101 **Principles of Laboratory Medicine I** (prereq #)
109027 0815-0900 MTThF, JacH 3145, Yasmineh, 4 cr

5138 **Clinical Microbiology Seminar** (prereq #)
400267 1115-1200 W, Mayo D230, Balfour, 1 cr (Eustis Amph)

5139 **Advanced Microbiology** (prereq #)
400270 Balfour, ar cr

5169 **Research in Human Genetics** (prereq #)
012608 Eaton, ar cr

5170 Advanced Problems in Medical Genetics (prereq #)
500275 Eaton, ar cr

5179 Chemistry Seminar (prereq #)
100280 Steffes, 1 cr

5180 Advanced Chemistry (prereq #)
400284 Benson, ar cr

5195 Introduction to Computers in Laboratory Medicine and Pathology (prereq #)
100286 Connelly, ar cr

5196 Computer Methodology in the Delivery of Health Care I: Physiological Monitoring and Testing (§PubH 5433; prereq PubH 5432 or #)
009028 1115-1230 TTh, MoosT 2130, Finkelstein, 3 cr

5765 Hematology (§Anat 5765, 5766; prereq #)
★LECT 1315-1400 TTh, MoosT 2520, Sundberg, 4 cr
731430 –1 LAB 1215-1400 TTh, JOAd 2119
531431 –2 LAB 1515-1700 TTh, JOAd 2119

5768 Advanced Hematology (prereq #)
700291 Brunning, ar cr

5864 Research Seminar (prereq #)
300293 1200-1300 M, Mayo C231, 1 cr (Todd Amph)

5865 Departmental Seminar (prereq #)
400298 0800-0900 W, Mayo D230, Steffes, 1 cr (Eustis Amph)

8105 Principles of Diagnostic Enzymology (§MedT 8178; prereq 5101, 5102, #)
635745 1415-1500 MWF, JacH 3145, Yasmineh, 3 cr

8235 Advanced Clinical Laboratory Medicine
800301 Benson, ar cr

8236 Research on Clinical Laboratory Problems
400303 Benson, ar cr

LABORATORY MEDICINE AND PATHOLOGY (LaMP)
Laboratory Medicine And Pathology
Medical School

5102 Organ Systems Pathology (prereq registered 2nd yr med student)
★LECT 0815-0900 M, 1315-1400 T, MoosT 2650
237515 –1 LAB 1415-1600 T, 2-7 cr
137516 –2 LAB 1415-1600 Th, 2-7 cr

5113 Surgical Pathology: University Hospitals (prereq Phase B)
000331 Rosai, ar cr

5114 Surgical Pathology: Hennepin County General Hospital (prereq Phase B)
300343 Anderson, ar cr

5115 Surgical Pathology: Veterans Administration Hospital (prereq Phase B)
000345 Limas, ar cr

5116 Clinical and Surgical Pathology Correlations (prereq regis Phase D med student)
912620 Handler, ar cr

5118 Endocrine Pathology: St. Paul Ramsey Hospital (prereq Phase B)
800346 Lakatua, ar cr

5119 Forensic Pathology: Medical Examiner's Office, Hennepin County Medical Center (prereq Phase D)
600347 Coe, ar cr

5125 Chronobiology (prereq Phase B, #)
400348 Halberg, ar cr

5141 Problems in Experimental Pathology (prereq Phase B, #)
200349 ar cr

5150 Anatomic Pathology in a Hospital Setting: University Hospitals (prereq Phase B)
600350 Burke, ar cr

5151 Anatomic Pathology in a Hospital Setting: Hennepin County General Hospital (prereq Phase B)
400351 Anderson, Strom, ar cr

5152 Anatomic Pathology in a Hospital Setting: Veterans Administration Hospital (prereq Phase B)
100353 Posalaky, ar cr

5153 Anatomic Pathology in a Hospital Setting: St. Paul Ramsey Hospital (prereq Phase B)
900354 Posalaky, ar cr

5158 Cardiac Pathology: Miller Hospital (prereq Phase B, #)
500356 Edwards, ar cr

5170 Pathophysiology of Disease I (prereq Nurs, PT, OT or #)
300360 1215-1300 TWTh, MoosT 2620, Bradley, 3 cr

5173 Pathology and Clinical Medicine (prereq △)
709587 1615-1700 M, 1315-1400 WF, MoosT 2520, O'Leary, 5 cr

5181 Laboratory and Clinical Hematology (prereq #)
800363 Brunning, ar cr

5182 Laboratory Studies of Genetic Disorders (prereq #)
600364 J Eaton, ar cr

5184 Immunohematology in Blood Banking (prereq #)
200366 McCullough, ar cr

5185 Laboratory Problems in Blood Coagulation (prereq #)
100367 Edson, ar cr

5186 Laboratory Medicine in a Community Hospital (prereq regis Phase D med student)
512622 Bandt, ar cr

5187 Clinical Pathology Externship: Mt. Sinai Hospital (prereq #)
809029 Ward, ar cr

5188 Clinical Pathology Externship: Methodist Hospital (prereq #)
900368 Segal, ar cr

5189 Applied Clinical Pathology: St. Paul Ramsey Hospital (prereq Phase D)
700369 Haus, ar cr

5190 Laboratory Medicine in a Community Hospital: Duluth (prereq Phase D, #)
900371 Larson, ar cr

5192 Laboratory Medicine for Primary Care: Virginia (prereq Phase D)
500373 Knabe, ar cr

5193 Clinical Pathology Externship: Hibbing General Hospital (prereq #)
300374 Nollet, ar cr

5194 Computer Applications in Medicine (prereq #)
100375 Ellis, ar cr

5195 Computer Applications in Medical Research (prereq #)
800377 Ellis, ar cr

LANDSCAPE ARCHITECTURE (LA)
Architecture & Landscape Architecture
Institute of Technology

R1021 History of Environmental Development: Architecture (§Arch 1021)
601272 1115-1300 TTh, NichH 45, Winterowd, 4 cr (Mpls)

R1025 Basic Visualization I (prereq LA maj or #) (A-N only)
501278 1000-1200 MWF, NorH 315, Pitz, 4 cr

1031 Introduction to Landscape Architecture
301279 0900-1045 TTh, AlderH 310, Cline, 4 cr

R3001 Environmental Design: Man and Environment
618265 1315-1500 TTh, Arch 50, Lavine, 4 cr (Mpls)

3072 Landscape Technology: Circulation and Utilities Design (prereq 3071, 3091) (A-N only)
312640 1000-1145 MWF, AlderH 405, Sykes, 4 cr

3081 Basic Design (prereq LA student) (A-N only)
501281 1330-1730 MWF, NorH 315, Elnicky, Baldwin, 6 cr

3091 Intermediate Design (prereq 3083) (A-N only)
301282 1330-1730 MWF, AlderH 405, Cline, Close, 6 cr

3094 Independent Study in Graphics (prereq landscape architecture student, #) (A-N only)
835176 1-4 cr

3095 Independent Study in Planting Design (prereq landscape architecture student, #) (A-N only)
635177 1-4 cr

3096 Independent Study in History or Theory (prereq landscape architecture student, #) (A-N only)
401273 1-4 cr

3097 Independent Study in Computer Aided Design (prereq landscape architecture, #) (A-N only)
101275 1-4 cr

3098 Independent Study in Design (prereq landscape architecture student, #) (A-N only)
901276 1-4 cr

3099 Independent Study in Technology (prereq landscape architecture student, #) (A-N only)
701277 1-4 cr

3200 Landscape Architecture Practicum (prereq landscape architecture student, #) (S-N only)
435178 1-6 cr

5010 Principles of Outdoor Recreation Design and Planning (§FR 5233) (A-N only)
401287 0800-0845 MWF, AlderH 310, Hard, Knopp, 4 cr

5099 Resource and Community Development Interdisciplinary Seminar I (§RCD 5099; prereq RCD sr or #) (A-N only)
235179 1500-1645 TTh, AlderH 310, 4 cr

5101 Site Planning and Design I (prereq 3093) (A-N only)
201288 1330-1730 MWF, NorH 305, Martin, 6 cr

5107 Regional Landscape Design (prereq 3092) (A-N only)
101289 1330-1730 MWF, NorH 305, Nassauer, 6 cr

R5117 Planting Design: Aesthetic and Functional Criteria (prereq 3083, Hort 1021 or #) (A-N only)
314811 0800-0945 MW, AlderH 405, Hard, 4 cr

5119 Planting Design: Ecological Principles/Land Use Concepts and Implementation (prereq 3092 or #) (A-N only)
435181 0800-0945 WF, NorH 305, Cline, 4 cr

5131 Directed Studies in Landscape Architecture History and Theory (prereq third yr landscape architecture student, △) (A-N only)
601286 1-6 cr

5132 Directed Studies in Landscape Architecture Design (prereq third yr landscape architecture student, △) (A-N only)
001284 1-6 cr

5133 Directed Studies in Landscape Architecture Technology (prereq third yr landscape architecture student, △) (A-N only)
101283 1-6 cr

5134 Directed Studies in Emerging Areas for Landscape Architecture (prereq third yr landscape architecture student, △) (A-N only)
235182 1-6 cr

5225 Landscape Technology: Working Drawings and Specifications (prereq 3072) (A-N only)
612644 1000-1145 MWF, NorH 305, 4 cr

LARGE ANIMAL CLINICAL SCIENCES (LACS)
Veterinary Medicine

5161 Large Animal Medicine (prereq 5160 or #)
101719 0800-0850 MTWThF, VetHos A325, Larson, Ames, others, 5 cr

5185 Swine Herd Health Management I (prereq regis vet med, 3rd or 4th yr or grad or #)
301721 1500-1650 M, AnScVM 111, Leman, 2 cr

5280 Seminar: World Food Supply Problems (§PlPa 5220; prereq maj in agri, vet med, nutr sci, soc sci field or #...grads by △ only)
435746 1800-2100 W, ClaOff B35, Sorensen, 4 cr

5551 Theriogenology Diagnostics Laboratory (prereq regis vet med or grad or #)
112610 –1 LAB 1400-1650 MF, VetHos C208, Seguin, Williamson, 1 cr
112616 –2 LAB 1400-1650 MF, VetHos C208, Seguin, Williamson, 1 cr

5552 Veterinary Obstetrics Laboratory (prereq 5550 or #)
712618 1300-1550 Th, 1400-1650 F, VetHos C208, Zemjanis, Fahning, 1 cr

5671 Biohazards in Veterinary Medicine (prereq #)
001723 Robinson, ar cr

5680 Problems in Veterinary Epidemiology and Public Health (prereq 5650 or equiv or #)
601725 Diesch, Robinson, others, ar cr

5951 Directed Studies (prereq #, △)
201727 1–5 cr

8193 Advances in Clinical Immunobiology (prereq grad or #)
901729 Ames, ar cr

8194 Problems in Diagnostic Virology, Serology and Immunology (prereq grad or #)
101731 Ames, ar cr

8195 Preventive Veterinary Medicine
701733 J Anderson, others, ar cr

8290 Advanced Veterinary Medicine (prereq 5162, SACS 5172, #)
301735 Larson, ar cr

8291 Advanced Diagnosis and Therapeutics of Animal Diseases (prereq 5162, SACS 5172, #)
101736 Larson, ar cr

8292 Seminar: Veterinary Medicine (prereq #)
801738 Sorensen, ar cr

8293 Medical Conference (prereq 5162, SACS 5172, #)
001740 Sorensen, ar cr

8299 Research in Veterinary Medicine
601742 V Larson, others, ar cr

8390 Seminar: Veterinary Surgery (prereq 5365, SACS 5360, #)
401743 Wallace, ar cr

8392 Advanced Large Animal Surgery (prereq 5365, #)
201744 Usenik, ar cr

8393 Problems in Large Animal Orthopedics (prereq 5365, #)
901746 Usenik, 3 cr

8397 Large Animal Anesthesia (prereq SACS 5380, #)
501748 Raffe, Usenik, ar cr

8590 Advanced Diagnostic Methods in Reproductive Diseases (prereq 5570 or #)
701750 ar cr

8591 Advanced Endocrinology of Reproduction (prereq MdBc 5100, 5101, VB 5310)
301752 1 cr

8592 Advanced Endocrinology of Reproduction (prereq MdBc 5100, 5101, VB 5310)
001754 1 cr

8593 Advanced Endocrinology of Reproduction (prereq MdBc 5100, 5101, VB 5310)
601756 1 cr

8594 Special Problems in Animal Reproduction (prereq 5570, #)
201758 ar cr

8595 Seminar: Veterinary Obstetrics
401760 Seguin, 1 cr

8690 Zoonoses and Comparative Medicine (prereq #)
101762 Diesch, ar cr

LATIN (Lat)
Classics
Liberal Arts

R1101 **Beginning Latin** (1101-1102†)
203073 –1 0815-0900 MTWThF, FolH 205, 5 cr
903075 –2 0915-1000 MTWThF, FolH 205, 5 cr
303078 –3 1015-1100 MTWThF, KoltH S135, 5 cr
131366 –4 1115-1200 MTWThF, FolH 205, 5 cr
509171 –5 1215-1300 MTWThF, FolH 205, 5 cr

1104 **Latin Prose** (prereq 1103 or 3 yrs high school Latin or △)
130663 1215-1300 MTWThF, FolH 208, Erickson, 5 cr

1111H Honors Course: Beginning Latin (prereq regis in honors division or high ability as indicated by college entrance records)
611204 1315-1400 MTWThF, FolH 107, Erickson, 5 cr

3051 Accelerated Beginning Latin (3051-3052†, §1101, 1102, 1103, 1104)
330670 1315-1400 MTWThF, FolH 107, Erickson, 5 cr

3455 Advanced Undergraduate Latin (prereq 3106 or 4 yrs high school Latin or △)
235747 0815-0900 MWF, FolH 103, Sonkowsky, 5 cr

3960H Honors Tutorial (prereq △)
812108 5 cr

3970 Directed Studies (prereq #, △, college approval)
809175 1–5 cr

5012 Prose Composition (prereq 3106 or △)
935749 1415-1500 MWF, FolH 208, Keuls, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
609176 1–5 cr

5980 Directed Instruction (prereq #, △, CLA approval)
209178 ar cr

5990 Directed Research (prereq #, △, CLA approval)
109179 ar cr

8120 Latin Text Course (prereq 3052 or △, non-maj)
230676 0815-0900 MWF, FolH 103, Sonkowsky, 4 cr

8910 Seminar: Classical and Medieval Latin Drama
135748 1515-1700 W, FolH 103, Sonkowsky, 4 cr

LATIN AMERICAN STUDIES (LAS)
Liberal Arts

3131 Introduction to Latin American Studies
412614 0915-1030 TTh, FolH 50, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
100053 ar cr

LAW SCHOOL (Law)

R5001 **Contracts** (prereq △)
303081 –1 1515-1605 MWTh, Law 40, Hudec, 3 cr
003083 –2 1315-1405 MWTh, Law 45, Farber, 3 cr
603085 –3 1515-1605 MWTh, Law 50, Matheson, 3 cr

R5003 **Legal Research** (prereq △)
821438 ar cr

R5004 **Property I** (prereq △)
736966 1115-1205 TWThF, Law 50, Schoettle, 4 cr

R5005 **Torts** (prereq △)
203090 –1 1115-1205 TWThF, Law 65, Marshall, 4 cr
903092 –2 1115-1205 TWThF, Law 40, Thigpen, 4 cr

R5006 **Procedure** (prereq △)
803098 –1 0915-1005 MThF, Law 50, Block, 3 cr
303100 –2 0915-1005 MThF, Law 40, Kramer, 3 cr
603104 –3 0915-1005 MThF, Law 65, Park, 3 cr

R5007 **Constitutional Law** (prereq △)
915260 –1 0915-1005 MTW, Law 50, Auerbach, 3 cr
715261 –2 0915-1005 MTW, Law 40, Morrison, 3 cr
121436 –3 0915-1005 MTW, Law 65, Bryden, 3 cr

R5050 **Commercial Paper** (prereq △)
321435 1215-1305 MTW, Law 40, Greene, 3 cr

R5051 **Business Associations** (prereq △)
903108 –1 1015-1105 MTWTh, Law 50, Koeppen, 4 cr
703112 –2 1015-1105 MTWTh, Law 40, Matheson, 4 cr

R5055 **Appellate Advocacy** (prereq △)
021440 ar cr

R5056 **Seminar: Legal Aid I** (prereq △) (A–N only)
121470 1615-1805 M, Law 55, Befort, Hopeman, others, ar cr

R5058 **Misdemeanor Prosecution** (prereq △)
821472 1615-1805 M, Law 45, Simon, ar cr

5059 **Seminar: Appellate Brief Writing (Criminal Appeals Clinic)** (prereq △)
914402 1615-1700 W, Law 65, ar cr

R5060 **Legal Aid to Minnesota Prisoners** (prereq △) (A–N only)
421474 1615-1805 M, Law 65, Peterson, Marron, ar cr

5063 **Seminar: Federal Tax Clinic** (prereq △) (A–N only)
014780 2 cr

R5065 **Seminar: Misdemeanor Defense** (prereq △)
315263 1615-1805 M, Law 45, Simon, ar cr

5066 **Moot Court (National) Team** (prereq △)
514399 Jackson, ar cr

5067 **National Moot Court Directors** (prereq △)
914397 Jackson, ar cr

5068 **International Moot Court Team** (prereq △)
414394 Weissbrodt, ar cr

5069 **International Moot Court Director** (prereq △)
614393 Weissbrodt, ar cr

5070 **Legal Aid I (Civil Clinic) Directors** (prereq △)
214400 Jackson, ar cr

5071 **Misdemeanor Prosecution/Defense (Legal Aid II) Clinical Directors** (prereq △)
014407 Simon, ar cr

5072 **Legal Assistance to Minnesota Prisoners (LAMP) (Legal Aid IV) Clinical Directors** (prereq △)
314405 Peterson, ar cr

5073 **Tax Clinic Directors** (prereq △)
814408 Befort, ar cr

5075 **Frederick Douglas Moot Court** (prereq △)
114776 Jackson, ar cr

5077 **Law and Inequality Journal Staff** (prereq △) (S–N only)
114964 1–2 cr

5078 **Law and Inequality Journal Directors** (prereq △) (S–N only)
914965 3 cr

R5100 **Taxation I** (prereq △)
121476 –1 1315-1405 F, Law 30, Scallen, 3 cr
521479 –2 1515-1605 M, 1315-1405 Th, Law 30, Scallen, 3 cr

R5108 **Secured Transactions** (prereq △)
821441 1215-1305 MT, Law 30, McClure, 2 cr

R5109 **Creditor's Remedies** (prereq △) (A–N only)
721481 0815-0905 MTWTh, Law 65, Nickels, 4 cr

R5112 **Accounting for Lawyers** (prereq △)
021485 1515-1605 WThF, Law 25, Kilbourn, 2 cr

R5113 **State and Local Tax** (prereq △) (A–N only)
535768 0815-0905 TTh, Law 55, Schoettle, 2 cr

R5118 **Comparative Constitutional Law** (prereq △)
935766 1115-1205 MTW, Law 55, Vialle, 2 cr

R5150 **Trust and Estates** (prereq △)
221489 1415-1505 MTWTh, Law 40, Waterbury, 4 cr

R5151 **Estate Planning** (prereq △)
921494 0815-0905 MWF, Law 50, Stein, 3 cr

R5203 **Labor Law** (prereq △)
115278 1215-1305 MTW, Law 50, Befort, 3 cr

R5210 **Antitrust** (prereq △)
410149 0915-1005 WThF, Law 30, Gifford, 3 cr

R5211 **Securities Regulation** (prereq △)
721500 1415-1505 ThF, Law 65, Koeppen, 2 cr

R5213 **Modern Real Estate** (prereq △)
615284 –1 1415-1505 MTW, Law 30, Burkhart, 3 cr
335769 –2 0915-1005 MT, 1015-1105 F, Law 30, Torres, 3 cr

R5215 **Environmental Regulation** (prereq △)
135773 1215-1305 TWTh, Law 65, Farber, 3 cr

R5218 **Criminal Procedures** (prereq △)
915291 1315-1405 MTW, Law 40, Feld, 3 cr

R5219 **Evidence** (prereq △)
203123 –1 1315-1405 TWThF, Law 50, Cound, 4 cr
314372 –2 1215-1305 MTWTh, Law 55, Park, 4 cr

R5226 Juvenile Justice (prereq △)
615298 1015-1105 MT, Law 65, Feld, 2 cr

R5232 Criminal Justice Systems (prereq △)
735770 0915-1005 MT, 1015-1105 F, Law 55, Frase, 3 cr

R5233 Sex Discrimination (prereq △) (A-N only)
610151 1415-1715 M, Law 65, MacKinnon, 3 cr

R5234 Pornography (prereq △) (A-N only)
335772 1930-2200 TTh, Law 45, MacKinnon, 3 cr

R5600 Legal Professions (prereq △)
415299 –1 1115-1205 ThF, Law 30, Kramer, 2 cr
015301 –2 1115-1205 ThF, Law 25, 2 cr

R5602 International Law (prereq △) (A-N only)
035774 1315-1405 MTW, Law 55, Morrison, 2 cr

R5603 Unfair Competition (prereq △)
214378 1315-1400 TW, Law 65, 2 cr

R5604 Family Law (prereq △)
210153 1015-1105 TWTh, Law 30, Levy, 3 cr

R5605 Law and Medicine (prereq △)
621506 1315-1405 ThF, Law 40, Eustis, 2 cr

5606 Administrative Law (prereq △)
221508 1415-1505 MTW, Law 50, Auerbach, 3 cr

R5608 Independent Research (prereq △)
230502 ar cr

5609 Law Review (prereq △)
114396 Grabb, ar cr

R5614 International Trade (prereq △) (A-N only)
535771 0915-1005 WTh, Law 55, Hudec, 3 cr

R5618 Trial Practice (prereq △)
215305 –1 1515-1805 M, Law 170, Goldberg, 3 cr
812707 –2 1800-2100 T, Law 170, O'Rourke, 3 cr
235764 –3 1800-2100 W, Law 170, Simon, 3 cr
135765 –4 1800-2100 Th, Law 170, Sedo, 3 cr

R5637 Agricultural Law (prereq △)
910155 1315-1405 ThF, Law 65, Torres, 2 cr

5638 Appellate Practice (prereq △)
414380 1515-1705 T, Law 473, Rogosheske, 2 cr

R5805 Seminar: Obscenity and Pornography (prereq △)
814389 1615-1805 Th, Law 471, McClure, 2 cr

R5806 Seminar: Divorce Counseling (prereq △)
714384 1615-1805 W, Law 7, Levy, 2 cr

R5826 Seminar: Comparative Criminal Law (prereq △) (A-N only)
835775 1615-1805 M, Law 45, Frase, 2 cr

R5835 Seminar: Higher Education (prereq △) (A-N only)
635776 1615-1805 W, Law 65, Dunham, 2 cr

R5836 Seminar: Trade Regulations (prereq △) (A-N only)
235778 1615-1805 Th, Law 55, Gifford, 2 cr

5844 Seminar: Juvenile Justice (prereq △)
514404 1615-1805 W, Law 5, Feld, Kammerman, 2 cr

R5850 Seminar: Criminal Justice Corrections (prereq △)
515309 1615-1805 T, Law 65, Clendenen, 2 cr

R5857 Seminar: Advanced Corporations (prereq △) (A-N only)
435777 1615-1805 Th, Law 65, Kilbourn, 2 cr

R5871 Seminar: Constitutional Law (prereq △) (A-N only)
114382 1615-1805 M, Law 5, Bryden, 2 cr

R5874 Seminar: Taxation (prereq △)
014391 1615-1805 W, Law 7, Schoettle, 2 cr

LIBRARY (Lib)
Liberal Arts

8224 Subject Bibliography (prereq 5221, 5401, 5601 or #)
230807 0945-1100 TTh, WaLib 339, Olson, 4 cr

R8225 Online Bibliographic Searching (prereq 8224, 8302, 8402 or #)
★LECT 1630-1930 M, WaLib 339, Crickman
635311 –1 LAB 1630-1930 W, WaLib 339, Crickman, 3 cr

8701 Research Methods in Librarianship
730813 1630-1930 T, WaLib 339, D'Elia, 3 cr

8950 Special Topics in Library Science (prereq #)
635308 –1 1300-1600 T, WaLib 339, Rohde, 4 cr
435309 –2 0900-1200 W, WaLib 339, Simonton, 3 cr

8970 Independent Study in Library Science (prereq #)
530814 ar cr

8990 Library Research (prereq #)
330815 ar cr

LINGUISTICS (Ling)
Linguistics
Liberal Arts

R1001 The Nature of Human Language
030817 1015-1100 MWF, PWB 2470, Yule, 4 cr

R3001 Introduction to Linguistics (§3005, 5001)
★LECT 1115-1200 MTW, MechE 18, Sanders
400611 –1 REC 1115-1200 Th, AkerH 225, 5 cr
900614 –2 REC 1115-1200 Th, MechE 18, 5 cr
500616 –3 REC 1115-1200 F, FolH 50, 5 cr
300620 –4 REC 1115-1200 F, FolH 305, 5 cr

R3001H Introduction to Linguistics (§3001, 5001, 3005; prereq honors regis or #)
★LECT 1115-1200 MTW, FolH 50, Kac
111210 –80 REC 1115-1200 Th, FolH 50, 5 cr

3051H Honors Course: Linguistics (prereq candidacy for honors in linguistics or #)
811217 4 cr

3301 Phonetics (§5301, 5003; prereq 3001 or ¶ or #)
830818 1415-1500 MTWThF, FolH 205, Thomas-Flinders, 5 cr

3811 Language Loyalty and Bilingualism in Minnesota (1001 or 3001 rec, knowledge of a second language helpful)
135359 1630-1745 MW, FolH 204, Downing, 4 cr

3970 Directed Studies (prereq linguistics maj, #, △, college approval)
030820 1-5 cr

R5001 Introduction to Linguistics (§3001, 3005; prereq grad standing or #)
★LECT 1115-1200 MTW, FolH 50, Kac
700632 –1 REC 1115-1200 Th, FolH 50, 5 cr

5003 Applied Phonetics (§3301, 5301; prereq 5001 or ¶ or #)
435357 1015-1100 MTWThF, JonesH 10, Thomas-Flinders, 5 cr

5011 Mathematical Linguistics (prereq linguistics maj or #)
012656 1015-1100 MWF, FolH 105, Hutchinson, 4 cr

5206 Advanced Syntax (prereq 5202, 5302 or #)
930826 1515-1600 MWF, FolH 208, Sanders, 4 cr

5301 Phonetics (§3301, 5003; prereq 3001 or 5001 or ¶ or #)
330829 1415-1500 MTWThF, FolH 205, Thomas-Flinders, 5 cr

5602 Language Change and Linguistic Reconstruction (prereq 3601 or 5601, 5201, 5302 or #)
909037 0945-1100 TTh, East Bank, Miranda, 4 cr

5605 Indo-European Liguistics (prereq 3601 or 5601 or #)
235358 1415-1530 TTh, FolH 204, Miranda, 4 cr

5701 Contrastive Linguistics (prereq 5002 or 5201, 5302, 5003 or #)
526133 1415-1500 MWF, JonesH 4, Gundel, 4 cr

R5722 English as a Second Language: Practicum (prereq maj or min in ESL, 5721, #) (S-N only)
930843 1415-1500 MWF, FolH 302, Yule, 3 cr

5731 A Contrastive Approach to Modern English (prereq 3001 or 5001 or #)
437223 1630-1745 TTh, FolH 204, Downing, 4 cr

5811 Introduction to Language Variation (prereq 3001 or 5001 or #)
036942 1630-1745 MW, FolH 205, Stenson, 4 cr

5970 Directed Studies (prereq linguistics or ESL maj, #, △, CLA approval)
330846 1-5 cr

8900 Independent Study (prereq maj, #)
236803 1-5 cr

MANAGEMENT (Mgmt)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for Mgmt courses.

R3001 Fundamentals of Management (§8001) (A-N only)
403170 –1 0900-1030 TTh, AndH 310, Manz, 4 cr
903173 –2 1045-1215 TTh, AndH 310, Albert, 4 cr
313013 –3 1230-1400 TTh, AndH 310, Manz, 4 cr

R3004 Business Policy: Strategy Formulation and Implementation (prereq sr, completion of business core or ¶final core course) (A-N only)
503192 –1 0815-1000 MWF, BlegH 330, Mauriel, 5 cr
803196 –2 1015-1200 MWF, BlegH 415, Mauriel, 5 cr

R5101 Advanced Topics (prereq sr or grad, #, SMgt approval)
136950 1330-1430 MW, BlegH 135, ar cr (application required in Mgmt/Econ 830)

R8001 Fundamentals of Management (§3001, not open to MBA, PhD students in business administration)
000104 1415-1600 TTh, BlegH 435, Wickesberg, 4 cr

R8102 History of Management Thought (§8011; prereq PhD student, or # and Mgmt Grad School approval)
735753 1015-1200 TTh, BlegH 340, Wickesberg, 4 cr

R8302 Seminar in Organization Theory (prereq PhD student, or # and Mgmt Grad School approval)
135751 1300-1600 T, Mgmt/Econ 136, Van De Ven, 4 cr

R8303 Organizational Research Seminar (prereq PhD student, or # and Mgmt Grad School approval)
935752 1315-1600 W, Law 1, Trist, 4 cr

8990 Readings in Theory and Administration (prereq 2nd yr grad student, requisite introductory courses, consent of adviser, #, grad SMgt approval)
400110 ar cr

8995 Research in Management Theory and Administration (prereq 2nd yr grad student, requisite introductory courses, consent of adviser, #, grad SMgt approval)
100112 ar cr

MANAGEMENT INFORMATION SYSTEMS (MIS)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for MIS courses.

R3098 Elementary COBOL (prereq 3040 or ¶ or 3100 or ¶ or 3300 or ¶) (S-N only)
703210 0915-1000 W, Law 20, Naumann, 1 cr

R3099 Elementary FORTRAN (prereq 3040 or ¶ or 3100 or ¶ or 3300 or ¶) (S-N only)
303212 1015-1100 W, Law 20, Naumann, 1 cr

R3300 Introduction to Computers and Management Information Systems (§3100, 5100, 5300) (A-N only)
★LECT 1430-1545 MW, AndH 210, Dickson
209598 –1 LAB 0815-0900 F, Law 35, 4 cr
809600 –2 LAB 0915-1000 F, Law 35, 4 cr
409602 –3 LAB 1015-1100 F, Law 35, 4 cr
109604 –4 LAB 1115-1200 F, Law 35, 4 cr
709606 –5 LAB 1415-1500 F, BlegH 415, 4 cr
735607 –6 LAB 1515-1600 F, BlegH 415, 4 cr

R5098 Intermediate COBOL (prereq 3098) (S-N only)
500115 1115-1200 W, Law 20, Naumann, 2 cr

R8300 **Computers and Management Information Systems** (§5100, 5300; prereq MBA 8005, grad mgmt/IR student or grad SMgt approval) (A-N only)
000118 –1 0915-1100 MW, BlegH 150, Dickson, 4 cr
535608 –2 0915-1100 MW, BlegH 435, DeSanctis, 4 cr

R8301 **Program Design and Programming** (prereq grad mgmt/IR student, MBA 8005, MIS 8300 or ¶, grad SMgt approval) (A-N only)
100120 –1 1215-1400 MW, Law 35, Lehman, 4 cr
335609 –2 1415-1600 MW, Law 35, Lehman, 4 cr

R8303 **Data Structures, File Processing, and Retrieval Languages** (§5103; prereq 8301, grad mgmt/IR student or grad SMgt approval) (A-N only)
426142 1700-2100 Th, BlegH 125, Everest, 4 cr

R8304 **MIS Administration** (§8269; prereq 8302, grad mgmt/IR student or grad SMgt approval) (A-N only)
535611 1730-2050 W, BlegH 420, Wetherbe, 4 cr

8990 **Readings in Management Information Systems** (prereq consent of adviser, #, 2nd yr grad, requisite introductory courses, grad SMgt approval) (A-N only)
400124 ar cr

8995 **Graduate Research** (prereq consent of adviser, #, 2nd yr grad, requisite introductory courses, grad SMgt approval) (A-N only)
200125 ar cr

MARATHI (Mar)
South And Southwest Asian Studies
Liberal Arts

5970 **Directed Studies** (prereq #, △, CLA approval)
100148 Junghare, ar cr

MARKETING (Mktg)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for Mktg courses.

R3000 **Principles of Marketing** (§8000; prereq Econ 1002) (A-N only)
103227 –1 0815-0945 MW, Law 15, 4 cr
835601 –2 1015-1145 MW, Law 15, 4 cr

R3010 **Buyer Behavior and Marketing Analysis** (prereq 3000, QA 1050)
614989 –1 1315-1445 MW, BlegH 335, Gardner, 4 cr
312976 –2 1515-1645 MW, BlegH 105, 4 cr
112980 –3 0815-0945 TTh, BlegH 110, 4 cr
509591 –4 1015-1145 TTh, BlegH 110, 4 cr

R3020 **Marketing Operations Management** (prereq 3010)
231259 –1 0815-0945 TTh, BlegH 340, 4 cr
631260 –2 1415-1545 TTh, BlegH 335, 4 cr

R3065 **Retail Management** (§8065; prereq 3010)
103230 1015-1145 MW, BlegH 330, Werner, 4 cr

R3090 **Marketing Topics** (prereq 3010, #, SMgt approval)
431261 1415-1545 MW, BlegH 210, Werner, 4 cr

R8040 **International Business** (§BGS 3004, Mgmt 8040; prereq grad mgmt/IR student, either MBA core courses or MBA 8045 and △, Mgmt 3001 or 8001 or grad SMgt approval)
635602 1015-1145 MW, BlegH 145, Holloway, 4 cr

R8090 **Marketing Topics** (prereq either MBA core courses, or MBA 8045 and △, grad mgmt/IR student or grad SMgt approval)
128525 –1 0915-1130 M, Mgmt/Econ 128, 4 cr
137631 –2 1315-1445 MWF, BlegH 330, Cardozo, 4 cr

R8095 **Marketing Research** (prereq either MBA core courses, or MBA 8045 and △, grad mgmt/IR student or grad SMgt approval)
612966 –1 1015-1145 TTh, Mgmt/Econ 130, Childers, 4 cr (students must contact instructor by Sept 16)
112969 –2 1315-1445 TTh, Law 1, Childers, 4 cr (students must contact instructor by Sept 16)

R8098 **Introduction to Consumer Behavior** (prereq either MBA core courses or MBA 8045, grad mgmt/IR student or grad SMgt approval)
100126 1515-1645 MW, BlegH 335, Loken, 4 cr

8990 **Readings in Marketing** (prereq either MBA core courses, or MBA 8045 and △, consent of advisor, #, grad SMgt approval)
900127 ar cr

8995 **Graduate Research in Marketing** (prereq either MBA core courses, or MBA 8045 and △, consent of advisor, #, grad SMgt approval)
700128 ar cr

MASTER OF BUSINESS ADMINISTRATION (MBA)
Management

R8005 **Computer Access and Programming for Business Analysis** (prereq MBA students only) (S-N only)
931264 –1 1015-1200 T, BlegH 415, Hoffmann, 1 cr
731265 –2 1315-1500 T, BlegH 250, Hoffmann, 1 cr

R8010 **Management and Organizational Behavior** (prereq MBA students only)
531266 –1 1015-1200 TTh, BlegH 440, Nichols, 4 cr
331267 –2 1315-1500 TTh, BlegH 440, Nichols, 4 cr

R8020 **Business Statistics: Data Sources, Presentation, and Analysis** (prereq MBA students only)
131268 –1 1015-1200 MW, 1015-1100 F, BlegH 440, Rothermel, 4 cr
031269 –2 1415-1600 MW, 1415-1500 F, BlegH 440, 4 cr

R8030 **Financial Accounting** (prereq MBA students only)
331270 –1 1000-1145 MW, Law 35, Tranter, 4 cr
131271 –2 1315-1500 MW, BlegH 150, Tranter, 4 cr

R8055 **Business, Government, and Macroeconomics** (prereq MBA student only)
431275 –1 1015-1200 MW, BlegH 340, Maitland, 4 cr
231276 –2 1415-1600 MW, BlegH 340, Maitland, 4 cr
131277 –3 1015-1200 TTh, BlegH 435, Erickson, 4 cr
010339 –4 1415-1600 TTh, BlegH 340, Erickson, 4 cr

MATERIALS SCIENCE (MatS)
Chemical Engineering & Materials Science
Institute of Technology

3090 **Industrial Employment**
113191 1-2 cr

R3400 **Mechanical Properties of Materials** (prereq 2nd yr IT student)
★LECT 1315-1400 MWF, AmundH 240, Sivertsen
003956 –1 LAB 1415-1700 M, MinMet 410, 4 cr
803960 –2 LAB 1415-1700 T, MinMet 410, 4 cr
203963 –3 LAB 1415-1700 W, MinMet 410, 4 cr
703966 –4 LAB 1415-1700 Th, MinMet 410, 4 cr
303968 –5 LAB 1415-1700 F, MinMet 410, 4 cr

R5011 **Introduction to the Science of Materials** (prereq upper division chem engr or mat sci maj)
★LECT 1015-1100 MWF, AmundH 240, Weaver
303971 –1 REC 0815-0900 TTh, MinMet 120, 4 cr
603975 –2 REC 1015-1100 TTh, MinMet 120, 4 cr
403976 –3 REC 1115-1200 TTh, MinMet 120, 4 cr
103978 –4 REC 1215-1300 TTh, MinMet 104, 4 cr
203980 –5 REC 1415-1500 TTh, MinMet 120, 4 cr
903982 –6 REC 1515-1600 TTh, MinMet 120, 4 cr

R5200 **Optical and Electron Microscopy of Solids** (prereq upper division IT)
★LECT 1215-1300 MW, AmundH 162, Shores
137474 –1 LAB 1315-1700 T, AmundH 54, 4 cr
037475 –2 LAB 1315-1700 Th, AmundH 54, 4 cr

R5450 **Corrosion of Electrochemistry of Corrosion**
012818 1115-1200 MWF, LindH 340, Nicholson, Oriani, 4 cr

5481 **Special Problems in Physical Metallurgy and Materials Science** (prereq sr)
301301 ar cr

R5610 **Polymer Chemistry** (prereq physical chemistry or 5011 or #)
★LECT 1015-1100 MWF, MurH 308, Macosko, Miller
103995 –1 LAB 1315-1700 T, SmithH 249B, 249, 3-4 cr
903996 –2 LAB 1315-1700 W, SmithH 249B, 249, 3-4 cr
703997 –3 LAB 1315-1700 F, SmithH 249B, 249, 3-4 cr

8310 **Theories of Mechanical Behavior of Solids**
837476 0815-1000 TTh, AmundH 54, Gerberich, 3 cr

8401 **Transformations in Alloys and Origins of Microstructure** (prereq 5403 or #)
337117 0815-0900 MWF, AmundH 154, Sivertsen, 3 cr

8470 **Seminar: Materials Science and Engineering**
526181 1315-1600 TTh, AmundH 240, ar cr

R8480 **Selected Topics in Materials Science and Engineering**
001303 0915-1000 MWF, AmundH 158, Wellinghoff, 3 cr

MATHEMATICS (Math)
Institute of Technology

R0009 **Intermediate Algebra** (prereq 1 yr high school algebra or grade of C or better in 0006) (course fee)
103236 –1 0800-0845 MTWThF, HckrH 100, 0 cr (StP)
703238 –2 0815-0900 MTWThF, Arch 5, 0 cr
503242 –3 1015-1100 MTWThF, FolH 308, 0 cr
003245 –4 1215-1300 MTWThF, FolH 308, 0 cr
203249 –5 1315-1400 MTWThF, BlegH 5, 0 cr
135927 –6 1415-1500 MTWThF, AkerH 209, 0 cr

R1005 **Foundations of Arithmetic** (prereq plane geometry, 2 yrs hs algebra, or plane geometry, grade of C or better in 0009)
103261 –1 1015-1100 MWF, VinH 1, 4 cr
803263 –2 1315-1400 MWF, FordH 130, 4 cr

R1006 **Foundations of Arithmetic** (prereq 1005)
301220 –1 0915-1000 MWF, AkerH 225, 4 cr
935928 –2 1215-1300 MWF, VinH 1, 4 cr

R1008 **Trigonometry** (§1111, 1201; prereq plane geometry, 2 yrs hs algebra or grade of C or better in 0009)
531476 –1 0915-1000 MWF, VinH 16, 4 cr
331477 –2 1215-1300 MWF, AndH 210, 4 cr
135930 –3 1415-1500 MWF, SmithH 325, 4 cr

R1111 **College Algebra and Analytic Geometry** (§1201; prereq plane geometry, 2 yrs hs alg or plane geometry, grade of C or better in 0009)
511163 –1 0800-0845 MTWThF, ABLMS 125, 5 cr (StP)
011166 –2 0900-0945 MWF, HodsonH 495, 0900-0945 TTh, ABLMS 125, 5 cr (StP)
611168 –3 0815-0900 MTWThF, Arch 50, 5 cr
611171 –4 0815-0900 MTWThF, ApH 150, 5 cr
411172 –5 0915-1000 MTWThF, Phys 131, 5 cr
911175 –6 0915-1000 MTWThF, WullH 230, 5 cr
511177 –7 1015-1100 MTWThF, FordH 155, 5 cr
111179 –8 1115-1200 MTWThF, Phys 131, 5 cr
935931 –9 1215-1300 MTWThF, SmithH 225, 5 cr
735932 –10 1315-1400 MTWThF, Zoology 313, 5 cr
335934 –11 1315-1400 MTWThF, MechE 212, 5 cr
135935 –12 1415-1500 MTWThF, MechE 18, 5 cr

R1131 Finite Mathematics (prereq 3 1/2 yrs high school math or grade of C or better in 1111)

★LECT 1115-1200 MWF, AmundH 240
803344 –1 REC 1115-1200 TTh, VinH 113, 5 cr
203347 –2 REC 1115-1200 TTh, VinH 211, 5 cr
114020 –3 REC 1115-1200 TTh, VinH 364, 5 cr
203350 –4 REC 1115-1200 TTh, VinH 209, 5 cr
131478 –5 REC 1115-1200 TTh, MurH 308, 5 cr
111182 –6 REC 1115-1200 TTh, MurH 311, 5 cr

★LECT 1215-1300 MWF, OwreH 2230
611185 –7 REC 1215-1300 TTh, FordH 120, 5 cr
111188 –8 REC 1215-1300 TTh, LindH 340, 5 cr
211190 –9 REC 1215-1300 TTh, MurH 311, 5 cr
911192 –10 REC 1215-1300 TTh, MurH 308, 5 cr
111196 –11 REC 1215-1300 TTh, Zoology 313, 5 cr

★LECT 1315-1400 MWF, SciCB 175
211206 –12 REC 1315-1400 TTh, PtH 102, 5 cr
035936 –13 REC 1315-1400 TTh, JonesH 11, 5 cr
835937 –14 REC 1315-1400 TTh, LindH 203, 5 cr
635938 –15 REC 1315-1400 TTh, FolH 205, 5 cr
435939 –16 REC 1315-1400 TTh, VinH 1, 5 cr
835940 –17 REC 1315-1400 TTh, SmithH 325, 5 cr

R1142 Short Calculus (§1211, 1511H, 1611; prereq 3 1/2 yrs hs math or grade of C or better in 1111 or 1201)

★LECT 1315-1400 MWF, AndH 370
703353 –1 REC 1315-1400 TTh, Botany B6, 5 cr
303355 –2 REC 1315-1400 TTh, NichH 107, 5 cr
603359 –3 REC 1315-1400 TTh, MechE 18, 5 cr
803361 –4 REC 1315-1400 TTh, Zoology 102, 5 cr

★LECT 1415-1500 MWF, Arch 5
635941 –5 REC 1415-1500 TTh, VinH 364, 5 cr
103365 –6 REC 1415-1500 TTh, VinH 311, 5 cr
703367 –7 REC 1415-1500 TTh, VinH 313, 5 cr
303369 –8 REC 1415-1500 TTh, VinH 314, 5 cr

R1201 Pre-Calculus (§1008, 1111; prereq 4 yrs high school math including trigonometry)

711629 –1 0815-0900 MTWThF, SmithH 325, 5 cr
511213 –2 0915-1000 MTWThF, Arch 50, 5 cr
111215 –3 1015-1100 MTWThF, Phys 170, 5 cr
411219 –4 1115-1200 MTWThF, Arch 5, 5 cr
611221 –5 1215-1300 MTWThF, SmithH 100, 5 cr
435942 –6 1315-1400 MTWThF, WullH 230, 5 cr
235943 –7 1415-1500 MTWThF, CivMinE 212, 5 cr
436590 –8 0815-0900 MWF, MechE 108, 0815-0900 TTh, MechE 102, 5 cr

R1211 Calculus I (§1142, 1511H; prereq 4 yrs hs math incl trig or grade of C or better in 1201 or 1008, 1111)

★LECT 0815-0900 MWF, SmithH 225
803392 –1 REC 0815-0900 TTh, VinH 314, 5 cr
403394 –2 REC 0815-0900 TTh, VinH 311, 5 cr
103396 –3 REC 0815-0900 TTh, VinH 113, 5 cr
703398 –4 REC 0815-0900 TTh, VinH 6, 5 cr

★LECT 0815-0900 MWF, Phys 133
903402 –5 REC 0815-0900 TTh, VinH 2, 5 cr
503404 –6 REC 0815-0900 TTh, FordH 60, 5 cr
103406 –7 REC 0815-0900 TTh, FordH 70, 5 cr
803408 –8 REC 0815-0900 TTh, Arch 45, 5 cr

★LECT 0915-1000 MWF, Arch 25
803411 –9 REC 0915-1000 TTh, VinH 301, 5 cr
403413 –10 REC 0915-1000 TTh, VinH 314, 5 cr
103415 –11 REC 0915-1000 TTh, VinH 209, 5 cr
703417 –12 REC 0915-1000 TTh, VinH 313, 5 cr

★LECT 0915-1000 MWF, FordH 155
503421 –13 REC 0915-1000 TTh, VinH 211, 5 cr
103423 –14 REC 0915-1000 TTh, AkerH 225, 5 cr
803425 –15 REC 0915-1000 TTh, BuH 123, 5 cr
403427 –16 REC 0915-1000 TTh, VinH 113, 5 cr

★LECT 1015-1100 MWF, JacH 2135
203431 –17 REC 1015-1100 TTh, AkerH 21, 5 cr
903433 –18 REC 1015-1100 TTh, CivMinE 213, 5 cr
103437 –19 REC 1015-1100 TTh, PtH 214, 5 cr
803439 –20 REC 1015-1100 TTh, Zoology 102, 5 cr
003441 –21 REC 1015-1100 TTh, FolH 107, 5 cr

★LECT 1015-1100 MWF, VinH 16
203445 –22 REC 1015-1100 TTh, FolH 205, 5 cr
703448 –23 REC 1015-1100 TTh, FordH 70, 5 cr
703451 –24 REC 1015-1100 TTh, ApH 150, 5 cr
803456 –25 REC 1015-1100 TTh, Arch 45, 5 cr

★LECT 1115-1200 MWF, Arch 50
603460 –26 REC 1115-1200 TTh, VinH 6, 5 cr
903464 –27 REC 1115-1200 TTh, FordH 349, 5 cr
503466 –28 REC 1115-1200 TTh, Arch 40, 5 cr
303470 –29 REC 1115-1200 TTh, ApH 150, 5 cr
003472 –30 REC 1115-1200 TTh, Zoology 102, 5 cr

★LECT 1115-1200 MWF, SmithH 325
603474 –31 REC 1115-1200 TTh, FordH 60, 5 cr
203476 –32 REC 1115-1200 TTh, VinH 301, 5 cr
903481 –33 REC 1115-1200 TTh, PtH 214, 5 cr
503483 –34 REC 1115-1200 TTh, MinMet 124, 5 cr

★LECT 1215-1300 MWF, SciCB 175
803487 –35 REC 1215-1300 TTh, CivMinE 212, 5 cr
603491 –36 REC 1215-1300 TTh, FolH 303, 5 cr
503497 –37 REC 1215-1300 TTh, VinH 2, 5 cr
703501 –38 REC 1215-1300 TTh, FordH 170, 5 cr

★LECT 1215-1300 MWF, FordH 155
103504 –39 REC 1215-1300 TTh, LindH 325, 5 cr
803506 –40 REC 1215-1300 TTh, SmithH 315, 5 cr
103513 –41 REC 1215-1300 TTh, SmithH 111, 5 cr
303517 –42 REC 1215-1300 TTh, Zoology 102, 5 cr

★LECT 1315-1400 MWF, AndH 310
103521 –43 REC 1315-1400 TTh, BlegH 110, 5 cr
403525 –44 REC 1315-1400 TTh, BlegH 220, 5 cr
703529 –45 REC 1315-1400 TTh, BlegH 240, 5 cr
503533 –46 REC 1315-1400 TTh, RarigC 610, 5 cr

★LECT 1315-1400 MWF, SciCB 375
803537 –47 REC 1315-1400 TTh, CivMinE 212, 5 cr
403539 –48 REC 1315-1400 TTh, AkerH 209, 5 cr
614037 –49 REC 1315-1400 TTh, MinMet 116, 5 cr
414038 –50 REC 1315-1400 TTh, VinH 2, 5 cr

★LECT 1415-1500 MWF, Phys 170
935945 –51 REC 1415-1500 TTh, AkerH 211, 5 cr
735946 –52 REC 1415-1500 TTh, WullH 230, 5 cr
535947 –53 REC 1415-1500 TTh, SmithH 325, 5 cr
335948 –54 REC 1415-1500 TTh, SmithH 225, 5 cr

★LECT 1415-1500 MWF, Phys 131, 5 cr
735977 –55 REC 1415-1500 TTh, VinH 6, 5 cr
535978 –56 REC 1415-1500 TTh, VinH 211, 5 cr
335979 –57 REC 1415-1500 TTh, VinH 2, 5 cr
735980 –58 REC 1415-1500 TTh, VinH 1, 5 cr

R1221 Calculus II (§1321, 1521H, 1621; prereq grade of C or better in 1211)

★LECT 0915-1000 MWF, Phys 133
903545 –1 REC 0915-1000 TTh, VinH 203, 5 cr
503547 –2 REC 0915-1000 TTh, SmithH 325, 5 cr
103549 –3 REC 0915-1000 TTh, SmithH 225, 5 cr
103552 –4 REC 0915-1000 TTh, PtH 215, 5 cr
535981 –5 REC 0915-1000 TTh, VinH 207, 5 cr

★LECT 1115-1200 MWF, JacH 2135
031482 –6 REC 1115-1200 TTh, AkerH 215, 5 cr
903559 –7 REC 1115-1200 TTh, LindH 203, 5 cr
103561 –8 REC 1115-1200 TTh, AmundH 162, 5 cr
703563 –9 REC 1115-1200 TTh, ExpE 193, 5 cr
003567 –10 REC 1115-1200 TTh, MechE 202, 5 cr

★LECT 1315-1400 MWF, OwreH 2230
414041 –11 REC 1315-1400 TTh, SmithH 111, 5 cr
403573 –12 REC 1315-1400 TTh, VinH 314, 5 cr
703577 –13 REC 1315-1400 TTh, AmundH 158, 5 cr
303579 –14 REC 1315-1400 TTh, AmundH 154, 5 cr
303582 –15 REC 1315-1400 TTh, AmundH 162, 5 cr

★LECT 1415-1500 MWF, SmithH 225
631484 –16 REC 1415-1500 TTh, Phys 210, 5 cr
114043 –17 REC 1415-1500 TTh, AkerH 317, 5 cr
335982 –18 REC 1415-1500 TTh, AkerH 313, 5 cr
135983 –19 REC 1415-1500 TTh, VinH 209, 5 cr

R1231 Calculus III (§1331, 1531H, 1621; prereq grade of C or better in 1221)

★LECT 0815-0900 MWF, Arch 35
603586 –1 REC 0815-0900 TTh, MinMet 116, 5 cr
103589 –2 REC 0815-0900 TTh, ExpE 193, 5 cr
103592 –3 REC 0815-0900 TTh, Zoology 102, 5 cr
703594 –4 REC 0815-0900 TTh, AkerH 215, 5 cr
303596 –5 REC 0815-0900 TTh, AkerH 313, 5 cr

★LECT 0915-1000 MWF, Arch 35
103602 –6 REC 0915-1000 TTh, CivMinE 212, 5 cr
803604 –7 REC 0915-1000 TTh, Zoology 102, 5 cr
203607 –8 REC 0915-1000 TTh, ExpE 193, 5 cr
714045 –9 REC 0915-1000 TTh, VinH 2, 5 cr

★LECT 1015-1100 MWF, NichH 211
103611 –10 REC 1015-1100 TTh, MechE 202, 5 cr
803618 –11 REC 1015-1100 TTh, NichH 211, 5 cr
003620 –12 REC 1015-1100 TTh, AkerH 215, 5 cr
603622 –13 REC 1015-1100 TTh, AkerH 313, 5 cr
903626 –14 REC 1015-1100 TTh, Phys 210, 5 cr

★LECT 1215-1300 MWF, Phys 133
303629 –15 REC 1215-1300 TTh, VinH 1, 5 cr
003634 –16 REC 1215-1300 TTh, ExpE 193, 5 cr
231486 –17 REC 1215-1300 TTh, JonesH 2, 5 cr
116138 –18 REC 1215-1300 TTh, AkerH 309, 5 cr
835985 –19 REC 1215-1300 TTh, AkerH 215, 5 cr

★LECT 1415-1500 MWF, AmundH 240
635986 –20 REC 1415-1500 TTh, Arch 30, 5 cr
435987 –21 REC 1415-1500 TTh, LindH 203, 5 cr
235988 –22 REC 1415-1500 TTh, JonesH 4, 5 cr
135989 –23 REC 1415-1500 TTh, Zoology 102, 5 cr

★LECT 1315-1400 MWF, MechE 102
936593 –24 REC 1315-1400 TTh, MechE 102, 5 cr

R1511H Honors Calculus I (§1142, 1211, 1611; prereq △)

★LECT 0915-1000 MWF, VinH 1
811279 –80 REC 0915-1000 TTh, VinH 1, 5 cr
611283 –81 REC 0915-1000 TTh, VinH 206, 5 cr

R1611 Accelerated Calculus I (§1142, 1211, 1511H; prereq △)
★LECT 1215-1300 MWF, Arch 35
203641 –1 REC 1215-1300 TTh, JonesH 11, 5 cr
103642 –2 REC 1215-1300 TTh, MechE 221, 5 cr
903643 –3 REC 1215-1300 TTh, VinH 301, 5 cr
435990 –4 REC 1215-1300 TTh, MinMet 124, 5 cr

R3066 Elementary Differential Equations (§3213, 3221, 3521; prereq grade of C or better in 1231 or equiv)
401256 1115-1200 MWF, VinH 6, 4 cr

R3142 Introduction to Linear Algebra (§3213, 3221, 3511; prereq grade of C or better in 1231 or equiv)
203655 –1 0815-0900 MWF, VinH 311, 4 cr
903657 –2 0915-1000 MWF, VinH 311, 4 cr
931488 –3 1015-1100 MWF, VinH 311, 4 cr
016142 –4 1215-1300 MWF, VinH 6, 4 cr
235991 –5 1315-1400 MWF, VinH 113, 4 cr

R3211 Multivariable Calculus (§3521; prereq grade of C or better in 1231 or equiv)
★LECT 1015-1100 MWF, OwreH 2230
131490 –1 REC 1015-1100 TTh, VinH 203, 5 cr
931491 –2 REC 1015-1100 TTh, VinH 313, 5 cr
731492 –3 REC 1015-1100 TTh, VinH 207, 5 cr
531493 –4 REC 1015-1100 TTh, VinH 209, 5 cr
131495 –5 REC 1015-1100 TTh, VinH 314, 5 cr
★LECT 1115-1200 MWF, VinH 16
031496 –6 REC 1115-1200 TTh, VinH 314, 5 cr
831497 –7 REC 1115-1200 TTh, VinH 313, 5 cr
631498 –8 REC 1115-1200 TTh, VinH 311, 5 cr
131500 –9 REC 1115-1200 TTh, VinH 207, 5 cr
031501 –10 REC 1115-1200 TTh, VinH 203, 5 cr
★LECT 1215-1300 MWF, VinH 16
831502 –11 REC 1215-1300 TTh, VinH 207, 5 cr
631503 –12 REC 1215-1300 TTh, VinH 6, 5 cr
231505 –13 REC 1215-1300 TTh, VinH 113, 5 cr
931507 –14 REC 1215-1300 TTh, VinH 211, 5 cr
★LECT 1315-1400 MWF, VinH 16
731508 –15 REC 1315-1400 TTh, VinH 20, 5 cr
531509 –16 REC 1315-1400 TTh, VinH 311, 5 cr
731511 –17 REC 1315-1400 TTh, VinH 301, 5 cr
216146 –18 REC 1015-1100 TTh, VinH 301, 5 cr
135992 –19 REC 1315-1400 TTh, VinH 313, 5 cr
★LECT 1415-1500 MWF, VinH 16
535995 –20 REC 1415-1500 TTh, VinH 113, 5 cr
335996 –21 REC 1415-1500 TTh, VinH 203, 5 cr
135997 –22 REC 1415-1500 TTh, VinH 207, 5 cr
035998 –23 REC 1415-1500 TTh, VinH 301, 5 cr

R3212 Vector and Linear Analysis I (§3231; prereq grade of C or better in 3211 or equiv)
★LECT 1015-1100 MWF, MechE 18
736000 –1 REC 1015-1100 TTh, WullH 230, 5 cr
536001 –2 REC 1015-1100 TTh, BuH 123, 5 cr
336002 –3 REC 1015-1100 TTh, LindH 203, 5 cr
136003 –4 REC 1015-1100 TTh, VinH 2, 5 cr
★LECT 1315-1400 MWF, SmithH 325
836005 –5 REC 1315-1400 TTh, VinH 6, 5 cr
636006 –6 REC 1315-1400 TTh, VinH 113, 5 cr
436007 –7 REC 1315-1400 TTh, VinH 207, 5 cr
236008 –8 REC 1315-1400 TTh, VinH 211, 5 cr

R3221 Introduction to Linear Algebra and Linear Differential Equations (§3066, 3142, 3212, 3511; prereq grade of C or better in 1231 or equiv)
★LECT 0815-0900 MWF, VinH 16
111229 –1 REC 0815-0900 TTh, VinH 203, 5 cr
311231 –2 REC 0815-0900 TTh, VinH 207, 5 cr
011233 –3 REC 0815-0900 TTh, VinH 301, 5 cr
411236 –4 REC 0815-0900 TTh, VinH 313, 5 cr
★LECT 1015-1100 MWF, OwreH 2210
111238 –5 REC 1015-1100 TTh, VinH 6, 5 cr
511244 –6 REC 1015-1100 TTh, VinH 113, 5 cr
111246 –7 REC 1015-1100 TTh, VinH 211, 5 cr
111070 –8 REC 1015-1100 TTh, VinH 364, 5 cr
★LECT 1215-1300 MWF, MechE 18
211075 –9 REC 1215-1300 TTh, VinH 20, 5 cr
911077 –10 REC 1215-1300 TTh, VinH 313, 5 cr
611252 –11 REC 1215-1300 TTh, VinH 209, 5 cr
911256 –12 REC 1215-1300 TTh, VinH 364, 5 cr

R3231 Vector Analysis (§3212, 3531; prereq grade of C or better in 3211 or equiv)
103678 –1 0915-1000 MWF, VinH 113, 4 cr
303680 –2 1015-1100 MWF, MechE 102, 4 cr
603684 –3 1015-1100 MWF, VinH 20, 4 cr
131514 –4 1115-1200 MWF, VinH 113, 4 cr
616144 –5 1215-1300 MWF, VinH 113, 4 cr
136009 –6 1315-1400 MWF, VinH 364, 4 cr

R3511 Linear Analysis I (§3142, 3213, 3221; prereq grade of B or better in 1231 or equiv)
★LECT 1315-1400 MWF, CivMinE 212
703692 –1 REC 1315-1400 TTh, VinH 203, 5 cr
003696 –2 REC 1315-1400 TTh, VinH 209, 5 cr
436010 –3 REC 1315-1400 TTh, VinH 364, 5 cr

R3521 Linear Analysis II (§3066, 3211; prereq grade of C or better in 3511)
★LECT 1215-1300 MWF, MurH 308
114060 –1 REC 1215-1300 TTh, VinH 203, 5 cr
236011 –2 REC 1215-1300 TTh, VinH 314, 5 cr

R3675 Introductory Mathematics (prereq 1231)
101258 1215-1300 MWF, VinH 313, 4 cr

R5056 Theory of Interest (prereq 1231 or equiv)
811072 0815-0930 TTh, VinH 364, 4 cr

R5081 Fundamental Topics in Analysis (prereq 3531 or ¶ or 3211) (A-N only)
411074 1610-1725 MW, VinH 364, 4 cr

R5162 Mathematical Logic (prereq 3211, 3221 or 3211, 3142 or Phil 5202 or #)
901259 1415-1500 MWF, VinH 211, 4 cr

R5200 Topics in Algebra (prereq #)
136012 1015-1100 MWF, VinH 314, 4 cr

R5242 Linear Algebra with Applications (§5232-5233, 5262, 5282, 5264, 5284; prereq 3142 or 3221)
103706 –1 1215-1300 MWF, VinH 211, 4 cr
814781 –2 1315-1400 MWF, VinH 311, 4 cr

R5282 Fundamental Structures of Algebra (prereq one sophomore sequence or #...some previous abstract math rec)
714093 –1 1115-1200 MWF, VinH 313, 4 cr
414069 –2 1115-1200 MWF, VinH 207, 4 cr

R5341 Introduction to Topology (prereq one sophomore sequence or #...some previous abstract mathematics rec)
101261 1415-1500 MWF, VinH 6, 4 cr

R5375 Differential Geometry (prereq 3211 or #)
501264 0915-1000 MWF, VinH 6, 4 cr

R5457 Methods of Applied Mathematics (prereq 3211, 3066 or 3211, 3221)
031515 –1 1015-1100 MWF, VinH 6, 4 cr
831516 –2 1015-1100 MWF, VinH 207, 4 cr

R5473 Analysis of Numerical Methods (prereq 3211, 3142 or equiv) (A-N only)
801268 0915-1000 MWF, VinH 203, 4 cr

R5512 Differential Equations with Applications I (prereq 3211 or 3521 or 3611, 3221 or 3066 or 3531 or 3621)
431518 –1 1415-1500 MWF, VinH 311, 4 cr
631520 –2 1415-1500 MWF, VinH 313, 4 cr

R5521 Introduction to Ordinary Differential Equations (prereq one sophomore sequence or #...some previous abstract math rec) (A-N only)
001270 1315-1400 MWF, VinH 203, 4 cr

R5567 Fourier Series and Boundary Values Problems (§5571; prereq 3211, 3066 or 3211, 3221 or equiv or #)
801271 1315-1400 MWF, VinH 313, 4 cr

R5568 Elementary Theory of Complex Variables (§5572; prereq 3231 or 5602 or equiv vector analysis course)
936013 1415-1500 MWF, VinH 364, 4 cr

R5571 Elementary Partial Differential Equations (prereq 5603 or 5613)
814098 –1 0915-1000 MWF, VinH 207, 4 cr
914075 –2 0915-1000 MWF, VinH 313, 4 cr

R5601 Advanced Calculus (prereq 3211 or #)
603720 –1 1015-1100 MWF, VinH 313, 4 cr
103723 –2 1115-1200 MWF, VinH 203, 4 cr
915355 –3 1215-1300 MWF, VinH 203, 4 cr

R5603 Advanced Calculus (prereq 5602)
736014 1115-1200 MWF, VinH 364, 4 cr

R5612 Introduction to Analysis (prereq one sophomore sequence or #)
303727 –1 1115-1200 MWF, VinH 20, 4 cr
303730 –2 1315-1400 MWF, VinH 314, 4 cr

R5679 Probability (§5681; prereq 3211 or #)
314078 1415-1500 MWF, VinH 314, 4 cr

R5681 Introduction to Probability (prereq 3531 or 3631 or two 5 level math courses or Stat 5133 or #)
901262 1415-1500 MWF, VinH 207, 4 cr

R5701 Enumerative Combinatorics (prereq 3211 or equiv, 3rd yr standing...sophomore level linear algebra is helpful)
701263 1315-1400 MWF, VinH 301, 4 cr

R8140 Applied Logic: Recursion Theory (prereq #)
536015 0915-1000 MWF, VinH 213, 3 cr

R8150 Axiomatic Set Theory (prereq 5164 or #)
336016 1415-1500 MWF, VinH 213, 3 cr

R8190 Topics in Logic (prereq 5164 or #)
411141 0915-1000 MWF, VinH 364, 3 cr

R8200 General Algebra (prereq 5284 or #)
301265 1115-1200 MWF, VinH 314, 3 cr

R8270 Lie Groups, Algebras (prereq 8202 or #)
136017 1415-1500 MWF, VinH 301, 3 cr

R8290 Topics in Algebra (prereq 8202 or #)
036018 1315-1400 MWF, VinH 213, 3 cr

R8306 Algebraic Topology (prereq 5342 or #)
101266 1015-1100 MWF, VinH 203, 3 cr

R8365 Riemannian Geometry (prereq 5377 or #)
311147 1115-1200 MWF, VinH 206, 3 cr

R8374 Topics in Algebraic Geometry (prereq #)
011149 1215-1300 MWF, VinH 206, 3 cr

R8406 Advanced Methods of Applied Mathematics (prereq 5459 or #)
311150 1415-1500 MWF, VinH 203, 3 cr

R8445 Numerical Analysis of Ordinary and Partial Differential Equations (prereq 5567, 5571 or equiv, 5513 or equiv) (A-N only)
011152 1215-1300 MWF, VinH 213, 3 cr

R8460 Problems in Theoretical Physics (prereq #)
836019 1315-1400 MWF, VinH 206, 3 cr

R8500 Theory of Ordinary Differential Equations (prereq 5614, 5521 or #)
001267 1315-1400 MWF, VinH 207, 3 cr

R8540 Topics: Differential, Difference Equations (prereq #)
136020 0915-1000 MWF, VinH 206, 3 cr

R8550 Theory of Partial Differential Equations (prereq 5614, 5521 or #)
601269 1015-1100 MWF, VinH 113, 3 cr

R8590 Topics in Partial Differential Equations (prereq 8609, 8552 or #)
801397 0915-1000 MWF, VinH 209, 1-3 cr

R8600 Real Analysis (prereq 5614 or 8702 or #)
401399 1215-1300 MWF, VinH 301, 3 cr

R8640 Topics in Real Analysis (prereq 8602 or #)
036021 1115-1200 MWF, VinH 213, 3 cr

R8650 Theory of Probability (prereq 8602 or #)
836022 1015-1100 MWF, VinH 213, 3 cr

R8656 Measure Theory and Probability (prereq 5614 or #)
811153 1015-1100 MWF, VinH 206, 3 cr

R8672 Topics in Combinatorial Theory (prereq #)
636023 1415-1500 MWF, VinH 209, 3 cr

R8690 Topics in the Theory of Probability (prereq 8652 or #)
411155 1415-1500 MWF, VinH 206, 1-3 cr

R8700 Complex Analysis (prereq 5614 or 5573 or #)
801402 1315-1400 MWF, VinH 6, 3 cr

R8782 Topics in Several Complex Variables (prereq 8781)
435973 1115-1200 MWF, VinH 209, 1-3 cr

R8800 Functional Analysis (prereq 8602 or #)
401404 0915-1000 MWF, VinH 211, 3 cr

R8990 Reading and Research
201405 ar cr

R8991 Reading and Research (prereq 8990)
036889 ar cr

MATHEMATICS EDUCATION (MthE)
Curriculum And Instruction Education

5101 Workshop: Elementary School Mathematics (max 12 cr; prereq #, non math educ majs) (A-N only)
036827 Jackson, 3 cr (Rochester)

R5102 Workshop: Mathematics Education (max 12 cr) (A-N only)
709041 1515-1600 MW, PeikH 375, House, 2 cr

5680 Practicum in Mathematics Education (max 9 cr; prereq #) (A-N only)
929742 3-9 cr

5980 Directed Studies (max 9 cr; prereq #) (A-N only)
729743 3-9 cr

8680 Internship: Mathematics Education
529744 ar cr

8980 Problems: Mathematics Education (prereq 8500 or 8570)
329745 ar cr

MECHANICAL ENGINEERING (ME)
Mechanical Engineering Institute of Technology

R1025 Engineering Graphics (prereq ¶Math 1211 or equiv, IT stu)
131537 –1 LECT 1015-1100 MTWThF, Arch 10, 4 cr
131540 –2 LECT 1315-1400 MTWThF, Arch 10, 4 cr
★LAB open hrs, MechE 314

R3201 Mechanical Engineering Systems Analysis (§AEM 3401; prereq AEM 3036, mech engr or aerospace engr maj)
★LECT 1015-1100 MWF, Arch 50
403766 –1 REC 1215-1400 M, MechE 314, 4 cr
903769 –2 REC 1115-1300 T, MechE 321, 4 cr
903772 –3 REC 1215-1400 T, MechE 202, 4 cr
303775 –4 REC 1415-1600 W, AkerH 313, 4 cr
026248 –5 REC 1415-1600 Th, MechE 321, 4 cr

R3203 Analysis of Mechanism Systems (prereq AEM 3036 or equiv, upper division mech engr maj)
★LECT 1515-1600 MWF, MechE 221
110770 –1 REC 1415-1600 T, MechE 221, 4 cr
910771 –2 REC 1415-1600 Th, MechE 221, 4 cr

R3205 Engineering Systems Design (prereq AEM 3016, upper division mech engr maj)
★LECT 1215-1300 MWF, MechE 302
012821 –1 REC 1415-1600 M, AkerH 313, 4 cr
212825 –2 REC 1415-1600 W, AkerH 317, 4 cr

R3301 Thermodynamics (prereq Chem 1014 or Phys 1281, Math 3221 or equiv, IT stu)
803778 –1 0815-0900 MTWThF, Arch 40, 4 cr
803781 –2 1015-1100 MTWThF, Arch 40, 4 cr
131531 –3 1415-1500 MTWThF, Arch 10, 4 cr

R3303 Applied Thermodynamics (§3305; prereq 3301 or equiv, upper division mech engr or aerospace engr maj)
831533 –1 0915-1000 MTWThF, Arch 40, 4 cr
631534 –2 1215-1300 MTWThF, Arch 10, 4 cr

R3701 Basic Measurements Laboratory I (prereq 3301 or ¶, upper division mech engr maj)
913623 1215-1300 T, Arch 50, 2 cr (Open lab ar, MechE 370-388)

R3702 Basic Measurements Laboratory II (prereq 3701, upper division mech engr maj)
713624 1215-1300 Th, Arch 50, 2 cr (Open lab ar, MechE 370-388)

R3741 Industrial Assignment (prereq regis in intern program)
712845 2 cr

R3742 Industrial Assignment (prereq 3741)
112848 2 cr

R3743 Industrial Assignment (prereq 3742)
513625 2 cr

R3900 Introduction to Engineering Statistics (prereq Math 1231 or equiv, IT stu)
501426 1315-1400 MWThF, MechE 302, 4 cr

R5190 Advanced Engineering Problems (prereq submission of approved departmental permission form)
101428 2-4 cr

R5205 Creativity in Engineering Design (prereq 3203, 3205, 3303, 5342 or equiv, IT stu or grad)
712831 1015-1100 MWF, CivMinE 213, 3-4 cr

R5207 Experimental Stress Analysis (prereq AEM 3016, IT upper division or grad)
314839 1215-1300 MWF, MechE 202, 4 cr (lab ar)

R5220 Computer Aided Design (prereq 3203, 3205, FORTRAN programming, IT stu or grad)
431535 0915-1000 MWThF, MechE 221, 4 cr (lab ar)

R5225 Finite Elements in Mechanical Design (prereq 3205, 5342, programming, IT stu or grad) (A-N only)
435780 1315-1800 M, AkerH 317, 4 cr

R5254 Design Morphology with Applications (prereq completion of sequences 3201/3203/3205, 3303/5342 or #, upper div mech engr maj)
★LECT 1315-1400 TTh, Arch 35
203803 –1 LAB 1415-1700 TTh, MechE 314, 4 cr
703806 –2 LAB 1415-1700 TTh, MechE 321, 4 cr
503810 –3 LAB 1415-1700 TTh, MechE 358, 4 cr
103812 –4 LAB 1415-1700 TTh, MechE 352, 4 cr
803814 –5 LAB 1415-1700 TTh, MechE 325, 4 cr
328269 –6 LAB 1515-1700 TTh, MechE 302, 4 cr
528271 –7 LAB 1415-1800 Th, Arch 15, 4 cr

R5255 Engineering Design Project (prereq 5254, upper division mech engr maj)
★LECT 1315-1400 TTh, MechE 221, 4 cr
410734 –1 LAB 1415-1700 TTh, MechE 327

R5260 Engineering Materials and Processing (prereq Phys 1291, Chem 1004, 1st yr calculus, upper division mech engr maj)
★LECT 1315-1400 MWF, MurH 308
103818 –1 REC 1415-1700 M, MechE 50, 4 cr
203820 –2 REC 0815-1100 T, MechE 50, 4 cr
103821 –3 REC 1415-1700 T, MechE 50, 4 cr
712828 –4 REC 1415-1700 W, MechE 50, 4 cr
113619 –5 REC 1415-1700 Th, MechE 50, 4 cr

R5262 Material Working and Fabrication Processes (prereq 5260, IT stu or grad)
410779 0915-1100 TTh, Arch 15, 4 cr

R5283 Industrial Instrumentation and Automatic Control (prereq 3201 or equiv, IT stu or grad)
911628 1115-1300 TTh, Arch 55, 4 cr

R5342 Heat Transfer (prereq 3301, CE 3400 or AEM 3200, IT upper division or grad)
931541 –1 0815-0900 MTWThF, MechE 221, 4 cr
731542 –2 1015-1100 MTWThF, MechE 221, 4 cr

R5402 Ecology, Technology and Society (§SSci 3402; prereq IT stu or grad)
301430 1115-1200 MWF, MurH 308, 4 cr

R5442 Vapor Cycle Power Systems (prereq 3303, IT stu or grad)
001432 0815-0900 MWF, MechE 302, 3-5 cr

R5446 An Introduction to Combustion (prereq 5342 or equiv, IT stu or grad)
601434 1015-1100 MWThF, MechE 321, 4 cr

R5460 Internal Combustion Engines (prereq 3301, IT stu or grad)
401435 1115-1200 MTWThF, MechE 321, 4 cr

R5462 Gas Turbines (prereq 3301, IT stu or grad)
201436 0915-1000 MTWThF, Arch 30, 4 cr

R5603 Thermal Environmental Engineering (prereq 8303, 5342 or equiv, IT stu or grad)
101437 1115-1200 MWThF, Arch 45, 4 cr

R5609 Air Pollution (prereq 3303 or #, IT stu or grad)
237580 1315-1400 MWThF, AkerH 225, 4 cr

R5612 Environmental Engineering (prereq IT upper division or grad)
701439 0815-1000 TTh, MechE 321, 4 cr

R5613 Principles of Particle Technology (prereq 3303, IT stu or grad)
901441 0815-1000 MW, LindH 303, 4 cr

R5703 Advanced Mechanical Engineering Laboratory (prereq 3702, sr)
610781 2 cr (Obtain experiment cards from MechE 121 prior to registering)

R5704 Advanced Mechanical Engineering Laboratory (prereq 5703)
313626 2 cr (Obtain experiment cards from MechE 121 prior to registering)

R5741 Industrial Assignment and Design Project (5741-5742†; prereq 3742)
110775 4 cr

R5742 Industrial Assignment and Design Project (5741-5742†; prereq 5741)
810777 4 cr

8330 Conduction (prereq 5342)
501443 0915-1000 MWF, LindH 217, 3 cr

8360 Introduction to Plasma Technology (prereq 5342 or #)
235781 0915-1000 MWF, MechE 351, 3 cr

8443 Thermochemical Analysis of Power Systems (prereq 3303)
101445 Fletcher, 3 cr

8485 Biomedical-Engineering Seminar (§Surg 8785)
801447 1515-1630 T, MoosT 2580, 1-3 cr

8486 Biomedical-Engineering Seminar (§Surg 8785; prereq 8485)
401449 1515-1630 T, MoosT 2580, 1-3 cr

8487 Biomedical-Engineering Seminar (§Surg 8785; prereq 8486)
601451 1515-1630 T, MoosT 2580, 1-3 cr

8770 Mechanical Engineering Research (prereq △)
201453 ar cr

8771 Mechanical Engineering Research (prereq 8770, △)
901455 ar cr

R8773 Graduate Seminar (S-N only)
501457 1515-1630 W, MechE 108, 212, 1 cr

8774 Graduate Seminar (prereq 8773) (S-N only)
101459 1515-1630 W, MechE 108, 212, 1 cr

8775 Graduate Seminar (prereq 8774) (S-N only)
301461 1515-1630 W, MechE 108, 212, 1 cr

MEDICAL TECHNOLOGY (MedT)
Medical School

1010 Orientation (prereq freshman) (S-N only)
300407 1115-1200 Th, MoosT 2520, Hovde, 1 cr

1030 Introduction to Clinical Medicine (prereq soph) (S-N only)
000409 1215-1300 T, MoosT 2520, Rausch, 1 cr

5063 Introduction to Urinalysis (prereq △)
★LECT 1215-1300 TTh, MoosT 2580, Harvey, 3 cr
109044 –1 LAB 1315-1600 M, MoosT 3331

5067 Hemostasis (prereq △)
★LECT 1215-1300 W, MoosT 2580, Swinehart, 2 cr
903853 –1 LAB 1315-1600 M, MoosT 3349
303856 –2 LAB 0915-1200 T, MoosT 3349

5082 Applied Clinical Chemistry (prereq 5111) (S-N only)
100411 4 cr

5085 Applied Clinical Hematology (prereq 5067, 5076) (S-N only)
800413 4 cr

5086 Applied Clinical Immunohematology (prereq 5066) (S-N only)
400415 4 cr

5088 Applied Diagnostic Microbiology (prereq 5102) (S-N only)
100417 4 cr

5090 Special Laboratory Methods (prereq #)
700419 2 cr

5092 Honors Program: Laboratory Methods (prereq #)
900421 5 cr

5095 Professional Aspects of Medical Technology (prereq △) (S-N only)
100425 1015-1100 Th, OwreH 2210, Karni, 1 cr

5120 Seminar
500423 1-3 cr

5125 Practicum: Teaching (max 3 cr)
000426 ar cr

5130 Practicum in Laboratory Administration (prereq #)
800427 3 cr

5135 Advanced Clinical Microbiology (prereq #)
400429 5 cr

5138 Seminar: Clinical Microbiology
600431 1115-1200 W, Mayo D230, ar cr

5140 Techniques for Teaching (prereq △)
235151 0915-1000 MWF, PWB 15194, Rausch, 3 cr

5145 Development of Medical Technology
200433 3 cr

5155 Advanced Clinical Hematology (prereq #)
900435 5 cr

5165 Advanced Clinical Immunohematology (prereq #)
500437 5 cr

5175 Advanced Clinical Chemistry (prereq #)
100439 5 cr

5179 Chemistry Seminar (prereq #)
300441 1 cr

MEDICINAL CHEMISTRY (MedC)
Pharmacy

5330 Therapeutic Agents II (prereq 5440) (A-N only)
901102 1115-1200 MTWTh, 1015-1200 F, MoosT 2530, Hanna, 5 cr

5600 General Principles of Medicinal Chemistry (prereq Phcl 1009, BioC 5001 or #) (A-N only)
135278 Portoghese, 3 cr

8100 Medicinal Chemistry Seminar
701103 1615-1800 T, MoosT 2520, Hanna, ar cr

8900 Research in Medicinal Chemistry (prereq Chem 3303 or #)
815736 ar cr

MEDICINE (Med)
Medical School

5500 Advanced Internal Medicine (prereq 5502)
000443 Ferris, 9 cr

5501 Medical Oncology Externship in Medicine
600445 Kennedy, 9 cr

5502 Medicine Externship I
200447 Ferris, 9 cr

5504 Medicine Externship
200450 Wang, 9 cr

5505 Infectious Disease Research at the University Hospital
900452 Sabath, 9 cr

5507 Medicine Subinternship in Hematology (prereq 5502, regis med student)
209181 Ferris, 9 cr

5509 Research in Rheumatology
500454 Messner, 9 cr

5511 Research in Gastroenterology
300455 Levitt, 9 cr

5512 Research in Hematology
000457 Jacob, 9 cr

5518 Research in Endocrinology (prereq regis med student)
600459 Oppenheimer, 9 cr

5521 Infectious Diseases, Clinical Aspects at the University Hospitals
800461 Sabath, 9 cr

5522 Medical Gastroenterology
600462 Olson, 9 cr

5523 Endocrinology, Metabolism, Clinical Pharmacology
300469 1515-1700 Th, MoosT 2520, Barbosa, 9 cr

5525 Cardiovascular Medicine
700470 Bache, 9 cr

5527 Contemporary Problems in Investigative Cardiology
500468 Bache, 9 cr

5528 Clinical Hematology
700467 Howe, 9 cr

5531 Clinical Rheumatology
900466 Hathaway, 4.5-9 cr

5532 Pulmonary Disease
200464 Kronenberg, 9 cr

5533 Clinical Allergy at University Hospitals
500471 Blumenthal, 4.5-9 cr

5542 Research in Pulmonary Disease
100473 Kronenberg, 9 cr

5548 Clinical Genetics
800475 King, 9 cr

5554 Fluid Electrolyte, Acid-Base Metabolism
600476 Ma, 9 cr

5556 Renal Diseases
200478 Ferris, 4.5-9 cr

5557 Research in Nephrology
100479 Ferris, ar cr

5562 Medical Nephrology
400480 Rao, 9 cr

5570 Clinical Medicine on the General Clinical Research Center
200481 Bantle, 9 cr

5571 Clinical Toxicology and Emergency Medicine (prereq regis med student)
636829 Mulhausen, 4.5 cr

5572 Ambulatory Adult, Geriatric Medicine at St. Paul Ramsey Hospital
100482 Spilane, 9 cr

5573 Externship in Geriatric Medicine at St. Paul-Ramsey Medical Center (prereq regis med)
900483 Irvine, 9 cr

5574 Critical Care in Internal Medicine at Hennepin County Medical Center (prereq 5502)
826249 Schultz, 9 cr

5575 Ambulatory Care Medicine at Hennepin County Medical Center (prereq 5502)
126250 Boss, 9 cr

5576 Externship in Geriatrics (prereq 5502)
235537 Miles, 9 cr

5583 Diagnosis, Evaluation, and Care of Adults and Children with Cancer
700484 Ramsey, 9 cr

5589 Medicine Externship II at St. Luke's Hospital, Duluth (prereq 5502)
500485 Goldish, 9 cr

5590 Preceptorships in Internal Medicine
300486 Howe, 9 cr

5591 Internal Medicine for the Ambulatory Outpatient (prereq 5502, regis med student)
135538 Howe, 9 cr

5592 Rural Physician Associate Program in Internal Medicine
100487 Howe, ar cr

5594 Psychiatry in Medicine: Consultation-Liason
800489 Popkin, 9 cr

5596 Occupational Health
109182 Johnson, 4.5 cr

5597 Research in Occupational Health
800492 Johnson, 9 cr

8201 Clinical Medicine
400494 Ferris, ar cr

8202 Clinical Conference
100496 Ferris, 1 cr

8203 Clinical Radiology Conference
700498 Ferris, 1 cr

8204 Pathology Conference
200500 Ferris, 1 cr

8205 Electrocardiographic Conference
900502 Tuna, 1 cr

8206 Nephrology Seminar
500504 Ferris, 3 cr

8209 Tumor Clinical Conference
100506 Kennedy, 1 cr

8210 Infectious Disease Seminar
800508 Sabath, ar cr

8211 Diseases of the Cardiovascular System
000510 Cohn, ar cr

8212 Diseases of the Chest
600512 Kronenberg, ar cr

8213 Diseases of the Kidney
200514 Ferris, ar cr

8214 Diseases of Diabetes, Endocrinology, Metabolism
900516 Oppenheimer, ar cr

8215 Diseases of Hematology
500518 Jacob, ar cr

8216 Diseases of Gastroenterology
700520 Wilson, ar cr

8217 Diseases of Oncology
300522 Kennedy, ar cr

8220 Research in Medicine
000524 Ferris, ar cr

8221 Topics in Medicine
800525 Ferris, ar cr

8223 Topics in Related Basic Science
600526 Ferris, ar cr

METALLURGICAL ENGINEERING (MetE)
Chem Engr, Materials Sci, Civil, Mineral Engr
Institute of Technology

5100 Chemical Metallurgy I (prereq Chem 1031, 1032, 5534 or #)
212758 0915-1000 MTWThF, Arch 20, Moore, Bitsianes, 4 cr

5500 Metallurgical Engineering Design I (prereq #)
112762 Smith, 4 cr

5502 Metallurgical Engineering Field Study (prereq #)
826252 Smith, 2 cr

5801 Mineral Processing II (prereq #)
★LECT 0815-0900 MWF, MRRC 211, Iwasaki, 4 cr
209584 –1 LAB 1315-1600 Th, MRRC 211, Smith

5900 Metallurgical Heat Transfer and Fluid Flow (prereq #)
412788 1215-1300 MTWF, MRRC 211, Schulz, 4 cr

5940 Special Problems in Extractive Metallurgical Engineering (prereq sr)
626253 Smith, 1-6 cr

8000 Applied Process Metallurgy I (prereq #)
212811 1615-1700 MWF, MRRC 211, Moore, 3 cr

8921 Research in Extractive Metallurgical Engineering (prereq #) (A-N only)
426254 Iwasaki, Moore, ar cr

8930 Physical Chemistry of High Temperature Metallurgical Reactions I (prereq #)
226255 1115-1230 TTh, CivMinE 213, Bitsianes, 3 cr

MICROBIOLOGY (MicB)
Medical School

R5105 Biology of Microorganisms (§3103, Biol 5013, VPB 3103; prereq 5 cr biological sciences, Biol 5001 or #)
★LECT 1015-1130 TTh, MoosT 2690, Crawford, 5 cr
408448 –1 LAB 1315-1500 TTh, MoosT 2252

5201 Microbiology for Dental Students
★LECT 0900-0945 MTWThF, MoosT 2690, Reilly, 7 cr (Sept 7-Nov 15)
208449 –1 LAB 1000-1200 TTh, MoosT 2252, (Sept 27-Nov 22)

R5216 Immunology (prereq Biol 5001)
★LECT 1415-1500 MWF, MoosT 2620, Schlievert, 4 cr
408451 –1 LAB 1515-1700 W, MoosT 2252

5218 Immunology (prereq Biol 5001)
700534 1415-1500 MWF, MoosT 2620, Schlievert, 3 cr

R5233 Microorganisms and Disease (not open to microbiology majs; prereq 10 cr chemistry, 5 cr biological sciences or #)
★LECT 1115-1200 MTWTh, MoosT 2620, Johnson
704003 –1 LAB 0915-1100 MWF, MoosT 2252, 7 cr
304005 –2 LAB 1315-1500 MWF, MoosT 2252, 7 cr

R5235 Microorganisms and Disease (not open to microbiology majs; prereq 10 cr chemistry, 5 cr biological sciences or #)
500535 1115-1200 MTWTh, MoosT 2620, Johnson, 4 cr

5611 Microbial Ecology (prereq general microbiology course, Biol 5001 or #)
400530 1315-1430 TTh, JacH 2135, Crawford, 4 cr

5900 Topics in Microbiology (S-N only)
200528 1515-1600 W, Mayo 1050, Rogers, 1 cr

TAKE A GRADUATE COURSE IN LEADERSHIP



If you have earned a Bachelor's Degree in technical fields like engineering, science, math and computers you've taken one giant step in building your future. But today, with our competitive job market, the person who has the edge is often the one with something extra. That something is leadership experience.

The 17-week Coast Guard Officer Candidate School (OCS) Program offers you the opportunity to receive post-graduate leadership training and be paid as you learn. Upon completing the course you'll put your training to immediate use with important leadership duties.

The Coast Guard is the smallest armed service with big global responsibilities. These include managing our coastal and inland waterways from Alaska to Puerto Rico; saving lives, protecting property and our maritime resources. As a leader you'll find the work rewarding, exciting and invaluable in priming yourself for success in the Coast Guard.

As the proud possessor of a Bachelor's Degree, a commission and leadership position you'll earn up to $18,000 for starters. And you can expect up to 40% in wage increases and promotions the first three years. When you consider the other benefits a Coast Guard officer receives, your compensation package is even more impressive:

- Free medical/dental care for service members
- Post-graduation studies often paid for
- Living quarters allowance
- Thirty days paid vacation per year
- Retirement after 20 years

Leaders are not born...they're made! Coast Guard OCS training can help you develop the confidence, poise, maturity and problem solving abilities you'll need to take command in today's hi-tech world. To apply, mail the attached coupon or call

Lt. Stephen Jackson

800-424-8883

except in Alaska, Hawaii or Washington, D.C.

COAST GUARD OCS
Commandant (G-PMR-1)
2100 2nd Street, SW, Washington, DC 20593

Please send me more information about the opportunities for men and women in the Coast Guard OCS program. Coast Guard O.C.S. ☐, Academy ☐, Coast Guard Reserve ☐, Regular Enlisted ☐.

Name_____ Age_____

Address_____ Apt. #_____

City_____ State_____ Zip_____

Phone_____

THE COAST GUARD.
AN ARMED SERVICE AND MORE.

5912 Introduction to Analytical Methods (prereq #)
100537 0900-1000 TTh, MoosT 18211, Wohlhueter, 2 cr

5970 Directed Studies (prereq #, △)
108453 Rogers, ar cr

5990 Directed Research (prereq #, △)
000538 Rogers, ar cr

5992 Practicum: Teaching (prereq #)
312721 1 cr

R8110 Biology of Microorganisms (prereq organic chemistry, biochemistry, general biology or #)
800539 1015-1130 TTh, MoosT 2580, Dworkin, 3 cr

8239 Preceptorship in Medical Microbiology (max 6 cr; prereq #)
100540 Prince, ar cr

R8910 Seminar (prereq #)
400544 1215-1300 W, MoosT 2520, Dworkin, 1 cr

8911 Colloquium in Microbiology
200545 1 cr

8990 Research in Microbiology
100546 Cleary, ar cr

MIDDLE EASTERN AND SOUTH ASIAN STUDIES (MESA)
South And Southwest Asian Studies
Liberal Arts

1536 The Religion of Islam (§RelS 1036)
237546 1115-1200 MWF, BlegH 245, Farah, 4 cr

3201 Ancient Indian Literature in Translation
137550 1215-1300 MWF, FolH 108, Munda, 4 cr

3541 History of the Arabs (§Hist 3541)
137547 0915-1000 MWF, BlegH 415, Farah, 4 cr

3556 Women in India: Role and Repression
137541 1115-1200 MWF, FolH 108, Junghare, 4 cr

5970 Directed Study (prereq #, △, CLA approval)
837543 ar cr

5990 Research (prereq #, △, CLA approval)
637544 ar cr

8990 Research (prereq #)
437545 ar cr

MILITARY SCIENCE (Mil)

R1011 World Military History (prereq △) (A-N only)
329034 0815-0900 TTh, Armory 116, Westhaus, 2 cr

R1021 U.S. International Perspectives: Analysis of the U.S. Military Role (prereq △) (A-N only)
129035 1415-1500 TTh, Armory 116A, Heffelfinger, 2 cr

R3131 Leadership Assessment and Training (prereq △, Leadership Laboratory) (A-N only)
113412 –1 0945-1100 TTh, Armory 116A, Deca, 3-4 cr
113420 –2 1130-1245 TTh, Armory 116A, Deca, 3-4 cr

R3141 Military Management, Ethics, and Professionalism (prereq △, Leadership Laboratory) (A-N only)
913430 –1 0945-1100 TTh, Armory 116, Pearson, 3 cr
213439 –2 1130-1245 TTh, Armory 116, Pearson, 3 cr

3970 Directed Studies (prereq #, △) (A-N only)
029036 1-3 cr

MINING ENGINEERING (MinE)
Civil And Mineral Engineering
Institute of Technology

5600 Mineral Exploration and Exploitation (prereq 3rd yr, IT stu or grad IT) (A-N only)
826350 0915-1000 MTWThF, CivMinE 213, 4 cr

R5619 Engineering Field Study (prereq sr or grad mineral or geological engineer or #) (A-N only)
101171 Smith, 3 cr (Sept 12-26)

R5630 Surface Mining Engineering (prereq 5620, IT stu or grad IT) (A-N only)
801173 1015-1100 MTW, 1215-1300 T, CivMinE 214, Dorenfeld, 4 cr

5660 Special Mineral Engineering Problems (prereq IT stu or grad IT maj) (A-N only)
313447 ar cr

5670 Drilling and Blasting Technology (prereq GeoE 3300, ME 3301 or #, IT stu) (A-N only)
908809 0915-1100 Th, CivMinE 214, Fairhurst, 2 cr

5680 Materials Handling (prereq CE 3400 or #)
626351 1315-1400 MWF, CivMinE 214, Hayes, 4 cr

8470 Research Problems (prereq #) (A-N only)
601174 ar cr

8601 Seminar: Mineral Engineering (prereq #) (S-N only)
201176 1515-1600 Th, CivMinE 212, ar cr

MORTUARY SCIENCE (Mort)
Health Sciences

R3001 Orientation in Funeral Services (A-N only)
201078 0915-1100 TTh, JOAd 2125, Mathews, 4 cr

R3040 Psychology of Funeral Service (prereq introductory course in general psychology) (A-N only)
137619 1215-1300 MWF, JOAd 2125, Burger, 3 cr

R3050 Restorative Art (prereq regis mortuary science) (A-N only)
★LECT 1115-1200 TTh, JacH 2153, Burger
704034 –1 LAB 0915-1200 M, JacH 2153B, Burger, 4 cr
504035 –2 LAB 0915-1200 W, JacH 2153B, Burger, 4 cr
104037 –3 LAB 0915-1200 F, JacH 2153B, Burger, 4 cr

3060 Embalming (prereq biology, human anatomy, regis in mortuary science or #) (A-N only)
435312 1315-1400 MWF, JOAd 2125, Stroud, 4 cr

3061 Embalming (prereq 3060) (A-N only)
★LECT 0915-1100 TTh, JacH 2153, Stroud, 4 cr
135314 –1 LAB 0915-1100 W, JacH 2153A, Stroud
935315 –2 LAB 0915-1100 F, JacH 2153A, Stroud
735316 –3 LAB 0915-1100 M, JacH 2153A, Stroud

R3062 Gross Human Anatomy (prereq biology, human anatomy, regis in mortuary science) (A-N only)
412855 –1 LAB 0915-1200 F, JacH 5147, Lee, 3 cr
212856 –2 LAB 0915-1200 M, JacH 5147, Lee, 3 cr
912858 –3 LAB 0915-1200 W, JacH 5147, Lee, 3 cr

R3070 Funeral Management (prereq regis mortuary science) (A-N only)
112860 1115-1200 MWF, JOAd 2125, Mathews, 3 cr

R3071 Funeral Management (prereq regis mortuary science) (A-N only)
★LECT 1015-1100 MWF, JOAd 2125, Mathews
912861 –1 LAB 0815-1000 W, JOAd 2125, Mathews, 4 cr
712862 –2 LAB 0815-1000 F, JOAd 2125, Mathews, 4 cr
512863 –3 LAB 0815-1000 M, JOAd 2125, Mathews, 4 cr

R3072 Funeral Management (prereq regis in mortuary science, 3071) (A-N only)
812867 1415-1500 MW, JOAd 2125, Slater, 2 cr

R3074 Funeral Service Laws and Rules (prereq regis in mortuary science) (A-N only)
612871 1315-1500 Th, JOAd 2125, Stroud, Grayson, 2 cr

3080 Practicum in Funeral Service (prereq 3001, 3010, 3030, 3040, 3050, 3060, 3061, 3070, 3071, 3270, 3271, LaMP 3050, min of (S-N only)
714367 15 cr

R3090 Independent Study (prereq sr)
401080 Burger, Stroud, others, 1 cr

R3270 Seminar: Funeral Management (prereq regis mortuary science) (S-N only)
708813 1315-1500 T, MMA 125, Slater, 2 cr

MUSIC (Mus)
Music
Liberal Arts

R1001 Fundamentals of Music (prereq nonmus maj)
604057 –1 0815-0900 MWF, WullH 320, Byrne, 4 cr
913735 –2 1115-1200 MWF, WullH 320, 4 cr
404061 –3 1315-1400 MWF, WullH 320, 4 cr

R1021 Introduction to Music (§3021)
935279 1215-1300 MTWThF, ScottH 108, Sutton, 5 cr

R1051 Piano Class for Non-Music Majors
615432 –1 1315-1400 MW, MusEd 200, 2 cr
215434 –2 1415-1500 MW, MusEd 200, 2 cr
915436 –3 1515-1600 MW, MusEd 200, 2 cr

R1151 Piano: Class Lessons (prereq mus maj)
304067 –1 0815-0900 MW, MusEd 200, Arrau, 2 cr (written permission required)
304070 –2 1015-1100 MW, MusEd 200, Arrau, 2 cr
104071 –3 1115-1200 MW, MusEd 200, Arrau, 2 cr

R1160 Voice: Class Lessons
730939 –1 1215-1300 MW, ScottH 4, 2 cr
208998 –2 1315-1400 MW, ScottH 19, 2 cr
608996 –3 1415-1500 MW, ScottH 19, 2 cr
108999 –4 1215-1300 TTh, ScottH 4, 2 cr
235280 –5 1315-1400 TTh, ScottH 19, 2 cr

1330 Jazz Improvisation (max 12 cr; prereq audition, #)
813761 –1 1215-1300 TTh, NMA 5, Buckner, 2 cr
413763 –2 1315-1400 TTh, NMA 5, Buckner, 2 cr

1340 Jazz Ensemble (max 6 cr; prereq audition, #)
613776 –1 1315-1400 MW, NMA 4, Bencriscutto, 1 cr
213778 –2 1115-1300 TTh, NMA 4, Bencriscutto, 1 cr
413780 –3 1315-1400 TTh, NMA 4, Bencriscutto, 1 cr
135281 –4 1715-1800 TTh, NMA 4, Bencriscutto, 1 cr

R1351 Jazz Class Piano (prereq 1153 or #)
113815 1215-1300 MW, MusEd 200, Buckner, 2 cr

1410 Band (prereq #)
030946 1515-1700 MTWThF, NMA 4, 5, Bencriscutto, Sanford, 1 cr

1420 Orchestra (prereq #)
430949 1515-1700 MTTh, WullH 320, Massmann, 1 cr

1430 University Chorus, Concert Choir, Women's Chorus, Men's Chorus, St. Paul Campus Chorus (prereq #)
104077 –1 1115-1200 MWF, NMA 5, 1900-2130 T, SciCB 325, Jorgenson, 1 cr
104080 –2 1315-1400 MWF, NMA 5, 1900-2130 T, SciCB 325, Jorgenson, 1 cr
704082 –3 1215-1300 MWF, NMA 5, Jorgenson, 1 cr (Men's Chorus)

1440 Ensemble (prereq #)
630951 –1 1 cr (Guitar)
935282 –2 1 cr (Harp)
735283 –3 1 cr (Piano)
535284 –4 1 cr (Strings)
335285 –5 1 cr

R1501 Theory I (prereq freshman theory entrance exam, acceptance in x2xx mode in applied music, △)
◆604088 –1 LECT 1215-1300 TTh, WullH 30, Lubet, 3 cr
◆804090 –2 LECT 1215-1300 WF, WullH 30, Lubet, 3 cr
404092 –1 REC 0815-0900 WF, ScottH 2
104094 –2 REC 0915-1000 WF, ScottH 2
704096 –3 REC 1015-1100 WF, ScottH 2
504097 –4 REC 1115-1200 WF, ScottH 2

R1511 Ear-Training and Sight-Singing I (prereq freshman theory entrance exam, acceptance in x2xx mode in applied music, △)
104099 –1 0815-0900 TTh, ScottH 2, 1 cr
704101 –2 0915-1000 TTh, ScottH 2, 1 cr
304103 –3 1015-1100 TTh, ScottH 2, 1 cr
004105 –4 1115-1200 TTh, ScottH 2, 1 cr
604107 –5 1215-1300 TTh, ScottH 2, 1 cr

R1514 Ear-Training and Sight-Singing II (prereq 1513)
204109 –1 0815-0900 TTh, ScottH 3, 1 cr
404111 –2 0815-0900 TTh, ScottH 103, 1 cr
104113 –3 1115-1200 TTh, ScottH 4, 1 cr
704115 –4 1215-1300 TTh, ScottH 3, 1 cr
304117 –5 1315-1400 TTh, WullH 7, 1 cr

1604 History of Western Music (prereq 1603)
930955 0915-1100 TTh, ScottH 108, Laudon, 3 cr

3029 Music in the 20th Century
135300 1015-1200 TTh, ScottH 19, Jackson, 4 cr

3440 Ensemble (prereq #)
530957 –1 1 cr (Guitar)
135286 –2 1 cr (Harp)
035287 –3 1 cr (Piano)
835288 –4 1 cr (Strings)
635289 –5 1 cr

R3501 Theory IV (prereq 1503)
♦104121 –1 LECT 1115-1200 TTh, WullH 30, Damschroder, 3 cr
♦804123 –2 LECT 1115-1200 WF, WullH 30, Damschroder, 3 cr
404125 –1 REC 0815-0900 WF, ScottH 3
104127 –2 REC 0915-1000 WF, ScottH 3
704129 –3 REC 1015-1100 WF, WullH 30
904131 –4 REC 1215-1300 WF, ScottH 3

3504 Theory VII (prereq 3503)
130959 0915-1000 MTWTh, WullH 30, Kagan, 3 cr

3550 Composition (max 12 cr; prereq 1506, #)
104135 –1 Argento, 2 cr
804137 –2 Fetler, 2 cr
404139 –3 0915-1200 F, ScottH 108, Stokes, 2 cr

R3791 Introduction to Electronic Music (prereq 4 cr in mus or #)
530960 1515-1700 TTh, ScottH 19, Stokes, 4 cr

3970 Directed Studies (prereq #, △, college approval)
230967 1-15 cr

3980 Directed Teaching (prereq #, △, college approval)
130968 1-4 cr

5182 Baroque Performance Practices (prereq sr or grad, 1506, 1606 or #)
613745 0915-1100 MW, WullH 7A, McClary, 4 cr

5330 Jazz Improvisation (max 12 cr; prereq 12 cr of 1330 or audition)
713767 –1 1215-1300 TTh, NMA 5, Buckner, 2 cr
513771 –2 1315-1400 TTh, NMA 5, Buckner, 2 cr

5340 Jazz Ensemble (prereq 6 cr of 1340 or audition by instructor)
113782 –1 1315-1400 MW, NMA 4, Bencriscutto, 1 cr
713784 –2 1115-1300 TTh, NMA 4, Bencriscutto, 1 cr
013788 –3 1315-1400 TTh, NMA 4, Bencriscutto, 1 cr
035290 –4 1715-1800 TTh, NMA 4, Bencriscutto, 1 cr

5351 Piano Pedagogy I (prereq 12 cr 1101 or 1201 or 1301 or 5153 or #)
230970 0915-1100 T, MusEd 200, Arrau, 2 cr

5360 Woodwind Ensemble (prereq audition)
530974 1115-1300 F, ScottH 19, Anderson, 1 cr

R5371 Diction for Singers (prereq 12 cr of MusA 1204 or #)
030977 1515-1700 Th, WullH 30, Weller, 2 cr

R5377 The Adolescent Singing Voice (prereq 3xxx clearance in voice for vocal maj or 6 cr of applied voice for non-vocal maj)
830978 1515-1700 T, WullH 7A, Jorgenson, 3 cr

R5380 Brass Choir (prereq #)
104149 –1 1115-1300 TTh, WullH 320, Baldwin, 1 cr
304151 –2 0915-1100 F, WullH 320, Baldwin, 1 cr

R5387 Instrumental Conducting (prereq #)
515438 1215-1400 MW, WullH 330, Massmann, 4 cr

5399 Performance in Conducting (prereq 5388 or 5385, #)
630979 Lancaster, 4 cr

5410 Band (prereq #)
830981 1515-1700 MTWThF, NMA 4, 5, Bencriscutto, Sanford, 1 cr

5420 Orchestra (prereq #)
630982 1515-1700 MTTh, WullH 320, Massmann, 1 cr

5430 University Chorus, Concert Choir, Women's Chorus, Men's Chorus, St. Paul Campus Chorus (prereq #)
104152 –1 1115-1200 MWF, NMA 5, 1900-2130 T, SciCB 325, Jorgenson, 1 cr
804154 –2 1315-1400 MWF, NMA 5, 1900-2130 T, SciCB 325, Jorgenson, 1 cr
404156 –3 1215-1300 MWF, NMA 5, Jorgenson, 1 cr (Men's Chorus)

R5440 Ensemble (prereq #)
513737 –1 1 cr (Guitar)
513740 –2 1 cr (Harp)
835291 –3 1 cr (Piano)
635292 –4 1 cr (Strings)
435293 –5 1 cr (Minnesingers)
235294 –6 1 cr

5450 Collegium Musicum (prereq #)
013807 McClary, 1 cr

5460 Contemporary Music Ensemble (prereq #)
230922 1315-1600 F, ScottH 108, Stokes, 2 cr

5470 Opera Workshop (prereq #)
135295 0915-1100 MWF, Sutton, 3 cr 429 Ontario S.E.,

5490 Chamber Singers (prereq audition)
130923 1515-1700 MWF, WullH 30, Lancaster, 1 cr

5521 Keyboard Harmony (prereq 1506, sr or grad)
930924 1215-1300 TTh, MusEd 200, Billmeyer, 2 cr

5531 Analysis I (prereq 1506)
130928 1015-1200 M, 1015-1100 W, ScottH 3, Damschroder, 3 cr

5540 Jazz Composition, Arranging (prereq 1506, #)
413813 Bencriscutto, 2 cr

5550 Composition I (max 12 cr; prereq 1506, #)
804168 –1 Argento, 2 cr
004170 –2 Fetler, 2 cr
804171 –3 0915-1200 F, ScottH 108, Stokes, 2 cr

R5561 Orchestration (prereq 1506)
030932 1415-1500 MW, ScottH 3, Argento, 2 cr

R5601 History of Opera (prereq 9 cr in history of music, art, theatre or European history from 1600 or #)
430935 1315-1400 MTW, ScottH 3, Argento, 3 cr

5634 Baroque Era (prereq 1606)
935296 1015-1200 TTh, WullH 7A, McClary, 4 cr

5641 Romantic Concert Music (prereq 1606 or #)
735297 1315-1500 MW, ScottH 103, Laudon, 4 cr

5741 Vocal Literature (prereq 12 cr in 1104 or 1204 or 1304 or #)
535298 0915-1100 TTh, WullH 320, Sutton, 4 cr

5747 Organ Literature (prereq grad organ, musicology students, sr #)
836991 1415-1600 TTh, ScottH 3, 2 cr

5810 Asian Music: Performance (prereq #)
813811 Kagan, 2 cr

5841 Music Bibliography (prereq 1606 or #)
230936 1015-1200 WF, WaLib 102, Holum, 4 cr

5863 Musical Instruments of World
335299 1315-1500 TTh, ScottH 103, Kagan, 4 cr

8537 Score Study (Choral) (prereq grad student, #)
812688 1230-1400 MWF, WullH 7A, Lancaster, 4 cr

8550 Composition (max 18 cr;prereq compl undergrad maj seq in mus theory, comp incl 3543,5503,5553,5563 or #)
304182 –1 Argento, 3 cr
604186 –2 Fetler, 3 cr
404190 –3 0915-1200 F, ScottH 108, Stokes, 3 cr

8844 Seminar: Advanced Research in Music
130937 1015-1200 MW, ScottH 103, Jackson, 4 cr

8990 Special Problems (prereq △)
930938 2-12 cr

MUSIC APPLIED (MusA)
Music
Liberal Arts

See Section 4, Course Fees, for MusA course fees. **These fees are in addition to tuition and are assessed at registration.**

1101 Piano, Elective (prereq audition, △)
726728 2-4 cr

1102 Harpsichord, Elective (prereq audition, △)
526729 2-4 cr

1103 Organ, Elective (prereq audition, △)
926730 2-4 cr

1104 Voice, Elective (prereq audition, △)
726731 2-4 cr

1105 Violin, Elective (prereq audition, △)
526732 2-4 cr

1106 Viola, Elective (prereq audition, △)
326733 2-4 cr

1107 Cello, Elective (prereq audition, △)
126734 2-4 cr

1108 Double Bass, Elective (prereq audition, △)
026735 2-4 cr

1109 Flute, Elective (prereq audition, △)
826736 2-4 cr

1111 Oboe, Elective (prereq audition, △)
626737 2-4 cr

1112 Clarinet, Elective (prereq audition, △)
426738 2-4 cr

1113 Saxophone, Elective (prereq audition, △)
226739 2-4 cr

1114 Bassoon, Elective (prereq audition, △)
626740 2-4 cr

1115 French Horn, Elective (prereq audition, △)
426741 2-4 cr

1116 Trumpet, Elective (prereq audition, △)
226742 2-4 cr

1117 Trombone, Elective (prereq audition, △)
126743 2-4 cr

1118 Baritone, Elective (prereq audition, △)
926744 2-4 cr

1119 Tuba, Elective (prereq audition, △)
726745 2-4 cr

1121 Percussion, Elective (prereq audition, △)
326747 2-4 cr

1122 Harp, Elective (prereq audition, △)
526746 2-4 cr

1123 Guitar, Elective (prereq audition, △)
126748 2-4 cr

1124 Accordion, Elective (prereq audition, △)
026749 2-4 cr

1125 Sitar, Elective (prereq audition, △)
126751 2-4 cr

1201 Piano, Principal (prereq audition, △)
226756 2-4 cr

1202 Harpsichord, Principal (prereq audition, △)
126757 2-4 cr

1203 Organ, Principal (prereq audition, △)
926758 2-4 cr

1204 Voice, Principal (prereq audition, △)
726759 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

1205 Violin, Principal (prereq audition, △)
126760 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1206 Viola, Principal (prereq audition, △)
926761 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1207 Cello, Principal (prereq audition, △)
726762 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1208 Double Bass, Principal (prereq audition, △)
326764 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1209 Flute, Principal (prereq audition, △)
126765 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1211 Oboe, Principal (prereq audition, △)
026766 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1212 Clarinet, Principal (prereq audition, △)
626768 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1213 Saxophone, Principal (prereq audition, △)
426769 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1214 Bassoon, Principal (prereq audition, △)
826770 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1215 French Horn, Principal (prereq audition, △)
626771 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1216 Trumpet, Principal (prereq audition, △)
426772 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1217 Trombone, Principal (prereq audition, △)
226773 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1218 Baritone, Principal (prereq audition, △)
126774 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1219 Tuba, Principal (prereq audition, △)
926775 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1221 Percussion, Principal (prereq audition, △)
726776 2-4 cr

1222 Harp, Principal (prereq audition, △)
526777 2-4 cr

1223 Guitar, Principal (prereq audition, △)
126779 2-4 cr

1301 Piano, Major (prereq audition, △)
526780 2-4 cr

1302 Harpsichord, Major (prereq audition, △)
326781 2-4 cr

1303 Organ, Major (prereq audition, △)
126782 2-4 cr

1304 Voice, Major (prereq audition, △)
026783 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

1305 Violin, Major (prereq audition, △)
626785 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1306 Viola, Major (prereq audition, △)
426786 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1307 Cello, Major (prereq audition, △)
226787 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1308 Double Bass, Major (prereq audition, △)
126788 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1309 Flute, Major (prereq audition, △)
926789 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1311 Oboe, Major (prereq audition, △)
226790 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1312 Clarinet, Major (prereq audition, △)
126791 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1313 Saxophone, Major (prereq audition, △)
926792 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1314 Bassoon, Major (prereq audition, △)
526794 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1315 French Horn, Major (prereq audition, △)
126796 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1316 Trumpet, Major (prereq audition, △)
826798 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1317 Trombone, Major (prereq audition, △)
326800 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1318 Baritone, Major (prereq audition, △)
026802 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1319 Tuba, Major (prereq audition, △)
626804 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1321 Percussion, Major (prereq audition, △)
926811 2-4 cr

1322 Harp, Major (prereq audition, △)
526813 2-4 cr

1323 Guitar, Major (prereq audition, △)
326814 2-4 cr

1401 Piano, Secondary Required (max 12 cr; prereq mus maj, △)
126815 2-4 cr

1402 Harpsichord, Secondary Required (max 12 cr; prereq mus maj, △)
026816 2-4 cr

1403 Organ, Secondary Required (max 12 cr; prereq mus maj, △)
826817 2-4 cr

1404 Voice, Secondary Required (max 12 cr; prereq mus maj, △)
626818 2-4 cr

1405 Violin, Secondary Required (max 12 cr; prereq mus maj, △)
426819 2-4 cr

1406 Viola, Secondary Required (max 12 cr; prereq mus maj, △)
826820 2-4 cr

1407 Cello, Secondary Required (max 12 cr; prereq mus maj, △)
626821 2-4 cr

1408 Double Bass, Secondary Required (max 12 cr; prereq mus maj, △)
426822 2-4 cr

1409 Flute, Secondary Required (max 12 cr; prereq mus maj, △)
226823 2-4 cr

1411 Oboe, Secondary Required (max 12 cr; prereq mus maj, △)
126824 2-4 cr

1412 Clarinet, Secondary Required (max 12 cr; prereq mus maj, △)
726826 2-4 cr

1413 Saxophone, Secondary Required (max 12 cr; prereq mus maj, △)
326828 2-4 cr

1414 Bassoon, Secondary Required (max 12 cr; prereq mus maj, △)
526830 2-4 cr

1415 French Horn, Secondary Required (max 12 cr; prereq mus maj, △)
126832 2-4 cr

1416 Trumpet, Secondary Required (max 12 cr; prereq mus maj, △)
026833 2-4 cr

1417 Trombone, Secondary Required (max 12 cr; prereq mus maj, △)
826834 2-4 cr

1418 Baritone, Secondary Required (max 12 cr; prereq mus maj, △)
426836 2-4 cr

1419 Tuba, Secondary Required (max 12 cr; prereq mus maj, △)
126838 2-4 cr

1421 Percussion, Secondary Required (max 12 cr; prereq mus maj, △)
226840 2-4 cr

1422 Harp, Secondary Required (max 12 cr; prereq mus maj, △)
926842 2-4 cr

1423 Guitar, Secondary Required (max 12 cr; prereq mus maj, △)
526844 2-4 cr

1501 Piano, Secondary Elective (max 12 cr; prereq mus maj, △)
126846 2-4 cr

1502 Harpsichord, Secondary Elective (max 12 cr; prereq mus maj, △)
826848 2-4 cr

1503 Organ, Secondary Elective (max 12 cr; prereq mus maj, △)
626849 2-4 cr

1504 Voice, Secondary Elective (max 12 cr; prereq mus maj, △)
026850 2-4 cr

1505 Violin, Secondary Elective (max 12 cr; prereq mus maj, △)
826851 2-4 cr

1506 Viola, Secondary Elective (max 12 cr; prereq mus maj, △)
626852 2-4 cr

1507 Cello, Secondary Elective (max 12 cr; prereq mus maj, △)
426853 2-4 cr

1508 Double Bass, Secondary Elective (max 12 cr; prereq mus maj, △)
226854 2-4 cr

1509 Flute, Secondary Elective (max 12 cr; prereq mus maj, △)
126855 2-4 cr

1511 Oboe, Secondary Elective (max 12 cr; prereq mus maj, △)
726857 2-4 cr

1512 Clarinet, Secondary Elective (max 12 cr; prereq mus maj, △)
526858 2-4 cr

1513 Saxophone, Secondary Elective (max 12 cr; prereq mus maj, △)
326859 2-4 cr

1514 Bassoon, Secondary Elective (max 12 cr; prereq mus maj, △)
726860 2-4 cr

1515 French Horn, Secondary Elective (max 12 cr; prereq mus maj, △)
526861 2-4 cr

1516 Trumpet, Secondary Elective (max 12 cr; prereq mus maj, △)
326862 2-4 cr

1517 Trombone, Secondary Elective (max 12 cr; prereq mus maj, △)
126863 2-4 cr

1518 Baritone, Secondary Elective (max 12 cr; prereq mus maj, △)
026864 2-4 cr

1519 Tuba, Secondary Elective (max 12 cr; prereq mus maj, △)
826865 2-4 cr

1521 Percussion, Secondary Elective (max 12 cr; prereq mus maj, △)
626866 2-4 cr

1522 Harp, Secondary Elective (max 12 cr; prereq mus maj, △)
426867 2-4 cr

1523 Guitar, Secondary Elective (max 12 cr; prereq mus maj, △)
226868 2-4 cr

1601 Piano, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
126869 2-4 cr

1602 Harpsichord, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
426870 2-4 cr

1603 Organ, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
226871 2-4 cr

1604 Voice, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
126872 2-4 cr

1605 Violin, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
926873 2-4 cr

1606 Viola, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
726874 2-4 cr

1607 Cello, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
526875 2-4 cr

1608 Double Bass, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
326876 2-4 cr

1609 Flute, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
126877 2-4 cr

1611 Oboe, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
026878 2-4 cr

1612 Clarinet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
826879 2-4 cr

1613 Saxophone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
126880 2-4 cr

1614 Bassoon, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
026881 2-4 cr

1615 French Horn, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
626883 2-4 cr

1616 Trumpet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
426884 2-4 cr

1617 Trombone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
226885 2-4 cr

1618 Baritone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
126886 2-4 cr

1619 Tuba, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
926887 2-4 cr

1621 Percussion, Principal Beyond Requirement (max 12 cr; prereq mus maj, Δ)
526889 2-4 cr

1622 Harp, Principal Beyond Requirement (max 12 cr; prereq mus maj, Δ)
926890 2-4 cr

1623 Guitar, Principal Beyond Requirement (max 12 cr; prereq mus maj, Δ)
726891 2-4 cr

1701 Piano, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
526892 2-4 cr

1702 Harpsichord, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
326893 2-4 cr

1703 Organ, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
126894 2-4 cr

1704 Voice, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
026895 2-4 cr

1705 Violin, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
826896 2-4 cr

1706 Viola, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
626897 2-4 cr

1707 Cello, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
426898 2-4 cr

1708 Double Bass, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
226899 2-4 cr

1709 Flute, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
026900 2-4 cr

1711 Oboe, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
826901 2-4 cr

1712 Clarinet, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
626902 2-4 cr

1713 Saxophone, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
426903 2-4 cr

1714 Bassoon, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
226904 2-4 cr

1715 French Horn, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
126905 2-4 cr

1716 Trumpet, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
926906 2-4 cr

1717 Trombone, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
726907 2-4 cr

1718 Baritone, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
526908 2-4 cr

1719 Tuba, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
726910 2-4 cr

1721 Percussion, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
526911 2-4 cr

1722 Harp, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
326912 2-4 cr

1723 Guitar, Major Beyond Requirement (max 12 cr; prereq mus maj, Δ)
026914 2-4 cr

3101 Piano, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
826915 2-4 cr

3102 Harpsichord, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
426917 2-4 cr

3103 Organ, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
226918 2-4 cr

3104 Voice, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
126919 2-4 cr

3105 Violin, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
426920 2-4 cr

3106 Viola, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
226921 2-4 cr

3107 Cello, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
126922 2-4 cr

3108 Double Bass, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
926923 2-4 cr

3109 Flute, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
726924 2-4 cr

3111 Oboe, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
526925 2-4 cr

3112 Clarinet, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
126927 2-4 cr

3113 Saxophone, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
026928 2-4 cr

3114 Bassoon, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
126930 2-4 cr

3115 French Horn, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
026931 2-4 cr

3116 Trumpet, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
626933 2-4 cr

3117 Trombone, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
426934 2-4 cr

3118 Baritone, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
226935 2-4 cr

3119 Tuba, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
926937 2-4 cr

3121 Percussion, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
726938 2-4 cr

3122 Harp, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
526939 2-4 cr

3123 Guitar, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
926940 2-4 cr

3124 Accordion, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
726941 2-4 cr

3125 Sitar, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
526942 2-4 cr

3201 Piano, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
326943 2-4 cr

3202 Harpsichord, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
126944 2-4 cr

3203 Organ, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
026945 2-4 cr

3204 Voice, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
626947 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

3205 Violin, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
226949 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3206 Viola, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
626950 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3207 Cello, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
426951 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3208 Double Bass, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
226952 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3209 Flute, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
126953 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3211 Oboe, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
926954 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3212 Clarinet, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
726955 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3213 Saxophone, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
026959 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3214 Bassoon, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
126961 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3215 French Horn, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
826963 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3216 Trumpet, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
626964 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3217 Trombone, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
426965 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3218 Baritone, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
226966 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3219 Tuba, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
126967 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3221 Percussion, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
926968 2-4 cr

3222 Harp, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
726969 2-4 cr

3223 Guitar, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
126970 2-4 cr

3301 Piano, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
926971 2-4 cr

3302 Harpsichord, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
726972 2-4 cr

3303 Organ, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, Δ)
526973 2-4 cr

3304 Voice, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
326974 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

3305 Violin, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
126975 1415-1500 Th, WullH 30, 2-4 cr (addnl hrs ar)

3306 Voila, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
026976 1415-1500 Th, WullH 30, 2-4 cr (addnl hrs ar)

3307 Cello, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
826977 1415-1500 Th, WullH 30, 2-4 cr (addnl hrs ar)

3308 Double Bass, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
626978 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3309 Flute, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
426979 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3311 Oboe, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
826980 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3312 Clarinet, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
626981 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3313 Saxophone, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
426982 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3314 Bassoon, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
226983 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3315 French Horn, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
126984 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3316 Trumpet, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
926985 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3317 Trombone, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
726986 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3318 Baritone, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
526987 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3319 Tuba, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
326988 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3321 Percussion, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
126989 2-4 cr

3322 Harp, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
526990 2-4 cr

3323 Guitar, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
326991 2-4 cr

3401 Piano, Secondary Required (max 12 cr; prereq mus maj, △)
126992 2-4 cr

3402 Harpsichord, Secondary Required (max 12 cr; prereq mus maj, △)
026993 2-4 cr

3403 Organ, Secondary Required (max 12 cr; prereq mus maj, △)
826994 2-4 cr

3404 Voice, Secondary Required (max 12 cr; prereq mus maj, △)
626995 2-4 cr

3405 Violin, Secondary Required (max 12 cr; prereq mus maj, △)
426996 2-4 cr

3406 Viola, Secondary Required (max 12 cr; prereq mus maj, △)
226997 2-4 cr

3407 Cello, Secondary Required (max 12 cr; prereq mus maj, △)
126998 2-4 cr

3408 Double Bass, Secondary Required (max 12 cr; prereq mus maj, △)
926999 2-4 cr

3409 Flute, Secondary Required (max 12 cr; prereq mus maj, △)
827000 2-4 cr

3411 Oboe, Secondary Required (max 12 cr; prereq mus maj, △)
627001 2-4 cr

3412 Clarinet, Secondary Required (max 12 cr; prereq mus maj, △)
427002 2-4 cr

3413 Saxophone, Secondary Required (max 12 cr; prereq mus maj, △)
227003 2-4 cr

3414 Bassoon, Secondary Required (max 12 cr; prereq mus maj, △)
127004 2-4 cr

3415 French Horn, Secondary Required (max 12 cr; prereq mus maj, △)
927005 2-4 cr

3416 Trumpet, Secondary Required (max 12 cr; prereq mus maj, △)
727006 2-4 cr

3417 Trombone, Secondary Required (max 12 cr; prereq mus maj, △)
527007 2-4 cr

3418 Baritone, Secondary Required (max 12 cr; prereq mus maj, △)
327008 2-4 cr

3419 Tuba, Secondary Required (max 12 cr; prereq mus maj, △)
127009 2-4 cr

3421 Percussion, Secondary Required (max 12 cr; prereq mus maj, △)
527010 2-4 cr

3422 Harp, Secondary Required (max 12 cr; prereq mus maj, △)
327011 2-4 cr

3423 Guitar, Secondary Required (max 12 cr; prereq mus maj, △)
127012 2-4 cr

3501 Piano, Secondary Elective (max 12 cr; prereq mus maj, △)
027013 2-4 cr

3502 Harpsichord, Secondary Elective (max 12 cr; prereq mus maj, △)
827014 2-4 cr

3503 Organ, Secondary Elective (max 12 cr; prereq mus maj, △)
627015 2-4 cr

3504 Voice, Secondary Elective (max 12 cr; prereq mus maj, △)
427016 2-4 cr

3505 Violin, Secondary Elective (max 12 cr; prereq mus maj, △)
227017 2-4 cr

3506 Viola, Secondary Elective (max 12 cr; prereq mus maj, △)
127018 2-4 cr

3507 Cello, Secondary Elective (max 12 cr; prereq mus maj, △)
927019 2-4 cr

3508 Double Bass, Secondary Elective (max 12 cr; prereq mus maj, △)
227020 2-4 cr

3509 Flute, Secondary Elective (max 12 cr; prereq mus maj, △)
127021 2-4 cr

3511 Oboe, Secondary Elective (max 12 cr; prereq mus maj, △)
927022 2-4 cr

3512 Clarinet, Secondary Elective (max 12 cr; prereq mus maj, △)
727023 2-4 cr

3513 Saxophone, Secondary Elective (max 12 cr; prereq mus maj, △)
527024 2-4 cr

3514 Bassoon, Secondary Elective (max 12 cr; prereq mus maj, △)
327025 2-4 cr

3515 French Horn, Secondary Elective (max 12 cr; prereq mus maj, △)
127026 2-4 cr

3516 Trumpet, Secondary Elective (max 12 cr; prereq mus maj, △)
027027 2-4 cr

3517 Trombone, Secondary Elective (max 12 cr; prereq mus maj, △)
827028 2-4 cr

3518 Baritone, Secondary Elective (max 12 cr; prereq mus maj, △)
627029 2-4 cr

3519 Tuba, Secondary Elective (max 12 cr; prereq mus maj, △)
027030 2-4 cr

3521 Percussion, Secondary Elective (max 12 cr; prereq mus maj, △)
827031 2-4 cr

3522 Harp, Secondary Elective (max 12 cr; prereq mus maj, △)
627032 2-4 cr

3523 Guitar, Secondary Elective (max 12 cr; prereq mus maj, △)
427033 2-4 cr

3601 Piano, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
127035 2-4 cr

3602 Harpsichord, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
727037 2-4 cr

3603 Organ, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
327039 2-4 cr

3604 Voice, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
727040 2-4 cr

3605 Violin, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
527041 2-4 cr

3606 Viola, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
327042 2-4 cr

3607 Cello, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
027044 2-4 cr

3608 Double Bass, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
627046 2-4 cr

3609 Flute, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
227048 2-4 cr

3611 Oboe, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
127049 2-4 cr

3612 Clarinet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
427050 2-4 cr

3613 Saxophone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
227051 2-4 cr

3614 Bassoon, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
927053 2-4 cr

3615 French Horn, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
527055 2-4 cr

3616 Trumpet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
127057 2-4 cr

3617 Trombone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
027058 2-4 cr

3618 Baritone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
827059 2-4 cr

3619 Tuba, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
027061 2-4 cr

3621 Percussion, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
627063 2-4 cr

3622 Harp, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
227065 2-4 cr

3623 Guitar, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
927067 2-4 cr

3701 Piano, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
527069 2-4 cr

3702 Harpsichord, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
727071 2-4 cr

3703 Organ, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
527072 2-4 cr

3704 Voice, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
127074 2-4 cr

3705 Violin, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
827076 2-4 cr

3706 Viola, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
427078 2-4 cr

3707 Cello, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
627080 2-4 cr

3708 Double Bass, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
227082 2-4 cr

3709 Flute, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
927084 2-4 cr

3711 Oboe, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
527086 2-4 cr

3712 Clarinet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
127088 2-4 cr

3713 Saxophone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
327090 2-4 cr

3714 Bassoon, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
127091 2-4 cr

3715 French Horn, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
027092 2-4 cr

3716 Trumpet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
827093 2-4 cr

3717 Trombone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
627094 2-4 cr

3718 Baritone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
427095 2-4 cr

3719 Tuba, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
227096 2-4 cr

3721 Percussion, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
927098 2-4 cr

3722 Harp, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
427100 2-4 cr

3723 Guitar, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
127102 2-4 cr

3801 Piano, Minor (prereq audition, △)
008669 2-4 cr

3802 Harpsichord, Minor (prereq audition, △)
308670 2-4 cr

3803 Organ, Minor (prereq audition, △)
008672 2-4 cr

3804 Voice, Minor (prereq audition, △)
608674 2-4 cr

3805 Violin, Minor (prereq audition, △)
208676 2-4 cr

3806 Viola, Minor (prereq audition, △)
108677 2-4 cr

3807 Cello, Minor (prereq audition, △)
908678 2-4 cr

3808 Double Bass, Minor (prereq audition, △)
708679 2-4 cr

3809 Flute, Minor (prereq audition, △)
108680 2-4 cr

3811 Oboe, Minor (prereq audition, △)
908681 2-4 cr

3812 Clarinet, Minor (prereq audition, △)
508683 2-4 cr

3813 Saxophone, Minor (prereq audition, △)
108685 2-4 cr

3814 Bassoon, Minor (prereq audition, △)
808687 2-4 cr

3815 French Horn, Minor (prereq audition, △)
408689 2-4 cr

3816 Trumpet, Minor (prereq audition, △)
608691 2-4 cr

3817 Trombone, Minor (prereq audition, △)
208693 2-4 cr

3818 Baritone, Minor (prereq audition, △)
908695 2-4 cr

3819 Tuba, Minor (prereq audition, △)
508697 2-4 cr

3821 Percussion, Minor (prereq audition, △)
108699 2-4 cr

3822 Harp, Minor (prereq audition, △)
908700 2-4 cr

3823 Guitar, Minor (prereq audition, △)
708701 2-4 cr

5101 Piano (prereq audition, △)
213943 2-4 cr

5102 Harpsichord (prereq audition, △)
113944 2-4 cr

5103 Organ (prereq audition, △)
713946 2-4 cr

5104 Voice (prereq audition, △)
513947 2-4 cr

5105 Violin (prereq audition, △)
113949 2-4 cr

5106 Viola (prereq audition, △)
313951 2-4 cr

5107 Cello (prereq audition, △)
013953 2-4 cr

5108 Double Bass (prereq audition, △)
613955 2-4 cr

5109 Flute (prereq audition, △)
213957 2-4 cr

5111 Oboe (prereq audition, △)
913959 2-4 cr

5112 Clarinet (prereq audition, △)
213960 2-4 cr

5113 Saxophone (prereq audition, △)
913962 2-4 cr

5114 Bassoon (prereq audition, △)
513964 2-4 cr

5115 French Horn (prereq audition, △)
113966 2-4 cr

5116 Trumpet (prereq audition, △)
813968 2-4 cr

5117 Trombone (prereq audition, △)
613969 2-4 cr

5118 Baritone Horn (prereq audition, △)
813971 2-4 cr

5119 Tuba (prereq audition, △)
413973 2-4 cr

5121 Percussion (prereq audition, △)
113975 2-4 cr

5122 Harp (prereq audition, △)
713977 2-4 cr

5123 Guitar (prereq audition, △)
513978 2-4 cr

5124 Accordian (prereq audition, △)
713980 2-4 cr

5125 Sitar (prereq audition, △)
513981 2-4 cr

8201 Piano, Principal (prereq audition, △)
327283 2-4 cr

8202 Harpsichord, Principal (prereq audition, △)
127284 2-4 cr

8203 Organ, Principal (prereq audition, △)
027285 2-4 cr

8204 Voice, Principal (prereq audition, △)
827286 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

8205 Violin, Principal (prereq audition, △)
627287 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8206 Viola, Principal (prereq audition, △)
427288 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8207 Cello, Principal (prereq audition, △)
627290 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8208 Double Bass, Principal (prereq audition, △)
427291 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8209 Flute, Principal (prereq audition, △)
227292 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8211 Oboe, Principal (prereq audition, △)
127293 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8212 Clarinet, Principal (prereq audition, △)
927294 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8213 Saxophone, Principal (prereq audition, △)
727295 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8214 Bassoon, Principal (prereq audition, △)
527296 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8215 French Horn, Principal (prereq audition, △)
127298 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8216 Trumpet, Principal (prereq audition, △)
027299 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8217 Trombone, Principal (prereq audition, △)
727300 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8218 Baritone, Principal (prereq audition, △)
527301 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8219 Tuba, Principal (prereq audition, △)
327302 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8221 Percussion, Principal (prereq audition, △)
027304 2-4 cr

8222 Harp, Principal (prereq audition, △)
827305 2-4 cr

8223 Guitar, Principal (prereq audition, △)
627306 2-4 cr

8301 Piano, Major (prereq audition, △)
427307 2-4 cr

8302 Harpsichord, Major (prereq audition, △)
227308 2-4 cr

8303 Organ, Major (prereq audition, △)
127309 2-4 cr

8304 Voice, Major (prereq audition, △)
427310 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

8305 Violin, Major (prereq audition, △)
227311 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8306 Viola, Major (prereq audition, △)
127312 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8307 Cello, Major (prereq audition, △)
927313 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8308 Double Bass, Major (prereq audition, △)
527315 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8309 Flute, Major (prereq audition, △)
327316 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8311 Oboe, Major (prereq audition, △)
127317 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8312 Clarinet, Major (prereq audition, △)
527119 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8313 Saxophone, Major (prereq audition, △)
927120 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8314 Bassoon, Major (prereq audition, △)
727121 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8315 French Horn, Major (prereq audition, △)
527122 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8316 Trumpet, Major (prereq audition, △)
127124 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8317 Trombone, Major (prereq audition, △)
827126 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8318 Baritone, Major (prereq audition, △)
427128 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8319 Tuba, Major (prereq audition, △)
627130 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8321 Percussion, Major (prereq audition, △)
427131 2-4 cr

8322 Harp, Major (prereq audition, △)
227132 2-4 cr

8323 Guitar, Major (prereq audition, △)
127133 2-4 cr

8401 Piano, Secondary Required (max 12 cr; prereq mus maj, △)
927134 2-4 cr

8402 Harpsichord, Secondary Required (max 12 cr; prereq mus maj, △)
527136 2-4 cr

8403 Organ, Secondary Required (max 12 cr; prereq mus maj, △)
127138 2-4 cr

8404 Voice, Secondary Required (max 12 cr; prereq mus maj, △)
027139 2-4 cr

8405 Violin, Secondary Required (max 12 cr; prereq mus maj, △)
327140 2-4 cr

8406 Viola, Secondary Required (max 12 cr; prereq mus maj, △)
127141 2-4 cr

8407 Cello, Secondary Required (max 12 cr; prereq mus maj, △)
027142 2-4 cr

8408 Double Bass, Secondary Required (max 12 cr; prereq mus maj, △)
827143 2-4 cr

8409 Flute, Secondary Required (max 12 cr; prereq mus maj, △)
427145 2-4 cr

8411 Oboe, Secondary Required (max 12 cr; prereq mus maj, △)
127147 2-4 cr

8412 Clarinet, Secondary Required (max 12 cr; prereq mus maj, △)
927148 2-4 cr

8413 Saxophone, Secondary Required (max 12 cr; prereq mus maj, △)
727149 2-4 cr

8414 Bassoon, Secondary Required (max 12 cr; prereq mus maj, △)
927151 2-4 cr

8415 French Horn, Secondary Required (max 12 cr; prereq mus maj, △)
727152 2-4 cr

8416 Trumpet, Secondary Required (max 12 cr; prereq mus maj, △)
527153 2-4 cr

8417 Trombone, Secondary Required (max 12 cr; prereq mus maj, △)
327154 2-4 cr

8418 Baritone, Secondary Required (max 12 cr; prereq mus maj, △)
127155 2-4 cr

8419 Tuba, Secondary Required (max 12 cr; prereq mus maj, △)
027156 2-4 cr

8421 Percussion, Secondary Required (max 12 cr; prereq mus maj, △)
827157 2-4 cr

8422 Harp, Secondary Required (max 12 cr; prereq mus maj, △)
627158 2-4 cr

8423 Guitar, Secondary Required (max 12 cr; prereq mus maj, △)
427159 2-4 cr

8501 Piano, Secondary Elective (max 12 cr; prereq mus maj, △)
827160 2-4 cr

8502 Harpsichord, Secondary Elective (max 12 cr; prereq mus maj, △)
627161 2-4 cr

8503 Organ, Secondary Elective (max 12 cr; prereq mus maj, △)
427162 2-4 cr

8504 Voice, Secondary Elective (max 12 cr; prereq mus maj, △)
227163 2-4 cr

8505 Violin, Secondary Elective (max 12 cr; prereq mus maj, △)
127164 2-4 cr

8506 Viola, Secondary Elective (max 12 cr; prereq mus maj, △)
727166 2-4 cr

8507 Cello, Secondary Elective (max 12 cr; prereq mus maj, △)
527167 2-4 cr

8508 Double Bass, Secondary Elective (max 12 cr; prereq mus maj, △)
327168 2-4 cr

8509 Flute, Secondary Elective (max 12 cr; prereq mus maj, △)
127169 2-4 cr

8511 Oboe, Secondary Elective (max 12 cr; prereq mus maj, △)
527170 2-4 cr

8512 Clarinet, Secondary Elective (max 12 cr; prereq mus maj, △)
327171 2-4 cr

8513 Saxophone, Secondary Elective (max 12 cr; prereq mus maj, △)
027173 2-4 cr

8514 Bassoon, Secondary Elective (max 12 cr; prereq mus maj, △)
827174 2-4 cr

8515 French Horn, Secondary Elective (max 12 cr; prereq mus maj, △)
627175 2-4 cr

8516 Trumpet, Secondary Elective (max 12 cr; prereq mus maj, △)
227177 2-4 cr

8517 Trombone, Secondary Elective (max 12 cr; prereq mus maj, △)
927179 2-4 cr

8518 Baritone, Secondary Elective (max 12 cr; prereq mus maj, △)
227180 2-4 cr

8519 Tuba, Secondary Elective (max 12 cr; prereq mus maj, △)
127181 2-4 cr

8521 Percussion, Secondary Elective (max 12 cr; prereq mus maj, △)
927182 2-4 cr

8522 Harp, Secondary Elective (max 12 cr; prereq mus maj, △)
727183 2-4 cr

8523 Guitar, Secondary Elective (max 12 cr; prereq mus maj, △)
527184 2-4 cr

8601 Piano, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
327185 2-4 cr

8602 Harpsichord, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
127186 2-4 cr

8603 Organ, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
027187 2-4 cr

8604 Voice, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
827188 2-4 cr

8605 Violin, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
627189 2-4 cr

8606 Viola, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
027190 2-4 cr

8607 Cello, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
827191 2-4 cr

8608 Double Bass, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
627192 2-4 cr

8609 Flute, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
427193 2-4 cr

8611 Oboe, Principle Beyond Requirement (max 12 cr; prereq mus maj, △)
227194 2-4 cr

8612 Clarinet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
127195 2-4 cr

8613 Saxophone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
927196 2-4 cr

8614 Bassoon, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
727197 2-4 cr

8615 French Horn, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
527198 2-4 cr

8616 Trumpet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
327199 2-4 cr

8617 Trombone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
127200 2-4 cr

8618 Baritone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
927201 2-4 cr

8619 Tuba, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
727202 2-4 cr

8621 Percussion, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
527203 2-4 cr

8622 Harp, Principle Beyond Requirement (max 12 cr; prereq mus maj, △)
327204 2-4 cr

8623 Guitar, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
127205 2-4 cr

8701 Piano, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
027206 2-4 cr

8702 Harpsichord, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
827207 2-4 cr

8703 Organ, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
627208 2-4 cr

8704 Voice, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
427209 2-4 cr

8705 Violin, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
827210 2-4 cr

8706 Viola, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
627211 2-4 cr

8707 Cello, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
427212 2-4 cr

8708 Double Bass, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
227213 2-4 cr

8709 Flute, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
127214 2-4 cr

8711 Oboe, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
927215 2-4 cr

8712 Clarinet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
527217 2-4 cr

8713 Saxophone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
127219 2-4 cr

8714 Bassoon, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
527220 2-4 cr

8715 French Horn, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
327221 2-4 cr

8716 Trumpet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
127222 2-4 cr

8717 Trombone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
827224 2-4 cr

8718 Baritone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
427226 2-4 cr

8719 Tuba, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
127228 2-4 cr

8721 Percussion, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
227230 2-4 cr

8722 Harp, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
127231 2-4 cr

8723 Guitar, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
927232 2-4 cr

MUSIC EDUCATION (MuEd)

Education

1201 Introduction to Music Education (A-N only)
129746 1115-1200 M, ScottH 4, Borg, 1 cr

1801 Introduction to Music Therapy (A-N only)
029747 0915-1000 F, 1411 Univ Ave SE, Jellison, 1 cr

R3011 Teaching Music in the Elementary School (prereq Mus 1001, elementary educ maj) (A-N only)
804543 –1 0915-1000 MWF, ScottH 4, Borg, 4 cr
604544 –2 1315-1400 MWF, ScottH 2, 4 cr

3301 Teaching Vocal and General Music, K-4 (prereq music education maj or #) (A-N only)
829748 1015-1100 MTWThF, ScottH 4, Borg, 4 cr

R3322 Techniques of Classroom Instruments (prereq Mus 1001 or music or music education maj) (A-N only)
709184 1315-1500 MWF, ScottH 4, Caswell, 4 cr

R3500 String Techniques I (prereq music education maj or #) (A-N only)
909183 1115-1200 MWF, WullH 330, Massmann, 3 cr

3503 Woodwind Techniques (prereq music education maj or #) (A-N only)
629749 0915-1000 MTWTh, NMA 5, Schultz, 4 cr

3504 Brass Techniques (§1525; prereq music education maj or #) (A-N only)
029750 0915-1000 MTWTh, NMA 4, Turrentine, 4 cr

3505 Percussion Techniques (prereq music education maj) (A-N only)
829751 0815-0900 MTWTh, NMA 4, Dahlgren, 4 cr

R3515 Instrumental Laboratory I (prereq music education maj or #) (A-N only)
629752 1015-1100 MTWTh, NMA 4, Schultz, 4 cr

3650 Student Teaching in Music (prereq #) (A-N only)
704549 –1 1415-1600 M, ScottH 2, Schultz, 3-12 cr
704552 –2 1615-1800 W, ScottH 2, Borg, Buckner, 3-12 cr

3800 Observation in Music Therapy (§3803; prereq educ stu) (A-N only)
429753 1115-1300 M, 1411 Univ Ave SE, Jellison, 2 cr

3805 Music Therapy Techniques II (3805-3806†; prereq 3804) (A-N only)
213795 1115-1300 T, 1115-1200 Th, 1411 Univ Ave SE, Jellison, 3 cr

3850 Field Experiences: Music Therapy (max 10 cr; prereq 3800, 3804) (S-N only)
513804 –1 1215-1300 Th, 1411 Univ Ave SE, Jellison, 1-2 cr
213800 –2 1315-1400 Th, 1411 Univ Ave SE, Jellison, 1-2 cr

3851 Internship: Music Therapy (prereq #) (S-N only)
129755 Jellison, 6 cr

3852 Internship: Music Therapy (prereq 3852) (S-N only)
229754 Jellison, 6 cr

5214 Psychological Foundations (prereq #) (A-N only)
735543 1615-1800 W, ScottH 103, Caswell, 3 cr

5970 Independent Study (prereq educ or grad stu) (A-N only)
929756 1-4 cr

8281 Seminar: Historical, Philosophical, and Psychological Issues (8281-8282-8283†; prereq MA in music or music educ or #)
729757 1615-1800 T, ScottH 103, Turrentine, 2 cr

8990 Research Problems (prereq knowledge of elementary statistics)
529758 1-12 cr

NAVAL SCIENCE (Nav)

R0101 Introduction to Naval Science (prereq #) (S-N only)
904565 –1 0915-1000 TTh, Armory 202, May, 0 cr
304568 –2 1215-1300 TTh, Armory 202, May, 0 cr

R0204 Professional Training in Naval Science (prereq #) (S-N only)
431213 0700-0900 W, Armory 202, 0 cr

R1103 Principles of Naval Weapons Systems (prereq #) (A-N only)
504570 –1 0915-1000 MW, Armory 202, Wilson, 2 cr
804574 –2 1115-1200 MW, Armory 202, Wilson, 2 cr

R3303 Inland and Coastal Navigation (prereq #)
★LECT 1115-1200 TWTh, Armory 12A, Currie, 3 cr
829037 –1 LAB 1115-1200 MF, Armory 12A, Graening
★LECT 1215-1300 TWTh, Armory 12A, Currie, 3 cr
629038 –2 LAB 1215-1300 MF, Armory 12A, Graening

R3404 Principles of Naval Management I (prereq #) (A-N only)
104578 –1 1115-1200 TTh, Armory 205, Chauncey, 2 cr
208550 –2 1215-1300 TTh, Armory 205, Chauncey, 2 cr

R3452 Amphibious Warfare I (prereq #) (A-N only)
235277 0915-1000 MF, Armory 205, Conrad, 2 cr

NEUROLOGY (Neur)
Medical School

5120 Selected Problems in Neurology (prereq regis med)
900547 ar cr

5122 Pediatric Neurology: Health Care Psychology Interns (prereq #)
700548 Greenberg, ar cr

5510 Externship in Clinical Neurology (prereq regis med)
500549 Klassen, ar cr

5541 Pediatric Neurology: Neurochemistry (prereq regis med)
900550 Swaiman, ar cr

5542 Pediatric Neurology (prereq regis med)
500552 Swaiman, ar cr

5544 Clinical Electroencephalography (prereq regis med)
100554 Torres, ar cr

5545 Electromyography (prereq regis med)
800556 Kennedy, ar cr

5570 Immunology-Veterans Administration Hospital (prereq regis med)
400558 Ansari, ar cr

8200 Clinical Neurology
600560 Klassen, ar cr

8201 Clinical Pediatric Neurology
200562 Swaiman, ar cr

8202 Research in Neurology
900564 Klassen, ar cr

8203 Applied Electroencephalography
500566 Torres, ar cr

8204 Applied Electromyography
100568 Kennedy, ar cr

8205 Applied Neuropathology
300570 Sung, ar cr

8233 Neurological Clinical Pathological Conference
000572 1100-1300 W, Mayo B535, Klassen, 1 cr

8234 Neuropsychology Conference
600574 1000-1200 Th, Mayo C667, Meier, 1 cr

8236 Research in Neuropathology
200576 Sung, ar cr

8704 Survey of Neuropathology (§Path 8702)
900578 1100-1300 M, Mayo B535, Sung, 1 cr

8705 Neurological-Neurosurgical Conference (§Surg 8318, Rad 0124)
100580 1300-1430 F, Mayo C231, 1 cr (Todd Amph)

NEUROSURGERY (NSu)
Medical School

5500 Externship at the University Hospitals (prereq regis med)
700582 Chou, Seljeskog, others, 4.5-9 cr

5510 Externship at Veterans Hospital (prereq regis med)
300584 Maxwell, 4.5-9 cr

5511 Externship at Hennepin County Medical Center (prereq regis med)
000586 Rockswold, 4.5-9 cr

5512 Externship at St. Paul Ramsey Hospital (prereq regis med)
600588 Thienprasit, 4.5-9 cr

5520 Neurosurgical Investigation (prereq regis med)
800590 Bloedel, Chou, others, 9 cr

5530 Neuropsychology
400592 Meier, 3 cr

5550 Neurophysiological Literature Seminar (prereq medical school course in physiology, #)
100594 Bloedel, 1 cr

8305 Neurosurgical Diagnosis
700596 Chou, Seljeskog, others, 4 cr

8308 Neurosurgical Problems and Management
300598 Chou, Seljeskog, others, 4 cr

8311 Operative Neurosurgery
900600 Chou, Seljeskog, others, 4 cr

8316 Neurosurgical Research
700601 Bloedel, Chou, others, 6 cr

8318 Neuroradiological Conference
500602 1300-1430 F, Mayo C231, Chou, Seljeskog, others, 1 cr (Todd Amph)

8320 Neurosurgical Conference
100604 0800-1100 S, Mayo B507, Chou, Seljeskog, others, 2 cr

8323 Neurosurgery-Ophthalmology Seminar-Part II (prereq 8322)
800606 0800-0900 T, Mayo B524, 1 cr

8324 Readings in Neurobiology (prereq 8104, consent of Medical School)
115331 ar cr

8330 Neurosurgery Literature Seminar
400608 2000-2200 Th, MoosT 2580, Chou, Seljeskog, others, 2 cr

NORWEGIAN (Nor)
Scandinavian Languages
Liberal Arts

R1101 Beginning Norwegian
704647 –1 0815-0900 MTWThF, FolH 204, 5 cr
304649 –2 1115-1200 MTWThF, FolH 208, 5 cr
104653 –3 1215-1300 MTWThF, Arch 15, 5 cr
804655 –4 1315-1400 MTWThF, JonesH 4, 5 cr

1104 Intermediate Norwegian (prereq 1103)
130914 0915-1000 MTWThF, FolH 207, Simpson, 5 cr

3670 Readings in Norwegian Literary Texts (max 28 cr; prereq 3101)
830916 1015-1100 MWF, FolH 205, Mishler, 4 cr

NURSING, SCHOOL OF (Nurs)

R5200 Introduction to Nursing (prereq nursing student or △)
535317 1215-1400 TTh, HSUnitF 2120, 2130, 4 cr

R5206 Tools I (prereq 5205, anatomy or ¶)
613907 –1 LAB 0815-1000 M, HSUnitF 4120, 1 cr
413908 –2 LAB 1015-1200 M, HSUnitF 4120, 1 cr
613910 –3 LAB 1015-1200 W, HSUnitF 4120, 1 cr

R5207 Synthesis (prereq 5202, 5203 or 5200, 5204, growth and development, 5206 or ¶)
708519 –1 CLN 0815-1130 TTh, 2 cr (1st 5 weeks)
908521 –2 CLN 0815-1130 TTh, 2 cr (1st 5 weeks)
508523 –3 CLN 0815-1130 TTh, 2 cr (1st 5 weeks)
108525 –4 CLN 0815-1130 TTh, 2 cr (1st 5 weeks)
808527 –5 CLN 0815-1130 TTh, 2 cr (2nd 5 weeks)
608528 –6 CLN 0815-1130 TTh, 2 cr (2nd 5 weeks)
113555 –7 CLN 1330-1700 TTh, 2 cr (2nd 5 weeks)

R5208 Small Group Analysis, Nursing Practice
★LECT 1315-1400 T, OwreH 2210, 3 cr
831435 –1 LAB 1415-1600 TTh, MoosT 2107
631436 –2 LAB 1415-1600 TTh, MoosT 2113
431437 –3 LAB 1415-1600 TTh, MoosT 2154
231438 –4 LAB 1415-1600 TTh, MoosT 2629
131439 –5 LAB 1415-1600 TTh, MoosT 2639
431440 –6 LAB 1415-1600 TTh, MoosT 2672
231441 –7 LAB 1415-1600 TTh, MoosT 2680
213893 –8 LAB 1415-1600 TTh, MoosT 2146

R5209 Clinical Application of Nursing Tools: Level I (prereq 5202, 5203 or 5200, 5204, 5205, 5206 or ¶5206)
808530 –1 CLN 0815-1200 F, 1 cr (1st 5 weeks)
408532 –2 CLN 0815-1200 F, 1 cr (1st 5 weeks)
108534 –3 CLN 1315-1700 T, 1 cr (2nd 5 weeks)
335318 –4 CLN 1 cr (2nd 5 weeks)

R5404 Tools II (prereq 5206, LaMP 5170 or ¶, anatomy, MdBc 3050, Phcl 1009 or ¶)
313917 –1 LAB 0815-1000 TTh, HSUnitF 4120, 2 cr
113921 –2 LAB 0815-1000 TTh, HSUnitF 4120, 2 cr
813923 –3 LAB 1015-1200 TTh, HSUnitF 4120, 2 cr
113927 –4 LAB 1315-1500 TTh, HSUnitF 4120, 2 cr
713929 –5 LAB 1315-1500 TTh, HSUnitF 4120, 2 cr

R5407 Systematic Process II (prereq 5207)
901083 1015-1200 M, MMA 125, 2 cr

R5408 Adaptation II (prereq 5207, LaMP 5170 or ¶LaMP 5170)
701084 1015-1200 F, MMA 125, 2 cr

R5409 Helping Relationships II (prereq group theory or 5208 or ¶, 5207, abnormal psychology or ¶)
204711 –1 0815-1000 MW, HSUnitF, 2 cr
504715 –2 0815-1000 MW, HSUnitF, 2 cr
804719 –3 1015-1200 MW, HSUnitF, 2 cr
804722 –4 0815-1000 TTh, HSUnitF, 2 cr

R5612 Synthesis Incorporating Concepts of Stress and Crisis (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1500 T, MoosT 2530, 4 cr
812111 –1 CLN
612112 –2 CLN
412113 –3 CLN
212114 –4 CLN
912116 –5 CLN

R5614 Synthesis Incorporating Concepts of Health (prereq 5404, 5405 or ¶5405, 5407, 5408, 5409, abnormal psy, Phcl 1009, LaMP 5171 or ¶5171)
★LECT 1315-1500 Th, MoosT 2620, 3 cr
812125 –1 CLN
612126 –2 CLN
212128 –3 CLN
412130 –4 CLN

R5615 Synthesis in Complex Nursing Situations I (prereq 5611, 5612, 5613, 5614, FScN 3602)
★LECT 1415-1600 W, HSUnitF 4176, 5 cr
512135 –1 CLN
312136 –2 CLN
112137 –3 CLN
012138 –4 CLN
812139 –5 CLN

R5616 Synthesis in Complex Nursing Situations II (prereq 5611, 5612, 5613, 5614, FScN 3602)
★LECT 1515-1630 T, MoosT 2530, 5 cr
414847 –1 CLN
114849 –2 CLN
214851 –3 CLN
914853 –4 CLN
514855 –5 CLN
114857 –6 CLN

R5704 Human Sexuality: Significance for Nursing (prereq 2 level II synthesis courses...S.A.R. weekend rec)
113563 1315-1500 T, PWB 5206, 3 cr

5714 Nursing History and Physical Assessment (prereq sr, 2 level II synthesis courses, grad student in nursing or RN, #)
113899 1615-1900 MW, HSUnitF, Burns, 3 cr (lab ar)

R5722 An Introduction to The Nurse as a Leader for Change Through Participation in the Legislative Process (prereq any two of the following: 5611, 5612, 5613, 5614 or # or grad)
413567 1015-1200 W, MMA 125, 3–5 cr

R5726 Social and Psychological Aspects of Death and Dying (prereq completion of 2 Level II synthesis courses)
113569 1830-2030 W, MoosT 2580, 2 cr

5734 Nursing Leaders 1800-1950 (prereq basic course in nurs hist or equiv, 2 or 3 nurs courses involving clinical exper)
737096 3 cr

5752 Reproductive Physiology
135319 1015-1200 TTh, PWB 5206, Sonstegard, 4 cr

5799 Self-Directed Study as a Means of Accomplishing Nursing Electives (prereq any two of the following: 5611, 5612, 5613, 5614)
008543 ar cr

R5816 Leadership/Management (prereq 5611, 5612, 5613, 5614, 5615 or 5616, FScN 3602)
★LECT 1015-1200 M, HSUnitF 2120, 2130, 6 cr
812142 –1 CLN
412144 –2 CLN
212145 –3 CLN
912147 –4 CLN
913573 –5 CLN
713574 –6 CLN

R5999 Clinical Study (prereq any two of the following: 5611, 5612, 5613, 5614)
604771 0815-1000 M, HSUnitF 2120, 2130, 1 cr

8001 Special Educational Experiences in Nursing (prereq △)
501085 ar cr

8009 Special Topics (prereq #)
301086 ar cr

R8010 Structure of the Discipline of Nursing (prereq △)
504780 –1 1215-1500 TTh, MoosT 2571, 2585, Egan, 3 cr (1st 5 weeks)
004783 –2 1615-1900 W, PWB 5206, Norris, 3 cr
113577 –3 Sodergren, 3 cr (Rochester)

R8011 Moral and Ethical Positions in Nursing (prereq △)
112123 –1 0815-1100 W, MoosT 2571, 2585, Weise, 3 cr
104788 –2 1615-1900 Th, PWB 5224, Crisham, 3 cr

R8012 Conceptual Framework for Nursing Practice (prereq 8010)
904792 1215-1500 TTh, PWB 5224, Egan, 3 cr (2nd 5 weeks)

R8014 Research in Nursing (prereq inferential statistics, △)
004797 1615-1900 T, MoosT 2571, 2585, Feldman, 3 cr

R8030 Nursing Intervention Models (8 cr must be completed before any cr is given; prereq 8011, 8012 or ¶8011, #)
604804 –1 0915-1100 W, 1215-1400 W, MoosT 2676, Snyder, 8 cr (cln ar) (Med-Surg)
104807 –2 1015-1200 T, 0915-1200 Th, MoosT 2676, Taylor, 8 cr (cln ar) (CCFN)
104810 –3 1215-1400 TTh, MoosT 2107, Gordon, 8 cr (cln ar) (Psych-Mental Health)

8050 Problems in Nursing (prereq #)
001088 1–9 cr

R8051 Special Topics in Nursing Research
513902 1–9 cr

8060 Advanced Clinical Nursing (prereq △, #)
101087 3–9 cr

R8063 Nursing Consultation
313934 3 cr

R8313 Care of the Childbearing Family in Risk (prereq physiology, #)
800735 0915-1300 W, MoosT 2146, Lindell, 4–6 cr (cln ar)

R8315 Nurse-Midwifery Management: Intrapartal and Postpartal (prereq 8314)
400737 0915-1300 W, MoosT 2154, Rossi, Neilson, 8–10 cr (cln ar)

R8411 Knowledge Development Underlying Nursing Therapy (prereq 8030, advanced physiology)
013581 1215-1400 W, MoosT 2633, Burns, 4–6 cr (cln ar)

R8421 Psychiatric-Mental Health Nursing: Group Dynamics and Leadership Skills (prereq 8030, Psych-Mental health section, a course in psychopathology)
400740 1015-1200 Th, MoosT 2633, Kjervik, 3 cr (cln ar)

R8425 Psychiatric-Mental Health Nursing: Role Development (prereq 8422)
100742 1015-1200 W, MoosT 2585, Mansfield, 6 cr (cln ar)

R8435 Childbearing-Childrearing Family Nursing II (prereq 8431 or #)
500745 0915-1200 W, MoosT 2107, Rode, 6–9 cr (cln ar)

R8445 Clinical Nurse Specialist Role in Perinatal Nursing (prereq 8441, #, △)
535320 1315-1600 TTh, Sonstegard, 9 cr (cln ar)

R8451 Teaching-Learning Process in Nursing (prereq 8030, ¶course in learning theory, #)
335447 1315-1600 TTh, HSUnitF, Corcoran, 4 cr

R8455 Nurse Educator in Higher Education (prereq 8451, ¶course in educational measurement, #)
331446 1415-1600 TTh, MoosT 2146, Gustafson, 6 cr (cln ar)

8509 Special Topics: Nursing Education (prereq #)
801089 ar cr

R8601 Clinical Nursing Leadership I (prereq 8600)
013905 6 cr (cln ar)

8609 Special Topics in Nursing Supervision (prereq #)
101090 ar cr

R8701 Nursing Administration I (prereq 8030, #)
001091 0915-1200 T, MoosT 2146, Edwardson, 6 cr (cln ar)

NUTRITION (Nutr)
Agriculture & Home Econ

8745 Seminar (prereq #)
229253 1600-1645 T, FScN 23, Clarke, 1 cr

8990 Graduate Research (prereq #)
904744 2–5 cr

OBSTETRICS AND GYNECOLOGY (Obst)
Medical School

5500 Externship in Obstetrics and Gynecology (prereq regis med)
426352 Foreman, others, 9 cr

5520 Obstetrics and Gynecology Externship in Clinical Practice (prereq regis med)
226353 Foreman, others, 4.5 cr

5540 Advanced Externship in Obstetrics and Gynecology (prereq 5500)
126354 Foreman, others, ar cr

5560 Research in Reproduction (prereq regis med)
926355 Foreman, others, ar cr

5575 Gynecological Pathology and Diagnostic Cytology (prereq 5500)
726356 Okagaki, Brooker, 9 cr

5590 Preceptorship in Obstetrics and Gynecology (prereq 5500)
526357 Foreman, others, 9 cr

8201 Advanced Obstetrics and Gynecology I
326358 Prem, others, ar cr

8202 Advanced Obstetrics and Gynecology I (prereq 8201)
126359 Prem, others, ar cr

8203 Advanced Obstetrics and Gynecology I (prereq 8202)
526360 Prem, others, ar cr

8204 Advanced Obstetrics and Gynecology I (prereq 8203)
326361 Prem, others, ar cr

8205 Advanced Obstetrics and Gynecology II
126362 Prem, others, ar cr

8206 Advanced Obstetrics and Gynecology II (prereq 8205)
026363 Prem, others, ar cr

8207 Advanced Obstetrics, Gynecology II (prereq 8206)
826364 Prem, others, ar cr

8208 Advanced Obstetrics, Gynecology II (prereq 8207)
626365 Prem, others, ar cr

8209 Advanced Obstetrics and Gynecology III
426366 Prem, others, ar cr

8210 Advanced Obstetrics and Gynecology III (prereq 8209)
226367 Prem, others, ar cr

8211 Advanced Obstetrics and Gynecology III (prereq 8210)
126368 Prem, others, ar cr

8212 Advanced Obstetrics and Gynecology III (prereq 8211)
926369 Prem, others, ar cr

8213 Advanced Obstetrics and Gynecology IV (prereq 8212)
226370 Prem, others, ar cr

8214 Advanced Obstetrics and Gynecology (prereq 8213)
126371 Prem, others, ar cr

8215 Advanced Obstetrics and Gynecology IV (prereq 8214)
926372 Prem, others, ar cr



It's pretty hard not to like an Army ROTC Scholarship.

Just look at what it covers: full tuition, books, lab fees. Plus, it pays you up to $1,000 each school year it's in effect.

But what we think you'll like best about our scholarship is the commitment. Because it leads to a commission in the Army Nurse Corps (ANC) after graduation.

As an Army nurse, you'll belong to one of the largest, most comprehensive health care teams in the world. Training on state-of-the-art equipment. And using the latest techniques.

An Army nurse is an Army officer, too. So along with professional recognition, you'll also receive all the prestige, privileges and respect that go with being a leader in today's Army.

And don't forget, the Army Nurse Corps is part of a worldwide organization. Which means you'll have the opportunity to work in different cities around the country. And different countries around the world. Without losing seniority or benefits.

So make your commitment to nursing really pay off. Begin your future in the Army Nurse Corps. And that begins with Army ROTC.

For more information about scholarship opportunities,contact the Army ROTC Professor of Military Science on your campus. Or write: Army ROTC, Dept. NX, P.O. Box 9000, Clifton, N.J. 07015.

ARMY ROTC.
BE ALL YOU CAN BE.

8216 Advanced Obstetrics and Gynecology IV (prereq 8215)
726373 Prem, others, ar cr

8217 Seminar: Obstetrics and Gynecology IV (prereq 8216)
526374 Prem, others, ar cr

8218 Seminar: Obstetrics and Gynecology (prereq 8217)
326375 Prem, others, ar cr

8219 Seminar: Obstetrics and Gynecology (prereq 8218)
126376 Prem, others, ar cr

8221 Seminar: Obstetrics and Gynecology (prereq 8219)
026377 Prem, others, ar cr

8222 Gynecological Oncology (prereq 8221)
826378 Prem, others, ar cr

8223 Gynecological Oncology (prereq 8222)
626379 Prem, others, ar cr

8224 Gynecological Endocrinology I (prereq 8223)
026380 Prem, others, ar cr

8225 Gynecological Endocrinology II (prereq 8224)
826381 Prem, others, ar cr

8226 Obstetrical Physiology and Anesthesiology (prereq 8225)
626382 Prem, others, ar cr

8227 Preceptorship in Clinical Practice (prereq 8226)
426383 Prem, others, ar cr

8228 Selected Aspects of Radiation Therapy (prereq 8227)
226384 Prem, others, ar cr

8229 Selected Aspects of Medical Oncology (prereq 8228)
126385 Prem, others, ar cr

8230 Research in Reproduction (prereq 8229)
926386 Prem, others, ar cr

OPERATIONS MANAGEMENT (OM)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for OM courses.

R3056 Production and Inventory Management (prereq 3000 or #) (A-N only)
726387 0945-1100 TTh, BlegH 335, Scudder, 4 cr

R8056 Production and Inventory Management (§5056; prereq 3000 or MBA 8050 and QA 3055 or MBA 8025, grad mgmt/IR student or grad SMgt approval) (A-N only)
326389 1115-1230 TTh, BlegH 330, Hill, 4 cr

R8850 Topics in Operations Management (prereq 3000, grad mgmt/IR student or grad SMgt approval) (A-N only)
809046 1315-1600 Th, Mgmt/Econ 136, Treleven, ar cr

8990 Readings in Operations Management (prereq consent of adviser, #, 2nd yr grad student, requisite introductory courses, grad SMgt approval) (A-N only)
500132 ar cr

8995 Graduate Research in Operations Management (prereq consent of adviser, #, 2nd yr grad student, requisite introductory courses, grad SMgt approval) (A-N only)
511812 ar cr

OPHTHALMOLOGY (Oph)
Medical School

5100 Introduction to Anatomy, Histology, and Embryology (prereq physician or vet med student)
400639 0715-0830 Th, PWB 9335, Cameron, 1 cr

5180 Externship (prereq regis med)
214896 ar cr

5190 Research Problems (prereq regis med)
914898 ar cr

8101 Clinical Opthalmology
900645 0800-1700 MTWThF, PWB 9100, Doughman, others, 8 cr (Eye Clinic)

8106 Strabismus Management (prereq grad physician or grad in veterinary science)
115152 0730-0830 M, PWB 9339, Letson, 1 cr

8117 Orbit, Plastics and Trauma (prereq grad physician or grad in veterinary science)
435150 1500-1600 F, PWB 9339, Wirtschafter, others, 3 cr

8119 Clinical Pathological Correlations in Ophthalmology (prereq grad physician or grad in veterinary sci)
515150 1600-1800 F, PWB 9339, Cameron, 1 cr

8120 Scope of Ophthalmic Pathology (prereq grad physician or grad in veterinary science)
315151 1400-1500 F, PWB 9339, Cameron, 2 cr

8131 Practical Ocular Surgery
500647 0800-1200 MTWThF, Doughman, others, 3 cr (Mayo OR)

8142 Ophthalmic Pathology Laboratory
300648 1330-1530 T, PWB 9335, Cameron, others, 2 cr

8152 Ophthalmology Laboratory
500650 15 cr

8155 Special Topics in Ophthalmology (prereq #)
100652 1-3 cr

ORAL AND MAXILLOFACIAL SURGERY (OSur)
Dentistry

5257 Ambulatory General Anesthesia
029621 Waite, 1 cr

8250 Advanced Oral Surgery
829622 Waite, ar cr

8251 Seminar: Oral Surgery (max 1 cr)
629623 1300-1400 T, MoosT 5125, Waite, ar cr

8252 Research in Oral Surgery
429624 Waite, ar cr

8253 Problems in Oral Surgery
229625 Waite, ar cr

8254 Topics: Oral Surgery
129626 1400-1500 Th, MoosT 5125, Waite, ar cr

8255 General Surgery
929627 Thompson, others, ar cr

8256 Anesthesia and Pain Control
729628 Holte, ar cr

8258 Anesthesia II Seminar
529629 1200-1300 Th, MoosT 7158, Waite, 1 cr

ORAL BIOLOGY (OBio)
Dentistry

8001 Research in Oral Biology
829605 Shapiro, ar cr

8002 Tutorial in Oral Biology
629606 Shapiro, ar cr

8021 Topics in Oral Biology (prereq #)
429607 Shapiro, 1-3 cr

8030 Seminar
229608 Shapiro, 1 cr

ORAL PATHOLOGY (OPat)
Dentistry

5017 Oral Pathology Clinic
129609 0930-1130 MTWThF, 1330-1530 MTWThF, MoosT 7438, Sedano, ar cr

8001 Research in Oral Pathology
429610 Gorlin, Vickers, ar cr

8004 Histopathology
229611 0815-0915 W, 1515-1630 Th, MoosT 16104, Vickers, 1 cr

8005 Advanced Oral Pathology
129612 Vickers, 3 cr

8007 Special Oral Pathology
929613 0800-1000 F, MoosT 16104, Sedano, others, 2 cr

8008 Clinical Oral Pathology
729614 Sedano, 1 cr

8011 Surgical Oral Pathology
529615 1500-1600 MTWThF, MoosT 16127, Vickers, ar cr

8012 Human and Medical Cytogenetics
329616 1400-1600 TTh, MoosT 16104, Cervenka, 4 cr

8016 Histopathology
129617 Sedano, 2 cr

8300 Human Development Genetics I (prereq GCB 3022, BioC 5970, Path 5101 or #)
029618 0800-1000 Th, MoosT 16104, Witkop, 2 cr

ORAL RADIOLOGY (ORad)
Dentistry

8300 Advanced Oral Roentgenographic Interpretation (prereq #)
829619 1000-1300 W, MoosT 5125, Kuba, 2 cr

8600 Radiological Health, Hygiene, and Protection (prereq 8400)
113823 Kuba, 1-3 cr

8900 Oral Radiology Research (prereq #)
129620 Kuba, ar cr

ORTHODONTICS (Otho)
Dentistry

5001 Clinical Orthodontics
929630 0900-1200 MTWThF, 1400-1700 MTWThF, MoosT 6320, Bevis, Speidel, others, ar cr

8001 Research in Orthodontics
729631 Speidel, others, ar cr

8200 Growth and Development
529632 0800-0900 MTWThF, MoosT 6320, Speidel, others, ar cr

8204 Orthodontic Diagnosis and Treatment Planning
329633 1300-1400 TWF, MoosT 6370, Speidel, others, ar cr

8208 Orthodontic Seminar
129634 Speidel, others, ar cr

8216 Topics in Orthodontics
029635 1300-1400 MTh, MoosT 6370, Speidel, others, ar cr

ORTHOPAEDIC SURGERY (OrSu)
Medical School

5180 Orthopaedics I (prereq regis med)
500695 Thompson, others, ar cr

5185 Orthopaedics II: Externship in Orthopaedic Surgery (prereq regis med)
300696 Thompson, others, ar cr

5186 Research Problems in Orthopaedic Surgery (prereq regis med)
100697 Thompson, others, ar cr

5187 Externship in Orthopaedic Surgery and Fractures-St. Paul Ramsey Hopsital (prereq regis med)
000698 Comfort, ar cr

5188 Externship in Orthopaedic Surgery and Fractures-Gillette Children's Hospital (prereq regis med)
500700 Vanden Brink, ar cr

5189 Externship in Orthopaedic Surgery and Fractures-St. Luke's Hospital, Duluth (prereq regis med)
300701 ar cr

5190 Externship in Orthopaedic Surgery and Fractures-Veterans Hospital (prereq regis med)
100702 Premer, ar cr

5191 Orthopaedic Externship at Hennepin County Medical Center (prereq regis med)
000703 Gustilo, ar cr

8401 Orthopaedic Conference
600705 Thompson, others, 3 cr

8403 Fractures
400706 Gustilo, 5 cr

8404 Fractures
100708 Comfort, 5 cr

8405 Orthopaedic Diagnosis
900709 Thompson, others, 3 cr

8407 Pediatric Orthopaedics
200710 Vanden Brink, 5 cr

8408 Orthopaedic Problems and Management
900712 Thompson, others, 5 cr

8409 Orthopaedic Problems and Management
700713 Winter, 5 cr

8410 Orthopaedic Pathology
500714 Thompson, others, 2 cr

8411 Orthopaedic Operative Surgery
310693 Thompson, others, 5 cr

8412 Orthopaedic Anatomy
010695 House, 2 cr

8416 Orthopaedic Research
610697 Bradford, 5 cr

OTOLARYNGOLOGY (Otol)
Medical School

5500 General ENT Elective
000619 4.5 cr

5501 Acting Internship-ENT Elective
100621 9 cr

5503 Research Basic Science (prereq regis med student)
800623 ar cr

8220 Research
400625 Paparella, 18 cr

8230 Clinical Otorhinolaryngology
726390 Adams, Duvall, others, 6 cr

8231 Surgery of Ear, Nose, and Throat
526391 Paparella, Duvall, 4 cr

8232 Maxillofacial Surgery
200626 Duvall, Paparella, 1 cr

8233 Plastic and Reconstructive Surgery of the Head and Neck
326392 Adams, Duvall, 1 cr

8234 Anatomy of the Head and Neck and Temporal Bone Dissection
900628 Paparella, 2 cr

8235 Roentgenology of the Head and Neck
700629 2 cr

8236 Pharmacology in ENT
900631 2 cr

8237 Endoscopy
500633 Duvall, 2 cr

8238 Pathology of the Ear, Nose, and Throat
126393 Duvall, Paparella, 2 cr

8239 Otoneurology
026394 Paparella, Duvall, 2 cr

8240 Allergy
826395 2 cr

8241 Tumor Clinic
626396 Adams, Duvall, 1 cr

8242 Audiology of Speech Pathology
300634 Lassman, Harford, 2 cr

8243 Introduction to Research Methodology
426397 Nelson, Ward, 2 cr

8244 Seminar: Current Literature
126399 Adams, Paparella, others, 1 cr

8245 Master's Thesis Research
000636 ar cr

8246 Ph.D. Thesis Research
800637 ar cr

8247 Physiology of Hearing (§Phsl 8216; prereq #)
600641 Ruggero, 3 cr

8248 Research
200643 ar cr

PATHOBIOLOGY (Path)
Laboratory Medicine And Pathology
Medical School

5102 Organ System Pathology (prereq pathobiology grad student or △)
★LECT 0815-0900 M, 1315-1400 T, MoosT 2650
737518 –1 LAB 1415-1600 T, 2-7 cr
537519 –2 LAB 1415-1600 Th, 2-7 cr

5104 Autopsies (prereq regis grad med or #)
626401 Burke, Snover, ar cr

5108 Fundamentals of Immunobiology (prereq Biol 5001, 5003, GCB 5043, MdBc 5100 or #)
935542 1015-1100 MWF, PWB 7155, Bach, 3 cr

5109 Seminar: Selected Topics in Pathobiology (prereq #)
935539 Benson, 1 cr

5110 Seminar: Pathology (prereq #)
400379 1200-1300 M, Mayo C231, 1 cr (Todd Amph)

5113 Surgical Pathology (prereq regis grad med or #)
400382 Dehner, Rosai, ar cr

5128 Experimental Immunopathology (prereq regis med or grad med)
700386 Kersey, 4 cr

5140 Seminar: Experimental Chronobiology
300388 Halberg, 1 cr

5141 Problems in Experimental and Clinical Chronobiology
500390 Halberg, ar cr

5169 Research in Human Genetics (prereq #)
100392 Eaton, ar cr

5170 Advanced Problems: Medical Genetics (prereq #)
713848 Eaton, ar cr

5179 Seminar: Chemistry (prereq #)
800394 Steffes, 1 cr

5180 Advanced Chemistry (prereq #)
013841 Benson, ar cr

5415 Mathematical Models in Pathobiology I: Deterministic Models in Physiological Chemistry (prereq knowledge of biomedical computing, calculus, pathobiology)
235540 1415-1530 TTh, MoosT 2113, Ackerman, 3 cr

5865 Departmental Seminar (prereq #)
426402 0800-0900 W, Mayo D230, 1 cr (Eustis Amph)

8108 Pathobiology I (8108-8109-8110†; prereq MdBc 5100, 5101 or ¶, Anat 5103, 5104 or ¶ or #)
700405 0915-1000 MWF, JacH 3145, Ahmed, Estensen, others, 3 cr

8200 Advanced Problems (prereq #)
200397 ar cr

8201 Research
900399 ar cr

8207 Research in Experimental and Clinical Chronobiology
400401 Halberg, ar cr

8237 Laboratory in Optical Transforms of Electron Micrographs (prereq Anat 8135, 8136, 8137 or equiv, plus #...BioC 5523 or Chem 5574 or equiv desirable)
809189 Runge, ar cr

8272 Immunobiology (prereq #)
135541 Azar, 2 cr

8701 Advanced Neuropathology (§Neur 8703)
813842 Sung, Mastri, ar cr

8702 Survey of Neuropathology (§Neur 8704)
413844 Sung, Mastri, 1 cr

PEDIATRIC DENTISTRY (Pedo)
Dentistry

5414 Advanced Clinical Pedodontics (prereq #)
329647 1000-1230 Th, 1400-1630 MF, MoosT 6210, Till, others, ar cr

8001 Research (prereq #)
129648 Messer, others, ar cr

8290 Hospital Pedodontics I (prereq #)
029649 0830-1200 TW, Mayo D349, Walker, others, ar cr

8291 Hospital Pedodontics II (prereq #)
329650 0900-1200 TW, 1300-1600 MTWThF, Till, others, ar cr

8292 Pedodontic Literature (prereq #)
129651 0800-1000 M, MoosT 6162, Feigal, others, ar cr

8294 Pedodontic Diagnosis and Treatment Planning (prereq #)
029652 0800-0900 F, MoosT 6162, Feigal, others, ar cr

8295 Independent Pedodontic Study (prereq #)
712425 Till, others, ar cr

PEDIATRICS (Ped)
Medical School

5501 Pediatric Clerkship
226403 Satran, ar cr

5503 Pediatric Clerkship with Outstate Clinicians
126404 Satran, ar cr

5504 Clinical Aspects of Pediatric Psychology (prereq #)
015931 ar cr

5512 Pediatric Acting Internship
926405 Satran, 9-18 cr

5515 Child Development at St. Paul Ramsey Hospital
800654 Davis, ar cr

5520 Pediatric Out-Patient
600655 Satran, ar cr

5522 Ambulatory Pediatrics at Hennepin County Medical Center (prereq 5501)
400656 Tobin, 9 cr

5523 Outpatient Externship at Community University Health Care Center
100658 Smelker, ar cr

5525 International Health
200660 1900-2100 Th, MoosT 2520, Venters, ar cr

5532 Clinical Allergy and Immunology at University Hospitals
100661 Page, ar cr

5534 Pediatric Cardiology at the University Hospital
700663 Moller, ar cr

5535 Infectious Diseases
300665 Ferrieri, ar cr

5536 Pediatric Hematology/Oncology at the University Hospitals
000667 Nesbit, ar cr

5537 Pediatric Endocrinology and Metabolism at the University
600669 Ulstrom, ar cr

5538 Pediatric Gastroenterology
000670 Sharp, ar cr

5539 Neonatal Medicine Externship
600672 Boros, ar cr

5540 Pediatric Neurology
200674 Swaiman, ar cr

5542 Clinical Pharmacology at the University
700677 Mirkin, ar cr

5543 Nephrology at the University
300679 Michael, ar cr

5544 Pediatric Pulmonary Disease
700680 Warwick, ar cr

5545 Diagnosis, Evaluation, and Care of Adults and Children with Cancer
300682 Ramsay, ar cr

5547 Topics in Maternal and Child Care (prereq 5500, 5501 or 5502, #)
100683 ten Bensel, ar cr

5548 Pediatric Genetics at the University
726406 Pierpont, 9 cr

5551 Elective in Communicative Therapy in Medicine (prereq attendance intro lect Phase B prog, compl of assigned rdg material prior workshop)
800685 Olness, 1.5 cr

5553 Adolescent Medicine
712361 Blum, 9 cr

5555 Neonatal Clerkship (prereq 5501 or 5512)
413715 Opitz, ar cr

5556 Clinical Pediatrics Clerkship (prereq 5501 or 5512)
213716 Blau, ar cr

8200 Graduate Seminar
600686 Krivit, 1.5 cr

8202 Pediatric Clinic (prereq #)
100689 Krivit, ar cr

8204 Residency in Pediatrics (prereq #)
200691 Krivit, ar cr

8206 Pediatric Special Interest (prereq #)
100692 Krivit, ar cr

8208 Pediatric Research (prereq #)
700694 ar cr

PERIODONTICS (Pero)
Dentistry

8000 Advanced Clinical Periodontology
829653 Pihlstrom, ar cr

8100 Research in Periodontology
629654 Herzberg, ar cr

8200 Lectures
429655 Pihlstrom, ar cr

8300 Seminar: Periodontology
229656 Pihlstrom, ar cr

PERSIAN (Per)
South And Southwest Asian Studies
Liberal Arts

1101 Beginning Persian
835145 1315-1500 MW, 1315-1400 F, FordH 70, Tavakoli, 5 cr

3011 Intermediate Persian (prereq 1103)
035144 1615-1800 MW, FolH 52, Tavakoli, 4 cr

5900 Readings in a Iranian Language (max 12 cr; prereq 3013 or #)
237627 1215-1300 MWF, FolH 52, Malandra, 4 cr

5970 Directed Readings (prereq 3013, #, △, CLA approval)
400155 ar cr

PERSONAL ORIENTATION (PO)
Liberal Arts

R1001 How to Study (cannot be applied toward any CLA degree)
105116 –1 0915-1000 MWF, JonesH 2, 2 cr
905120 –2 1115-1200 MWF, JonesH 2, 2 cr
105124 –3 1215-1300 MWF, JonesH 2, 2 cr
405128 –4 1315-1400 MWF, JonesH 2, 2 cr
205132 –5 0800-0845 MWF, CofH 120, 2 cr (StP)

PHARMACEUTICS (Phm)
Pharmacy

8101 Readings in Pharmaceutics (prereq #)
301105 Miller, 1 cr

8200 Research Problems (prereq #)
112289 ar cr

PHARMACOGNOSY (Phcg)
Pharmacy

5899 Special Problems in Pharmacognosy (prereq #)
526407 ar cr

8300 Pharmaceutical Cell Systems (prereq #)
435147 4 cr

8900 Research in Pharmacognosy (prereq #)
235148 ar cr

PHARMACOLOGY (Phcl)
Medical School

1009 Pharmacology for Nursing Students
300715 1515-1600 MWF, MoosT 2620, Quebbemann, 3 cr

5101 Pharmacology for Pharmacy Students (prereq registered 2nd yr Pharmacy student or #) (A-N only)
★LECT 1015-1100 MTWTh, MoosT 2530, Dunham, 4 cr
609047 –1 LAB 1315-1600 F, MoosT 3110

5103 Pharmacology for Dental Students
★LECT 0845-0930 MTWTh, MoosT 2530, Wilcox, 5 cr
409048 –1 LAB 1415-1600 Th, MoosT 3110

5109 Problems in Pharmacology (prereq #)
000717 Shideman, ar cr

8203 Research in Pharmacology (prereq #)
600719 ar cr

8204 Seminar: Selected Topics in Pharmacology (max 3 cr; prereq 5110 or #)
600722 1215-1300 W, MlrdH 3257, Sladek, 1 cr

8206 Seminar: Microassary of Drugs (prereq Chem 3101 or #)
135149 Holtzman, 1 cr

8207 Seminar: Psychopharmacology (max 3 cr; prereq #)
900726 Sparber, 1 cr

PHARMACY (Phar)
Pharmacy

5009 Multidisciplinary Perspectives on Aging
526410 1615-1800 MW, VinH 16, Galle, 4 cr

5201 Drugs and Health Care (S-N only)
801092 1015-1100 TTh, PWB 2470, 1115-1200 TTh, HSUnitF 2110, 2140, Kabat, 3 cr

5210 Terminology of Health Sciences
601093 Bast, 2 cr

5230 Pharmacy and the Law (prereq second yr pharmacy student or #)
613261 0915-1100 TTh, MMA 100, Holmstrom, 2 cr

5232 Drugs and Prison Health
326411 Kingston, 2 cr

5237 Introduction to Computers (A-N only)
236977 0915-1000 TTh, MMA 125, Anderson, 1 cr

5250 Pharmacy and the Health Care System (A-N only)
310807 0815-0900 MWF, MoosT 2520, Wertheimer, 3 cr

5255 Social and Psychological Aspects of Death and Dying (prereq 5201 or #)
401094 1800-1930 T, HSUnitF, Benson, 2 cr

5286 Drugs and Society (prereq 5285 or #)
513849 Gallo, 1-3 cr

5290 Specialty Clerkships
201095 Cloyd, ar cr

5301 Clinical Therapeutics (prereq 5350, Phcl 5102 or #)
410815 1015-1100 MWF, HSUnitF 2110, 2140, Canafax, 3 cr

5302 Clinical Therapeutics (prereq 5301)
710819 1115-1200 MWF, HSUnitF 2110, 2140, Canafax, 3 cr

5304 Communication for the Health Sciences II (prereq phcy student or #)
436976 Bast, 1 cr

5315 Interpersonal Competencies
636975 Bast, 2 cr

5330 Therapeutic Agents II (prereq 5440 or #) (A-N only)
701098 1115-1200 MTWTh, 1015-1200 F, MoosT 2530, Hanna, 5 cr

5390 Community Practice Clerkship (prereq 3rd yr pharmacy student) (S-N only)
026413 Benson, 8-12 cr

5392 Hospital Practice Clerkship (prereq 3rd yr pharmacy student) (S-N only)
826414 Mann, 8-12 cr

5396 Pharm.D. IV Clerkship (prereq 5312 or #) (S-N only)
626415 1800-2100 W, MoosT 2530, Cloyd, 12 cr

5430 Biochemistry of Medicinals (prereq Chem 3303 or #)
013970 1115-1200 MWF, MoosT 2520, Vince, 3 cr

R5442 Therapeutic Agents Lab II (prereq 5421, 5440) (A-N only)
213263 –1 LAB 1315-1600 T, HSUnitF 3150, Abdel-Monem, 1 cr
113264 –2 LAB 1315-1600 Th, HSUnitF 3150, Abdel-Monem, 1 cr

5503 Pathophysiology and Therapeutics of Blood Diseases (prereq PharmD candidate) (A-N only)
336355 1015-1200 MWF, MoosT 2690, Cipolle, 3 cr

5507 Pathophysiology and Therapeutics of Neoplastic Diseases (prereq PharmD candidate) (A-N only)
136356 1515-1700 TTh, MoosT 2690, Sylvester, 2 cr

5512 Pathophysiology and Therapeutics of Eye, Ear, Nose, Throat and Skin Diseases (prereq PharmD candidate) (A-N only)
935783 1515-1700 MW, MoosT 2530, Larson, 1 cr

5514 Pathophysiology and Therapeutics of Clinical Nutrition (prereq PharmD candidate) (A-N only)
036357 1315-1500 ThF, OwreH 2210, Teasley, 1 cr

5603 Pharmaceutical Calculations
501099 0915-1000 F, PWB 2470, Rippie, 1 cr

R5605 Introduction to Dosage Form Design (prereq ¶5603) (A-N only)
★LECT 1015-1100 F, MoosT 2620, 2 cr
231455 –1 LAB 0815-1100 MW, HSUnitF 3120
131456 –2 LAB 1315-1600 MW, HSUnitF 3120

5670 Drug Information Retrieval and Evaluation (A-N only)
735784 –1 0915-1000 M, HSUnitF, Gallo, 2 cr
535785 –2 0815-0900 T, HSUnitF, 2 cr
335786 –3 0815-0900 W, HSUnitF, 2 cr
135787 –4 0915-1000 W, HSUnitF, 2 cr
035788 –5 0815-0900 Th, HSUnitF, 2 cr
835789 –6 0915-1000 F, HSUnitF, 2 cr

5680 Pharmacokinetics (prereq 5620)
201100 1315-1500 MW, MoosT 2650, Sawchuk, 4 cr

5695 Nuclear Pharmacy (prereq 5620)
135782 1315-1500 T, HSUnitF, Chandler, 2 cr

5970 Directed Studies (prereq #)
101101 1-5 cr

5999 Special Problems (prereq #)
213974 ar cr

PHILOSOPHY (Phil)
Liberal Arts

R1001 Introduction to Logic
★LECT 0915-1000 MWF, SmithH 100, Dolan
405226 –1 REC 0915-1000 T, FordH 150, 5 cr
905229 –2 REC 0915-1000 T, FordH 285, 5 cr
105231 –3 REC 0915-1000 T, FordH 55, 5 cr
505234 –4 REC 1015-1100 T, FordH 150, 5 cr
005237 –5 REC 1015-1100 T, LindH 229, 5 cr
205244 –6 REC 1015-1100 T, FordH 120, 5 cr
705247 –7 REC 0915-1000 Th, FordH 150, 5 cr
705250 –8 REC 0915-1000 Th, FordH 285, 5 cr
005254 –9 REC 0915-1000 Th, FordH 55, 5 cr
★LECT 1315-1400 MWF, FordH 55, Root
205258 –10 REC 1315-1400 T, FordH 285, 5 cr
831399 –11 REC 1315-1400 T, FordH 130, 5 cr
531400 –12 REC 1415-1500 T, FordH 349, 5 cr
426416 –13 REC 1315-1400 Th, FordH 285, 5 cr
226417 –14 REC 1315-1400 Th, FordH 130, 5 cr
126418 –15 REC 1415-1500 Th, FordH 349, 5 cr

R1001H Honors Course: Logic
★LECT 0915-1100 MWF, SmithH 100, Dolan
136947 –80 REC 1315-1400 M, FordH 349, 5 cr

R1002 Introduction to Philosophy
★LECT 1015-1100 MWF, ApH 150, Lewis
705264 –1 REC 1015-1100 T, AkerH 225, 5 cr
005268 –2 REC 1015-1100 Th, FordH 60, 5 cr
105270 –3 REC 1115-1200 Th, FordH 285, 5 cr
★LECT 1315-1400 MWF, MMA 125, Owens
805272 –4 REC 1315-1400 T, FordH 155, 5 cr
331401 –5 REC 1215-1300 Th, FordH 60, 5 cr
131402 –6 REC 1315-1400 Th, FordH 60, 5 cr

R1002H Honors Course: Introduction to Philosophy (prereq honors regis or #)
837252 1015-1130 TTh, FordH 50, Kitcher, 5 cr

R1003 Introduction to Ethics
613633 0815-0900 MTWF, FordH 130, Owens, 5 cr

1005 Introduction to Inductive and Scientific Reasoning
211108 1115-1230 TTh, FordH 150, Savage, 5 cr

R3001 General History of Western Philosophy
★LECT 0915-1000 MWF, MMA 125, Dahl
905280 –1 REC 0915-1000 T, FordH 349, 5 cr
305283 –2 REC 0915-1000 Th, FordH 349, 5 cr

R3001H Honors Course: General History of Western Philosophy (prereq honors regis or #)
★LECT 0915-1000 MWF, MMA 125, Dahl
113840 –80 REC 0915-1000 T, FordH 130, 5 cr

R3003 General History of Western Philosophy
★LECT 1115-1230 TTh, Phys 210, Gunderson
535866 –1 REC 1115-1200 M, FordH 150, 5 cr
335867 –2 REC 1115-1200 W, FordH 150, 5 cr

R3201 Symbolic Logic I (§5201)
★LECT 1015-1100 MWF, FordH 120, Anderson
105298 –1 REC 1015-1100 TTh, FordH 349, 5 cr

R3302 Moral Problems of Contemporary Society
★LECT 1115-1200 MWF, FordH 130, Eaton
135868 –1 REC 1115-1200 T, FordH 170, 5 cr
035869 –2 REC 1115-1200 Th, FordH 170, 5 cr

3970 Directed Studies (prereq #, △, college approval)
630867 1-5 cr

3980 Directed Instruction (prereq #, △, college approval)
430868 1-5 cr

5005 Plato (prereq 3001 or #)
835856 1215-1300 MWF, FordH 175, Peterson, 4 cr

5034 Descartes (prereq 3003 or #)
635857 1115-1200 MWF, FordH 175, Root, 4 cr

5041 Locke (prereq 3003 or #)
435858 1315-1400 MWF, FordH 175, Lewis, 4 cr

R5201 Symbolic Logic I (§3201)
★LECT 1015-1100 MWF, FordH 120, C A Anderson
126421 –1 REC 1215-1300 TTh, FordH 447, 5 cr

5231 Philosophy of Language (prereq 1001 or 3201 or 5201 or #)
235859 1115-1200 MWF, FordH 170, Dolan, 4 cr

5311 Ethical Theory (prereq 1003 or #)
635860 1415-1500 MWF, FordH 349, Dahl, 4 cr

5501 Principles of Aesthetics (prereq 3502 or #)
435861 0915-1000 MWF, FordH 70, Eaton, 4 cr

5521 Philosophy of Religion (prereq 8 cr in philosophy)
235862 1415-1500 MWF, FordH 160, C A Anderson, 4 cr

5760 Selected Topics in Philosophy (prereq 4 3xxx-5xxx cr in philosophy or #)
637253 1215-1330 TTh, FordH 349, Kitcher, 4 cr

5970 Directed Studies and Research (prereq #, △, CLA approval)
230869 1-5 cr

5990 Directed Studies and Research (prereq #, △, CLA approval)
630870 1-5 cr

8130 Seminar: Epistemology (prereq 5105 or #)
735865 1515-1700 T, FordH 359, Scheman, 4 cr

8640 Seminar: Philosophy of Psychology (prereq advanced grad student in philosophy or psychology with written consent)
111126 1515-1700 Th, FordH 359, Savage, 4 cr

8970 Directed Study and Research (prereq passing grade on written prelim exam for PhD in philosophy)
430871 1-4 cr

8990 Directed Study and Research (prereq passing grade on written prelim exam for PhD in philosophy)
926422 1-4 cr

PHYSICAL EDUCATION (PE)
School of Physical Ed, Rec, School Health Ed Education

For Facility Fee, see section 4

Courses listed below are ranked numerically according to activity level, i.e., the level of skill required. The activity level of each course is indicated by the second digit in the course number, 0 = first level, 1 = second level, and so on. Thus 1007, for example, is a first-level course and 1107 is a second-level course. In most cases, the lower level course is a prerequisite for the higher; however, students who can demonstrate sufficient skill in an activity may usually register for the most advanced course without completing the prerequisite(s).

Most of the courses are considered high intensity; that is, they require a high level of physical exertion. Thus students are encouraged to consider carefully any limits on their health or physical fitness and to consult a physician if they have any questions about their health or about their ability to participate safely in the physical activities involved in any courses for which they wish to register.

Open to ALL Students

R1004 Diving, Springboard (prereq 1007 or #)
829832 0815-0910 TTh, CookeH 15, Lincoln, 1 cr

R1007 Swimming
605337 0915-1000 MWF, CookeH 10, 1 cr

R1014 Conditioning
805353 –1 0915-1000 MWF, StadS 264, FieldHse, Northrop Fld, 1 cr
105357 –2 1015-1100 MWF, StadS 264, FieldHse, Northrop Fld, 1 cr
905361 –3 1315-1400 MWF, StadS 264, FieldHse, Northrop Fld, 1 cr
105365 –4 0815-0910 TTh, StadS 264, FieldHse, Northrop Fld, 1 cr
405369 –5 0915-1010 TTh, StadS 264, FieldHse, Northrop Fld, 1 cr
205373 –6 1115-1210 TTh, StadS 264, FieldHse, Northrop Fld, 1 cr
505377 –7 1800-2000 Th, TerH, 1 cr
431325 –8 1300-1355 MW, Gym, 1 cr (StP)

R1015 Weight Training
305381 –1 0815-0900 MWF, StadN 202, 1 cr
605385 –2 0915-1000 MWF, StadN 202, 1 cr
905389 –3 0915-1010 TTh, StadN 202, 1 cr
905392 –4 1115-1210 TTh, StadN 202, 1 cr

R1031 Sabre Fencing
137628 1015-1110 TTh, NorrisH 60, Jacobson, 1 cr

R1032 Badminton
705409 0815-0910 TTh, CookeH 325, 1 cr

R1033 Foil Fencing
429834 0915-1010 TTh, NorrisH 60, Jacobson, 1 cr

R1034 Judo
105410 –1 1215-1310 TTh, StadN 207, Holm, 1 cr
905411 –2 1315-1410 TTh, StadN 207, Holm, 1 cr
336923 –3 1415-1510 TTh, StadN 207, Holm, 1 cr

R1035 Karate
305414 –1 0915-1010 MW, PeikG G100, Fusaro, 1 cr
005416 –2 1015-1110 MW, PeikG G100, Fusaro, 1 cr

R1036 Racquetball
231326 –1 1015-1110 MW, StadN 208, 1 cr
605421 –2 1315-1410 MW, StadN 208, 1 cr
905425 –3 0815-0910 TTh, StadN 208, 1 cr
305428 –4 0915-1010 TTh, StadN 208, 1 cr
305431 –5 1315-1410 TTh, StadN 208, 1 cr

R1038 Tennis
805448 –1 0815-0900 MTWThF, BFAB 101, TCts, 1 cr (Sept 26-Oct 28)
605452 –2 0915-1000 MTWThF, BFAB 101, TCts, 1 cr (Sept 26-Oct 28)

R1043 Beginning Horsemanship
605466 –1 1600-1800 M, CookeH 420, Bryant Lake Stables, Krotee, 1 cr
105469 –2 1600-1800 T, CookeH 420, Bryant Lake Stables, Krotee, 1 cr
105472 –3 1600-1800 Th, CookeH 420, Bryant Lake Stables, Krotee, 1 cr

R1044 Self Defense
913881 –1 1115-1210 TTh, StadN 207, Holm, 1 cr
513883 –2 1800-2000 T, FronH, Bendickson, Brandl, 1 cr

R1046 Apparatus
229835 1015-1110 MW, CookeH 302, Roethlisberger, 1 cr

R1047 Archery (moderate intensity)
129836 1015-1100 MW, NorrisH 60, 1 cr

R1048 Bowling (moderate intensity)
305476 –1 0915-1000 MWF, CMU, 1 cr
805479 –2 1015-1100 MWF, CMU, 1 cr
805482 –3 1115-1200 MWF, CMU, 1 cr

R1052 Rifle Marksmanship (moderate intensity)
705488 –1 0915-1010 MW, Armory, Coons, 1 cr
705491 –2 1015-1110 MW, Armory, Coons, 1 cr

R1053 Ice Skating
105494 0915-1000 MTWThF, WmsA, 1 cr (Oct 31-Dec 8)

R1060 Tumbling, Floor Exercise, and Trampoline
131330 –1 0915-1010 TTh, CookeH 302, Roethlisberger, 1 cr
931331 –2 1015-1110 TTh, CookeH 302, Roethlisberger, 1 cr

R1067 Basketball
937629 1015-1110 TTh, CookeH 325, 1 cr

R1072 Soccer
405498 0915-1000 MTWThF, FieldHse, BFAB Fld, 1 cr (Sept 26-Oct 28)

R1073 Softball
929837 1215-1300 MTWThF, FieldHse, BFAB Fld, 1 cr (Sept 26-Oct 28)

R1074 Volleyball
805501 1315-1410 TTh, CookeH 325, 1 cr

R1107 Swimming (prereq 1007)
126435 1115-1200 MWF, NorrisH 58, 1 cr

R1143 Intermediate Horsemanship (prereq 1043 or #)
726437 1600-1800 W, CookeH 420, Bryant Lake Stables, Krotee, 1 cr

R1148 Bowling (prereq 1048 or #) (moderate intensity)
526438 1315-1400 MWF, CMU, Sleezer, 1 cr

R1205 Scuba and Skin Diving (prereq 1107)
729838 1015-1200 TTh, CookeH 15, BFAB 285, Aubineau, 1 cr

R1306 Advanced Lifesaving (prereq ability to swim 440 yds)
605516 1215-1300 MWF, CookeH 15, 1 cr

R1410 Water Safety Instructor (prereq curr ARC adv Lifesaving Cert, have or concurrently acquire ARC First Aid, CPR Cert)
105522 1015-1200 MW, CookeH 10, Freeman, 2 cr

R1497 Directed Study (prereq 3 cr in physical education, △)
129844 Krotee, 1-6 cr

Professional Courses

R1521 Gymnastics (A-N only)
405534 –1 1115-1230 TTh, CookeH 308, Yeboah, 1 cr (women's events)
705538 –2 1115-1230 TTh, CookeH 302, Roethlisberger, 1 cr (men's events)

R1654 Track and Field (prereq 1059, physical education maj) (A-N only)
029845 0915-1000 MWF, FieldHse, BFAB 285, Griak, 1 cr

R1990 Directed Study (prereq △) (A-N only)
629847 Stoner, 1-6 cr

R3100 Adapted Physical Education (A-N only)
429848 1115-1200 MWF, CookeH 214, Breihan, 3 cr

R3111 Mechanics of Movement (prereq Anat 1027) (A-N only)
229849 0915-1000 MWF, CookeH 215, Stoner, 3 cr

R3126 Psychological and Sociological Dimensions of Physical Activity (A-N only)
235568 1315-1400 MWF, CookeH 215, Krotee, 3 cr

R3143 Organization and Management of Sport (prereq 2 cr coaching course) (A-N only)
726440 1015-1100 MWF, CookeH 214, Krotee, 3 cr

R3150 Introduction to Evaluation (A-N only)
229852 0815-0900 MTWF, CookeH 214, 325, Shick, 4 cr

R3175 Ice Hockey Coaching (A-N only)
129853 1215-1300 MWF, BFAB 285, Buetow, 2 cr

R3310 Athletic Training Laboratory (prereq 3114) (A-N only)
929854 0915-1100 T, BFAB, Monroe, 1 cr (Trng Rm)

R3323 Teaching Physical Education: Secondary School (prereq all required activity courses) (A-N only)
729855 1015-1200 MWF, CookeH 215, 325, Anderson, 5 cr

R3327 Teaching Physical Education in the Elementary School (prereq elementary education maj) (A-N only)
205566 –1 1315-1400 MWF, NorrisH M153A, M153, 3, Plack, 3 cr
705569 –2 1415-1500 MWF, NorrisH M153A, M153, 3, Lampe, 3 cr

R3607 Student Teaching: College (prereq physical education maj, ¶3323) (A-N only)
736935 Anderson, 1 cr

R3621 Student Teaching: Elementary (prereq 3322, 3323, SeEd 3150, 3155 or Elem 3100, PubH 3385, 3386) (S-N optional)
529856 1615-1800 W, CookeH 206, Lampe, Griffin, Stube, 6 cr (addnl hrs ar)

R3622 Student Teaching: Secondary (prereq 3322, 3323, SeEd 3150, 3155 or Elem 3100, PubH 3385, 3386) (S-N optional)
329857 1615-1800 W, CookeH 206, Anderson, Jonas, Winters, 6 cr (addnl hrs ar)

R3624 Student Teaching: Coaching (S-N only)
126443 1815-1930 W, CookeH 206, Winters, 3 cr

R3625 Supervised Practical Experience (max 6 cr; prereq △) (S-N only)
129858 Stoner, 3 cr

R3900 Directed Study (prereq △) (A-N only)
029859 Stoner, 1-9 cr

5100 Teaching Physical Education for the Handicapped (prereq #) (A-N only)
329860 1800-2000 M, CookeH 214, Breihan, 3 cr (1 hr ar)

5120 Advanced Biomechanics/Kinesiology (prereq undergrad kinesiology or #) (A-N only)
135569 1600-1800 TTh, CookeH 215, Stoner, 4 cr

5122 Applied Physiology (prereq PubH 3386 or PhsI 3051) (A-N only)
129861 1800-2000 W, CookeH 214, Stull, 3 cr (1 hr ar)

5150 Teaching Elementary School Physical Education (prereq teaching license or #) (A-N only)
235571 1600-1800 T, CookeH 214, Plack, Serfass, others, 3 cr (1 hr ar)

5351 Seminar: Teaching Physical Education in Colleges and Universities (max 3 cr, §Rec 5351, Hlth 5351; prereq △) (A-N only)
809192 1 cr

5389 Practical Experience in Graded Exercise Testing, Prescription, and Direction (max 6 cr, §PubH 5389; prereq 5388 or PubH 5388, #) (A-N only)
029862 Alexander, 3-6 cr

5980 Research Methodology (§Hlth 5980; prereq educ or grad stu) (A-N only)
829863 1615-1730 MW, CookeH 214, Shick, 3 cr

5981 Problems (prereq MEd candidate, #) (A-N only)
629864 ar cr

5983 Readings: Physical Education (max 9 cr; prereq educ or grad stu) (A-N only)
429865 ar cr

8150 Professional Preparation of Physical Education Teachers (prereq 5151)
135572 1800-2000 T, CookeH 224, Young, 3 cr (1 hr ar)

8981 Research Problems (prereq 8980 or #) (S-N only)
229866 ar cr

PHYSICAL MEDICINE AND REHABILITATION (PMed)
Medical School

R1002 Orientation to Physical Therapy (S-N only)
700744 1315-1400 Th, ChRC R220, Gardner, 1 cr

R1003 Orientation to Occupational Therapy (S-N only)
000748 1215-1300 T, ChRC R208, Arndts, 1 cr

5100 Orientation to Rehabilitation (prereq regis OT or PT)
800752 1315-1400 TTh, OwreH 2230, Dahlstrom, Pauley, ar cr

5135 Pathokinesiology (prereq #) (A-N only)
135353 Pohtilla, 3 cr

5150 Kinesiological Electromyography and Nerve Conduction (prereq #) (A-N only)
636698 Allison, 3 cr

5215 Introduction to Physical Therapy Clinical Education (prereq regis PT)
200755 0815-1000 T, ChRC R220, Ellingham, 1 cr (obs ar)

5220 Therapeutic Procedures I (prereq regis PT)
500759 1015-1200 MF, 1015-1100 W, ChRC R220, Ellingham, Carey, 3 cr

5256 Special Interim Clinical Education in Physical Therapy (prereq regis PT)
500762 Ellingham, ar cr

5275 Applied Anatomy (prereq regis PT)
100764 1015-1100 MTWF, ChRC R208, Gullickson, Pohtilla, 3 cr

5282 Theory of Therapeutic Exercise (prereq 5281)
400768 1215-1300 MThF, 1215-1400 W, ChRC R208, Kottke, 4 cr

5284 Techniques of Therapeutic Exercise (prereq 5283)
100773 1415-1600 MWThF, 1215-1400 T, ChRC R220, Scudder, Carey, Amundsen, 4 cr

5288 Evaluation Procedures (prereq regis PT)
900743 1415-1600 T, 0815-1000 WF, 1015-1200 Th, ChRC R220, Scudder, Carey, others, 4 cr

5291 Seminar: Contemporary Issues in Physical Therapy (prereq #)
513995 1215-1300 Th, ChRC R204, Ellingham, Pauley, 2 cr

5294 Independent Study in Physical Therapy (prereq #) (A-N only)
335352 Ellingham, ar cr

5300 Introduction to Occupational Therapy Practice (prereq registered OT student) (S-N only)
426447 1415-1600 T, Mayo C368, Elliason, 1 cr

5312 Wood Processing (prereq regis OT)
200741 1415-1700 MW, ChRC R255, Sicard, 3 cr

5330 Functional Anatomy (prereq regis OT)
200738 1115-1200 MWF, Mayo C368, 1315-1500 MF, 1415-1600 W, ChRC R262, 0815-1000 TTh, JacH 5161, Esch, Lepley, 6 cr

5340 Human Development (prereq regis OT or PT)
100787 0815-1000 MWF, JacH 2135, Huss, 4 cr

5342 Theory II: Psychocial Dysfunction (prereq regis OT)
900791 0815-1000 TTh, ChRC R262, 1415-1600 F, ChRC R208, Eliason, 6 cr

5343 Theory: Physical Dysfunction I (prereq regis OT) (A-N only)
300794 0815-1000 TTh, ChRC R208, 1015-1100 W, 1515-1700 TTh, ChRC R262, Dahlstrom, 7 cr

5360 Group Process Seminar (prereq regis OT)
600798 0815-1000 MWF, ChRC R262, Eliason, 3 cr

5370 Rehabilitation Procedures (prereq regis OT)
226448 1215-1400 MWF, ChRC R220, 1015-1200 Th, ChRC R262, 4 cr

5392 Methods of Scientific Research (prereq regis OT)
600803 1015-1100 MF, 1015-1200 T, Mayo C368, Amundsen, 4 cr

5397 Field Work Education in Occupational Therapy (prereq 5396) (S-N only)
200805 Eliason, ar cr

5410 Adult Rehabilitation Medicine (prereq regis med)
314906 ar cr

5411 Rehabilitation Medicine: Children (prereq regis med)
014908 ar cr

5414 Physical Medicine and Rehabilitation for the Family Physician (prereq regis med)
114910 ar cr

5415 Private Practice in Physical Medicine and Rehabilitation
814912 4.5 cr

5416 Physical Medicine and Rehabilitation at St. Paul Ramsey
414914 ar cr

5441 Adult Physical Medicine, Rehabilitation: Health Care Psychology Interns (prereq #)
115829 ar cr

8103 Clinic (prereq regis PT)
814005 Ellingham, ar cr

8130 Seminar: Current Literature in Physical Therapy
113997 Scudder, 1 cr

8135 Advanced Kinesiology (prereq kinesiology course)
909197 Pohtilla, 3 cr

8140 Physiological Assessment in Physical Therapy
826445 Amundsen, Allison, 1 cr

8150 Research Methodology: Physical Therapy in Electromyography and Nerve Conduction (prereq #)
626446 Allison, 3 cr

8170 Special Topics in Physical Therapy (prereq #)
813999 Amundsen, 1 cr

8171 Administration Physical Therapy Services (prereq #)
213991 Pauley, ar cr

8181 Physiological Bases for Therapeutic Exercise
413987 Kottke, Scudder, 3 cr

8185 Problems in Physical Therapy (prereq regis PT)
114003 Amundsen, ar cr

8188 Teaching Practicum (max 8 cr; prereq #)
113989 Ellingham, ar cr

8193 Research Problems in Physical Therapy (prereq 8192 or #)
414007 Amundsen, ar cr

8195 Research in Physical Therapy (prereq #)
114009 Amundsen, ar cr

8200 Physical Medicine and Rehabilitation Service
535351 Magness, ar cr

8205 Readings in Physical Medicine and Rehabilitation (max 2 cr)
835355 0900-1000 M, ChRC R208, Kottke, 2 cr

8206 Conference on Physical Medicine and Rehabilitation
915002 0800-0900 F, ChRC R208, Magness, 2 cr

8207 Basic and Applied Physiatry
035354 0800-0900 M, ChRC R208, Kottke, 2 cr

8210 Research in Physical Medicine
100814 ar cr

8212 Electromyography (prereq #)
635356 1300-1700 MTWThF, ChRC R311, Dykstra, ar cr

8214 Readings in Electromyography (max 3 cr; prereq #)
115001 1 cr

8220 Seminar: Physical Medicine and Rehabilitation
600817 0800-0900 W, ChRC R208, Magness, 2 cr

PHYSICS (Phys)
Institute of Technology

R1001 The Physical World (§any physics courses other than 1061, no cr for IT stu; prereq one yr high school algebra)
111322 1115-1200 MTWF, Phys 166, Gasiorowicz, 4 cr (Companion lab is 1005)

R1005 Physics Laboratory (no cr for IT students; prereq 1001 or ¶) (S-N only)
611297 1 cr (Lab time assigned first 2 days of class)

R1041 Introductory Physics (§other intro phys crse, no cr IT ex arch, pre-arch, env des; prereq hs alg, plane geometry) (Companion lab is 1045)
711324 –1 1415-1500 MTWF, Phys 150, Broadhurst, 4 cr
311326 –2 1500-1545 MTWF, ClaOff B45, Shupe, 4 cr (StP)

R1042 Introductory Physics (§other intro physics course, no cr IT except arch, pre-arch, env design; prereq 1041)
335254 1415-1500 MTWF, Phys 133, Waddington, 4 cr (Companion lab is 1046)

R1045 Introductory Physics Laboratory (no cr IT except arch, pre-arch, environmental design; prereq 1041 or ¶) (S-N only)
211299 –1 1 cr (Mpls) (Lab time assigned first 2 days of class)
135264 –2 1 cr (StP) (Lab time assigned first 2 days of class)

R1046 Introductory Physics Laboratory (no cr IT except arch, pre-arch, environmental design; prereq 1042 or ¶) (S-N only)
135255 1 cr (Lab time assigned first 2 days of class)

R1061 Physics of Human Motion (no cr for IT students; prereq 1 yr high school algebra, ¶1065)
701473 1115-1200 MWF, Phys 170, Hintz, 4 cr

R1065 Human Motion Laboratory (no cr for IT students; prereq ¶1061) (S-N only)
011300 1 cr (Lab time assigned first 2 days of class)

R1071 Introductory Meteorology (prereq high school algebra)
011328 0815-0900 MTWF, Phys 131, G Freier, 4 cr (Companion lab is 1075)

R1075 Introductory Meteorology Laboratory (prereq 1071 or ¶) (S-N only)
611302 1 cr (Lab time assigned first 2 days of class)

R1104 General Physics (no cr for IT students; prereq Math 1142, high school trigonometry or Math 1008)
101476 1115-1200 MTWThF, Phys 150, Mauersberger, 4 cr (Companion lab is 1107)

R1106 General Physics (no cr for IT students; prereq 1105)
801478 0815-0900 MTWThF, Phys 170, Weyhmann, 4 cr (Companion lab is 1109)

R1107 General Physics Laboratory (no cr for IT students; prereq 1104 or ¶) (S-N only)
411303 1 cr (Lab time assigned first 2 days of class)

R1109 General Physics Laboratory (no cr for IT students; prereq 1108, 1106 or ¶) (S-N only)
111305 1 cr (Lab time assigned first 2 days of class)

R1271 General Physics (prereq Math 1221 or 1321 or 1621 or ¶) (Companion lab is 1275)
405646 –1 0815-0900 MTWThF, Phys 150, P Freier, 4 cr
105648 –2 1215-1300 MTWThF, Phys 166, Mantis, 4 cr

R1275 General Physics Laboratory (prereq 1271 or 1311 or ¶) (S-N only)
911306 1 cr (Lab time assigned first 2 days of class)

R1281 General Physics (prereq 1271, completion of or ¶Math 1231, 1331, 1621) (Companion lab is 1285)
505654 –1 0915-1000 MTWThF, Phys 166, Huang, 4 cr
805658 –2 1315-1400 MTWThF, Phys 150, Marquit, 4 cr

R1285 General Physics Laboratory (prereq 1275, 1281 or 1331 or ¶) (S-N only)
511308 1 cr (Lab time assigned first 2 days of class)

R1291 General Physics (prereq 1281) (Companion lab is 1295)
605662 –1 0815-0900 MTWThF, Phys 166, Winckler, 4 cr
105665 –2 1015-1100 MTWThF, Phys 150, Greenlees, 4 cr
131506 –3 1115-1200 MTWThF, Phys 133, Marshak, 4 cr (Advanced section. Essentially the same material as in other sections but covered in more breadth or depth. Less class time spent on elementary examples of problem solving.)
835257 –4 1315-1400 MTWThF, Phys 166, Courant, 4 cr

R1292 General Physics Seminar (prereq ¶1291, sec 3, △) (S-N only)
635258 1215-1300 Th, Phys 157, Marshak, 1 cr

R1295 General Physics Laboratory (prereq 1285, 1291 or 1341 or ¶) (S-N only)
711310 1 cr (Lab time assigned first 2 days of class)

R1311 Comprehensive Introductory Physics with Calculus (prereq ¶Math 1211 or 1511 or 1611 or equiv)
237093 1015-1100 MTWF, Phys 133, Johnson, 4 cr

R3501 Modern Physics (§3511, 3512, 3513, no cr for physics majs; prereq 1291 or 1106)
001480 1315-1400 MTWF, Phys 170, Cahill, 4 cr

R3511 Modern Physics (prereq 1291 or ¶, 1106 or ¶, Math 1231)
601482 1015-1100 MTWF, Phys 131, Peterson, 4 cr

R3515 Physics Laboratory (prereq 3501 or ¶ or 3512 or ¶)
311312 –1 1415-1700 T, Phys 225, Blair, 1 cr
514323 –2 0815-1100 Th, Phys 225, Blair, 1 cr
435262 –3 1415-1700 Th, Phys 225, Blair, 1 cr

R3970 Directed Study (prereq #, △)
201484 1-5 cr

R5021 Introduction to Analytic Mechanics (prereq 3011, Math 3231 or equiv)
901486 0915-1000 MTWF, Phys 170, Ruddick, 4 cr

R5031 Topics in Mathematical Physics (prereq two 5000-level math courses)
501488 0915-1000 MTWF, Phys 143, Suura, 4 cr

R5051 Classical Physics (prereq 5022, 5024, advanced calculus or #)
701490 0800-0900 MWF, Phys 210, Lysak, 4 cr

R5101 Introduction to Quantum Mechanics (prereq 3512)
301492 1315-1400 MTWF, Phys 210, Hamermesh, 4 cr

R5121 Methods of Experimental Physics I (prereq 3513 or #)
131487 1215-1300 MWF, Phys 170, Heller, Zimmermann, 5 cr (lab ar)

R5124 Experimental Project (prereq 5123, #)
414055 Heller, Zimmermann, ar cr

R5151 Quantum Mechanics (prereq 5102 or equiv, advanced calculus or #)
001494 0800-0910 T, 0800-0950 Th, Phys 143, Valls, 4 cr

R5162 Introduction to Plasma Physics (prereq 5022, 5024 or #)
435259 1115-1200 MTWF, Phys 143, Kellogg, 4 cr

R5201 Thermal and Statistical Physics (prereq 3513 or equiv)
411320 1015-1100 MTWF, Phys 143, Giese, 4 cr

R5231 Introduction to Solid-State Physics (prereq grad, advanced undergrad students in physics, science, engineering)
401497 0915-1000 MTWF, Phys 210, Dahlberg, 4 cr

R5950 Seminar (prereq △)
101499 1600-1730 W, Phys 131, ar cr

R5970 Directed Studies (prereq #, △)
601501 1-5 cr

R5990 Directed Research (prereq 3rd yr, △)
201503 ar cr

R8081 General Relativity (prereq 5053 or #)
536838 1215-1300 MWF, Phys 236A, Kapusta, 3 cr

R8121 Advanced Quantum Mechanics (prereq 5153 or #)
701506 1315-1400 MWF, Phys 236A, Rudaz, 3 cr

R8131 Symmetry and Its Applications to Physical Problems (prereq 5153 or #)
301508 0915-1000 MTWF, Phys 157, Bayman, 4 cr

R8200 Seminar: Solid-State and Low-Temperature Physics
101509 1415-1600 Th, Phys 236A, Goldman, ar cr

R8211 Equilibrium Statistical Mechanics (prereq 5153 or #)
301511 1015-1100 MWF, Phys 157, Goldman, 3 cr

R8221 Solid-State Physics (prereq ¶5152-5153, 5211 or #)
114051 1115-1200 MWF, Phys 157, Campbell, 3 cr

R8238 Advanced Topics in Solid-State and Low-Temperature Physics
336839 1415-1500 MWF, Phys 143, Coleo, ar cr

R8300 Seminar: Nuclear Physics
001513 1415-1600 W, Phys 236A, Kapusta, ar cr

R8311 Nuclear Physics (prereq 5153 or ¶5151-5152-5153, 5301 or #)
635261 1415-1500 MTF, Phys 236A, Ellis, 3 cr

R8360 Seminar: Mass Spectroscopy
601515 1515-1700 F, Phys 236A, ar cr

R8370 Seminar: Elementary Particle Physics
201579 1515-1700 T, Phys 210, Rudaz, ar cr

R8380 Advanced Topics in Elementary Particle Physics (prereq #, 1105 or ¶)
736840 1015-1130 TTh, Phys 157, Walsh, ar cr

R8400 Seminar: Cosmic-Ray and Space Physics
401581 1515-1700 Th, Phys 143, P Freier, ar cr

R8420 Seminar: Magnetospheric Physics (max 3 cr)
101583 1515-1700 F, Phys 157, Cahill, 1-3 cr

R8440 Seminar: Atmospheric Physics
701585 1215-1300 T, Phys 157, Mantis, ar cr

R8500 Plan B Project (no cr toward PhD; prereq #) (S-N only)
301587 4 cr

R8950 Seminar: Problems of Physics Teaching and Higher Education (prereq grad standing in physics or #)
001589 1615-1700 T, Phys 236A, Heller, 1 cr

R8990 Research in Physics (prereq #)
101591 ar cr

PHYSIOLOGY (Phsl)
Medical School

1001 Human Physiology (prereq high school biology, chemistry or #)
★LECT 1415-1500 MWF, MoosT 2530, Bloom, 4 cr
400821 –1 DEM 1215-1400 W, MoosT 3110
100823 –2 DEM 1515-1700 W, MoosT 3110

3052 Principles of Physiology (prereq 1 yr college chemistry, physics, math through integ calculus)
100831 1015-1100 MWF, MoosT 3110, Johnson, 3 cr

3055 Principles of Physiology (prereq 1 yr college chemistry, physics, math through integ calculus)
400835 1015-1100 MWF, MoosT 3110, Johnson, 5 cr

3070 Neurophysiology (prereq biochemistry, human or mammalian anatomy)
226577 0915-1000 TTh, 1315-1400 F, JacH 2135, 1315-1400 TTh, MoosT 3110, 2 cr

3091H Readings (prereq honors candidates in physiology)
211223 Poppele, ar cr

3092H Problems (prereq honors candidates in physiology)
911225 Poppele, ar cr

5094 Human Physiology (prereq course in biochemistry, human or mammalian anatomy)
700839 1415-1500 MWF, MlrdH 5276, Kepner, 3 cr

5106 Respiratory Physiology (prereq #)
735347 0815-1000 TTh, MlrdH 5276, Kronenberg, Wangensteen, 3-4 cr

5113 Problems in Physiology (prereq #)
100845 ar cr

5114 Biophysics of Nerve Cells (prereq #)
335349 Fohlmeister, 3 cr

5440 Quantitative Physiology (prereq one yr sequences in mathematics, physics, chemistry, biology or #)
112302 1015-1100 MWF, MoosT 3110, Johnson, 3 cr

5551 Literature Seminar
614023 1215-1300 M, MlrdH 5276, 1-2 cr

5552 Readings in Physiology
400849 ar cr

5553 Research in Physiology
200853 ar cr

8106 Respiratory Physiology (prereq #)
535348 0815-1000 TTh, MlrdH 5276, Kronenberg, Wangensteen, 3-4 cr

8113 Problems in Physiology (prereq #)
100859 ar cr

8114 Biophysics of Nerve Cells (prereq #)
735350 Fohlmeister, 3 cr

8201 Literature Seminar
914027 1215-1300 M, MlrdH 5276, 1 cr

8202 Readings in Physiology
400866 ar cr

8203 Research in Physiology
100871 ar cr

8216 Selected Topics in Neurophysiology (§Otol 8247; prereq 8104 or equiv, #)
700873 ar cr

PLANT PATHOLOGY (PlPa)
Agriculture

1001 Introductory Plant Pathology: Lecture and Introduction to Diagnostic Procedures and Laboratory (§3001, 5002; prereq soph, 9 cr plant science)
509204 0800-0945 MWF, KaufL 302, MacDonald, 4 cr

R3001 Introductory Plant Pathology: Lecture, Laboratory and Introduction to Diagnosis (§1001, 5002; prereq soph, 9 cr plant science)
★LECT 0800-0945 MWF, KaufL 302, MacDonald, 6 cr
812366 –1 LAB 1330-1445 MWF, StakH 103, 105, 106, MacDonald
612367 –2 LAB 1500-1615 MWF, StakH 103, 105, 106, MacDonald

3090 Research in Plant Pathology (prereq 1001 or equiv or #)
929210 ar cr

R5002 Introductory Plant Pathology for Advanced Students (§1001, 3001; prereq 14 cr plant science or #)
★LECT 0800-0945 MWF, KaufL 302, MacDonald, 5 cr
729211 –1 LAB 1230-1315 MWF, StakH 103, 105, 106, MacDonald

R5005 **Plant Diseases Caused by Bacteria and Viruses** (prereq 20 cr hrs in biology, including botany, biochemistry, plant physiology)
★LECT 0800-0845 TTh, StakH 103, Banttari, Kennedy, 4 cr
529212 –1 LAB 1300-1645 TTh, StakH 103, 105, Banttari, Kennedy

R5105 **Introduction to the Study of Fungi** (prereq 9 cr botany or Biol 1011 or #)
★LECT 0900-0945 TTh, StakH 103, Anderson, 4 cr
329213 –1 LAB 1000-1145 TTh, StakH 105, Anderson

8001 **Plant Disease Theory I: Molecular to Cellular** (prereq 5005, 5006, 5007 or #)
113961 1400-1530 TTh, StakH 401, Brambl, Mirocha, others, 3 cr

8090 **Advanced Procedures and Research in Plant Pathology**
129214 ar cr

8095 **Advanced Procedures and Research in Mychology**
535544 Stewart, 1-6 cr

8200 **Plant Pathology Colloquium**
713963 1600-1700 W, StakH 401, 1 cr

PLANT PHYSIOLOGY (PlPh)
Agriculture

3131 **Survey of Plant Physiology** (§5131, Bot 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 3021 or BioC 5001)
729256 1200-1245 MTWF, AnScVM 135, Soulen, 4 cr

5131 **Survey of Plant Physiology** (§3131, Bot 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 3021 or BioC 5001)
531512 1200-1245 MTWThF, AnScVM 135, Soulen, 4 cr

R5132 **Plant Physiology Laboratory** (§Bot 5132; prereq 5131 or ¶)
331219 1300-1545 T, BioSci 198, 2 cr

R5188 **Research Perspectives in Plant Physiology** (prereq Chem 3100, 3101, 8 cr biochemistry, #)
329258 ar cr

R5703 **Internal Water Balance** (prereq #)
135345 Stadelmann, 3 cr

R5970 **Special Problems in Plant Physiology**
129259 ar cr

8251 **Seminar: Plant Physiology**
529260 1500-1600 Th, KaufL 302, Jones, 1 cr

8285 **Photosynthesis** (prereq 5182)
935346 Frenkel, 3 cr

8310 **Methods in Plant Physiology**
313979 Soulen, 1 cr

POLISH (Plsh)
Russian And East European Studies
Liberal Arts

R1101 **Beginning Polish**
235344 1115-1200 MTWThF, ChDev 216, Polakiewicz, 5 cr

3801 **Postwar Polish Culture** (§5801)
137225 1330-1500 TTh, FolH 104, Godzich, 4 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
429008 1-4 cr

POLITICAL SCIENCE (Pol)
Liberal Arts

R1001 **American Government and Politics**
011586 –1 0815-0900 MTWThF, AndH 250, Hult, 5 cr
611588 –2 1015-1100 MTWThF, BlegH 5, Lenz, 5 cr
811590 –3 1115-1200 MTWThF, AndH 370, Nimtz, 5 cr
411592 –4 0915-1100 TTh, AndH 370, Smith, 5 cr

1001H **Honors Course: American Goverment and Politics** (not open to jr, sr; prereq honors division or 3.0 GPA)
835548 1215-1300 MTWThF, BlegH 10, Flanigan, 5 cr

R1025 **World Politics**
230872 0915-1000 MWF, AndH 370, Goldman, 4 cr

R1026 **American Foreign Policy**
130873 0945-1100 TTh, AndH 350, Goldman, 4 cr

1061 **Introduction to Political Thought**
★LECT 1015-1100 MWF, BlegH 235, Dietz
635566 –1 REC 1315-1400 W, BlegH 210, Dietz, 4 cr
435567 –2 REC 1415-1500 W, BlegH 115, Dietz, 4 cr

3051 **Introduction to Political Analysis**
111568 0945-1100 TTh, AndH 250, Fogelman, 5 cr

3070 **Directed Field Studies** (prereq #, △)
730875 1-4 cr

3080 **Internship** (prereq △) (S-N only)
530876 4 cr

R3109H **Seminar on Research Design** (prereq 3108H)
011264 1315-1500 W, BlegH 350, Duvall, 3 cr

3110H **Honors Course: Selected Fields** (max 6 cr; prereq 3109)
311262 3-6 cr

3306 **The American Presidency** (prereq 1001 or #)
330877 0915-1000 MWF, AndH 350, Eyestone, 4 cr

3309 **Judicial Process** (prereq 1001 or #)
130878 1115-1200 MWF, BlegH 10, Sorauf, 4 cr

3310 **Topics in American Politics: American Courts and Their Environment** (prereq 1001 or #)
311570 0815-0900 MWF, AndH 230, Smith, 4 cr

R3321 **Issues in American Public Policy**
635549 1315-1400 MWF, BlegH 10, Eyestone, 4 cr

3331 **Minnesota Government and Politics** (1001 rec)
035550 0945-1100 TTh, AndH 230, Backstrom, 4 cr

3561 **Comparative Legal Systems** (prereq jr or #)
835551 1315-1400 MWF, AndH 230, Krislov, 4 cr

3810 **Topics in International Politics/Foreign Policy**
635552 1820-2050 W, AndH 210, Sampson, 4 cr

R3835 **The International System**
112373 1015-1100 MWF, AndH 270, McCoy, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
030879 1-6 cr

5654 **Development of Political Thought: Ancient and Medieval (Plato to Aquinas)** (prereq 3051 or 9 crs in social science or #)
436847 1215-1300 MWF, BlegH 440, Dietz, 4 cr

5737 **Political Parties** (prereq 1001 or #)
135555 1820-2050 Th, BlegH 235, Eyestone, 4 cr

5741 **Political Behavior of Women** (prereq 1001 or 1051 or #)
935556 1215-1300 MWF, BlegH 120, Gray, 4 cr

5767 **Public Opinion and Voting Behavior** (prereq 1001 or #)
035547 1415-1600 TTh, BlegH 105, Flanigan, 5 cr

5881 **International Law**
926596 1115-1300 TTh, AndH 330, McLaughlin, 5 cr

5883 **International Organizations** (prereq 3835 or 3825 or #)
735557 0915-1000 MWF, BlegH 155, Duvall, 4 cr

5886 **International Diplomacy, Bargaining, and Negotiation** (prereq 3835 or 3825 or 3836 or 3826 or #)
535558 1115-1200 MWF, AndH 330, Hopmann, 4 cr

8101 **Scope and Methods of Political Science**
030882 1515-1700 M, SocSci 1383, Fogelman, 3 cr

8140 **Individual Readings and Research in Methodology** (prereq #, △)
830883 1-3 cr

8221 **Empirical Theory** (prereq #)
335559 1315-1500 F, SocSci 101, Fogelman, 3 cr

8240 **Individual Reading and Research in Political Thought** (prereq #, △)
430885 1-3 cr

8301 **Public Opinion and Political Participation** (prereq #)
735560 1315-1500 W, SocSci 1383, Flanigan, 3 cr

8303 **Seminar: Political Parties** (prereq #)
535561 1315-1500 F, SocSci 1383, Backstrom, 3 cr

8323 **Seminar: Community Power Systems** (prereq #)
335562 1315-1500 T, SocSci 1383, Scott, 3 cr

8340 **Individual Reading and Research in American Politics** (prereq #, △)
130887 1-3 cr

8350 **Research Seminar: American Politics** (prereq #)
127611 3 cr

8401 **Theories of International Politics** (prereq #)
611557 1315-1500 M, SocSci 1383, Hopmann, 3 cr

8411 **Theories of Foreign Policy**
135563 1515-1700 T, SocSci 1383, Sampson, 3 cr

8440 **Individual Reading and Research in International Relations** (prereq #, △)
730889 1-3 cr

8603 **Scandinavian Government and Politics**
035564 1315-1500 Th, SocSci 1383, Kvavik, 3 cr

8640 **Individual Readings and Research in Comparative Politics** (prereq #, △)
930891 1-3 cr

8645 **Comparative Analysis: Elites in Institutional Context** (prereq #)
835565 1515-1700 Th, SocSci 1383, Nimtz, 3 cr

PORTUGUESE (Port)
Spanish And Portuguese
Liberal Arts

R1001 **Beginning Portuguese**
800184 –1 0915-1000 MTWThF, FolH 208, 5 cr
809211 –2 1015-1100 MTWThF, KoltH S136, 5 cr

R1003 **Beginning Portuguese** (prereq 1002 or #)
400186 1015-1100 MTWThF, FolH 203, 5 cr

R1004 **Intermediate Portuguese Grammar and Composition** (prereq 1003 or 1103)
100188 1115-1200 MTWThF, MinMet 104, 5 cr

R3502 **Luso-Brazilian Civilization II** (prereq 1005)
635342 1215-1300 MWF, FolH 50, 5 cr

3970 **Directed Studies** (prereq #, △, college approval)
200190 1-5 cr

5970 **Directed Readings** (max 15 cr; prereq #, △, CLA approval)
900192 1-5 cr

5990 **Directed Research** (prereq #, △, CLA approval)
500194 1-5 cr

8950 **Research: Social Approaches to Lusophone African Literature**
435343 1515-1700 M, 1515-1600 W, FolH 302, Hamilton, 4 cr

8970 **Directed Readings in Romance Languages**
000197 ar cr

PROSTHODONTICS (Pros)
Dentistry

8001 **Research in Prosthodontics**
129657 0900-1200 F, MoosT 9170, Goodkind, ar cr

8003 **Advanced Technical Restorative Dentistry**
929658 1000-1200 F, MoosT 9139, Goodkind, ar cr

8005 **Advanced Clinical Prosthodontics I**
729659 0900-1200 MTh, MoosT 9139, Goodkind, ar cr

8006 **Advanced Clinical Prosthodontics II** (prereq #)
129660 0900-1200 MWTh, MoosT 9526, Goodkind, ar cr

Help Wanted

requirements:
- » human
- » warm-blooded
- » willing to help others

Plasma Alliance will pay $10 per donation. $5 bonus for first time donors with this ad. A & AB blood types earn extra.

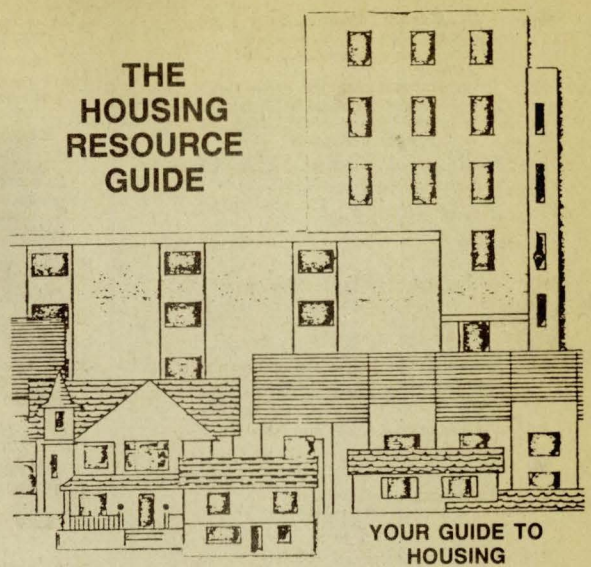
HOURS:

MON-TH	7am to 7pm
FRIDAY	7am to 6pm
SATURDAY	8am to 3pm

plasma alliance

1026 washington avenue, s.e.
331-9180 (NEXT TO ARBY'S)

THE HOUSING RESOURCE GUIDE



YOUR GUIDE TO HOUSING

- University Housing
- Off-Campus Housing
- Landlord-Tenant Rights

. . . And More

FOR SALE AT U OF M
HOUSING OFFICE
OFF-CAMPUS DIVISION

REGULAR SERVICE HOURS
WEEKDAYS
8:00 – 4:15 PM

COMSTOCK HALL EAST
210 DELAWARE ST. S.E.
373-7542

Equal Housing Opportunity

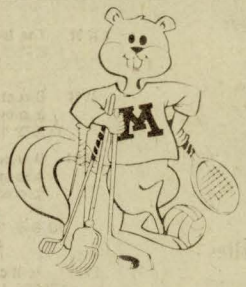
LSAT

There's a new test. Our students haven't been surprised, don't you be.

Plan your studying when preparing for your important admissions test. Let the Stanley H. Kaplan Educational Center show you how. 44 years of experience. Always up to date · Call or visit 378-9191. 328 E. Hennepin

Stanley H. KAPLAN Educational Center

Centers in More than 105 Major U.S. Cities



JOIN REC SPORTS FOR FALL '83

INTRAMURALS
The U of M has one of the largest I-M programs in the country. Male, female and co-rec (men and women combined) teams. Sign up for fall quarter: **Soccer, touch football, bowling, table tennis, co-rec volleyball** and **floor hockey** leagues and tournaments in **swimming and diving, cross country, basketball,** and **touch football.** Instant scheduling at 101A Bierman, the I-M office.

CLUBS
Nearly 50 clubs exist in the Rec Sports program and chances are — whatever your interests — you'll find a club just for you. All clubs are open to fees-paid students and some clubs have provisions for non-University members . . . and clubs are always looking for beginners. Offices are: Peik Gym 25, 376-9263 or 106-107 Norris, 376-9250.

FITNESS AND OPEN RECREATION
Choose from aerobic dance, aerobic exercise, or aerobic workout; or from self-motivated programs in swimming and running. Or use gyms, pools, weight rooms and other activity areas during "open" times.

JOBS, TOO
Rec Sports annually hires 500 students — and you could be one of them. Check out the several types of student employment at 107 Cooke Hall. Good money, flexible scheduling and good work experience.

UM REC SPORTS

GENERAL	373-4200
107 Cooke	373-4200
101A Bierman	373-1917
104 St. Paul Gym	373-0956

8010 Seminar: Advanced Restorative Dentistry
929661 1000-1200 W, MoosT 9139, Goodkind, ar cr

8015 Seminar: Prosthodontics I (prereq #)
729662 1000-1200 T, MoosT 9176, Goodkind, ar cr

PSYCHOEDUCATIONAL STUDIES (PsyS)
Educational Psychology
Education

3106 Exceptional Students in Regular Classes (§5106) (A-N only)
514354 –1 1315-1500 T, BuH 120, Reynolds, 2 cr (elem ed maj only)
614359 –2 1615-1800 W, BuH 120, Balow, 2 cr (sec ed maj only)

5101 Education of Exceptional Children (§SpEd 5101) (A-N only)
929899 1315-1500 TTh, ChDev 216, Knowlton, 4 cr

5106 Exceptional Students in Regular Classes (§3106) (A-N only)
614362 –1 1315-1500 T, BuH 120, Reynolds, 2 cr (elem ed maj only)
114365 –2 1615-1800 W, BuH 120, Balow, 2 cr (sec ed maj only)

R**5110 Counseling Procedures** (§CSPP 5110) (A-N only)
205938 –1 1615-1845 M, BuH 125, 3 cr
205941 –2 1315-1545 Th, BuH 120, Erickson, 3 cr

5112 Education of Learning-Disabled Children (§SpEd 5112) (A-N only)
629895 1800-2115 T, BuH 123, Balow, 3 cr

5113 Diagnosis and Remediation of Learning Disability I (§SpEd 5110; prereq #) (A-N only)
429896 1615-1930 Th, PtH 214, Walter, 4 cr

5125 Education of Handicapped Infants and Preschool Children (§SpEd 5125; prereq 5101 or 5120 or SpEd 5101 or 5120 or #) (A-N only)
514371 1615-1800 MW, PtH 102, 4 cr

R**5130 Introduction to Guidance** (§CSPP 5130) (A-N only)
229897 1615-1830 W, BuH 125, W Tennyson, 3 cr

5140 Psychosocial and Educational Aspects of Deafness (§SpEd 5140) (A-N only)
129898 1815-2045 W, PtH 214, 3 cr

R**5151 Managing Problem Behavior in the Classroom** (§SpEd 5151) (A-N only)
629900 1630-1900 M, BuH 120, Wood, 3 cr

R**5152 Disturbed and Disturbing Students I: Background and Assessment** (§SpEd 5152) (A-N only)
129903 1630-1900 T, Wood, 3 cr (Irondale High School 309)

5160 Supervision and Administration of Special Education (§SpEd 5160, EdAd 5103) (A-N only)
929904 1615-1800 M, FolH 110, Weatherman, 3 cr

5200 Assessment and Decision Making in Special Education (A-N only)
731315 1630-2000 W, WullH 230, Voeltz, 4 cr

R**5210 Foundations of Career Development** (§CSPP 5101) (A-N only)
229902 1615-1830 T, BuH 125, L Hansen, 3 cr

R**5300 Workshop: Counseling Psychology** (max 12 cr; prereq #) (A-N only)
836943 1415-1700 Th, PtH 102, A Anderson, 3 cr

R**5310 Counseling Women for Career Development** (§CSPP 5310)
636944 1615-1830 W, JonesH 1, L Hansen, 3 cr

5601 Practicum: Special Education (S-N optional; prereq #)
114373 –1 Walter, ar cr
114390 –2 Wood, ar cr
313156 –3 Voeltz, ar cr
013158 –4 ar cr

R**5900 Independent Study** (max 12 cr; prereq #) (A-N only)
705961 –1 ar cr (special ed maj only)
105964 –2 ar cr (counseling maj only)
605967 –3 ar cr (school psych maj only)

8120 Psychological Theory and Research in Mental Retardation (§SpEd 8120)
435827 1315-1500 TTh, ChDev 105, Turnure, 4 cr

R**8140 College Student Personnel Work-Foundations and Scope** (§CSPP 8140; prereq course in higher education or ¶ or #)
429901 1315-1500 MW, BuH 123, Snoke, 3 cr

8150 Psychological Aspects of Counseling Supervision (§CSPP 8150; prereq 8510, 8604 or CSPP 8510, CSPP 8604, #)
729905 Snoke, 3 cr

R**8302 Counseling Theory and Procedures I** (§CSPP 8302; prereq ¶8602, #)
529906 1415-1800 Th, BuH 125, Shaffer, 3 cr

8305 Field Placement in Counseling and Student Personnel Psychology (max 9 cr; prereq MA student in CSPP, ¶8302, ¶8602)
329907 1-3 cr

R**8310 Techniques of Psychoeducational Assessment** (prereq #)
129908 1215-1400 TTh, EltH N647, Weinberg, 5 cr

8341 Diagnosis, Treatment of College Learning Difficulties (§CSPP 8341; prereq course in reading, #)
029909 1415-1600 W, EddyH 202, 3 cr

8502 Seminar: Special Education (prereq #)
329910 1315-1500 MW, PtH 218, Reynolds, ar cr

R**8505 Masters Seminar: Counseling, Student Personnel Psychology** (max 6 cr; prereq MA student, #)
129911 1415-1600 M, BuH 125, W Tennyson, ar cr

R**8510 Seminar: Advanced Counseling Theory** (§CSPP 8510; prereq PhD student, #)
029912 0915-1100 TTh, BuH 125, Hummel, 4 cr

R**8513 Theories and Methods of Intervention: Individuals**
414377 1600-1830 W, EltH N534, Erickson, 3 cr

8600 Clinical Practice in School Psychology (prereq 8310 or SchP 8310)
829913 Egeland, 1-5 cr

8601 Advanced Practicum (prereq #)
629914 ar cr

R**8602 Counseling Practicum I** (§CSPP 8602; prereq ¶8302, #)
329888 1315-1500 MW, BuH 123, Snoke, 3 cr

8610 Practicum: School Psychological Services (prereq #)
129889 Lindborg, 1-5 cr

8613 Counseling Practicum: Student Counseling Bureau (max 9 cr, §CSPP 8613; prereq #)
914383 1415-1600 Th, JonesH 2, Fiedler, Loeffler, 3 cr

8640 Practice in Student Personnel Work (max 9 cr, §CSPP 8640; prereq 8304, 8604, 8140, 5540 or CSPP 8340, 8604, 8140, 5540 or #)
529890 Snoke, 1-3 cr

8700 Internship: School Psychological Services (prereq 8610 or SchP 8610, #)
329891 Lindborg, Egeland, 5-15 cr

8701 Internship: Counseling and Student Personnel Psychology (§CSPP 8701, max 9 cr for MA and specialist students, max 18 cr for PhD students)
129892 Snoke, 0-6 cr

R**8710 Internship: Instruction and Supervision in School Psychology** (§SchP 8710; prereq 8700 or SchP 8700 or #, doctoral candidate in school psychology)
029893 Weinberg, 1-9 cr

R**8900 Research Problems** (prereq #)
105990 –1 ar cr (special ed maj only)
905991 –2 ar cr (counseling maj only)
105995 –3 ar cr (school psych maj only)

R**8910 Directed Study** (prereq #)
805997 –1 ar cr (special ed maj only)
405999 –2 ar cr (counseling maj only)
106001 –3 ar cr (school psych maj only)

PSYCHOLOGICAL FOUNDATIONS OF EDUCATION (PsyF)
Educational Psychology
Education

R**3380 Introduction to Human Relations** (prereq education jr or sr) (S-N only)
★LECT 1415-1600 M, SciCB 175, Oden, Maruyama
705877 –1 REC 0815-1000 W, PtH 111, 3 cr
505881 –2 REC 1415-1600 W, WullH 130, 3 cr
805885 –3 REC 1415-1600 W, PtH 111, 3 cr
105889 –4 REC 1900-2045 W, PeikH 225, 3 cr
105892 –5 REC 0815-1000 Th, ChDev 105, 3 cr
705894 –6 REC 1415-1600 Th, WullH 130, 3 cr
514063 –7 REC 1215-1400 F, PtH 111, 3 cr

R**5110 Introductory Statistical Methods** (S-N optional)
426612 –1 0800-0900 MWF, PtH 214, 4 cr
126614 –2 1015-1200 MW, PtH 214, Stecklein, 4 cr
726616 –3 1615-1800 MW, FolH 50, Morgan, 4 cr

5120 Educational Measurement in the Classroom (S-N optional)
429915 1615-1800 TTh, NichH 122, Kellogg, 4 cr

5121 Basic Principles of Measurement (S-N optional; prereq 5110 or 8110 or Psy 3801 or equiv)
229916 1615-1800 MW, PtH 215, Davison, 3 cr

5125 Principles and Methods of Evaluation (S-N optional)
129917 1015-1130 TTh, PtH 215, Welch, 3 cr

5147 Intelligence (§5150) (A-N only)
835825 1820-2030 W, BuH 120, Bart, 3 cr

5149 Behavior Analysis in Education (A-N only)
729919 1600-1900 T, WullH 130, Deno, 4 cr

5170 Social Psychology of Education (A-N only)
129920 1615-1900 T, WullH 230, D Johnson, 4 cr

5182 Psychology of Student Learning (A-N only)
929921 1730-1930 T, NichH 209A, Bart, 3 cr

5183 Adult Learning and Educational Practice (A-N only)
635826 1730-2000 Th, ChDev 216, 4 cr

5305 Workshop in Human Relations (max 6 cr, §CSPP 5305) (S-N only)
729922 1630-2130 M, SciCB 125, Oden, Maruyama, 1-6 cr

5333 Introduction to Computer Operations: U of M Systems, SPSS (S-N only)
029926 1515-1600 MTWThF, EltH N647, Anderson, 1 cr (Oct 3-14)

5520 Evaluation Colloquium (max 6 cr) (A-N only)
829927 1215-1330 F, EltH N647, Welch, 1 cr (alt F)

5900 Directed Study (S-N optional; prereq #)
529923 ar cr

R**8110 Statistical Methods** (prereq 5110 or Psy 3801)
331320 –1 0915-1000 MWF, PtH 215, Anderson, 3 cr
131321 –2 1415-1530 MW, BuH 120, Merwin, 3 cr
031322 –3 1615-1730 MW, PtH 214, Stecklein, 3 cr

8112 Statistical Methods (prereq 8111)
329924 0915-1000 MWF, BuH 123, MacEachern, 3 cr

8113 Design and Analysis of Experiments (prereq 8112 or #)
129925 0815-0900 MWF, WullH 230, MacEachern, 3 cr

8130 Computer Application to Statistical Analyses (prereq 8112)
629928 1115-1200 MWF, EltH N647, Anderson, 3 cr

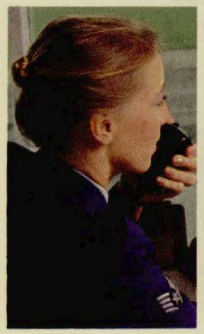
8522 Advanced Theory of Measurement (prereq 5121, 8111 or #)
429929 1415-1600 MW, PeikH 315, Davison, 3 cr

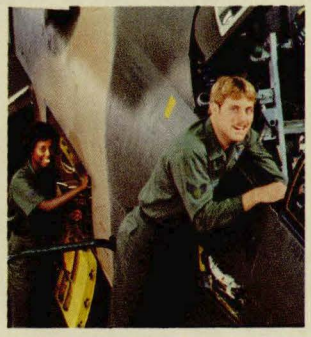
8565 Development of Moral-Political Judgment and Programs in Value Education (prereq #...¶8960 rec)
626608 1700-1830 MW, JonesH 2, Rest, 2-4 cr

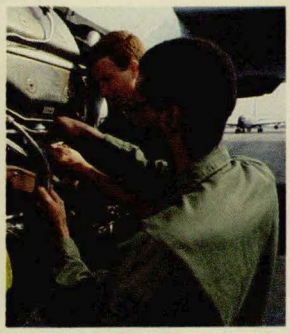
8571 Psychology of Conflict Resolution (prereq 5170)
829930 1615-1900 M, PtH 111, D Johnson, 4 cr

8574 Social and Psychological Influences on Individual Behaviors (prereq introductory course in soc psychology or #)
629931 1215-1500 T, PtH 214, Maruyama, 3 cr





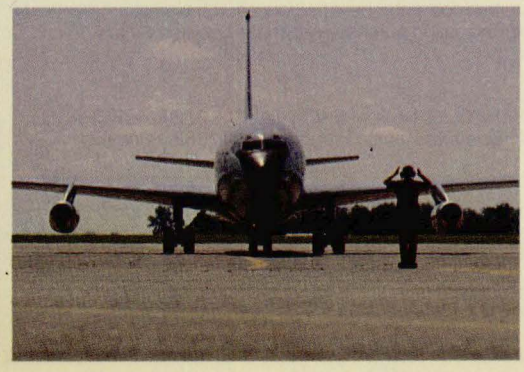












Planes don't guard America's skies.

People do.

The people and planes of the Air National Guard stand ready, 24 hours a day, seven days a week, to Guard America's skies. It's a job that's growing in importance and complexity every day. A job that demands first-rate technology. And most importantly, first-rate people. People like you.

To find out more about the challenges and opportunities waiting for you in the Air National Guard, fill out and mail the coupon below. Or call toll-free 800-638-0936.* Because planes don't Guard America's skies. People like you do.

*In Alaska, Hawaii, New Jersey, Puerto Rico, Guam and the U.S. Virgin Islands, consult your local directory.

We Guard America's Skies.

AIR NATIONAL GUARD

A2OMMI**023NP

Complete and mail to:
Air National Guard, P.O. Box 6000, Clifton, NJ 07015.

☐ MALE
☐ FEMALE

NAME (Please Print)

ADDRESS APT

CITY STATE ZIP

AREA CODE: PHONE

OCCUPATION

BIRTH DATE

PRIOR MILITARY SERVICE YES NO

BRANCH RANK AFSC/MOS

A2UCPD**093NP

CASIO NOW OFFERS STUDENT AID.

We at Casio figured you could use a little help this semester (not to mention a few extra bucks). So we're offering a $5 rebate on our FX-98 and FX-910 solar powered scientific calculators, which regularly sell for $29.95.

The FX-910 is a wallet sized unit with 48 scientific functions. The FX-98 is credit card size with 42 scientific functions.

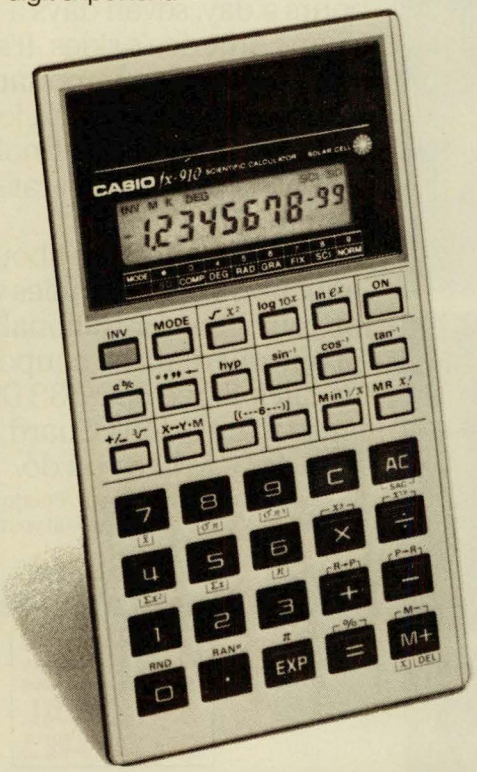
Both feature an 8 digit mantissa with 2 digit exponent.

Both feature fractional calculations (a function not found on many comparable units). So now you can work with fractions without having to convert to decimals.

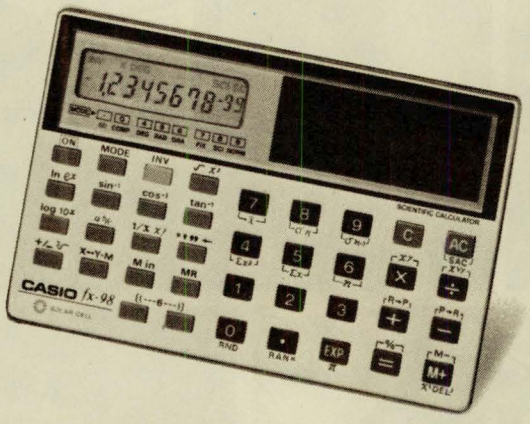
And since both units incorporate a powerful solar cell that can operate in very low light, they'll not only save you time and energy, they'll save you from ever having to buy batteries.

The FX-98 and FX-910 also come with a free application manual, "Strategies for Scientific Calculating," which will save you work by showing you shortcuts for using your calculator.

So if you think you could use a little student aid this semester, take advantage of our $5 rebate offer. And bring a Casio to class.



CASIO
Where miracles never cease®



$5 ---CASIO $5.00 Rebate Certificate--- $5

VALID AUGUST 15—OCTOBER 15, 1983

Here's how to get your $5.00 rebate:

Purchase one or more of either an FX-910 or FX-98 Solar Scientific Calculator and send us for each calculator purchased:

1. Both box flap ends which indicate the model number of product purchased
2. The ORIGINAL dated sales receipt indicating purchase was made between August 15 and October 15, 1983
3. The warranty card
4. This properly completed coupon

BE SURE YOU INCLUDE ITEMS 1 THROUGH 4 FOR EACH CALCULATOR PURCHASED.
Mail all of the above items to: Caslo Scientific Rebate Program Box 1353 Unionville, CT 06085

Name_____ Address_____

City_____ State_____ Zip_____

This coupon and all necessary material must be postmarked no later than midnight October 30, 1983. Models other than those listed are not eligible for rebate. All proofs of purchase become the property of CASIO and none will be returned. Requests mailed to any other address will experience processing delays. Void where prohibited, taxed or restricted by law. Promotion not open to dealers or retailers. This order form may not be reproduced in any shape or form. Offer good in U.S.A. through participating retailers only. Please allow 6-8 weeks for rebate.

FDC

$5 $5

Use this card for DIRECTORY OF CLASSES™ Free Information from advertisers.

Advertisers listed below will provide you with free additional information about their products and services. Please circle the number of those that interest you.

1. AIR FORCE
2. AIR NATIONAL GUARD
3. ARMY RESERVE
4. ARMY ROTC OPPORTUNITIES
5. CANON
6. CASIO
7. CHEVROLET CORVETTE
8. DELCO-GM/BOSE
9. DODGE/SHELBY CHARGER
10. FOOTLOCKER
11. FORD/1984 TEMPO
12. GENERAL MOTORS
13. HONDA/AERO
14. INSTITUTE FOR PARALEGAL TRAINING
15. JENSEN/CAR AUDIO
16. THE LEE COMPANY
17. MARINE CORPS
18. MAYBELLINE COSMETICS
19. NATIONAL SECURITY AGENCY
20. NEW YORK CITY HEALTH & HOSPITAL CORP.
21. NURSING '83
22. PANASONIC
23. PONTIAC 1000
24. RADIO SHACK/ COMPUTER CATALOG
25. RADIO SHACK/GENERAL CONSUMER CATALOG
26. SHARP
27. TECHNICS
28. U.S. COAST GUARD
29. U.S. NAVY
30. WDS
31. OLYMPUS

UNIVERSITY COMMUNICATIONS DIRECTORY OF CLASSES

NAME _____ AGE _____

ADDRESS _____ CITY _____ STATE _____ ZIP _____

SCHOOL _____

CLASS A ☐ FRESHMAN
B ☐ SOPHOMORE
C ☐ JUNIOR
D ☐ SENIOR
E ☐ GRADUATE LEVEL

MAJOR F ☐ ENGINEERING
G ☐ SCIENCE/TECHNICAL
H ☐ BUSINESS/FINANCE
J ☐ COMPUTER SCIENCES
K ☐ LIBERAL ARTS
L ☐ OTHER _____

This Card Expires December 31, 1983

DOC 783

Use this card for DIRECTORY OF CLASSES™ Free Information from advertisers.

Advertisers listed below will provide you with free additional information about their products and services. Please circle the number of those that interest you.

1. AIR FORCE
2. AIR NATIONAL GUARD
3. ARMY RESERVE
4. ARMY ROTC OPPORTUNITIES
5. CANON
6. CASIO
7. CHEVROLET CORVETTE
8. DELCO-GM/BOSE
9. DODGE/SHELBY CHARGER
10. FOOTLOCKER
11. FORD/1984 TEMPO
12. GENERAL MOTORS
13. HONDA/AERO
14. INSTITUTE FOR PARALEGAL TRAINING
15. JENSEN/CAR AUDIO
16. THE LEE COMPANY
17. MARINE CORPS
18. MAYBELLINE COSMETICS
19. NATIONAL SECURITY AGENCY
20. NEW YORK CITY HEALTH & HOSPITAL CORP.
21. NURSING '83
22. PANASONIC
23. PONTIAC 1000
24. RADIO SHACK/ COMPUTER CATALOG
25. RADIO SHACK/GENERAL CONSUMER CATALOG
26. SHARP
27. TECHNICS
28. U.S. COAST GUARD
29. U.S. NAVY
30. WDS
31. OLYMPUS

UNIVERSITY COMMUNICATIONS DIRECTORY OF CLASSES

NAME _____ AGE _____

ADDRESS _____ CITY _____ STATE _____ ZIP _____

SCHOOL _____

CLASS A ☐ FRESHMAN
B ☐ SOPHOMORE
C ☐ JUNIOR
D ☐ SENIOR
E ☐ GRADUATE LEVEL

MAJOR F ☐ ENGINEERING
G ☐ SCIENCE/TECHNICAL
H ☐ BUSINESS/FINANCE
J ☐ COMPUTER SCIENCES
K ☐ LIBERAL ARTS
L ☐ OTHER _____

This Card Expires December 31, 1983

DOC 783

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 27346 PHILADELPHIA, PA

POSTAGE WILL BE PAID BY—

UNIVERSITY COMMUNICATIONS
DIRECTORY OF CLASSES
P.O. BOX 13871
PHILADELPHIA, PA 19101

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 27346 PHILADELPHIA, PA

POSTAGE WILL BE PAID BY—

UNIVERSITY COMMUNICATIONS
DIRECTORY OF CLASSES
P.O. BOX 13871
PHILADELPHIA, PA 19101

8721 Internship: Evaluation (max 12 cr; prereq #)
429932 1015-1200 F, BuH 330, Welch, 3 cr

8900 Research Problems (prereq #)
814067 ar cr

8910 Problems: Statistics for Students in Education and Psychology
229933 MacEachern, Terwilliger, others, ar cr

8920 Problems: Measurement (max 9 cr)
129934 –1 1215-1330 F, BuH 330, Corcoran, 1–3 cr (alt F)
112509 –2 Davison, Stecklein, others, 1–3 cr

R8921 Problems: Evaluation (prereq 5621 or 8525)
505931 –1 1215-1330 F, BuH 330, Corcoran, ar cr (alt F)
110185 –2 Welch, Corcoran, others, ar cr

8930 Research Problems: Computer Applications (prereq #)
929935 Anderson, ar cr

8940 Research Problems: Learning and Cognition (prereq #)
729936 Bart, ar cr

8960 Research Problems: Personality (max 9 cr; prereq #)
529937 Rest, ar cr

8970 Research Problems: Social Psychology (prereq #)
329938 1930-2100 T, BuH 330, D Johnson, Maruyama, ar cr (alt T)

PSYCHOLOGY (Psy)
Liberal Arts

R1001 Introduction to Psychology
006002 –1 1315-1400 MTWThF, WilleyH 125, Burkhardt, Fox, Jenkins, Kendall, Weiss, 5 cr
606004 –2 1415-1500 MTWThF, WilleyH 125, Burkhardt, Fox, Jenkins, Kendall, Weiss, 5 cr

R1004 Introductory Laboratory Psychology (1004-1005†; prereq soph, 1001 or ¶)
★LECT 1115-1200 T, SmithH 100, Viemeister
206006 –1 LAB 1315-1600 T, EltH 150, 4 cr
106007 –2 LAB 1315-1600 T, EltH 160, 4 cr
706009 –3 LAB 0915-1200 W, EltH 150, 4 cr
906011 –4 LAB 0915-1200 W, EltH 160, 4 cr
506013 –5 LAB 1315-1600 W, EltH 150, 4 cr
806017 –6 LAB 1315-1600 W, EltH 160, 4 cr
606021 –7 LAB 0915-1200 Th, EltH 150, 4 cr
106024 –8 LAB 0915-1200 Th, EltH 160, 4 cr
306028 –9 LAB 1315-1600 Th, EltH 150, 4 cr
306031 –10 LAB 1315-1600 Th, EltH 160, 4 cr
106032 –11 LAB 0915-1200 F, EltH 150, 4 cr
606035 –12 LAB 0915-1200 F, EltH 160, 4 cr

R1011 Career Decision Making (cannot be applied toward any CLA degree)
730925 –1 1215-1400 T, ChDev 218, Sarkissian, 2 cr
913721 –2 1315-1500 Th, MinMet 124, Sarkissian, 2 cr

R3011 Introduction to Psychology of Learning (prereq 1001, 1005 or Biol 1107 or #)
530926 1115-1200 MWF, NichH 45, Peterson, 4 cr

R3101 Introduction to Personality (§5101; prereq 1001)
330927 0945-1100 TTh, NichH 45, Tellegen, 4 cr

3604 Introduction to Abnormal Psychology (§5604; prereq 1001)
030929 0815-0900 MWF, WilleyH 175, Hollon, 4 cr

3617 Introduction to Clinical Psychology (prereq 3604, 3801 or 5604)
237577 1115-1230 TTh, AndH 270, Kendall, 4 cr

3801 Introduction to Measurement and Statistical Methods (prereq 1001 or equiv)
630934 1415-1530 TTh, SmithH 100, Cudeck, 4 cr

3960 Undergraduate Seminar (prereq 1001, #, △)
730942 1–5 cr

3970 Directed Studies (prereq #, △, college approval)
530943 1–8 cr

3990 Directed Research (prereq #, △, college approval)
936366 1–8 cr

R5011 Theories of Learning and Cognition (prereq 3011 except for students in honors sequence, grad students)
330944 1415-1500 MWF, EltH N119, 4 cr

R5017 Analysis of Behavior (prereq 3011 except for students in honors sequence, grad students)
130945 0945-1100 TTh, EltH N119, Thompson, 4 cr

5031 Perception (prereq 3051 or 3031 or #)
514242 1115-1230 TTh, EltH N119, Case, 4 cr

5061 Fundamentals of Physiological Psychology (§3061; prereq 1001)
830947 1215-1300 MWF, WullH 230, Roberts, 4 cr

5134 Introduction to Behavior Genetics (prereq 3124 or 5126)
230953 0945-1100 TTh, EltH N257, Depue, 4 cr

5201 Social Psychology (prereq 1001, 3201, psychology honors maj or grad student or #)
130962 0915-1000 MWF, EltH N119, Berscheid, 4 cr

5703 Psychology of Organizational Training and Development (prereq 8 cr in psychology or #)
830964 0945-1100 TTh, Arch 35, Campbell, 4 cr

R5862 Psychological Measurement: Theory and Methods (prereq 3801, honors candidate or grad student)
630965 1115-1230 TTh, WullH 230, Weiss, 4 cr

R5900H Honors Seminar: Psychology (prereq psychology honors maj or #) (S–N only)
613180 1415-1600 W, EltH N257, Peterson, 1 cr

5901H Honors Project (prereq sr, #)
413181 1–8 cr

5960 Topics in Psychology (prereq 1001, #)
430966 1–5 cr

8010 Advanced Topics in Learning (prereq 5012, 5013 or #)
930969 1300-1500 TTh, EltH N257, Overmier, Peterson, 3 cr

8070 Seminar: Psychopharmacology (prereq #)
130976 Sparber, Thompson, 1 cr

8120 Personality, Therapy, and Women (prereq 5101, 8 cr in psychology or #)
014245 Faunce, 4 cr

8201 Social Cognition (prereq #)
430983 1000-1200 W, EltH N305, Borgida, 3 cr

8204 Seminar: Research in Social Psychology (prereq PhD candidate in psychology, #)
230984 1300-1500 T, EltH N305, Berscheid, Snyder, others, 3 cr

R8501 Counseling Psychology I: History and Theory (prereq counseling psychology stu or #)
130985 1415-1630 T, EltH N491, Brown, 3 cr

8514 Practicum in Student Counseling (prereq 8501, 8502, 8503 or equiv)
930986 1415-1600 Th, JonesH 2, Loper, others, 3 cr

8517 Practicum in Rehabilitation Counseling (prereq 8503 or #)
530988 1315-1500 TTh, Mayo 796, Athelstan, others, 3 cr

8520 Fieldwork in Applied Psychology (prereq #)
330989 1–6 cr

8541 Seminar: Practices, Approaches, and Issues in Counseling Psychology (prereq grad student in counseling psychology or #)
730990 1515-1645 F, EltH N218, Lofquist, 1 cr (alt F)

8544 Seminar: Research in Counseling Psychology (prereq #)
530991 1615-1800 M, EltH N595, Dawis, 1 cr (alt M)

8551 Marriage and Family Counseling: Internship I (prereq 8214, 8215, 8216, #)
330992 1500-1630 M, Berry 103, Boss, ar cr (StP)

8560 Internship in Counseling Psychology (prereq #)
130993 1–6 cr

8561 Seminar: Vocational Counseling for Work Adjustment (prereq #)
030994 1015-1130 F, EltH N595, Dawis, 2 cr

8564 Advanced Seminar: Vocational Counseling for Work Adjustment (prereq 8563 or #)
830995 1015-1130 M, EltH N218, Lofquist, 2 cr

8611 Professional Methods in Clinical Psychology I: Assessment (prereq clinical psychology maj or #)
★LECT 1415-1530 TTh, EltH N423, Butcher, others, 4 cr
709217 –1 LAB 1315-1500 W, EltH N423, Butcher, others

8620 Practicum in Clinical Psychology (prereq #)
430997 1–6 cr

8631 Professional Methods in Clinical Psychology III: Crisis Intervention, Brief Therapies (prereq PhD candidate in clinical psychology, 8611, 8612, 8613, 8614 or #)
135546 Leon, 3 cr

8640 Seminar: Topics in Clinical Psychology (prereq #)
631002 1015-1200 F, EltH N423, Depue, others, 1–6 cr

8644 Seminar: Advanced Clinical Psychology (prereq advanced statistics, #)
431003 1 cr

8664 Personality Assessment (prereq #)
231004 Tellegen, 4 cr

8670 Internship in Clinical Psychology (prereq PhD candidate in clinical psychology, permission of director of training program)
931006 2–4 cr

R8703 Seminar: Industrial and Organizational Psychology (prereq #)
335545 Campbell, 4 cr

8881 Seminar: Psychometric Methods (8881-8882-8883†; prereq #)
531008 1115-1300 W, EltH N668, Weiss, 1 cr

8970 Seminar: Special Areas of Psychology and Related Sciences (prereq #)
731010 1–6 cr

8980 Directed Teaching in Psychology (prereq #)
331012 1–6 cr

8990 Research Problems (prereq #)
031014 1–6 cr

PUBLIC AFFAIRS (PA)

R5515 Introduction to Planning (prereq #)
300035 0815-0930 TTh, BlegH 330, Bryson, 4 cr

5550 Proseminar (prereq #)
935816 –1 1315-1500 M, Mgmt/Econ 128, Fass, 2 cr (Social Planning Practice)
135815 –2 1115-1300 T, Mgmt/Econ 136, Abrahamson, 2 cr (Environmental Policy)
735817 –3 1315-1500 T, BlegH 425, Eustis, 2 cr (Human Resources)
335819 –4 1115-1300 Th, Mgmt/Econ 136, Lukermann, 2 cr (Land Use)

5671 Topics in Human Services
000037 1615-1800 MW, VinH 16, 1–4 cr

5971 Directed Study (prereq #)
535821 ar cr

8201 Policy Analysis I (prereq Econ 3101 or #)
600039 1515-1700 TF, BlegH 155, Brandl, Kudrle, 3 cr

8205 Quantitative Methods for Policy Analysis (prereq #)
314128 1115-1300 MW, BlegH 335, 4 cr

8216 Policy Process I (prereq #)
035824 1515-1700 MTh, BlegH 425, 3 cr

8220 Public Budgeting (prereq #)
★LECT 0945-1100 TTh, BlegH 330, Brandl, Jernberg, 4 cr
509221 –1 LAB 1015-1200 F, BlegH 330

8251 Workshop: Long Term Care (prereq #)
335822 1315-1500 F, BlegH 350, Eustis, ar cr

8521 Development Management Systems (prereq #)
135823 1900-2130 Th, SocSci 307, Einsweiler, 3 cr

8971 Individual Readings, Research in Public Policy Analysis, Administration (prereq #
000040 ar cr

PUBLIC HEALTH (PubH)

R3001 Personal and Community Health (§3004, GC 3114)
301525 1015-1100 MWF, WilleyH 175, Rothenberger, 3 cr

R3004 Basic Concepts in Personal and Community Health (§3001, 3033, GC 3114)
001527 1015-1100 MTWThF, WilleyH 175, Rothenberger, 5 cr

R3033 **Fundamentals of Alcohol and Drug Abuse** (§3004)
601529 1015-1100 TTh, WilleyH 175, Rothenberger, 2 cr

3034 **Topics in Alcohol and Drug Problems** (prereq #)
001530 ar cr

3385 **Physiological Hygiene** (prereq #, NSci 1004, 1005, 4 cr human anatomy)
★LECT 1215-1300 MWF, CookeH 214, 215, Alexander, Serfass, 4 cr
308491 –1 LAB 0815-1000 Th, MoosT 3110, Alexander, Serfass

R5001 **Philosophical and Conceptual Bases of Public Health Practice** (prereq public health grad student or #)
335321 1415-1500 M, 1415-1600 W, HSUnitF 2120, 2130, Schwanke, others, 2 cr

5004 **Field Instruction in Public Health** (prereq #)
601532 ar cr

R5005 **Topics in Public Health** (prereq advanced proposal, #)
201534 ar cr

R5006 **Introduction to Community Health** (§5016; prereq pharmacy student, nursing student, other health professional or #)
901536 1215-1400 MWF, MoosT 2530, Stauffer, 5 cr

R5007 **Health Leadership and Effecting Change** (§HSU 5007; prereq grad student)
037153 1615-1800 M, Mayo 1250, Spradley, 4 cr

R5013 **Interdisciplinary Team Training in Health Services Delivery** (§HSU 5001, 5300, SW 5013; prereq #)
501538 1810-2110 W, MoosT 2571, 2585, Cohn, Schwanke, 3 cr

R5015 **Topics in Interdisciplinary Studies** (prereq #)
701540 ar cr

5021 **Human Sexuality for Health and Helping Professionals I** (§HSU 5025, FSoS 5240, SW 5021, Hlth 5700; prereq enroll in hlth sci, public hlth, grad prog in FSOS or SW or #)
001544 1715-1930 Th, MoosT 2650, Larson, Maddock, Terrell, 3-4 cr

5043 **Fundamentals of Alcohol and Drug Problems**
037167 1315-1400 T, 1315-1500 Th, MoosT 2580, Kincannon, 3 cr

R5044 **Topics in Alcohol and Drug Problems** (prereq advance proposal, #)
837168 1-4 cr

R5053 **Communication in Health Education** (prereq grad student in health educ)
108492 1315-1600 T, Mayo 1205, Veninga, 3 cr

R5054 **Foundations of Public Health Education** (prereq student in health education)
008493 1315-1600 M, Mayo 1250, Carlaw, others, 3 cr

R5065 **Health in the Workplace: A Health Education Perspective** (prereq grad student in health sciences)
808494 1015-1200 M, 1015-1100 W, Mayo 1205, Veninga, 3 cr

R5080 **Internship in Patient Education Studies** (prereq health education maj)
837154 Carlaw, others, ar cr

R5081 **Internship in Family and Community Studies** (prereq health education maj)
637155 Carlaw, others, ar cr

R5082 **Internship in Occupational Health Studies** (prereq health education maj)
437156 Carlaw, others, ar cr

R5083 **Internship in Health Policies and Planning** (prereq health education maj)
237157 Carlaw, others, ar cr

R5095 **Advanced Seminar in Health Education I** (prereq health education maj)
135322 1415-1600 F, Mayo A272, Carlaw, 2 cr

R5096 **Topics: Research** (prereq health education maj)
137158 Carlaw, others, ar cr

R5098 **Topics: Selected Readings** (prereq #)
408496 1315-1500 W, BoynHS N325, Janda, ar cr

5150 **Topics: Environmental Health** (prereq #)
901553 Barber, ar cr

5156 **Environmental Health I** (prereq environmental health student or #)
501555 0815-0900 TTh, MMA 100, 2 cr

5159 **Seminar: Environmental Health** (prereq environmental health student)
101557 1315-1500 Th, MoosT 2530, 1 cr

5177 **Public Health Biology** (prereq environmental health student or #)
101560 0915-1000 MWF, MoosT 2520, Ruschmeyer, 3 cr

5211 **Industrial Hygiene Engineering**
401564 1115-1200 MWF, MoosT 2580, McJilton, 3 cr

5233 **Biohazard Control in Biomedical Laboratories** (prereq #)
901570 0915-1000 TTh, BoynHS W147, Vesley, 2 cr

5261 **General Environmental Toxicology**
101574 1215-1300 MWF, JacH 2135, Stevens, 3 cr

5262 **Basic Toxicology for the Environmental Scientist** (prereq 5261 or #)
814182 1515-1600 MWF, Mayo 1210, Stevens, 3 cr

R5310 **Diseases Transmitted Between Animals and Humans** (prereq VPH maj or #)
301606 1515-1700 TTh, VetS 438, Anderson, Diesch, 4 cr (StP)

5326 **Research in Animal/Human Health** (prereq VPH maj or #)
101607 R K Anderson, Robinson, ar cr

R5330 **Epidemiology I** (prereq basic courses in microbiology and statistics, preferably biostatistics)
★LECT 1415-1500 MTWF, MoosT 2690, Schuman
514189 –1 LAB 1515-1700 M, MoosT 2580, 4 cr
514192 –2 LAB 1315-1500 Th, Mayo 1250, 4 cr
814196 –3 LAB 1515-1700 F, MoosT 2530, 4 cr

R5342 **Public Health Bacteriology** (prereq MicB 5216, 5232, 5234, #)
401614 1215-1400 MWF, Stickle, ar cr (MN State Health Dept)

5370 **Applied Epidemiology** (prereq 5330, 5333, basic course in biostatistics or #)
601613 R K Anderson, 1-5 cr

5379 **Topics in Epidemiology** (prereq epidemiology student or #)
001611 ar cr

5380 **Applied Human Nutrition** (prereq biochemistry or equiv)
101610 1315-1500 MWF, MMA 100, Leon, 5 cr

5389 **Practicum: Exercise Testing: Prescription, Conditioning, Rehabilitation** (§PE 5389; prereq 5387, 5388)
001608 Leon, Crow, others, 2-6 cr

5400 **Introduction to Quantitative Methods in the Biologic and Health Sciences** (prereq Biol 1009, Chem 1004-1005, Math 1111 or 1201 or #)
201615 0915-1000 MTWF, Mayo 1220, Le, 4 cr

5404 **Introduction to Biostatistics and Statistical Decision**
901617 1315-1500 TTh, Mayo 1220, Weckwerth, 4 cr

5409 **Biometry in Clinical Studies I** (prereq DDS, MD, DVM, PharmD, clinical nursing student or #)
701618 1315-1400 MWF, MoosT 5181, Keenan, 3 cr

5413 **Vital and Health Statistics**
501619 1015-1100 Th, JacH 2135, Kjelsberg, 1 cr

R5414 **Biometric Methods I** (prereq public health regis or #)
706205 –1 1115-1300 TTh, JacH 2135, Goldman, 3 cr
006209 –2 1015-1200 WF, Mayo 1250, Boen, 3 cr

5430 **Biomedical Computing I** (prereq algebra or #)
701621 0915-1000 MTWTh, OwreH 2210, Ellis, 4 cr

5433 **Computer Methodology in the Delivery of Health Care I: Physiological Monitoring and Testing** (§LMed 5196; prereq 5432 or #)
501622 1115-1230 TTh, HSUnitF 2130, Finkelstein, 3 cr

5450 **Biometry I** (prereq ¶5451...familiarity with basic concepts of calculus rec)
001625 1015-1100 MWF, MoosT 2520, Jeffries, 3 cr

5451 **Biometry Laboratory I** (prereq ¶5450)
601627 1015-1100 TTh, MoosT 2520, Jeffries, 2 cr

5460 **Demography and Health** (§Soc 5561; prereq biometry or epidemiology maj; others #)
401628 1115-1200 MWF, Mayo 1220, McHugh, 3 cr

5470 **Topics in Biometry** (prereq #)
201629 ar cr

5503 **Community Health Systems Development: A Public Health, Community Oriented Prespective** (prereq grad or MPH student)
937159 1515-1700 T, Mayo 1210, Lentsch, 3 cr

5507 **Consultation in Human Services**
237160 0815-1000 W, Mayo 1205, Lentsch, 2-3 cr

5509 **Introduction to Public Health Nursing** (prereq public health nursing student) (A-N only)
315053 0915-1100 T, 0915-1000 Th, PWB 5224, White, others, 3 cr

5510 **Research Methodology in Nursing**
137161 1115-1300 M, 1215-1300 W, Mayo 1250, Abanobi, 3 cr

5511 **Healthy Adults: A Public Health Perspective**
415125 0915-1100 W, Mayo 1325, Ostwald, 3 cr

5513 **Topics: Adult Health** (prereq #) (S-N only)
937162 Ostwald, 1-3 cr

5516 **Ethical Dimensions of Public Health Nursing Practice**
035337 1615-1800 W, MoosT 2650, Aroskar, 1 cr (Sept 28, Oct 5, 19, Nov 2, 16, 30)

5530 **Public Health Nursing Practicum** (prereq #) (S-N only)
112731 Aroskar, 1-6 cr

5531 **Public Health Nursing Practicum** (prereq #) (S-N only)
712733 Aroskar, 1-6 cr

5543 **Child Health: A Public Health Nursing Perspective** (prereq public health nursing grad student or #)
635325 1315-1400 MW, Mayo 1205, 1315-1400 T, Mayo 1210, Berkseth, 3 cr

5547 **Topics: Public Health Nursing of Child Populations** (prereq #) (S-N only)
435326 Berkseth, 1-3 cr

5550 **Nursing Administration Seminar I** (prereq student in Projects in Nursing Administration)
127598 Spradley, 3 cr

5575 **Topics: Public Health Nursing** (prereq #)
201632 ar cr

5585 **Public Health Nursing** (prereq current R.N. licensure, #)
316543 4 cr

5597 **Topics: Injury Prevention in the Workplace, Community and Home** (prereq basic course in epidemiology)
714921 Gerberich, 1-3 cr

5610 **Principles of Maternal and Child Health** (prereq grad student or #)
101633 0815-0900 TTh, MoosT 2580, ten Bensel, 3 cr

R5613 **Chronic and Handicapping Conditions of Children**
901634 0815-1000 W, Mayo 1210, Leonard, Nelson, 3 cr

5614 **Field Experience in Maternal and Child Health** (prereq MCH grad student) (S-N only)
701635 ten Bensel, Splett, ar cr

5621 **Maternal and Child Health Student/Faculty Seminar** (prereq MCH student) (S-N only)
501636 1315-1500 Th, Mayo A387, ten Bensel, others, 1 cr (MCH Reading Room)

R5624 **International Health** (§Ped 5525; prereq #)
101638 1900-2100 Th, MoosT 2520, Venters, ar cr

5649 **Topics: Maternal and Child Health** (prereq #)
301640 ten Bensel, others, ar cr

5651 Philosophy and Concepts of Preventive Dentistry (prereq student in dental public health or #)
001642 1215-1400 F, PWB 9208, Stallard, ar cr

5652 Current Issues: Dental Public Health (prereq student in dental public health or #)
935329 Block, ar cr

5654 Topics: Dental Public Health (prereq student in dental public health or #)
235330 ar cr

5657 Independent Study: Dental Public Health (prereq student in dental public health or #)
401645 Block, ar cr

5660 Field Experience: Dental Public Health (prereq student in dental public health or #)
201646 Block, ar cr

5663 Administrative Residency in Dental Public Health (prereq student in dental public health or #)
101647 Block, ar cr

5700 Public Health Administration I (prereq student in public health administration or #)
135331 1015-1200 MF, Block, 3 cr (MN State Health Dept)

5703 Public Health Administration Clerkship (prereq student in public health administration or #)
701649 Block, ar cr

5704 Field Experience: Public Health Administration (prereq student in public health administration or #)
101650 Block, ar cr

5707 Independent Study: Public Health Administration (prereq student in public health administration or #) (S-N only)
526651 1-12 cr

5710 Regulation and Health (prereq grad student in public health, health related professional with B.A. or #)
935332 1615-1800 W, PWB 2470, McInerney, 3 cr

R5712 Principles of Organization and Management of Health Maintenance Organizations I (prereq student in public health administration or #)
701652 1515-1700 W, BoynHS W334, Rupprecht, 2 cr

5723 Administrative Residency (prereq student in public health administration or #)
914741 ar cr

5739 Public Health Administration (prereq student in public health administration or #)
914206 1615-1800 W, MoosT 2620, 3 cr

R5740 Organizational Behavior (prereq ¶5742 and hospital administration student or #)
126653 0815-1000 MW, Mayo 1250, Gordon, 3 cr

R5742 Hospital Organization and Management (prereq ¶5740 and hospital administration student or #)
826655 1015-1200 T, 1015-1100 Th, Mayo 1250, Johnson, 3 cr

R5745 Advanced Problem Solving in Health Services Organizations (prereq 5744)
735333 0815-1000 F (1st meeting), MMA 100, 1315-1700 F, Hamilton Associates, Dornblaser, 3 cr

R5762 Evaluation Concepts and Methods (prereq MHA students or #)
812755 0915-1100 MW, MoosT 2580, Moscovice, 3 cr

R5766 Applied Field Research I (prereq MHA student or #) (S-N only)
412757 –1 1115-1200 W, OwreH 2210, Weckwerth, 1 cr
737163 –2 1215-1300 W, OwreH 2210, Resnick, 1 cr

5770 Topics: Hospital and Health Care Administration (prereq hospital administration student or #)
714742 ar cr

5790 Sociology of Medicine and Health Care: An Introduction to Medical Sociology (§Soc 5855)
314212 1115-1200 MWF, MMA 100, Litman, 4 cr

R5792 Health Services Organization in the Community (prereq hospital administration student)
414198 1515-1600 Th, 0815-1000 F, Mayo 1250, Henry, 1 cr

R5794 Public Policy in Health Care (prereq MHA student or #)
008509 1015-1200 TTh, Mayo 1220, Kralewski, 3 cr

5800 Research Project in Health Psychology
301654 1-6 cr

5801 Directed Study in Health Psychology
001656 1-4 cr

5802 Special Topics in Health Psychology (prereq health psych maj or #)
801657 ar cr

5806 Principles of Public Health Research (prereq grad or enrollment School of PubH, compl of or ¶ in course in stat or vital stat)
212761 1515-1700 M, 1515-1600 W, MoosT 2650, Garrard, 3 cr

5851 Human Interaction Laboratory (§HSU 5024; prereq #)
335335 1615-1800 W, PWB 5224, Ayers, 4 cr

5853 Behavioral Medicine I: Theory, Research and Practice (prereq psy grad student or public hlth student or professional in hlth related diiscipline)
001673 1630-1815 M, PWB 5224, Hung, 3 cr

5869 Clerkship in Psychological Assessment (prereq grad students in clinical psychology, school psychology or #)
412158 1-4 cr

5870 Clerkship in Neuropsychological Assessment (prereq health psychology maj or #)
612160 Meier, 1-4 cr

5871 Fieldwork Experience in Health Psychology (prereq health psychology maj or #) (S-N only)
212162 1-4 cr

5872 Case Conference in Health Psychology (prereq health psychology maj or #) (S-N only)
112163 1 cr

5873 Case Conference in Neuropsychology (prereq health psychology maj or #) (S-N only)
912164 Meier, 1 cr

5877 Internship in Clinical Psychology (prereq PhD candidate and 400 hrs clerkship experience) (S-N only)
512166 1-4 cr

5878 Health Psychology Clinic Internship (prereq health psychology maj or #) (S-N only)
112168 Petzel, others, 1-4 cr

5879 Medical Consultation for Health Psychology Interns (prereq health psychology maj or #) (S-N only)
312170 Brantner, 1-4 cr

5880 Health Psychology Internship at the Boynton Health Service (prereq health psychology maj or #) (S-N only)
012172 Bugge, Heiberg, 1-4 cr

5881 Health Psychology for the Physically Handicapped Child (prereq health psychology maj or #) (S-N only)
812173 Blackburn, 1-4 cr

5882 Introduction to Neuropsychological Assessment (prereq health psychology maj or #) (S-N only)
612174 Meier, 1-4 cr

5883 Advanced Neuropsychological Assessment (prereq health psychology maj or #) (S-N only)
212176 Meier, 1-4 cr

5884 Rural Community Mental Health Internship for Psychologists (prereq health psychology maj or #) (S-N only)
912178 Kollmorgen, Moorman, others, 1-4 cr

5885 Community Child Guidance Center Psychology Internship (prereq health psychology maj or #) (S-N only)
712179 Hanvik, Reed, others, 1-4 cr

5886 Student Counseling Bureau Psychology Internship (prereq health psychology maj or #) (S-N only)
112180 Loper, others, 1-4 cr

5888 Behavioral Medicine (prereq PhD candidate and 400 hrs clerkship experience or #) (S-N only)
512183 Hung, 1-4 cr

5890 Supervised Psychological Therapy (prereq health psychology maj or #) (S-N only)
112185 1-4 cr

5891 Health Psychology Laboratory (prereq Psy 8611, 8612, 8613, 8614)
112221 2 cr

5894 Group Supervision of Psychotherapy (prereq hlth psych maj or #, psychiatry resident)
912763 Schofield, 2 cr

5900 Field Course I: Public Health Nutrition (prereq public health nutrition student)
008512 Splett, 1-4 cr

5901 Seminar: Public Health Nutrition (prereq public health nutrition maj)
808513 Fleming, others, 1-6 cr

5902 Maternal and Child Nutrition (prereq 3000 level nutrition course or equiv or #)
608514 0915-1100 T, 0915-1000 Th, HSUnitF 2110, 2140, Brown, 3 cr

5909 Topics in Public Health Nutrition (prereq public health nutrition student or #)
108517 Brown, others, 1-12 cr

R8002 Field Observations of Selected Public Health Practices (prereq #)
601675 ar cr

R8003 Research
401676 ar cr

8150 Research: Environmental Health (prereq #)
101678 1-6 cr

8330 Research in Epidemiology (prereq epidemiology maj)
001687 1-8 cr

8331 Field Practice in Epidemiologic Investigations (max 8 cr; prereq epidemiology maj)
601689 1-8 cr

8378 Advanced Seminar in Epidemiology (prereq epidemiology maj)
801691 Mandel, 1-2 cr

8379 Seminar in Epidemiology (prereq epidemiology student or #)
401693 1215-1400 T, MoosT 1108, Mandel, ar cr

8385 Seminar: Physiological Hygiene (prereq physiological hygiene maj, #)
908499 1 cr

8386 Readings in Physiological Hygiene (prereq physiological hygiene maj, #)
101695 ar cr

8387 Research in Physiological Hygiene and Related Areas (prereq physiological hygiene maj, #)
701697 ar cr

8389 Seminar: Topics in Health Behavior Science (prereq physiological hygiene maj, #)
408501 3 cr

8400 Seminar: Biometry
301699 ar cr

8420 Advanced Biometric Methods I (prereq 5455, 5459, FORTRAN)
901701 1315-1400 MWF, Mayo 1210, Johnson, 3 cr

8430 Advanced Biometric Analysis I (prereq 8422, advanced calculus, theoretical statistics)
135336 McHugh, 3 cr

8449 Topics in Biometry (prereq 5450, #)
501703 ar cr

8450 Research in Biometry
101705 ar cr

8597 Research: Injury Prevention in the Workplace, Community and Home (prereq basic courses in epidemiology, statistics, PubH 5594)
314923 Gerberich, 3-6 cr

8752 Seminar: Comparative Health Care Systems (prereq #)
537164 1115-1300 Th, Mayo 1205, Litman, 3 cr

8760 Topics in Hospital and Health Care Administration (prereq PhD student in hospital administration)
108511 Weckwerth, 3 cr

8761 Readings in Theory and Principles of Hospital and Health Care Administration (prereq 8760)
801707 Weckwerth, 3 cr

8781 Seminar: Research Studies in Health Care (prereq PhD student in hospital administration or #)
337165 0830-1000 F, Mayo 1210, Kralewski, others, 3 cr

8782 Research Practicum (prereq PhD student in hospital administration)
137166 Litman, Weckwerth, 6 cr

QUANTITATIVE ANALYSIS (QA)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for QA courses.

R1050 Elementary Managerial Statistics (prereq Math 1111 or 1131) (A-N only)
★LECT 1515-1630 MW, WilleyH 125, Benson
931278 –1 LAB 0815-0930 T, BlegH 205, 4 cr
731279 –2 LAB 0945-1100 T, BlegH 205, 4 cr
131280 –3 LAB 1115-1230 T, BlegH 205, 4 cr
631288 –4 LAB 1245-1400 T, BlegH 205, 4 cr
431289 –5 LAB 0815-0930 W, BlegH 115, 4 cr
831290 –6 LAB 0945-1100 W, BlegH 115, 4 cr

R3055 Introduction to Management Sciences (prereq 1050, Math 1142 or equiv) (A-N only)
★LECT 1115-1230 TTh, AndH 350, Feiring
631291 –1 LAB 1315-1430 Th, BlegH 205, 4 cr
431292 –2 LAB 1445-1600 Th, BlegH 205, 4 cr
131294 –3 LAB 0915-1030 F, BlegH 145, 4 cr
931295 –4 LAB 1045-1200 F, BlegH 145, 4 cr

R5000 Basic Methods of Management Science (prereq 3055) (A-N only)
126659 1115-1230 TTh, BlegH 420, Fox, 4 cr

8990 Readings in Quantitative Analysis (prereq #, grad SMgt approval) (A-N only)
400222 ar cr

8995 Research in Quantitative Analysis (prereq #, grad SMgt approval) (A-N only)
200223 ar cr

RADIOLOGY (Rad)
Medical School

0120 X-Ray Conference (prereq #)
001026 1600-1800 T, Mayo C231, Gedgaudas, 0 cr (Todd Amph)

0121 Medical Roentgenologic Conference
009224 1130-1200 T, Mayo C231, Gedgaudas, 0 cr (Todd Amph)

0123 Surgical Roentgenologic Conference
601028 0900-1100 S, Mayo C231, Gedgaudas, 0 cr (Todd Amph)

0124 Neurosurgical-Roentgenologic Conference
401029 1300-1430 F, Mayo C231, Gold, 0 cr (Todd Amph)

0125 Cardiovascular Roentgenologic Conference
601031 1200-1300 Th, Mayo B167, Amplatz, 0 cr (Rigler Lib)

0126 Roentgenologic Conference on Chest Diseases
401032 1200-1300 M, Mayo B167, Gedgaudas, 0 cr (Rigler Lib)

0220 Nuclear Medicine: Clinical Conference
101034 1700-1800 T, Mayo C231, Loken, 0 cr (Todd Amph)

5101 Externship: Diagnostic Radiology-University Hospitals (prereq regis med)
701036 Gedgaudas, ar cr

5102 Externship: Diagnostic Radiology-Veterans Administration Hospital (prereq regis med)
301038 Reinke, ar cr

5103 Externship: Diagnostic Radiology-Hennepin County General Hospital (prereq regis med)
501040 Tsai, ar cr

5104 Externship: Diagnostic Radiology-St. Paul Ramsey Hospital (prereq regis med)
226661 L'Heureux, ar cr

5105 Externship: Diagnostic Radiology-St. Luke's Hospital, Duluth (prereq regis med)
101042 Ahrens, ar cr

5140 Special Problems: Roentgenology (prereq regis med)
801044 Gedgaudas, ar cr

5170 Basic Radiological Physics (§BPhy 5170, TRad 5170; prereq #)
104748 1630-1730 W, 1600-1730 F, Morin, 3 cr

5174 Physics of Diagnostic Radiology (§BPhy 5174, TRad 5174; prereq 5170 or #)
304750 1600-1710 M, 1600-1700 Th, Mayo B167, Morin, 3 cr (Rigler Lib)

5240 Special Problems: Nuclear Medicine (prereq regis med)
401046 Loken, ar cr

5511 Roentgen Technique
501054 1700-1800 M, Mayo C231, Morin, 1 cr (Todd Amph)

5530 Externship in Nuclear Medicine At University Hospital (prereq regis med)
004752 Loken, ar cr

5540 Special Problems: Radiological Physics (prereq regis med)
101048 Morin, ar cr

8100 Gastrointestinal Roentgenology
726664 Frick, ar cr

8101 Urologic Roentgenology
326666 Goldberg, ar cr

8102 Neurological Roentgenology
026668 Gold, ar cr

8103 Cardiovascular Roentgenology
201050 Amplatz, ar cr

8104 Pediatric Roentgenology
101051 Day, ar cr

8105 Pulmonary Roentgenology
701053 Gedgaudas, ar cr

8150 Research: Roentgenology
101056 Gedgaudas, ar cr

8200 Nuclear Medicine
801058 Loken, ar cr

8210 Fundamentals of Nuclear Medicine (prereq 1st yr resident)
101065 1600-1700 M, Mayo C231, Loken, 1 cr

8250 Research; Nuclear Medicine
601059 Loken, ar cr

8450 Research: Radiation Biology
801061 Morin, Song, ar cr

8550 Research: Radiological Physics
401063 Morin, ar cr

RECREATION, PARK, AND LEISURE STUDIES (Rec)
School of Physical Ed, Rec, School Health Ed
Education

R1520 Orientation to Leisure and Recreation (A-N only)
129870 0915-1100 TTh, CookeH 206, 5 cr

R3210 Therapeutic Information for Recreators (prereq Phar 5210, Anat 1027 or 1004, △) (A-N only)
812187 1015-1100 MWF, CookeH 206, Weiss, 3 cr

R3530 Recreation and Park Areas and Facilities (prereq 1520, recreation maj or △) (A-N only)
729869 1315-1500 TTh, CookeH 206, McAvoy, 5 cr

R3540 Recreation Programming (prereq 1520, recreation maj or △) (A-N only)
929868 1115-1300 MW, CookeH 206, Schleien, 5 cr

3700 Senior Internship (prereq sr, recreation maj or minor, △) (S-N only)
115211 1-15 cr

3900 Directed Study (max 9 cr; prereq recreation maj only, △) (S-N optional)
729872 3 cr

R5100 Foundations of Recreation (§8120; prereq MEd, adult special or grad student) (A-N only)
929871 1615-1830 M, CookeH 206, Schultz, 3 cr

R5210 Introduction to Therapeutic Recreation (prereq 1520 or 5100, rec maj or △) (A-N only)
614233 –1 1315-1530 M, CookeH 206, Weiss, 3 cr (addnl hrs ar) (grad and med only)
714224 –2 1115-1230 TTh, CookeH 214, Schleien, 3 cr (addnl hrs ar) (undergrad maj only)

R5300 Foundations of Outdoor Education (prereq sr, 1520 or 5100 or #) (A-N only)
129867 1315-1600 W, CookeH 214, McAvoy, 3 cr

5630 Practicum: Therapeutic Recreation (prereq recreation M.Ed. or grad) (A-N only)
315215 Weiss, Schleien, 3-9 cr

5640 Practicum: Public Recreation and Parks (prereq recreation M.Ed. or grad) (A-N only)
015217 McAvoy, Schultz, 3-9 cr

R5900 Workshop: Contemporary Issues in Leisure Services (max 12 cr; prereq △) (A-N only)
014228 –1 0915-1000 MWF, CookeH 206, Schultz, 3 cr
014231 –2 1315-1600 F, CookeH 214, 3 cr

R5980 Introduction to Research (§PE 5980; prereq MEd, grad or △) (A-N only)
529873 1615-1830 T, CookeH 226, 3 cr

5981 Problems (prereq MEd candidate, #) (A-N only)
329874 ar cr

5983 Readings: Recreation (prereq MEd, grad or △) (A-N only)
129875 1-3 cr

8980 Research Problems (prereq 5980, PsyF 5110 or #) (S-N only)
029876 1 cr

8981 Research Problems (prereq 8980 or #) (S-N only)
829877 ar cr

RELIGIOUS STUDIES (RelS)
Liberal Arts

1001 Introduction to Religious Studies
314291 1115-1230 TTh, FordH 155, Tapp, 4 cr

1034 Introduction to Judaism (§JwSt 1034, 3034)
414296 1415-1500 MWF, Arch 55, Zahavy, 4 cr

1036 The Religion of Islam (§MidE 1536)
126670 1115-1200 MWF, BlegH 245, Farah, 4 cr

3101 Religions of the American People
530893 0915-1000 MWF, FolH 50, Ross, 4 cr

3970 Directed Studies (prereq #, △, college approval)
008901 3-5 cr

5960 Topics in Religious Studies: Indo-European Religions (prereq #)
035306 1415-1700 T, FordH 50, Lincoln, 4 cr

8970 Directed Studies (prereq △)
608903 2-5 cr

RESOURCE AND COMMUNITY DEVELOPMENT (RCD)
Agriculture

1010 Issues in the Environment
835307 Adams, 3 cr

5099 Interdisciplinary Seminar I (5099-5100†, §AgEc 5099, AgET 5099, LA 5099, Soil 5099; prereq RCD sr or #)
826672 1500-1645 TTh, AlderH 310, 4 cr

5110 Special Problems (max 12 cr; prereq RCD sr, #)
329261 1-4 cr

RHETORIC (Rhet)
Agriculture

R1101 Writing to Inform and Persuade (§Comp 1011; prereq ¶1104 required)
406490 –1 0900-0945 MWF, HckrH 302, 4 cr
906493 –2 1000-1045 MWF, HckrH 210, 4 cr
506495 –3 1300-1345 MWF, HckrH 312, 4 cr
006498 –4 0930-1045 TTh, HckrH 312, 4 cr
106502 –5 1100-1215 TTh, HckrH 312, 4 cr

R1104 Library Laboratory (S-N only)
635793 –1 LAB 1000-1045 M, CentLib 268, 1 cr
435794 –2 LAB 1230-1315 T, CentLib 268, 1 cr
235795 –3 LAB 0900-0945 W, CentLib 268, 1 cr
135796 –4 LAB 0930-1015 Th, CentLib 268, 1 cr
935797 –5 LAB 1100-1145 Th, CentLib 268, 1 cr

R1147 Efficient Reading
306515 0930-1045 TTh, HckrH 210, Bennett, 4 cr

R1151 Writing in Your Major (prereq completion of Rhet 1101, 1104, soph status)
735798 –1 1000-1045 MWF, HckrH 302, Kantar, 4 cr
937081 –2 1100-1145 MWF, HckrH 210, Kantar, 4 cr
737082 –3 1400-1545 TTh, HckrH 210, Bennett, 4 cr

R1220 Principles of Human Communication
029215 0930-1045 TTh, HckrH 302, 4 cr

R1222 Public Speaking (prereq completion of 1101, 1104)
906526 –1 0800-0845 MTWTh, HckrH 222, Wendt, 4 cr
306529 –2 0900-0945 MTWTh, CentLib 4, Gore, 4 cr
506531 –3 1100-1145 MTWTh, HckrH 222, Hayes, 4 cr
006534 –4 1200-1245 MTWTh, CentLib 4, Eyo, 4 cr
406537 –5 1200-1245 MTWTh, HckrH 222, McBride, 4 cr
206538 –6 1300-1345 MTWTh, CentLib 6, Eyo, 4 cr
106539 –7 1300-1345 MTWTh, HckrH 222, McBride, 4 cr
406540 –8 0800-0915 MTWTh, CentLib 6, Hardesty, 4 cr
106542 –9 1100-1215 TTh, CentLib 6, McDowell, 4 cr
306546 –10 1100-1215 TTh, HckrH 302, 4 cr
413276 –11 1230-1345 TTh, HckrH 209, Bennett, 4 cr

R1301† Humanities: Modern Thought and the Enlightenment
906557 1100-1145 MWF, HckrH 312, Marchand, 4 cr

R1302 Humanities: Modern Thought and the Industrial Revolution
829216 1000-1045 MWF, HckrH 302, Walzer, 4 cr

R1303 Humanities: Modern Thought and the Impact of Evolution
537083 0900-0945 MWF, HckrH 100, Walzer, 4 cr

R1310 Humanities: The Land in American Experience
429218 0900-0945 MWF, HckrH 312, Scanlan, 4 cr

R1311 Humanities: The Family in American Experience
535799 1100-1145 MWF, HckrH 302, Scanlan, 4 cr

R1500 Introduction to Word Processing (prereq #) (S–N only)
235800 1400-1600 MWF, HckrH 329, Winkler, 2 cr

R3254 Advanced Public Speaking (prereq 1222)
429221 1000-1045 MTWTh, HckrH 222, Hayes, 4 cr

R3266 Communication, Discussion, in Small Group Decision Making (prereq completion of freshman communication requirement)
229222 1000-1045 MTWTh, CentLib 4, Gore, 4 cr

3270 Speech: Special Problems (prereq #)
129223 Connolly, Gore, others, 1–5 cr

R3370 American Humanities
337084 1200-1245 MWF, HckrH 100, Horberg, 4 cr

3374 Special Problems in Humanities (prereq #)
135801 Horberg, Marchand, others, 1–2 cr

R3562 Writing in Your Profession (prereq 1101, 1104, 1151, jr status)
206605 –1 0900-0945 MWF, HckrH 111, Churchill, 4 cr
906607 –2 1000-1045 MWF, HckrH 111, Somers, 4 cr
906610 –3 1000-1045 MWF, HckrH 100, 4 cr
306613 –4 1100-1145 MWF, HckrH 100, 4 cr
313884 –5 1100-1145 MWF, HckrH 111, Somers, 4 cr
935802 –6 1200-1245 MWF, HckrH 111, Churchill, 4 cr
735803 –7 0930-1045 TTh, HckrH 100, Horberg, 4 cr
535804 –8 0930-1045 TTh, HckrH 111, Ferguson, 4 cr
335805 –9 1100-1215 TTh, HckrH 111, Winkler, 4 cr
135806 –10 1230-1345 TTh, HckrH 111, Winkler, 4 cr
035807 –11 1230-1345 TTh, HckrH 302, Schuelke, 4 cr
835808 –12 1300-1500 Th, GrnH 211, Ferguson, 2–4 cr (Forestry students only)
635809 –13 1530-1700 T, Agr 202, Pearsall, 2–4 cr (Agronomy students only)

3572 Grammatical Editing for Technical Writers (prereq #) (S–N only)
835811 Walzer, 2 cr

5000 Professional Experience Program (prereq #) (S–N only)
129237 Connolly, McDowell, others, 4 cr

5100 Technical Communication: Special Problems (prereq #)
129240 Connolly, McDowell, others, ar cr

R5147 Efficient Reading
331222 0930-1045 TTh, HckrH 210, Bennett, 4 cr

R5150 Direction of Training in Business and Service Organizations (prereq freshman communication or equiv)
729239 1300-1545 Th, CentLib 4, Grabow, 4 cr

5180 Internship in Technical Communication (prereq #)
929238 Connolly, McDowell, others, 4–6 cr

R5257 Scientific and Technical Presentation (prereq 1222, 3562 or #)
★LECT 1400-1515 TTh, HckrH 224, Connolly, 4 cr
635812 –1 LAB 1100-1145 W, HckrH 224, Connolly
435813 –2 LAB 1300-1345 W, HckrH 224, Connolly

R5571 Writing for Special Purposes (prereq technical communication maj or minor, freshman commication, 3562 or #)
235814 1400-1545 Th, HckrH 317C, Winkler, 2 cr

R5600 Tranfer of Technology (§AgJo 5600; prereq work experience in scientific/technical communication or #)
529243 1600-1845 M, HckrH 302, Schuelke, 4 cr

RUSSIAN (Russ)
Russian And East European Studies
Liberal Arts

R1101 Beginning Russian
306627 –1 0815-0900 MTWThF, WullH 130, 5 cr
306630 –2 0915-1000 MTWThF, NichH 122, Corten, 5 cr
806633 –3 1115-1200 MTWThF, WullH 130, Caskey, 5 cr
206636 –4 1215-1300 MTWThF, WullH 130, Prokopov, 5 cr
106637 –5 1315-1400 MTWThF, KoltH S132, Prokopov, 5 cr

R1104 Intermediate Russian (prereq 1103)
706639 –1 1115-1200 MTWThF, ChDev 105, Corten, 5 cr
906641 –2 1315-1400 MTWThF, WullH 130, Donchenko, 5 cr

R3101 Third-Year Russian (prereq 1106)
614314 1015-1100 MTWThF, ChDev 105, Kulesov, 5 cr

3104 Introduction to Literary Analysis (prereq 3101)
630898 1215-1300 MTWThF, ChDev 105, Kulesov, 5 cr

3421 Literature: Middle Ages to Dostoevsky in Translation (§5421; prereq 1106 or equiv for Russ lang/lit maj)
435682 –1 0915-1000 MWF, WullH 130, Jahn, 4 cr
235683 –2 0915-1000 MTWF, WullH 130, Jahn, 4 cr (Russian maj only)

3970 Directed Readings (prereq #, △, college approval)
130900 3–5 cr

5407 Stories and Plays of Anton Chekhov in Translation
409244 1315-1400 MWF, ChDev 105, Polakiewicz, 4 cr

5421 Literature: Middle Ages to Dostoevsky in Translation (§3421)
636846 1415-1500 MWF, KoltH S132, Jahn, 4 cr

5970 Directed Readings (prereq #, △, CLA approval)
114308 1–4 cr

8211 Proseminar: Introduction to Russian Area Studies
536371 1315-1500 T, JonesH 2, Noonan, 2 cr

SANSKRIT (Skt)
South And Southwest Asian Studies
Liberal Arts

1201 Beginning Sanskrit
526682 0915-1000 MTWThF, KlaCt 190, Malandra, 5 cr

5131 Intermediate Sanskrit (prereq 1203 or 5203)
326683 1015-1100 MWF, KlaCt 190, Munda, 5 cr

5161 Advanced Sanskrit (prereq 5133)
126684 4 cr

5201 Beginning Sanskrit (§1201)
026685 0915-1000 MTWThF, KlaCt 190, Malandra, 5 cr

5970 Directed Studies (prereq #, △, CLA approval)
700159 ar cr

5990 Directed Research (prereq #, △, CLA approval)
900161 1315-1600 F, KlaCt 196, ar cr

8990 Research (prereq #)
500163 ar cr

SCANDINAVIAN (Scan)
Scandinavian Languages
Liberal Arts

R3602 The Scandinavian Fairy Tale as Literature
935301 1115-1200 MWF, FolH 308, Mishler, 4 cr

R3604 Finnish Literature in Translation
735302 1245-1400 TTh, FolH 50, Vahamaki, 4 cr

3615 The Family in Scandinavian Literature
535303 1415-1530 TTh, FolH 105, Houe, 4 cr

3970 Directed Studies (max 15 cr; prereq #, △, college approval)
008977 1–5 cr

5616 Strindberg and the Drama in Revolt and Transition
335304 1415-1500 MWF, FolH 203, Stockenstrom, 4 cr

5701 Old Norse: Language and Literature
513124 1415-1530 TTh, FolH 203, Grimstad, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
826686 1–15 cr

8201 Proseminar: Scaninavian Bibliography, Literary Methodology
135305 1515-1800 W, FolH 203, Simpson, 4 cr

8970 Research: Scandinavian Literature and Language
626687 1–6 cr

SCHOOL HEALTH EDUCATION (Hlth)
School of Physical Ed, Rec, School Health Ed
Education

R1500 American Red Cross Standard First Aid and Personal Safety (A–N only)
106676 –1 0915-1000 MWF, NorrisH 201, 2 cr
806678 –2 1115-1200 MWF, NorrisH 201, 2 cr
806681 –3 1415-1530 TTh, NorrisH 201, 2 cr

R1502 Basic Life Support (S–N only)
429879 1215-1300 MWF, NorrisH 201, 1 cr

R3100 Curriculum in School Health Education (prereq PubH 3004, school health education maj or min) (A–N only)
629878 1015-1130 TTh, NorrisH 3, Cobb, 3 cr

R3300 Instructor's Course in Standard First Aid and Personal Safety (prereq ARC First Aid, Personal Safety Certificate or Advanced Certificate) (A–N only)
406683 1315-1400 MWF, NorrisH 3, 3 cr

R3330 Teaching Health in the Elementary School (prereq elementary education maj) (A–N only)
226689 1315-1445 TTh, NorrisH 3, 3 cr

3600 Pre-Fall Student Teaching (prereq #) (A–N only)
429882 3 cr

3601 Student Teaching: Elementary School (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A–N only)
629881 3 cr

3602 Student Teaching: Junior High School (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A–N only)
829880 3–6 cr

3603 Student Teaching: Senior High School (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A–N only)
229883 3–6 cr

3999 Directed Studies: School Health Education (max 6 cr; prereq upper division maj or min in school health education, #) (S–N only)
129884 Cobb, Needle, 1–6 cr

5069 Community Health Education Practicum for School Health Education Students (prereq 5072) (A–N only)
929885 6 cr

R5072 Introduction to School and Community Health Education (prereq 3100 or PubH 5080 or #) (A–N only)
729886 1800-2030 W, NorrisH 3, Needle, 3 cr

R5150 Family Life and Sex Education in the Secondary Schools (prereq FSoS 5001 or #) (A–N only)
529842 1800-2030 M, NorrisH 3, Cobb, 3 cr (1 hr ar)

5685 School-Based Projects in School Health Education (max 12 cr; prereq school health M.Ed.) (A–N only)
329843 Cobb, Needle, 1–12 cr

5980 Introduction to Research (§PE 5980; prereq #) (A–N only)
529887 1615-1730 MW, CookeH 214, Shick, 3 cr

5981 Problems (prereq #) (A–N only)
729841 Cobb, Needle, ar cr

5983 Readings: Health Education (prereq sr honor, grad student, #) (A–N only)
929840 Cobb, Needle, 1–3 cr

8981 Research Problems (prereq 8980 or #) (S–N only)
529839 Cobb, Needle, ar cr

SECONDARY EDUCATION (SeEd)
Curriculum And Instruction
Education

R3150 Introduction to Secondary School Teaching (prereq educ stu, 5 cr introductory psychology) (A–N only)
606696 –1 0815-1000 MWF, PeikH 40, Bruning, 5 cr
106699 –2 0815-1000 MWF, PeikH 165, Willie, 5 cr (social studies maj only)
606701 –3 1015-1200 MWF, PeikH 40, Bruning, 5 cr
206703 –4 1300-1445 MWF, PeikH 40, 5 cr

3151 Directed Study (prereq △) (A–N only)
329759 1–9 cr

R3152 Practicum: Secondary Education (max 7 cr; prereq educ stu, △) (S–N only)
906705 1515-1600 TTh, PeikH 375, 1–7 cr (math maj only)

R3155 Psychological Foundations of Secondary Education (prereq educ stu, Psy 1001) (A–N only)
★LECT 1115-1200 MWF, BuH 120, Rest
006713 –1 LAB 0815-1000 T, ChDev 105, 5 cr
606715 –2 LAB 1015-1200 T, BuH 120, 5 cr
206717 –3 LAB 1015-1200 Th, BuH 120, 5 cr
931314 –4 LAB 1215-1400 Th, ChDev 218, 5 cr

3320 Basis for Instruction in Language in Secondary English Curricula (prereq Engl 5851) (A–N only)
535592 1215-1400 MW, PeikH 225, Piche, 3 cr

3325 Instructional Practice in English, Speech, and Theatre Arts (A–N only)
729760 1415-1600 MW, PeikH 225, Beckman, 4 cr

R3326 Teaching Adolescent Literature (prereq 3150, 3155) (A–N only)
529761 1315-1500 TTh, PeikH 225, Appleman, 3 cr

3334 Teaching Second Languages (prereq educ stu) (A–N only)
429767 1515-1800 TTh, PeikH 215, Jorstad, 6 cr

3348 Teaching Social Studies in the Secondary School (prereq social studies maj) (A–N only)
629766 0815-1000 TTh, PeikH 165, Mackey, 3 cr

R3356 Teaching Secondary School Science (prereq jr, 5 cr introductory psychology, ¶3155) (A–N only)
829765 0815-1000 TTh, PeikH 365, Humphreys, 2 cr

3365 Teaching Secondary School Mathematics (prereq 3150, 3155, ¶3152 for 2 cr) (A–N only)
029764 1300-1500 TTh, PeikH 375, House, 4 cr

3600 Student Teaching (prereq △) (S–N only)
129763 ar cr

3606 Student Teaching in Library Science (prereq sr, Lib 5102, 5201, 5202, 5205, 5302, 5303 or #) (A–N only)
329762 2–6 cr

3621 Directed Experiences in Teaching English, Speech, and Theatre Arts (prereq 3325, #) (S–N only)
106726 –1 1615-1800 M, PeikH 26, Johnson, Reilly, 9 cr
806728 –2 Johnson, Reilly, 6 cr (minors to major only)

3631 Student Teaching in Second Languages (S–N only)
126693 1615-1800 M, PeikH 215, Jorstad, 3–12 cr

R3641 Student Teaching in Social Studies (max 15 cr; prereq 3350, sr) (S–N only)
229768 1615-1800 M, PeikH 165, Fleener, 3–15 cr

3651 Student Teaching in Science (prereq sr, 3357, 4 cr in 3352...for minors: 3357, #) (S–N only)
129769 1615-1800 M, PeikH 365, Wainwright, 1–12 cr

3661 Student Teaching in Mathematics (prereq 3365 during same year) (S–N only)
429770 Bledsoe, 3–12 cr

5150 Advanced Methods of Teaching the Social Studies (A–N only)
335593 1615-1800 T, PeikH 165, Glenn, 3 cr

5151 School-Based Projects in Social Studies Education (max 12 cr) (A–N only)
129772 Glenn, Mackey, 1–12 cr

5153 New Perspectives in the Social Studies: Improving the Teaching of History (max 12 cr) (A–N only)
413178 1615-1800 Th, PeikH 165, Mackey, 3 cr

R5176 Classroom Research in English Education and Reading (A–N only)
015380 1615-1800 TTh, PeikH 225, Graves, 3 cr

5185 School and Professional Based Experiences in Second Languages and Cultures (max 12 cr; prereq MEd students) (A–N only)
214347 Lange, Paige, Jorstad, Walker, 1–12 cr

5189 Planning and Assessing Second Language Curriculum (A–N only)
726695 1600-1800 TTh, PeikH 375, Lange, 4 cr

5216 Foundations of Bilingual Education (A–N only)
714708 1600-1800 MW, PeikH 33, Walker, 4 cr

5324 Curriculum Problems and Issues in Teaching Theatre Arts in Secondary Schools (A–N only)
135594 1615-1800 T, PtH 111, 3 cr

R5344 Teaching Reading in Content Areas (A–N only)
929773 1615-1800 W, PeikH 225, Graves, 3 cr

5351 Directed Study (max 6 cr; prereq educ or grad stu) (S–N optional)
729774 ar cr

R5390 Current Developments in Secondary School Science Teaching (prereq 3356, 3357 or equiv undergrad courses or experence teaching science) (A–N only)
814344 0800-1100 S, PeikH 365, Gennaro, 3 cr

5395 School-Based Projects in Science Education (max 12 cr; prereq MEd student in science education) (A–N only)
529775 Gennaro, 1–12 cr

5504 Theoretical and Research Bases for the Teaching of Writing (prereq postbac, M.Ed. or grad) (A–N only)
035595 1615-1800 TTh, PeikH 315, Piche, 4 cr

5659 School-Related Projects in Language Arts (max 12 cr; prereq MEd student in English education) (A–N only)
129777 Beach, Graves, Piche, 1–12 cr

8104 Curriculum Development in the Social Studies (prereq 5150, 5152)
835596 Glenn, Mackey, 3 cr

8387 Seminar: Second Language Education
029778 1330-1530 F, PeikH 215, Jorstad, Walker, 1–3 cr

8801 Problems: Teaching Social Studies (prereq 5150, 5152, 5156, 8104 or #)
829779 Glenn, Mackey, 3–9 cr

8871 Problems: Curriculum Construction (prereq #)
129780 Gennaro, ar cr

R8892 Introduction to Research in English Education and Reading
029781 1615-1800 TTh, PeikH 225, Graves, 4 cr

8893 Seminar: Advanced Topics in English-Language Arts Education (max 9 cr; prereq #)
635597 1615-1800 M, PeikH 225, Beach, 1–9 cr

8894 Problems: Second Languages and Cultures Education (max 8 cr)
829782 Lange, Paige, Jorstad, Walker, ar cr

8895 Readings in English Education
629783 Beach, Graves, Piche, 1–3 cr

8896 Problems: Teaching English
429784 Beach, Graves, Piche, ar cr

R8898 Readings in Second Languages and Cultures Education
229785 Lange, Paige, Jorstad, Walker, 1–3 cr

8899 Seminar: Research in Science Education (max 9 cr; prereq MA or PhD candidate, #)
736885 Gennaro, 3 cr

SERBO-CROATIAN (Serb)
Russian And East European Studies
Liberal Arts

1101 Beginning Serbo-Croatian
835341 1415-1500 MTWThF, Arch 20, Caskey, 5 cr

SMALL ANIMAL CLINICAL SCIENCES (SACS)
Veterinary Medicine

5171 Small Animal Medicine (prereq 5170 or #)
326697 0900-0950 MWF, 1000-1050 M, AnScVM 125, 0900-0950 Th, AnScVM 135, Hardy, Klausner, others, 5 cr

5250 Small Animal Dermatology (prereq regis vet med, 3rd or 4th yr or grad or #)
701764 1500-1650 M, AnScVM 135, McKeever, 2 cr

5255 Diseases of the Urinary System (prereq regis vet med, 3rd or 4th yr or grad or #)
501765 1300-1450 M, AnScVM 111, Klausner, Osborne, Polzin, 2 cr

5380 Anesthesiology and Traumatology (prereq 5170 or #)
026699 1100-1150 W, AnScVM 125, 1000-1050 Th, AnScVM 135, Raffe, Robinson, 2 cr

5450 Veterinary Radiology: Introduction and Fundamentals (prereq #)
101767 1100-1150 Th, AnScVM 135, Jessen, Hanlon, others, 1 cr

5453 Special Procedures in Veterinary Radiology (prereq regis vet med, 3rd or 4th yr or grad or #)
801769 G Johnston, Feeney, others, 2 cr

5455 Roentgenology Bone-Small Animals (prereq regis vet med, 3rd or 4th yr or grad or #)
136835 1300-1450 M, VetHosp 282, Hanlon, 1 cr (first 5 weeks)

8180 Advanced Clinical Neurology (prereq #)
101770 Fletcher, Hardy, ar cr

8190 Comparative Cardiovascular Diseases (prereq grad)
801772 Ogburn, 3 cr

8191 Advanced Comparative Electrocardiology (prereq grad)
401774 Ogburn, 3 cr

8192 Special Cardiology Clinics (prereq grad)
101776 Ogburn, ar cr

8196 Internal Medicine in Small Companion Animals (prereq grad)
701778 Osborne, 2 cr

8197 Advanced Dermotologic Clinics (prereq grad or #) (A-N only)
501779 McKeever, 4 cr

8198 Problems in Veterinary Comparative Dermatology (prereq grad or #)
501782 McKeever, ar cr

8290 Advanced Veterinary Medicine (prereq 5172, LACS 5162, #)
101784 Osborne, ar cr

8291 Advanced Diagnosis and Therapeutics of Animal Diseases (prereq 5172, LACS 5162, #)
801786 Osborne, ar cr

8292 Seminar: Veterinary Medicine (prereq #)
401788 Osborne, ar cr

8293 Medical Conference (prereq 5172, LACS 5162, #)
601790 Osborne, ar cr

8295 Comparative Veterinary Medical Ophthalmology (prereq grad or #)
201792 Bistner, 3 cr

8296 Comparative Veterinary Surgical Ophthalmology (prereq grad or #)
901794 Bistner, 3 cr

8297 Advanced Clinical Veterinary Ophthalmology (prereq grad or #)
701795 Bistner, 3 cr

8298 Research in Veterinary Ophthalmology (prereq grad or #)
301797 Bistner, 3-5 cr

8299 Research in Veterinary Medicine
101798 ar cr

8390 Seminar: Veterinary Surgery (prereq #)
701800 Caywood, Lipowitz, others, ar cr

8391 Advanced Small Animal Surgery (prereq CVM 5350 or equiv, #)
301802 Caywood, Lipowitz, others, ar cr

8394 Surgery of the Gastrointestinal System (prereq LACS 5160 or #)
001804 Caywood, Lipowitz, others, ar cr

8396 Advanced Veterinary Anesthesia (prereq LACS 5355, #)
601806 Raffe, Robinson, ar cr

8410 Surgical Physiology (prereq 8391, #)
201808 Caywood, Lipowitz, Wallace, 2 cr

8420 Neurosurgery (prereq 8391, #)
401810 Caywood, Lipowitz, Wallace, 3 cr

8430 Thoracic and Cardiovascular Surgery (prereq 8391, #)
201811 Caywood, Lipowitz, Wallace, 3 cr

8471 Therapeutic Radiology (max 2 cr; prereq 5452, #)
901813 Feeney, Johnston, others, ar cr

8480 Seminar: Veterinary Radiology (prereq 5452, #)
501815 0800-0850 T, VetHosp 282, Johnston, Feeney, others, 1 cr

8490 Advanced Veterinary Radiology (prereq 5450, 5451, 5452 or equiv, #) (A-N only)
101817 Feeney, Johnston, others, 1-2 cr

SOCIAL AND ADMINISTRATIVE PHARMACY (SAPh)
Pharmacy

5840 Principles of Health Behavior (prereq PubH 5795 or #)
301119 Martinson, 2 cr

8100 Seminar
106807 -1 Giese, 1 cr
006811 -2 Wertheimer, 1 cr

8200 Research Problems
501118 ar cr

8270 Clinical Conferences
701117 Cloyd, 2 cr

8280 Administrative Clerkship (prereq △)
901116 ar cr

8290 Clinical Clerkship (prereq 8270)
101115 Angaran, 2-5 cr

8400 Special Clinical Problems
201114 ar cr

8610 Behavioral and Social Research Methodologies in the Health Sciences (prereq #)
401113 Martinson, 3 cr

8700 Hospital Administration (prereq #) (A-N only)
601112 T Jones, 2 cr

SOCIAL AND PHILOSOPHICAL FOUNDATIONS OF EDUC (SPFE)
Educational Policy And Administration
Education

R3090 School and Society (prereq sr) (A-N only)
831323 -1 1000-1045 MWF, KaufL 302, Harkins, 3 cr (StP)
631324 -2 1415-1600 T, 1415-1500 Th, Arch 55, Beck, 3 cr

3099 Directed Study (prereq #) (A-N only)
730228 Bagley, Beck, others, 1-6 cr

5099 Directed Study (max 9 cr, S-N optional; prereq #)
914447 Bagley, Beck, others, ar cr

5101 Historical Foundations of Modern Education (A-N only)
530229 1615-1800 M, ChDev 216, Bagley, 3 cr

5120 History of Childhood Education (S-N optional)
930230 1615-1800 T, ChDev 218, Bagley, 3 cr

5141 Critical Issues in Contemporary Education (A-N only)
730231 1615-1800 W, ChDev 218, Beck, 3 cr

5175 Introduction to Systems Theory in Social Science and Education (A-N only)
530232 1830-2030 T, ChDev 105, Harkins, 3 cr

5190 Sociology of Education (§Soc 5953) (A-N only)
135790 1515-1700 T, NichH 107, Clark, 4 cr

5191 Professionalization and Teaching (A-N only)
035791 1515-1700 Th, BuH 123, Clark, 3 cr

5202 Politics of Education (§8202, EdAd 5202, 8202) (A-N only)
835792 1615-1800 M, FolH 105, Mazzoni, 3 cr

5209 Education in Future Social Systems (§5212) (A-N only)
130234 1830-2030 M, ChDev 216, Harkins, 3 cr

8220 Seminar: Social and Educational Futures (max 6 cr; prereq 5209 or 5210 or 5211 or #)
430238 1830-2030 Th, BuH 125, Harkins, 1-6 cr

8241 Problems: History and Philosophy of Education (prereq #)
630240 ar cr

SOCIAL WORK (SW)
Home Economics

R1001 Introduction to Social Welfare and Community Services
100028 1015-1200 MW, AndH 250, 5 cr

R1002 Community Experience in Social Welfare (prereq 1001, △) (S-N only)
214705 1315-1400 T, FordH 120, Quam, 1 cr

R3004 Social Work Issues and Human Development Through the Life Cycle (prereq 1001, CPsy 1301)
900029 0915-1100 TTh, MurH 308, Battle, 4 cr

R3101 Current Social Policy Problems and Social Welfare (§5101; prereq 1001)
526701 0815-1000 TTh, FordH 120, 4 cr

3970 Directed Studies (prereq maj, #, △, college approval)
100031 1-15 cr

R3984 Community Organization/Development Practice (§5984; prereq 1001)
136978 1315-1500 MW, FordH 150, 4 cr

3990 Directed Research (prereq #, △, college approval)
700033 ar cr

R5013 Interdisciplinary Team Training in Health Services Delivery (§HSU 5001, PubH 5013; prereq #)
837235 1810-2110 W, MoosT 2571, Cohn, Ayers, others, 3 cr

R5021 Human Sexuality for the Health and Helping Professionals I (§HSU 5025, PubH 5021, FSoS 5240, Hlth 5700)
237238 1715-1930 Th, MoosT 2650, Larson, Terrel, others, 3-4 cr

R5024 Multidisciplinary Perspectives on Aging (§CPsy 5305, Educ 5440, HSU 5009, Phar 5009, PA 5671, Soc 5960)
437240 1615-1800 MW, VinH 16, Cohn, 4 cr

R5601 Ethno-Cultural Concepts in Social Work Practice (prereq 1001)
414606 0815-1100 M, FordH 150, A Stewart, 3-4 cr

R8010 Field Instruction I (4 cr or ar cr by #) (S-N only)
300049 -1 1215-1400 T, FordH 160, Johnston, ar cr
614782 -2 1215-1400 T, FordH 70, ar cr
414783 -3 1215-1400 T, FordH 60, ar cr
214784 -4 1215-1400 T, FordH 55, ar cr
114785 -5 1215-1400 T, FordH 115, ar cr

8020 Field Instruction II (4 cr or ar cr by #; prereq 8010) (S-N only)
500051 Johnston, ar cr

R8121 Social Policy and Delivery Systems for Family and Children's Services (prereq 5111)
135829 1315-1600 T, FordH 170, Wattenberg, 3 cr

R8122 Health/Mental Health Policy (prereq 5111)
435830 0815-1100 M, FordH 170, Battle, 3 cr

R8300 Organizational Behavior
300052 1415-1700 T, FordH 120, Austin, 3 cr

R8350 Special Topics: Management, Planning, and Development: MPD Concentration Workshop (prereq MPD concentration or #)
911600 1715-1900 M, FordH 170, 1-4 cr (alt M)

R8400 A Framework for Social Work Intervention
106878 -1 1415-1700 M, FordH 170, Quam, 3 cr
106881 -2 0815-1100 T, FordH 175, Quam, 3 cr

R8407 Strategies of Family Intervention (prereq 8401, 2nd yr MSW student, #)
800055 1115-1400 Th, FordH 70, 3 cr

R8408 Direct Work with Children (prereq 8400)
511597 1415-1700 M, FordH 130, 3 cr

R8422 Social Work Practice with the Chronically Mentally Ill (prereq 8122, 8400, 8401 or #)
936979 1115-1400 M, FordH 50, 3 cr

R8450 Special Topics: Practice with Individuals, Families and Groups; Practice Issues in Health (prereq 8401 or #)
111599 1315-1600 Th, FordH 170, Bracht, 3 cr

R8460 Special Topics in the Personal Social Services: Models of Direct Practice (prereq 8401, #, for doctoral student only)
236980 1415-1700 M, FordH 285, ar cr

R8901 Scientific Inquiry in Social Work
006887 1315-1600 Th, FordH 120, AuClaire, 3 cr

8970 Directed Study (prereq #)
600056 -1 ar cr
515987 -2 ar cr

8990 Research Projects (max 6 cr)
400057 ar cr

8993 Seminar on Research (prereq MSW degree)
235831 1715-2000 M, FordH 447, AuClaire, 3 cr

SOCIOLOGY (Soc)
Liberal Arts

R1001 Introduction to Sociology
506898 -1 0815-0900 MWF, AndH 310, Asher, 4 cr
106900 -2 0915-1000 MWF, BlegH 5, J Clark, 4 cr
506903 -3 1215-1300 MWF, AndH 310, Fiola, 4 cr
106905 -4 1315-1400 MWF, AndH 210, Reiss, 4 cr
606908 -5 0945-1100 TTh, AndH 270, Fulton, 4 cr
406912 -6 1115-1230 TTh, BlegH 5, Bradley, 4 cr

R1001H Honors Course: Introduction to Sociology
911242 0815-0900 MWF, BlegH 350, Inverarity, 4 cr

R1002 American Community
131411 0945-1100 TTh, AndH 330, Kennedy, 4 cr

R3101 Introduction to American Criminal Justice (§CJS 3101)
914609 1115-1230 TTh, AndH 210, Kruttschnitt, 4 cr

R3201 Principles of Social Psychology (prereq 1001)
★LECT 1115-1200 MWF, BlegH 150, Spitzer
414623 –1 LAB 0800-1000 M, Mgmt/Econ 130, 5 cr
714627 –2 LAB 0900-1100 T, Mgmt/Econ 136, 5 cr
514631 –3 LAB 0800-1000 W, Mgmt/Econ 130, 5 cr
814635 –4 LAB 0800-1000 F, Mgmt/Econ 130, 5 cr

R3214 Understanding Everyday Life (prereq soph)
300066 1215-1330 MW, AndH 350, Reynolds, 4 cr

R3401 Principles of Social Organization (prereq 1001, 3801)
637270 1215-1300 MWF, BlegH 130, Mortimer, 5 cr

R3405 Inequality: Introduction to Stratification (prereq 1001)
114639 1315-1400 MWF, BlegH 155, T Anderson, 4 cr

R3501 The Family System (prereq 1001 or #)
100067 1115-1200 MWF, AndH 270, Li, 4 cr

R3503 Sex, Romance, and Relationships (prereq 1001)
800069 1415-1530 MW, AndH 370, Fischer, 4 cr

R3551 World Population Problems
000071 1245-1400 TTh, BlegH 235, Kennedy, 4 cr

R3801 Sociological Methods I: Descriptive Statistics (prereq basic algebra or Math 0009)
★LECT 1015-1100 MWF, AndH 350, T Anderson
306952 –1 LAB 0915-1000 MW, BlegH 410, 5 cr
006954 –2 LAB 1315-1400 MW, BlegH 410, 5 cr
406957 –3 LAB 1415-1500 MW, BlegH 410, 5 cr
106959 –4 LAB 0815-0900 TTh, BlegH 410, 5 cr
300617 –5 LAB 0915-1000 TTh, BlegH 410, 5 cr
706964 –6 LAB 1015-1100 TTh, BlegH 410, 5 cr

R3801H Honors Course: Sociological Methods I: Descriptive Statistics (prereq basic algebra or Math 0009, #)
★LECT 1015-1100 MWF, AndH 350, T Anderson
211254 –80 LAB 1215-1300 MW, BlegH 410, 5 cr

R3803 Sociological Methods III: Research Methods (prereq 3801, 3802 or #)
★LECT 1215-1300 MWF, BlegH 245, R Anderson
406974 –1 LAB 1115-1200 MW, BlegH 410, 5 cr
106976 –2 LAB 1215-1300 TTh, BlegH 410, 5 cr

R3811 Computer Usage for Social Statistics (¶3801 rec) (S–N only)
800072 0915-1000 W, BlegH 340, Felt, 1 cr

3960 Topics in Sociology: Nuclear Weapons and Nuclear War, (§IntR 3105; prereq 1001)
036990 1315-1500 MW, Law 20, Hopmann, 4 cr

3970 Directed Studies (prereq #, △, college approval)
600073 1–15 cr

3990 Sociology Honors Thesis (max 8 cr; prereq jr or sr sociology honors student, #, △, college approval)
400074 4–8 cr

5104 Community-Based Corrections (§CJS 5113; prereq 3102 or #)
735882 1415-1500 MWF, BlegH 255, Heitzeg, 4 cr

R5108 Current Issues in Crime Control (§CJS 5207; prereq 3102 or #)
936870 0945-1100 TTh, BlegH 150, Kruttschnitt, 4 cr

R5111 Sociology of Deviant Behavior (prereq 3101, 3102 or #)
914660 1015-1100 MWF, BlegH 120, Finestone, 4 cr

5147 Sociology of Mental Illness and Health (prereq 1001, 3102 or #)
135885 0915-1000 MWF, BlegH 105, Spitzer, 4 cr

R5415 Comparative Social Structure (prereq 20 cr in sociology, economics or political science or #)
736871 1115-1200 MWF, BlegH 255, Cooperman, 4 cr

5441 Work-Family Linkages (prereq 8 cr in sociology or #)
035886 1415-1500 MWF, BlegH 105, Mortimer, 4 cr

R5505 Family Development (prereq 1001, 3201 or 5201, CPsy 1301 or #)
237269 0915-1100 MF, Law 20, Fischer, Liek, 5 cr

R5524 Sociology of Human Sexuality (prereq 8 cr in sociology or #)
536872 –1 1115-1200 MWF, BlegH 235, Reiss, 4 cr (undergrad or grad)
436878 –2 1115-1200 MWF, BlegH 235, Reiss, 4 cr (grad only)

R5651 Rural Social Institutions (prereq any 3xxx sociology course or #)
700078 1115-1230 TTh, BlegH 260, Donohue, 4 cr

R5675 World Food Supply Problems (AgEc 5790; prereq maj in agri, vet med, nutr sci, social sci field or #...grad by △ only)
735896 1800-2100 W, ClaOff B35, Ellenbogen, 4 cr (StP)

R5701 Analytical Social Theory (prereq 8 cr in social science or #)
900080 1115-1230 TTh, BlegH 120, Jasso, 4 cr

R5855 Sociology of Medicine and Health Care: An Introduction to Medical Sociology (§PubH 5790; prereq jr or sr or grad student)
500082 1115-1200 MWF, MMA 100, Litman, 4 cr

R5953 Sociology of Education (§SPFE 5190; prereq 1001 or equiv or #)
235876 1515-1700 T, NichH 107, S Clark, 4 cr

5954 Women and Men in the United States Today (prereq 3201 or 3401 or 3405 or 3503 or 5201 or 5401 or #)
435889 0815-0930 TTh, BlegH 260, Laslett, 4 cr

R5956 Sociology of Death (prereq jr or sr, 8 cr in sociology or #)
336873 1245-1400 TTh, BlegH 155, Fulton, 4 cr

R5960 Topics in Sociology: Multidisciplinary Perspectives on Aging (§CPsy 5355, Educ 5440, HSU 5009, PA 5671, SW 5024)
731413 1615-1800 MW, VinH 16, Fischer, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
200092 1–15 cr

8090 Topics (prereq #)
531414 –1 ar cr
610926 –2 Reynolds, ar cr

8101 Seminar: Research in Social Deviance
835890 1415-1600 W, SocSci 101, Inverarity, 3 cr

8148 Law, Society, and the Mental Health System (§CJS 8205; prereq grad student, 5148 or #)
635891 1515-1700 Th, Law 1, Malmquist, Meehl, 3 cr

8405 Seminar: Research Problems in Social Stratification (prereq 5405)
435892 1115-1300 T, SocSci 1383, Nelson, 3 cr

8515 Seminar: Research Problems in the Family
935895 1415-1615 Th, BlegH 115, Leik, 3 cr

R8701 Seminar: Social Theory
900094 1415-1600 W, Mgmt/Econ 130, Cooperman, 3 cr

8812 Intermediate Statistics for Sociologists (prereq 3801, 3802, 3803 or #)
★LECT 1315-1400 TTh, Mgmt/Econ 128, Jasso, 4 cr
135894 –1 LAB 1415-1600 F, Mgmt/Econ 128

8816 Seminar: Design of Qualitative Research (prereq #)
410930 0930-1230 T, SocSci 307, Finestone, 3 cr

8817 Fieldwork and Laboratory Training in Social Research
110932 1415-1600 M, Mgmt/Econ 130, Bradley, 5 cr

R8941 Social Research and Social Policy (prereq grad student)
126709 1900-2200 T, SocSci 307, Reynolds, 4 cr

SOIL SCIENCE (Soil)
Agriculture

R1001 Orientation to Soil Science (S–N only)
309334 1500-1645 Th, Soils 215, Cooper, 1 cr

R1122 Introductory Soil Science (prereq Chem 1001 or 1004)
831483 0900-0945 MWF, GrnH 120, Cooper, 4 cr (3 hr lab ar)

R1262 Introduction to Meteorology
★LECT 0800-0845 MWF, Soils 215, Baker, Skaggs
007036 –1 LAB 0815-0900 TTh, BlegH 445, Baker, Skaggs, 4 cr (Mpls)
807040 –2 LAB 0915-1000 TTh, BlegH 445, Baker, Skaggs, 4 cr (Mpls)

R3548 Seminar: Use and Management of Organic Soils (S–N only)
735591 1500-1645 W, Soils 215, Farnham, 1 cr

R3610 Soil Biology (prereq 1122, PlPa 1001)
★LECT 1100-1145 MWF, Soils 215, Graham
535589 –1 LAB 0800-0945 T, Soils 120, Graham, 4 cr
935590 –2 LAB 1200-1345 T, Soils 120, Graham, 4 cr

R3918 Senior Seminar (prereq jr or sr)
114664 1500-1645 T, Soils 215, Cooper, 1 cr

5000 Professional Experience Program (prereq #) (A–N only)
129245 4 cr

5099 RCD Interdisciplinary Seminar I (5099-5100†; prereq sr or #)
935587 1500-1645 TTh, AlderH 310, Adams, 4 cr

5114 Special Problems in Soils (max 10 cr; prereq 1122 or #)
029246 1–5 cr

5228 Seminar: Climatology, Meteorology, and Agriculture (max 3 cr; prereq #)
829247 1400-1500 W, Soils 321, Baker, 1 cr

R5232 Soil Physics (prereq Math 1142 or equiv or #)
★LECT 1300-1345 MTWF, Soils 215, Swan, 5 cr
629279 –1 LAB 1400-1645 Th, Soils 120, Swan

R5310 Soil Chemistry (prereq 1122, analytical chemistry or #)
★LECT 1100-1145 MWF, PalmC 12, Bloom, 4 cr
135586 –1 LAB 1000-1245 Th, Soils 125, Bloom, 4 cr

5515 Soil Development, Classification and Geography (prereq 3520 or #)
612515 0800-0930 TTh, Soils 215, Rust, 4 cr (Field trip Oct 14-16)

8111 Colloquia in Soil Science (prereq maj or min or #)
829250 1100-1200 T, Soils 215, 1–4 cr

8124 Research Problems in Soils
429249 2–5 cr

8128 Seminar: Soils
629248 1500-1645 M, Soils 215, 1 cr

SPANISH (Span)
Spanish And Portuguese
Liberal Arts

R1101 Beginning Spanish: Oral Approach
707063 –1 0815-0900 MTWThF, FolH 208, 5 cr
007067 –2 0815-0900 MTWThF, LindH 229, 5 cr
635874 –3 0915-1000 MTWThF, AmundH 154, 5 cr
435875 –4 1015-1100 MTWThF, AkerH 317, 5 cr
707077 –5 1015-1100 MTWThF, LindH 315, 5 cr
507081 –6 1115-1200 MTWThF, KoltH S134, 5 cr

807085 –7 1215-1300 MTWThF, MinMet 120, 5 cr
207088 –8 1215-1300 MTWThF, AkerH 313, 5 cr
107092 –9 1215-1300 MTWThF, KoltH S134, 5 cr
507095 –10 1315-1400 MTWThF, KoltH S134, 5 cr
007098 –11 1315-1400 MTWThF, KoltH S140, 5 cr
107102 –12 1315-1400 MTWThF, KoltH S137, 5 cr
007103 –13 1415-1500 MTWThF, LindH 320, 5 cr
607105 –14 1415-1500 MTWThF, SmithH 111, 5 cr

R1102 Beginning Spanish: Oral Approach (prereq 1101 or 1 yr high school Spanish)
807118 –1 0815-0900 MTWThF, LindH 315, 5 cr
607122 –2 0915-1000 MTWThF, LindH 315, 5 cr
907126 –3 1215-1300 MTWThF, LindH 315, 5 cr
507128 –4 1315-1400 MTWThF, LindH 315, 5 cr

R1103 Beginning Spanish: Oral Approach (prereq 1102 or 2 yrs high school Spanish)
807135 –1 0815-0900 MTWThF, Arch 15, 5 cr
107139 –2 1115-1200 MTWThF, LindH 315, 5 cr
107142 –3 1215-1300 MTWThF, Arch 45, 5 cr
835842 –4 1315-1400 MTWThF, KoltH S136, 5 cr

R1104 Intermediate Spanish, Oral Approach: Interpretation of Modern Problems (prereq 1103 or 3 yrs high school Spanish)
635843 –1 0915-1000 MTWF, KoltH S132, 4 cr
435844 –2 1115-1200 MTWF, AkerH 317, 4 cr

R1105 Intermediate Spanish, Oral Approach: Discussions of Modern Literature and the Press (prereq 1104 or 4 yrs high school Spanish)
235845 –1 1215-1300 MTWF, AkerH 317, 4 cr
135846 –2 1415-1500 MTWF, AkerH 215, 4 cr

R1501 Culture, Civilization of Spain, Portugal: The Roots of Modern Spain, Portugal
600199 1215-1300 MWF, FordH 55, Zahareas, 4 cr

R3002 Reading for Speed and Comprehension (prereq 1105)
000202 0915-1000 TTh, FolH 305, 3 cr

R3003 Advanced Grammar Workshop (prereq 1105)
600204 1015-1100 TTh, FolH 105, 3 cr

R3004 Written Communication: Formal and Informal (prereq 1105)
814702 1015-1100 MWF, FolH 204, 4 cr

R3005 Oral Communication: Speaking and Listening (prereq 1105)
107195 1115-1200 MWF, FolH 204, Spadaccini, 4 cr

R3104 The Art of Reading Literary Texts (prereq 3002)
400205 1015-1100 MWF, FolH 50, Jara, 4 cr

R3212 Spanish Literature: Aspects of Poetry (prereq 3104)
735834 0915-1000 MWF, FolH 107, Jones, 4 cr

R3251 Spanish-American Literature: Aspects of Prose and Fiction (prereq 3104)
535835 1115-1200 MWF, FolH 209, Jara, 4 cr

R3502 Spanish Civilization: Modern Spain (prereq 3002)
335836 0915-1100 T, 1015-1100 Th, JonesH 2, 5 cr

R3614 Don Quixote: Study of Lost Illusions
100210 1215-1300 MWF, FolH 209, Jones, 4 cr

R3701 Structure of Spanish and Portuguese (prereq 3003 or Port 3014)
135837 1115-1200 T, 1115-1300 Th, FolH 209, Mantini, 4 cr

3970 Directed Studies (prereq #, △, college approval)
300214 1–5 cr

5106 The Literature of the Reconquest and Feudal Spain (prereq 3xxx or 5xxx literature courses in Span or Port)
035838 1315-1400 MWF, FolH 208, Spadaccini, 4 cr

5528 Popular Literary Consciousness 1900-1950 (prereq three 3xxx or 5xxx Span or Port lit courses or △)
835839 1415-1700 Th, FolH 307, Vidal, 4 cr

5701 History of Ibero-Romance (prereq 10 cr from 3001-3005 series or #)
135840 1315-1500 T, 1315-1400 Th, FolH 208, Mantini, 4 cr

5970 Directed Readings (max 15 cr; prereq #, △, CLA approval)
800217 1–5 cr

5990 Directed Research (prereq #, △, CLA approval)
600218 1–5 cr

8300 Research in the Historigraphy of the Spanish Literature
035841 1415-1500 MWF, FolH 108, Zahareas, 4 cr

8970 Directed Readings in Romance Languages (prereq △)
400219 ar cr

SPANISH-PORTUGUESE (SpPt)
Spanish And Portuguese
Liberal Arts

3980 Directed Instruction (max 8 cr; prereq #, △, college approval) (S-N only)
800220 1–4 cr

SPEECH-COMMUNICATION (Spch)
Liberal Arts

R1101 Fundamentals of Speech-Communication: Oral Communication (§1441)
207236 –1 0815-1000 MW, FolH 306, 4 cr
107240 –2 1015-1200 MW, FolH 306, 4 cr
307244 –3 1015-1200 MW, FolH 307, 4 cr
807247 –4 1215-1400 MW, FolH 307, 4 cr
807250 –5 1415-1600 MW, FolH 406, 4 cr
107254 –6 0815-1000 M, JonesH 11, 0815-1000 F, FolH 406, 4 cr
707256 –7 1015-1200 M, JonesH 11, 1015-1200 F, FolH 307, 4 cr
107259 –8 0815-1000 TTh, JonesH 11, 4 cr
107262 –9 1015-1200 TTh, FolH 306, 4 cr
607265 –10 1215-1400 TTh, FolH 307, 4 cr
107268 –11 0815-1000 W, JonesH 11, 0815-1000 F, FolH 306, 4 cr
907272 –12 1015-1200 W, JonesH 11, 1015-1200 F, FolH 306, 4 cr
307275 –13 1215-1400 W, JonesH 11, 1215-1400 F, FolH 406, 4 cr

R1102 Fundamentals of Speech-Communication: Communication Process
730987 1015-1100 MWF, NichH 45, 4 cr

1110 Freshman Discussion and Debate (prereq freshman who qualify for freshman debate squad, #)
031000 1415-1630 WF, KoltH S137, 2 cr

R1313 Analysis of Oral Argument
513494 –1 1015-1100 MWF, FolH 304, 4 cr
813498 –2 1215-1400 M, JonesH 11, 1215-1400 F, FolH 307, 4 cr
013502 –3 0815-1000 TTh, FolH 306, 4 cr
413505 –4 1015-1200 TTh, JonesH 11, 4 cr
835159 –5 1315-1500 TTh, FolH 406, 4 cr
135160 –6 1215-1400 W, FolH 306, 1215-1400 F, JonesH 11, 4 cr

3191H Honors Course: Tutorial Seminar in Speech (prereq honors candidate in speech-communication, △, #)
211271 1015-1200 Th, FolH 103, Shapiro, 4 cr

R3201 Introduction to Broadcasting Production
007294 –1 0815-1000 MW, RarigC 610, 4 cr (spch-comm and jour majs only)
407297 –2 1015-1200 MW, RarigC 610, 4 cr (spch-comm and jour majs only)
807300 –3 0815-1000 TTh, RarigC 610, 4 cr (spch-comm and jour majs only)
607301 –4 1215-1400 WF, RarigC 610, 4 cr (spch-comm and jour majs only)
107304 –5 1415-1600 WF, RarigC 610, 4 cr (spch-comm and jour majs only)
111750 –6 0815-1000 MW, RarigC 610, 4 cr
811752 –7 1015-1200 MW, RarigC 610, 4 cr
011751 –8 0815-1000 TTh, RarigC 610, 4 cr
611753 –9 1215-1400 WF, RarigC 610, 4 cr
411754 –10 1415-1600 WF, RarigC 610, 4 cr

R3202 Producing Videotape in the Field (prereq 3201)
631419 –1 1215-1600 M, RarigC 610, 4 cr (spch-comm and jour majs only)
031420 –2 1215-1600 M, RarigC 610, 4 cr

R3203 Radio Production (prereq 3201)
031725 –1 1015-1200 TTh, EddyH 28, 4 cr (spch-comm and jour majs only)
911760 –2 1015-1200 TTh, EddyH 28, 4 cr

R3204 Studio Television Production (prereq 3201)
631422 –1 1015-1200 TTh, RarigC 610, L Bart, 4 cr (spch-comm and jour majs only)
711761 –2 1015-1200 TTh, RarigC 610, 4 cr

R3211 Determinants of Broadcast Programming
835162 0915-1000 MWF, FolH 308, Browne, 4 cr

R3401 Theories of Interpersonal Communication (prereq 1102 or #, Psy 1001)
831726 1115-1200 MWF, FraserH 102, Sykes, 4 cr

R3431 The Role of Persuasion in the Modern World (soph standing rec)
631727 –1 1115-1200 MWF, Phys 210, Cashman, 4 cr (spch-comm maj only)
311682 –2 1115-1200 MWF, Phys 210, Cashman, 4 cr

R3451 Intercultural Communication: Theory and Practice (§UC 3701; prereq planning an intercultural experience)
511762 1115-1300 WF, FolH 304, 4 cr

R3452 Communication and the Intercultural Reentry (§UC 3703; prereq return from an intercultural experience)
431728 –1 1315-1500 TTh, FolH 304, Martin, 4 cr (spch-comm maj only)
111683 –2 1315-1500 TTh, FolH 304, Martin, 4 cr

R3601 Approaches to Public Discourse (prereq 1101)
231729 0815-0900 MWF, FolH 308, Scott, 4 cr

R3605 Public Speaking (prereq 1101)
607315 –1 1215-1400 MF, FolH 306, 4 cr (spch-comm maj only)
107318 –2 0815-1000 TTh, FolH 406, 4 cr (spch-comm maj only)
107321 –3 1215-1400 TTh, FolH 305, 4 cr (spch-comm maj only)
111692 –4 1215-1400 MF, FolH 306, 4 cr
411690 –5 0815-1000 TTh, FolH 406, 4 cr
411687 –6 1215-1400 TTh, FolH 305, 4 cr

3620 Intercollegiate Debate and Oratory (prereq #)
631730 1415-1630 WF, KoltH S140, 2 cr

R3625 Ethical Standards in Modern Communication (prereq 1101 or 1101H or #)
212193 –1 0915-1000 MWF, FolH 305, Jensen, 4 cr (spch-comm maj only)
113524 –2 0915-1000 MWF, FolH 305, Jensen, 4 cr

R3641 Discussion and Conference Methods (prereq 1101 or 1101H or #)
307325 –1 0815-1000 MW, FolH 406, 4 cr (spch-comm maj only)
807328 –2 1215-1400 MW, FolH 406, 4 cr (spch-comm maj only)
607332 –3 0815-1000 TTh, FolH 307, 4 cr (spch-comm maj only)
107335 –4 1015-1200 TTh, FolH 307, 4 cr (spch-comm maj only)
111702 –5 1215-1400 TTh, FolH 306, 4 cr (spch-comm maj only)
011703 –6 0815-1000 MW, FolH 406, 4 cr
811704 –7 1215-1400 MW, FolH 406, 4 cr
711713 –8 0815-1000 TTh, FolH 307, 4 cr
111708 –9 1015-1200 TTh, FolH 307, 4 cr
211707 –10 1215-1400 TTh, FolH 306, 4 cr

3970 Directed Studies (no cr for spch-comm maj; prereq at least one spch-comm course, #, △, college approval)
431731 ar cr

3980 Directed Instruction (max 8 cr, no cr for speech-communication maj; prereq #, △, college approval) (S-N only)
231732 1–4 cr

R5110 Advanced Topics in Speech-Communication Theory (prereq 3211 or 3401 or 3601)
635163 –1 1315-1600 MW, FolH 304, Mayerle, 4 cr (spch-comm maj only)
435164 –2 1315-1600 MW, FolH 304, Mayerle, 4 cr

R5231 Comparative Broadcast Systems (prereq 3211 or #)
011717 –1 1015-1200 MW, FolH 305, Browne, 4 cr (spch-comm maj only)
811718 –2 1015-1200 MW, FolH 305, Browne, 4 cr

R5261 Communicative Processes of Television (prereq 3211 or #)
235165 –1 1315-1500 WF, FolH 50, Cohen, 4 cr (spch-comm maj only)
135166 –2 1315-1500 WF, FolH 50, Cohen, 4 cr

R5281 Broadcasting Audience Analysis and Programming (prereq 3211)
811721 –1 1015-1100 MWF, FolH 406, Rarick, 4 cr (spch-comm maj only)
411723 –2 1015-1100 MWF, FolH 406, Rarick, 4 cr

R5401 Advanced Process of Interpersonal Communication
735168 0915-1100 TTh, FolH 304, 4 cr

R5402 Problems in Interpersonal Communication (prereq 3401 or #)
131733 –1 1315-1500 MWF, FolH 209, Shapiro, 4 cr (spch-comm maj only)
911726 –2 1315-1500 MWF, FolH 209, Shapiro, 4 cr

R5406 Family Communication (prereq 1102, 3401 for undergrads, 5421 or equiv for grads)
535169 –1 1015-1100 MWF, FolH 107, Petronio, 4 cr (spch-comm maj only)
935170 –2 1015-1100 MWF, FolH 107, Petronio, 4 cr

R5411 Small Group Communication (prereq 3641 or #) (A–N only)
931734 –1 1315-1500 TTh, FolH 209, Bormann, 4 cr (spch-comm maj only)
611736 –2 1315-1500 TTh, FolH 209, Bormann, 4 cr

R5414 Authority and Power in Task-Oriented Communication (prereq 3641 or #) (S–N only)
731735 –1 1615-1800 TTh, FolH 50, Howell, 4 cr (spch-comm maj only)
411737 –2 1615-1800 TTh, FolH 50, Howell, 4 cr

R5422 Interview and Communication (prereq 1101, 6 cr in social science or #)
331737 –1 1515-1700 MW, FolH 306, Rarick, 4 cr (spch-comm maj only)
411740 –2 1515-1700 MW, FolH 306, Rarick, 4 cr
336808 –3 1515-1700 MW, FolH 306, Rarick, 4 cr (SMgt stu, pre-bus majs only)

R5441 Communication in Human Organizations (prereq 1102 or 3401, 3641 or 5411 or grad student)
131738 –1 1615-1800 MW, FolH 209, Shapiro, 4 cr (spch-comm maj only)
111742 –2 1615-1800 MW, FolH 209, Shapiro, 4 cr

R5451 Processes of Intercultural Communication (prereq 3401, Anth 1102 or another course in cultural anthropology or #)
031739 –1 1015-1200 TTh, FolH 406, Howell, 4 cr (spch-comm maj only)
711744 –2 1015-1200 TTh, FolH 406, Howell, 4 cr

R5618 History and Criticism of American Public Address (prereq 1101 or 1101H, Psy 1001)
735171 1315-1500 MW, FolH 305, Bormann, 4 cr

5970 Directed Readings (prereq nine 3xxx-5xxx speech-communication cr, #, △, CLA approval)
031742 ar cr

8110 Seminar: Advanced Speech Problems (prereq undergrad maj in speech or equiv, #)
535172 1415-1600 MW, FolH 52, Petronio, 3 cr

8203 Historical and Descriptive Research in Speech-Communication (prereq 8101 or #)
011748 0830-1000 MW, FolH 304, Browne, 3 cr

8204 Seminar in Rhetorical Criticism
335173 1515-1700 M, FolH 305, Scott, 3 cr

8423 Seminar: Sexual Communication (prereq 3401, 5402, #)
131741 1515-1700 T, FolH 307, Cashman, 3 cr

8631 Seminar: Public Address in Britain and the Commonwealth (prereq 5616 or #)
135174 1415-1600 W, FolH 307, Jensen, 3 cr

8990 Research (prereq #, △)
331740 ar cr

STATISTICS (Stat)
Liberal Arts

R1051 Introduction to Ideas of Statistics (prereq high school higher algebra)
★LECT 0815-0900 MWF, PillsH 110, K Chen
707368 –1 REC 0815-0900 T, VinH 211, 4 cr
707371 –2 REC 0815-0900 Th, VinH 211, 4 cr
★LECT 1000-1045 MWF, FScN 15, Chaloner, (StP)
007375 –3 REC 1000-1045 T, ClaOff B25, 4 cr (StP)
207382 –4 REC 1000-1045 Th, ClaOff B35, 4 cr (StP)
★LECT 1415-1500 MWF, MechE 212, Lindgren
707385 –5 REC 1415-1500 T, VinH 20, 4 cr
307387 –6 REC 1415-1500 Th, VinH 20, 4 cr

R3081 Experimental Techniques and Statistical Inference (prereq agri, biological science, forestry or home economics student)
★LECT 1000-1045 MWF, ClaOff B25, (StP)
311777 –1 LAB 1000-1045 TTh, ClaOff B36, 5 cr (StP)
011779 –2 LAB 1300-1345 TTh, ClaOff B36, 5 cr (StP)

R3091 Probability and Statistics (§5121, 5131; prereq differential, integral calculus)
★LECT 0815-0900 MWF, MechE 18, Sudderth
307390 –1 REC 0815-0900 T, VinH 20, 4 cr
007392 –2 REC 0815-0900 Th, VinH 20, 4 cr
★LECT 0915-1000 MWF, Armory 116, Heath, (IT majs)
107397 –3 REC 0915-1000 T, VinH 20, 4 cr
707399 –4 REC 0915-1000 Th, VinH 20, 4 cr
★LECT 1015-1100 MWF, Phys 210, Buehler, (IT majs)
107402 –5 REC 1015-1100 T, VinH 20, 4 cr
507405 –6 REC 1015-1100 Th, VinH 20, 4 cr
★LECT 1115-1200 MWF, Arch 55, Cohen, (IT majs)
331415 –7 REC 1115-1200 T, VinH 20, 4 cr
414489 –8 REC 1115-1200 Th, VinH 20, 4 cr
★LECT 1215-1300 MWF, Phys 210, Witmer, (IT majs)
135899 –9 REC 1215-1300 T, VinH 311, 4 cr
935900 –10 REC 1215-1300 Th, VinH 311, 4 cr

R5021 Statistical Analysis I (prereq college algebra or #)
★LECT 0915-1000 MWF, AndH 230, Witmer, (soc sci majs)
007411 –1 LAB 0915-1100 Th, BlegH 225, 5 cr
407414 –2 LAB 1315-1500 Th, BlegH 210, 5 cr
707418 –3 LAB 1215-1400 F, Law 35, 5 cr
107424 –4 LAB 1415-1600 F, BlegH 210, 5 cr
★LECT 1000-1045 MWF, ClaOff B35, Larntz, (StP)
607427 –5 LAB 1100-1245 T, ClaOff B36, 5 cr (StP)
607430 –6 LAB 0900-1045 Th, ClaOff B42, 5 cr (StP)
107433 –7 LAB 1300-1445 Th, ClaOff B42, 5 cr
★LECT 1300-1345 MWF, ClaOff B35, (StP)
707435 –8 LAB 1300-1445 T, ClaOff B42, 5 cr (StP)
131416 –9 LAB 0900-1045 Th, ClaOff B25, 5 cr (StP)
927604 –10 LAB 1100-1245 Th, ClaOff B42, 5 cr (StP)

R5022 Statistical Analysis II (prereq 5021 or #)
★LECT 1300-1345 MWF, ClaOff B25, Weisberg, (StP)
026721 –1 LAB 0900-1045 T, ClaOff B42, 5 cr (StP)
626723 –2 LAB 1100-1245 T, ClaOff B42, 5 cr (StP)

R5121 Theory of Statistics (§5131; prereq Math 1231 or 1331 or 1621)
★LECT 0915-1000 MWF, FordH 120, Cohen
007442 –1 REC 0915-1000 T, VinH 6, 4 cr
207446 –2 REC 0915-1000 Th, VinH 6, 4 cr

R5131 Theory of Statistics (§5121-5122; prereq Math 3211 or 3411)
707449 –1 1015-1100 MWF, VinH 211, Sudderth, 4 cr
507453 –2 1115-1200 MWF, VinH 211, K Chen, 4 cr
307454 –3 1315-1400 MWF, VinH 211, Berry, 4 cr

R5301 Designing Experiments (prereq 5022 or 5122 or 5133 or #)
631744 1400-1500 MWF, VinH 2, Martin, 4 cr

R5302 Applied Regression Analysis (prereq 5022 or 5122 or 5133 or #)
231746 1005-1105 MWF, VinH 2, Lahiff, 4 cr

5900 Tutorial Course (prereq #)
931748 Berry, ar cr

5911 Topics in Statistics: Design and Analysis (prereq 5301 and either 5122 or 5133, #)
735901 Chaloner, 3 cr

8151 Mathematical Statistics (prereq 5133 or #, advanced calculus, matrix algebra)
131750 0900-1000 MWF, VinH 2, Lindgren, 4 cr

8162 Applied Statistical Methods (prereq 8161)
931751 1300-1400 MWF, ClaOff B30, Brant, 4 cr (StP)

8171 Theory of Inference (prereq 8153, Math 8658 or #)
535902 1315-1430 TTh, VinH 206, Geisser, 3 cr

8311 Linear Models and Experimental Design (prereq 5122 or 5133, matrix theory)
531753 1430-1545 MW, VinH 113, Buehler, 3 cr

8801 Statistical Consulting (prereq #)
031756 1–3 cr

8900 Seminar in Statistical Literature (prereq #)
631758 1–3 cr

8931 Advanced Topics in Statistics: Analysis of Directional Data (prereq #)
914528 Bingham, 3 cr

SURGERY (Surg)
Medical School

5500 Externship: Surgery at the University and Affiliated Hospitals (prereq regis med)
800718 Cerra, ar cr

5501 Emergency Room Externship
000720 Cerra, 9 cr

5502 Externship in the Surgical Intensive Care Unit (prereq regis med)
635339 9 cr

5503 Research Problems in Surgery (prereq regis med) (S–N only)
515326 –1 9 cr
216003 –2 9 cr

5523 Externship in Colon and Rectal Surgery: Veterans Administration Hospital (prereq regis med)
200724 Goldberg, ar cr

5583 Diagnosis, Evaluation, Care of Adults, Children with Cancer
114902 9 cr

8200 Clinical Surgical Problems in Management
700727 Najarian, 5 cr

8201 Surgical-Roentgenological Conference
300729 0915-1300 S, Mayo B139, Najarian, 1 cr (Todd Amph)

8202 Surgical Research
500731 Najarian, 5 cr

8203 Surgery Complications and Research Conference
300732 1600-1700 T, PWB 11157, Najarian, 1 cr

8206 Biomedical Engineering Seminar (prereq 8205)
000734 Blackshear, 1–3 cr

8207 Transplantation, Bone Marrow Conference
600736 1630-1700 Th, PWB 11157, Najarian, 1 cr

SWEDISH (Swed)
Scandinavian Languages
Liberal Arts

R1101 Beginning Swedish
007490 –1 0815-0900 MTWThF, FolH 207, 5 cr
607492 –2 1015-1100 MTWThF, FolH 207, 5 cr
207494 –3 1215-1300 MTWThF, FolH 204, 5 cr
707497 –4 1315-1400 MTWThF, FolH 204, 5 cr

1104 Intermediate Swedish (prereq 1103)
230919 1215-1300 MTWThF, FolH 203, Grimstad, 5 cr

3670 Readings of Swedish Literary Texts (max 28 cr; prereq 3101)
430921 1315-1400 MWF, FolH 108, Stockenstrom, 4 cr

TEXTILES AND CLOTHING (TexC)
Home Economics

R1602 Fitting the Human Subject (prereq △)
★LECT 1300-1345 T, McNH 475, Hethorn
514788 –1 LAB 1400-1545 T, McNH 475, Hethorn, 2 cr
114471 –2 LAB 1400-1545 T, McNH 480, Fiori, 2 cr

R1603 Advanced Principles of Apparel Production (prereq 1602 or ¶)
★LECT 1300-1345 Th, McNH 475, Fiori
714479 –1 LAB 1400-1545 Th, McNH 475, Fiori, 2 cr

R1641 Introduction to Merchandising (prereq ¶1642)
130475 0900-0945 MWF, AlderH 310, Druy, 3 cr

R1642 Seminar: Orientation to Retail Merchandising (prereq ¶1641) (S-N only)
030476 1500-1545 W, ClaOff B25, 1 cr

R1643 Apparel Industries (prereq Econ 1002 or AgEc 1030)
009336 0900-0945 MWThF, McNH 197, 4 cr

R3003 Cooperative Education Program (prereq soph, HE 1003, #) (S-N only)
014486 1-3 cr

R3621 Textiles (prereq soph, Chem 1002, 1003 or 1005 or #)
★LECT 0900-0945 MWF, ClaOff B25, Franzen, (1 hr ar)
507517 –1 LAB 0800-0945 TTh, McNH 322, 5 cr
507520 –2 LAB 1000-1145 TTh, McNH 322, 5 cr
007523 –3 LAB 1300-1445 TTh, McNH 322, 5 cr

R3622 Textiles for Interiors (prereq 3621, #)
214493 –1 1000-1145 MWF, McNH 340, Franzen, 3 cr
414511 –2 1300-1445 MWF, McNH 340, Franzen, 3 cr

R3644 Retail Experience Seminar I (prereq 3rd qtr soph, 1641, 1642, 200 hrs or ¶200 hrs approved selling experience) (S-N only)
430482 1500-1645 W, McNH 470, Druy, 2 cr

R3646 Retail Supervision (prereq Mgmt 3001, 3002 or #)
012527 1300-1345 MWF, McNH 470, Druy, 3 cr

R3661 Cultural Prospectives on Dress (prereq Anth 1002 or Soc 1001)
035905 1000-1045 MWF, McNH 197, 3 cr

R3664 Fashion Trend Analysis (prereq jr or sr, Soc 1001, Psy 1001)
813887 1300-1445 TTh, McNH 377, Grindereng, 4 cr

5003 Cooperative Education Program (5003-5004†; prereq sr, ¶5004, #, minimum GPA of 2.50) (S-N only)
230483 –1 Druy, 4-8 cr (Retail merchandising students)
409342 –2 4-8 cr (Textiles and clothing students)

5004 Cooperative Education Integrative Paper (5003-5004†; prereq sr, ¶5003, #) (A-N only)
130484 –1 Druy, 4 cr (Retail merchandising students)
109344 –2 4 cr (Textiles and clothing students)

R5621 Macro-Micro Property Relationships (prereq 3622 or 3623)
930485 0800-0945 MWF, McNH 395, R Johnson, 5 cr

R5628 Characterization of Yarns and Woven Fabrics (prereq 3621)
730486 1500-1645 TTh, McNH 340, Brown, 3 cr

R5662 Clothing Consumption Problems (prereq 3621, AgEc 1030 or Econ 1002, Soc 1001, Psy 1001 or #)
835906 1000-1115 TTh, McNH 198, Williams, 3 cr

8621 Readings in Textiles (prereq #)
530487 Brown, R Johnson, 1-3 cr

8625 Problems: Textiles and Clothing (max 9 cr; prereq #)
330488 Brown, R Johnson, 3-9 cr

8661 Readings in Clothing (prereq min 12 cr in textiles and clothing courses, #)
130489 Williams, Grindereng, others, 1-3 cr

8662 Sociocultural Literature of Dress (A-N only)
337554 Grindereng, 3 cr

8663 Problems: Clothing and Textiles (max 9 cr; prereq #)
530490 Williams, Grindereng, others, 3-9 cr

THEATRE ARTS (Th)
Liberal Arts

R1101 Introduction to the Theatre
307535 –1 1015-1200 MW, RarigC 190, Ballet, 4 cr
807538 –2 1015-1200 TTh, RarigC 190, Ballet, 4 cr

R1301 Beginning Acting for Non-Theatre Majors (prereq 1101 or ¶)
807541 –1 1015-1100 MWF, RarigC 90, Moulton, 4 cr
407543 –2 1015-1100 TThF, RarigC 90, Moulton, 4 cr

R1321 Beginning Acting: Creative Approach (prereq 1101, 1504, 3rd qtr freshman or above)
107545 –1 0815-1000 MW, RarigC 210, 4 cr
707547 –2 1515-1700 MW, RarigC 210, 4 cr
507548 –3 1515-1700 TTh, RarigC 210, Berry, 4 cr

R1326 Beginning Acting: Technique (prereq 1321)
431759 1515-1600 MTWThF, RarigC 10, 4 cr

R1502 Makeup for the Actor (prereq 1504, clean-shaven face)
631761 0815-1000 TTh, RarigC 45, 2 cr

R1504 Elements of Technical Theatre (prereq 1101 or ¶)
431745 0915-1000 TTh, RarigC 190, Crellin, 4 cr (lab ar)

R3101 Senior Seminar (prereq sr theatre maj) (A-N only)
335688 0915-1000 TTh, RarigC 275, Thompson, 4 cr

3171 History of the Theatre (prereq 1101, 1504)
511602 1315-1500 TTh, BlegH 150, Gadberry, 4 cr

R3311 Beginning Voice Production for the Theatre (prereq 1321 or ¶1321) (A-N only)
131747 0915-1000 MTWTh, RarigC 20, Nash, 4 cr

R3321 Advanced Acting: Characterization (prereq 1326)
731749 1315-1500 MW, RarigC 210, McIntyre, 4 cr

3412H Honors Course: Tutorial Seminar in Theatre Arts (prereq candidate for honors in theatre arts, △)
111604 0-3 cr

R3513 Technical Theatre Production I (prereq 1504)
331754 0915-1000 MW, 0915-1100 F, RarigC 190, Brockman, Josal, 4 cr (lab ar)

R3711 Stage Direction (§3708, 5711; prereq 1321, jr or sr)
207575 –1 1515-1700 MW, RarigC 185, Hamilton, 4 cr
707578 –2 1315-1500 TTh, RarigC 185, Hamilton, 4 cr

R3801 Oral Interpretation of Fiction (prereq 1504 or 1804 or Spch 1101)
707581 –1 1315-1500 MW, RarigC 20, Fredricks, 4 cr
635583 –2 1015-1200 MW, RarigC 185, Congdon, 4 cr
435584 –3 1315-1500 TF, RarigC 20, Fredricks, 4 cr

R3950 Topics in Theatre: Platform Performances (prereq △, SMgt maj)
137071 –1 1315-1500 MW, RarigC 616, 4 cr
037072 –2 1515-1700 MW, RarigC 616, 4 cr
837073 –3 0815-1000 TTh, BlegH 130, 4 cr

R3980 Directed Instruction (max 8 cr; prereq compl of course in which teaching will be done, #, △, college approval)
731752 1-3 cr

R5100 Theatre Practicum (prereq △, #, written permission) (A-N only)
131755 Gadberry, others, 1-6 cr

R5110 Theatre Performance (max 9 cr; prereq #, written permission) (S-N only)
831757 Montgomery, 1 cr

R5177 Theatre Backgrounds (prereq 1504, jr, sr or grad student)
436637 1315-1500 TTh, RarigC 75, Ballet, 4 cr

R5311 Intermediate Voice Production for the Theatre (prereq BFA candidate or theatre arts grad) (A-N only)
135577 1015-1100 MTWTh, RarigC 20, Nash, 4 cr

R5314 Stage Combat: Unarmed (prereq 1326 or grad student, #)
611607 1315-1500 TTh, RarigC 10, Berry, 2 cr

R5323 Acting for the Camera (prereq 3321 or grad student, written permission)
700002 1315-1500 TTh, RarigC 515, Moore, 4 cr (Studio B)

R5334 Acting for Music-Theatre (prereq 1326, 3313 or 8313 or music maj, written permission)
231424 0815-1000 MW, 0915-1000 F, RarigC 185, 4 cr

R5510 Drawing and Rendering for Theatre Designers (prereq 3513 or 3515 or grad student, #)
035578 1015-1200 TTh, RarigC 275, Brockman, 2 cr

R5512 Advanced Problems in Costuming (prereq 3515 or #)
835579 1015-1200 MW, RarigC 275, Crellin, 4 cr (lab ar)

R5560 Stage Lighting Crafts and Techniques (max 8 cr; prereq 3515 or #)
211609 1315-1500 MW, RarigC 275, Montgomery, 4 cr (lab ar)

R5711 Stage Direction (§3708, 3711; prereq 1321, sr or grad student)
300004 1015-1200 TTh, RarigC 185, Adey, 4 cr

R5712 Stage Direction (prereq 3708 or 3711 or 5711, 3513, 3515, 3801)
000006 1315-1500 MW, RarigC 185, Adey, 4 cr

R5716 Stage Management for the Theatre (prereq 3711 or ¶ or 5711 or ¶)
600008 1515-1700 MW, RarigC 275, Montgomery, 4 cr

R5718 Theatre Management and Promotion (prereq 1504, sr or grad student or #)
800010 1015-1200 MW, RarigC 75, Neely, 4 cr

R5720 Plays in Production and Performance (max 6 cr for undergrads; prereq 5712, written permission)
600011 2-4 cr

R5760 Advanced Stage Management (max 6 cr for undergrads; prereq 5716 or ¶, written permission)
200013 Montgomery, 1-3 cr

R5823 Oral Interpretation of Shakespeare (prereq 1504, 3801 or grad student)
900015 1315-1500 MW, RarigC 90, Thompson, 4 cr

5970 Directed Readings (prereq 9 cr in theatre, #, △, CLA approval)
500017 2-6 cr

R8101 Introduction to Research (prereq theatre maj or #)
135580 1515-1700 MW, BlegH 255, Gadberry, 4 cr

R8311 Advanced Voice Production for the Theatre (prereq written permission) (A-N only)
035581 1115-1200 MTWTh, RarigC 20, Nash, 4 cr

R8321 Problems in Acting (prereq written permission)
600025 1015-1100 MTWTh, RarigC 210, McIntyre, 4 cr

R8323 Problems in Acting (prereq 8322, written permission)
800024 1315-1500 TTh, RarigC 210, McIntyre, 4 cr

R8326 History and Technique of Stage Movement (prereq written permission)
000023 0915-1000 MTWThF, RarigC 10, Moulton, 4 cr

R8711 Seminar: Stage Direction (prereq 5712 or equiv)
835582 1515-1700 MW, RarigC 75, Adey, 4 cr

8980 Directed Instruction (prereq △)
300021 1-3 cr

8990 Research (prereq #, △)
100019 ar cr

THERAPEUTIC RADIOLOGY (TRad)
Medical School

5170 Basic Radiological Physics (§Rad 5170, BPhy 5170; prereq #)
100739 1630-1730 W, 1600-1730 F, Khan, others, 3 cr

5340 Special Problems in Radiation Therapy
300746 ar cr

5505 Externship in Radiation Therapy (prereq regis med)
100747 Levitt, others, ar cr

5506 Cancer Diagnosis and Treatment (prereq regis med)
100750 Levitt, others, ar cr

5507 Advanced Externship in Radiation Therapy (prereq regis med)
000751 Levitt, others, ar cr

5508 Special Problems in Radiation Biology
600753 Song, others, ar cr

5512 Dosimetry of Internal and External Radiation Emitters
100756 0730-0830 W, Mayo B141, Khan, others, 1 cr

5540 Special Problems in Radiological Physics (prereq regis med)
900757 Khan, others, ar cr

5583 Diagnosis, Evaluation, and Care of Adults, Children with Cancer
700761 0800-0900 Th, Mayo B507, Kim, Ramsay, others, 9 cr

8300 Radiation Therapy
800766 ar cr

8310 Fundamentals of Radiation Therapy
200769 1630-1730 M, Mayo B141, 1 cr

8315 Radiation Therapy Pathology
400771 1 cr

8320 Radiation Therapy Treatment Planning Problems
700775 1 cr

8325 Radiation Therapy Pediatrics Oncology
500776 1 cr

8350 Research in Radiation Therapy
100778 ar cr

8410 Seminar: Radiation Biology
300780 Song, others, 1 cr

8450 Research in Radiation Biology
100781 Song, others, ar cr

8550 Research of Radiation Physics
000782 Khan, Loken, ar cr

TRANSPORTATION (Tran)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for Tran courses.

R**3054 Fundamentals of Transportation** (§8154; prereq Econ 1002) (A-N only)
★LECT 1015-1100 MWF, AndH 330, Harper
714546 –1 LAB 0815-0900 T, BlegH 225, 4 cr
814554 –2 LAB 0915-1000 T, BlegH 225, 4 cr
114558 –3 LAB 1015-1100 T, BlegH 225, 4 cr

R**8154 Fundamentals of Transportation** (§3054; prereq Econ 1002) (A-N only)
100224 1015-1100 MWF, AndH 330, Harper, 4 cr

R**8990 Readings in Transportation and Business Logistics** (prereq consent of adviser, #, grad SMgt approval) (A-N only)
900225 ar cr

R**8995 Graduate Research in Transportation and Business Logistics** (prereq grad SMgt approval) (A-N only)
700226 ar cr

TURKISH (Turk)
South And Southwest Asian Studies
Liberal Arts

5970 Directed Readings (prereq 1103, #, △, CLA approval)
100635 ar cr

UNIVERSITY COLLEGE (UC)

R**3075 Independent Study** (prereq △)
429039 ar cr

3200 Introductory Period (prereq UWW student, △) (S-N only)
829040 ar cr

3201 Directed Studies (prereq UWW student, △) (S-N only)
629041 8 cr

3211 Degree Planning (prereq University Without Walls student, △) (S-N only)
712604 7 cr

3212 Degree Planning (prereq University Without Walls student, △) (S-N only)
112607 7 cr

3213 Degree Planning (prereq University Without Walls student, △)
812609 7 cr

3291 Graduation Dossier Preparation (max 21 cr; prereq University Without Walls student, △) (S-N only)
512605 7 cr

3292 Graduation Dossier Preparation (max 21 cr; prereq University Without Walls student, △) (S-N only)
512586 7 cr

3293 Graduation Dossier Preparation (max 21 cr; prereq University Without Walls student, △)
112588 7 cr

3299 Graduation Dossier Examination (prereq University Without Walls student, prior submission of dossier for examination, △) (S-N only)
313853 7 cr

3401 Directed Studies (prereq University Scholars student, △)
429042 ar cr

URBAN STUDIES (UrbS)
Liberal Arts

R**3101 Urban Studies Colloquia** (prereq #) (S-N only)
807684 –1 1415-1600 M, SocSci 101, McLellan, 2 cr
107688 –2 1315-1500 T, Mgmt/Econ 160, Stadum, 2 cr

R**3104 Introduction to Urban Studies**
200058 0945-1100 TTh, BlegH 115, Martin, 3 cr

R**3500 Workshops** (prereq jr or sr, #)
536970 –1 1415-1700 W, Mgmt/Econ 160, Martin, 4 cr
914531 –2 1815-2100 Th, Mgmt/Econ 128, Orange, 4 cr

R**3900 Internship** (max 12 cr; prereq jr, sr, △)
100059 1800-2000 M, Mgmt/Econ 130, Hickey, 1-6 cr

R**3970 Directed Studies** (prereq #, △, college approval)
400060 ar cr

URDU (Urdu)
South And Southwest Asian Studies
Liberal Arts

1101 Beginning Urdu (§Hndi 1101, 5101)
200173 1315-1400 MTWThF, KoltH S135, Staneslow, 5 cr

3031 Intermediate Urdu (§5131; prereq 1103 or Hndi 1103 or #)
100174 Barker, 5 cr

5131 Intermediate Urdu (§3031; prereq 1103 or Hndi 1103, 5103 or #)
900175 Barker, 5 cr

5970 Directed Studies (prereq #, △, CLA approval)
300178 Barker, ar cr

5990 Directed Research (prereq #, △, CLA approval)
100179 Barker, ar cr

8990 Research (prereq #)
100182 Barker, ar cr

UROLOGIC SURGERY (Urol)
Medical School

5180 Externship in Urology (prereq regis med)
414900 ar cr

8250 Urological Surgery
700789 0800-1200 MWF, Fraley, 4 cr (Mayo OR Room H)

8251 Cystoscopy and Urological Diagnosis
500793 0800-1200 MTWThF, Fraley, 4 cr (Cysto Suite)

8252 Urological Conference
000796 0800-0900 S, Fraley, 4 cr (Sta 57 Conf Room)

8253 Research in Urology
100800 Fraley, 4 cr

8254 Urological Seminar
000801 1300-1400 MWF, Mayo A503, Fraley, 3 cr

8255 Urological Radiological Conference
900807 1300-1400 MTWThF, Mayo A503, Fraley, 3 cr

8256 Urological Pathological Conference
700808 1600-1700 W, Mayo A503, Fraley, 3 cr

8257 Selected Topics on the Genitourinary System (prereq MD or PhD degree, PhD with #)
512300 Li, Bronson, others, 2 cr

VETERINARY BIOLOGY (VB)
Veterinary Medicine

1120 Comparative Vertebrate Morphology (not open to vet med students; prereq Biol 1106 or #)
★LECT 1400-1450 MWF, AnScVM 125, Rosenzweig, 5 cr
611266 –1 LAB 1500-1650 MWF, AnScVM 40

5100 Veterinary Anatomy I (prereq #)
★LECT 1300-1350 TTh, AnScVM 135, Cox, Fletcher, Gallant, 6 cr
111269 –1 LAB 1400-1650 TTh, 0800-1050 WF, AnScVM 40

5103 Veterinary Prenatal Development (prereq #)
731525 –1 LECT 1300-1350 MW, AnScVM 125, Weber, 3 cr
★LAB 1400-1650 W, AnScVM 104

5104 Microscopic Anatomy of Domestic Animals (prereq #)
★LECT 0800-0850 MTTh, AnScVM 125, Czarnecki, Beitz, 5 cr
911273 –1 LAB 0900-1050 M, AnScVM 104, 0900-1050 TTh, AnScVM 104, 125

5120 Comparative Vertebrate Morphology (§1120, not open to vet med students; prereq Biol 1106 or #)
★LECT 1400-1450 MWF, AnScVM 125, Rosenzweig, 5 cr
111277 –1 LAB 1500-1650 MWF, AnScVM 40

5149 Topics of Organology (prereq 5104, #)
401824 1-5 cr

5210 Veterinary Biochemistry (prereq #)
201825 1100-1150 MTWF, AnScVM 135, Jorgensen, Louis, 4 cr

5310 Animal Physiology (prereq 5308 or #)
011281 0800-0850 MWF, AnScVM 135, Brockman, 3 cr

5330 Wild Bird Medicine (prereq regis vet med, 3rd or 4th yr or grad student or #) (A-N only)
335576 1500-1650 M, AnScVM 111, Duke, Redig, 2 cr

5400 Veterinary Pharmacology (prereq 5308 or #)
★LECT 0900-0950 MWF, AnScVM 135, Gray, 4 cr
★REC 0800-1050 Th, AnScVM 335K
511289 –1 LAB 1300-1550 T, AnScVM 161

5920 Independent Research in Veterinary Biology (prereq #)
801819 ar cr

5950 Directed Studies (prereq #, △)
001821 1-5 cr

8112 Research Propositions in Morphology (prereq #)
701828 2 cr

8113 Research Propositions in Morphology (prereq #)
901830 2 cr

8114 Research Propositions in Morphology (prereq #)
701831 2 cr

8134 Comparative Veterinary Neurology (prereq 5100, #)
501832 Beitz, Fletcher, 4 cr

8135 Comparative Veterinary Neurology (prereq 5100, #)
301833 Beitz, Fletcher, 4 cr

8136 Experimental Comparative Veterinary Neurology (prereq 8135, #)
101834 Beitz, Fletcher, 3 cr

8330 Seminar: Physiology and/or Pharmacology (prereq #)
001835 ar cr

8349 Research in Physiology (prereq #)
801836 ar cr

8448 Problems in Veterinary Pharmacology (prereq 5401, #)
601837 ar cr

VETERINARY MEDICINE (CVM)
Veterinary Medicine

1100 Orientation to Veterinary Medicine
401709 1000-1050 T, AnScVM 135, Holcomb, 1 cr

5100 Introduction to Veterinary Medicine (prereq regis vet med, 1st yr) (S-N only)
601711 0800-1650 WThF, AnScVM 135, DeBoer, 2 cr (Sept 21-23)

5150 Diagnostic and Therapeutic Techniques (prereq #)
201713 1400-1650 M, VetHos C238, Larson, McKeever, 1 cr

5350 Principles of Veterinary Surgery (prereq VB 5126 or #)
★LECT 1300-1350 M, AnScVM 135, 1100-1150 ThF, 1300-1350 F, AnScVM 125, Usenik, Wallace, others, 5 cr
207799 –1 LAB 1300-1550 T, VetHos C254
807801 –2 LAB 1300-1550 W, VetHos C254

5400 Laboratory Animal Medicine (prereq #)
901715 1100-1150 M, 1000-1050 WF, ABLMS 125, Manning, 3 cr

5761 Clinics (prereq #)
501717 0800-1150 M, 0800-1650 TWThFS, Morris, Osborne, 16 cr

VETERINARY PATHOBIOLOGY (VPB)
Veterinary Medicine

R3103 General Microbiology (not open to vet med students; prereq 10 cr chemistry, 4 cr biological sciences)
★LECT 0900-0950 MWF, VetS 145, Bey
931538 –1 LAB 1000-1150 MWF, VetS 325, 5 cr

5502 Systemic Veterinary Pathology (prereq 5501 or #)
★LECT 1000-1050 MF, 0900-0950 T, 1300-1350 W, VetS 145, Hayden, O'Leary, others, 5 cr
711291 –1 LAB 1400-1450 W, VetS 145, 1500-1650 W, VetS 225

5520 Veterinary Clinical Pathology (prereq 5204, #)
401838 1300-1350 MW, VetS 438, Perman, others, 1-3 cr

5521 Surgical Pathology (prereq #)
601840 D Barnes, 3 cr

5522 Diagnostic Pathology (prereq #)
201842 D Barnes, 5 cr

5524 Pathology of Spontaneous Diseases of Poultry (prereq #)
336971 Walser, 3 cr

5533 Directed Studies in Veterinary Pathobiology (prereq regis vet med, 4th yr, #)
101843 K H Johnson, Hayden, others, ar cr

5601 Veterinary Parasitology I (prereq 5501 or #)
★LECT 1300-1350 MThF, VetS 145, Bemrick, Stromberg
207818 –1 LAB 1400-1450 M, VetS 145, 1400-1650 M, Vet S 225, 227, 229, 4 cr
107822 –2 LAB 1400-1450 Th, VetS 145, 1400-1650 Th, Vet S 225, 227, 229, 4 cr

5703 Veterinary Virology (prereq 5701 or equiv or #)
★LECT 1100-1150 MWF, VetS 145, Shope, 4 cr
311293 –1 LAB 1000-1150 T, 1100-1150 Th, VetS 325

5748 Problems in Veterinary Microbiology and Public Health (prereq 5703 or equiv, #)
901844 ar cr

8502 Advanced Systemic Pathology (prereq 8501 or Path 5101, #)
★LECT 1000-1050 MF, 0900-0950 T, 1300-1350 W, VetS 145, Hayden, O'Leary, others
011295 –1 LAB 1400-1450 W, VetS 145, 1500-1650 W, VetS 225, 4-6 cr

8504 Seminar: Advanced Veterinary Histopathology (prereq 5502, 5503, #)
701845 1600-1700 M, VetS 215, Hayden, 1 cr

8531 Veterinary Necropsy (max 6 cr; prereq 5501, 5502, 5503, #)
501846 O'Leary, Hayden, others, 1-2 cr

8533 Problems: Pathology (prereq #)
301847 K H Johnson, Hayden, others, ar cr

8534 Problems: Clinical Pathology (prereq #)
101848 Perman, others, ar cr

8648 Problems in Veterinary Parasitology (prereq 5602, #)
001849 Bemrick, Schlotthauer, Stromberg, ar cr

8720 Advanced Veterinary Microbiology (prereq #)
301850 ar cr

8721 Advanced Poultry Diseases (prereq 5704, #)
101851 Newman, ar cr

8724 Advanced Veterinary Diagnostic Microbiology (prereq #)
001852 Ward, ar cr

8726 Colloquium in Immunology (prereq MicB 5216, grad student)
612305 Maheswaran, 2 cr

VOCATIONAL EDUCATION (VoEd)
Vocational And Technical Education Education

5200 Evaluation of Local Vocational Education Programs (A-N only)
835338 1600-1830 W, VoTech R370, Copa, 3 cr

5274 Two-Year Postsecondary Institutions (§EdAd 5274, 8274) (A-N only)
114690 1600-1745 Th, VoTech 320A, Morgan, 3 cr

5300 Philosophy and Practice of Vocational Education (A-N only)
130346 1600-1830 M, VoTech R285, G Swanson, 3 cr

R5750 Training in Industry and Business (A-N only)
309527 1830-2130 Th, VoTech R280, R Swanson, 3-4 cr

R5780 Internship: Training and Development (max 15 cr; prereq 5750) (S-N optional)
226725 McLean, R Swanson, ar cr

5800 Working with Special Needs Students (A-N only)
014682 1600-1830 T, VoTech R380, Brown, 3 cr

WOMEN'S STUDIES (WoSt)
Liberal Arts

R1005 Introduction to Women's Studies
★LECT 0915-1000 MWF, FordH 55, Zita
907871 –1 REC 1315-1400 M, FordH 447, 4 cr
307874 –2 REC 1415-1500 M, FordH 175, 4 cr
807877 –3 REC 1115-1200 T, FordH 160, 4 cr
807880 –4 REC 1215-1300 T, FordH 285, 4 cr
207883 –5 REC 1315-1400 T, FordH 447, 4 cr
707886 –6 REC 1315-1400 W, FordH 447, 4 cr
307888 –7 REC 1415-1500 W, FordH 175, 4 cr
307891 –8 REC 1315-1400 Th, FordH 447, 4 cr
007893 –9 REC 1415-1500 Th, FordH 160, 4 cr
407896 –10 REC 1515-1600 Th, FordH 447, 4 cr

3300 Comparative Study of Women: Women in India: Role and Repression (max 8 cr; prereq introductory courses in one or two social sciences)
336601 1115-1200 MWF, FolH 108, Junghare, 4 cr

R3502 Women and the Arts (prereq introductory work in music, art, drama, dance, film or other arts)
535754 0945-1100 TTh, FordH 170, Yates, 4 cr

R3838 Feminist Thought and Theory
335755 1015-1100 MWF, FordH 115, McNaron, 4 cr

R3900 Seminar: Current Women's Issues (prereq △)
400043 1215-1400 T, FordH 50, Yates, 4 cr

R3910 Topics in Women's Studies: Quantitative Social Research: A Feminist Perspective (max 12 cr)
609534 1115-1200 MWF, FordH 160, Robert, 4 cr

3970 Directed Studies (prereq #, △, college approval)
200044 1-15 cr

3980 Directed Instruction (prereq #, △, college approval)
414749 1-5 cr

3990 Directed Research (prereq #, △, college approval)
900046 1-5 cr

R5910 Topics in Women's Studies (max 12 cr; prereq △)
135756 –1 1415-1500 MWF, BlegH 105, Mortimer, 4 cr (Work-Family Linkages)
635759 –2 1415-1600 TTh, FordH 130, Faunce, 4 cr (Women, Feminism and Power)
835758 –3 1900-2100 TTh, Dworkin, MacKinnon, 4 cr (Pornography)
035757 –4 1500-1700 W, FordH 50, Dworkin, 4 cr (Love and Women)

5970 Directed Studies (max 12 cr; prereq #, △, CLA approval)
500048 1-5 cr

YOUTH DEVELOPMENT AND RESEARCH (YoSt)
Home Economics

3100 Introduction to Youthwork
137175 1015-1130 MW, JonesH 1, Hedin, 3 cr (Mpls)

5120 Independent Study in Youth Studies (max 12 cr; prereq #)
830494 ar cr

5200 Working with Youth Through Adults (max 9 cr; prereq BA degree, consent of faculty)
509333 1000-1600 F, McNH 386A, 1-3 cr

R5201 Practicum (prereq acceptance into youth studies collateral)
430496 0900-1100 T, McNH 386A, Seltzer, 4 cr

R5330 Child and Adolescent Psychology for Practitioners (prereq courses in educational psychology, child or adolescent psychology)
130498 1600-1830 Th, McNH 386A, Hedin, 3 cr

5600 International Development Seminar: Agriculture, Home Economics, Women and Youth (prereq Econ 1001, Soc 1001, Psy 5303 or #)
036973 1315-1500 Th, McNH 386A, Seltzer, 3 cr

5601 International Development Practicum (prereq participation in international development collateral)
937176 ar cr

8001 Advanced Seminar in Youth (prereq #)
630500 3 cr

ZOOLOGY (Zool)
Biological Sciences

8970 Seminar
329342 0 cr

8980 Special Research
129343 ar cr

8990 Research
029344 ar cr

COURSES OPEN THROUGH EXTENSION CLASSES

The following list indicates those day school classes, scheduled before 1600, which are open to Extension students. **(If you are a currently enrolled day school student, you may not register through Extension for the following day school classes.)** You should use this list in conjunction with the Schedule of Classes to determine which courses and sections you are eligible to register for. No 8000-level courses are available under this program.

All classes which have **R** preceding the course number have limited enrollment. Of the total number of spaces available in these classes, a small number are open to Extension students. **To register for these courses, you must obtain written permission from both the instructor and the department.** *This written permission must contain specific permission for all parts of the course (e.g., LECT, LAB, REC), and the section numbrs for those parts must be clearly identified (for example, LECT 1, LAB 12).* Classes that do not have an **R** preceding the course number may also have a limited number of spaces for Extension students. Please register early to avoid disappointment.

As an Extension student, you are subject to the same requirements as day school students. You must meet prerequisites in order to register for a class and you must obtain an authorized and signed Registration Override Permit from the instructor before registering for any course in which the symbol # appears as part of the prerequisite statement. (See Section 2 for an explanation of this and other symbols used in the Schedule of Classes.) Usually, you need only call and request that the form be sent out to you. In some instances, however, you may have to come to campus to obtain permission.

Check your 1983-84 *Extension Classes Bulletin* for instructions on how, when, and where to register. Call 376-3000 for a bulletin, registration forms, and a brochure with more complete information on registration and tuition rates.

Afro-American Studies: All courses

American Indian Studies: All courses

Ancient Near Eastern and Jewish Studies: All courses

Anthropology: All courses

Architecture: All courses *except* 3081, 3091, 5111, 5121

Art History: All courses *except* 3303

Art Studio: All courses *except* 1701, 3710, 5710

Astronomy: 1011, 1015

Biochemistry: All courses

Biology: All courses *except* 1008

Botany: All courses

Chicano Studies: All courses

Child Psychology: All courses

Civil Engineering: All courses

Classics: All courses

Communication Disorders: All courses

Danish: All courses

Dutch: All courses

East Asian Studies: All courses

Ecology and Behavioral Biology: All courses

Educational Administration: All courses

English Language and Literature: All courses *except* 1009, 1016, 3241, 3242, 3851, 3852

Family Social Science: All courses *except* 1401, 5200

Finnish: All courses

Forest Products: All courses

Forest Resources: 1100 thru 3104, 5104, 5126, 5233, 5248, 5259

French: All courses

French and Italian: All courses

General College: All courses with written permission from instructor.

Genetics and Cell Biology: All courses

Geography: All courses

German: All courses

Higher Education: All courses

History: All courses *except* 5571 thru 5990

History of Medicine: All courses

Humanities: All courses

Industrial Engineering/Operations Research: All courses available after regular registration period with permission of instructor.

Insurance: 3220

Italian: All courses

Journalism: 1001, 1002, 3007, 3201, 3776, 5501, 5549, 5601, 5721, 5801

Landscape Architecture: 1021, 1031, 3001, 5010

Latin American Studies: All courses

Linguistics: All courses *except* 5722

Mathematics: All courses

Mechanical Engineering: All courses available after regular registration period with permission of instructor.

Microbiology: All courses

Military Science: All courses

Music Education: All courses *except* 1001, 3550, 5550

Norwegian: All courses

Pharmacy: All courses

Philosophy: All courses *except* 1001, 1002, 3001

Polish: All courses

Political Science: All courses *except* 1001, 1025, 3051

Portuguese: 1001 thru 3502

Psychology: All courses *except* 1004 and Honors courses.

Public Affairs: All courses

Public Health: 3001, 3004, 3033, 5004, 5005, 5006, 5007, 5015, 5043, 5098, 5156, 5310, 5330, 5342, 5516, 5543, 5511, 5610, 5613, 5614, 5621, 5624, 5649, 5710, 5800, 5801, 5802

Religious Studies: All courses

Russian: All courses

Russian and East European Studies: All courses

Scandinavian: All courses

Social and Philosophical Foundations of Education: All courses

Social Work: All courses

Sociology: All courses

South and Southwest Asian Studies: All courses

Spanish: 1101 thru 3701

Speech-Communication: All courses

Statistics: All courses

Swedish: All courses

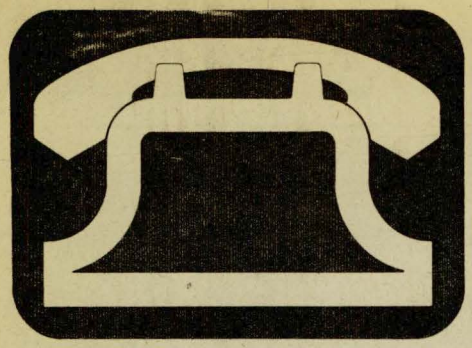
Theatre Arts: 1101, 1301, 1504, 3513, 5718

Urban Studies: All courses

Women's Studies: All courses

COURSE DESIGNATORS
(Twin Cities)

Acct	Accounting
AdPy	Adult Psychiatry
AEM	Aerospace Engineering and Mechanics
Afro	Afro-American Studies
AgEc	Agricultural Economics
AgEd	Agricultural Education
AgEn	Agricultural Engineering
AgET	Agricultural Engineering Technology
AgJo	Agricultural Journalism
Agri	Agriculture
Agro	Agronomy and Plant Genetics
Air	Aerospace Studies
Akka	Akkadian
AmIn	American Indian Studies
AmSt	American Studies
Anat	Anatomy
ANEJ	Ancient Near Eastern and Jewish Studies
Anes	Anesthesiology
AnSc	Animal Science
AnSt	Ancient Studies
Anth	Anthropology
Arab	Arabic
Arch	Architecture
ArEd	Art Education
Arm	Aramaic
ArtH	Art History
ArtS	Art Studio
Ast	Astronomy
BA	Business Administration
Ben	Bengali
BFin	Finance
BGS	Business, Government and Society
BioC	Biochemistry (Biol Sci)
Biol	Biology
BLaw	Business Law
BME	Business and Management Education
Bot	Botany
BPhy	Biophysical Sciences
CAPy	Child and Adolescent Psychiatry
CDis	Communication Disorders
CE	Civil Engineering
Chem	Chemistry
ChEn	Chemical Engineering
Chic	Chicano Studies
Chn	Chinese
CHS	College Honors Seminar
CISy	Curriculum and Instructional Systems
Clas	Classics
ClCv	Classical Civilization
CLit	Comparative Literature
Comp	Composition and Communication
CPsy	Child Psychology
CSci	Computer Science
CVM	College of Veterinary Medicine
Dan	Danish
Dent	Dentistry
Derm	Dermatology
DH	Dental Hygiene
Dnce	Dance
Dsgn	Design
Dtch	Dutch
EAS	East Asian Studies
EBB	Ecology and Behavioral Biology
Econ	Economics
EdAd	Educational Administration
Educ	Adult and Teacher Education
EE	Electrical Engineering
Elem	Elementary Education
Endo	Endodontics
Engl	English Language and Literature
Ent	Entomology
ESL	English as a Second Language
Fin	Finnish
ForP	Forest Products
FoSt	Foreign Study
FPAd	Family Planning Administration
FPCH	Family Practice and Community Health
FR	Forest Resources
Fren	French
FrIt	French and Italian
FScN	Food Science and Nutrition
FSoS	Family Social Science
FW	Fisheries and Wildlife
GC	General College
GCB	Genetics and Cell Biology
Geo	Geology and Geophysics
GeoE	Geo-Engineering
Geog	Geography
Ger	German
Grk	Greek
HCol	Honors Colloquium
HE	Home Economics
Hebr	Hebrew
HEEd	Home Economics Education
HiEd	Higher Education
Hist	History
Hlth	School Health Education
HMed	History of Medicine
Hndi	Hindi
Hort	Horticultural Science
HSci	History of Science and Technology
HSU	Health Science Units
Hum	Humanities
ID	Interdepartmental Study
IEOR	Industrial Engineering/Operations Research
Ind	Industrial Education
InMd	Interdisciplinary Medicine
Ins	Insurance
IntR	International Relations
IofT	Institute of Technology
IR	Industrial Relations
Ital	Italian
Jour	Journalism and Mass Communication
Jpn	Japanese
JwSt	Jewish Studies
LA	Landscape Architecture
LACS	Large Animal Clinical Sciences
LaMP	Laboratory Medicine and Pathology



Emergency and Frequently Called Telephone Numbers

Emergency Numbers

DEPARTMENT	PHONE NUMBER

TO REPORT FIRE — SERIOUS INJURY — ILLNESS — MAJOR UTILITY FAILURE

FROM U HOSPITALS PATIENT—OCCUPIED BUILDING ..... DIAL 123

FROM ALL OTHER CAMPUS LOCATIONS ..... DIAL 133

UNIVERSITY POLICE 373-3550

YOUTH EMERGENCY SERVICE 339-7033

Frequently Called Numbers

DEPARTMENT	PHONE NUMBER
BOYNTON HEALTH SERVICE	373-3141
CAMPUS ASSISTANCE CENTER	373-1234
COUNSELING BUREAU (MPLS)	373-4193
COUNSELING BUREAU (ST.P)	373-1140
CRISIS COUNSELOR, BOYN HS	373-4119
EMPLOYMENT, STUDENT	373-3674

DEPARTMENT	PHONE NUMBER
FINANCIAL AID (MPLS)	376-2424
FINANCIAL AID (ST.P)	376-2572
HANDICAPPED RESOURCE OFFICE	376-2727
HEALTH SERVICE (ST.P)	373-0960
HOUSING OFFICE	373-7542
INFORMATION, UNIVERSITY	373-2002

Radio Shack's TRS-80® Campus Computers Are In a Class By Themselves



8K Model 100 Portable Computer **$799**
26-3801

Only $45 Per Month on CitiLine Credit

PC-4 Pocket Computer **69.95**
26-3650

PC-4 Interface **39.95**
26-3651

PC-4 Printer **79.95**
26-3652

The Model 100 Portable Computer helps you be more resourceful with its timesaving and organizational capabilities! Simply turn on the Model 100 and you have instant access to five built-in programs (plus your own files). Personal word processing is easy with the full size keyboard and 8-line by 40-character display. Use the communications program and built-in modem to access other computers and information networks. In addition, Model 100 is a phone directory, address book, appointment calendar and telephone auto-dialer, and it contains a very powerful BASIC programming language. Take the Model 100 anywhere, too—it weighs under four pounds and operates on batteries or optional-extra AC adapter.

The PC-4 Pocket Computer is a real computer at a remarkably low price! It's more powerful and easier to program (uses BASIC language) than a programmable calculator, which makes it ideal for tough engineering, business and math problems. The expandable 544-character memory can even hold multiple programs. With the cassette interface and an optional cassette recorder, save and load your own programs and data, or print them out on the PC-4 printer.

Available Nationwide. See the TRS-80 Model 100 and PC-4 at the Radio Shack Computer Center or participating store or dealer near you.

Radio Shack®
The biggest name in little computers®
A DIVISION OF TANDY CORPORATION

☐ **Send me your free TRS-80 Computer Catalog today!**

Mail To: Radio Shack, Dept. 84-A-51
300 One Tandy Center, Fort Worth, Texas 76102

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE _____

Prices apply at participating Radio Shack stores and dealers.



Personal Telephone Numbers

Name	Number

Make it with us and the sky's the limit.

Looking for a chance to move in the fast lane? Then check out Marine Corps Aviation. The training is superb. The challenges are unique. Your ticket to fly is your college diploma and your drive to succeed. If you've got what it takes, you could be at the controls of anything from a Cobra to a Harrier to the hottest thing flying, the F-18 Hornet. If you want to take it to the limit, mail the card or call toll-free, 800-423-2600. In California, 800-252-0241.



Marines

Maybe you can be one of us. The few. The proud. The Marines.

November 1983

OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

DECEMBER

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Sound Savings With Your Student I.D. Card

Present your student identification card, get extra dollars off our regular low prices.

$10 OFF
A. AM/FM/FM-stereo radio with cassette recorder and 2-way, 4- speaker system.

$20 OFF
B. AM/FM/SW1/SW2, 4-band radio with cassette recorder.

$15 OFF
C. Personal stereo cassette player with headset and AM/FM/FM-stereo tuner pack.

Offer Ends
September 30, 1983



Brand Name Quality **TOSHIBA**
...In Touch with Tomorrow

Low Discount Prices, We've Got It And We've Got It Good!

Kmart

Copyright 1983 by Kmart® Corporation

OLYMPUS OM-G

The Olympus OM-G complements your creativity in a unique way. With a complement of capabilities never before available in any SLR. At any price.

It's the world's lightest SLR with the ruggedness to accept a blazing 5-FPS motor drive. So you can capture sudden moments of motion, or emotion, as never before.

It's the world's smallest SLR with aperture-priority versatility and OTF™ (Off-the-film) automation that actually fine-tunes your exposure during exposure.

It's the world's only SLR with incredibly-bright Lumi-Micron Matte focusing screen. So even in dim light, you focus and compose quickly. Confidently. Creatively.

Its built-in controls let you compensate auto-exposures, or move to manual at 11 shutter speeds. Always, brilliant viewfinder LEDS show the mode you're exploring.

They even show full charge and correct exposure with Olympus T-Series flash units. Which offer creative bounce, filtered, macro and off-camera capabilities.

Depth-of-field preview. Stepless shutter speeds from 1/1000 to over 2 seconds. Interchangeable Steady-Grips for handling ease and comfort. Metal-alloy precision.

Over 300 professional OM System lenses and components. For creative capabilities incomparable in an SLR so affordable.

The OM-G offers it all.

The Olympus OM-G. See it now at your Olympus dealer. (Or write Olympus, Woodbury, NY 11797. In Canada: W. Carsen Co. Ltd., Toronto.)

It's the best way to complement your creativity.

It complements your creativity like no other SLR ever created.



OLYMPUS.
When you have more to say than just smile.

$30 CASH REBATE ON OLYMPUS OM-G!

The camera that raises the standard of creativity now lowers the cost.

The Olympus OM-G raises the standard of creative photography in a unique way. With a complement of creative capabilities you'll find in no other SLR. At any price.

It's the world's smallest SLR with professional OTF™ automation that measures light right off-the-film.

It's the world's lightest SLR with the rugged precision to accept a 5-frames-per-second motor drive.

It's the world's only SLR with incredibly-bright Lumi-Micron Matte focusing screen. So even in dim light, you can compose and create quickly.

And it's compatible with over 300 OM System components.

So hurry to your dealer, make your best deal and buy your OM-G with Olympus lens from July 1 to Oct. 31, 1983. You'll get great pictures AND a $30 rebate direct from Olympus!



OLYMPUS®
When you have more to say than just smile.

First quiz of the school year? No. We just wanted to make sure you noticed the envelope with the Minneapolis Star and Tribune's 50% discount offer to students, faculty and staff.

The envelope said 50% off what?

Check the envelope near the front again. It offers you 150 days of the weekday Star and Tribune for only $15 —10¢ a day during the school year! And we'll deliver to your home.

Fill out the form on the back of the envelope. Enclose your check or money order, or charge your subscription with Visa or Mastercard and mail the envelope today!

If you've misplaced the envelope, take advantage of this special offer by sending your check or money order for $15 to:

College Offer
Minneapolis Star and Tribune
425 Portland Avenue
Minneapolis, MN 55488

Remember: 150 issues of the weekday Star and Tribune for only a dime a day.

Saturday Star and Tribune is available for 29 weeks at the regular rate of $5.80. Sunday Tribune is available for 29 weeks at the regular rate of $26.10.

The discount offer is void if you've been a Monday-Friday subscriber within the last 30 days. This offer ends December 31, 1983.

Minneapolis STAR and Tribune

LAS	Latin American Studies
Lat	Latin
Law	Law
LFA	Literature and Fine Arts
Lib	Library School
Ling	Linguistics
LMed	Laboratory Medicine
Luch	Luchuan
Mar	Marathi
Math	Mathematics
MatS	Materials Science
MBA	Master of Business Administration
MdBc	Biochemistry (Medical)
MdGk	Modern Greek
ME	Mechanical Engineering
Med	Medicine
MedC	Medicinal Chemistry
MedT	Medical Technology
MESA	Middle Eastern and South Asian Studies
MetE	Metallurgical Engineering
Mgmt	Management
MicB	Microbiology
Mil	Military Science
MinE	Mining Engineering
MIS	Management Information Systems
Mktg	Marketing
Mort	Mortuary Science
MthE	Mathematics Education
MuEd	Music Education
Mus	Music
MusA	Music Applied
Nav	Naval Science
Neur	Neurology
Nor	Norwegian
NSu	Neurosurgery
Nurs	Nursing
Nutr	Nutrition
OBio	Oral Biology
Obst	Obstetrics and Gynecology
OM	Operations Management
OPat	Oral Pathology
Oph	Ophthalmology
ORad	Oral Radiology
OrSu	Orthopedic Surgery
Otho	Orthodontics
OSur	Oral Surgery
Otol	Otolaryngology
PA	Public Affairs
Path	Pathology
PE	Physical Education
Ped	Pediatrics
Pedo	Pediatric Dentistry
Per	Persian
Pero	Periodontics
Phar	Pharmacy
Phcg	Pharmacognosy
Phcl	Pharmacology
Phil	Philosophy
Phm	Pharmaceutics
Phsl	Physiology
Phys	Physics
PlPa	Plant Pathology
PlPh	Plant Physiology
Plsh	Polish
PMed	Physical Medicine and Rehabilitation
PO	Personal Orientation
Pol	Political Science
Port	Portuguese
Pros	Prosthodontics
Psy	Psychology
PsyF	Psychological Foundations
PsyS	Psychoeducational Studies
PubH	Public Health
QA	Quantitative Analysis
Rad	Radiology
RCD	Resources and Community Development
Rec	Recreation, Park, and Leisure Studies
RelS	Religious Studies
Rhet	Rhetoric
Russ	Russian
SACS	Small Animal Clinical Sciences
SAPh	Social and Administrative Pharmacy
Scan	Scandinavian
SeEd	Secondary Education
Serb	Serbo-Croatian
Skt	Sanskrit
Slav	Slavic
Soc	Sociology
Soil	Soil Science
Span	Spanish
Spch	Speech-Communication
SPFE	Social and Philosophic Foundations of Education
SpPt	Spanish Portuguese
Stat	Statistics
Sum	Sumerian
Surg	Surgery
SW	Social Work
Swed	Swedish
TexC	Textiles and Clothing
Th	Theatre Arts
Thai	Thai
Tib	Tibetan
TRad	Therapeutic Radiology
Tran	Transportation
Turk	Turkish
UC	University College
UrbS	Urban Studies
Urdu	Urdu
Urol	Urologic Surgery
VB	Veterinary Biology
VoEd	Vocational Education
VPB	Veterinary Pathobiology
WoSt	Women's Studies
Ydsh	Yiddish
YoSt	Youth Development and Research
Zool	Zoology

DIRECTORY FOR DEPARTMENT OFFICES

Adult and Teacher Education ..... PeikH 175
Aerospace Engineering and Mechanics ..... AkerH 107
Aerospace Studies ..... Armory 3
Afro-American Studies ..... SocSci 214
Agricultural and Applied Economics ..... ClaOff 231
Agricultural Education ..... VoTech 320
Agricultural Engineering (Agri) ..... AgEng 213
Agricultural Engineering (IT) ..... AgEng 213
Agricultural Journalism ..... HckrH 326
Agronomy and Plant Genetics ..... Agr 303
American Indian Studies ..... SocSci 812
American Studies ..... LindH 225
Anatomy ..... JacH 4-135
Ancient Near Eastern & Jewish Studies ..... KlaCt 178
Anesthesiology ..... Mayo B515
Animal Science ..... PetH 120
Anthropology ..... FordH 215
Architecture ..... Arch 110
Art Education ..... WullH 135
Art History ..... JonesH 107
Art, Studio ..... ArtB 208
Astronomy ..... Phys 356

Biochemistry (BioC) ..... GorL 140
Biochemistry (Med) ..... MlrdH 4-225
Biological Sciences ..... SnH 123
Biology ..... SnH 223
Biophysical Sciences ..... TNCE 200
Botany ..... BioSci 220
Business and Distributive Education ..... VoTech 420

Chemical Engineering and Materials Science ..... AmundH 151
Chemistry ..... SmithH 139
Chicano Studies ..... FordH 489
Child Psychology ..... ChDev 158
Civil and Mineral Engineering ..... MinMet 112
Classics ..... FolH 310
Communication Disorders ..... ShevH 115
Comparative Literature ..... FolH 301
Computer Science ..... LindH 136
Counseling, Student Personnel Psychology ..... BuH 139
Curriculum and Instructional Systems ..... PeikH 130

Dance ..... NorrisH 159
Dental Hygiene ..... MoosT 5-164
Dentistry ..... MoosT 15-209
Dermatology ..... PWB 4-240
Design ..... McNH 240

East Asian Studies ..... FolH 113
Ecology and Behavioral Biology ..... Zoology 109
Economics ..... Mgmt/Econ 1035
Educational Administration ..... PeikH 275
Electrical Engineering ..... ElectE 139
Elementary Education ..... PeikH 125
English ..... LindH 207
Entomology ..... HodsonH 219

Family Practice, Community Health ..... PWB 6-240
Family Social Science ..... McNH 290
Fisheries and Wildlife ..... HodsonH 219
Food Sciences, Nutrition ..... FScN 225
Forest Products ..... KaufL 203
Forest Resources ..... GrnH 110
French and Italian ..... FolH 200

General College ..... NichH 106
Genetics and Cell Biology ..... BioSci 250
Geography ..... SocSci 414
Geology and Geophysics ..... PillsH 106
German ..... FolH 219

Higher Education ..... BuH 105
History ..... SocSci 614
History of Science & Technology ..... Phys 428
Home Economics ..... McNH 32
Home Economics Education ..... VoTech 325
Horticultural Science ..... AlderH 305
Humanities ..... FordH 314

Industrial Education ..... VoTech 425
Interdepartmental Study (CLA) ..... JohH 220

Journalism, Mass Communication ..... MurH 111

Laboratory Medicine ..... Mayo D242
Large Animal Clinical Sciences ..... VetTchHos 225
Law School ..... Law 285
Library School ..... WaLib 419
Linguistics ..... KlaCt 142

Management, School of ..... Mgmt/Econ 225
Mathematics ..... VinH 127
Mathematics Education ..... PeikH 125
Mechanical Engineering ..... MechE 125
Medical Technology ..... PWB 15-170
Medicine ..... PWB 14-110
Microbiology ..... Mayo 1060
Military Science ..... Armory 108
Mining Engineering ..... MinMet 112
Mortuary Science ..... Botany 400
Music ..... ScottH 106
Music Education ..... ScottH 104

Naval Science ..... Armory 203
Neurology ..... PWB 12-100
Nursing ..... HSUnitF 5-140

Obstetrics and Gynecology ..... MoosT 12-211
Ophthalmology ..... PWB 9th floor
Otolaryngology ..... PWB 8-240

Pediatrics ..... PWB 13-112
Pharmacology ..... MlrdH 3-260
Pharmacy ..... HSUnitF 5-130
Philosophy ..... FordH 355
Physical Education ..... CookeH 224
Physical Medicine and Rehabilitation ..... Mayo 860
Physics ..... Phys 148
Physiology ..... MlrdH 6-255
Plant Pathology ..... StakH 304
Plant Physiology ..... BioSci 220
Political Science ..... SocSci 1414
Psychiatry ..... Mayo A605
Psychoeducational Studies ..... BuH 204
Psychological Foundations ..... BuH 204
Psychology ..... EltH N218
Public Affairs ..... SocSci 909
Public Health ..... Mayo 1360

Radiology ..... Mayo B238
Recreation, Park, and Leisure Studies ..... CookeH 203
Rhetoric ..... HckrH 202
Russian & East European Studies ..... EltH 253

Scandinavian Languages ..... FolH 210
School Health Education ..... NorrisH 101
Secondary Education ..... PeikH 125
Small Animal Clinical Sciences ..... VetTchHos C339
Social, Philosophical Foundations of Educ ..... PeikH 275
Social Work ..... FordH 400
Sociology ..... SocSci 1114
Soil Science ..... Soils 125
South and Southwest Asian Studies ..... KlaCt 192
Spanish and Portuguese ..... FolH 34
Special Education ..... BuH 206
Speech-Communication ..... FolH 317
Statistics ..... VinH 270
Surgery ..... PWB 11-100

Textiles and Clothing ..... McNH 364
Theatre Arts ..... MdbH 208

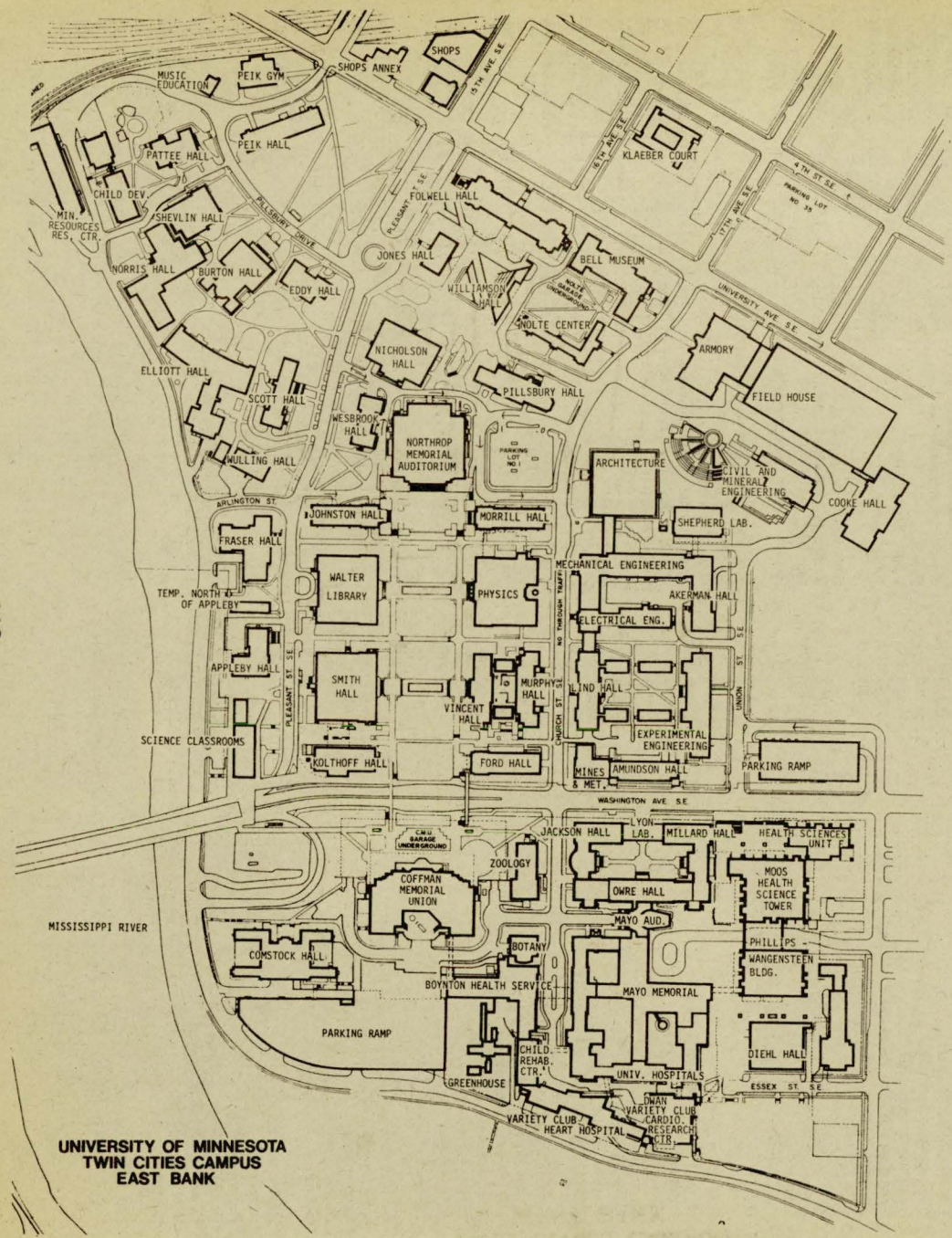
University College:
Intercollege Program (ICP) ..... TNA 213
University Without Walls (UWW) ..... WesH 201

Veterinary Biology ..... AnScVM 295K
Veterinary Pathobiology ..... VetS 205g
Vocational and Technical Education ..... VoTech 210

Women's Studies ..... FordH 492

Youth Development and Research ..... McNH 386

Zoology ..... Zoology 109



UNIVERSITY OF MINNESOTA
TWIN CITIES CAMPUS
EAST BANK

BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

MINNEAPOLIS

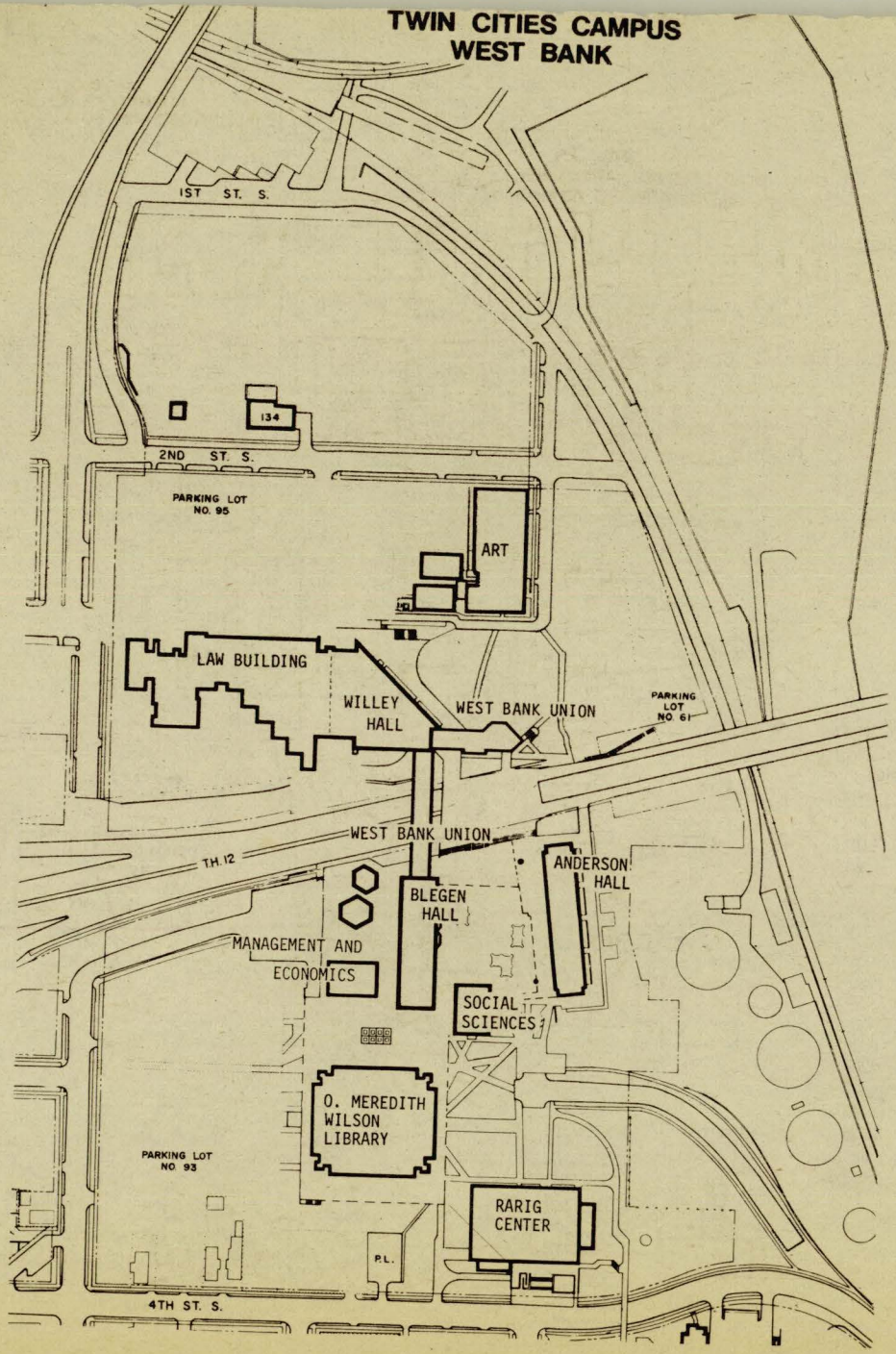
East Bank

AkerH, Akerman Hall ⊡
AmundH, Amundson Hall ♿ * L
ApH, Appleby Hall ■ *
Arch, Architecture ♿ * L
Armory ⊡
BellMus, Museum of Natural History ♿ * L
BFAB, Bierman Field Athletic Building ⊡ * L
Botany ⊡
BoynHS, Boynton Health Service ♿ * L
BuH, Burton Hall ♿ * L
CenH, Centennial Hall
ChDev, Child Development ♿ *
ChRC, Children's Rehabilitation Center ♿ * L
CivMinE, Civil and Mineral Engineering ♿ * L
CMU, Coffman Memorial Union ♿ * L
CookeH, Cooke Hall ■
DiehlH, Diehl Hall ♿ *
DVCCRC, Dwan Variety Club Cardiovascular Research Center ♿ * L
EddyH, Eddy Hall ■
EdHAn, Eddy Hall Annex
ElectE, Electrical Engineering ⊡
EltH, Elliott Hall ♿ * L
ExpE, Experimental Engineering ■
FieldHse, University Field House
FolH, Folwell Hall ♿ * L
FordH, Ford Hall ♿ * L
FraserH, Fraser Hall ⊡
FronH, Frontier Hall ♿ *
HL, St. Anthony Falls Hydraulic Laboratory (Hennepin Island)
HolB, Holman Bldg
HSUnitF, Health Sciences Unit F ♿ * L
JacH, Jackson Hall ♿ *
JOAd, Jackson-Owre Addition ♿ *
JohH, Johnston Hall ♿ * L
JonesH, Jones Hall ■
KlaCt, Klaeber Court ⊡
KoltH, Kolthoff Hall ♿ * L
LindH, Lind Hall ♿ * L
LyonL, Lyon Laboratories
Mayo, Mayo Memorial ♿ * L
MechE, Mechanical Engineering ♿ * L
MinMet, Mines and Metallurgy ♿ *
MlrdH, Millard Hall ♿ *
MMA, Mayo Memorial Auditorium ⊡
MoosT, Moos Health Sciences Tower (formerly HSUnitA) ♿ * L
MorH, Morrill Hall ♿ * L
MRRC, Mineral Resources Research Center ■
MurH, Murphy Hall ■
MusEd, Music Education ■
NichH, Nicholson Hall ♿ * L
NMA, Northrop Memorial Auditorium ♿ * L
NorrisH, Norris Hall ⊡ L
OwreH, Owre Hall ♿ * L
PeikG, Peik Gym ⊡
PeikH, Peik Hall ⊡ *
Phys, Tate Laboratory of Physics ⊡ *
PiH, Pioneer Hall ⊡
PillsH, Pillsbury Hall ■
PtH, Pattee ⊡
PWB, Phillips Wangensteen Building ♿ * L
SaH, Sanford Hall ■
SciCB, Science Classroom Building ⊡ *
ScottH, Scott Hall ■
ShepLab, Shepherd Laboratories ♿ *
ShevH, Shevlin Hall ■
SmithH, Smith Hall ♿ *
Stad, Stadium ⊡ L
TerH, Territorial Hall ■
TNA, Temporary, North of Appleby ■
TNCE, Temporary, North Court of Engineering ■
VFWCRC, VFW Cancer Research Center
VinH, Vincent Hall ♿ *
WaLib, Walter Library ♿ * L
WesH, Wesbrook Hall ■
WmsA, Williams Arena ⊡ L
WmsonH, Williamson Hall ♿ * L
WullH, Wulling Hall ⊡ *
Zoology ♿ * L

CODES:

♿ = accessible building
⊡ = partially accessible
■ = inaccessible building
* = elevator
L = adapted lavatory

For a map, *Guide for the Handicapped*, and further information, contact Physical Planning at 373-5765 or Rehabilitation Services at 376-3143.



BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

MINNEAPOLIS

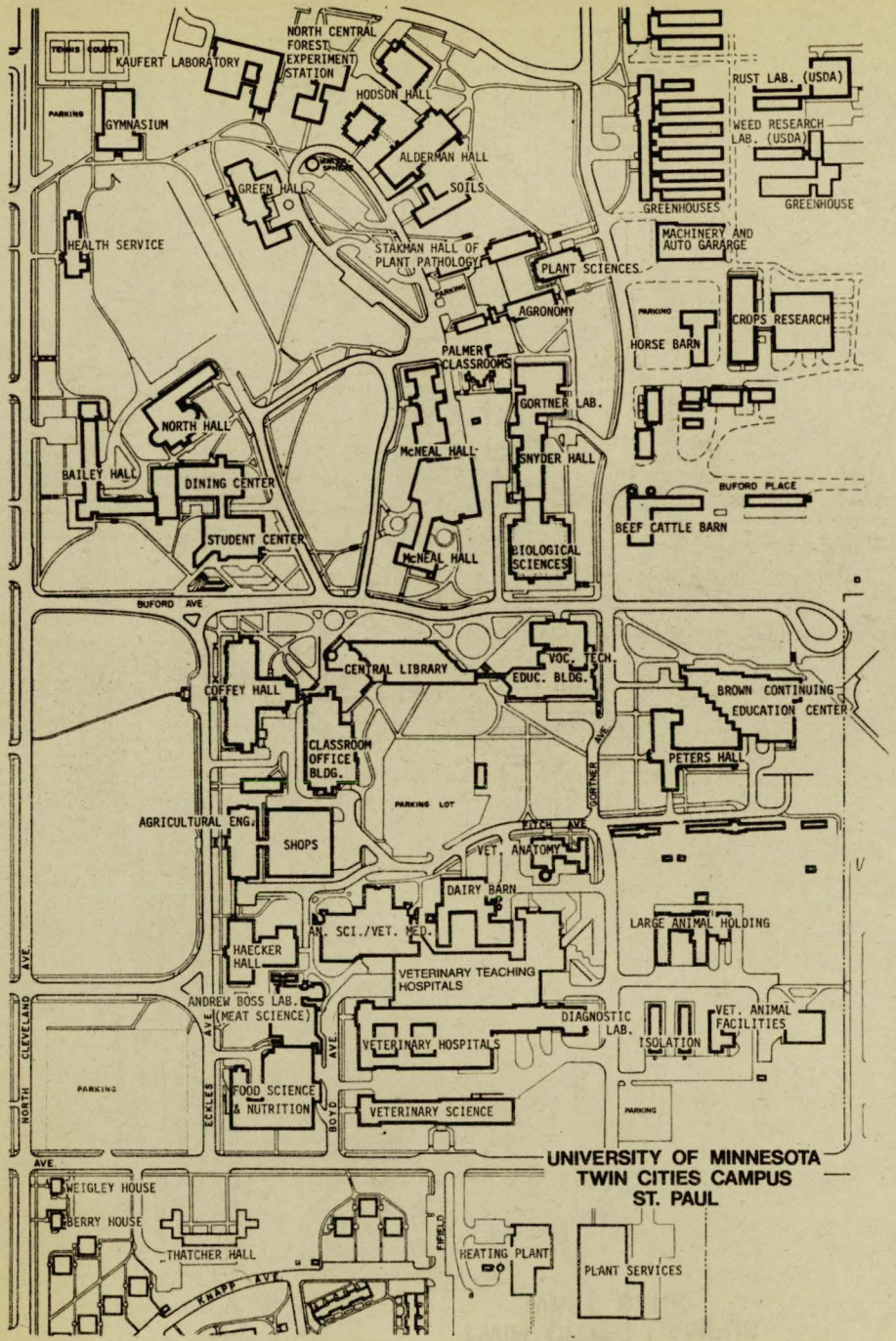
West Bank

AndH, Anderson Hall ♿ *
ArtB, Art Building (2020 Washington Ave S) ⊡
BlegH, Blegen Hall ♿ * L
Law, Law Building ♿ * L
MdbH, Middlebrook Hall ♿ * L
Mgmt/Econ, Management/Economics Building ♿ *
OMWL, O. Meredith Wilson Library ♿ * L
RarigC, Rarig Center ♿ * L
SocSci, Social Sciences Building ♿ *
WBU, West Bank Union ♿ L
WilleyH, Willey Hall ♿ * L

CODES:

♿ = accessible building
⊡ = partially accessible
■ = inaccessible building
* = elevator
L = adapted lavatory

For a map, *Guide for the Handicapped*, and further information, contact Physical Planning at 373-5765 or Rehabilitation Services at 376-3143.



BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

ST. PAUL

ABLMS, Andrew Boss Laboratory-Meat Science ♿ *
AgEng, Agricultural Engineering ⊡ *
Agr, Agronomy ■
AgrPGGh, Agronomy/Plant Genetics Greenhouse
AlderH, Alderman Hall ♿ *
AnAren, Animal Arena
AnScVM, Animal Science, Veterinary Medicine ⊡ *
Berry, Berry House (1304 Cleveland Ave N) ⊡
BioSci, Biological Sciences Center ⊡ *
CentLib, St. Paul Campus Central Library ♿ *
ClaOff, Classroom Office Bldg ♿ *
CofH, Coffey Hall ♿ *
DinC, Dining Center ♿ *
EBCEC, Earle Brown Continuing Education Center ♿ * L
FScN, Food Science and Nutrition ♿ *
GorL, Gortner Laboratory of Biochemistry ♿ *
GrnH, Green Hall ♿ * L
Gym, Gymnasium ■
HckrH, Haecker Hall ⊡
HodsonH, Hodson Hall ♿ *
KaufL, Kaufert Laboratory ♿ *
McNH, McNeal Hall ♿ * L
NorH, North Hall ■
PalmC, Palmer Classroom Building ⊡
PetH, Peters Hall ⊡
PlSci, Plant Sciences ■
SnH, Snyder Hall
Soils ♿ *
StakH, Stakman Hall of Plant Pathology ■
StCen, Student Center ♿ * L
VetA, Veterinary Anatomy ⊡
VetDL, Veterinary Diagnostic Laboratories ■
VetTchHos, Veterinary Teaching Hospitals ⊡
VetS, Veterinary Science ■
VoTech, Vocational-Technical Education ♿ * L
Weigley, Weigley House (1316 Cleveland Ave N)

CODES:

♿ = accessible building
⊡ = partially accessible
■ = inaccessible building
* = elevator
L = adapted lavatory

For a map, *Guide for the Handicapped*, and further information, contact Physical Planning at 373-5765 or Rehabilitation Services at 376-3143.

section 4 tuition & fees

TWIN CITIES CAMPUS TUITION SCHEDULE 1983-84

PER-CREDIT TUITION RATES	RESIDENT	NON-RESIDENT
Students registering in:		
Lower Division—Colleges of Agriculture, Education, Forestry, Home Economics, Liberal Arts, General College, University College, and Institute of Technology only (90 or fewer completed undergraduate credits)*	$ 33.67	$ 92.59
Agriculture, College of*	41.38	113.79
Biological Sciences, College of*	41.71	114.70
Dentistry, School of	110.91	221.82
Dental Hygiene (baccalaureate program)*	38.99	107.22
Education, College of*	41.16	113.19
Forestry, College of*	44.96	123.64
General College*	33.95	93.36
Graduate School	70.89	141.78
Thesis credits	70.89	70.89
Dentistry, clinical fields in	110.91	221,82
Day M.B.A. program	98.00	141.78
Evening M.B.A. program	98.00	98.00
Law	91.94	183.88
Veterinary Medicine, clinical fields in	98.83	197.66
Home Economics, College of*	40.79	112.17
Law School	91.94	183.88
Liberal Arts, College of*	34.64	95.26
Management, School of*	39.40	108.35
Medical Technology, Program in*	52.92	145.53
Mortuary Science, Department of*	45.02	123.80
Nurse Anesthetist (Medical School)*	52.92	145.53
Nursing, School of*	50.29	100.58
Occupational Therapy, Physical Therapy, Courses in*	54.52	149.93
Pharmacy, College of*	45.00	90.00
Public Health, School of*	44.38	88.76
Technology, Institute of*	40.99	112.72
University College*	35.22	96.85
Veterinary Medicine, College of	98.83	197.66

TERM TUITION RATES**	RESIDENT	NON-RESIDENT
Students registering in:		
Dentistry, School of	$1331.00	$2662.00
Graduate School		
Clinical Fields in Dentistry	1331.00	2662.00
Clinical Fields in Medicine		
1-5 credits	375.00	750.00
6-10 credits	749.00	1498.00
11-15 credits	1124.00	2248.00
16 or more credits	1498.00	2996.00
Clinical Fields in Veterinary Medicine	1186.00	2372.00
Law School (semester rate)	1103.00	2206.00
Medical School		
1-5 credits	375.00	750.00
6-10 credits	749.00	1498.00
11-15 credits	1124.00	2248.00
16 or more credits	1498.00	2996.00
Veterinary Medicine	1186.00	2372.00

SPECIAL FEE CATEGORIES (PER TERM)	RESIDENT	NON-RESIDENT
Dental fellow specialists	$ 121.00	$ 121.00
Graduate students in minimum fee classifications:[1]		
Doctoral candidates in final quarter	165.00	165.00
Continuous registration[2]	65.00	65.00
Student status[3]	70.89	70.89
Graduate medical or dental fellows[4]	749.00	749.00
Medical fellow specialists, post M.D.	121.00	121.00
Pharmacy externs	121.00	121.00
Pharmacy fellow specialists	121.00	121.00
Psychology fellow specialists	121.00	121.00
Preparatory instruction	$100.00 per course	
Managers M.B.A. program	$4950.00 per year	
SUMMER SESSION (per credit)[5]***	by college of enrollment	
CONTINUING EDUCATION AND EXTENSION[6] AND INDEPENDENT STUDY[7]*** (per credit)		
1000-level courses	$34.00	
3000-level courses	by college of course	
5000-level courses	by college of course	
8000-level courses	$68.00	

PER-CREDIT TUITION—The first section of the tuition schedule lists per-credit tuition rates. Tuition will be assessed on a per-credit basis for most colleges and schools of the University. For undergraduates, tuition will vary according to class standing and college of registration. If you are a lower division student (with 90 or fewer credits) in the Colleges of Agriculture, Education, Forestry, Home Economics, Liberal Arts, General College, University College, or Institute of Technology, you will pay the lower division rate. If you are an upper division student (with 91 or more completed credits) *or if you have been admitted to an upper division college or program* (i.e., College of Biological Sciences, College of Pharmacy, School of Management, Medical Technology, Mortuary Science, Occupational Therapy, Physical Therapy, and the baccalaureate program in Dental Hygiene), you will pay the per-credit rate listed for the college, school, or progam in which you are registering.

TUITION PLATEAU—There will be a 14-18 credit tuition plateau for most students. For 1-14 credits you will be charged for each credit according to the per-credit tuition rate that applies to you. If you register for 15 or 16 or 17 or 18 credits you will be charged the same amount of tuition and fees (excluding course fees) as you would be charged for taking 14 credits. Each credit above 18 will be charged for on a per-credit basis. All colleges, schools, and programs that have a plateau (including lower division) are marked with an * in the per-credit tuition section.

TERM TUITION—Certain professional schools and colleges and certain Graduate School programs will continue to have term tuition rates for 12 or more credits (except where indicated). Use the second section of the tuition schedule to determine if term tuition

*14-18 credit tuition plateau.
**For 12 credits or more except as indicated.
***Rates are the same for residents and nonresidents.
[1]Graduate students registered for credit pay either the minimum fee indicated or the per-credit rate, whichever is higher.
[2]Open only to doctoral students admitted prior to fall 1983 who have passed their preliminary oral examinations.
[3]For students enrolled in the Graduate School who are required to register (e.g., to satisfy requirements of an assistantship or fellowship) but who are not enrolled in courses and are not eligible for continuous registration.
[4]Medical and dental fellows who have completed course work and preliminary examinations for the Ph.D. degree may pay the continuous registration tuition rate. Those who have completed course work and language requirements but not the preliminary examinations may pay the student status tuition rate.
[5]For 1983 summer terms tuition was the same as the academic year rate. Rates for 1984 not available.
[6]Effective fall quarter 1983.
[7]Effective July 1, 1983.

applies to your registration. If you are registering for fewer than 12 credits in any of the areas listed (excluding Medicine) you will pay at the per-credit tuition rate listed in the first section of the tuition schedule.

STUDENT SERVICES FEE

All students registered for 6 or more credits must pay a $79.40-per-quarter ($119.10-per-semester) student services fee in addition to tuition. Courses that carry no degree credit (Comp 0011, Math 0005, 0006, 0007, & 0009, and all courses in which the student registers as an auditor) count in the determination of the credit total for the student services fee on a one class hour = one credit basis. For example, registration in Math 0009, which meets for 5 class hours per week, counts as 5 credits towards assessment of the fee.

Certain students, including those registered in minimum fee classifications, are exempted from the student services fee requirement. Such students may elect to pay the fee if they wish to use the services covered by the fee.

Twin Cities campus students who have paid the student services fee may request a refund of the portion of the fee allocated to the Board of Publications. Refunds will be available at the Bursar's Office (145 Williamson Hall, West Bank Bursar, 107 Coffey Hall) during the first two weeks *only* of the appropriate quarter. Students must present original receipts of paid fee statements to obtain a refund.

Distribution of student services fee—

$ 2.81	—Board of Publications *(Daily)*
39.85	—Boynton Health Service
.18	—Child Care Consortium
.20	—Council of College Boards
.41	—Cultural Programs
.095	—Elections Commission
.05	—Intercollegiate Debate and Forensics Program
.145	—International Reciprocal Student Exchange Program
.05	—International Student Exchange Program
.439	—International Study and Travel Center
.32	—Minnesota International Student Association
4.00	—Minnesota Union Expansion
16.95	—Minnesota Union Operations
.98	—MSA Forum
.583	—Music Programs
.085	—National Student Exchange
5.874	—Recreational Sports
1.78	—Recreational Sports Facilities Planning
.11	—St. Paul Board of Colleges
.076	—Student Advocate Service
.25	—Student Emergency Loan Fund
2.99	—Student Legal Service
.143	—Student Ombudsman Service
1.00	—University Community Video
.03	—WMMR Radio
$79.40	—TOTAL

HEALTH SERVICE AND HOSPITALIZATION CHARGES

At the time of registration, students who pay the student services fee will be paying for outpatient health coverage as part of that fee. Students who do not pay the student services fee may purchase this outpatient health coverage directly from Boynton Health Service. The Health Service provides most outpatient care free of charge to all students who either pay the student services fee or pay the Health Service directly for health coverage.

The student services fee for the Health Service does not cover surgical procedures, hospitalization, services related to hospitalization, prescriptions, or certain other procedures. Students are required to carry hospitalization insurance coverage. A University-sponsored hospitalization insurance policy is available and may be purchased from the Bursar when tuition and fees are paid or purchased at the Health Service, room W-227A. Only students who pay the student services fee or the separate health service fee are eligible for this coverage. Dependent insurance coverage is also available, but may only be purchased at Boynton Health Service, room W-227A.

Partial Exemption From Student Services Fee—If you are a member of a health maintenance organization such as Coordinated Health Care, Group Health, MedCenter, Physician's Health Plan, Nicollet-Eitel, SHARE, or HMO Minnesota, or if you have health insurance which duplicates Boynton Health Service prepaid benefits, you may apply for a partial exemption of the health service portion of the student services fee *no later than the end of the second week of classes*. To apply, show proof of coverage to the Boynton Health Service Cashier, room W220, who will certify a Health Service Fee Adjustment Request form. You must present this form to the registration clerk in order to receive the partial deduction from your student services fee assessment.

Students who do not pay the full Health Service fee waive all prepaid benefits but may use the Health Service on a fee-for-service basis. For detailed information about health coverage and fee exemptions, contact the Boynton Health Service, room W220 (373-3780).

ID CARD REPLACEMENT

ID cards are required in many areas of the University to process student services. *If you have registered within the last two years and need a replacement ID card for any reason* (excluding normal wear of the embossing surface), you must purchase an authorization card for $5 at the Bursar's Office, 145 Williamson Hall (or from the cashier in 107 Coffey Hall, St. Paul). Bring this authorization card to the Certification Service, 155 Williamson Hall (or 130 Coffey Hall), where staff will enter your name and file number as they appear on your official record. Finally, you must bring this completed authorization to the ID card office, 248 Williamson Hall, where you will be issued a new card. (Note: lost ID cards that have been turned in are kept at the Information Booth in Williamson Hall for six months.) *If you have* ***not*** *registered within the last two years and have lost or never been issued an ID card,* you may receive an authorization from the Registration Center, 202 Fraser Hall (130 Coffey Hall for St. Paul-based students) or from the Certification Service, 155 Williamson Hall. To receive your new card, bring the authorization to the ID card office, 248 Williamson Hall.

PAYMENT OF FEES

Where to Pay—Pay your tuition and fees at the Bursar's Office (145 Williamson Hall on the East Bank, ground floor of Blegen Hall on the West Bank in Minneapolis, or the Cashier's Office in 107 Coffey Hall in St. Paul). Your fee statement and a check or money order may be dropped in the fee deposit box in Fraser Hall or Coffey Hall or the lower concourse of Williamson Hall next to the Bursar's Office. The receipted fee statement may be picked up after ten working days at the East Bank Bursar's Office, 145 Williamson Hall, in Minneapolis or at the registration windows in 130 Coffey Hall in St. Paul.

Mailing Your Payment—The fee statement and a check or money order may be mailed to the Bursar's Office in Minneapolis (145 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455) or to the cashier in St. Paul (107 Coffey Hall, 1420 Eckles Avenue, St. Paul, MN 55108). When mailing your payment for tuition and fees, you must enclose all copies of your fee statement. *Do not remove the student copy before sending in payment but do remove the lower portion—your course confirmation document.* If you want your receipted fee statement returned to you by mail, you

must enclose a self-addressed, stamped envelope. If you do not include this return envelope, you can pick up your receipted copy after ten working days at the Bursar's Office to which you mailed your payment (or the registration windows in 130 Coffey Hall for St. Paul students).

When to Pay—For students who register through September 23, tuition and fees are due within 10 working days following the date of registration. (If you register on Tuesday, September 6, for example, you must pay tuition and fees on or before Tuesday, September 20.) For students who register from September 26 through October 5, fees are due October 7. Fees for students who register on or after October 6 are due within two working days following the date of registration.

You must pay 50-100% of your assigned tuition and fees by the due date(s) on your fee statement(s) to avoid $20 late payment fees. You must pay your account in full by Friday of the fifth week of the quarter or you will be charged an additional $20 late payment fee. **For complete information on the Installment Payment Option plan, see Step 7 in Section 1.**

Fee Statement Due Dates—Each fee statement you receive has its own due date. Later fee statements do not extend the due date(s) on earlier fee statements. A $20 late payment fee can be charged for any fee statement that is paid after the due date printed on it. If you mail your fee statement and payment to the Bursar's Office, the postmark date must be the same as or earlier than the due date printed on the fee statement, or you will be billed for a $20 late payment fee by Students Accounts Receivable.

Fee Statements—Do not destroy or throw away any fee statements you receive from the Registration Center. All copies of unpaid fee statements must be turned in to the Bursar's Office. You should keep all fee statements for the quarter together with your ID card; many University facilities such as the libraries, Boynton Health Service, the Bursar's check cashing service, and athletic facilities require fee statement(s) as proof of enrollment.

Duplicate Fee Statements—Duplicate unreceipted fee statements for the current quarter may be obtained at your Registration Center until registration for the next quarter begins. If your fees are paid, Student Accounts Receivable can issue a payment verification letter or validate your unreceipted copy at B1 Fraser Hall or 130 Coffey Hall (150 Williamson Hall for students with mobility impairments). Duplicate fee statements for any quarter prior to spring quarter 1982 may be obtained at the Certification Service in 155 Williamson Hall or the registration windows in 130 Coffey Hall.

Credit Balance Fee Statements—Credit balance fee statements have a dollar amount in the "Amount Due" box that is followed by "CR," which means that your obligation to the University has been reduced by that amount. If you have already paid your fees, you may obtain a refund voucher by presenting the credit balance fee statement to Student Accounts Receivable. (See also Refunds, on the following page.) If all of your fees have not been paid and the amount on the credit balance fee statement is less than what you owe on your other fee statements, take all fee statements to the Bursar's Office and pay the difference. If the credit amount is more than the amount that you owe, go to Student Accounts Receivable for further information.

Billing Statement for Installment Payment Plan—If you pay tuition and fees on the Installment Payment plan, you should receive a billing statement for the balance of your tuition plus the $10 installment payment fee. **If you do not receive this billing statement, you *must* obtain a payment voucher on or before October 28 from Student Accounts Receivable** at B1 Fraser Hall (Bursar's departmental window, 145 Williamson Hall, for students with mobility impairments) in Minneapolis or 130 Coffey Hall in St. Paul. If you do not obtain this payment voucher and pay the balance of your tuition and fees by October 28, you will be charged a $20 late payment fee, and a hold will be placed on your record.

Financial Aid Recipients—You must turn in your Course Request form and receive your fee statement by September 23, even if you have not yet received your financial aid check. If you register after September 23, you will be charged a late registration fee.

Tuition and Fees Paid by Various Agencies—If you have authorization for the University to bill a donor for your tuition and fees, you should bring your authorization *before the beginning of registration* to the Registration Center (202 Fraser Hall, 130 Coffey Hall for St. Paul-based undergraduates and adult specials, or 150 Williamson Hall for students with mobility impairments). If you are unable to present your authorization before the beginning of registration, bring it with you when you register.

Effective fall quarter, 1983, you will have a hold placed on your record if your sponsoring agency falls behind in payment for more than two quarters. You will ultimately be held responsible for all unpaid tuition and fees if your sponsoring agency does not fulfill its obligations.

Regents' Scholarships—If you are registering for a course with a Regents' Scholarship, you should bring your authorization to the Registration Center when you register. You must return to the Registration Center for an adjusted fee statement *if you receive your authorization after you have registered.* **(Regents' Scholarship authorizations should *never* be mailed to the Bursar.)** If you fail to receive authorization by the due date on your first (or 01) fee statement, you will be assessed a $20.00 late payment fee. Regents' Scholarships cover only tuition for approved courses. You are responsible for all course fees and special fees. Failure to pay these fees by the due date on your first (or 01) fee statement will make you liable for a $20.00 late payment fee.

Payroll Deduction—Graduate students holding at least 25% appointments as graduate assistants may have their tuition and student services fee deducted from their paychecks each quarter. (Students holding hourly miscellaneous payroll appointments are not eligible.) This privilege applies *only* to tuition and the student services fee; course fees, special fees, and hospitalization may not be paid by payroll deduction but must be paid directly to the Bursar's Office. You must pay all fees not covered by payroll deduction by the due date(s) printed on your fee statement(s) in order to avoid paying $20 late payment fee(s). Qualified students who choose the payroll deduction method of payment must have either *all* of their tuition or the *total* amount for a quarter (tuition plus student services fee) withheld from their paychecks; no smaller percentage of these amounts will be withheld. If your tuition is $350, for example, you must either pay the whole amount or have the whole amount withheld, one-fourth from each of four paychecks; you may not pay the Bursar a percentage of the amount due (e.g., $50) and have the rest paid by payroll deduction. The total, $350, will be withheld from your last four paychecks of the quarter in equal installments of $87.50.

NOTE: you are eligible for payroll deduction only if your assessed tuition (and student services fee) exceed $150.

The procedures for paying by payroll deduction were being revised at the time of publication of this *Class Schedule*. Information on the new procedures should be distributed to departments before the beginning of fall quarter registration. Contact your employing department's payroll secretary or the Graduate Assistants Office (376-3644) for information.

Note: If you cancel courses, you cannot receive a refund for tuition and fees that are being deducted until two weeks after all four payments have been deducted from your check.

VETERANS CERTIFICATION

Ch. 34 and Ch. 35 Veterans—Veterans must register and pay fees like every other student. If you are a veteran, you must conduct your business with the Veterans Administration separately from your business at the University; proper application is your own responsibility. Late payment fees will not be waived because you are waiting to receive your check(s) from the Veterans Administration. The University assists you by certifying as required. You initiate this certification at the Certification Service, 155 Williamson Hall.

Do the following:

Apply at the Certification Service, 155 Williamson Hall, for benefits on or before your first day of class. You will not get paid unless you do apply. You must present your receipted fee statement *in person* every quarter. If you are returning for another quarter, your previous period of education under the law having been officially interrupted, you must make out a re-entrance form at the Certification Service, 155 Williamson Hall, notifying the Veterans Administration that you wish to resume training status.

New and returning veterans—Effective fall 1982 you must provide a certified copy of the birth certificate for each child claimed as dependent and a certified copy of your marriage certificate if you claim your spouse as a dependent. (Certified copies have the Clerk of Courts stamp attached—notarized copies are *not* acceptable.) **If you do not provide these documents you will be paid at the single rate of pay.**

Ch. 31 Veterans (veterans approved for Rehabilitation Program)—When you have received your fee statement, have it approved at the Certification Service, 155 Williamson Hall, and then receipted by the Bursar's Office. Bring the receipted statement and your course list to the Certification Service, 155 Williamson Hall, to obtain an order for books and supplies.

Additional information concerning University attendance under the above designated laws may be obtained at the Certification Service in 155 Williamson Hall or in the Official Daily Bulletin printed in the *Minnesota Daily* and posted on campus bulletin boards.

REFUNDS

Tuition and Course Fees—If you officially cancel all courses before classes begin, you are entitled to a 100% refund. After classes begin, tuition and course fees are refunded on the following basis: if you cancel within the first week, you get 90%; within the second, 80%; third, 70%; fourth, 60%; fifth, 50%; sixth, 40%. After the sixth week of class, there is *no* refund unless retroactive cancellation has been authorized and is accompanied by a Final Attendance Verfication form for each course (signed by the instructor) or by a signed statement, from the instructor for each course, that you have **never** attended class (note: these statements *must* be written on official University stationery). In the event that retroactive cancellation is authorized, you may not apply for any refund more than one calendar year following the end of the quarter for which you seek cancellation. **To be entitled to a refund, you should file for official cancellation at the Registration Center as soon as you decide to withdraw from a class or classes.**

Student Services Fee—Usually, if you cancel below 6 credits *before the end of the sixth week of class*, you can request, when you process your cancellation, a refund for tuition and fees (see above). **If you have been assessed the University-sponsored hospitalization at registration, however, any refund of your student services fee must be requested at and authorized by Boynton Health Service, room W227.** If you receive a refund of the student services fee, you may no longer use the services provided by the fee. To continue using these services, you must continue to be enrolled and not be issued any refund. If you completely cancel out of the University and qualify for a tuition refund, you must also accept a prorated refund of the student services fee unless you retain University-sponsored hospitalization (see below). However, *no* refund of the student services fee will be issued after the sixth week of the quarter, even if retroactive cancellation is authorized.

University-Sponsored Hospitalization—Refunds of the University-sponsored hospitalization insurance fee will be issued *only through the end of the second week of classes* and must be processed at Boynton Health Service, room W227. If you cancel completely during this refund period, you may opt to retain your hospitalization, but will not then be given any refund of the student services fee.

Special Fees—The orientation fee is never refunded. After classes begin, there is no refund of the record service fee. **MPIRG is not refunded through the Registration Centers**—refund instructions are published every quarter in the Official Daily Bulletin, a column printed in the *Minnesota Daily* and posted on campus bulletin boards. All other special fees assessed at registration are refunded through the sixth week of class at the same rate as tuition and course fees (see above). There is *no* refund of special fees after the sixth week of class, even if retroactive cancellation is authorized.

Refunds for Students on Payroll Deduction—If you cancel courses, you cannot receive a refund for tuition and fees that are being deducted until two weeks after all four payments have been deducted from your check.

Financial Aid Refund Policy—If you receive financial aid, you must maintain full-time status (a minimum of 12 credits for undergraduates, 8 credits for graduate students). If you cancel courses and your credit total falls below full-time status, you may not qualify for a tuition refund. Federal regulations require that all or a portion of your tuition refund must be credited to the financial aid funds from which you received assistance. Refunds may also be sent to the lender of a student loan to reduce the principal on that loan. **Repayment of financial aid is calculated according to the date on which your cancellation is effective. If you cancel courses at the 100% refund rate during a quarter—including retroactive cancellation—you must repay *all* financial aid received during that quarter.** If the refund amount is insufficient to repay the appropriate financial aid fund, you will be billed for the difference by Student Accounts Receivable. You will be notified by mail of the disposition of your refund.

COURSE FEES[1]

All fees are per quarter unless otherwise indicated.
Students taking the following courses will pay course fees as follows:

ARTS, STUDIO[2]
Materials fees:
$10—1101, 1102, 1105, 1404
$15—3110, 3120, 3160
$20—5110, 5120, 5160, 5190
$25—1701, 1702, 3430, 3710, 3720, 5430, 5710, 5790
$30—1510, 1520, 1530, 1811, 1812, 3510, 3520, 3530, 5510, 5520, 5530, 5590
$40—1301, 1302, 3301, 3302, 3304, 3305, 3810, 5310, 5320, 5340, 5350, 5390
$45—5810
$50—3303, 5330
$70—3820, 5820
Arranged (amount adjusted to individual needs of students or particular class project)—3830, 3970, 3980, 5830, 5970, 8000-level courses

COMPOSITION AND COMMUNICATION
$100[3]—0011 Preparatory Composition

ECOLOGY AND BEHAVIORIAL BIOLOGY
$15—5014, 5016, 5132, 5134 Transportation Fee

FORESTRY
$50—ForP 3300 Wood Industries Tour

HEALTH SERVICE (Field Trips and Foreign Study)
$39.85 per quarter—Required of students on University field trips such as Anthropology, Geology, Mines, etc.
Students in University-sponsored foreign travel groups must rely on private insurance coverage while traveling.

MATHEMATICS (Arts)
$100[3]—0005, 0006, 0007, 0009 Preparatory Mathematics

MUSIC, APPLIED
Applied lessons—1 half-hour lesson per week for 2 credits; 2 half-hour lessons or 1 hour lesson per week for 4 credits.
Music majors who have passed the entrance exam: $0 per 2 credits
Majors taking extra credits (beyond' requirement) or taking lessons on a second instrument: $32 per 2 credits
Non-majors, elective credit: $96 (0-2 credits)

PUBLIC HEALTH
$200—5755 Administrative Residency

SOIL SCIENCE
$15—3520, 5510 Transportation Fee
$25—5565 (SS) Field Course

[1]Fees are subject to change.
[2]Materials fees—assessed at the time of registration. Arranged fees are collected by department.
[3]In lieu of tuition

SPECIAL FEES[1]

COGS (COUNCIL OF GRADUATE STUDENTS)
$.55 required of all graduate students who register for one or more credits —assessed at registration.

COLLEGE OF EDUCATION—PLACEMENT SERVICE FEE
$30—Registration fee for graduate students, alumni, and others (annual fee)
$20—College of Education seniors (annual fee—assessed with graduation fee)
$5—Bulletin service fee for non-seniors (quarterly fee)
Bachelor of science degree candidates from College of Education (except Recreation, Park, and Leisure Studies students) are required to register with placement section of the Education Career Development Office or to secure an official exemption from that office. Graduate students and alumni seeking employment in education positions may also use placement services.

CREDIT BY SPECIAL EXAMINATION
$30—Check with your college office for further information.

DIPLOMA, OVERSEAS MAILING
For sending a diploma *air mail* to address outside the United States, Canada, or Mexico
$3—small diploma
$6—large diploma
(Fee optional)

DIPLOMA REPLACEMENT FEE[2]
$17—small diploma
$20—large diploma

ENGLISH FOR INTERNATIONAL STUDENTS
For international students needing instruction in English—$85 per quarter administrative fee plus instructional and materials fee ranging from $242-$793.

GRADUATION FEE (each degree)[2]
$15—including small diploma
$22.50—including large diploma

INTERNATIONAL STUDENT AID FEE
$4 per quarter required of **all** non-immigrant students who have temporary visa status.

LATE PAYMENT FEE
$20—See fee statement for due date.

LATE REGISTRATION FEE
$10 through the first two weeks of classes and $20 thereafter.

MINNESOTA PUBLIC INTEREST RESEARCH GROUP (MPIRG)
$2 (refusable/refundable)—assessed with student services fee.

MUSIC PRACTICE ROOM
$1 per qtr for one, $2 for two, 50 cents for each addtl hr per week—all instruments except organ.
.25 per hr—small organ
.50 per hr—large organ

ORIENTATION FEE
$15 required of all new students *except* new graduate students who attended the University as undergraduates and *except* students in law, medicine, veterinary medicine, dentistry, and public health, and in master of education and master of agriculture programs.

RECORD SERVICE FEE
$6 required of all new students. This fee provides students with unofficial copies of student records.

RECREATIONAL SPORTS PARTICIPATION FEE
$15 per quarter to cover use of recreational and athletic facilities; $30 for 2 quarters, $45 for 3 quarters. $60 for a whole year—for faculty and staff only. Guest ticket—$2 per visit.

SERVICE FEE, INTERNATIONAL PROGRAMS
$100-$250 per quarter according to services provided—for international students supported under contractual arrangements with sponsoring agencies or entities requiring special administrative or management services beyond those normally provided.

SPEECH AND HEARING CLINIC
U of M students, staff, and faculty are not charged for clinical services provided in the Speech and Hearing Clinic.
Outpatients:
Speech Pathology, Clinical Management—$2 per session
Audiologic Evaluation—$25
Audiologic Evaluation for Senior Citizens—$15
Audiology Screening—$2
Audiology Screening Follow-up—$5

TECHNOLOG
$1.80 required of all Institute of Technology students who pay the student services fee—assessed at registration

TRANSCRIPT FEE
$2 required for **each** official certified copy of student records. This fee will be assessed both day and extension students.

IOK REVIEW
$1.20 required of all School of Management students who pay the student services fee—assessed at registration

[1]Fees are subject to change.
[2]Graduation fees and diploma sizes under review for fall quarter.

FACILITY FEES

Physical Education facility fees—Students registered in the following physical education courses must pay the amount indicated to the appropriate facility operator for the use of the facility and/or equipment.

AnSc 1601 Horse Equitation	$60
PE 1034 Judo	$18 (maximum)
PE 1035 Karate	$23 (maximum)
PE 1048, 1148 Bowling	each $15 (maximum)
PE 1052 Riflemanship	$8 (maximum)
PE 1057, 1157, 1257 Skiing	each $60 (maximum)
PE 1205 Scuba and Skin Diving	$20 (maximum)
PE 1043 Beginning Horsemanship	$60
PE 1143 Intermediate Horsemanship	$60

DEPOSIT CARDS AND RENTAL CARDS

Deposit cards may be purchased from the east bank Bursar's Office, 145 Williamson Hall. Chemistry cards are $20; pharmacy cards are $10; art cards are $5. Chapter 31 veterans (veterans on vocational rehabilitation) should obtain a voucher from the Certification Service, 155 Williamson Hall, and present this voucher at the Bursar's Office when they purchase a card.

Chemistry and pharmacy cards MUST be presented for admittance to the first meeting of laboratory class. One card may serve for more than one class. Partially depleted cards are acceptable for admittance to class, provided that the unused portion is not less than the minimum stipulated for that course. The deposit card requirement is waived for graduate teaching assistants.

Laboratory material and breakage will be charged against your deposit card. Any unused balance will be refunded at the end of the course.

You must present your deposit card to be assigned a laboratory desk. If you are disabled, you should speak with your instructor about any special arrangements that are necessary.

Microscope rental cards—Students enrolling in the following courses who do not provide their own microscopes must purchase a microscope rental card: Biology 3013, Microbiology 1101, 3103, 5105, 5233, 5234. The non-refundable card is $3 and may be purchased from the Bursar's Offices.

PE Locker-Towel Rental Cards

Cooke Hall
Locker-Towel rental—$.50 per day, $9 per quarter, $27 for 3 quarters, $36 yearly. Gym clothing—$10 per quarter, $30 for 3 quarters, $40 yearly.

Norris Hall, St. Paul Gymnasium
Locker-Towel rental—$9 per quarter, $27 for 3 quarters, $36 yearly.

The cards for Cooke Hall and the St. Paul Gymnasium are purchased in those facilities.

The cards for Norris Hall are purchased at the Bursar's Offices.

TUITION RATES FOR STAFF MEMBERS

Students registered in the Graduate School and holding appointments as graduate assistants at 25% time or more are privileged to pay resident tuition rates, regardless of source of fund, resident status, or curriculum pursued. Members of the immediate families of qualified graduate students are eligible to pay resident tuition rates in the college in which they are registered. The University defines "immediate family" as spouse, children, parents, or legal guardian or ward living in the same household as the graduate assistant.

Resident tuition rate privileges are extended beyond the term of qualifying appointment, subject to the following rules:

The qualifying appointee must have held one of the above appointments for a minimum of 3 academic quarters, at 25% time or more, after September 15, 1969. Two summer sessions will count as one academic-year quarter. The use of the privileges is extended, after completion of the qualifying 3 quarters of appointment, on a quarter-for-quarter basis up to a maximum of 6 quarters of use. Appointment for 3 quarters entitles extension of the privilege for 3 additional quarters, and appointment for more than 3 quarters entitles extension (on a quarter-for-quarter basis) for not more than 6 quarters. The entitlement of the qualifying appointee and members of his or her immediate family to this privilege will not extend beyond 3 years from the termination of the last or most recent qualifying appointment.

This privilege does not apply to those holding appointments as instructors.

If you are a nonresident Graduate School student holding a current qualifying appointment as a graduate assistant, your eligibility for resident tuition will be authorized automatically when your employing department processes the documents necessary to put you on the payroll. Follow Graduate School Registration Instructions in Section 1 of this *Class Schedule* and proceed to the Registration Center in 202 Fraser Hall or 130 Coffey Hall (150 Williamson Hall for students with mobility impairments). Resident fees will automatically be assessed. **If nonresident fees are assessed, contact the Graduate Assistants Office, 411 Johnston Hall, 376-3644, for information on the status of your appointment or for separate resident certification.**

If you are a nonresident Graduate School student who formerly held a graduate assistantship, or if you are a member of the immediate family of a graduate assistant holding either a current or a former appointment as a graduate assistant, contact the Graduate Assistants Office, 376-3644, for information on procedures to claim the resident tuition privilege.

Students with bachelor's degrees who are in postbaccalaureate professional degree programs (including doctor of pharmacy, master of public health, master of hospital administration, master of agriculture, master of education) and who are teaching assistants paid on the General Operations and Maintenance Fund and appointed at 25% time or more are eligible to pay at the resident rate of their college of enrollment.

Medical and dental fellows and University of Minnesota civil service appointees who are working 75% time or more and who are registered in the Graduate School may pay fees at the resident rate. This privilege does not extend to members of the immediate families of such appointees.

Residence counselors with bachelor's degrees are privileged to pay tuition at the resident rate of the college in which they are enrolled.

Full-time faculty members who hold the Ph.D. degree may informally audit courses (with permission of the instructor and on a space-available basis) without registration or payment of fees. Should the need arise, official authorization may be obtained from the Graduate School.

If you are a nonresident entitled to resident fee privileges under these regulations, show the registration clerk your certification of appointment card when you turn in your approved Course Enrollment Request form at the Registration Center in 202 Fraser Hall or 130 Coffey Hall (150 Williamson Hall for students with mobility impairments).

Full-time faculty members with the rank of instructor or above, civil service personnel eligible for faculty group insurance, certain accredited foreign diplomatic officials, and their immediate families may pay resident fees in all colleges. Similar provision is made, one year after their arrival, for military personnel on duty in Minnesota for reasons other than college attendance. Full-time faculty on the staff of accredited Minnesota colleges (not their families) have the same privilege as provided for University faculty. Persons to whom these provisions apply should contact the Registration, Student Records, and Scheduling Office, 150 Williamson Hall, to make appropriate arrangements.

section 5 exams & grades

FINAL EXAMINATION SCHEDULE

The time of the examination for a class is based on the hours and days the class is regularly scheduled. This final examination schedule does not apply to courses offered primarily to students registered in the School of Dentistry, Law School, Medical School, College of Pharmacy, and College of Veterinary Medicine, or to courses numbered over 8000 that have no regularly scheduled classrooms.

To determine the time of a final examination, use the schedules on this page and the next according to the following instructions:

- Find the exam schedule for the college offering the course. To determine the college, see the last line under the department heading in the Schedule of Classes. (Because Schedules A and B can apply to either Minneapolis or St. Paul note the choice of class starting times.)
- Find the class hour and days in the Class Hours column of the schedule, and read across to find the time and date of the examination.
  - Go by the lecture hours rather than the laboratory or recitation hours.
  - Follow the MWF schedule if your class meets more than three days per week.
  - If a course meets on unusual days, follow the MWF exam time. (For example, a class meeting 0815 MTTh or 0815 TF would follow the 0815 MWF exam time.)
  - Courses meeting at irregular times should follow the exam schedule for the meeting time of the day earliest in the week. (For example, a course meeting 0915-1100 T, 0815-0900 Th would follow the 0915 TTh exam time.)
  - Except for split-hour classes, use the first full class hour if your class meets for more than one continuous hour. (For example, a class meeting 1315-1500 MWF would follow the 1315 MWF examination time schedule.)
  - For split-hour classes in Minneapolis, use the following arrangement: 0815-0930 TTh use 0815 TTh; 0945-1100 TTh use 0915 TTh; 1115-1230 TTh use 1115 TTh; 1245-1400 TTh use 1215 TTh; 1415-1530 TTh use 1415 TTh; 1545-1630 use 1515 TTh.
  - For split-hour classes in St. Paul, use the following arrangement: 0800-0915 TTh use 0800 TTh; 0930-1045 TTh use 0900 TTh; 1100-1215 TTh use 1100 TTh; 1230-1345 TTh use 1200 TTh; 1400-1515 TTh use 1400 TTh; 1530-1615 TTh use 1500 TTh.
- If your course is listed under the Common Examinations, use the common examination hour instead of the hour from Schedule A or Schedule B.
- Classes meeting four or more days a week may give 3-hour examinations provided the instructor notifies the Scheduling Office of his/her intention to do so on an A123 form. Three-hour examinations will be scheduled on the respective morning or afternoon the examinations would be given: December 12 (0830-1130), December 13 (1330-1630), December 14 (0830-1130; 1330-1630), December 15 (0830-1130; 1330-1630), December 16 (0830-1130; 1330-1630).

Special Note: Examination times for classes meeting at 0715 and 1615 will be arranged by the instructor, who must file Form A123 with the Scheduling Office.

FINAL EXAM SCHEDULES

Schedule A
Courses Offered in Colleges of Education and Liberal Arts, †Health Sciences, †Dentistry, and Public Affairs

Class Hours				Class Hours			
0800 *or* 0815 MWF	1330-1530	W	December 14	1200 *or* 1215 TTh	1030-1230	F	December 16
0800 *or* 0815 TTh	1600-1800	W	December 14	1300 *or* 1315 MWF	1030-1230	W	December 14
0900 *or* 0915 MWF	1600-1800	F	December 16	1300 *or* 1315 TTh	1600-1800	M	December 12
0900 *or* 0915 TTh	0800-1000	T	December 13	1400 *or* 1415 MWF	1600-1800	Th	December 15
1000 *or* 1015 MWF	1030-1230	M	December 12	1400 *or* 1415 TTh	1330-1530	Th	December 15
1000 *or* 1015 TTh	1330-1530	M	December 12	1500 *or* 1515 MWF	1030-1230	Th	December 15
1100 *or* 1115 MWF	1600-1800	T	December 13	1500 *or* 1515 TTh	0800-1000	Th	December 15
1100 *or* 1115 TTh	1030-1230	T	December 13	0800 *or* 0815 S	0800-1000	S	December 10
1200 *or* 1215 MWF	0800-1000	F	December 16	1000 *or* 1015 S	1030-1230	S	December 10

†Courses offered primarily to students other than medical or dental students.

Rooms for 1615-1700 and 1715-1800 hour classes will not be scheduled unless they are requested on Form A123.

Courses beginning at 1730 or 1800 will start at 1815 during exam week.

Schedule B

Courses Offered in Colleges of Agriculture, Biological Sciences, Forestry, and Home Economics, General College, School of Management, and Institute of Technology

Class Hours				Class Hours			
0800 *or* 0815 MWF	1330-1530	W	December 14	1200 *or* 1215 TTh	1030-1230	F	December 16
0800 *or* 0815 TTh	1600-1800	W	December 14	1300 *or* 1315 MWF	0800-1000	W	December 14
0900 *or* 0915 MWF	1350-1530	F	December 16	1300 *or* 1315 TTh	1600-1800	M	December 12
0900 *or* 0915 TTh	0800-1000	T	December 13	1400 *or* 1415 MWF	1600-1800	Th	December 15
1000 *or* 1015 MWF	0800-1000	M	December 12	1400 *or* 1415 TTh	1330-1530	Th	December 15
1000 *or* 1015 TTh	1330-1530	M	December 12	1500 *or* 1515 MWF	1030-1230	Th	December 15
1100 *or* 1115 MWF	1330-1530	T	December 13	1500 *or* 1515 TTh	0800-1000	Th	December 15
1100 *or* 1115 TTh	1030-1230	T	December 13	0800 *or* 0815 S	0800-1000	S	December 10
1200 *or* 1215 MWF	0800-1000	F	December 16	1000 *or* 1015 S	1030-1230	S	December 10

Rooms for 1615-1700 and 1715-1800 hour classes will not be scheduled unless they are requested on Form A123.
Courses beginning at 1730 or 1800 will start at 1815 during exam week.

Common Examinations—All sections of the following courses are examined together at the time indicated.

Saturday, December 10

Acct 1024, 1025—1030-1230
Biol 1009, 1009H, 1101—1030-1230
BFin 3000—1030-1230
BLaw 3058—0800-1000
Math 1008—1330-1530
Math 0009, 1111, 1131, 1142, 1201, 1211, 1221, 1231, 1621, 3211, 3221—1330-1630
Psy 1001—1900-2100
PubH 3001, 3004, 3033—1830-2130
QA 1050—0800-1000
Rhet 1101—0800-1000

Monday, December 12

CSci 3101, 3102—1830-2130
Econ 1001, 1001H—1830-2130

Tuesday, December 13

Econ 1002, 1002H—1830-2130
Ger 1101—1830-2130
QA 3055—1830-2130

Rooms—Examinations except common examinations are given in the regularly scheduled classroom unless your instructor arranges for and announces a different room. Note to instructors: requests for special final examination rooms must be submitted to the Scheduling Office by your department office on Form A123 on or before October 28. Notification of room assignments for all A123 forms received in the Scheduling Office by October 28 will be sent to departments on or before November 23.

Examination Scheduling Conflicts—Students are required to take final examinations at the times shown. However, if you have examination conflicts or three exams within a 16-hour period, you may request adjustment with your college office and with your instructor. Such a request must be presented at least two weeks before the examination period begins.

If you miss a final, an I or an N is recorded, depending upon your standing at the time. To make up the exam, you must obtain the instructor's permission.

SCHEDULE COMMITTEE REGULATIONS REGARDING EXAMINATIONS

1. There shall be no variations from the University final examination schedule except by concurrence of the dean of the college and the Director of Scheduling. **This prohibition also precludes moving a final examination from a scheduled time to study day or to the last or earlier meetings of the class, except laboratory final examinations** which cannot be held in accordance with the regular final examination schedule.

   All department requests for adjustment of final examination hours should be made on Form A163 by November 11 to permit publication of the change and orderly consideration of hardships. Additional common examinations may be requested on the same form, which is available in department offices.
2. Instructors requesting any variation from the official examination schedule must agree to give a special make-up examination to any student having examination conflicts or three examinations in one calendar day because of the change in hours.
3. Arranged examinations and authorized variations in published hours shall conform with the hour-periods shown in the examination schedules.
4. **No variations from the University final examination schedule will be considered official** until published in the Official Daily Bulletin printed in the *Minnesota Daily* and posted on campus bulletin boards.
5. Each college shall assume responsibility for making arrangements to spread out examinations for students who have more than two examinations scheduled in one day.
6. Since providing adequate seating for final examinations is a continuing and growing problem:
   a. departments are encouraged to limit final examinations to 2 hours;
   b. alternate seating should be requested only when it is deemed necessary for proper administration of the exam.

FALL QUARTER GRADES

Academic Staff—Grades are due in the Office of Registration, Student Records, and Scheduling (150 Williamson Hall) within 72 hours after the examination. Grades for fall quarter are due beginning Tuesday, December 13; the grades for the last examinations are due on Tuesday, December 20 by 8:30 a.m. Messenger service is provided. Please call 373-2153 when grades are ready. *Do not send grades by mail.*

Students—*Fall quarter grades for students registered in the College of Liberal Arts, College of Education, General College, University College, School of Nursing, Graduate School, and Institute of Technology* may be picked up in the Armory Gymnasium on the first day of winter quarter—January 3—from 8 a.m. to 4 p.m. Grades not picked up on January 3 may be obtained in 202 Fraser Hall for one week beginning January 10. *Grades for students in other colleges* will be distributed through college offices. **You must show identification to receive grades.**

GRADING POLICIES AND PRACTICES

1. There shall be two grading systems, A-B-C-D-N and S-N. Each college (meaning also each separate school or institute) will determine to what extent and under what conditions each system may be available to its students and faculty. Any college may specify what courses or what proportion of courses taken by its students or by its prospective students must be on a particular grading system.

2. The S-N system represents a self-contained alternative to the A-B-C-D-N system, and the two may not be combined for a particular student in a particular course. Students may receive symbols only from the grading system under which they are registered.

3. When the two grading systems are available to a student, he or she should declare a choice of systems as part of the initial registration. The choice may not be changed after the end of the second week of classes (first week in summer session).

4. The following symbols, as defined, may be used on the University's official transcript, the chronological quarterly record of the student's registrations after the end of the second week of classes (end of first five days of classes for summer sessions). The official transcript is released by the University only at the student's request, with the official seal imprinted.

   Grade of A— Represents achievement that is outstanding relative to the level necessary to meet course requirements.

   Grade of B— Represents achievement that is significantly above the level necessary to meet course requirements.

   Grade of C— Represents achievement that meets the basic course requirements in every respect.

   Grade of D— Represents achievement that is worthy of credit even though it does not fully meet the basic course requirements in every respect.

   Grade of S— Represents achievement that is deemed by the instructor to be satisfactory for the course in which the student is registered. This definition is intended to imply that the standards for S may vary from one course to another.

   Symbol of W— Entered by the Registration, Student Records, and Scheduling Office when a student officially withdraws from a course, in accordance with procedures established by the student's college.

   Symbol of I— Assigned by an instructor to indicate **Incomplete**, in accordance with provisions announced in class at the beginning of the quarter, when in the instructor's opinion there is a reasonable expectation that the student can complete successfully the work of the course. An **I** that is not made up by the end of the next quarter of residence becomes an **N**; instructors may set dates within the quarter for make-up examinations. (In the Graduate School, in master's degree programs in undergraduate colleges, and in the doctor of medicine programs, an **I** remains until changed by the instructor.) When an **I** is changed to another symbol, the **I** is removed from the record.

   Symbol of N— Assigned when the student does not earn an **S** or a **D** or higher and is not assigned an **I**. It stands for **no credit.**

   Symbol of X— Reported to indicate that a student may continue in a sequence course in which a grade cannot be determined until the full sequence of quarters is completed. The instructor will submit a grade for each **X** when the student has completed the sequence.

In connection with all achievement symbols, but especially in connection with S, the instructor is obligated to define to a class as explicitly as possible in its early meetings the performance that will be necessary to earn each.

   Symbol of V— Indicates registration as an auditor or visitor, a non-credit, non-grade registration.

   Symbol of T— Posted as a supplement in front of the original grade to indicate credits transferred from another institution or from one college or campus to another within the University when re-evaluation is required.

In the doctor of medicine and doctor of veterinary medicine programs, O (Outstanding) may be used with S-N.

5. If a student is permitted by the college to repeat a course, all grades are reported on the official transcript.

6. Any college may set special scholastic or other standards for registration in a particular course, for scholastic probation, for admission, for honors, for continued residence, for degrees, etc.

7. **The grading system described here became effective fall quarter 1977, thereby replacing all previous University systems, but its definitions and provisions may not be applied retroactively to any grades or symbols recorded before that time.**

8. Each transcript will be clearly identified as to the procedures under which it was produced and will be maintained and released under policies in effect during the time of registration.

9. The Assembly Committee on Student Academic Services has authority to grant to individual colleges permission to use experimental grading methods outside the provisions of this official University system, for a specified period, provided that the proposals do not interfere significantly with the registration options of students from other colleges and programs. Such experimental systems shall be reported for information to the Twin Cities Campus Assembly as soon as permitted and, after the specified period, shall be re-evaluated, to be either extended, discontinued, or, with Assembly approval, made a regular system for the unit concerned.

10. The Assembly Committee on Student Academic Services is charged with resolving disputes between and among colleges should procedures developed under this grading system result in unacceptable complications for students registering across college lines. The committee may bring to the Assembly issues it is unable to resolve informally through negotiation, with recommendations for resolution.

● STUDENT SHOPPER'S GUIDE ●

AIR FORCE

MINNEAPOLIS, MN:
Col Robert B. Patrick
AFROTC Dept. 415
University of Minnesota
(612) 373-2205

TWIN CITIES, MN:
Officer Training School
SSgt Bruce Trickel
Rm 586,
Bishop Henry Whipple Bldg.

AIR NATIONAL GUARD

ST. PAUL, MN:
MSG Gregory C. Beckwith
TSG Timothy R. Egan
SSG John O. Raymond
HQ 133rd Tac Airlift Wing
Mpls.-St. Paul Intl. Airport
(612) 725-5622

ARMY RESERVE

ST. PAUL, MN:
1457 University Avenue
(612) 644-5688
Or call toll free 1-800-USA-Army

ARMY ROTC

MINNEAPOLIS, MN:
Contact:
Prof. of Military Science
15 Church Street
(612) 373-2212

CANON

Contact your nearest local Canon Dealer.

CASIO

See your nearest local Casio Dealer.

CHEVROLET

The new Corvette. The Rewards of a higher Education. Available at your Chevrolet Dealer.

DELCO

GM/Bose - Experience a totally new class of automotive music systems from DELCO at your local GM Dealer.

DODGE SHELBY CHARGER

It ain't just paint

FORD

The all-new 1984 Ford Tempo Style and Technology in Total Harmony. Available at your Ford Dealer.

GENERAL MOTORS

How much is too much to Drink? See message in this issue.

HONDA

See your local Honda Dealer.

JENSEN

Contact your nearest Jensen car audio dealer.

K-MART

Toshiba On Sale at K-Mart. AM/FM Stereo Radio Cassette, AM/FM 4-Band Cassette and personal stereo cassette players - On Sale At K-Mart Stores Nationwide.

THE LEE COMPANY

For the Lee Dealer nearest you, call Toll Free 1-800-835-2246 x95, In Kansas 1-800-342-2421 x 95

MARINE CORPS

MINNEAPOLIS, MN:
Officer Selection Officer
Room B34, FOB
210 Third Avenue S.

OLYMPUS

Check your yellow pages for the Olympus Dealer nearest you.

PANASONIC

See your Local Authorized Panasonic Dealer.

PONTIAC 1000

T.G.I.F. Available at your Pontiac Dealer.

RADIO SHACK

Visit your nearest Radio Shack Retail Store.

RADIO SHACK

Visit your nearest Radio Shack Computer Center.

SHARP

See your College Bookstore or your local Sharp Dealer.

TECHNICS

Technics is Available Wherever fine audio equipment is sold.

TIME INC.

For subscriptions at Special rates, mail in postage paid reply card.

OTHER LOCAL MERCHANTS

See Display Ad For More Information

MINNEAPOLIS, MN:
Air Force ROTC
Room 3, Armory
Call 373-2205

Art Materials, Inc.
315 14th Ave. S.E.
Call 331-6864

B'nai B'rith Hillel Foundation
1521 University Ave. S.E.
Call 332-4691

Education Assistant Researchers, Inc.
129 Lake Street
Call 827-3523

Extension Classes, Office of Study Abroad
77 Pleasant Street
Call 376-5049

International Study & Travel Center
44 Coffman Union
Call 373-0180

Men's Intercollegiate Athletics
205 Bierman Field Athletic Building
516 15th Ave. S.E.
Call 373-3181

Minneapolis Star & Tribune
425 Portland Ave.

Morgan's Fine Jewelry
Suite 1740, Midwest Federal Building
801 Nicollet Mall
Call 332-0453

MSA STORE
Ground Floor Coffman

Nelson's Office Supply
1417 4th Street
Call 331-5969

Peking Garden Restaurant
2324 University Ave. S.E.
Call 623-3989

Plasma Alliance
1026 Washington Ave. S.E.
Call 331-9180

Rec Sports
Call 373-4200
(See Ad for Details)

Stanley H. Kaplan
328 E. Hennepin
Call 378-9191

Student Computer Services
327 14th Ave. S.E.
Call 379-0204

Team Electronics
(See Ad for Nearest Location)

The Artery
413 Cedar Ave.
Call 333-2558

The Green Mill
(See Ad for Nearest Location)

The Housing Office (U. of Minnesota)
Comstock Hall East
210 Delaware St. S.E.
Call 373-7542

University Bindery
P&GA Building, Room 180
2818 Como Ave. S.E.
Call 373-2843

University Optique and Contact Lens
Dinkydale Arcade
Call 331-7100

University Student Legal Services
160 West Bank Union Skyway
Call 376-5237

West Bank Co-op
Grocery
417 Cedar Ave.
Call 338-2720

Pharmacy
427 Cedar Ave.
Call 333-6328

EDEN PRAIRIE, MN:
KJO/104
11320 Valley View Road
Call 941-5774

ST. PAUL, MN:
Continental Merchandisers
c/o Sur-Savers, Inc.
P.O. Box 4613
Call 645-4197

Minnesota Army National Guard
(See Ad for Details)
Call 1-800-652-9032

St. Paul Student Center
(See Ad for Details)
Call 373-1404

PHILADELPHIA, PA:
The Institute for Paralegal Training
1926 Arch Street
Call 215-567-4811

Now You Can Copy Tapes in Half the Time With Radio Shack's Dubbing Deck (and do it for $60 less!)



Reduced $60.00. At $339.95, the Realistic® SCT-28 was a great deal. Now at $279.95, the convenience of a dual-cassette deck is even more affordable!

High-Speed Dubbing. Duplicate your tapes at twice the normal recording speed. You get professional sounding copies and you save time, too—no second deck or patch cords required.

Two Superb Decks in One. Deck-1 is designed for playback only, and features a special narrow-gap tape head. Deck-2 has full record/play capability and a wide-gap head for superior recording results. And both decks feature soft-touch controls for smooth, easy operation.

Continuous-Play Function. You can set the SCT-28 to automatically play two cassettes in sequence for up to two hours of uninterrupted music.

Auto-Search Music System. Deck-1 has ASMS to help you locate your favorite selections quickly. Each time you press the button the SCT-28 finds and plays the next or previous song automatically!

Features for Great-Sounding Copies. You get Dolby*B noise reduction for expanded dynamic range and dramatically lowered tape hiss. Selectors for noise-free metal, CrO_2 high bias and normal cassettes plus a fine-bias control. Two-color, five-step LED peak meters to indicate the signal level. And a normal-speed button so you can listen as you dub. Plus, mike and line inputs let you use the SCT-28 like a regular deck.

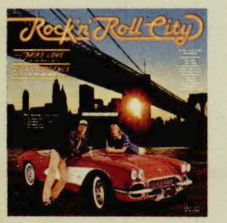
Come in for a hands-on demonstration today and discover high-speed dubbing for yourself. Only $26 per month on Radio Shack/CitiLine credit.

Take it from Mike Love of The Beach Boys and Dean Torrence of Jan and Dean:

"Dean uses the SCT-28 to make copies of my songs, so he can learn to sing."



"Rock'n'Roll City" Dolby Cassette Starring Mike & Dean



Only $4.99

A Radio Shack exclusive! 12 new Rock'n'Roll recordings by Mike & Dean with special guests: The Beach Boys, Paul Revere & The Raiders, and The Association. New recordings of 60's hits will make you feel 18 again. Produced by Daryl Dragon.

GET YOUR FREE AUDIO CATALOG

32 Full-Color Pages Show You What's Really New in Stereo Hi-Fi!

Name _____

Address _____ Apt. # _____

City _____ State _____ Zip _____

Bring this coupon to your nearby Radio Shack or mail to:
Radio Shack, 300 One Tandy Center, Fort Worth, TX 76102

84A-063

Radio Shack®
A DIVISION OF TANDY CORPORATION

*TM Dolby Laboratories Licensing Corp.

Prices apply at participating Radio Shack stores and dealers.

SCHEDULE WORKSHEET

TIMETABLE

PERIOD OR TIME	MON	TUES	WED	THURS	FRI	SAT

COURSES

COURSE NO	TITLE	INSTRUCTOR



YOU CAN GO FOR IT ALL AT NSA

ELECTRICAL ENGINEERS

■ A wide variety of R & D projects which require Communications, Electronic and Computer Engineering graduates.

MATHEMATICIANS

■ Diverse Problem Solving in Communications Related Areas. Long Range Research and Evaluation of New Techniques.

COMPUTER SCIENTISTS

■ A variety of opportunities in Systems Analysis and Design, Programming, Data Base Management, Computer Networking/Security and Graphics.

LANGUAGE MAJORS

■ Translation, Transcription and Analysis/Reporting for Slavic, Near Eastern and Asian Language Majors.

CO-OP PROGRAMS

■ NSA has an extensive CO-OP Program at the Undergraduate and Graduate levels for students in the disciplines listed above.

■ Transportation Paid

■ Housing Available

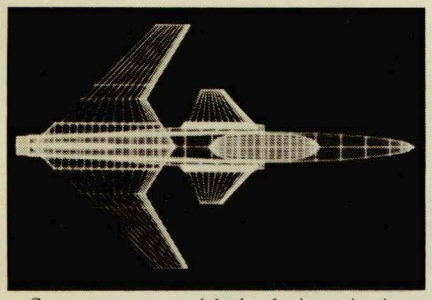
Contact CO-OP Coordinator on your campus.

An Equal Opportunity Employer. U.S. Citizenship Required.

Interested individuals contact:

NATIONAL SECURITY AGENCY
M322 (1GH-DC)
Fort George G. Meade, MD. 20755

ENGINEERING TAKES ON EXCITING NEW DIMENSIONS IN THE AIR FORCE.



Computer-generated design for investigating structural strengths and weaknesses.

Developing and managing Air Force engineering projects could be the most important, exciting challenge of your life. The projects extend to virtually every engineering frontier.

5 CAREER FIELDS FOR ENGINEERS



Air Force electrical engineer studying aircraft electrical power supply system.

Engineering opportunities in the Air Force include these five career areas: aeronautical, architectural, astronautical, electrical and nuclear. Hundreds of diverse specialties are included in a wide variety of work settings. For example, an electrical engineer may work in aircraft design, space systems, power production, communications or research. An aeronautical engineer might be included in wind tunnel testing, designing cockpit displays and flight testing.

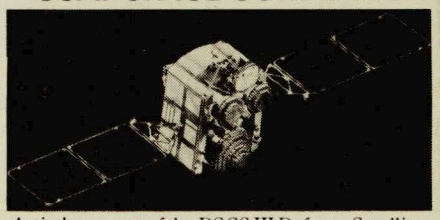
PROJECT RESPONSIBILITY COMES EARLY IN THE AIR FORCE



Air Force aeronautical engineers discuss flight characteristics of a fighter aircraft.

Most Air Force engineers have complete project responsibility early in their careers. For example, a first lieutenant directed work on a new airborne electronic system to pinpoint radiating targets. Another engineer tested the jet engines for advanced tanker and cargo aircraft.

OPPORTUNITIES IN THE NEW USAF SPACE COMMAND



Artist's concept of the DSCS III Defense Satellite Communications System satellite. (USAF photo.)

Recently, the Air Force formed a new Space Command. Its role is to pull together space operations and research and development efforts, focusing on the unique technological needs of space systems. You may have an opportunity to join the team that operates superior space systems as the Air Force moves into the twenty-first century.

To learn more about how you can be part of the team, as an officer, see your Air Force recruiter or call our Engineer Hotline toll free 1-800-531-5826 (in Texas call 1-800-292-5366). There's no obligation.

AIM HIGH
AIR FORCE
A great place for engineers.



Before you work anywhere, take a look at the tools we work with.

NASA's space shuttle. For Air Force officers working as scientists and engineers, the challenge is just beginning. In fact, from laboratories to lasers to launch pads, we have exciting projects and management opportunities very few employers can offer.

For example, Air Force scientists are developing experiments that will be an important part of the space shuttle's cargo in the years to come. Experienced Air Force engineers will work as shuttle mission planners and as astronaut flight controllers.

If you have a technical degree with a science or math background, we may have a challenging future for you as an Air Force officer. It's a future that demands the vision and commitment of people like you. And it's vital to our country.

For more information about Air Force science and engineering opportunities, mail the card. Or call our toll-free Engineer Hotline 1-800-531-5826 (in Texas 1-800-292-5366). Better yet, send your resume to HRS/RSAANE, Randolph AFB, TX 78150. There's no obligation.

AIR FORCE

A great place for scientists and engineers.


T.G.I.F.
You could use a break. You spent so many hours at the library this week you were beginning to get your phone calls there. Now you're free, and ready to go. You've got your nifty Pontiac 1000 full of fuel. And you're about to fill this fun little Hatchback with your favorite friends and refreshments. The beach, the mountains—it really doesn't matter. All you want to do this weekend is hit the road... instead of the books.
DAVIS HALL
1000
PONTIAC
WE BUILD EXCITEMENT
GM

MGC
C568

UNIVERSITY OF MINNESOTA

PRELIMINARY CLASS SCHEDULE

WINTER/SPRING 1984

TWIN CITIES

This preliminary winter/spring schedule lists the courses that will be offered during the coming 1984 winter and spring quarters, the probable times, and the probable areas of campus on which they will be scheduled. These winter and spring sections are printed to help you plan a tentative schedule for the coming academic year while you are planning your fall quarter registration. You should not use this information for actual winter and spring registration because all course and time listings are subject to change.

ACCOUNTING (Acct)
Management
Winter Quarter

R1024 Principles of Financial Accounting I (§1050; prereq 3rd qtr freshman) (A-N only)
–1 0815-0900 MWF, West Bank, 3 cr
–2 0815-0900 MWF, West Bank, 3 cr
–3 0915-1000 MWF, West Bank, 3 cr
–4 0915-1000 MWF, West Bank, 3 cr
–5 0915-1000 MWF, West Bank, 3 cr
–6 1015-1100 MWF, West Bank, 3 cr
–7 1015-1100 MWF, West Bank, 3 cr
–8 1115-1200 MWF, West Bank, 3 cr
–9 1115-1200 MWF, West Bank, 3 cr
–10 1215-1300 MWF, West Bank, 3 cr
–11 1215-1300 MWF, West Bank, 3 cr
–12 1315-1400 MWF, West Bank, 3 cr
–13 1315-1400 MWF, West Bank, 3 cr
–14 1415-1500 MWF, West Bank, 3 cr
–15 1415-1500 MWF, West Bank, 3 cr

R1025 Principles of Financial Accounting II (§1050; prereq 1024) (A-N only)
–1 0815-0900 MWF, West Bank, 3 cr
–2 0915-1000 MWF, West Bank, 3 cr
–3 0915-1000 MWF, West Bank, 3 cr
–4 1015-1100 MWF, West Bank, 3 cr
–5 1015-1100 MWF, West Bank, 3 cr
–6 1115-1200 MWF, West Bank, 3 cr
–7 1215-1300 MWF, West Bank, 3 cr
–8 1315-1400 MWF, West Bank, 3 cr
–9 1315-1400 MWF, West Bank, 3 cr
–10 1415-1500 MWF, West Bank, 3 cr

R3102 Accounting Theory and Practice II (§8102; prereq 3101) (A-N only)
–1 0815-0915 MWF, West Bank, 4 cr
–2 0930-1030 MWF, West Bank, 4 cr
–3 1200-1300 MWF, West Bank, 4 cr
–4 1430-1530 MWF, West Bank, 4 cr

R3201 Cost Accounting (prereq 3001, MIS 3099, QA 3055) (A-N only)
–1 0930-1030 MWF, West Bank, 4 cr
–2 1430-1600 MW, West Bank, 4 cr

R5125 Auditing Principles and Procedures (prereq 3102, 3201) (A-N only)
1315-1445 MW, West Bank, 4 cr

R5126 Internal Auditing (prereq 5125) (A-N only)
–1 1730-1900 TTh, West Bank, 4 cr
–2 1730-1900 TTh, West Bank, 4 cr (MBA only)

R5135 Income Tax Accounting (prereq 1051) (A-N only)
–1 1315-1415 MWF, West Bank, 4 cr
–2 1545-1645 MWF, West Bank, 4 cr

R5180 Advanced Accounting (prereq 3102) (A-N only)
–1 0930-1100 MW, West Bank, 4 cr
–2 1430-1600 MW, West Bank, 4 cr

R5290 Perspectives of Top Financial Executives (prereq 3201 or MBA 8035) (A-N only)
–1 1430-1600 MW, West Bank, 4 cr
–2 1430-1600 MW, West Bank, 4 cr (MBA only)

R5310 Current Topics in Financial Accounting (prereq 3102) (A-N only)
–1 1430-1600 MW, West Bank, 4 cr
–2 1430-1600 MW, West Bank, 4 cr (MBA only)

R8102 Accounting Theory and Practice II (§3102; prereq 8101) (A-N only)
1800-1945 MW, West Bank, 4 cr

R8128 Analytic Review and Audit Sampling (prereq #) (A-N only)
1800-1945 MW, West Bank, 4 cr

R8201 Managerial Accounting (§3201; prereq 8051, MIS 5101) (A-N only)
2000-2145 MW, West Bank, 4 cr

R8820 Seminar: Managerial Cost Accounting (prereq #, PhD student) (A-N only)
1300-1600 F, West Bank, 4 cr

R8825 Auditing: Seminar (prereq #) (A-N only)
0915-1100 TTh, West Bank, 4 cr

R8990 Readings in Accounting (prereq #) (A-N only)
–1 1515-1700 TTh, West Bank, ar cr
–2 ar cr

Spring Quarter

R1024 Principles of Financial Accounting I (§1050; prereq 3rd qtr freshman) (A-N only)
–1 0815-0900 MWF, West Bank, 3 cr
–2 0815-0900 MWF, West Bank, 3 cr
–3 0815-0900 MWF, West Bank, 3 cr
–4 0915-1000 MWF, West Bank, 3 cr
–5 1015-1100 MWF, West Bank, 3 cr
–6 1115-1200 MWF, West Bank, 3 cr
–7 1115-1200 MWF, West Bank, 3 cr
–8 1215-1300 MWF, West Bank, 3 cr
–9 1215-1300 MWF, West Bank, 3 cr
–10 1215-1300 MWF, West Bank, 3 cr
–11 1315-1400 MWF, West Bank, 3 cr
–12 1315-1400 MWF, West Bank, 3 cr
–13 1415-1500 MWF, West Bank, 3 cr
–14 1515-1600 MWF, West Bank, 3 cr
–15 1515-1600 MWF, West Bank, 3 cr

R1025 Principles of Financial Accounting II (§1050; prereq 1024) (A-N only)
–1 0815-0900 MWF, West Bank, 3 cr
–2 0815-0900 MWF, West Bank, 3 cr
–3 0915-1000 MWF, West Bank, 3 cr
–4 1015-1100 MWF, West Bank, 3 cr
–5 1115-1200 MWF, West Bank, 3 cr
–6 1215-1300 MWF, West Bank, 3 cr
–7 1315-1400 MWF, West Bank, 3 cr
–8 1315-1400 MWF, West Bank, 3 cr
–9 1415-1500 MWF, West Bank, 3 cr
–10 1415-1500 MWF, West Bank, 3 cr

R3001 Managerial Accounting (prereq 1025) (A-N only)
–1 0930-1030 MWF, West Bank, 4 cr
–2 1045-1145 MWF, West Bank, 4 cr

R3101 Accounting Theory and Practice I (§8101; prereq 1025) (A-N only)
–1 1315-1415 MWF, West Bank, 4 cr
–2 1430-1530 MWF, West Bank, 4 cr

R3199 Internship in Public Accounting (prereq 5125, #) (S-N only)
3 cr

R3201 Cost Accounting (prereq 3001, MIS 3099, QA 3055) (A-N only)
–1 0930-1030 MWF, West Bank, 4 cr
–2 1315-1415 MWF, West Bank, 4 cr
–3 1430-1530 MWF, West Bank, 4 cr
–4 1545-1645 MWF, West Bank, 4 cr

R5125 Auditing Principles and Procedures (prereq 3102, 3201) (A-N only)
–1 1200-1345 TTh, West Bank, 4 cr
–2 1400-1545 TTh, West Bank, 4 cr
–3 1800-1945 TTh, West Bank, 4 cr (MBA, PhD only)

R5126 Internal Auditing (prereq 5125) (A-N only)
1800-1930 TTh, West Bank, 4 cr (MBA only)

R5135 Income Tax Accounting (prereq 1051) (A-N only)
–1 1200-1300 MWF, West Bank, 4 cr
–2 1545-1645 MWF, West Bank, 4 cr

R5180 Advanced Accounting (prereq 3102) (A-N only)
–1 1315-1415 MWF, West Bank, 4 cr
–2 1430-1530 MWF, West Bank, 4 cr
–3 1800-1945 MW, West Bank, 4 cr (MBA, PhD only)

R5270 Reporting for Management Control (§3255, 8255; prereq 3201) (A-N only)
–1 1130-1300 TTh, West Bank, 4 cr
–2 1810-1940 TTh, West Bank, 4 cr (MBA only)

R5310 Current Topics in Financial Accounting (prereq 3102) (A-N only)
–1 0930-1100 TTh, West Bank, 4 cr
–2 0930-1100 TTh, West Bank, 4 cr (MBA only)
–3 1515-1645 TTh, West Bank, 4 cr

R8160 Financial Statement Analysis (§3160; prereq 1051, for nonacct maj only) (A-N only)
1800-1940 MW, West Bank, 4 cr

R8805 Financial Accounting: Seminar I (prereq #, PhD student) (A-N only)
1115-1300 Th, West Bank, 4 cr

R8990 Readings in Accounting (prereq #) (A-N only)
1515-1700 TTh, West Bank, ar cr

ADULT AND TEACHER EDUCATION (Educ)
Curriculum And Instruction
Education
Winter Quarter

5103 Adult Education Workshop (max 12 cr; prereq practicing adult educator or #) (A-N only)
–1 1615-1815 M, Williams, 3 cr (Issues in Adult Education)
–2 1800-2100 T, Bruning, 3 cr (Rochester) (Volunteerism)
–3 1615-1845 W, Copeland, 3 cr (Older Adult Education)

5104 Survey of Adult Education (prereq sr) (A-N only)
1545-1800 Th, East Bank, 3 cr

5202 Adult Literacy: Diagnosis and Prescription (prereq 5201 or #) (A-N only)
1615-1815 T, East Bank, Park, 3 cr

5204 Reading in Work Settings (§VoEd 5204) (A-N only)
1800-2100 Th, Park, 3 cr

5205 Field Experience in Adult Education (max 8 cr; prereq #) (A-N only)
–1 Bruning, 4-8 cr
–2 Copeland, 4-8 cr
–3 Park, 4-8 cr
–4 Williams, 4-8 cr
–5 Willie, 4-8 cr

5401 Adult Learning and Development Through Life Span (A-N only)
1415-1600 T, East Bank, Williams, 3 cr

5605 Research Topics: International Development Education (A-N only)
1615-1800 T, Cogan, 3 cr

8284 Problems: Teacher Education (prereq #)
Howey, Willie, 3-9 cr

8302 Problems: Adult Education (prereq #)
–1 Bruning, 1-9 cr
–2 Copeland, 1-9 cr
–3 Park, 1-9 cr
–4 Williams, 1-9 cr
–5 Willie, 1-9 cr

Spring Quarter

5103 Adult Education Workshop (max 12 cr; prereq practicing adult educator or #) (A-N only)
–1 1615-1800 M, East Bank, Bruning, 3 cr
–2 1830-2030 M, East Bank, Bruning, 3 cr

5203 Adult Literacy: Methods and Materials (prereq 5202 or Elem 5331 or #) (A-N only)
1515-1715 T, East Bank, Park, 3 cr

5205 Field Experience in Adult Education (max 8 cr; prereq #) (A-N only)
–1 Bruning, 4-8 cr
–2 Copeland, 4-8 cr
–3 Park, 4-8 cr
–4 Williams, 4-8 cr
–5 Willie, 4-8 cr

5301 Designing the Adult Education Program (A-N only)
–1 1545-1800 Th, East Bank, Copeland, 3 cr
–2 1800-2030 T, Copeland, 3 cr (Rochester)

5401 **Adult Learning and Development Through Life Span** (A-N only)
1615-1800 M, East Bank, Williams, 3 cr

5501 **Continuing Education and the Professions** (A-N only)
0845-1100 S, East Bank, Willie, 3 cr

5607 **Applied International Development Education** (A-N only)
1615-1800 T, Braun, 3 cr

8284 **Problems: Teacher Education** (prereq #)
Howey, Willie, 3-9 cr

8302 **Problems: Adult Education** (prereq #)
–1 Bruning, 1-9 cr
–2 Copeland, 1-9 cr
–3 Park, 1-9 cr
–4 Williams, 1-9 cr
–5 Willie, 1-9 cr

AEROSPACE ENGINEERING AND MECHANICS (AEM)
Institute of Technology

Winter Quarter

R**1005** **Aerospace Survey and Laboratory** (prereq lower division AEM maj)
1415-1500 T, East Bank, 1 cr

R**1015** **Statics** (prereq Phys 1271, Math 1231, IT stu) (A-N only)
1315-1400 MTWThF, East Bank, 4 cr

R**3016** **Deformable Body Mechanics** (prereq 1015, ¶Math 3221, IT stu) (A-N only)
★LECT 1015-1100 MWF, East Bank,
–1 REC 1015-1100 TTh, East Bank, 4 cr
–2 REC 1015-1100 TTh, East Bank, 4 cr
–3 REC 1015-1100 TTh, East Bank, 4 cr
–4 REC 1015-1100 TTh, East Bank, 4 cr
–5 REC 1015-1100 TTh, East Bank, 4 cr
–6 REC 1015-1100 TTh, East Bank, 4 cr
–7 REC 1015-1100 TTh, East Bank, 4 cr
–8 REC 1015-1100 TTh, East Bank, 4 cr

R**3036** **Dynamics** (prereq 1015, ¶Math 3221, IT stu) (A-N only)
★LECT 1215-1300 MWF, East Bank,
–1 REC 1215-1300 TTh, East Bank, 4 cr
–2 REC 1215-1300 TTh, East Bank, 4 cr
–3 REC 1215-1300 TTh, East Bank, 4 cr
–4 REC 1215-1300 TTh, East Bank, 4 cr
–5 REC 1215-1300 TTh, East Bank, 4 cr

R**3092** **Statics and Mechanics of Materials I** (prereq Math 1221, Phys 1042 or 1281, architecture maj or adult special)
★LECT 0815-0900 MWF, East Bank,
–1 REC 0815-0900 TTh, East Bank, 4 cr
–2 REC 0815-0900 TTh, East Bank, 4 cr
–3 REC 0815-0900 TTh, East Bank, 4 cr
–4 REC 0815-0900 TTh, East Bank, 4 cr

R**3200** **Introduction to Engineering Fluid Mechanics** (§CE 3400; prereq 1015, Math 3221, Phys 1271, IT stu)
★LECT 0915-1000 MWF, East Bank,
–1 LAB 1015-1200 M, East Bank, 4 cr
–2 LAB 1515-1700 M, East Bank, 4 cr
–3 LAB 1015-1200 W, East Bank, 4 cr
–4 LAB 1515-1700 W, East Bank, 4 cr
–5 LAB 1015-1200 F, East Bank, 4 cr
–6 LAB 1515-1700 F, East Bank, 4 cr

R**5202** **Incompressible Boundary Layer Theory** (prereq 5200, upper div IT stu)
1015-1100 MTWThF, East Bank, 4 cr

R**5206** **Aerodynamics of Lifting Surfaces** (prereq 5200)
1115-1200 MTWThF, East Bank, 4 cr

R**5321** **Automatic Flight Control Systems** (prereq 3401, ¶5300 or #)
1515-1700 MW, East Bank, 4 cr

R**5330** **Design of Aerospace Elements and Systems** (prereq 4th yr engineering maj, #)
1515-1700 TTh, East Bank, 4 cr

R**5410** **Introduction to Astrodynamics** (prereq 5438)
1415-1500 MTWTh, East Bank, 4 cr

R**5440** **Intermediate Dynamical Systems** (prereq 3401, ME 3201 or #)
0915-1000 MWThF, East Bank, 4 cr

R**5515** **Aerospace Structures I** (prereq 3016, upper div IT stu)
1315-1400 MTWThF, East Bank, 4 cr

R**5581** **Mechanics of Solids II** (prereq 5580 or #)
0915-1000 MWThF, East Bank, 4 cr

R**5646** **Aeromechanics Laboratory II** (prereq 3016, 5200, aerospace engineering maj)
★LECT 0815-0900 M, East Bank,
–1 LAB 0815-1200 T, East Bank, 2 cr
–2 LAB 1315-1700 T, East Bank, 2 cr
–3 LAB 0815-1200 Th, East Bank, 2 cr
–4 LAB 1315-1700 Th, East Bank, 2 cr

R**5650** **Aeroelasticity I** (prereq 5206)
1115-1200 MTWF, East Bank, 4 cr

5801 **Problems in Mechanics and Materials** (prereq △)
1-4 cr

5811 **Problems in Fluid Mechanics** (prereq △)
1-4 cr

5840 **Industrial Assignment** (prereq regis in engineering intern program, △)
2 cr

5841 **Industrial Assignment** (prereq regis in engineering intern program, △)
2 cr

5842 **Industrial Assignment** (prereq regis in engineering intern program, △)
2 cr

8002 **Seminar: Aerospace Engineering and Mechanics** (prereq consent of director of graduate studies)
1415-1600 F, East Bank, 1 cr

R**8202** **Fluid Mechanics II** (prereq 8201)
1415-1500 MTWTh, East Bank, 4 cr

8221 **Rheological Fluid Mechanics II** (prereq 8220 or #)
1515-1700 TTh, East Bank, Joseph, 3 cr

8411 **Linear Systems** (prereq 5438 or #)
1115-1200 MTWF, East Bank, 4 cr

8511 **Continuum Mechanics II** (prereq 8510 or #)
1515-1700 MW, East Bank, 4 cr

8522 **Theory of Plasticity** (prereq 8510 or 5580 or #)
1215-1400 MW, East Bank, Hodge, 4 cr

8585 **Advanced Topics in Continuum Mechanics** (prereq 8510, 8511, 8512, #)
1015-1100 MWF, East Bank, Ericksen, 3 cr

8801 **Selected Topics in Mechanics and Materials** (prereq △)
1-4 cr

8811 **Selected Topics in Fluid Mechanics** (prereq △)
1-4 cr

8880 **Plan B Project** (max 4 cr; prereq grad aerospace engineering or mechanics maj, △)
1-4 cr

Spring Quarter

R**1006** **Aerospace Survey and Laboratory** (prereq 1005, lower division AEM maj)
1315-1400 T, East Bank, 1 cr

R**1015** **Statics** (prereq Phys 1271, Math 1231, IT stu) (A-N only)
1315-1400 MTWThF, East Bank, 4 cr

R**3016** **Deformable Body Mechanics** (prereq 1015, ¶Math 3221, IT stu) (A-N only)
★LECT 1215-1300 MWF, East Bank,
–1 REC 1215-1300 TTh, East Bank, 4 cr
–2 REC 1215-1300 TTh, East Bank, 4 cr
–3 REC 1215-1300 TTh, East Bank, 4 cr
–4 REC 1215-1300 TTh, East Bank, 4 cr
–5 REC 1215-1300 TTh, East Bank, 4 cr
–6 REC 1215-1300 TTh, East Bank, 4 cr
–7 REC 1215-1300 TTh, East Bank, 4 cr

R**3036** **Dynamics** (prereq 1015, ¶Math 3221, IT stu) (A-N only)
★LECT 0915-1000 MWF, East Bank,
–1 REC 0915-1000 TTh, East Bank, 4 cr
–2 REC 0915-1000 TTh, East Bank, 4 cr
–3 REC 0915-1000 TTh, East Bank, 4 cr
–4 REC 0915-1000 TTh, East Bank, 4 cr
–5 REC 0915-1000 TTh, East Bank, 4 cr
–6 REC 0915-1000 TTh, East Bank, 4 cr
–7 REC 0915-1000 TTh, East Bank, 4 cr
–8 REC 0915-1000 TTh, East Bank, 4 cr
–9 REC 0915-1000 TTh, East Bank, 4 cr

R**3093** **Statics and Mechanics of Materials II** (prereq 3092)
★LECT 0815-0900 MF, East Bank,
★REC 0815-0900 W, East Bank,
–1 LAB 0915-1100 M, East Bank, 4 cr
–2 LAB 0915-1100 T, East Bank, 4 cr
–3 LAB 0915-1100 W, East Bank, 4 cr
–4 LAB 0915-1100 Th, East Bank, 4 cr

R**5201** **Shock Waves and Compressible Fluid Flow** (prereq 5200, upper div IT stu)
1015-1100 MTWThF, East Bank, 4 cr

R**5250** **Computational Fluid Mechanics** (prereq FORTRAN, 5206 or #)
0915-1000 MTWThF, East Bank, Moran, 4 cr

R**5300** **Flight Mechanics** (prereq 5206)
★LECT 1215-1300 MWF, East Bank, 4 cr
–1 REC 1215-1400 Th, East Bank,

R**5359** **Deceleration of Aerospace Craft** (prereq 5200, 3036)
1415-1600 MW, East Bank, 4 cr

R**5370** **Aerodynamics of V/Stol Flight** (prereq 5206)
1515-1700 TTh, East Bank, 4 cr

R**5435** **Introduction to Random Vibrations** (prereq 3401 or ME 3201)
1015-1100 MTWF, East Bank, 4 cr

R**5516** **Aerospace Structures II** (prereq 5515 or #)
1315-1500 TTh, East Bank, 4 cr

R**5518** **Mechanics of Composite Materials** (prereq 3016)
1115-1200 MTWF, East Bank, 4 cr

R**5583** **Mechanics of Solids III** (prereq 5580 or #)
1215-1300 MTWF, East Bank, 4 cr

R**5642** **Elementary Aeromechanics Laboratory** (prereq 3016, 5200, aerospace engineering maj)
–1 LAB 1415-1600 M, East Bank, 2 cr
–2 LAB 1215-1400 T, East Bank, 2 cr
–3 LAB 1515-1700 T, East Bank, 2 cr
–4 LAB 1415-1600 W, East Bank, 2 cr
–5 LAB 1415-1600 Th, East Bank, 2 cr
–6 LAB 1415-1600 F, East Bank, 2 cr

5647 **Aeromechanics Laboratory Projects** (prereq 5200, △, aerospace engineering maj)
3 cr

5802 **Problems in Mechanics and Materials** (prereq △)
1-4 cr

5812 **Problems in Fluid Mechanics** (prereq △)
1-4 cr

5842 **Industrial Assignment** (prereq regis in engineering intern program, △)
2 cr

5843 **Industrial Assignment** (prereq regis in engineering intern program, △)
2 cr

8003 **Seminar: Aerospace Engineering and Mechanics** (prereq consent of director of graduate studies)
1415-1600 F, East Bank, 1 cr

R**8203** **Fluid Mechanics III** (prereq 8202)
1415-1500 MTWTh, East Bank, 4 cr

8230 **Advanced Gas Dynamics** (prereq 8204 or #)
1515-1700 TTh, East Bank, 3 cr

8240 **Perturbation Methods in Fluid Mechanics** (prereq 8202 or #)
0915-1000 MWF, East Bank, 3 cr

R**8412** **Nonlinear Systems** (prereq 8411 or #)
1115-1200 MTWF, East Bank, 4 cr

8512 **Continuum Mechanics III** (prereq 8510 or #)
1515-1700 MW, East Bank, 4 cr

8540 **Theory of Viscoelasticity** (prereq # or 8510 or 5580)
1315-1400 MTWF, East Bank, 4 cr

8570 **Fracture Mechanics** (prereq #)
0915-1100 TTh, East Bank, 3 cr

8802 **Selected Topics in Mechanics and Materials** (prereq △)
1-4 cr

8810 **Selected Topics in Fluid Mechanics** (prereq △)
1-4 cr

8812 **Selected Topics in Fluid Mechanics** (prereq △)
1-4 cr

8880 **Plan B Project** (max 4 cr; prereq grad aerospace engineering or mechanics maj, △)
1-4 cr

AEROSPACE STUDIES (Air)

Winter Quarter

R**1105** **Air Force Combat Commands**
–1 0915-1000 TTh, East Bank, Beachem, 1 cr
–2 1015-1100 TTh, East Bank, Beachem, 1 cr
–3 1315-1400 TTh, East Bank, Beachem, 1 cr

R**1205** **Allied Airpower in World War II and the Berlin Airlift**
–1 0815-0900 T, 0815-0945 Th, East Bank, Holden, 2 cr
–2 1115-1200 T, 1115-1245 Th, East Bank, Holden, 2 cr

R3302 **Air Force Leadership Communication**
–1 1015-1130 TTh, East Bank, McNally, 3-4 cr
–2 1415-1530 TTh, East Bank, McNally, 3-4 cr

R3401 **Military in Society**
–1 1015-1130 TTh, East Bank, Patrick, 3 cr
–2 1215-1330 TTh, East Bank, Patrick, 3 cr

Spring Quarter

R1106 **U.S. Support Forces**
–1 0915-1000 TTh, East Bank, Beachem, 1 cr
–2 1015-1100 TTh, East Bank, Beachem, 1 cr
–3 1315-1400 TTh, East Bank, Beachem, 1 cr

R1206 **Modern Employment of Airpower**
–1 0815-0900 T, 0815-0945 W, East Bank, Holden, 2 cr
–2 1115-1200 T, 1115-1245 Th, East Bank, Holden, 2 cr

R3303 **Contemporary Problems: Air Force Management**
–1 0815-0930 TTh, East Bank, McNally, 3 cr
–2 1015-1130 TTh, East Bank, McNally, 3 cr
–3 1315-1430 TTh, East Bank, McNally, 3 cr

R3413 **Military Law and Service Orientation**
–1 0915-1030 TTh, East Bank, Patrick, 3 cr
–2 1115-1230 TTh, East Bank, Patrick, 3 cr

AFRO-AMERICAN STUDIES (Afro)
Liberal Arts

Winter Quarter

1015 **Black Protest from Colonial Times to the Present**
1115-1230 TTh, West Bank, Ward, 5 cr

1025 **Black Americans: Socialization, Personality, and Behavior**
0945-1130 TTh, West Bank, Taborn, 4 cr

3002 **Introduction to West African History: 1800 to Present**
1000-1100 MWF, West Bank, Coifman, 4 cr

3011 **Social Change in East and Central Africa**
1015-1100 MF, West Bank, Dean, 4 cr

3055 **Folklore: The African in America**
1315-1400 MWF, West Bank, 4 cr

3057 **African Oral Narrative**
0915-1000 MWF, West Bank, 4 cr

3061 **The Black Family**
0815-0930 TTh, West Bank, 4 cr

3072 **Racism: Social Psychological Consequences for Black Americans** (§5072)
1145-1300 TTh, West Bank, Taborn, 4 cr

3101 **Afro-American Literature**
1015-1100 MWF, West Bank, 4 cr

3108 **Black Music: A History of Jazz**
0915-1000 MWF, West Bank, Buckner, 4 cr

3301 **The Caribbean: African Musical Retentions** (§Mus 3709)
0945-1100 TTh, West Bank, Southall, 4 cr

3601 **Introduction to African Literature**
1215-1300 MWF, West Bank, 4 cr

3910 **Topics in Afro-American/African Studies**
–1 1300-1400 MWF, West Bank, Coifman, 4 cr
–2 1245-1400 TTh, West Bank, Southall, 4 cr (Black Women: Jazz Contributions)
–3 0945-1100 Th, West Bank, Plummer, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-15 cr

5001 **Law and Society: A Minority Point of View** (prereq Pol 1001 or #)
0945-1100 TTh, West Bank, Ward, 5 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-6 cr

Spring Quarter

1015 **Black Protest from Colonial Times to the Present**
1115-1230 TTh, West Bank, Ward, 5 cr

1025 **Black Americans: Socialization, Personality, and Behavior**
0945-1100 TTh, West Bank, Taborn, 4 cr

3013 **Cities in Africa: African, Islamic, European Traditions**
1000-1100 MWF, West Bank, Coifman, 4 cr

3062 **The Black Family**
0815-0930 TTh, West Bank, 4 cr

3091 **Development of a Black Political Strategy**
1115-1200 MWF, West Bank, Nimitz, 4 cr

3102 **Afro-American Literature**
1015-1100 MWF, West Bank, 4 cr

3105 **Afro-American Music Through the 1920's** (§Mus 3708)
0945-1100 TTh, West Bank, Southall, 4 cr

3421 **Caribbean History**
1515-1630 TTh, West Bank, Plummer, 4 cr

3501 **African Societies and Civilizations** (§Anth 3241)
0915-1000 MWF, West Bank, Dean, 4 cr

3910 **Topics in Afro-American/African Studies**
–1 0945-1100 TTh, West Bank, Plummer, 4 cr
–2 0915-1000 MWF, West Bank, 4 cr
–3 1315-1400 MWF, West Bank, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-15 cr

5002 **Law and Society: A Minority Point of View** (prereq 5001)
0945-1100 TTh, West Bank, Ward, 5 cr

5072 **Racism: Social Psychological Consequences for Black Americans** (§3072)
1145-1300 TTh, West Bank, Taborn, 4 cr

5101 **Black Women**
1115-1230 TTh, West Bank, 4 cr

5201 **Black Composers: Contributions to Western Music and Culture** (prereq 1301 or 3105 or 3301, Mus 3708 or 3709, grad or #)
1515-1630 TTh, West Bank, Southall, 4 cr

5301 **African Literature**
1415-1500 MWF, West Bank, 4 cr

5551 **Use of Oral Traditions as Resources for History: Methods**
1300-1400 MWF, West Bank, Coifman, 4 cr

5800 **African Studies Interdisciplinary Seminar**
1315-1500 Th, West Bank, 4 cr

5900 **Senior Seminar** (prereq jr, sr or grad)
1300-1500 F, West Bank, Alexis, 2-4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-6 cr

AGRICULTURAL AND APPLIED ECONOMICS (AgEc)
Agriculture

Winter Quarter

R1020 **Principles of Macroeconomics** (§Econ 1001)
–1 1000-1045 MTWThF, St. Paul, Rodgers, 5 cr
–2 1100-1145 MTWThF, St. Paul, Larson, 5 cr

R1030 **Principles of Microeconomics** (§Econ 1002; prereq 1020)
–1 0845-0945 MWF, St. Paul, Waelti, 4 cr
–2 1400-1500 MWF, St. Paul, Waelti, 4 cr

3070 **Agriculture and Economic Growth in Developing Countries** (prereq 1020, 1030)
1400-1530 TTh, St. Paul, Purvis, 4 cr

3101 **Microeconomic Theory** (§Econ 3101; prereq 1030 or Econ 1002, Math 1111 or #)
1300-1345 MTWTh, St. Paul, Larson, 4 cr

3430 **Dairy Marketing Economics** (prereq 1400)
1200-1245 MWF, St. Paul, Hammond, 3 cr

3640 **Public Finance: Concepts and Practices** (prereq 1020, 1030 or Econ 1001, 1002)
1300-1430 TTh, St. Paul, Helmberger, 4 cr

3820 **Farm Management Economics** (prereq 1030)
1400-1530 TTh, St. Paul, Eidman, 4 cr

3850 **Farm Business and Enterprise Analysis** (prereq 1030, 3820 or #)
0745-0845 MTWTh, St. Paul, Welsch, 4 cr

5000 **Professional Experience Program** (prereq #) (S-N only)
4 cr

5100 **RCD Interdisciplinary Seminar II** (5099-5100†, §RCD 5100, AgEt 5100, LA 5100, Soil 5100; prereq 5099 or #)
1500-1645 TTh, St. Paul, 4 cr

R5104 **Agricultural Systems Analysis and Modeling** (prereq Math 1142 or #)
1000-1045 MWF, St. Paul, Cornelius, 4 cr (2 hr lab ar)

5180 **Agri-Marketing Communications** (no ag econ grads; prereq 1020, 1030, basic comm, spch courses, basic AgJo course or △ or #)
1400-1530 TTh, St. Paul, Wells, Swanson, others, 4 cr

5271 **Bayesian Decision Making** (§Econ 5271; prereq ¶Stat 5122 or equiv, Econ 1002 or equiv)
0945-1100 MW, Hildreth, 4 cr

5400 **Intermediate Market and Price Analysis** (prereq 1400 or 3101 or Econ 3101 or 5151)
0900-0945 MTWTh, St. Paul, Hammond, 3-4 cr

R5480 **Futures Markets and Prices** (prereq 1400 or #)
1000-1045 MTWTh, St. Paul, R Dahl, 3-4 cr

R5500 **Advanced Agricultural Finance** (prereq 3500)
1400-1545 TTh, St. Paul, Thompson, 3-4 cr

5600 **Land Economics** (prereq 3101, 3102 or Econ 3101, 3102 or #)
1400-1445 MWF, St. Paul, Raup, 3-4 cr

5630 **Regional Development Systems** (prereq 1030 or Econ 1002)
0830-0945 TTh, St. Paul, Maki, 3-4 cr

5660 **Economics of Public Services** (prereq 3101 or Econ 3101 or 5151 or #)
1600-1700 MWF, St. Paul, Nelson, 3-4 cr

5890 **Independent Study: Advanced Topics in Farm Management** (prereq #)
1-6 cr

5990 **Special Topics and Independent Study in Agricultural and Applied Economics** (prereq #)
ar cr

8200 **Advanced Topics in Agricultural and Appled Economics**
1-9 cr

8245 **Agricultural Marketing Economics** (prereq Econ 5151, 5152 or #)
0830-0945 MW, St. Paul, Roe, 3 cr

8266 **Applied Regional Economics** (prereq Econ 5151, 5152 or #)
1530-1645 TTh, St. Paul, Maki, 3 cr

8288 **Dynamic Production Economics** (prereq 5860, Econ 8101)
1000-1130 MW, St. Paul, Eidman, 3 cr

8346 **Seminar: Law and Agricultural Economics** (prereq prereq law or grad student)
1515-1705 T, West Bank, D Dahl, 3 cr (Jan 10-May 14)

8356 **Seminar: Consumption Economics**
Kinsey, Senauer, 3 cr

8364 **Seminar: Resource Economics and Policy**
Easter, Graham-Tomasi, 3 cr

8378 **Seminar: Agricultural Development**
Ruttan, 1-3 cr

Spring Quarter

R1030 **Principles of Microeconomics** (§Econ 1002; prereq 1020)
–1 1000-1045 MTWTh, St. Paul, Peterson, 4 cr
–2 1100-1145 MTWTh, St. Paul, Peterson, 4 cr

1030H **Principles of Microeconomics** (§Econ 1002; prereq 1020, B average or #)
1400-1530 MWF, St. Paul, Larson, 4 cr

1400 **Agricultural Markets and Prices** (prereq 1030)
1000-1045 MTWTh, St. Paul, D Dahl, 4 cr

3102 **Macroeconomic Theory** (§Econ 3102; prereq 1020, 1030 or Econ 1001, 1002 or #)
1100-1145 MTWTh, St. Paul, Larson, 4 cr

R3290 **Agribusiness Management** (prereq 1020, 1030, Mgmt 3001 for ag bus majs, 3101 for others or #)
1300-1445 MW, St. Paul, Smith, 4 cr

3410 Economic Organization of the Hospitality Industry (prereq 1020, 1030, Mktg 3000 or #)
1500-1630 MW, St. Paul, 4 cr

3440 Livestock Marketing Economics (prereq 1400)
0900-0945 MWF, St. Paul, Egertson, 3 cr

3710 Agricultural and Market Policies (prereq 1400 or 3101, 3102 or Econ 3101, 3102 or #)
0800-0845 MTWTh, St. Paul, Sundquist, 4 cr

3830 Organizing the Farm Business for Entry, Growth, and Transfer (prereq 3820...3850 rec)
1100-1230 MW, St. Paul, Thomas, 4 cr

3831 Organizing the Farm Business for Entry, Growth, Transfer Lab (prereq ¶3830)
1100-1230 F, St. Paul, Apland, 1-3 cr

5000 Professional Experience Program (prereq #) (S-N only)
4 cr

5020 Applied Linear Programming (prereq 1030, Math 1111 or 1131)
1445-1630 TTh, St. Paul, Fuller, 3-4 cr

5272 Bayesian Decision Making (§Econ 5272; prereq 5271)
0945-1100 MW, Hildreth, 4 cr

5440 Cooperatives and Agribusiness Organization (prereq 1400)
1200-1245 MTWTh, St. Paul, R Dahl, 3-4 cr

5550 Food Consumption Economics (FScN 5474; prereq 3101, Stat 5021, FScN 3472 or #)
0900-0945 MWF, St. Paul, Senauer, 3-4 cr

5560 Economics of Consumer Policies (prereq 3101 or Econ 3101 or #)
0900-1030 TTh, St. Paul, Kinsey, 3-4 cr

5610 Land Use Institutions of Local Government (prereq 1020, 1030)
★LECT 1300-1400 TTh, St. Paul, Snyder
–1 REC 1500-1700 Th, St. Paul, Snyder, 3-4 cr

5650 Economics of Natural Resource Policy (prereq 3101 or Econ 3101 or Econ 5151 or #)
1530-1700 MW, St. Paul, Easter, Waelti, 3-4 cr

5720 Economics of World Agriculture (prereq 1020, 1030 or #)
1400-1515 MW, St. Paul, Raup, 3-4 cr

5750 Agricultural Trade and Commercial Policy (prereq 3101, 3102 or Econ 3101, 3102)
0800-0845 MWF, St. Paul, Houck, 3-4 cr

5840 Management of the Farm Business (prereq 3820...3830, 3850 rec)
1300-1430 TTh, St. Paul, Apland, Eidman, others, 3-4 cr

5990 Special Topics and Independent Study in Agricultural and Applied Economics (prereq #)
ar cr

8200 Advanced Topics in Agricultural and Appled Economics
1-9 cr

8220 Applied Mathematical Programming (prereq Math 1142, Econ 5151 or #)
Apland, Roe, 3 cr

8287 Production Functions: Theory and Estimations (prereq 5860, Stat 5302)
1530-1655 TTh, St. Paul, Peterson, 3 cr

8366 Seminar: Applied Regional Economics
1600-1730 TTh, St. Paul, Maki, 3 cr

8373 Seminar: Food and Agricultural Policy in the United States
1000-1130 MW, St. Paul, Schuh, 3 cr

8382 Seminar: Farm Management and Production Economics
Eidman, 3 cr

AGRICULTURAL EDUCATION (AgEd)
Vocational And Technical Education Education

Winter Quarter

1001 Introduction to Agricultural Education (A-N only)
1200-1245 W, St. Paul, Marvin, 1 cr

3029 Directed Experience in Agricultural Education (prereq △) (A-N only)
1200-1245 M, St. Paul, Persons, 1-3 cr

3031 Student Teaching in Agriculture (prereq jr, 5028, SeEd 3155, #) (A-N only)
1200-1345 Th, St. Paul, Peterson, 8 cr

R3041 Practicum: Agricultural Education Technology (max 5 cr; prereq △) (A-N only)
–1 1300-1445 T, St. Paul, Leske, 1-3 cr
–2 1-3 cr

5023 Extension Methods for Agricultural Production in Developing Countries (§HEEd 5023) (A-N only)
1500-1730 M, St. Paul, Marvin, Persons, 3 cr

5025 Extension Program Development (§HEEd 5025) (A-N only)
1000-1100 T, 1000-1200 Th, St. Paul, Anderson, 3 cr

5027 Practicum: Placement for Extension Experiences (max 9 cr, §HEEd 3605, 5027) (S-N optional)
Norenberg, 2-9 cr

5049 Agricultural Education for Adults (A-N only)
★LECT 0900-0945 MTWThF, St. Paul, Persons, 5 cr
–1 LAB 0800-0845 F, St. Paul, Persons

5061 Program Planning and Evaluation (prereq sr) (A-N only)
1400-1445 MWF, St. Paul, Marvin, 3 cr

5071 Supervised Occupational Experiences in Agriculture (A-N only)
1000-1145 MTThF, St. Paul, Leske, 3 cr

5090 Independent Study (prereq sr) (A-N only)
1-3 cr

5095 Independent Study (prereq MEd student in agricultural education) (A-N only)
3 cr

5128 Methods of Teaching (prereq non-agricultural-education maj and/or #) (A-N only)
3 cr

5200 Seminar: Working with Youth Through Adults (max 9 cr including HEEd 5200 and YoSt 5200; prereq △) (S-N optional)
Leske, 1-3 cr

8001 Research in Agricultural Education (prereq 15 cr educ)
ar cr

8091 Field Problems
3 cr

Spring Quarter

1001 Introduction to Agricultural Education (A-N only)
1200-1245 W, St. Paul, Marvin, 1 cr

1010 History and Philosophy of Vocational and Community Education (A-N only)
0800-0845 MWF, St. Paul, Swanson, 3 cr

R3010 Organization and Direction of FFA Activities (A-N only)
1200-1245 TTh, St. Paul, Leske, 2 cr

3029 Directed Experience in Agricultural Education (prereq △) (A-N only)
1200-1245 M, St. Paul, Leske, 1-3 cr

3041 Practicum: Agricultural Education Technology (max 5 cr; prereq △) (A-N only)
–1 1200-1245 F, St. Paul, Leske, 1-3 cr
–2 Bear, 3 cr

5021 Education Through Extension Methods (§HEEd 5021; prereq grad or #) (A-N only)
1500-1730 Th, St. Paul, Norenberg, 3 cr

5024 Extension History and Philosophy (§HEEd 5024; prereq #) (A-N only)
1400-1630 T, St. Paul, Lewis, 3 cr

5027 Practicum: Placement for Extension Experiences (max 9 cr, §HEEd 3605, 5027) (S-N optional)
Norenberg, 2-9 cr

5028 Teaching Methods in Agricultural Education (prereq SeEd 3155 or ¶) (A-N only)
1000-1045 MTWThF, St. Paul, Peterson, 5 cr

5049 Agricultural Education for Adults (A-N only)
★LECT 0900-0945 MTWThF, St. Paul, Persons, 5 cr
–1 LAB 0800-0845 F, St. Paul, Persons

5061 Program Planning and Evaluation (prereq sr) (A-N only)
1400-1445 MWF, St. Paul, Marvin, 3 cr

5072 Practicum: Agricultural Business and Industry (max 9 cr; prereq 5071 or #) (A-N only)
0800-0845 T, St. Paul, Leske, 1-3 cr (lab ar)

5090 Independent Study (prereq sr) (A-N only)
1-3 cr

5095 Independent Study (prereq MEd student in agricultural education) (A-N only)
3 cr

5128 Methods of Teaching (prereq non-agricultural-education maj and/or #) (A-N only)
1000-1045 MWF, St. Paul, Peterson, 3 cr

5129 Curriculum Planning (prereq 5128 or ¶, non-agricultural-education maj and/or #) (A-N only)
1500-1545 MWF, St. Paul, Marvin, 3 cr

5200 Seminar: Working with Youth Through Adults (max 9 cr including HEEd 5200 and YoSt 5200; prereq △) (S-N optional)
Leske, 1-3 cr

8001 Research in Agricultural Education (prereq 15 cr educ)
ar cr

8091 Field Problems
3 cr

8303 Seminar: Graduate Studies Review
1600-1745 M, St. Paul, Leske, 1-3 cr

AGRICULTURAL ENGINEERING (AgEn)
Institute of Technology

Winter Quarter

R3052 Physio Engineering in Agriculture (prereq AEM 3016 or ¶, IT stu)
★LECT 1330-1445 TTh, St. Paul, Slack, 4 cr
–1 LAB 1500-1700 T, St. Paul,
–2 LAB 1500-1700 Th, St. Paul,

3970 Directed Studies in Agricultural Engineering (prereq #)
2-5 cr

5050 Intern Reports (prereq IT stu)
Flikke, 2 cr

5081 Design: Power and Machinery (prereq completion of appropriate AgEn senior level courses or #, IT upper div)
1300-1545 TTh, St. Paul, Schertz, 4 cr

5083 Design: Structures and Environment (prereq completion of appropriate AgEn senior level courses or #, IT upper div)
1000-1145 MWF, St. Paul, Jordan, 4 cr

5140 Thermal Processes for Food (prereq heat transfer, 5060 or #, IT upper div or grad IT)
★LECT 0800-0845 MWF, St. Paul, Thompson, 4 cr
–1 LAB 1400-1645 W, St. Paul,

5191 Special Problems (prereq #)
2-5 cr

5192 Special Problems (prereq 5191, #)
2-5 cr

5340 Agricultural Tractors (prereq ME 3303, IT upper div or grad IT)
★LECT 0800-0845 MWF, St. Paul, Chaplin, 4 cr
–1 LAB 1400-1645 M, St. Paul,

R5550 Drainage and Irrigation Engineering (prereq 3052 or CE 3300, CE 5401 or #, IT upper div or grad IT)
★LECT 1215-1345 TTh, St. Paul, Allred, 4 cr
–1 LAB 1400-1645 T, St. Paul,

5740 Environmental Control for Agricultural Production (prereq ME 5603, IT upper div or grad IT)
0800-0945 MWF, St. Paul, Jordan, 4 cr

5910 Agricultural Waste Management Engineering I (prereq 3052 or #, Chem 1005 or 1014, IT upper div or grad IT)
★LECT 1015-1130 TTh, St. Paul, Clanton, 4 cr
–1 LAB 1400-1645 Th, St. Paul,

8190 Advanced Problems and Research (prereq 5191, 5192, △)
2-6 cr

8191 Advanced Problems and Research (prereq 5191, 5192, △)
2-6 cr

8192 Advanced Problems and Research (prereq 5191, 5192, △)
2-6 cr

8700 Moisture and Heat Transfer (prereq knowledge of differential equations, #, grad IT maj)
0900-0945 TTh, St. Paul, Slack, 3 cr

Spring Quarter

1031 Computations in Agricultural Engineering (prereq CSci 3101 or equiv, Math 1231, lower div IT stu)
★LECT 1500-1545 M, St. Paul, Jordan, 2 cr
–1 LAB 1500-1645 W, St. Paul,

3060 Analysis in Agricultural Engineering (prereq CSci 3101 or equiv, Math 3211, IT stu)
0800-0845 MTWTh, St. Paul, Morey, 4 cr

3970 Directed Studies in Agricultural Engineering (prereq #)
2-5 cr

5050 Intern Reports (prereq IT stu)
Flikke, 2 cr

5070 Automatic Control and Instrumentation (prereq 3060, EE 3000 or 3002, IT upper div or grad IT)
★LECT 0900-0945 TTh, St. Paul, Janni, 4 cr
–1 LAB 1000-1145 TTh, St. Paul,

R5072 Finite Element Method: Fundamentals and Applications (prereq differential equations, IT upper division or grad or #)
1200-1345 TTh, St. Paul, Gustafson, 4 cr

5082 Design: Soil and Water (prereq completion of appropriate AgEn senior level courses or #, IT upper div)
1400-1545 Th, St. Paul, Allred, Larson, others, 4 cr (addnl hrs ar)

5084 Design: Food Engineering (prereq completion of appropriate AgEn senior level courses or #, IT upper div)
1400-1545 T, St. Paul, Thompson, 4 cr (addnl hrs ar)

5191 Special Problems (prereq #)
2-5 cr

5192 Special Problems (prereq 5191, #)
2-5 cr

8072 Instrumentation for Agricultural Research (prereq #)
0800-1145 TTh, St. Paul, Jordan, 4 cr

8190 Advanced Problems and Research (prereq 5191, 5192, △)
2-6 cr

8191 Advanced Problems and Research (prereq 5191, 5192, △)
2-6 cr

8192 Advanced Problems and Research (prereq 5191, 5192, △)
2-6 cr

AGRICULTURAL ENGINEERING TECHNOLOGY (AgET)
Agriculture

Winter Quarter

1090 Directed Studies (prereq #)
ar cr

3091 Special Problems in Agricultural Engineering (prereq #)
2-5 cr

R3205 Power and Power Use (prereq Math 1111, Phys 1041)
★LECT 1300-1345 MWF, St. Paul, Schertz
–1 LAB 1400-1645 W, St. Paul, 4 cr
–2 LAB 1400-1645 F, St. Paul, 4 cr

R3410 Hydrology, Water Control (prereq Math 1111, Phys 1041, Soil 1122)
★LECT 1000-1045 MWF, St. Paul, Larson
–1 REC 0945-1100 Th, St. Paul, 4 cr
–2 REC 1245-1400 Th, St. Paul, 4 cr

3606 Farm Building Design, Layout, Systems (prereq Math 1111, Phys 1041)
1100-1145 MTWTh, St. Paul, Janni, 4 cr

5000 Professional Experience Program (prereq #) (S–N only)
Flikke, 4 cr

5020 Program Planning and Instructional Methods in Agricultural Mechanics (prereq 10 cr in agri eng tech, AgEd 3031 or ¶)
★LECT 0800-0945 MTTh, St. Paul, Bear
–1 LAB 0800-1145 W, 0800-0945 F, St. Paul, 4 cr

5022 Energy Systems in Agriculture (prereq Math 1142, Phys 1042)
0800-0845 MWThF, St. Paul, Gustafson, 4 cr

5030 Agricultural Tractor and Engine Power (prereq 5020 or #)
Bear, 1-3 cr

5091 Special Problems in Agricultural Engineering (prereq #)
2-5 cr

5092 Special Problems in Agricultural Engineering (prereq 5091)
2-5 cr

5100 RCD Interdisciplinary Seminar II (5099-5100†; prereq 5099 or #)
1500-1645 TTh, St. Paul, Clanton, 4 cr

Spring Quarter

R1020 Agricultural Shop-Metalwork (prereq Chem 1004 or #)
★LECT 1300-1345 MW, St. Paul, Bear, 4 cr
–1 LAB 1400-1645 MW, St. Paul,

1090 Directed Studies (prereq #)
ar cr

3091 Special Problems in Agricultural Engineering (prereq #)
2-5 cr

R3610 Electricity in Agriculture (prereq Math 1111, Phys 1041)
★LECT 0800-0845 MWF, St. Paul, Gustafson
–1 LAB 1400-1545 T, St. Paul, 4 cr
–2 LAB 1400-1545 F, St. Paul, 4 cr

R3615 Crop Processing and Storage (prereq Math 1111, Phys 1041)
★LECT 1100-1145 MWF, St. Paul, Morey, 4 cr
–1 LAB 1400-1645 Th, St. Paul,

5000 Professional Experience Program (prereq #) (S–N only)
Flikke, 4 cr

5023 Fluids-Principles and Systems (prereq Math 1142, Phys 1042 or #)
★LECT 0900-0945 MWF, St. Paul, Goodrich, 4 cr
–1 LAB 1400-1545 M, St. Paul,

5031 Agricultural Machinery and Mechanization (prereq 5020 or #)
Bear, 1-3 cr

5091 Special Problems in Agricultural Engineering (prereq #)
2-5 cr

5092 Special Problems in Agricultural Engineering (prereq 5091)
2-5 cr

5400 Drainage and Irrigation (prereq Soil 3210)
★LECT 1300-1345 MWF, St. Paul, Allred, 4 cr
–1 LAB 1400-1645 W, St. Paul,

AGRICULTURAL JOURNALISM (AgJo)
Agriculture

Winter Quarter

R3111 Journalistic Techniques (prereq completion of Rhet 1101 and 1102 or equiv, C average, typing ability required)
1000-1145 TTh, St. Paul, Wells, 5 cr

R3122 Agricultural and Rural Affairs Reporting (§Jour 3121; prereq Jour 1101, Rhet 3551 or 3562 or Comp 1027 or #)
1300-1345 TTh, St. Paul, Sperbeck, 4 cr

3530 Publicity (prereq compl of rhetoric communication requirement)
0800-0845 MWF, Swanson, 4 cr

3936 Special Problems (prereq 3530 or #)
ar cr

5000 Professional Experience Program (no grad cr; prereq #) (S–N only)
Swanson, 4 cr

5180 Agri-Marketing Communications (§AgEc 5180, no ag econ grads; prereq AgEc 1020, 1030, basic comm, spch courses, basic AgJo
1400-1530 TTh, St. Paul, Swanson, Wells, 4 cr

R5561 Writing for Publication (§Jour 3173; prereq 3111 or Jour 3101 or equiv or #, △)
1400-1445 MWF, St. Paul, Dueber, 4 cr

5936 Special Problems in Agricultural Communications (prereq #)
Breneman, Swanson, others, ar cr

Spring Quarter

R3111 Journalistic Techniques (prereq completion of Rhet 1101 and 1102 or equiv, C average, typing ability required)
1000-1145 TTh, St. Paul, Wells, 5 cr

R3159 Publications Editing (§Jour 3155; prereq freshman comp plus adv comp, 3530 or equiv jour course or #, △)
★LECT 1400-1445 MWF, St. Paul, Dueber, 4 cr
–1 LAB 1500-1630 W, St. Paul, Dueber

3530 Publicity (prereq compl of rhetoric communication requirement)
0800-0845 MWF, Swanson, 4 cr

3936 Special Problems (prereq 3530 or #)
Swanson, ar cr

5000 Professional Experience Program (no grad cr; prereq #) (S–N only)
Swanson, 4 cr

R5100 Seminar in Agricultural Communication (max 6 cr; prereq sr, #)
1400-1530 TTh, Wells, others, 3 cr

R5301 Functional Photography (35 mm camera required)
1400-1615 TTh, Breneman, 4 cr

R5500 Research: Communication Strategies (§Rhet 5500; prereq #)
1600-1845 Th, St. Paul, McDowell, 4 cr

5936 Special Problems in Agricultural Communications (prereq #)
Breneman, Swanson, others, ar cr

AGRICULTURE (Agri)
Agriculture

Winter Quarter

R1000 Academic Enrichment and Honors Program: Special Projects (prereq acceptance for Special Opportunity Grant, agriculture maj only, #) (S–N only)
Wharton, 1-15 cr

R1001 Leadership Development: Project LEAD (max 6 cr; prereq agriculture maj, #) (S–N only)
Wharton, 2 cr

Spring Quarter

R1000 Academic Enrichment and Honors Program: Special Projects (prereq acceptance for Special Opportunity Grant, agriculture maj only, #) (S–N only)
Wharton, 1-15 cr

R1001 Leadership Development: Project LEAD (max 6 cr; prereq agriculture maj, #) (S–N only)
Wharton, 2 cr

AGRONOMY AND PLANT GENETICS (Agro)
Agriculture

Winter Quarter

R1010 Principles of Agronomy (§3010, 3020, 3030)
1100-1145 MWThF, St. Paul, Smith, 4 cr

R1011 Principles of Agronomy-Discussion (prereq ¶1010) (S–N only)
–1 1400-1445 M, St. Paul, Smith, 1 cr
–2 1500-1545 M, St. Paul, Smith, 1 cr
–3 1300-1345 Th, St. Paul, Smith, 1 cr
–4 1400-1445 Th, St. Paul, Smith, 1 cr

1020 Special Problems (prereq 5 cr agronomy, #)
Simmons, 1-3 cr

R1110 Seed Analysis and Grain Grading (prereq 1100 or #)
–1 0900-1145 TTh, St. Paul, Goodding, 3 cr
–2 1300-1545 TTh, St. Paul, Goodding, 3 cr

R3010 Adaptation, Distribution, and Production of Field Crops (prereq Biol 1011)
★LECT 1000-1045 MWF, St. Paul, Simmons
–1 REC 0800-0845 T, St. Paul, Simmons, 4 cr
–2 REC 0900-0945 T, St. Paul, Simmons, 4 cr
–3 REC 1000-1045 T, St. Paul, Simmons, 4 cr
–4 REC 1000-1045 Th, St. Paul, Simmons, 4 cr

R3200 Seminar (prereq jr or sr, #)
1530-1700 Th, St. Paul, Simmons, Cardwell, 1 cr

5000 Professional Experience Program (prereq #) (S-N only)
Smith, 4 cr

5001 Problems in Agronomy for Advanced Students (prereq 20 cr agronomy, #)
Cardwell, 1-5 cr

R5010 Forage Production and Utilization (prereq 1010 or #)
★LECT 1100-1145 MWF, St. Paul, Sheaffer, 4 cr
–1 LAB 1400-1645 T, St. Paul, Sheaffer
–2 LAB 1200-1445 W, St. Paul, Sheaffer
–3 LAB 1400-1645 Th, St. Paul, Sheaffer

R5020 Introduction to Plant Breeding (prereq GCB 3022)
1400-1445 MWThF, St. Paul, Orf, 4 cr

R5030 Weed Control (prereq 1010 or #)
★LECT 1300-1345 MTWTh, St. Paul, Wyse
–1 REC 0900-0945 F, St. Paul, Wyse, 5 cr
–2 REC 1000-1045 F, St. Paul, Wyse, 5 cr
–3 REC 1100-1145 F, St. Paul, Wyse, 5 cr
–4 REC 1300-1345 F, St. Paul, Wyse, 5 cr

R5110 Adaptation, Distribution, and Production of Field Crops (§3010; prereq Biol 1011)
★LECT 1000-1045 MWF, St. Paul, Simmons
–1 REC 0800-0845 F, St. Paul, Simmons, 3 cr

8010 Research in Agronomy (prereq #)
ar cr

8020 Seminar: Agronomy
1600-1700 W, St. Paul, Simmons, 1 cr

8200 Principles of Plant Breeding I (prereq 5020, Stat 5301 or equiv)
0900-0945 MWF, St. Paul, Rasmusson, 3 cr

R8220 Application of Quantitative Genetics to Plant Breeding (prereq 8210, GCB 5042)
1000-1045 MWF, St. Paul, Stucker, 3 cr

8270 Seminar: Plant Breeding
1600-1700 M, St. Paul, Orf, 1 cr

8330 Research in Plant Genetics
ar cr

Spring Quarter

R1010 Principles of Agronomy (§3010, 3020, 3030)
1100-1145 MTWF, St. Paul, Goodding, 4 cr

R1011 Principles of Agronomy-Discussion (prereq ¶1010) (S-N only)
–1 0900-0945 T, St. Paul, Goodding, 1 cr
–2 1200-1245 T, St. Paul, Goodding, 1 cr
–3 1200-1245 W, St. Paul, Goodding, 1 cr

1020 Special Problems (prereq 5 cr agronomy, #)
Smith, 1-3 cr

R3020 Growth, Development, and Culture of Field Crops (prereq Biol 1011, Chem 1005)
★LECT 1000-1045 MTWF, St. Paul, Cardwell
–1 LAB 1300-1445 M, St. Paul, Cardwell, 5 cr
–2 LAB 1300-1445 T, St. Paul, Cardwell, 5 cr
–3 LAB 0800-0945 W, St. Paul, Cardwell, 5 cr
–4 LAB 1100-1245 W, St. Paul, Cardwell, 5 cr
–5 LAB 0900-1045 Th, St. Paul, Cardwell, 5 cr

R3060 Field Plot Design in Agronomy (prereq jr, △)
★LECT 0800-0845 MWF, St. Paul, Hicks
–1 REC 1300-1445 M, St. Paul, Hicks, 4 cr
–2 REC 1000-1145 T, St. Paul, Hicks, 4 cr

R3200 Seminar (prereq jr or sr, #)
1530-1700 Th, St. Paul, Smith, Goodding, 1 cr

5000 Professional Experience Program (prereq #) (S-N only)
Cardwell, Smith, 4 cr

5001 Problems in Agronomy for Advanced Students (prereq 20 cr agronomy, #)
Smith, 1-5 cr

R5040 Corn and Soybean Management (prereq 3010, 3020, 3030, Soil 1122 or #)
1300-1445 TTh, St. Paul, Crookston, 3 cr

R5050 Herbicides (prereq 5030, PlPh 3131, BioC 1302)
0800-0845 MWF, St. Paul, 3 cr

R5060 Small Grains, Sunflower and Sugarbeet Management (prereq 3010, 3020, 3030, 5030, Soil 1122 or #)
1400-1545 MW, St. Paul, Simmons, 3 cr

R5120 Growth, Development, and Culture of Field Crops (§3020; prereq Biol 1011, Chem 1005)
★LECT 1000-1045 MTWF, St. Paul, Cardwell, 5 cr (lab ar)
–1 REC 0800-0845 F, St. Paul, Cardwell

8010 Research in Agronomy (prereq #)
ar cr

8210 Principles of Plant Breeding II (prereq 8200 or #)
0900-0945 MWF, St. Paul, Geadelmann, 3 cr

R8240 Plant Genetics in Relation to Plant Improvement (prereq GCB 5031, #)
★LECT 1300-1345 MWF, St. Paul, Gengenbach, 3 cr
–1 REC 1400-1445 F, St. Paul, Gengenbach

8280 Current Topics in Plant Breeding (prereq 8210 or #)
Rasmusson, 2 cr

8330 Research in Plant Genetics
ar cr

AKKADIAN (Akka)
Near And Middle Eastern Studies
Liberal Arts

Winter Quarter

R5012 Elementary Akkadian (prereq 5011)
0815-0900 MWF, East Bank, Reisman, 4 cr

Spring Quarter

R5013 Elementary Akkadian (prereq 5012)
0815-0900 MWF, East Bank, Reisman, 4 cr

ALBANIAN (Alb)
French And Italian
Liberal Arts

Winter Quarter

R5510 Albanian Language and Culture (no knowledge of Albanian req)
1515-1700 TTh, East Bank, Pipa, 5 cr

AMERICAN INDIAN STUDIES (AmIn)
Liberal Arts

Winter Quarter

1021 Beginning Ojibwe
1415-1500 MTWThF, West Bank, Oakgrove, 5 cr

1022 Beginning Ojibwe (prereq 1021)
1315-1400 MTWThF, West Bank, Northbird, 5 cr

1032 Beginning Dakota (prereq 1031)
1115-1200 MTWThF, West Bank, Schommer, 5 cr

3024 Intermediate Ojibwe (prereq 1023)
1015-1100 MTWThF, West Bank, Oakgrove, 5 cr

3025 Intermediate Ojibwe (prereq 3024)
1115-1200 MTWThF, West Bank, Northbird, 5 cr

3035 Intermediate Dakota (prereq 3034)
1315-1400 MTWThF, West Bank, Schommer, 5 cr

3111 American Indian History from Mid-15th Century to 1850 (§Hist 3871)
1015-1100 MWF, West Bank, 4 cr

3112 American Indian History: 1850 to the Present (§Hist 3872)
0915-1000 MWF, West Bank, 4 cr

3121 History: American Indian Education (prereq 3111, 3112 or #)
1245-1400 TTh, West Bank, Beaulieu, 4 cr

5411 Urban Indian Communities
0945-1100 TTh, West Bank, Beaulieu, 4 cr

Spring Quarter

1022 Beginning Ojibwe (prereq 1021)
1015-1100 MTWThF, West Bank, Oakgrove, 5 cr

1023 Beginning Ojibwe (prereq 1022)
1115-1200 MTWThF, West Bank, Northbird, 5 cr

1033 Beginning Dakota (prereq 1032)
1115-1200 MTWThF, West Bank, Schommer, 5 cr

1771 Introduction to American Indian Studies
0945-1100 TTh, West Bank, Beaulieu, 4 cr

3025 Intermediate Ojibwe (prereq 3024)
1315-1400 MTWThF, West Bank, Northbird, 5 cr

3026 Ojibwe History and Culture
1315-1400 MWF, West Bank, Oakgrove, 4 cr

3035 Intermediate Dakota (prereq 3034)
1315-1400 MTWThF, West Bank, Schommer, 5 cr

3036 Dakota History and Culture
1315-1400 MWF, West Bank, 4 cr

3112 American Indian History: 1850 to the Present (§Hist 3872)
0915-1000 MWF, West Bank, 4 cr

R5251 American Indians and the Cinema (§AmSt 5251)
1245-1500 TTh, West Bank, Vizenor, 4 cr

5960 Topics in American Indian Studies
1245-1400 TTh, West Bank, Beaulieu, 4 cr

AMERICAN STUDIES (AmSt)
Liberal Arts

Winter Quarter

R1002 American Culture: Mid-19th Century to 1920s
–1 0915-1000 MWF, East Bank, 4 cr
–2 1015-1100 MWF, East Bank, 4 cr
–3 0945-1100 TTh, East Bank, Vizenor, 4 cr

R1003 American Culture: 1920s to the Present
1215-1300 MWF, East Bank, 4 cr

R3112 American Everyday Life
–1 1015-1100 MWF, West Bank, 4 cr
–2 0945-1100 TTh, East Bank, Delattre, 4 cr

3252 American Popular Culture: 1900-1945
1115-1230 TTh, East Bank, L May, 4 cr

R3302 Proseminar: American Studies (prereq 3301)
1415-1645 T, East Bank, L May, 4 cr

3970 Directed Studies (prereq #, △, college approval)
1-15 cr

R5102 Religion and American Culture
1015-1100 MWF, East Bank, Delattre, 4 cr

R8202 Introduction to American Studies (prereq MA candidate in AmSt, 8201) (A-N only)
1415-1530 TTh, East Bank, Martin, 4 cr

R8311 Seminar: American Studies (prereq PhD candidate)
1415-1615 T, East Bank, Vizenor, 3 cr

R8802 Dissertation Seminar (prereq 8801)
1315-1500 W, East Bank, Yates, 2 cr

8920 Topics: The Myth and Symbol Approach to Methodology in American Studies (prereq #)
0815-1000 Th, East Bank, Gearity, 4 cr

8970 Readings in American Civilization (prereq △)
ar cr

Spring Quarter

R1003 American Culture: 1920s to the Present
–1 1015-1100 MWF, East Bank, 4 cr
–2 1315-1400 MWF, East Bank, R Ross, 4 cr
–3 1415-1530 TTh, East Bank, 4 cr

R3113 American Cultural Diversity
–1 1215-1300 MWF, West Bank, Menard, 4 cr
–2 0945-1100 TTh, East Bank, Delattre, 4 cr

R3303 Proseminar: American Studies (prereq 3302)
1415-1645 T, East Bank, L May, 4 cr

R3920 Topics in American Studies: Vietnam War in Literature and Film
1245-1400 TTh, West Bank, Silberman, 4 cr

3970 Directed Studies (prereq #, △, college approval)
1-15 cr

R5251 American Indians and the Cinema (§AmIn 5251)
1245-1500 TTh, West Bank, Vizenor, 4 cr

R5920 Topics in American Studies (max 12 cr; prereq #)
1315-1400 MWF, East Bank, Geffen, 4 cr

R8203 **Introduction to American Studies** (prereq MA candidate)
1215-1400 M, East Bank, Marling, 4 cr

R8401 **Materials and Methods for the Study of American Civilization** (prereq adv degree candidate in AmSt or #)
1415-1615 Th, East Bank, L May, 3 cr

8500 **Studies in American Religious and Philosophical Thought** (prereq adv degree candidate in AmSt or #)
1415-1615 W, East Bank, Delattre, 3 cr

8970 **Readings in American Civilization** (prereq △)
ar cr

ANATOMY (Anat)
Medical School

Winter Quarter

3970 **Special Problems** (prereq #)
2 cr

5108 **Gross Human Anatomy for Dental Students** (prereq freshman dental student or #)
★LECT 0815-0900 MWF, East Bank, Bauer, 7 cr
–1 LAB 0915-1200 MWF, East Bank,

5111 **Human Neuroanatomy** (prereq regis med fr, anat grad or grad with #)
★LECT 0915-1000 TTh, East Bank, Smithberg
–1 LAB 1415-1600 T, East Bank, 3-4 cr
–2 LAB 1415-1600 Th, East Bank, 3-4 cr

5190 **Advanced Anatomy** (prereq regis med, 5103, #)
2 cr

5501 **The Extremities** (prereq Phase D)
3-4.5 cr

5502 **Head and Neck** (prereq Phase D)
3-4.5 cr

5504 **The Endocrine System** (prereq Phase D)
Hamilton, 3-4.5 cr

5508 **The Thorax** (prereq Phase D)
3-4.5 cr

5509 **The Abdomen** (prereq Phase D)
3-4.5 cr

5510 **Perineum, Genital-Urinary System and Pelvis** (prereq Phase D)
3-4.5 cr

5766 **Hematology** (prereq 5765)
★LECT 1315-1400 TTh, East Bank, Sundberg, 4 cr
–1 LAB 1415-1600 TTh, East Bank,

8135 **Biological Electron Microscopy: Technics** (prereq #)
Erlandsen, 1-5 cr

8154 **Advanced Anatomy** (prereq #)
1-6 cr

8166 **Cytological Aspects in Protein Synthesis and Secretion** (prereq 5100 or #)
Bauer, 3 cr

8202 **Research in Anatomy** (prereq #)
1-10 cr

8206 **Seminar: Anatomy** (prereq #)
1215-1300 W, Hamilton, 1 cr

Spring Quarter

1027 **Anatomy for Physical Education Students**
★LECT 1215-1400 TTh, East Bank, Serfass, 4 cr
–1 LAB 1415-1500 TTh, East Bank,

R3001 **Elementary Anatomy** (prereq one qtr college biology)
★LECT 0750-0900 TWTh, East Bank, Coulter, 5 cr
–1 LAB 0915-1100 W, East Bank,
–2 LAB 1115-1300 W, East Bank,
–3 LAB 1315-1500 W, East Bank,
–4 LAB 1515-1700 W, East Bank,

3970 **Special Problems** (prereq #)
2 cr

5109 **Gross Human Anatomy for Dental Students** (prereq freshman dental student or #)
★LECT 0815-0900 MWF, East Bank, Sorenson, 7 cr
–1 LAB 0915-1200 MWF, East Bank,

5110 **Neuroscience for Dental Students** (prereq ¶Phsl 5100, registered dental freshman, #)
★LECT 1315-1400 TWTh, East Bank, Elde, 2 cr
–1 LAB 1415-1700 W, East Bank,

5127 **Problems in Modern Developmental Biology** (prereq 5106 or #)
Hegre, 2 cr

5190 **Advanced Anatomy** (prereq regis med, 5103, #)
2 cr

5211 **Biology of Nerve Cells** (prereq GCB 5049, any of the following: Phsl 3053, 3056, 5103, 5111, GCB 5114, VB 5312 or #)
0915-1000 MWF, East Bank, Quick, 3-4 cr (rec ar)

5500 **General Gross Anatomy** (prereq Phase D)
Robertson, 3-4.5 cr

5501 **The Extremities** (prereq Phase D)
Robertson, 3-4.5 cr

5502 **Head and Neck** (prereq Phase D)
Robertson, 3-4.5 cr

5504 **The Endocrine System** (prereq Phase D)
Hamilton, 3-4.5 cr

5508 **The Thorax** (prereq Phase D)
Robertson, 3-4.5 cr

5509 **The Abdomen** (prereq Phase D)
Robertson, 3-4.5 cr

5510 **Perineum, Genital-Urinary System and Pelvis** (prereq Phase D)
Robertson, 3-4.5 cr

5767 **Seminar: Hematology** (prereq 5766)
Sundberg, 1 cr

8136 **Biological Electron Microscopy: Technics** (prereq #)
Erlandsen, 1-5 cr

8155 **Advanced Anatomy** (prereq #)
1-6 cr

8170 **Cell Junction Structure and Physiology** (prereq GCB 5048, Phsl 5103 or Phsl 5104 or GCB 5114 or #)
Sheridan, 4 cr

8203 **Research in Anatomy** (prereq #)
1-10 cr

8207 **Seminar: Anatomy** (prereq #)
1215-1300 W, Hamilton, 1 cr

8223 **Neurobiology of Endocrine Regulation** (prereq #)
Elde, 3 cr

ANCIENT NEAR EASTERN AND JEWISH STUDIES (ANEJ)
Near And Middle Eastern Studies
Liberal Arts

Winter Quarter

R3502 **Ancient Israel** (§5502, no knowledge of Hebr req)
0915-1000 MWF, East Bank, Paradise, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-4 cr

Spring Quarter

R3251 **Modern Study of the Old Testament**
0915-1000 MWF, East Bank, Reisman, 4 cr

R3505 **Ancient Israel: The Hellenistic Period**
1315-1400 MWF, East Bank, Zahavy, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-4 cr

ANCIENT STUDIES (AnSt)
Liberal Arts

Winter Quarter

5100 **Topics in Ancient Studies** (prereq enrollment in AnSt or #)
–1 1245-1400 TTh, West Bank, Jones, 4 cr (Ancient Near East)
–2 1500-1700 T, East Bank, Gibbon, 3 cr (Methods and Theory in Archaeology)
–3 1515-1700 W, East Bank, Coulson, 3 cr (Exhibition of the Sarazyn Collection of Ancient Artifacts)

8002 **Basic Seminar: Methods and Theory in Archaeology** (prereq grad maj or #)
1515-1700 T, East Bank, Gibbon, 3 cr

8110 **Interdisciplinary Seminar: An Archaeological Perspective on Cultural Evolution** (prereq 8100)
1515-1800 Th, East Bank, Hastorf, 3 cr

8200 **Directed Readings** (prereq #)
ar cr

8300 **Directed Research** (prereq #)
ar cr

8400 **Colloquium** (prereq enrollment in AnSt)
1515-1700 M, East Bank, Gibbon, 2 cr

Spring Quarter

5100 **Topics in Ancient Studies** (prereq enrollment in AnSt or #)
–1 1415-1600 T, East Bank, Aris, 3 cr (Archaeology of the Book)
–2 1500-1700 F, East Bank, Coulson, 3 cr (Exhibition of the Sarazyn Collection of Ancient Artifacts)

8003 **Basic Seminar: Interdisciplinary Research** (prereq grad maj or #)
1515-1700 Th, East Bank, Gibbon, 3 cr

8120 **Interdisciplinary Seminar: Ancient Empires** (prereq 8110)
1415-1600 M, Gunter, 3 cr

8200 **Directed Readings** (prereq #)
ar cr

8300 **Directed Research** (prereq #)
ar cr

8400 **Colloquium** (prereq enrollment in AnSt)
1515-1700 W, East Bank, Gibbon, 2 cr

ANIMAL SCIENCE (AnSc)
Agriculture

Winter Quarter

1100 **Introductory Animal Science**
0900-0945 MTWThF, St. Paul, Goodrich, Otterby, others, 5 cr

R1107 **Swine Practicum** (prereq #) (S-N only)
1400-1445 T, St. Paul, Moser, 1 cr

R1500 **Meat Science** (§FScN 1500; prereq Biol 1011)
★LECT 1200-1245 MTWTh, St. Paul, C Allen
–1 LAB 1300-1445 T, St. Paul, 4 cr
–2 LAB 1500-1645 W, St. Paul, 4 cr
–3 LAB 1300-1445 Th, St. Paul, 4 cr
–4 LAB 1500-1645 Th, St. Paul, 4 cr

1520 **Milk Production** (prereq 1100 or #)
0800-0845 MWF, St. Paul, Hansen, 3 cr

3113 **Animal Welfare** (prereq soph)
1400-1515 TTh, St. Paul, 4 cr

5000 **Professional Experience Program** (prereq #) (S-N only)
Moser, 4 cr

5104 **Agricultural Systems Analysis and Modeling** (prereq Math 1142 or #)
1000-1045 MWF, St. Paul, Cornelius, others, 4 cr

5231 **Dairy Cattle Breeding** (prereq 3220 or #)
1300-1345 MTWF, St. Paul, Young, 4 cr

5327 **General Endocrine Physiology** (prereq 3301 or #)
1400-1445 MWF, St. Paul, Wheaton, 3 cr

5328 **General Endocrine Physiology Laboratory** (prereq 5327 or #)
0900-1145 TTh, St. Paul, Wheaton, 2 cr

5331 **Fertility and Incubation of Avian Eggs** (prereq 10 cr Biol or #)
0800-0945 MW, St. Paul, Hamre, 3 cr

5405 **Poultry Nutrition** (prereq 1401 or 3401)
1000-1045 MWF, St. Paul, Waibel, 3 cr

5601 **Swine Production** (prereq 1401 or 3401...3220 rec)
1100-1145 MTWTh, St. Paul, Moser, 4 cr

5609 **Principles of Farm Animal Environment** (prereq jr, 3301 or #)
0900-0945 MWF, St. Paul, El Halawani, 3 cr

R5703 **Literature and Seminar** (prereq jr)
–1 1400-1445 MW, St. Paul, Donker, 2-3 cr
–2 1500-1545 MW, St. Paul, Donker, 2-3 cr

5710 **Special Problems** (prereq #)
ar cr

5715 **Tutorial** (prereq #)
ar cr

8081 **Neuroethology** (§EBB 8081; prereq EBB 5312, Psy 5061 or #)
1400-1700 Th, East Bank, Phillips, 3 cr

8221 **Quantitative Inheritance** (prereq GCB 5042)
0900-0945 MWF, St. Paul, Boylan, 3 cr

8603 **Graduate Seminar** (prereq #)
1600-1645 M, St. Paul, Hunter, 1 cr

8740 Concepts and Developments in Ruminant Nutrition (prereq #)
Stern, 2 cr

8750 Concepts and Developments in Meat Science and Technology (prereq #)
1 cr

8810 Research in Animal Science (prereq #)
ar cr

8820 Research in Animal Genetics (prereq #)
ar cr

8830 Research in Animal Physiology (prereq #)
ar cr

8840 Research in Animal Nutrition (prereq #)
ar cr

8850 Research in Muscle Chemistry and Physiology (prereq #)
ar cr

Spring Quarter

R1107 Swine Practicum (prereq #) (S-N only)
1400-1445 T, St. Paul, Moser, 1 cr

R1110 Dairy Cattle Evaluation
1300-1545 TTh, St. Paul, Hansen, 2 cr

1600 Horse Production (§5501)
1300-1345 MTWTh, St. Paul, Jordan, 4 cr

R1601 Horse Equitation and Management
–1 1400-1600 Th, St. Paul (first day), Jordan, 1 cr (Hennepin County Vo-Tech, Eden Prairie)
–2 1400-1600 F, St. Paul (first day), Jordan, 1 cr (Hennepin County Vo-Tech, Eden Prairie)

R1603 Beef Practicum (prereq soph, #) (S-N only)
1400-1445 T, St. Paul, Meiske, 2 cr (3 hrs ar)

3111 Vertebrate Behavior (prereq Biol 1011, 3011 or #)
1400-1545 TTh, St. Paul, Phillips, 4 cr

3131 Live Animal Performance and Selection
1500-1745 TTh, 1600-1745 TTh, Christians, 3 cr (Arena)

3141 Advanced Dairy Judging (prereq 1110)
Hansen, 1 cr

R3305 Reproductive Physiology, Artificial Insemination, and Lactation (prereq 3301)
★LECT 0900-0945 MTWTh, St. Paul, Hunter
–1 LAB 1500-1645 W, St. Paul, Hunter, 5 cr
–2 LAB 0900-1045 F, St. Paul, Hunter, 5 cr

R3402 Applied Animal Nutrition (§1401; prereq 3401)
★LECT 0900-0945 T, St. Paul, Waibel
–1 LAB 1300-1445 T, St. Paul, Waibel, 2 cr
–2 LAB 1500-1645 W, St. Paul, Waibel, 2 cr

5000 Professional Experience Program (prereq #) (S-N only)
Moser, 4 cr

5232 Applied Meat Animal Breeding (prereq 3220 or #)
1100-1145 MWF, St. Paul, Boylan, 3 cr

5240 Animal Cytogenetics (prereq GCB 3022 or #)
1300-1445 TTh, St. Paul, Shoffner, 4 cr

5330 Current Topics in Endocrinology (prereq 3301, Biol 3021 or BioC 5001)
1600-1645 W, St. Paul, Wheaton, 1 cr

R5403 Ruminant Nutrition (§5413; prereq 1401 or 3401)
★LECT 1000-1045 MWF, St. Paul, Goodrich, Otterby, Stern
–1 LAB 1000-1145 T, St. Paul, 4 cr
–2 LAB 1000-1145 Th, St. Paul, 4 cr
–3 LAB 4 cr

5404 Applied Animal Nutrition
1100-1145 MW, 0800-0845 W, St. Paul, Otterby, Olson, Goodrich, 3 cr

R5407 Laboratory Analysis of Feedstuffs (prereq sr or #)
1300-1345 MWF, St. Paul, Goodrich, Otterby, 2 cr

5440 Intermediate Animal Nutrition (prereq 1401, BioC 1302...Biol 5001 rec)
0900-0945 MTWTh, St. Paul, Cornelius, 4 cr

5603 Beef Cattle Production (§5613; prereq 1401 or 3401...3220, 5403 rec)
0800-0845 TWThF, St. Paul, Meiske, 4 cr

5604 Dairy Farm Management (prereq 1520, 5403...3220 rec) (A-N only)
★LECT 1100-1145 MTWTh, St. Paul, Hansen, 4 cr
–1 REC 1100-1145 F, St. Paul,

R5703 Literature and Seminar (prereq jr)
–1 1400-1445 MW, St. Paul, Donker, 2-3 cr
–2 1500-1545 MW, St. Paul, Donker, 2-3 cr

5710 Special Problems (prereq #)
ar cr

5715 Tutorial (prereq #)
ar cr

8332 Preservation of Spermatozoa and Embryo (prereq 5322, 3 cr upper division biochemistry, #)
★LECT 1400-1445 MWF, St. Paul, Graham, 5 cr
–1 LAB 1400-1645 TTh, St. Paul,

8603 Graduate Seminar (prereq #)
1530-1645 M, St. Paul, Hunter, 1 cr

8750 Concepts and Developments in Meat Science and Technology (prereq #)
C Allen, 1 cr

8810 Research in Animal Science (prereq #)
ar cr

8820 Research in Animal Genetics (prereq #)
ar cr

8830 Research in Animal Physiology (prereq #)
ar cr

8840 Research in Animal Nutrition (prereq #)
ar cr

8850 Research in Muscle Chemistry and Physiology (prereq #)
ar cr

ANTHROPOLOGY (Anth)
Liberal Arts

Winter Quarter

R1101 Human Origins
★LECT 0945-1100 TTh, East Bank, Johnson
–1 REC 0815-0900 T, East Bank, 5 cr
–2 REC 1115-1200 T, East Bank, 5 cr
–3 REC 1115-1200 T, East Bank, 5 cr
–4 REC 1215-1300 T, East Bank, 5 cr
–5 REC 0815-0900 Th, East Bank, 5 cr
–6 REC 1115-1200 Th, East Bank, 5 cr
–7 REC 1115-1200 Th, East Bank, 5 cr
–8 REC 1215-1300 Th, East Bank, 5 cr

R1101H Honors Course: Human Origins (prereq B avg or #)
★LECT 0945-1100 TTh, East Bank, Johnson
–80 REC 1015-1100 T, East Bank, Johnson, 5 cr

R1102 Introduction to Social and Cultural Anthropology (§1115)
★LECT 0915-1000 MWF, West Bank, Ogan
–1 REC 0815-0900 T, East Bank, 5 cr
–2 REC 0915-1000 T, East Bank, 5 cr
–3 REC 0915-1000 T, East Bank, 5 cr
–4 REC 1015-1100 T, East Bank, 5 cr
–5 REC 1015-1100 T, East Bank, 5 cr
–6 REC 1115-1200 T, East Bank, 5 cr
–7 REC 1115-1200 T, East Bank, 5 cr
–8 REC 0815-0900 Th, East Bank, 5 cr
–9 REC 0915-1000 Th, East Bank, 5 cr
–10 REC 0915-1000 Th, East Bank, 5 cr
–11 REC 1015-1100 Th, East Bank, 5 cr
–12 REC 1015-1100 Th, East Bank, 5 cr
–13 REC 1115-1200 Th, East Bank, 5 cr
–14 REC 1115-1200 Th, East Bank, 5 cr

R1102H Introduction to Social and Cultural Anthropology (prereq GPA 3.0 or #)
★LECT 0915-1000 MWF, West Bank, Ogan
–80 REC 0915-1000 T, East Bank, Ogan, 5 cr

R3001 Human Biology (prereq 1101 or intro biol course or #)
1015-1100 MWF, East Bank, Etkin, 4 cr

3101 History of Anthropology (prereq 1102, 15 cr in 3-5 level courses)
1115-1200 MWF, East Bank, Spencer, 4 cr

3211 Indians of North America (prereq 1102 or #)
0915-1000 MWF, East Bank, Spencer, 4 cr

R3301 Methods and Theory in Archaeology (prereq 1101 or #)
1115-1230 TTh, East Bank, Hastorf, 5 cr

R3302 Methods and Theory in Human Biology (prereq 3001, #)
1215-1430 M, East Bank, Etkin, 5 cr

R3366 Methods and Theory in Anthropological Linguistics (prereq 1102 or 5102 or #)
0945-1100 TTh, East Bank, Dunnigan, 5 cr

R3386 Comparative Primate Osteology (prereq 1101 or #)
1315-1500 TTh, East Bank, Murrill, 5 cr

3511 Prehistoric Archaeology of North America (prereq 1101 or #)
0815-0900 MWF, East Bank, Whelan, 4 cr

3533 Prehistoric Archaeology of South Asia (prereq 1101 or #)
1015-1100 MWF, East Bank, Johnson, 4 cr

3970 Directed Studies (prereq #, △, college approval)
ar cr

5132 Symbolic Anthropology (prereq 1102 or 5102, 5112 or #)
1115-1200 MWF, East Bank, Ingham, 4 cr

R5145 Anthropology and Education (§SPFE 5171; prereq 1102 or 5102 or #)
1515-1700 Th, East Bank, Dobbert, 4 cr

5151 Cultural Change and Development (prereq 1102 or 5102 or #)
0945-1100 TTh, East Bank, Miller, 4 cr

5153 Urban Anthropology (prereq 1102 or 5102 or #)
0945-1100 TTh, East Bank, Rowe, 4 cr

5154 Anthropology of Colonialism (prereq 1102 or 5102 or #)
1245-1400 TTh, East Bank, Rowe, 4 cr

5165 Perspectives in Human Behavior (prereq #)
1415-1530 TTh, West Bank, Sarles, 4 cr

5175 Ethnoarchaeology (prereq 1101, 3301 or #)
1245-1400 TTh, East Bank, Spector, 4 cr

5331 Culture Theory: An Introduction (prereq jr, sr, grad or #)
0915-1000 MWF, East Bank, Penn, 4 cr

5910 Topics in Anthropology: Food and Culture in North-South Relations
1245-1500 M, East Bank, Miller, 4 cr

R5960 Senior Seminar (prereq sr maj)
1315-1530 Th, East Bank, Ingham, 4 cr

5970 Directed Readings (prereq #, △, CLA approval) (A-N only)
2-4 cr

8004 Core Seminar: Archaeology
1415-1630 W, East Bank, Gibbon, 3 cr

8360 Seminar: Religion
1415-1700 Th, East Bank, Penn, 3 cr

8710 Seminar: Linguistic Anthropology
1415-1630 W, East Bank, Sarles, 3 cr

8950 Directed Studies (prereq #)
ar cr

Spring Quarter

R1101 Human Origins
★LECT 1015-1130 TTh, East Bank, Spector
–1 REC 0815-0900 T, East Bank, 5 cr
–2 REC 0915-1000 T, East Bank, 5 cr
–3 REC 0915-1000 T, East Bank, 5 cr
–4 REC 1215-1300 T, East Bank, 5 cr
–5 REC 0815-0900 Th, East Bank, 5 cr
–6 REC 0915-1000 Th, East Bank, 5 cr
–7 REC 0915-1000 Th, East Bank, 5 cr
–8 REC 1215-1300 Th, East Bank, 5 cr

R1101H Honors Course: Human Origins (prereq B avg or #)
★LECT 1015-1130 TTh, East Bank, Spector
–80 REC 1015-1100 W, East Bank, Spector, 5 cr

R1102 Introduction to Social and Cultural Anthropology (§1115)
★LECT 1115-1200 MWF, East Bank, Spencer
–1 REC 0815-0900 T, East Bank, 5 cr
–2 REC 0915-1000 T, East Bank, 5 cr
–3 REC 0915-1000 T, East Bank, 5 cr
–4 REC 1015-1100 T, East Bank, 5 cr
–5 REC 1015-1100 T, East Bank, 5 cr
–6 REC 1115-1200 T, East Bank, 5 cr
–7 REC 1115-1200 T, East Bank, 5 cr
–8 REC 0815-0900 Th, East Bank, 5 cr
–9 REC 0915-1000 Th, East Bank, 5 cr
–10 REC 0915-1000 Th, East Bank, 5 cr
–11 REC 1015-1100 Th, East Bank, 5 cr
–12 REC 1015-1100 Th, East Bank, 5 cr
–13 REC 1115-1200 Th, East Bank, 5 cr
–14 REC 1115-1200 Th, East Bank, 5 cr

R1102H Introduction to Social and Cultural Anthropology (prereq GPA 3.0 or #)
★LECT 1115-1200 MWF, East Bank, Spencer
–80 REC 0915-1000 T, East Bank, Spencer, 5 cr

3222 **Peoples and Cultures of Middle America** (prereq 1102 or #)
0945-1100 TTh, East Bank, Ingham, 4 cr

3387 **Comparative Primate Osteology** (prereq 3386)
1315-1600 TTh, East Bank, Murrill, 5 cr

3970 **Directed Studies** (prereq #, △, college approval)
ar cr

5102 **Principles of Cultural Anthropology** (§1102; prereq jr standing only or #)
0915-1000 MWF, East Bank, Prell, 4 cr

5112 **Kinship and Marriage** (prereq 1102 or 5102, 3201 or #)
1215-1300 MWF, East Bank, Ball, 4 cr

5116 **Cultural Ecology** (prereq 1101, 1102 or 5102, one ethnographic area course or #)
1115-1230 TTh, East Bank, Hastorf, 4 cr

5147 **Dynamics of Pedagogy in Higher Education** (prereq #)
1015-1100 MWF, East Bank, Sarles, 4 cr

5177 **Archaeological Resource Management** (prereq 1101)
0815-0900 MWF, East Bank, Johnson, 4 cr

5186 **Nutritional Anthropology** (prereq 1101, 1102 or 5102 or #)
0945-1100 TTh, East Bank, Etkin, 4 cr

5187 **Folk Medicine: Cross-Cultural Studies** (prereq 1102 or 5102, 3001, # or intro biology, intro social science course, #)
1215-1400 TTh, East Bank, Etkin, 4 cr

5258 **Anthropological Analysis of American Culture** (prereq 1102 or 5102 or #)
1315-1400 MWF, East Bank, Rowe, 4 cr

5305 **Studies in Anthropological Classics**
1415-1600 T, East Bank, Penn, 5 cr

5392 **Philosophical Anthropology** (prereq 1102 or 5102)
1015-1100 MWF, East Bank, Penn, 4 cr

5910 **Topics in Anthropology: Peoples and Cultures of Southeast Asia**
1315-1400 MWF, East Bank, Dunnigan, 4 cr

5920 **Topics in Anthropology**
1115-1200 MWF, East Bank, Rowe, 4 cr

R5960 **Senior Seminar** (prereq sr maj)
–1 1315-1530 W, East Bank, Ogan, 4 cr (Anthropology and History)
–2 1315-1530 Th, East Bank, Miller, 4 cr

5970 **Directed Readings** (prereq #, △, CLA approval) (A–N only)
2–4 cr

8002 **Core Seminar: Social Anthropology** (prereq anth grad student or #)
1415-1600 W, East Bank, Ingham, 3 cr

8420 **Seminar: Cultural Change**
1415-1600 T, East Bank, Miller, 3 cr

8950 **Directed Studies** (prereq #)
ar cr

ARABIC (Arab)
South And Southwest Asian Studies
Liberal Arts

Winter Quarter

1102 **Beginning Arabic** (prereq 1101)
1115-1200 MTWThF, East Bank, Barker, 5 cr

3012 **Intermediate Arabic** (prereq 3011)
1015-1200 TTh, East Bank, 4 cr

5112 **Advanced Literary Arabic and Composition** (prereq 5111)
5 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
ar cr

Spring Quarter

1103 **Beginning Arabic** (prereq 1102)
1115-1200 MTWThF, East Bank, Barker, 5 cr

3013 **Intermediate Arabic** (prereq 3012)
1015-1200 TTh, East Bank, 4 cr

5113 **Advanced Literary Arabic and Composition** (prereq 5112)
5 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
ar cr

ARCHITECTURE (Arch)
Architecture & Landscape Architecture
Institute of Technology

Winter Quarter

R1022 **History of Environmental Development: Architecture and Landscape Architecture** (§LA 1022)
1115-1300 TTh, East Bank, Winterowd, 4 cr

R1042 **Architectural Graphics** (prereq 1041)
1820-2050 W, East Bank, Grebner, 2 cr

R3002 **Environmental Design: Tools and Processes** (§LA 3002; prereq 3001)
1315-1500 TTh, East Bank, LaVine, 4 cr

R3062 **Building Systems** (prereq 3061)
1015-1200 TTh, East Bank, Graffunder, 4 cr

R3065 **Environmental Management and Control** (prereq 3064)
1015-1200 TTh, East Bank, Diedrich, 4 cr

R3082 **Architectural Design** (prereq 3081)
★LECT 1315-1700 MWF, East Bank, Lockhart, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R3092 **Architectural Design** (prereq 3091)
★LECT 1315-1700 MWF, East Bank, Stageberg, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R3093 **Architectural Design** (prereq 3092)
★LECT 1315-1700 MWF, East Bank, Stageberg, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R3970 **Directed Study** (prereq 3081 or △)
ar cr

R5052 **Early Medieval Architecture** (prereq 1021)
1015-1200 MW, East Bank, Winterowd, 4 cr

R5111 **Architectural Design** (prereq 3093, 3064-3065 or ¶, CE 3600-3601-3602 or ¶, IT arch maj or adult special)
★LECT 1315-1700 MWF, East Bank, Weeks, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R5112 **Architectural Design** (prereq 5111)
★LECT 1315-1700 MWF, East Bank, Weeks, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R5113 **Architectural Design** (prereq 5112)
★LECT 1315-1700 MWF, East Bank, Weeks, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R5116 **Structure and Form in Architecture** (prereq 5115)
1315-1700 T, East Bank, Michelson, 4 cr

R5121 **Architectural Design** (prereq 5133, CE 3602, arch maj) (A–N only)
★LECT 1315-1700 MWF, East Bank, Grebner, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R5122 **Architectural Design** (prereq 5121, arch maj)
★LECT 1315-1700 MWF, East Bank, Grebner, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R5123 **Architectural Thesis** (prereq 5122, submit thesis plan qtr prior to writing, 800 hrs practical exp, arch maj)
1315-1700 MTWThF, East Bank, Rapson, 12 cr

R5128 **Law for Architects** (prereq 3093 or △)
1715-1900 T, East Bank, Heins, 4 cr

R5138 **Planning: Theory and Methodology** (prereq 5137 or #)
0815-1000 TTh, East Bank, Salem, 4 cr

R5142 **Historic Building Research and Documentation** (prereq 5141 or #)
1715-1845 TTh, East Bank, Dunwiddie, 4 cr

R5850 **Topics in Theory** (prereq arch maj or adult special)
2 cr

R5852 **Architecture: Theory and Philosophy** (prereq 3093 or #, arch maj or adult special)
1515-1700 Th, East Bank, Dittmar, 3 cr

R5855 **Typology and Architecture: Theories of Analysis and Synthesis** (prereq 3083 or #, arch maj or adult special)
1515-1700 Th, East Bank, Rockcastle, 3 cr

R5950 **Topics in Architecture** (prereq 3093, 3067 or #)
–1 1015-1200 MW, East Bank, Li, 4 cr
–2 ar cr
–3 2 cr

R5952 **Programming for Architectural Design** (prereq 3093 or #, arch maj or adult special)
1015-1100 W, 1015-1200 F, East Bank, Robinson, 3 cr

R5962 **Computer Aided Architectural Design** (prereq 5961 or #, arch maj)
1315-1500 T, East Bank, 4 cr

R5970 **Directed Study** (prereq #)
ar cr

R8202 **Special Research: Architectural History** (prereq 5056 or #)
Winterowd, ar cr

R8251 **Architectural Design** (prereq grad status in architecture) (A–N only)
1315-1700 MWF, East Bank, Rauma, others, 6 cr

R8252 **Architectural Design** (prereq grad status in architecture) (A–N only)
1315-1700 MWF, East Bank, Rauma, others, 6 cr

R8253 **Architectural Design** (prereq grad status in architecture) (A–N only)
1315-1700 MWF, East Bank, Rauma, others, 6 cr

R8254 **Architectural Design** (prereq grad status in architecture) (A–N only)
★LECT 1315-1700 MWF, East Bank, Michelson, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R8255 **Architectural Design** (prereq grad status in architecture) (A–N only)
★LECT 1315-1700 MWF, East Bank, Michelson, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R8256 **Architectural Design** (prereq grad status in architecture) (A–N only)
★LECT 1315-1700 MWF, East Bank, Michelson, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R8261 **Selected Problems in Architecture** (prereq grad status in architecture)
1315-1700 MWF, East Bank, Thompson, others, 1–9 cr

R8262 **Selected Problems in Architecture** (prereq grad status in architecture)
1315-1700 MWF, East Bank, Thompson, others, 1–9 cr

R8263 **Selected Problems in Architecture** (prereq grad status in architecture)
1315-1700 MWF, East Bank, Thompson, others, 1–9 cr

R8271 **Problems in City and Community Design**
1315-1700 MWF, East Bank, Martin, others, 9 cr

R8272 **Problems in City and Community Design**
1315-1700 MWF, East Bank, Martin, others, 9 cr

R8273 **Problems in City and Community Design**
1315-1700 MWF, East Bank, Martin, others, 9 cr

R8274 **Problems in City and Community Design**
1315-1700 MWF, East Bank, Martin, others, 9 cr

R8275 **Problems in City and Community Design**
1315-1700 MWF, East Bank, Martin, others, 9 cr

R8276 **Problems in City and Community Design**
1315-1700 MWF, East Bank, Martin, others, 9 cr

Spring Quarter

R1023 **History of Environmental Development: Planning** (§LA 1023)
1115-1300 TTh, East Bank, Showalter, 4 cr

R1043 **Architectural Graphics** (prereq 1042)
1820-2050 W, East Bank, Grebner, 2 cr

R3003 **Environmental Design** (§LA 3003; prereq 3002)
1315-1500 TTh, East Bank, Lavine, 4 cr

R3067 **Integrated Design Systems**
1315-1700 Th, East Bank, Swenson, 4 cr

R3083 **Architectural Design** (prereq 3082)
★LECT 1315-1700 MWF, East Bank, Lockhart, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R3091 **Architectural Design** (prereq 3083, arch maj or adult special)
★LECT 1315-1700 MWF, East Bank, Stageberg, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R3092 **Architectural Design** (prereq 3091)
★LECT 1315-1700 MWF, East Bank, Stageberg, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R3093 **Architectural Design** (prereq 3092)
★LECT 1315-1700 MWF, East Bank, Stageberg, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R3970 **Directed Study** (prereq 3081 or △)
ar cr

R5053 **Gothic Architecture** (prereq 1021)
1015-1200 MW, East Bank, Winterowd, 4 cr

R5105 **Seminar: Scandinavian Architecture** (prereq 5056 or 5061 or #)
Winterowd, 4 cr

R5111 **Architectural Design** (prereq 3093, 3064-3065 or ¶, CE 3600-3601-3602 or ¶, IT arch maj or adult special)
★LECT 1315-1700 MWF, East Bank, Weeks, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R5112 **Architectural Design** (prereq 5111)
★LECT 1315-1700 MWF, East Bank, Weeks, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R5113 **Architectural Design** (prereq 5112)
★LECT 1315-1700 MWF, East Bank, Weeks, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R5121 **Architectural Design** (prereq 5133, CE 3602, arch maj) (A–N only)
★LECT 1315-1700 MWF, East Bank, Grebner, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R5122 **Architectural Design** (prereq 5121, arch maj)
★LECT 1315-1700 MWF, East Bank, Grebner, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R5123 **Architectural Thesis** (prereq 5122, submit thesis plan qtr prior to writing, 800 hrs practical exp, arch maj)
1315-1700 MTWThF, East Bank, Rapson, 12 cr

R5126 **Professional Practice** (prereq 3rd yr design or ¶, arch maj or adult special)
1015-1200 TTh, East Bank, Graffunder, 4 cr

R5143 **Historic Building Conservation** (prereq 5141 or #)
1715-1845 TTh, East Bank, Dunwiddie, 4 cr

R5850 **Topics in Theory** (prereq arch maj or adult special)
2 cr

R5950 **Topics in Architecture** (prereq 3093, 3067 or #)
4 cr

R5953 **Housing and Values** (prereq upper division or grad)
1315-1600 T, East Bank, Clemence, 3 cr

R5958 **Energy and Architecture** (prereq 3093 or #, arch maj or adult special)
1015-1300 F, East Bank, LaVine, 4 cr

R5959 **Lighting Design Techniques** (prereq 3083 or #, arch maj or adult special)
1300-1330 MW, East Bank, Diedrich, 2 cr

R5961 **Computer-Aided Architectural Design** (prereq architecture maj, 3083 or #)
1315-1500 TTh, East Bank, Anderson, 4 cr

R5970 **Directed Study** (prereq #)
ar cr

R8203 **Special Research: Architectural History** (prereq 5056 or #)
Winterowd, ar cr

R8251 **Architectural Design** (prereq grad status in architecture) (A–N only)
★LECT 1315-1700 MWF, East Bank, French, Rauma, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R8252 **Architectural Design** (prereq grad status in architecture) (A–N only)
★LECT 1315-1700 MWF, East Bank, French, Rauma, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R8253 **Architectural Design** (prereq grad status in architecture) (A–N only)
★LECT 1315-1700 MWF, East Bank, Parker, Rauma, others, 6 cr
–1 LAB 1315-1700 MWF, East Bank,

R8254 **Architectural Design** (prereq grad status in architecture) (A–N only)
1315-1700 MWF, East Bank, Michelson, others, 6 cr

R8255 **Architectural Design** (prereq grad status in architecture) (A–N only)
1315-1700 MWF, East Bank, Michelson, others, 6 cr

R8256 **Architectural Design** (prereq grad status in architecture) (A–N only)
1315-1700 MWF, East Bank, Michelson, others, 6 cr

R8261 **Selected Problems in Architecture** (prereq grad status in architecture)
1315-1700 MWF, East Bank, Clemence, Michelson, others, 1–9 cr

R8262 **Selected Problems in Architecture** (prereq grad status in architecture)
1315-1700 MWF, East Bank, Clemence, Michelson, others, 1–9 cr

R8263 **Selected Problems in Architecture** (prereq grad status in architecture)
1315-1700 MWF, East Bank, Clemence, Michelson, others, 1–9 cr

R8271 **Problems in City and Community Design**
1315-1700 MWF, East Bank, Clemence, Showalter, 9 cr

R8272 **Problems in City and Community Design**
1315-1700 MWF, East Bank, Clemence, Showalter, 9 cr

R8273 **Problems in City and Community Design**
1315-1700 MWF, East Bank, Clemence, Showalter, 9 cr

R8274 **Problems in City and Community Design**
1315-1700 MWF, East Bank, Clemence, Showalter, 9 cr

R8275 **Problems in City and Community Design**
1315-1700 MWF, East Bank, Clemence, Showalter, 9 cr

R8276 **Problems in City and Community Design**
1315-1700 MWF, East Bank, Clemence, 9 cr

ART EDUCATION (ArEd)
Curriculum And Instruction
Education

Winter Quarter

R3000 **Art of Children** (A–N only)
1415-1600 MW, East Bank, DiBlasio, 3 cr

R3001 **Survey of Art Activities** (prereq non art education maj) (A–N only)
–1 0915-1100 MWF, East Bank, Park, 4 cr
–2 1415-1600 MWF, East Bank, Russell, 4 cr
–3 1315-1600 TTh, East Bank, 4 cr

R3009 **Weaving Without A Loom** (A–N only)
1515-1700 MWF, East Bank, Smits, 4 cr

R3010 **Introduction to Weaving** (A–N only)
1315-1500 MWF, East Bank, Smits, 4 cr

R3020 **Contemporary Crafts** (A–N only)
1315-1600 TTh, East Bank, Park, 4 cr

R3120 **Newer Media in Art Curriculum** (prereq 3110) (A–N only)
1315-1500 TTh, East Bank, Russell, 3 cr

3309 **Independent Study** (max 4 cr; prereq #) (A–N only)
1–4 cr

R3800 **Current Trends in Art Education** (prereq 3120, 3130) (A–N only)
1015-1200 MW, East Bank, 3 cr

R5020 **Advanced Contemporary Crafts** (prereq 3020) (A–N only)
1315-1600 TTh, East Bank, Park, 4 cr

5303 **Art Programs for Exceptional Learners** (A–N only)
1615-1900 W, East Bank, 4 cr

5600 **Internship** (prereq #) (A–N only)
Slettehaugh, 3–9 cr

5605 **Practicum** (prereq #) (A–N only)
DiBlasio, Slettehaugh, 3–9 cr

5900 **Professional Problems** (prereq MEd student, #) (A–N only)
DiBlasio, Slettehaugh, 3 cr

R8300 **Research in Art Education**
1615-1830 Th, East Bank, DiBlasio, 3 cr

R8306 **Seminar: Art Education**
1615-1800 T, East Bank, Slettehaugh, 1 cr

8900 **Problems: Art Education** (prereq #)
DiBlasio, Slettehaugh, ar cr

Spring Quarter

R3000 **Art of Children** (A–N only)
1215-1400 TTh, East Bank, 3 cr

3001 **Survey of Art Activities** (prereq non art education maj) (A–N only)
–1 1415-1600 MWF, East Bank, Russell, 4 cr
–2 1415-1700 TTh, East Bank, Russell, 4 cr

R3009 **Weaving Without A Loom** (A–N only)
1515-1700 MWF, East Bank, Smits, 4 cr

R3010 **Introduction to Weaving** (A–N only)
1315-1500 MWF, East Bank, Smits, 4 cr

R3020 **Contemporary Crafts** (A–N only)
–1 0915-1200 TTh, East Bank, Park, 4 cr
–2 1315-1600 TTh, East Bank, Park, 4 cr

R3130 **Community and School Resources in Art Curriculum** (prereq 3110) (A–N only)
1415-1600 TTh, East Bank, Slettehaugh, 3 cr

3200 **Field Experiences in Art Education** (prereq educ stu) (S–N only)
1615-1800 Th, East Bank, Slettehaugh, 3–9 cr

3309 **Independent Study** (max 4 cr; prereq #) (A–N only)
Slettehaugh, 1–4 cr

3600 **Student Teaching and Supervision of Art** (prereq 3120, 3130, sr in art educ, SeEd 3150, Elem 3101, ¶3610) (S–N only)
3–12 cr

3610 **Teaching Art in the Schools** (prereq ¶3600) (A–N only)
1615-1800 MW, East Bank, Russell, 3 cr

R5020 **Advanced Contemporary Crafts** (prereq 3020) (A–N only)
–1 0915-1200 TTh, East Bank, Park, 4 cr
–2 1315-1600 TTh, East Bank, Park, 4 cr

5201 **Introduction to Art Therapy** (A–N only)
1615-1830 Th, East Bank, DiBlasio, 3 cr

R5389 **Application of Aesthetic Theory in Education** (A–N only)
1615-1830 T, East Bank, DiBlasio, 3 cr

5600 **Internship** (prereq #) (A–N only)
3–9 cr

5605 **Practicum** (prereq #) (A–N only)
DiBlasio, 3–9 cr

5900 **Professional Problems** (prereq MEd student, #) (A–N only)
DiBlasio, Slettehaugh, 3 cr

8900 **Problems: Art Education** (prereq #)
DiBlasio, Slettehaugh, ar cr

ART HISTORY (ArtH)
Liberal Arts

Winter Quarter

R1002 **Introduction to the History of Art**
1015-1100 MWF, West Bank, Marling, Steyaert, others, 4 cr

R1016 **Introduction to Asian Art** (§3013)
1015-1100 MWF, East Bank, Asher, 4 cr

R3009 **History of Medieval Art**
1215-1300 MWF, East Bank, Stones, 4 cr

R3012 **History of 19th, 20th Century Art**
0945-1100 TTh, East Bank, Nelson, 4 cr

R3232 **Great Monasteries of the Middle Ages** (§Hum 3815; prereq 3009)
0915-1000 MWF, East Bank, Stones, 4 cr

R3895 **Methods of Writing and Research in Art History** (prereq art history maj) (A–N only)
1415-1600 W, East Bank, Sheppard, 4 cr

R3921 **Art of the Film**
1315-1400 MW, 1315-1530 F, East Bank, Silberman, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1–5 cr

3971 **Major Project** (prereq art history maj, 3895, #)
1 cr

3975 **Directed Museum Experience** (prereq # Director of Undergrad Studies, Director of Museology or a faculty supervisor) (S–N only)
1–3 cr

R5112 **Greek Sculpture: Archaic, Classical, and Hellenistic** (§Clas 5112; prereq jr or #)
1415-1500 MWF, East Bank, Coulson, 5 cr

R5313 **Italian High Renaissance Architecture, Sculpture, and Painting** (prereq 3011 or grad student or #)
1015-1100 MWF, East Bank, Canedy, 4 cr

R5324 **15th-Century Painting in Northern Europe** (prereq 3009 or 3011 or grad student or #)
1215-1300 MWF, East Bank, Steyaert, 5 cr

R5358 **18th-Century Art in Italy, Germany, Austria** (prereq 3011 or grad student or #)
1215-1300 MWF, East Bank, Stoughton, 4 cr

R5455 **Georgian and Victorian Painting** (prereq 4 cr art history or 19th century literature or history or #)
1115-1230 TTh, East Bank, Waldfogel, 5 cr

R5464 **Later 20th Century Painting** (prereq one American or modern art course or #)
0945-1100 TTh, East Bank, Simon, 5 cr

R5535 **Art in United States** (prereq 3 cr art hist or #)
1315-1400 MWF, East Bank, Marling, 5 cr

R5644 **Medieval Art of Scandinavia** (prereq one art hist course or #)
1245-1400 TTh, East Bank, Nelson, 4 cr

R5766 **Chinese Painting**
1115-1200 MWF, East Bank, Poor, 5 cr

R5940 **Topics: Renoir and Realism in the Film** (prereq 3921-3922 or #)
1115-1200 MW, 1115-1300 F, East Bank, Silberman, 4 cr

5970 **Directed Readings** (prereq sr, #, △, CLA approval)
1-5 cr

5990 **Directed Research** (prereq sr, #, △, CLA approval)
1-5 cr

8190 **Seminar: Problems in Classical Art** (prereq #)
1515-1700 M, East Bank, Gunter, 4 cr

R8993 **Museology I: Museum Principles and Practices** (8992-8993†; prereq 8992)
1415-1630 T, East Bank, 4 cr

8995 **Museology II** (prereq △)
Smith, 5 cr

8996 **Museology III** (prereq 8995)
5 cr

8997 **Museology IV** (prereq 8996)
5 cr

Spring Quarter

R1001 **Introduction to Visual Arts** (§3001)
1415-1530 TTh, West Bank, Poor, 4 cr

R1002 **Introduction to the History of Art**
1015-1100 MWF, West Bank, Marling, Steyaert, others, 4 cr

R3008 **History of Ancient Art** (§1008)
0915-1000 MWF, East Bank, McNally, 4 cr

R3009 **History of Medieval Art**
0815-0900 MWF, East Bank, Steyaert, 4 cr

R3011 **History of Renaissance and Baroque Art**
1215-1300 MWF, East Bank, Stoughton, 4 cr

R3012 **History of 19th, 20th Century Art**
1015-1100 MWF, East Bank, Simon, 4 cr

R3465 **Master Painters of the Nineteenth Century**
1245-1400 TTh, East Bank, Waldfogel, 4 cr

R3654 **Major Achievements in Scandinavian Art**
0945-1100 TTh, East Bank, Nelson, 4 cr

R3922 **Art of the Film** (prereq 3921)
1315-1400 MW, 1315-1530 F, East Bank, Silberman, 4 cr

R3936 **Arts of Black Africa**
1115-1200 MWF, East Bank, Smith, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-5 cr

3971 **Major Project** (prereq art history maj, 3895, #)
1 cr

3975 **Directed Museum Experience** (prereq # Director of Undergrad Studies, Director of Museology or a faculty supervisor) (S-N only)
1-3 cr

R5107 **Roman Sculpture** (§Clas 5107; prereq jr or #) (A-N only)
1215-1300 MWF, East Bank, McNally, 4 cr

R5234 **Gothic Sculpture of the Cathedral Age** (prereq 3009 or grad student or #)
0815-0900 MWF, East Bank, Steyaert, 5 cr

R5261 **Illuminated Book** (prereq 4 cr medieval art hist or #)
0945-1100 TTh, East Bank, Stones, 5 cr

R5306 **Italian Art of 14th Century** (prereq 1 art hist course or #)
0915-1000 MWF, East Bank, Canedy, 4 cr

R5314 **Later 16th-Century Italian Architecture, Sculpture, and Painting** (prereq 5313 or grad student or #)
1215-1300 MWF, East Bank, Canedy, 5 cr

R5466 **The Avant-Garde** (prereq 3012 or 5463 or #)
1315-1400 MWF, East Bank, Simon, 5 cr

R5645 **Folk Arts of Scandinavia** (prereq one art hist course or #)
1245-1400 TTh, East Bank, Nelson, 4 cr

R5767 **Japanese Painting**
0945-1100 TTh, East Bank, Poor, 4 cr

R5777 **Painting of India** (prereq 4 cr art hist or #)
1015-1100 MWF, East Bank, Asher, 5 cr

R5925 **History of Photography as Art** (prereq 3012 or #)
1115-1200 MWF, East Bank, Silberman, 4 cr

5970 **Directed Readings** (prereq sr, #, △, CLA approval)
1-5 cr

5990 **Directed Research** (prereq sr, #, △, CLA approval)
1-5 cr

R8520 **Seminar: Grant Wood and Regionalism** (§AmSt 8203; prereq #)
1415-1600 M, East Bank, Marling, 4 cr

8997 **Museology IV** (prereq 8996)
Smith, 5 cr

ART STUDIO (ArtS)

Liberal Arts

Winter Quarter

R1101 **Drawing I**
–1 0815-1000 MWF, West Bank, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1015-1200 MWF, West Bank, 4 cr (ArtS, ArEd, Dsgn majs only)
–3 1215-1400 MWF, West Bank, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 0915-1200 TTh, West Bank, Hendler, 4 cr (ArtS, ArEd, Dsgn majs only)
–5 1315-1600 TTh, West Bank, Caglioti, 4 cr (ArtS, ArEd, Dsgn majs only)
–6 0815-1000 MWF, West Bank, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
–7 1015-1200 MWF, West Bank, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
–8 1215-1400 MWF, West Bank, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
–9 0915-1200 TTh, West Bank, Hendler, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
–10 1315-1600 TTh, West Bank, Caglioti, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
–11 0815-1000 MWF, West Bank, 4 cr
–12 1015-1200 MWF, West Bank, 4 cr
–13 1215-1400 MWF, West Bank, 4 cr
–14 0915-1200 TTh, West Bank, Hendler, 4 cr
–15 1315-1600 TTh, West Bank, Caglioti, 4 cr

R1102 **Drawing II** (prereq 1101)
–1 1015-1200 MWF, West Bank, Roode, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1015-1200 MWF, West Bank, Roode, 4 cr
–3 0915-1200 TTh, West Bank, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 0915-1200 TTh, West Bank, 4 cr
–5 1315-1600 TTh, West Bank, 4 cr (ArtS, ArEd, Dsgn majs only)
–6 1315-1600 TTh, West Bank, 4 cr

R1105 **Beginning Painting**
–1 0915-1200 MW, Feinberg, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, Feinberg, 4 cr
–3 1315-1600 TTh, Hendler, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 1315-1600 TTh, Hendler, 4 cr

R1301 **Sculpture**
–1 0915-1200 MW, Baldwin, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, Baldwin, 4 cr
–3 1315-1600 TTh, Lucey, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 1315-1600 TTh, Lucey, 4 cr

R1302 **Sculpture**
–1 0915-1200 MW, Potratz, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, Potratz, 4 cr
–3 0915-1200 TTh, Lucey, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 0915-1200 TTh, Lucey, 4 cr
–5 1315-1600 TTh, Rose, 4 cr (ArtS, ArEd, Dsgn majs only)
–6 1315-1600 TTh, Rose, 4 cr

R1401 **Introduction to Studio Arts**
1415-1600 TTh, West Bank, 4 cr

R1404 **Color** (§1104; prereq 1101)
–1 1315-1600 MW, West Bank, Feinberg, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 MW, West Bank, Feinberg, 4 cr

R1510 **Printmaking: Intaglio** (max 8 cr)
–1 0915-1200 TTh, Bethke, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 TTh, Bethke, 4 cr

R1520 **Printmaking: Lithography** (max 8 cr)
–1 0915-1200 MW, Krepps, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, Krepps, 4 cr

R1530 **Printmaking: Relief** (max 8 cr)
–1 0915-1200 TTh, Krepps, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 TTh, Krepps, 4 cr

R1701 **Photo Medium**
–1 0915-1200 MW, Hallman, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, Hallman, 4 cr (CLA students only)
–3 0915-1200 TTh, Henkel, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 0915-1200 TTh, Henkel, 4 cr (CLA students only)

R1811 **Ceramics: Handbuilding**
–1 0915-1200 TTh, Hoard, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 TTh, Hoard, 4 cr

R1812 **Ceramics: Wheel Throwing**
–1 1315-1600 TTh, Hoard, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 TTh, Hoard, 4 cr

R3110 **Drawing** (max 12 cr; prereq 1102, 1401)
–1 1315-1600 TTh, West Bank, Rowan, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 TTh, West Bank, Rowan, 4 cr
–3 0915-1200 TTh, West Bank, Cowette, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 0915-1200 TTh, West Bank, Cowette, 4 cr

R3120 **Painting** (max 12 cr; prereq 1104, 1105, 1401, 4 cr of 3110 or #)
–1 0815-1000 MWF, West Bank, Roode, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0815-1000 MWF, West Bank, Roode, 4 cr

R3140 **Drawing and Painting** (max 6 cr; prereq 1101 or 1109 or #, arch student)
1700-1900 MW, West Bank, 2 cr

R3160 **Watercolor** (max 12 cr; prereq 1101, 1104, 1401 or #)
0915-1200 TTh, Caglioti, 4 cr (ArtS, ArEd, Dsgn majs only)

R3301 **Sculpture: Direct Metal** (prereq 1301, 1302, 1401)
–1 1315-1600 MW, Baldwin, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 MW, Baldwin, 4 cr

R3302 **Sculpture: Plastics Media** (prereq 1301, 1302, 1401)
–1 0915-1200 TTh, West Bank, Rose, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 TTh, West Bank, Rose, 4 cr

R3303 **Sculpture: Cast Metal** (prereq 1301, 1302, 1401)
–1 1315-1600 MW, Potratz, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 MW, Potratz, 4 cr

R3305 **Sculpture: Kinetics** (prereq 1301, 1302, 1401)
–1 1315-1600 MW, Baldwin, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 MW, Baldwin, 4 cr

3403H **Honors Workshop** (prereq honors candidate, 1401, #, △)
2-4 cr

3404H **Honors Workshop** (prereq honors candidate, 1401, #, △)
2-4 cr

3405H **Honors Thesis** (prereq 1401, #)
2-4 cr

3406H **Honors Thesis** (prereq 1401, #)
2-4 cr

R3420 **Studio Arts Workshop: Chemistry in Art** (§NSci 3011)
★LECT 1415-1500 MWF, East Bank
–1 Lab 0815-1000 F, East Bank, 1-5 cr
–2 Lab 1015-1200 F, East Bank, 1-5 cr

R3510 **Printmaking: Intaglio** (max 12 cr; prereq 1401, 4 cr of 1510 or #)
–1 1315-1600 TTh, Myers, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 TTh, Myers, 4 cr

R3520 **Printmaking: Lithography** (max 12 cr; prereq 1401, 4 cr of 1520 or #)
–1 1315-1600 MW, Krepps, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 MW, Krepps, 4 cr

R3710 **Photography** (max 12 cr; prereq 1401, 1701 or Jour 1301 or #)
–1 1315-1600 MW, Hallman, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 MW, Hallman, 4 cr (CLA students only)

R3810 **Intermediate Ceramics** (max 12 cr; prereq 1401, 1811, 1812 or #)
–1 0915-1200 MW, Lane, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, Lane, 4 cr

R3820 **Glassworking** (max 12 cr; prereq 1401, 1811 or 1301 or 1302)
1315-1600 MW, West Bank, Lane, 4 cr

3830 **Glass: Introduction to Neon** (max 12 cr; prereq 1401)
1315-1600 MW, West Bank, Lane, 4 cr

3970 **Directed Study** (max 8 cr; prereq 24 cr studio arts, #, △, college approval)
–1 Baldwin, 1-5 cr
–2 Bethke, 1-5 cr
–3 Caglioti, 1-5 cr
–4 Cowette, 1-5 cr
–5 Feinberg, 1-5 cr
–6 Gray, 1-5 cr
–7 Hallman, 1-5 cr
–8 Hendler, 1-5 cr
–9 Henkel, 1-5 cr
–10 Hoard, 1-5 cr
–11 Krepps, 1-5 cr
–12 Lane, 1-5 cr
–13 Lucey, 1-5 cr
–14 MacKenzie, 1-5 cr
–15 Myers, 1-5 cr
–16 Potratz, 1-5 cr
–17 Roode, 1-5 cr
–18 Rose, 1-5 cr
–19 Rowan, 1-5 cr
–20 Somberg, 1-5 cr
–21 Brooks, 1-5 cr

3980 **Directed Instruction** (max 8 cr; prereq #, △, college approval)
–1 Baldwin, 1-5 cr
–2 Bethke, 1-5 cr
–3 Caglioti, 1-5 cr
–4 Cowette, 1-5 cr
–5 Feinberg, 1-5 cr
–6 Gray, 1-5 cr
–7 Hallman, 1-5 cr
–8 Hendler, 1-5 cr
–9 Henkel, 1-5 cr
–10 Hoard, 1-5 cr
–11 Krepps, 1-5 cr
–12 Lane, 1-5 cr
–13 Lucey, 1-5 cr
–14 MacKenzie, 1-5 cr
–15 Myers, 1-5 cr
–16 Potratz, 1-5 cr
–17 Roode, 1-5 cr
–18 Rose, 1-5 cr
–19 Rowan, 1-5 cr
–20 Somberg, 1-5 cr
–21 Brooks, 1-5 cr

R5110 **Drawing** (max 16 cr; prereq 12 cr of 3110)
–1 0915-1200 TTh, West Bank, Rowan, 4 cr
–2 4 cr (sr, grad only)

R5120 **Painting** (max 16 cr; prereq 12 cr of 3120 or #)
–1 1315-1600 TTh, Cowette, 4 cr
–2 4 cr (sr, grad only)

R5160 **Watercolor** (max 16 cr; prereq 12 cr of 3160 or #)
–1 0915-1200 TTh, Caglioti, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 4 cr (sr, grad only)

5190 **Drawing and Painting** (max 16 cr; prereq #, non maj)
3-4 cr

R5310 **Sculpture: Direct Metal** (max 16 cr; prereq 3301)
1315-1600 MW, Baldwin, 4 cr

R5320 **Sculpture: Plastics Media** (max 16 cr; prereq 3302)
0915-1200 TTh, West Bank, Rose, 4 cr

R5330 **Sculpture: Cast Metal** (max 16 cr; prereq 3303)
1315-1600 MW, Potratz, 4 cr

R5350 **Sculpture: Kinetics** (max 16 cr; prereq 3305)
1315-1600 MW, Baldwin, 4 cr

5390 **Sculpture** (max 16 cr; prereq #, non maj)
3-4 cr

R5510 **Printmaking: Intaglio** (max 16 cr; prereq 12 cr of 3510 or #)
1315-1600 TTh, Myers, 4 cr

R5520 **Printmaking: Lithography** (max 16 cr; prereq 12 cr of 3520 or #)
1315-1600 MW, Krepps, 4 cr

5590 **Printmaking** (max 16 cr; prereq #, non maj)
3-4 cr

R5700 **Seminar: Photography** (prereq studio arts maj or #)
1615-1800 MW, West Bank, Hallman, 2 cr

R5710 **Photography** (max 16 cr; prereq 12 cr of 3710 or #)
1315-1600 TTh, Henkel, 4 cr

5790 **Photography** (max 16 cr; prereq #, non maj)
3-4 cr

R5810 **Advanced Ceramics** (max 16 cr; prereq 12 cr of 3810 or #)
0915-1200 MW, Lane, 4 cr

R5820 **Glass Working** (max 16 cr; prereq 3823 or 12 cr of 3820 or #)
1315-1600 MW, West Bank, Lane, 4 cr

5830 **Glass: Neon** (max 16 cr; prereq 12 cr of 3830)
Lane, 4 cr

5890 **Ceramics and Glass Working** (max 16 cr; prereq #)
3-4 cr

5970 **Directed Studies** (max 12 cr; prereq 24 cr studio arts, #, △, CLA approval)
–1 Baldwin, 1-5 cr
–2 Bethke, 1-5 cr
–3 Caglioti, 1-5 cr
–4 Cowette, 1-5 cr
–5 Feinberg, 1-5 cr
–6 Gray, 1-5 cr
–7 Hallman, 1-5 cr
–8 Hendler, 1-5 cr
–9 Henkel, 1-5 cr
–10 Hoard, 1-5 cr
–11 Krepps, 1-5 cr
–12 Lane, 1-5 cr
–13 Lucey, 1-5 cr
–14 MacKenzie, 1-5 cr
–15 Myers, 1-5 cr
–16 Potratz, 1-5 cr
–17 Roode, 1-5 cr
–18 Rose, 1-5 cr
–19 Rowan, 1-5 cr
–20 Somberg, 1-5 cr
–21 Brooks, 1-5 cr

R8110 **Drawing** (max 12 cr; prereq #)
–1 0915-1200 TTh, West Bank, Rowan, 4 cr
–2 4 cr (grad only)

8120 **Painting** (max 24 cr; prereq #)
4 cr

R8300 **20th Century Art Theories in Sculpture** (max 6 cr; prereq #)
1615-1700 T, Rose, 1 cr

8310 **Sculpture: Direct Metal** (max 12 cr; prereq #)
1315-1600 MW, Baldwin, 4 cr

R8320 **Sculpture: Plastics Media** (max 12 cr; prereq #)
0915-1200 TTh, West Bank, Rose, 4 cr

R8330 **Sculpture: Cast Metal** (max 12 cr; prereq #)
1315-1600 MW, Potratz, 4 cr

8350 **Sculpture: Kinetics** (max 12 cr; prereq #)
1315-1600 MW, Baldwin, 4 cr

R8400 **Concepts in Contemporary Art** (prereq art studio grad or #)
1615-1800 TTh, West Bank, Myers, 4 cr

8510 **Printmaking** (max 32 cr; prereq #)
4 cr

R8511 **Photomechanical Printmaking** (prereq MFA candidate, print concentration or #)
1315-1600 MW, Bethke, 4 cr

8512 **Problems in Photomechanical Printmaking** (prereq 8511 or #)
1315-1600 MW, Bethke, 4 cr

8710 **Photography** (max 24 cr; prereq #)
4 cr

8810 **Ceramics** (max 24 cr; prereq #)
4 cr

8820 **Glassworking** (max 24 cr; prereq #)
4 cr

Spring Quarter

R1101 **Drawing I**
–1 0815-1000 MWF, West Bank, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1015-1200 MWF, West Bank, 4 cr (ArtS, ArEd, Dsgn majs only)
–3 1215-1400 MWF, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 0815-1100 TTh, West Bank, 4 cr (ArtS, ArEd, Dsgn majs only)
–5 0915-1200 TTh, West Bank, Hendler, 4 cr (ArtS, ArEd, Dsgn majs only)
–6 1315-1600 TTh, 4 cr (ArtS, ArEd, Dsgn majs only)
–7 0815-1000 MWF, West Bank, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
–8 1015-1200 MWF, West Bank, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
–9 1215-1400 MWF, West Bank, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
–10 0815-1100 TTh, West Bank, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
–11 0915-1200 TTh, West Bank, Hendler, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
–12 1315-1600 TTh, West Bank, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
–13 0815-1000 MWF, West Bank, 4 cr
–14 1015-1200 MWF, West Bank, 4 cr
–15 1215-1400 MWF, West Bank, 4 cr
–16 0815-1100 TTh, West Bank, 4 cr
–17 0915-1200 TTh, West Bank, Hendler, 4 cr
–18 1315-1600 TTh, West Bank, 4 cr

R1102 **Drawing II** (prereq 1101)
–1 0815-1000 MWF, West Bank, Gray, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0815-1000 MWF, West Bank, Gray, 4 cr
–3 1315-1600 MW, West Bank, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 1315-1600 MW, West Bank, 4 cr
–5 0915-1200 TTh, West Bank, 4 cr (ArtS, ArEd, Dsgn majs only)
–6 0915-1200 TTh, West Bank, 4 cr

R1105 **Beginning Painting**
–1 0915-1200 MW, Feinberg, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, Feinberg, 4 cr
–3 1315-1600 TTh, Hendler, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 1315-1600 TTh, Hendler, 4 cr

R1301 **Sculpture**
–1 1315-1600 MW, Rose, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 MW, Rose, 4 cr
–3 0915-1200 TTh, Potratz, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 0915-1200 TTh, Potratz, 4 cr

R1302 **Sculpture**
–1 0915-1200 MW, Rose, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, Rose, 4 cr
–3 1315-1600 MW, Baldwin, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 1315-1600 MW, Baldwin, 4 cr

R1401 **Introduction to Studio Arts**
1415-1600 TTh, West Bank, 4 cr

R1404 **Color** (§1104; prereq 1101)
–1 0915-1200 MW, West Bank, Somberg, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, West Bank, Somberg, 4 cr

R1510 **Printmaking: Intaglio** (max 8 cr)
–1 0915-1200 TTh, Myers, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 TTh, Myers, 4 cr

R1520 **Printmaking: Lithography** (max 8 cr)
–1 0915-1200 MW, Krepps, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, Krepps, 4 cr

R1530 **Printmaking: Relief** (max 8 cr)
–1 0915-1200 MW, Bethke, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, Bethke, 4 cr

R1701 **Photo Medium**
–1 0915-1200 MW, Henkel, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, Henkel, 4 cr (CLA students only)
–3 0915-1200 TTh, West Bank, Hallman, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 0915-1200 TTh, West Bank, Hallman, 4 cr (CLA students only)

R1811 **Ceramics: Handbuilding**
–1 0915-1200 TTh, West Bank, Hoard, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 TTh, West Bank, Hoard, 4 cr

R1812 **Ceramics: Wheel Throwing**
–1 0915-1200 MW, MacKenzie, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, MacKenzie, 4 cr

R3110 **Drawing** (max 12 cr; prereq 1102, 1401)
–1 1015-1200 MWF, West Bank, Gray, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1015-1200 MWF, West Bank, Gray, 4 cr
–3 1315-1600 MW, West Bank, Feinberg, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 1315-1600 MW, West Bank, Feinberg, 4 cr

R3120 **Painting** (max 12 cr; prereq 1104, 1105, 1401, 4 cr of 3110 or #)
–1 1315-1600 MW, Somberg, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 MW, Somberg, 4 cr
–3 0915-1200 TTh, Cowette, 4 cr (ArtS, ArEd, Dsgn majs only)
–4 0915-1200 TTh, Cowette, 4 cr

R3140 **Drawing and Painting** (max 6 cr; prereq 1101 or 1109 or #, arch student)
1700-1900 MW, West Bank, 2 cr

R3160 **Watercolor** (max 12 cr; prereq 1101, 1104, 1401 or #)
1315-1600 TTh, Rowan, 4 cr (ArtS, ArEd, Dsgn majs only)

R3301 **Sculpture: Direct Metal** (prereq 1301, 1302, 1401)
–1 0915-1200 MW, West Bank, Baldwin, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, West Bank, Baldwin, 4 cr

R3303 **Sculpture: Cast Metal** (prereq 1301, 1302, 1401)
–1 1315-1600 TTh, Potratz, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 TTh, Potratz, 4 cr

R3304 **Sculpture: Wood and Stone** (prereq 1301, 1302, 1401)
–1 1315-1600 TTh, Lucey, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 TTh, Lucey, 4 cr

3305 **Sculpture: Kinetics** (prereq 1301, 1302, 1401)
–1 0915-1200 MW, West Bank, Baldwin, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 MW, West Bank, Baldwin, 4 cr

3403H **Honors Workshop** (prereq honors candidate, 1401, #, △)
2-4 cr

3404H **Honors Workshop** (prereq honors candidate, 1401, #, △)
2-4 cr

3405H **Honors Thesis** (prereq 1401, #)
2-4 cr

3406H **Honors Thesis** (prereq 1401, #)
2-4 cr

R3430 **Paper: Pulp to Plastic Expression** (max 12 cr; prereq 1401, 1xxx level studio arts)
–1 0915-1200 TTh, West Bank, Krepps, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 0915-1200 TTh, West Bank, Krepps, 4 cr

R3510 **Printmaking: Intaglio** (max 12 cr; prereq 1401, 4 cr of 1510 or #)
–1 1315-1600 TTh, Myers, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 TTh, Myers, 4 cr

R3520 **Printmaking: Lithography** (max 12 cr; prereq 1401, 4 cr of 1520 or #)
–1 1315-1600 MW, Krepps, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 MW, Krepps, 4 cr

R3530 **Printmaking: Relief** (max 12 cr; prereq 1401, 4 cr of 1530 or #)
–1 1315-1600 MW, Bethke, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 MW, Bethke, 4 cr

R3710 **Photography** (max 12 cr; prereq 1401, 1701 or Jour 1301 or #)
–1 1315-1600 MW, Henkel, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 MW, Henkel, 4 cr (CLA students only)

R3810 **Intermediate Ceramics** (max 12 cr; prereq 1401, 1811, 1812 or #)
–1 1315-1600 TTh, Hoard, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 1315-1600 TTh, Hoard, 4 cr

R3820 **Glassworking** (max 12 cr; prereq 1401, 1811 or 1301 or 1302)
1315-1600 MW, West Bank, Lane, 4 cr

3830 **Glass: Introduction to Neon** (max 12 cr; prereq 1401)
1315-1600 MW, Lane, 4 cr

3970 **Directed Study** (max 8 cr; prereq 24 cr studio arts, #, △, college approval)
–1 Baldwin, 1-5 cr
–2 Bethke, 1-5 cr
–3 Caglioti, 1-5 cr
–4 Cowette, 1-5 cr
–5 Feinberg, 1-5 cr
–6 Gray, 1-5 cr
–7 Hallman, 1-5 cr
–8 Hendler, 1-5 cr
–9 Henkel, 1-5 cr
–10 Hoard, 1-5 cr
–11 Krepps, 1-5 cr
–12 Lane, 1-5 cr
–13 Lucey, 1-5 cr
–14 MacKenzie, 1-5 cr
–15 Myers, 1-5 cr
–16 Potratz, 1-5 cr
–17 Roode, 1-5 cr
–18 Rose, 1-5 cr
–19 Rowan, 1-5 cr
–20 Somberg, 1-5 cr
–21 Brooks, 1-5 cr

3980 **Directed Instruction** (max 8 cr; prereq #, △, college approval)
–1 Baldwin, 1-5 cr
–2 Bethke, 1-5 cr
–3 Caglioti, 1-5 cr
–4 Cowette, 1-5 cr
–5 Feinberg, 1-5 cr
–6 Gray, 1-5 cr
–7 Hallman, 1-5 cr
–8 Handler, 1-5 cr
–9 Henkel, 1-5 cr
–10 Hoard, 1-5 cr
–11 Krepps, 1-5 cr
–12 Lane, 1-5 cr
–13 Lucey, 1-5 cr
–14 MacKenzie, 1-5 cr
–15 Myers, 1-5 cr
–16 Potratz, 1-5 cr
–17 Roode, 1-5 cr
–18 Rose, 1-5 cr
–19 Rowan, 1-5 cr
–20 Somberg, 1-5 cr
–21 Brooks, 1-5 cr

R5110 **Drawing** (max 16 cr; prereq 12 cr of 3110)
–1 0915-1200 TTh, Rowan, 4 cr
–2 4 cr (sr, grad only)

R5120 **Painting** (max 16 cr; prereq 12 cr of 3120 or #)
–1 1315-1600 TTh, Cowette, 4 cr
–2 4 cr (sr, grad only)

R5160 **Watercolor** (max 16 cr; prereq 12 cr of 3160 or #)
–1 1315-1600 TTh, Rowan, 4 cr (ArtS, ArEd, Dsgn majs only)
–2 4 cr (sr, grad only)

5190 **Drawing and Painting** (max 16 cr; prereq #, non maj)
3-4 cr

R5300 **Seminar: Sculpture** (prereq studuo arts maj or #)
1615-1800 T, Lucey, 2 cr

R5310 **Sculpture: Direct Metal** (max 16 cr; prereq 3301)
0915-1200 MW, West Bank, Baldwin, 4 cr

R5330 **Sculpture: Cast Metal** (max 16 cr; prereq 3303)
1315-1600 TTh, Potratz, 4 cr

R5340 **Sculpture: Wood and Stone** (max 16 cr; prereq 3304)
1315-1600 TTh, Lucey, 4 cr

5350 **Sculpture: Kinetics** (max 16 cr; prereq 3305)
0915-1200 MW, West Bank, Baldwin, 4 cr

5390 **Sculpture** (max 16 cr; prereq #, non maj)
3-4 cr

R5400 **Concepts in Contemporary Art** (prereq sr, studio art maj or #)
1615-1800 TTh, West Bank, Brooks, 2 cr

R5430 **Paper: Pulp to Plastic Expression** (max 16 cr; prereq 12 cr, # or △)
0915-1200 TTh, West Bank, Krepps, 4 cr

R5510 **Printmaking: Intaglio** (max 16 cr; prereq 12 cr of 3510 or #)
1315-1600 TTh, Myers, 4 cr

R5520 **Printmaking: Lithography** (max 16 cr; prereq 12 cr of 3520 or #)
1315-1600 MW, Krepps, 4 cr

R5530 **Printmaking: Relief** (max 16 cr; prereq 12 cr of 3530 or #)
1315-1600 MW, Bethke, 4 cr

5590 **Printmaking** (max 16 cr; prereq #, non maj)
3-4 cr

R5710 **Photography** (max 16 cr; prereq 12 cr of 3710 or #)
1315-1600 TTh, Hallman, 4 cr

5790 **Photography** (max 16 cr; prereq #, non maj)
3-4 cr

R5810 **Advanced Ceramics** (max 16 cr; prereq 12 cr of 3810 or #)
0915-1200 MW, Lane, 4 cr

R5820 **Glass Working** (max 16 cr; prereq 3823 or 12 cr of 3820 or #)
1315-1600 MW, Lane, 4 cr

5830 **Glass: Neon** (max 16 cr; prereq 12 cr of 3830)
1315-1600 MW, Lane, 4 cr

5890 **Ceramics and Glass Working** (max 16 cr; prereq #)
3-4 cr

5970 **Directed Studies** (max 12 cr; prereq 24 cr studio arts, #, △, CLA approval)
–1 Baldwin, 1-5 cr
–2 Bethke, 1-5 cr
–3 Caglioti, 1-5 cr
–4 Cowette, 1-5 cr
–5 Feinberg, 1-5 cr
–6 Gray, 1-5 cr
–7 Hallman, 1-5 cr
–8 Hendler, 1-5 cr
–9 Henkel, 1-5 cr
–10 Hoard, 1-5 cr
–11 Krepps, 1-5 cr
–12 Lane, 1-5 cr
–13 Lucey, 1-5 cr
–14 MacKenzie, 1-5 cr
–15 Myers, 1-5 cr
–16 Potratz, 1-5 cr
–17 Roode, 1-5 cr
–18 Rose, 1-5 cr
–19 Rowan, 1-5 cr
–20 Somberg, 1-5 cr
–21 Brooks, 1-5 cr

R8110 **Drawing** (max 12 cr; prereq #)
–1 0915-1200 TTh, Rowan, 4 cr
–2 4 cr (grad only)

8120 **Painting** (max 24 cr; prereq #)
4 cr

R8300 **20th Century Art Theories in Sculpture** (max 6 cr; prereq #)
1615-1700 M, Baldwin, 1 cr

8310 **Sculpture: Direct Metal** (max 12 cr; prereq #)
0915-1200 MW, West Bank, Baldwin, 4 cr

8330 **Sculpture: Cast Metal** (max 12 cr; prereq #)
1315-1600 TTh, Potratz, 4 cr

8340 **Sculpture: Wood, Stone** (max 12 cr; prereq #)
1315-1600 TTh, Lucey, 4 cr

8350 **Sculpture: Kinetics** (max 12 cr; prereq #)
0915-1200 MW, West Bank, Baldwin, 4 cr

8510 **Printmaking** (max 32 cr; prereq #)
4 cr

8710 **Photography** (max 24 cr; prereq #)
4 cr

8810 **Ceramics** (max 24 cr; prereq #)
4 cr

8820 **Glassworking** (max 24 cr; prereq #)
4 cr

ASTRONOMY (Ast)
Institute of Technology

Winter Quarter

R1011 **Descriptive Astronomy** (§1021)
–1 0915-1000 MTWTh, East Bank, Humphreys, 4 cr
–2 1015-1100 MTWTh, East Bank, Humphreys, 4 cr
–3 1115-1200 MTWTh, East Bank, Rudnick, 4 cr
–4 1215-1300 MTWF, East Bank, Ney, 4 cr
–5 1830-2015 MW, East Bank, TJ Jones, 4 cr

R1015 **Descriptive Astronomy Laboratories** (§1025H; prereq high school algebra...high school trigonometry rec)
Rudnick, 1 cr (Lab time assigned first 2 days of quarter, Phys 450)

R1025H Introduction to Astronomy Laboratory (§1015, 1015H; prereq high school algebra, trigonometry, physics or chemistry)
1830-2030 Th, East Bank, Rudnick, 1 cr

R1201 Topics in Modern Astrophysics (prereq 1011 or 1021, #)
1315-1400 MWF, East Bank, Kennicutt, 4 cr

3970 Directed Studies (prereq #, △)
1-5 cr

5161 Astrophysics of Diffuse Matter (prereq 3051, Phys 5024 or #)
1415-1500 MWF, East Bank, TW Jones, 4 cr

5421 High Energy Astrophysics (prereq 5161, 5162, 5321 or #)
1015-1130 MW, East Bank, Davidson, 4 cr

5970 Directed Studies (prereq #, △)
1-5 cr

5990 Directed Research (prereq #, △)
ar cr

8200 Seminar
1530-1630 Th, East Bank, Humphreys, 1-3 cr

8482 Topics in Astrophysics: Stellar Accretion Disks: Observations and Theory (prereq #)
1015-1130 TTh, East Bank, Stein, 3 cr

8990 Research in Astronomy and Astrophysics (prereq #)
ar cr

Spring Quarter

R1011 Descriptive Astronomy (§1021)
–1 0915-1000 MTWTh, East Bank, Dickey, 4 cr
–2 1015-1100 MTWTh, East Bank, Dickey, 4 cr
–3 1215-1300 MTWF, East Bank, Ney, 4 cr
–4 1830-2015 MW, East Bank, Stein, 4 cr

R1015 Descriptive Astronomy Laboratories (§1025H; prereq high school algebra...high school trigonometry rec)
Dickey, 1 cr (Lab time assigned first 2 days of quarter, Phys 450)

1021H Introduction to Astronomy (§1011; prereq high school trigonometry, physics or chemistry)
1315-1400 MTWTh, East Bank, Humphreys, 4 cr

R1025H Introduction to Astronomy Laboratory (§1015, 1015H; prereq high school algebra, trigonometry, physics or chemistry)
1830-2030 Th, East Bank, 1 cr

R1201 Topics in Modern Astrophysics (prereq 1011 or 1021, #)
1800-1930 TTh, East Bank, Davidson, 4 cr

3051 Introduction to Astronomy and Astrophysics (prereq 1 yr calculus, Phys 1106 or 1291 or #)
1315-1400 MWF, East Bank, Rudnick, 4 cr

3970 Directed Studies (prereq #, △)
1-5 cr

5162 Stars and Stellar Evolution (prereq 3051, Phys 5024 or #)
1415-1500 MWF, East Bank, TJ Jones, 4 cr

5970 Directed Studies (prereq #, △)
1-5 cr

5990 Directed Research (prereq #, △)
ar cr

8200 Seminar
1530-1630 Th, East Bank, Humphreys, 1-3 cr

8990 Research in Astronomy and Astrophysics (prereq #)
ar cr

BIOCHEMISTRY (BioC)
Biological Sciences

Winter Quarter

R1301 Elementary Biochemistry I (§Chem 1002, 3301; prereq Chem 1001 or 1005)
0900-0945 MTWThF, St. Paul, Glass, 5 cr

1302 Elementary Biochemistry II (prereq 1301 or Chem 1002)
0900-0945 MWF, St. Paul, Jenness, 3 cr

R1303 Elementary Biochemistry Laboratory (prereq 1301 or ¶)
★LECT 1200-1245 Th, St. Paul, Jenness
–1 LAB 0900-1145 Th, 2 cr
–2 LAB 1300-1545 Th, 2 cr

3960 Research Topics in Biochemistry (S-N only)
1600-1645 Th, Nelsestuen, 1 cr

5002 Biochemistry Topics (prereq Biol 5001)
0800-0845 MWF, St. Paul, Dagley, 3 cr

5003 Plant Biochemistry (prereq Biol 5001 or equiv...BioC 5002 rec)
1100-1145 MWF, St. Paul, Gander, 3 cr

R5025 Laboratory in Biochemistry (prereq Biol 5001 or ¶)
★LECT 1200-1245 T, St. Paul, Woodward
–1 LAB 0800-1145 T, 2 cr
–2 LAB 1300-1645 T, 2 cr

5523 Physical Biochemistry: Spectroscopic Methods (§Chem 5523, MdBc 5523; prereq 2 qtrs physical chemistry...Biol 5001 desirable)
1215-1300 MTWF, East Bank, Thomas, Bryant, 4 cr (Mpls)

R5744 Biochemistry Laboratory: Theory and Practice (prereq previous lab work in analytical, organic chemistry, #)
★LECT 1200-1245 MW, St. Paul, Lovrien, 4 cr
–1 LAB 1300-1545 MW, St. Paul, Lovrien

5752 General Biochemistry (§MdBc 5752; prereq 5751)
0745-0845 MWF, St. Paul, Nelsestuen, Anderson, 4 cr

5970 Directed Studies (prereq #, △)
ar cr

5990 Directed Research (prereq #, △)
ar cr

8094 Research and Literature Reports
Lovrien, 1 cr

8194 Graduate Seminar (prereq △)
1600-1715 W, St. Paul, Warner, 1 cr

8290 Current Research Techniques (prereq grad maj in biochem, △)
1-3 cr

8990 Graduate Research (prereq #)
2-5 cr

Spring Quarter

1302 Elementary Biochemistry II (prereq 1301 or Chem 1002)
0900-0945 MWF, St. Paul, Glass, 3 cr

R1303 Elementary Biochemistry Laboratory (prereq 1301 or ¶)
★LECT 1200-1245 Th, St. Paul, Glass
–1 LAB 0900-1145 Th, 2 cr
–2 LAB 1300-1545 Th, 2 cr

3960 Research Topics in Biochemistry (S-N only)
1600-1645 Th, Schottel, 1 cr

5002 Biochemistry Topics (prereq Biol 5001)
0800-0845 MWF, St. Paul, Dagley, 3 cr

R5025 Laboratory in Biochemistry (prereq Biol 5001 or ¶)
★LECT 1200-1245 T, St. Paul, Ugurbil
–1 LAB 0800-1145 T, 2 cr
–2 LAB 1300-1645 T, 2 cr

5524 Physical Biochemistry: Enzyme Kinetics (§Chem 5524, MdBc 5524; prereq 2 qtrs physical chemistry, 5751 or MdBc 5751 or equiv)
1115-1200 MTThF, East Bank, Lipscomb, Gander, 4 cr (Mpls)

5753 General Biochemistry (§MdBc 5753; prereq 5752)
0800-0900 MWF, East Bank, Towle, Schottel, 4 cr (Mpls)

5970 Directed Studies (prereq #, △)
ar cr

5990 Directed Research (prereq #, △)
ar cr

8094 Research and Literature Reports
1200-1300 F, St. Paul, Lovrien, 1 cr

8194 Graduate Seminar (prereq △)
1600-1715 W, St. Paul, Warner, 1 cr

8215 Advanced Topics in Lipid Biochemistry (§MdBc 8215; prereq 5752 or #) (A-N only)
1115-1200 M, 1115-1300 F, East Bank, Schlenk, Frantz, 3 cr

R8225 Tracer Techniques (prereq 5002 or 5753 and 5744 or MdBc 5750, #)
★LECT 1300-1445 M, St. Paul, Anderson
–1 LAB 1300-1545 WF, Anderson, 1-3 cr

8232 Advanced Topics in Protein Biochemistry (§MdBc 8232; prereq 5751 or #) (A-N only)
1500-1700 M, 1600-1700 W, St. Paul, Woodward, 3 cr

8233 Advanced Topics in Enzyme Biochemistry (§MdBc 8233; prereq 5751 or #) (A-N only)
1000-1045 MWF, St. Paul, Hogenkamp, 3 cr

8260 Advanced Physical Biochemistry (prereq 5523, △)
1500-1700 M, St. Paul, Muenck, 2 cr

8290 Current Research Techniques (prereq grad maj in biochem, △)
1-3 cr

8990 Graduate Research (prereq #)
2-5 cr

BIOCHEMISTRY, MEDICAL (MdBc)
Medical School

Winter Quarter

5053 Problems in Biochemistry (prereq 5100 or 5751)
1-10 cr

5101 Medical Biochemistry (prereq 5100)
★LECT 1315-1400 MT, 1015-1100 Th, 1515-1600 F, East Bank, Carr, Koerner, others, 5 cr
★REC 1500-1600 T, East Bank,
–1 LAB 1415-1700 T, East Bank, Van Pilsum, Roon
★REC 1500-1600 Th, East Bank,
–2 LAB 1415-1700 Th, East Bank, Van Pilsum, Roon
★REC 1000-1100 F, East Bank,
–3 LAB 0915-1200 F, East Bank, Van Pilsum, Roon

5301 Biochemistry (prereq 5300, med tech)
0815-0900 MTWTh, East Bank, Dempsey, Bodley, 4 cr

5523 Physical Biochemistry: Spectroscopic Methods (§BioC 5523, Chem 5523; prereq 2 qtrs physical chemistry...Biol 5001 desirable)
1215-1300 MTWF, East Bank, Thomas, Bryant, 4 cr

5752 General Biochemistry (§BioC 5752; prereq 5751)
0745-0845 MWF, St. Paul, Nelsestuen, Anderson, 4 cr (StP)

8150 Seminar: Biochemistry (S-N only)
1215-1300 Th, East Bank, Ungar, 1 cr

8232 Advanced Topics in Protein Biochemistry (§BioC 8232; prereq 5751 or #)
1500-1700 M, 1600-1700 T, St. Paul, Howard, Woodward, 3 cr

8240 Biochemistry of Neuronal Signalling (prereq 5753 or 5101)
1015-1130 MW, East Bank, Koerner, 3 cr

8290 Current Research Techniques (prereq grad maj in biochem, #) (S-N only)
1-3 cr

8300 Research
ar cr

Spring Quarter

5053 Problems in Biochemistry (prereq 5100 or 5751)
1-10 cr

5203 Topics: Dental Biochemistry
0845-0930 TTh, East Bank, Singer, 3 cr

5444 Muscle Contraction (prereq undergrad courses in biochemistry or physiology, #)
1515-1645 TTh, Thomas, Louis, others, 3 cr

5524 Physical Biochemistry: Enzyme Kinetics (§BioC 5524; prereq 2 qtrs physical chemistry...BioC 5751, 5002 or equiv desirable)
1115-1200 MTThF, East Bank, Gander, Lipscomb, 4 cr

5753 General Biochemistry (§BioC 5753; prereq 5752)
0800-0900 MWF, East Bank, Towle, Warner, 4 cr

8150 Seminar: Biochemistry (S-N only)
1215-1300 Th, East Bank, Ungar, 1 cr

8215 Advanced Topics in Lipid Biochemistry (§BioC 8215; prereq 5752 or #)
1115-1200 M, 1115-1300 F, East Bank, Frantz, Schlenk, 3 cr

8233 Advanced Topics in Enzyme Biochemistry (§BioC 8233; prereq 5751 or #)
1000-1045 MWF, St. Paul, Gander, Hogenkamp, 3 cr

8290 **Current Research Techniques** (prereq grad maj in biochem, #) (S-N only)
1-3 cr

8300 **Research**
ar cr

BIOLOGY (Biol)
Biological Sciences

Winter Quarter

R1008 **Introductory Biology: An Evolutionary Approach**
★LECT 1215-1300 MWF, East Bank, Birney
–1 REC 0915-1000 M, East Bank, 4 cr
–2 REC 1015-1100 M, East Bank, 4 cr
–3 REC 1115-1200 M, East Bank, 4 cr
–4 REC 1315-1400 M, East Bank, 4 cr
–5 REC 0815-0900 W, East Bank, 4 cr
–6 REC 0915-1000 W, East Bank, 4 cr
–7 REC 1015-1100 W, East Bank, 4 cr
–8 REC 1115-1200 W, East Bank, 4 cr
–9 REC 1315-1400 W, East Bank, 4 cr
–10 REC 0915-1000 F, East Bank, 4 cr
–11 REC 1015-1100 F, East Bank, 4 cr
–12 REC 1115-1200 F, East Bank, 4 cr
–13 REC 1315-1400 F, East Bank, 4 cr

R1008H **Introductory Biology: An Evolutionary Approach**
★LECT 1015-1100 MWF, East Bank,
–81 REC 1115-1200 M, East Bank, 4 cr
–82 REC 1115-1200 W, East Bank, 4 cr

R1009 **General Biology** (§1011)
★LECT 0815-0900 MWF, West Bank, Kirkwood
–1 LAB 0815-1000 TTh, East Bank, 5 cr
–2 LAB 0815-1000 TTh, East Bank, 5 cr
–3 LAB 1015-1200 TTh, East Bank, 5 cr
–4 LAB 1015-1200 TTh, East Bank, 5 cr
–5 LAB 1015-1200 TTh, East Bank, 5 cr
–6 LAB 1015-1200 TTh, East Bank, 5 cr
–7 LAB 1315-1500 TTh, East Bank, 5 cr
–8 LAB 1315-1500 TTh, East Bank, 5 cr
–9 LAB 1515-1700 TTh, East Bank, 5 cr
–10 LAB 1515-1700 TTh, East Bank, 5 cr
–11 LAB 1015-1200 WF, East Bank, 5 cr
–12 LAB 1015-1200 WF, East Bank, 5 cr
–13 LAB 1015-1200 WF, East Bank, 5 cr
–14 LAB 1315-1500 WF, East Bank, 5 cr
–15 LAB 1315-1500 WF, East Bank, 5 cr
–16 LAB 1315-1500 WF, East Bank, 5 cr
–17 LAB 1315-1500 WF, East Bank, 5 cr
–18 LAB 1515-1700 WF, East Bank, 5 cr
–19 LAB 1515-1700 WF, East Bank, 5 cr
★LECT 1215-1300 MWF, West Bank, Soulen
–20 LAB 0815-1000 TTh, East Bank, 5 cr
–21 LAB 0815-1000 TTh, East Bank, 5 cr
–22 LAB 1015-1200 TTh, East Bank, 5 cr
–23 LAB 1015-1200 TTh, East Bank, 5 cr
–24 LAB 1315-1500 TTh, East Bank, 5 cr
–25 LAB 1315-1500 TTh, East Bank, 5 cr
–26 LAB 1515-1700 TTh, East Bank, 5 cr
–27 LAB 0815-1000 WF, East Bank, 5 cr
–28 LAB 0815-1000 WF, East Bank, 5 cr
–29 LAB 1015-1200 WF, East Bank, 5 cr
–30 LAB 1015-1200 WF, East Bank, 5 cr
–31 LAB 1315-1500 WF, East Bank, 5 cr
–32 LAB 1515-1700 WF, East Bank, 5 cr

R1009H **General Biology** (§1011H; prereq honors division or 3-4 yrs high school math, high school chem, △)
★LECT 0815-0900 MWF, West Bank, Kirkwood
–81 LAB 0815-1000 TTh, East Bank, 5 cr
–82 LAB 1015-1200 TTh, East Bank, 5 cr

R1101 **Heredity and Human Society** (§GCB 3002, no cr if taken after 5003 or GCB 3022)
1215-1300 MTWTh, West Bank, V Woodward, 4 cr

R1103 **General Botany** (§3012; prereq 1009)
★LECT 1300-1345 MWF, St. Paul, Wetmore, (StP)
–1 LAB 1000-1245 W, St. Paul, 5 cr (StP)
–2 LAB 1100-1345 T, St. Paul, 5 cr (StP)
–3 LAB 1400-1645 T, St. Paul, 5 cr (StP)
–4 LAB 1400-1645 W, St. Paul, 5 cr (StP)
–5 LAB 1100-1345 Th, St. Paul, 5 cr (StP)
–6 LAB 1400-1645 Th, St. Paul, 5 cr (StP)
–7 LAB 1000-1245 F, St. Paul, 5 cr (StP)

R1106 **General Zoology** (prereq 1009)
★LECT 0815-0900 MWF, East Bank, Schmid
–1 LAB 0915-1200 T, East Bank, 5 cr
–2 LAB 1215-1500 T, East Bank, 5 cr
–3 LAB 0915-1200 W, East Bank, 5 cr
–4 LAB 1215-1500 W, East Bank, 5 cr
–5 LAB 0815-1100 Th, East Bank, 5 cr
–6 LAB 1215-1500 Th, East Bank, 5 cr

R1952 **Biology Colloquium** (prereq 1009 or ¶, #) (S-N only)
1415-1600 M, East Bank, 1-2 cr

R3011 **Animal Biology** (§1106; prereq 1009, Chem 1005)
★LECT 0950-1050 MWF, St. Paul, Rosenberg, (StP)
–1 LAB 0900-1045 TTh, 5 cr (StP)
–2 LAB 1200-1345 TTh, 5 cr (StP)
–3 LAB 1400-1545 TTh, 5 cr (StP)
–4 LAB 1200-1345 WF, 5 cr (StP)

R3012 **Plant Biology** (§1103; prereq 1009, Chem 1005)
★LECT 1200-1245 MWF, St. Paul, Charvat, (StP)
–1 LAB 0900-1045 MW, St. Paul, 5 cr (StP)
–2 LAB 1300-1445 MW, St. Paul, 5 cr (StP)
–3 LAB 1300-1445 MW, St. Paul, 5 cr (StP)
–4 LAB 1500-1645 MW, St. Paul, 5 cr (StP)

3111 **Animal Biology** (§3011; prereq 1009, 1106, Chem 1005)
0950-1050 MWF, St. Paul, Rosenberg, 4 cr

R3950H **Undergraduate Seminar** (prereq # or △) (S-N only)
–81 1500-1645 Th, St. Paul, Wetmore, 2 cr (Symbiosis) (Bot)
–82 2 cr (EBB)

3980 **Directed Instruction** (prereq #)
1-5 cr

R5001 **Biochemistry** (§3021, BioC 5001; prereq 1009, 12 cr organic chem or #)
0800-0900 MWF, East Bank, Chapman, 4 cr

5003 **Genetics** (§GCB 3022, 5022; prereq 5001)
1100-1200 MWF, St. Paul, Snustad, 4 cr (StP)

5004 **Cell Biology** (prereq 5001)
–1 1000-1045 MWF, St. Paul, Cunningham, 3 cr (StP)
–2 1700-1930 M, St. Paul, Cunningham, 3 cr (StP)

R5013 **Microbiology** (§MicB 3103, 5105, VPB 3103; prereq 5001)
★LECT 1215-1330 TTh, East Bank, Schottel, 5 cr
–1 LAB 0915-1100 TTh, East Bank,

R5041 **Ecology** (§3041; prereq Math 1142 or 1211, Biol 1103, 1106 or 3011 or 3012) (A-N only)
★LECT 1015-1100 MTWF, East Bank, Abrams, McNaught
–1 REC 0915-1000 T, East Bank, 4 cr
–2 REC 0815-0900 Th, East Bank, 4 cr
–3 REC 1215-1300 Th, East Bank, 4 cr
–4 REC 1315-1400 F, East Bank, 4 cr

R5125 **Recombinant DNA Laboratory** (prereq #)
1300-1700 TTh, St. Paul, Hackett, 4 cr

R5950 **Special Topics** (prereq △)
1300-1700 TTh, St. Paul, Hackett, 3 cr

R8710 **Tutorial in Developmental Biology** (prereq #, △)
3 cr

R8950 **Graduate Seminar** (prereq #, △)
1-2 cr

R8970 **Special Topics** (prereq #, △)
1-3 cr

Spring Quarter

R1008 **Introductory Biology: An Evolutionary Approach**
★LECT 1215-1300 MWF, East Bank, Corbin
–1 REC 0915-1000 M, East Bank, 4 cr
–2 REC 1015-1100 M, East Bank, 4 cr
–3 REC 1115-1200 M, East Bank, 4 cr
–4 REC 1315-1400 M, East Bank, 4 cr
–5 REC 0815-0900 W, East Bank, 4 cr
–6 REC 0915-1000 W, East Bank, 4 cr
–7 REC 1015-1100 W, East Bank, 4 cr
–8 REC 1115-1200 W, East Bank, 4 cr
–9 REC 1315-1400 W, East Bank, 4 cr
–10 REC 0915-1000 F, East Bank, 4 cr
–11 REC 1015-1100 F, East Bank, 4 cr
–12 REC 1115-1200 F, East Bank, 4 cr
–13 REC 1315-1400 F, East Bank, 4 cr

R1008H **Introductory Biology: An Evolutionary Approach**
★LECT 1015-1100 MWF, East Bank,
–81 REC 1115-1200 M, East Bank, 4 cr
–82 REC 1115-1200 W, East Bank, 4 cr

R1009 **General Biology** (§1011)
★LECT 0815-0900 MWF, West Bank, Kirkwood
–1 LAB 0815-1000 TTh, East Bank, 5 cr
–2 LAB 0815-1000 TTh, East Bank, 5 cr
–3 LAB 1015-1200 TTh, East Bank, 5 cr
–4 LAB 1015-1200 TTh, East Bank, 5 cr
–5 LAB 1315-1500 TTh, East Bank, 5 cr
–6 LAB 1315-1500 TTh, East Bank, 5 cr
–7 LAB 1515-1700 TTh, East Bank, 5 cr
–8 LAB 1015-1200 WF, East Bank, 5 cr
–9 LAB 1315-1500 WF, East Bank, 5 cr
–10 LAB 1315-1500 WF, East Bank, 5 cr
–11 LAB 1515-1700 WF, East Bank, 5 cr
★LECT 1215-1300 MWF, East Bank, Wood
–12 LAB 0815-1000 TTh, East Bank, 5 cr
–13 LAB 0815-1000 TTh, East Bank, 5 cr
–14 LAB 1015-1200 TTh, East Bank, 5 cr
–15 LAB 1015-1200 TTh, East Bank, 5 cr
–16 LAB 1315-1500 TTh, East Bank, 5 cr
–17 LAB 1515-1700 TTh, East Bank, 5 cr
–18 LAB 0815-1000 WF, East Bank, 5 cr
–19 LAB 0815-1000 WF, East Bank, 5 cr
–20 LAB 1015-1200 WF, East Bank, 5 cr
–21 LAB 1015-1200 WF, East Bank, 5 cr
–22 LAB 1315-1500 WF, East Bank, 5 cr
–23 LAB 1515-1700 WF, East Bank, 5 cr
★LECT 1800-1910 TTh, West Bank,
–24 LAB 1920-2100 TTh, East Bank, 5 cr

R1009H **General Biology** (§1011H; prereq honors division or 3-4 yrs high school math, high school chem, △)
★LECT 0815-0900 MWF, West Bank, Fuchs
–81 LAB 0815-1000 TTh, East Bank, 5 cr
–82 LAB 1015-1200 TTh, East Bank, 5 cr

R1101 **Heredity and Human Society** (§GCB 3002, no cr if taken after 5003 or GCB 3022)
1215-1300 MTWTh, West Bank, Fan, 4 cr

R1103 **General Botany** (§3012; prereq 1009)
★LECT 1300-1345 MWF, Biesboer, (StP)
–1 LAB 1000-1245 T, St. Paul, 5 cr (StP)
–2 LAB 1400-1645 W, St. Paul, 5 cr (StP)
–3 LAB 0800-1045 Th, St. Paul, 5 cr (StP)
–4 LAB 1100-1345 Th, St. Paul, 5 cr (StP)
–5 LAB 1400-1645 Th, St. Paul, 5 cr (StP)
–6 LAB 1000-1245 F, St. Paul, 5 cr (StP)
–7 LAB 1400-1645 F, St. Paul, 5 cr (StP)

R1106 **General Zoology** (prereq 1009)
★LECT 0815-0900 MWF, East Bank,
–1 LAB 0815-1100 T, East Bank, 5 cr
–2 LAB 1215-1500 T, East Bank, 5 cr
–3 LAB 0915-1200 W, East Bank, 5 cr
–4 LAB 1215-1500 W, East Bank, 5 cr
–5 LAB 0815-1100 Th, East Bank, 5 cr
–6 LAB 1215-1500 Th, East Bank, 5 cr

R1953 **Biology Colloquium** (prereq 1009 or ¶, #) (S-N only)
1415-1600 M, East Bank, 1-2 cr

R3011 **Animal Biology** (§1106; prereq 1009, Chem 1005)
★LECT 0950-1050 MWF, St. Paul, Goldstein, (StP)
–1 LAB 0900-1045 TTh, 5 cr (StP)
–2 LAB 1200-1345 TTh, 5 cr (StP)
–3 LAB 1400-1545 TTh, 5 cr (StP)
–4 LAB 1200-1345 WF, 5 cr (StP)

R3012 **Plant Biology** (§1103; prereq 1009, Chem 1005)
★LECT 1130-1245 TTh, St. Paul, Charvat, (StP)
–1 LAB 0900-1045 TTh, St. Paul, 5 cr (StP)
–2 LAB 0900-1045 TTh, St. Paul, 5 cr (StP)
–3 LAB 1300-1445 TTh, St. Paul, 5 cr (StP)
–4 LAB 1300-1445 TTh, St. Paul, 5 cr (StP)

R3042 **Field Problems in Ecology** (prereq 3041 or EBB 3004 or #)
1200-1700 Th, East Bank, Tester, 2 cr (Cedar Creek)

3111 **Animal Biology** (§3011; prereq 1009, 1106, Chem 1005)
0950-1050 MWF, St. Paul, Goldstein, 4 cr (StP)

R3950H **Undergraduate Seminar** (prereq # or △) (S-N only)
–81 1500-1645 W, St. Paul, Pratt, 2 cr (New Uses for Plants: A Look Toward the Future) (Bot)
–82 2 cr (EBB)
–83 1400-1530 T, St. Paul, Simmons, 2 cr (GCB)

3960H **Honors Seminar** (prereq △) (S-N only)
–81 1600-1700 M, St. Paul, 1 cr (StP)
–82 1600-1700 T, St. Paul, 1 cr (StP)

3980 **Directed Instruction** (prereq #)
1-5 cr

5001 **Biochemistry** (§3021, BioC 5001; prereq 1009, 12 cr organic chem or #)
1300-1400 MWF, St. Paul, Kirkwood, 4 cr (StP)

5003 **Genetics** (§GCB 3022, 5022; prereq 5001)
1200-1300 MWF, St. Paul, Rubenstein, 4 cr (StP)

5004 **Cell Biology** (prereq 5001)
1100-1145 MWF, St. Paul, Hooper, 3 cr (StP)

R5013 **Microbiology** (§MicB 3103, 5105, VPB 3103; prereq 5001)
★LECT 0745-0900 TTh, East Bank, 5 cr
–1 LAB 0915-1100 TTh, East Bank, Chapman

R5041 **Ecology** (§3041; prereq Math 1142 or 1211, Biol 1103, 1106 or 3011 or 3012) (A-N only)
★LECT 0915-1000 MTWF, East Bank, Morrow, Siniff
–1 REC 1315-1400 M, East Bank, 4 cr
–2 REC 1015-1100 W, East Bank, 4 cr
–3 REC 1315-1400 Th, East Bank, 4 cr
–4 REC 1415-1500 F, East Bank, 4 cr

5061 **Developmental Biology** (prereq 5003, 5004)
1000-1045 MWF, St. Paul, Kerr, 3 cr (StP)

5501 **Biochemical Evolution** (prereq 5 cr biochem)
1100-1145 MWF, St. Paul, Seal, 4 cr (StP)

R5950 **Special Topics** (prereq △)
–1 1115-1200 MWF, East Bank, Davis, 1-5 cr
–2 1200-1700 TTh, East Bank, Messing, 2 cr (StP)
–3 1800-1930 T, St. Paul, 2 cr (StP)
–4 1400-1530 W, St. Paul, Jump, 2 cr (StP)

5951 **Social Uses of Biology** (prereq 10 cr sciences) (S-N only)
★LECT 1300-1345 MWF, St. Paul, Cunningham, Hooper, others, 4 cr
–1 REC 1400-1445 M, St. Paul,
–2 REC 1300-1345 T, St. Paul,
–3 REC 1500-1545 W, St. Paul,

R8710 **Tutorial in Developmental Biology** (prereq #, △)
3 cr

R8950 **Graduate Seminar** (prereq #, △)
1-2 cr

R8970 **Special Topics** (prereq #, △)
1-3 cr

BIOPHYSICAL SCIENCES (BPhy)
Institute of Technology

Winter Quarter

5138 **Seminar: Biophysical Sciences**
1530-1630 W, Ackerman, ar cr

5156 **Biophysics** (prereq 28 cr between physics, biology, #...physical chemistry, physiology rec)
1315-1500 TTh, Schmitt, 3 cr

5171 **Physics of Nuclear Medicine** (§Rad 5171, TRad 5171; prereq 5170, #)
Morin, 3 cr

5173 **Physics of Radiation Therapy** (§Rad 5173, TRad 5173; prereq 5170 or #)
1630-1730 W, 1600-1730 F, East Bank, Khan, 3 cr

8222 **Research**
ar cr

8297 **Seminar**
1415-1600 F, Schmitt, ar cr

Spring Quarter

5138 **Seminar: Biophysical Sciences**
1530-1630 W, Ackerman, ar cr

5157 **Biophysics** (prereq 28 cr between physics, biology, #...physical chemistry, physiology rec)
1315-1500 TTh, Schmitt, 3 cr

5172 **Radiation Biology** (§Rad 5172, TRad 5172; prereq 5170, #)
1600-1730 W, 1600-1700 F, East Bank, Song, Buchsbaum, others, 3 cr

8223 **Research**
ar cr

8298 **Seminar**
1415-1600 F, Schmitt, ar cr

BOTANY (Bot)
Biological Sciences

Winter Quarter

3131 **Survey of Plant Physiology** (§5131, PlPh 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 5001)
1200-1245 MTWF, St. Paul, Guilfoyle, 4 cr

R3201 **Introductory Taxonomy** (prereq Biol 1103 or 3012)
★LECT 1300-1345 TTh, St. Paul, Morley
–1 LAB 1100-1245 TTh, St. Paul, 4 cr
–2 LAB 1400-1545 TTh, St. Paul, 4 cr
–3 LAB 1600-1745 TTh, St. Paul, 4 cr

3950 **Undergraduate Proseminar** (prereq #)
1 cr

R5111 **Developmental Plant Anatomy** (prereq Biol 1103 or Biol 3012)
★LECT 1200-1315 TTh, St. Paul, Biesboer, 5 cr
–1 LAB 1330-1615 TTh, St. Paul,

5131 **Survey of Plant Physiology** (§3131, PlPh 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 5001)
1200-1245 MTWF, 1200-1245 Th, St. Paul, Guilfoyle, Frenkel, 4 cr

5183 **Water, Minerals, and Translocation** (§PlPh 5183; prereq 5131)
1450-1550 MWF, St. Paul, Markhart, Stadelmann, 4 cr

5960 **Special Topics** (prereq #, △)
ar cr

5970 **Directed Studies** (prereq #, △)
ar cr

5990 **Directed Research** (prereq #, △)
ar cr

8301 **Pollen Morphology and Quaternary Palynology** (prereq plant taxonomy or #)
Cushing, 3-5 cr

8950 **Seminar: Plant Tumors** (prereq #)
1700-1800 T, St. Paul, Biesboer, 1 cr

8990 **Research Problems** (prereq #)
ar cr

Spring Quarter

R1009 **Minnesota Plant Life**
★LECT 1200-1245 TTh, St. Paul, Morley, (Field trips 1200-1600 T, 2nd half of quarter)
–1 LAB 1000-1145 TTh, St. Paul, 4 cr
–2 LAB 1300-1445 TTh, St. Paul, 4 cr
–3 LAB 1500-1645 TTh, St. Paul, 4 cr

3131 **Survey of Plant Physiology** (§5131, PlPh 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 5001)
1200-1245 MTWF, St. Paul, Gleason, 4 cr

3950 **Undergraduate Proseminar** (prereq #)
1 cr

5131 **Survey of Plant Physiology** (§3131, PlPh 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 5001)
1200-1245 MTWF, 1200-1245 Th, St. Paul, Gleason, Frenkel, 4 cr

5182 **Plant Metabolism** (§PlPa 5182; prereq 5131 or equiv, a course in biochemistry)
0800-0915 TTh, St. Paul, Soulen, 3 cr

R5205 **Flora of Minnesota** (prereq 3201 or #)
★LECT 0900-0945 TTh, St. Paul, Ownbey, 4 cr
–1 LAB 1000-1145 TTh, St. Paul, Ownbey

5960 **Special Topics** (prereq #, △)
ar cr

R5970 **Directed Studies** (prereq #, △)
ar cr

5990 **Directed Research** (prereq #, △)
ar cr

8950 **Seminar: Current Topics in Plant Molecular Biology** (prereq #)
1300-1445 M, St. Paul, Guilfoyle, Dale, 1 cr

8990 **Research Problems** (prereq #)
ar cr

BUSINESS ADMINISTRATION (BA)
Management

Winter Quarter

R3998 **Independent Study** (prereq #)
ar cr

R8200 **Library Access for Business Research** (prereq PhD student or #) (S-N only)
0800-1000 Th, Wells, 1 cr (Business Reference Lib)

Spring Quarter

R3998 **Independent Study** (prereq #)
ar cr

R8220 **Ph.D. Research Seminar** (prereq MBA 8005, BA 8200, PhD student for two qtrs or more or #) (A-N only)
1300-1600 W, West Bank, Van de Ven, Quinn, 4 cr

BUSINESS AND MARKETING EDUCATION (BME)
Vocational And Technical Education Education

Winter Quarter

R1501 **Basic Keyboarding/Typewriting** (§BDE 1501, S-N optional for non majors)
–1 1000-1045 MWF, St. Paul, Sormunen, 3 cr
–2 1300-1345 MWF, St. Paul, Bertelson, 3 cr
–3 1400-1445 MWF, St. Paul, Bertelson, 3 cr
–4 1700-1845 TTh, St. Paul, Davison, 3 cr

R1502 **Intermediate Typewriting** (§BDE 1502; prereq 1501 or proficiency exam) (A-N only)
1300-1345 MWF, St. Paul, Bertelson, 3 cr

R1503 **Advanced Typewriting** (§BDE 1503; prereq 1502 or proficiency exam) (A-N only)
1300-1345 MWF, St. Paul, Bertelson, 3 cr

3303 **Teaching Accounting and Data Processing** (§BDE 3303) (A-N only)
1500-1645 TTh, St. Paul, Hopkins, 3 cr

R3603 **Student Teaching in Business or Marketing Education** (prereq SeEd 3155, △) (S-N optional)
1700-1845 T, St. Paul, Ashmun, Hopkins, 4 cr

R3604 **Student Teaching in Business or Marketing Education** (prereq SeEd 3155, △) (S-N optional)
1700-1845 T, St. Paul, Ashmun, Hopkins, 4 cr

R3605 **Student Teaching in Business or Marketing Education** (prereq SeEd 3155, △) (S-N optional)
1700-1845 T, St. Paul, Ashmun, Hopkins, 4 cr

R5159 **Word Processing Concepts and Teaching Methods** (§BDE 5159) (A-N only)
0800-1045 S, St. Paul, Lambrecht, 4 cr

R5160 **Word Processing Practicum** (§BDE 5160) (A-N only)
–1 1100-1230 MW, St. Paul, Sormunen, 2 cr
–2 1000-1245 S, St. Paul, Lambrecht, 2 cr

5252 **Teaching Merchandise Display** (§BDE 5252) (A-N only)
1600-1745 Th, St. Paul, 3 cr

R5350 **Business Data Processing: Content and Teaching Methods** (§BDE 5350) (A-N only)
1600-1830 T, St. Paul, Lambrecht, 4 cr

5352 **Coordination Techniques in Business and Marketing Education** (§BDE 5352) (A-N only)
1600-1830 W, St. Paul, Abeln, 4 cr

R5359 **Occupational Experience** (prereq #) (S-N optional)
1900-2100 T, St. Paul, Ashmun, 1-18 cr (addnl hrs ar)

R5360 **Program Developments in Business and Marketing Education** (A-N only)
1730-1930 M, St. Paul, Ashmun, 3 cr

5600 **School-Based Projects in Business and Marketing Education** (max 12 cr; prereq #) (A-N only)
1-12 cr

R5900 **Directed Study in Business and Marketing Education** (max 6 cr; prereq △) (S-N optional)
–1 1800-1930 Th, St. Paul, Klaurens, 1-6 cr
–2 1-6 cr

8300 **Seminar: Research in Business, Marketing, and Economic Education** (prereq #)
1 cr

8900 **Problems: Business and Marketing Education** (max 9 cr; prereq #)
1-9 cr

Spring Quarter

R1501 **Basic Keyboarding/Typewriting** (§BDE 1501, S-N optional for non majors)
–1 1000-1045 MWF, St. Paul, Sormunen, 3 cr
–2 1300-1345 MWF, St. Paul, Bertelson, 3 cr
–3 1400-1445 MWF, St. Paul, Bertelson, 3 cr
–4 1700-1845 TTh, St. Paul, Davison, 3 cr

R1502 **Intermediate Typewriting** (§BDE 1502; prereq 1501 or proficiency exam) (A-N only)
1300-1345 MWF, St. Paul, Bertelson, 3 cr

R1503 **Advanced Typewriting** (§BDE 1503; prereq 1502 or proficiency exam) (A-N only)
1300-1345 MWF, St. Paul, Bertelson, 3 cr

R1509 **Office Machines** (§BDE 1509; prereq 1502 or equiv) (A-N only)
1300-1445 TTh, St. Paul, Lambrecht, 3 cr

3300 **Teaching Typewriting/Keyboarding** (§BDE 3300; prereq 1502 or BDE 1502 or ¶ or equiv, SeEd 3155 or ¶) (A-N only)
1500-1645 TTh, St. Paul, McLean, 3 cr

5156 **Teaching Shorthand and Transcription** (§BDE 5156) (A-N only)
1600-1745 W, St. Paul, Lambrecht, 3 cr

5158 **Office Management Techniques and Technology** (§BDE 5158) (A-N only)
1600-1830 M, St. Paul, Hopkins, 4 cr

R5160 **Word Processing Practicum** (§BDE 5160) (A-N only)
0800-0845 MWF, St. Paul, Sormunen, 2 cr

5253 **Teaching Supervisory Training** (§BDE 5253) (A-N only)
1830-2130 Th, St. Paul, Ashmun, 3 cr

5351 **Organization and Administration of Business and Marketing Education** (§BDE 5351) (A-N only)
1600-1830 W, St. Paul, Klaurens, 4 cr

5354 **Postsecondary Business and Marketing Education** (§BDE 5354) (A-N only)
1600-1745 M, St. Paul, Abeln, 3 cr

5600 **School-Based Projects in Business and Marketing Education** (max 12 cr; prereq #) (A-N only)
1-12 cr

R5900 **Directed Study in Business and Marketing Education** (max 6 cr; prereq △) (S-N optional)
–1 1800-1930 T, St. Paul, Klaurens, 1-6 cr
–2 1-6 cr

8300 **Seminar: Research in Business, Marketing, and Economic Education** (prereq #)
1 cr

8900 **Problems: Business and Marketing Education** (max 9 cr; prereq #)
1-9 cr

BUSINESS LAW (BLaw)
Management

Winter Quarter

R3058 **Introduction to Law, and the Law of Contracts and Agency** (§8158; prereq Econ 1002) (A-N only)
★LECT 1115-1200 T, West Bank, Andrews
–1 LAB 0815-0900 TTh, West Bank, Andrews, 4 cr
–2 LAB 0915-1000 TTh, West Bank, Andrews, 4 cr
–3 LAB 1015-1100 TTh, West Bank, Eastlund, 4 cr

R3078 **Law of Partnerships, Corporations, and Real Property** (§8278; prereq 3058)
0815-0930 TTh, West Bank, Eastlund, 4 cr

R8158 **Introduction to Law, and the Law of Contracts and Agency** (§3058; prereq Econ 1002) (A-N only)
★LECT 1115-1200 T, West Bank, Andrews
–1 LAB 0915-1000 TTh, West Bank, Andrews, 4 cr

R8278 **Law of Partnerships, Corporations, and Real Property** (§3078; prereq 8158)
0815-0930 TTh, West Bank, Eastlund, 4 cr

Spring Quarter

R3058 **Introduction to Law, and the Law of Contracts and Agency** (§8158; prereq Econ 1002) (A-N only)
★LECT 1115-1200 T, West Bank, Andrews
–1 LAB 0815-0900 TTh, West Bank, Andrews, 4 cr
–2 LAB 0915-1000 TTh, West Bank, Andrews, 4 cr
–3 LAB 1015-1100 TTh, West Bank, Eastlund, 4 cr

R3088 **Law of Personal Property, Sales Contracts, Commercial Paper, and Wills and Estates** (§8288; prereq 3058)
0815-0930 TTh, West Bank, Eastlund, 4 cr

R8158 **Introduction to Law, and the Law of Contracts and Agency** (§3058; prereq Econ 1002) (A-N only)
★LECT 1115-1200 T, West Bank, Andrews
–1 LAB 0915-1000 TTh, West Bank, Andrews, 4 cr

R8288 **Law of Personal Property, Sales Contracts, Commercial Paper and Wills and Estates** (§3088; prereq 8158)
0815-0930 TTh, West Bank, Eastlund, 4 cr

BUSINESS, GOVERNMENT AND SOCIETY (BGS)
Management

Winter Quarter

R3002 **Business and Society** (prereq jr, sr) (A-N only)
★LECT 1415-1530 MW, West Bank, Maitland
–1 LAB 1315-1400 W, West Bank, 4 cr
–2 LAB 0815-0900 F, West Bank, 4 cr
–3 LAB 1315-1400 F, West Bank, 4 cr
–4 LAB 1415-1500 F, West Bank, 4 cr
–5 LAB 1415-1500 F, West Bank, 4 cr

R3004 **International Business**
–1 1015-1145 TTh, West Bank, Holloway, 4 cr
–2 1330-1500 TTh, West Bank, Holloway, 4 cr

R8009 **Business and Government I: Government Economics Regulation of Business** (prereq MBA 8055 or #)
1730-2015 M, West Bank, Erickson, 4 cr

R8017 **Organizational Politics and Management**
1730-2015 T, West Bank, Erickson, Roberts, 4 cr

Spring Quarter

R3002 **Business and Society** (prereq jr, sr) (A-N only)
–1 0815-0930 MWF, West Bank, 4 cr
–2 0915-1030 MWF, West Bank, 4 cr
–3 1015-1130 MWF, West Bank, 4 cr
–4 1115-1230 MWF, West Bank, 4 cr
–5 1315-1430 MWF, West Bank, 4 cr
–6 1415-1530 MWF, West Bank, 4 cr

R3004 **International Business**
–1 1315-1445 MW, West Bank, 4 cr
–2 1015-1145 TTh, West Bank, Hastings, 4 cr
–3 1315-1445 TTh, West Bank, Hastings, 4 cr

CHEMICAL ENGINEERING (ChEn)
Chemical Engineering & Materials Science
Institute of Technology

Winter Quarter

R3091 **Industrial Employment**
1-2 cr

R5102 **Principles of Chemical Engineering II** (prereq 5101, upper division chem engr or mat sci maj)
★LECT 0915-1000 MWF, East Bank, Evans
–1 REC 0815-0900 TTh, East Bank, 4 cr
–2 REC 0915-1000 TTh, East Bank, 4 cr
–3 REC 1215-1300 TTh, East Bank, 4 cr
–4 REC 1415-1500 TTh, East Bank, 4 cr
–5 REC 1415-1500 TTh, East Bank, 4 cr
–6 REC 1515-1600 TTh, East Bank, 4 cr

R5201 **Thermodynamics and Material State** (prereq 5101, Chem 5534 or #, upper division chem engr or mat sci maj)
★LECT 1215-1300 MWF, East Bank, Cussler
–1 REC 0815-0900 TTh, East Bank, 4 cr
–2 REC 1115-1200 TTh, East Bank, 4 cr
–3 REC 1215-1300 TTh, East Bank, 4 cr
–4 REC 1215-1300 TTh, East Bank, 4 cr
–5 REC 1415-1500 TTh, East Bank, 4 cr
–6 REC 1515-1600 TTh, East Bank, 4 cr

R5302 **Applied Reactor Analysis** (prereq 5301)
1515-1700 TTh, East Bank, Griffin, 4 cr

R5403 **Chemical Engineering Laboratory** (prereq 5103, upper division chem engr or mat sci maj)
★LECT 0815-0900 M, East Bank, Carr
–1 LAB 1315-1700 M, East Bank, 2 cr
–2 LAB 1315-1700 T, East Bank, 2 cr
–3 LAB 1315-1700 W, East Bank, 2 cr
–4 LAB 1315-1700 Th, East Bank, 2 cr
–5 LAB 1315-1700 F, East Bank, 2 cr

R5501 **Process Evaluation and Design** (prereq 4th yr or #, upper division chem engr or mat sci)
★LECT 1015-1100 MWF, East Bank, Ranz
–1 REC 1415-1600 T, East Bank, Ranz, 4 cr
–2 REC 1415-1600 Th, East Bank, Johnson, 4 cr
–3 REC 1415-1600 Th, East Bank, Ranz, 4 cr

R5601 **Process Control** (prereq 4th yr or # upper division chem engr or mat sci maj)
★LECT 0815-0900 MWF, East Bank, Jensen
–1 REC 0815-0900 TTh, East Bank, 4 cr
–2 REC 0815-0900 TTh, East Bank, 4 cr
–3 REC 1015-1100 TTh, East Bank, 4 cr
–4 REC 1215-1300 TTh, East Bank, 4 cr
–5 REC 1215-1300 TTh, East Bank, 4 cr

R5620 **Polymer Processing** (prereq engineering transport phenomena or #)
1215-1300 MWF, East Bank, Macosko, 4 cr (lab ar)

R5752 **Biological Engineering Analysis** (prereq 5751)
1315-1500 MW, East Bank, 3 cr

R5754 **Food Processing Techology** (prereq 5103 or #)
1515-1700 MW, East Bank, Valentas, 4 cr

R5902 **Special Topics**
1115-1300 TTh, East Bank, Jensen, Hess, 3 cr

5903 **Special Topics**
ar cr

8004 **Physical Rate Processes** (prereq 5103, #)
1015-1100 MWF, East Bank, Dahler, 3 cr

8104 **Interfaces and Interfacial Phenomena** (prereq 8101)
0815-0900 MWF, East Bank, Scriven, 3 cr

8202 **Advanced Mathematics for Chemical Engineers** (prereq 8201)
0815-1000 TTh, East Bank, Aris, 3 cr

8302 **Physical and Chemical Thermodynamics** (prereq 8301 or #)
1015-1200 TTh, East Bank, Fredrickson, 3 cr

8402 **Chemical Reaction Kinetics-Surface Chemistry** (prereq #)
0815-0900 MWF, East Bank, Schmidt, 3 cr

8702 **Advanced Topics in Chemical Engineering**
1315-1500 Th, East Bank, Scriven, 1-3 cr

8802 **Seminar**
1315-1500 TTh, East Bank, 1 cr

8901 **Research in Chemical Engineering**
ar cr

8902 **Research in Chemical Engineering**
1415-1700 MF, East Bank, ar cr

Spring Quarter

R3092 **Industrial Employment**
1-2 cr

R5101 **Principles of Chemical Engineering I** (prereq chem engr or mat sci maj)
★LECT 1215-1300 MWF, East Bank,
–1 REC 0815-0900 TTh, East Bank, 4 cr
–2 REC 1215-1300 TTh, East Bank, 4 cr
–3 REC 1415-1500 TTh, East Bank, 4 cr
–4 REC 1515-1600 TTh, East Bank, 4 cr

R5103 **Principles of Chemical Engineering III** (prereq 5102, upper division chem engr or mat sci maj)
★LECT 0915-1000 MWF, East Bank, Schmidt
–1 REC 0815-0900 TTh, East Bank, 4 cr
–2 REC 1215-1300 TTh, East Bank, 4 cr
–3 REC 1215-1300 TTh, East Bank, 4 cr
–4 REC 1415-1500 TTh, East Bank, 4 cr
–5 REC 1415-1500 TTh, East Bank, 4 cr
–6 REC 1515-1600 TTh, East Bank, 4 cr

R5202 **Chemical Engineering Thermodynamics and Kinetics** (prereq 5201, upper division chem engr or mat sci maj)
★LECT 1015-1100 MWF, East Bank, Griffin
–1 REC 0815-0900 TTh, East Bank, 4 cr
–2 REC 1215-1300 TTh, East Bank, 4 cr
–3 REC 1215-1300 TTh, East Bank, 4 cr
–4 REC 1415-1500 TTh, East Bank, 4 cr
–5 REC 1515-1600 TTh, East Bank, 4 cr
–6 REC 1515-1600 TTh, East Bank, 4 cr

R5401 Chemical Engineering Laboratory (prereq 5102 or ¶, 5103 or ¶, upper division chem engr or mat sci maj)
★LECT 0815-0900 M, East Bank, Scriven
–1 LAB 1315-1700 M, East Bank, 2 cr
–2 LAB 0815-1200 T, East Bank, 2 cr
–3 LAB 1315-1700 T, East Bank, 2 cr
–4 LAB 1315-1700 W, East Bank, 2 cr
–5 LAB 0815-1200 Th, East Bank, 2 cr
–6 LAB 1315-1700 Th, East Bank, 2 cr
–7 LAB 1315-1700 F, East Bank, 2 cr
–8 LAB 0815-1200 S, East Bank, 2 cr

R5502 Process Evaluation and Design (prereq 5501 or #, upper division chem engr or mat sci maj)
★LECT 1115-1200 MWF, East Bank, Ranz
–1 REC 1415-1600 T, East Bank, 4 cr
–2 REC 1415-1600 T, East Bank, 4 cr
–3 REC 1415-1600 Th, East Bank, 4 cr

R5603 Process Control (prereq 5601 or #)
1215-1300 MWF, East Bank, Jensen, 3 cr

R5604 Process Control Laboratory (prereq 5601)
–1 1315-1700 T, East Bank, Jensen, 2 cr
–2 1315-1700 W, East Bank, DeJongh, 2 cr

R5640 Polymerization Reactor Engineering (prereq chem engineering reactor design course or #)
–1 1115-1230 TTh, East Bank, Tirrel, 4 cr

R5753 Biological Engineering Analysis (prereq 5752)
1515-1700 MW, East Bank, Fredrickson, 3 cr

R5761 Flow of Fluids in Porous Media with Applications to Oil Recovery
0815-0900 MWF, East Bank, Davis, 3 cr

R5771 Colloids and Dispersions (prereq physical chemistry)
1515-1700 TTh, East Bank, Evans, 3 cr

R5904 Special Topics
ar cr

R8005 Physical Rate Processes (prereq 8004)
1015-1100 MWF, East Bank, Cussler, 3 cr

R8102 Problems in Fluid Mechanics (prereq 8101)
1415-1500 MWF, East Bank, Scriven, 3 cr

8105 Principles, Applications of Rheology (prereq 8101 or AEM 8510 or #)
1315-1400 MWF, East Bank, 3 cr

R8203 Advanced Mathematics for Chemical Engineers (prereq 8202)
0815-1000 TTh, East Bank, 3 cr

R8401 Chemical Reaction Kinetics-Kinetics of Homogeneous Reactions (prereq #)
1115-1200 MWF, East Bank, Carr, 3 cr

R8640 Polymerization Reactor Engineering
1115-1230 TTh, East Bank, Tirrel, 3 cr

8803 Seminar
1315-1600 TTh, East Bank, 1 cr

R8902 Research in Chemical Engineering
1415-1700 MF, East Bank, ar cr

R8903 Research in Chemical Engineering
ar cr

CHEMISTRY (Chem)
Institute of Technology
Winter Quarter

R1002 Chemical Principles and Covalent Systems (1001-1002†, §1005, 1014, 1032, no IT students; prereq 1001)
★LECT 1415-1500 TWThF, East Bank, Brasted, 5 cr
–1 REC 1315-1400 M,
★LAB 1415-1700 M, East Bank,
–2 REC 0815-0900 T,
★LAB 0915-1200 T, East Bank,

R1004 General Principles of Chemistry (1004-1005†, §1001-1002, 1014, 1031-1032; prereq hs chem or equiv, placement Index of Y or predicted Math GPA 1.90 on ACT or Math 0009 or college course in algebra...high school physics, 4 yrs high school math rec)
♦–1 LECT 1015-1100 MTWF, East Bank, Truhlar, 5 cr
♦–2 LECT 1215-1300 MWThF, East Bank, Dixon, 5 cr
♦–3 LECT 1315-1400 MTWTh, East Bank, Hexter, 5 cr
♦–4 LECT 1500-1545 MTThF, St. Paul, Wilson, 5 cr (StP)
–1 REC 1215-1300 M,
–2 REC 1315-1400 M,
★LAB 1415-1700 M, East Bank,
–3 REC 0815-0900 T,
★LAB 0915-1200 T, East Bank,
–4 REC 1215-1300 T,
–5 REC 1315-1400 T,
★LAB 1415-1700 T, East Bank,
–6 REC 1215-1300 W,
–7 REC 1315-1400 W,
★LAB 1415-1700 W, East Bank,
–8 REC 0815-0900 Th,
★LAB 0915-1200 Th, East Bank,
–9 REC 1215-1300 Th,
–10 REC 1315-1400 Th,
★LAB 1415-1700 Th, East Bank,
–11 REC 1215-1300 F,
–12 REC 1315-1400 F,
★LAB 1415-1700 F, East Bank,
–13 REC 1200-1245 W, (StP)
–14 REC 1300-1345 W, (StP)
★LAB 1400-1645 W, St. Paul, (StP)

R1005 General Principles of Chemistry (1004-1005†, §1001-1002, 1014, 1031-1032; prereq 1004)
♦–1 LECT 0815-0900 MTWF, East Bank, Mead, 5 cr
♦–2 LECT 0915-1000 MTWF, East Bank, Conroy, 5 cr
♦–3 LECT 1215-1300 MWThF, East Bank, W Miller, 5 cr
♦–4 LECT 1315-1400 MTWTh, East Bank, Overend, 5 cr
♦–5 LECT 0800-0845 MTThF, St. Paul, Wilson, 5 cr (StP)
–1 REC 1215-1300 M,
–2 REC 1315-1400 M,
★LAB 1415-1700 M, East Bank,
–3 REC 0815-0900 T,
★LAB 0915-1200 T, East Bank,
–4 REC 1215-1300 T,
–5 REC 1315-1400 T,
★LAB 1415-1700 T, East Bank,
–6 REC 1215-1300 W,
–7 REC 1315-1400 W,
★LAB 1415-1700 W, East Bank,
–8 REC 0815-0900 Th,
★LAB 0915-1200 Th, East Bank,
–9 REC 1215-1300 Th,
–10 REC 1315-1400 Th,
★LAB 1415-1700 Th, East Bank,
–11 REC 1215-1300 F,
–12 REC 1315-1400 F,
★LAB 1415-1700 F, East Bank,
–13 REC 1300-1345 M, (StP)
★LAB 1400-1645 M, St. Paul, (StP)
–14 REC 1300-1345 T, (StP)
★LAB 1400-1645 T, St. Paul, (StP)
–15 REC 1300-1345 Th, (StP)
★LAB 1400-1645 Th, St. Paul, (StP)

R1032 Chemical Principles II (1031-1032†, §1002, 1005, 1014; prereq 1031)
★LECT 0815-0900 MWThF, East Bank, Britton, 5 cr
★REC 0815-0900 T,
–1 LAB 1415-1700 T, East Bank,
–2 LAB 0915-1200 W, East Bank,
–3 LAB 1415-1700 W, East Bank,
–4 LAB 0915-1200 Th, East Bank,
–5 LAB 1415-1700 Th, East Bank,

R3301 Elementary Organic Chemistry I (§3331; prereq 1005 or 1032)
–1 0915-1000 TWThF, East Bank, Ellis, 4 cr
–2 1115-1200 TWThF, East Bank, Leete, 4 cr

R3302 Elementary Organic Chemistry II (prereq 3301, 3305 or ¶)
–1 0815-0900 TWThF, East Bank, E Miller, 4 cr
–2 1015-1100 TWThF, East Bank, E Miller, 4 cr
–3 1100-1145 MWThF, St. Paul, Barbara, 4 cr (StP)

R3305 Elementary Organic Chemistry Laboratory I (prereq 3301 or ¶)
♦–1 LECT 0915-1000 M, East Bank, Fisher, 2 cr
♦–2 LECT 1115-1200 M, East Bank, Fisher, 2 cr
–1 LAB 1315-1700 M, East Bank,
–2 LAB 1315-1700 M, East Bank,
–3 LAB 1315-1700 M, East Bank,
–4 LAB 1315-1700 T, East Bank,
–5 LAB 1315-1700 T, East Bank,
–6 LAB 1315-1700 T, East Bank,
–7 LAB 1315-1700 W, East Bank,
–8 LAB 1315-1700 W, East Bank,
–9 LAB 1315-1700 W, East Bank,
–10 LAB 1315-1700 Th, East Bank,
–11 LAB 1315-1700 Th, East Bank,
–12 LAB 1315-1700 Th, East Bank,
–13 LAB 1315-1700 F, East Bank,

R3306 Elementary Organic Chemistry Laboratory II (prereq 3302 or ¶)
♦–1 LECT 0815-0900 M, East Bank, Livinghouse, 2 cr
♦–2 LECT 1015-1100 M, East Bank, Livinghouse, 2 cr
♦–3 LECT 1100-1145 T, St. Paul, Livinghouse, 2 cr (StP)
–1 LAB 1315-1700 M, East Bank,
–2 LAB 1315-1700 M, East Bank,
–3 LAB 1315-1700 M, East Bank,
–4 LAB 1315-1700 T, East Bank,
–5 LAB 1315-1700 T, East Bank,
–6 LAB 1315-1700 W, East Bank,
–7 LAB 1315-1700 W, East Bank,
–8 LAB 1315-1700 Th, East Bank,
–9 LAB 1315-1700 Th, East Bank,
–10 LAB 1315-1700 Th, East Bank,
–11 LAB 1315-1700 Th, East Bank,
–12 LAB 1315-1700 F, East Bank,
–13 LAB 1315-1700 F, East Bank,
–14 LAB 1300-1645 T, (StP)
–15 LAB 1300-1645 T, (StP)
–16 LAB 1300-1645 Th, (StP)
–17 LAB 1300-1645 Th, (StP)

R3332 Introductory Organic Chemistry II (3332-3335†; prereq 3331)
0815-0900 MWF, East Bank, Fristad, 3 cr

R3335 Introductory Organic Chemistry II Laboratory (3332-3335†; prereq 3332 or ¶...¶3332 rec)
★LECT 0815-0900 T, East Bank, Fenton
–1 LAB 1315-1700 MW, East Bank, 2 cr
–2 LAB 1315-1700 MW, East Bank, 2 cr
–3 LAB 1315-1700 MW, East Bank, 2 cr
–4 LAB 0915-1300 TTh, East Bank, 2 cr
–5 LAB 1315-1700 TTh, East Bank, 2 cr
–6 LAB 1315-1700 TTh, East Bank, 2 cr
–7 LAB 1315-1700 TTh, East Bank, 2 cr

R3335H Honors Introductory Organic Chemistry II Laboratory (prereq 3332 or ¶, #) (A–N only)
0815-0900 T, East Bank, Gassman, 2 cr (lab ar)

R3336H Honors Introductory Organic Chemistry II Laboratory (prereq 3335H) (A–N only)
0815-0900 T, East Bank, Gassman, 2 cr (lab ar)

3499 Senior Thesis (prereq #, 4th yr)
ar cr

3970 Directed Studies (prereq #)
ar cr

3992 Special Topics in Chemistry (prereq #)
ar cr

R5127 Analog Instrumentation (prereq Phys 1291, Math 1231 or equiv or #, chem maj or grad) (A–N only)
1715-1845 M, 1715-1800 WF, East Bank, Carr, 5 cr

R5134 Chemical Instrumentation and Analysis Laboratory (prereq 5133) (A–N only)
0815-1000 TTh or WF, Swofford, 2 cr

R5302 Organic Synthesis (prereq 3303 or 3333 or equiv, #)
0815-0900 T, East Bank, Gassman, 4 cr

5344 Heterocyclic Compounds (prereq 3303 or 3333)
0915-1000 TThS, East Bank, Noland, 3 cr

R5521 Elementary Physical Chemistry (prereq 5520)
0915-1000 MWF, East Bank, Crawford, 3 cr

5523 Physical Biochemistry: Structure and Intermolecular Forces (§BioC 5523; prereq 2 qtrs physical chem...BioC 5001 or Biol 3021 desirable)
1215-1300 MTWF, East Bank, Bryant, 4 cr (rec ar)

R5534 Chemical Thermodynamics (prereq 1 yr college chem, Math 3211, Phys 1291 or ¶ or 1106 with #)
★LECT 1015-1100 MTWF, East Bank, Wertz, 4 cr
–1 REC 1015-1100 Th, East Bank,

R5535 Statistical Mechanics and Reaction Kinetics (prereq 5534)
1115-1200 MTWF, East Bank, Lipsky, 4 cr

R5538 Physical Chemistry Laboratory (prereq 5535 or ¶)
–1 LAB 1315-1600 M, East Bank, Lumry, 1 cr
–2 LAB 1315-1600 T, East Bank, Lumry, 1 cr
–3 LAB 1315-1600 W, East Bank, Lumry, 1 cr
–4 LAB 1315-1600 Th, East Bank, Lumry, 1 cr
–5 LAB 1315-1600 F, East Bank, Lumry, 1 cr

R5732 Inorganic Chemistry II (prereq 5731)
★LECT 1015-1100 TWF, East Bank, Mann, 3 cr
–1 REC 1015-1100 Th, East Bank,

R5735 Inorganic Chemistry Laboratory II (prereq 5734, 5732 or ¶ or #)
★LECT 1015-1100 M, East Bank, Gladfelter
–1 LAB 1415-1600 M, 1415-1500 W, East Bank, 2 cr
–2 LAB 1415-1600 M, 1415-1500 F, East Bank, 2 cr
–3 LAB 1415-1600 T, 1415-1500 Th, East Bank, 2 cr
–4 LAB 1415-1600 W, 1415-1500 F, East Bank, 2 cr

5752 Physical Inorganic Chemistry II (prereq 5751 or equiv or #)
1115-1200 MTWF, East Bank, Reynolds, 4 cr

5762 Survey of the Chemistry of the Transition Metals (prereq 5732 or #)
1215-1300 MTWF, East Bank, Gladfelter, 4 cr

5992 Selected Topics (prereq △, sr)
0815-0900 MWF, East Bank, Stankovich, ar cr

8100 Survey of Analytical Chemistry
1 cr

8129 Survey of Modern Instrumental Analysis (prereq 5127, 8104 or #)
0915-1045 TTh, East Bank, Evans, 4 cr

8190 Seminar: Modern Problems in Chemical Instrumentation and Analysis (prereq 8129)
Lodge, 1 cr

8300 General Survey of Organic Chemistry
1 cr

8304 Advanced Organic Chemistry II (prereq 8301 or #)
0915-1000 MWF, East Bank, Farneth, 4 cr

8390 Seminar: Organic Chemistry
1930-2300 W, East Bank, 1 cr

8402 Bioorganic Chemistry II (prereq 3303 or 3333 or equiv)
1015-1100 MWF, East Bank, Gray, 4 cr

8500 General Survey of Physical Chemistry
1 cr

8532 Introductory Quantum Mechanics and Spectroscopy (prereq 8531)
★LECT 1115-1200 MWF, East Bank, Moscowitz, 4 cr
–1 REC 1115-1200 T, East Bank,

8542 Thermodynamics, Statistical Mechanics, and Kinetics (prereq 8541)
★LECT 1015-1100 MWF, East Bank, Prager, 4 cr
–1 REC 1015-1100 Th, East Bank,

8560 Seminar: Biological Systems
ar cr

8590 Seminar: Physical Chemistry
1615-1800 M, East Bank, Barbara, 1 cr

8700 General Survey of Inorganic Chemistry
1 cr

8790 Seminar: Modern Problems in Inorganic Chemistry (prereq △)
1630-1830 Th, East Bank, 1 cr

8990 Research in Chemistry (prereq △)
ar cr

8992 Special Topics in Chemistry (prereq △)
0815-0900 MWF, East Bank, Hoye, 3 cr

Spring Quarter

R1003 Physical World, Chemistry (§any other college chem course; prereq 1 yr high school algebra...high school chem rec)
★LECT 1115-1200 MWThF, East Bank, Wilson, 5 cr
–1 REC 1415-1500 M,
★LAB 1515-1700 M, East Bank,
–2 REC 1415-1500 T,
★LAB 1515-1700 T, East Bank,
–3 REC 1415-1500 Th,
★LAB 1515-1700 Th, East Bank,

R1004 General Principles of Chemistry (1004-1005†, §1001-1002, 1014, 1031-1032; prereq hs chem or equiv, placement Index of Y or predicted Math GPA 1.90 on ACT or Math 0009 or college course in algebra...high school physics, 4 yrs high school math rec)
★LECT 1415-1500 TWThF, East Bank, Dixon, 5 cr
–1 REC 1215-1300 M,
–2 REC 1315-1400 M,
★LAB 1415-1700 M, East Bank,
–3 REC 0815-0900 T,
★LAB 0915-1200 T, East Bank,
–4 REC 0815-0900 Th,
★LAB 0915-1200 Th, East Bank,

R1005 General Principles of Chemistry (1004-1005†, §1001-1002, 1014, 1031-1032; prereq 1004)
♦–1 LECT 0915-1000 MWThF, East Bank, Lipsky, 5 cr
♦–2 LECT 1015-1100 MTWF, East Bank, Conroy, 5 cr
♦–3 LECT 1315-1400 MTWTh, East Bank, Conroy, 5 cr
♦–4 LECT 0800-0845 MTThF, St. Paul, Mann, 5 cr (StP)
–1 REC 1215-1300 M,
–2 REC 1315-1400 M,
★LAB 1415-1700 M, East Bank,
–3 REC 0815-0900 T,
★LAB 0915-1200 T, East Bank,
–4 REC 1215-1300 T,
–5 REC 1315-1400 T,
★LAB 1415-1700 T, East Bank,
–6 REC 1215-1300 W,
–7 REC 1315-1400 W,
★LAB 1415-1700 W, East Bank,
–8 REC 0815-0900 Th,
★LAB 0915-1200 Th, East Bank,
–9 REC 1215-1300 Th,
–10 REC 1315-1400 Th,
★LAB 1415-1700 Th, East Bank,
–11 REC 1215-1300 F,
–12 REC 1315-1400 F,
★LAB 1415-1700 F, East Bank,
–13 REC 1300-1345 M, (StP)
★LAB 1400-1645 M, St. Paul, (StP)
–14 REC 1300-1345 T, (StP)
★LAB 1400-1645 T, St. Paul, (StP)
–15 REC 1300-1345 W, (StP)
★LAB 1400-1645 W, St. Paul, (StP)
–16 REC 1300-1345 Th, (StP)
★LAB 1400-1645 Th, St. Paul, (StP)

R1006 Principles of Solution Chemistry (prereq 1005 or 1032)
★LECT 1015-1100 MWF, East Bank, Brasted, 4 cr
–1 LAB 1315-1700 M, East Bank,
–2 LAB 0815-1200 T, East Bank,
–3 LAB 1315-1700 T, East Bank,
–4 LAB 1315-1700 W, East Bank,
–5 LAB 1315-1700 Th, East Bank,

R1008 Physical World, Chemistry (§any other college chem course; prereq 1 yr high school algebra...high school chem rec)
1115-1200 MWThF, East Bank, Wilson, 4 cr

R1014 Concepts of Chemistry (§1001-1002, 1004-1005, 1031-1032; prereq Phys 1105 or 1281 or #, IT stu or △)
1415-1500 MWThF, East Bank, Wertz, 4 cr

R1133 Elementary Quantitative Analysis (prereq 1032)
★LECT 0815-0900 MWF, East Bank, Swofford
–1 LAB 0815-1200 TTh, East Bank, 5 cr
–2 LAB 0915-1200 MW, 0915-1100 F, East Bank, 5 cr

R3100 Quantitative Analysis Lecture (3100-3101†; prereq 1005 or 1032, non-chem maj)
1215-1300 MWF, East Bank, Lodge, 3 cr

R3101 Quantitative Analysis Laboratory (3100-3101†; prereq 3100 or ¶)
–1 0815-1200 MW, East Bank, Swofford, 2 cr
–2 1315-1700 MW, East Bank, Swofford, 2 cr
–3 1315-1700 TTh, East Bank, Swofford, 2 cr

R3301 Elementary Organic Chemistry I (§3331; prereq 1005 or 1032)
0915-1000 TWThF, East Bank, L Miller, 4 cr

R3302 Elementary Organic Chemistry II (prereq 3301, 3305 or ¶)
–1 0915-1000 TWThF, East Bank, Que, 4 cr
–2 1015-1100 TWThF, East Bank, Farneth, 4 cr

R3303 Elementary Organic Chemistry III (prereq 3302, 3306 or ¶)
1115-1200 TWThF, East Bank, Leete, 4 cr

R3304 Elementary Bioorganic Chemistry (prereq 3302 or 3332 or equiv)
1015-1100 MWF, East Bank, Gray, 4 cr

R3305 Elementary Organic Chemistry Laboratory I (prereq 3301 or ¶)
★LECT 0915-1000 M, East Bank,
–1 LAB 1315-1700 M, East Bank, 2 cr
–2 LAB 1315-1700 M, East Bank, 2 cr
–3 LAB 1315-1700 T, East Bank, 2 cr
–4 LAB 1315-1700 T, East Bank, 2 cr
–5 LAB 1315-1700 T, East Bank, 2 cr
–6 LAB 1315-1700 W, East Bank, 2 cr
–7 LAB 1315-1700 Th, East Bank, 2 cr
–8 LAB 1315-1700 Th, East Bank, 2 cr
–9 LAB 1315-1700 F, East Bank, 2 cr

R3306 Elementary Organic Chemistry Laboratory II (prereq 3302 or ¶)
♦–1 LECT 0915-1000 M, East Bank, Barbara, 2 cr
♦–2 LECT 1015-1100 M, East Bank, Barbara, 2 cr
–1 LAB 1315-1700 M, East Bank,
–2 LAB 1315-1700 M, East Bank,
–3 LAB 1315-1700 M, East Bank,
–4 LAB 1315-1700 T, East Bank,
–5 LAB 1315-1700 T, East Bank,
–6 LAB 1315-1700 T, East Bank,
–7 LAB 1315-1700 W, East Bank,
–8 LAB 1315-1700 W, East Bank,
–9 LAB 1315-1700 W, East Bank,
–10 LAB 1315-1700 W, East Bank,
–11 LAB 1315-1700 Th, East Bank,
–12 LAB 1315-1700 Th, East Bank,
–13 LAB 1315-1700 F, East Bank,
–14 LAB 1300-1645 T, (StP)
–15 LAB 1300-1645 Th, (StP)
–16 LAB 1300-1645 Th, (StP)
–17 LAB 1300-1645 F, (StP)

R3333 Introductory Organic Chemistry III (prereq 3332)
0815-0900 MWF, East Bank, Hoye, 3 cr

R3336 Introductory Organic Chemistry III Laboratory (prereq 3333 or ¶...¶3333 rec)
★LECT 0815-0900 T, East Bank, Fenton
–1 LAB 1315-1700 MW, East Bank, 2 cr
–2 LAB 1315-1700 TTh, East Bank, 2 cr
–3 LAB 1315-1700 TTh, East Bank, 2 cr

3499 Senior Thesis (prereq #, 4th yr)
ar cr

3970 Directed Studies (prereq #)
ar cr

3993 Special Topics in Chemistry (prereq #)
1215-1300 Th, East Bank, Gladfelter, 1 cr

R5126 Modern Analytical Chemistry (prereq 3332, 3335, chem engr maj or △)
0815-0900 TTh, East Bank, Stankovich, 4 cr (lab ar)

5128 The Small Computer in the Chemical Laboratory (prereq 5127 or #)
1015-1100 MWF, East Bank, Evans, 5 cr

R5305 Intermediate Organic Chemistry (prereq 3303 or 3333)
★LECT 1015-1100 TWF, East Bank, Noland, 4 cr
–1 REC 1015-1100 Th, East Bank,

R5365 Organic Qualitative Analysis (prereq 3303 or 3333)
1315-1400 TTh, East Bank, Fenton, 4 cr (lab ar)

R5533 Quantum Chemistry (prereq 1 yr college chemistry, Phys 1291 or ¶ or 1106 with #, Math 3211)
1115-1200 MWF, 1115-1200 T, East Bank, Hexter, 4 cr

R5535 Statistical Mechanics and Reaction Kinetics (prereq 5534)
1015-1100 MWThF, East Bank, Lumry, 4 cr

R5536 Quantum Chemistry Laboratory (prereq 5533 or ¶)
–1 LAB 1315-1700 M, East Bank, Overend, 2 cr
–2 LAB 1315-1700 W, East Bank, Overend, 2 cr
–3 LAB 1315-1700 Th, East Bank, Overend, 2 cr

R5538 Physical Chemistry Laboratory (prereq 5535 or ¶)
–1 LAB 1315-1600 T, East Bank, Wertz, 1 cr
–2 LAB 1315-1600 W, East Bank, Wertz, 1 cr

5763 Survey of the Chemistry of Non-Transition Elements (prereq 5732 or #)
1215-1300 MTWF, East Bank, Ellis, 4 cr

5803 Chemistry of Industry (prereq chem sr or grad student or #)
0815-0900 MWF, East Bank, Heilman, Rassmussen, 4 cr

5993 Selected Topics (prereq △, sr)
1515-1630 TTh, East Bank, Gladfelter, 3 cr

8100 Survey of Analytical Chemistry
1 cr

8104 Spectroscopic Methods of Analysis (prereq 5133 or equiv or #) (A-N only)
0915-1000 MWF, East Bank, Bryant, 3 cr

8190 Seminar: Modern Problems in Chemical Instrumentation and Analysis (prereq 8129)
Lodge, 1 cr

8300 General Survey of Organic Chemistry
1 cr

8305 Advanced Organic Chemistry III (prereq 8304 or #)
0915-1000 MWF, East Bank, Livinghouse, 4 cr

8390 Seminar: Organic Chemistry
1930-2300 W, East Bank, 1 cr

8403 Bioorganic Chemistry I (prereq 3303 or 3333 or equiv)
1015-1100 MWF, East Bank, Fisher, 4 cr

8500 General Survey of Physical Chemistry
1 cr

8533 Introductory Quantum Mechanics and Spectroscopy (prereq 8532)
1115-1200 MWF, East Bank, Moscowitz, 4 cr

8543 Thermodynamics, Statistical Mechanics, and Kinetics (prereq 8542)
0815-0900 MWF, East Bank, Truhlar, 4 cr

8546 Advanced Statistical Mechanics (prereq 8541-8542) (A-N only)
0915-1000 MWF, East Bank, Prager, 4 cr

8560 Seminar: Biological Systems
ar cr

8590 Seminar: Physical Chemistry
1615-1800 M, East Bank, Barbara, 1 cr

8700 General Survey of Inorganic Chemistry
1 cr

8790 Seminar: Modern Problems in Inorganic Chemistry (prereq △)
1630-1830 Th, East Bank, 1 cr

8990 Research in Chemistry (prereq △)
ar cr

8993 Special Topics in Chemistry (prereq △)
1015-1100 MWF, East Bank, Fristad, 3 cr

8996 Special Topics in Chemistry (prereq △)
1115-1200 MWF, East Bank, Brittan, 3 cr

CHICANO STUDIES (Chic)
Liberal Arts

Winter Quarter

1106 Introduction to Chicano Studies: The Mexican-American Experience, 1821-1960
0915-1000 MWThF, East Bank, Vallejos, 4 cr

3118 The Bilingual Child (prereq 3112, Psy 1001)
0945-1100 TTh, West Bank, Cisneros, 4 cr

3330 Chicano History: Topics (prereq 1105, 1106, 1107 or 3324)
Valdes, 4 cr

3406 Spanish for the Spanish Speaking: Advanced Conversation and Composition (prereq 1201, 1202, 1203 or one yr Span, 3405)
1015-1100 MWF, East Bank, Cisneros, 4 cr

3442 Survey of Chicano History, 1900 to Present (§Hist 3442)
Valdes, 4 cr

3508 Introduction to Chicano Literature: Text, Context
1215-1300 MWF, East Bank, Vallejos, 4 cr

3615 Contemporary Chicano Participation in Politics
4 cr

3970 Directed Studies (prereq #, △, college approval)
ar cr

5970 Directed Studies (prereq #, △, CLA approval)
ar cr

Spring Quarter

1107 Introduction to Chicano Studies: The Chicano in Contemporary Society
0915-1000 MWThF, East Bank, Vallejos, 4 cr

3211 Chicano Philosophy
0945-1100 TTh, East Bank, 4 cr

3411 Chicano Dialects of the United States (prereq knowledge of world standard Span)
1015-1100 MWF, East Bank, Cisneros, 4 cr

3427 History of Cuba and Puerto Rico (§Hist 3427)
0915-1000 MWF, East Bank, Valdes, 4 cr

3510 Chicano Literature: Topics (max 12 cr; prereq 3507 or 3508 or #...some knowledge of Span rec)
1115-1200 MWF, East Bank, Vallejos, 4 cr

3711 Chicanos: Socio-Psychological Perspectives I (prereq 1105, intro course psy or soc or #)
4 cr

3970 Directed Studies (prereq #, △, college approval)
ar cr

CHILD PSYCHOLOGY (CPsy)
Education

Winter Quarter

R1301 Introduction to Child Psychology (§5301; prereq 5 cr introductory psychology)
–1 1015-1100 MWF, East Bank, Morgan, 4 cr
–2 1315-1400 MWF, East Bank, Haake, 4 cr
–3 1820-2050 T, East Bank, Reisman, 4 cr

R1970 Directed Study (prereq #)
ar cr

3303 Adolescent Psychology (§5303; prereq 5 cr introductory psychology)
0915-1000 MWF, East Bank, 4 cr

R3308 Research Methods in Child Psychology (S-N optional; prereq 1301, Psy 1004)
1415-1530 TTh, East Bank, Dolgin, 4 cr

3311 Behavioral and Emotional Problems (§5311; prereq 1301 or equiv)
1820-2050 M, East Bank, Reed, 4 cr

3313 Psychology of Atypical Children (§5313; prereq 1301 or equiv)
1015-1100 MWF, East Bank, Charlesworth, 4 cr

R3330 Directed Experiences (prereq 1301 or equiv) (S-N optional)
1515-1645 T, East Bank, Adolf, 4 cr (addnl hrs ar) (Observation, Participation in Early Childhood)

3331 Processes of Socialization of Children (§5331; prereq 1301 or equiv)
1820-2050 Th, East Bank, Livingston, 4 cr

3343 Introduction to Cognitive Development (prereq 1301) (S-N optional)
1820-2050 W, East Bank, Maratsos, 4 cr

3360H Honors Seminar I: Current Research in Developmental Psychology (prereq 1301 or equiv, #)
1115-1230 MW, East Bank, H Pick, 4 cr

R3980 Directed Instruction (max 4 cr; prereq #) (S-N only)
1-4 cr

5303 Adolescent Psychology (§3303; prereq 5 cr introductory psychology)
1215-1330 MW, East Bank, Collins, 4 cr

5311 Behavioral and Emotional Problems (§3311; prereq 1301 or equiv)
1820-2050 M, East Bank, Reed, 4 cr

5313 Psychology of Atypical Children (§3313; prereq 1301 or equiv)
1015-1100 MWF, East Bank, Charlesworth, 4 cr

R5315 Introduction to Mental Retardation (§SpEd 5120 or PsyS 5120; prereq 1301 or equiv)
0915-1030 TTh, East Bank, Bruininks, 4 cr

5319 Clinical Procedures with Children and Youth (prereq 12 cr psychology, educational psychology, sociology or child psychology)
0900-1130 S, East Bank, Gross, 4 cr

5331 Processes of Socialization of Children (§3331; prereq 1301 or equiv)
1820-2050 Th, East Bank, Livingston, 4 cr

5335 Peer Relations (prereq 3331 or 5331)
0930-1100 TTh, East Bank, Moore, 4 cr

R5970 Directed Study (prereq #)
ar cr

R5990 Directed Research (prereq #)
ar cr

8304 Research Methods in Child Psychology (prereq #)
1315-1430 MW, East Bank, A Pick, 3 cr

8310 Seminar: History of Child Development (prereq #)
2000-2200 M, Hartup, H Pick, 1 cr

8336 Advanced Social Development II (prereq #)
1445-1600 MW, East Bank, Hartup, Sroufe, 3 cr

8343 Advanced Cognitive Development I (prereq 12 cr in child psy or psychology)
1415-1530 TTh, East Bank, Perlmutter, 3 cr

8360 Seminar: Developmental Psychology (prereq #)
Breslow, others, ar cr

8970 Independent Study (prereq #)
ar cr

8990 Research Problems (prereq #)
ar cr

Spring Quarter

1301 Introductory Child Psychology (§5301; prereq 5 cr introductory psychology)
–1 1015-1100 MWF, East Bank, Gunnar, 4 cr
–2 1820-2050 M, East Bank, Salapatek, 4 cr

R1970 Directed Study (prereq #)
ar cr

3303 Adolescent Psychology (§5303; prereq 5 cr introductory psychology)
–1 1015-1100 MWF, East Bank, Dolgin, 4 cr
–2 1820-2050 W, East Bank, Palmer, 4 cr

3304 Introduction to Maturity and Aging (prereq 1301 or equiv)
1115-1200 MWF, Perlmutter, 4 cr

R3308 Research Methods in Child Psychology (S-N optional; prereq 1301, Psy 1004)
1315-1445 TTh, East Bank, Breslow, 4 cr

3311 Behavioral and Emotional Problems (§5311; prereq 1301 or equiv)
1315-1400 MWF, East Bank, Sroufe, 4 cr

3331 Processes of Socialization of Children (§5331; prereq 1301 or equiv)
0915-1000 MWF, East Bank, Hartup, 4 cr

3332 Cross-Cultural Child Development (prereq 4 cr in child psychology)
1115-1200 MWF, East Bank, Gudeman, 4 cr

3343 Introduction to Cognitive Development (prereq 1301) (S-N optional)
0915-1000 MWF, East Bank, A Pick, 4 cr

3361H Honors Seminar II: Research and Theory in Developmental Psychology (prereq 1301 or equiv, #)
0930-1100 TTh, East Bank, H Pick, 4 cr

R3980 Directed Instruction (max 4 cr; prereq #) (S-N only)
1-4 cr

5303 Adolescent Psychology (§3303; prereq 5 cr introductory psychology)
–1 1015-1100 MWF, East Bank, Dolgin, 4 cr
–2 1820-2050 W, East Bank, Palmer, 4 cr

5311 Behavioral and Emotional Problems (§3311; prereq 1301 or equiv)
1315-1400 MWF, East Bank, Sroufe, 4 cr

5315 Introduction to Mental Retardation (§SpEd 5120 or PsyS 5120; prereq 1301 or equiv)
1630-1800 TTh, East Bank, Turnure, 4 cr

5331 Processes of Socialization of Children (§3331; prereq 1301 or equiv)
0915-1000 MWF, East Bank, Hartup, 4 cr

5341 Perceptual Development (prereq 1301 or #)
1315-1400 MWF, East Bank, Salapatek, 4 cr

5345 Language Development (prereq 1301 or #)
1415-1500 MWF, East Bank, Morgan, 4 cr

R5970 Directed Study (prereq #)
ar cr

R5990 Directed Research (prereq #)
ar cr

8320 Seminar: Current Issues in Teaching Developmental Psychology (prereq #)
1245-1400 F, East Bank, Collins, 1 cr

8327 Ethology of Child Behavior (prereq #)
1345-1500 TTh, East Bank, Charlesworth, 3 cr

8341 Advanced Perceptual Development (prereq Psy 5031, #)
1415-1530 MW, East Bank, H Pick, 3 cr

8351 Theory, Practices in Preschool (prereq #)
1030-1200 TTh, East Bank, Moore, 3 cr

8360 Seminar: Developmental Psychology (prereq #)
Maratsos, ar cr

8970 Independent Study (prereq #)
ar cr

8990 Research Problems (prereq #)
ar cr

CHINESE (Chn)
East Asian Studies
Liberal Arts

Winter Quarter

R1012 Beginning Modern Chinese (prereq 1011)
–1 LECT 0915-1000 TTh, East Bank, Cass
–2 LECT 1115-1200 TTh, East Bank, Cass
♦–1 REC 0815-0900 MTWThF, East Bank, 5 cr
♦–2 REC 1215-1300 MTWThF, East Bank, 5 cr
♦–3 REC 1015-1100 MTWThF, East Bank, 5 cr

3022 Intermediate Modern Chinese (prereq 3021)
1115-1200 MTWThF, East Bank, Huters, 5 cr

3032 Introductory Classical Chinese (prereq 3031)
0915-1000 MWF, East Bank, Wang, 4 cr

3042 Third Year Modern Chinese (prereq 3041)
1115-1200 MWF, East Bank, Liu, 4 cr

3090H Honors Tutorial (prereq △)
1–4 cr

3202 Heritage of China: Medieval to Modern
1015-1100 MTWTh, East Bank, Huters, 5 cr

3970 Directed Studies (prereq #, △, college approval)
1–4 cr

5042 Third Year Modern Chinese (prereq 3031)
1115-1200 MWF, East Bank, Liu, 4 cr

5052 Advanced Chinese Conversation and Composition (§3052; prereq 3023 or #, grad)
1415-1500 MWF, East Bank, Liu, 4 cr

5105 Readings in Chinese Vernacular Fiction (prereq 3043 or #)
1115-1200 MWF, East Bank, Cass, 4 cr

5251 Structure of Standard Chinese (prereq 1013, #)
1415-1530 TTh, East Bank, Wang, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
–1 1–4 cr
–2 1–4 cr

8960 Seminar in Chinese Literature (prereq 2 qtrs from 51xx courses)
1515-1700 W, East Bank, Mather, 4 cr

Spring Quarter

R1013 Beginning Modern Chinese (prereq 1012)
–1 LECT 0915-1000 TTh, East Bank, Cass
–2 LECT 1115-1200 TTh, East Bank, Cass
♦–1 REC 0815-0900 MTWThF, East Bank, 5 cr
♦–2 REC 1215-1300 MTWThF, East Bank, 5 cr

3023 Intermediate Modern Chinese (prereq 3022)
1115-1200 MTWThF, East Bank, Wang, 5 cr

3033 Introductory Classical Chinese (prereq 3032)
0915-1000 MWF, East Bank, Mather, 4 cr

3043 Third Year Modern Chinese (prereq 3042)
1115-1200 MWF, East Bank, Liu, 4 cr

3090H Honors Tutorial (prereq △)
1–4 cr

3165 Chinese Drama in English Translation
1315-1400 MWF, East Bank, Liu, 4 cr

3970 Directed Studies (prereq #, △, college approval)
1–4 cr

5043 Third Year Modern Chinese (prereq 3042)
1115-1200 MWF, East Bank, Liu, 4 cr

5451 Studies in Chinese Linguistics (prereq 5251 or 5252)
1415-1530 TTh, East Bank, S Wang, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
1–4 cr

CIVIL ENGINEERING (CE)
Civil And Mineral Engineering
Institute of Technology

Winter Quarter

R3100 Introduction to Surveying and Mapping (prereq Math 1211, IT stu) (A–N only)
★LECT 0915-1000 MWF, East Bank, Johnson
–1 LAB 1315-1600 T, East Bank, 4 cr
–2 LAB 1415-1700 W, East Bank, 4 cr
–3 LAB 0915-1200 Th, East Bank, 4 cr
–4 LAB 1315-1600 Th, East Bank, 4 cr
–5 LAB 1415-1700 F, East Bank, 4 cr

R3300 Elements of Soil Mechanics (prereq AEM 1015, IT stu) (A–N only)
0915-1100 TTh, East Bank, Drescher, 4 cr

R3301 Soil Mechanics Laboratory (prereq 3300, IT stu) (A–N only)
–1 LAB 0915-1200 M, East Bank, Haitjema, 1 cr
–2 LAB 1315-1600 M, East Bank, Haitjema, 1 cr
–3 LAB 0915-1200 T, East Bank, Haitjema, 1 cr
–4 LAB 1315-1600 T, East Bank, Haitjema, 1 cr

R3400 Fluid Mechanics (§AEM 5200; prereq Math 3221, AEM 1015 or 3016, IT stu or forest products maj) (A–N only)
★LECT 1215-1300 MWF, East Bank, Stefan
–1 LAB 1415-1700 M, East Bank, Song, 4 cr
–2 LAB 1415-1700 T, East Bank, Song, 4 cr
–3 LAB 1415-1700 W, East Bank, Song, 4 cr
–4 LAB 1415-1700 Th, East Bank, Song, 4 cr
–5 LAB 1415-1700 F, East Bank, Song, 4 cr

3601 Structural Design for Architects (prereq architecture maj or adult special, AEM 3092, 3093, CE 3600) (A–N only)
0915-1000 MTWThF, East Bank, Cerny, 4 cr

5098 Advanced Design, Analysis, Research or Tutorial in Civil Engineering (prereq approval of faculty adviser) (A–N only)
1415-1500 MWF, East Bank, ar cr

R5104 Photogrammetry (prereq Math 1211, IT or grad stu) (A–N only)
1615-1800 TTh, East Bank, Johnson, 4 cr

R5200 Geometric Design of Highways (prereq 3200, 5102 or #, IT or grad stu) (A–N only)
0915-1000 MTWF, East Bank, Huber, 4 cr

5202 Airport Design (prereq 3200, 3300 or #, IT stu or grad) (A–N only)
1315-1400 MTWF, East Bank, Huber, 4 cr

R5212 Transportation Productivity and Energy Conservation (prereq #) (A–N only)
1315-1500 TTh, East Bank, Stephanedes, 4 cr

5300 Theory of Geomechanics (prereq 3300, IT or grad stu) (A–N only)
1615-1800 MW, East Bank, Vardoulakis, 4 cr

R5401 Water Resources Engineering (prereq 3400 or #, IT or grad stu) (A–N only)
★LECT 1315-1400 MWF, East Bank, Gulliver
–1 LAB 1415-1700 M, East Bank, 4 cr
–2 LAB 1415-1700 W, East Bank, 4 cr

R5405 Hydrology and Hydrologic Design (prereq 5401 or #, IT stu or grad) (A–N only)
★LECT 1215-1300 MWF, East Bank, Bowers
–1 LAB 1415-1700 T, East Bank, 4 cr
–2 LAB 1415-1700 Th, East Bank, 4 cr
–3 LAB 1415-1700 F, East Bank, 4 cr

5425 Groundwater Mechanics (prereq 3400 or #, IT or grad stu) (A–N only)
1415-1600 MW, East Bank, Strack, 4 cr

5505 Water Quality Engineering (prereq 3500 or #) (A–N only)
0915-1100 TTh, East Bank, Eisenreich, 4 cr

R5510 Solid Waste Management
1615-1800 TTh, East Bank, Chiesa, 4 cr

R5600 Linear Structural Systems (prereq AEM 1015, 3016, IT stu or grad) (A–N only)
–1 1115-1200 MTWF, East Bank, Goodman, 4 cr
–2 1115-1200 MTWF, East Bank, 4 cr

R5613 Intermediate Reinforced Concrete Design (prereq 5611, IT or grad stu) (A–N only)
1615-1800 TTh, East Bank, Cerny, 4 cr

5701 Cemented Materials Properties: Evaluation and Mixture Design (prereq 3700, IT or grad stu) (A–N only)
1615-1800 MW, East Bank, 4 cr

8098 Civil Engineering Research (prereq #) (A–N only)
1–5 cr

8201 Urban Traffic Operations (prereq #)
1515-1700 MW, East Bank, Michalopoulos, 4 cr

R8210 Modeling Consumer Choices in Transportation (prereq Stat 3091 or #)
1515-1700 TTh, East Bank, Stephanedes, 4 cr

8412 Mechanics of Similitude and Dimensional Analysis (prereq 5401)
1315-1400 MWF, East Bank, Farell, 3 cr

8422 Incompressible Boundary Layer Flow (prereq 5435 or #)
0915-1100 TTh, East Bank, Parker, 3 cr

8436 Topics: Hydrodynamics Theory (prereq #)
3 cr

8498 Advanced Hydraulic Laboratory (prereq #)
Bowers, 2 cr

8501 Biological and Chemical Processes for Wastewater Treatment (prereq 5501 or #)
0915-1000 MWF, East Bank, Maier, 3 cr

8505 Aquatic Chemistry for Environmental Engineers (prereq 5506)
1015-1200 MW, East Bank, Brezonik, 4 cr

8550 Analysis and Modeling of Aquatic Environments (prereq #) (A–N only)
1515-1700 MW, East Bank, Stefan, 4 cr

8605 Finite Element Method (prereq 5601 or #)
1415-1600 MW, East Bank, Krauthammer, 4 cr

8611 Plate Structures (prereq #)
1315-1500 TTh, East Bank, 4 cr

8616 Non-Linear Structural Systems (prereq 5610 or #)
1615-1800 TTh, East Bank, Galambos, 4 cr

8620 Structural Dynamics I (prereq AEM 3036 or #)
1315-1500 MW, East Bank, Goodman, 4 cr

Spring Quarter

R3200 Introduction to Transportation Engineering (prereq Phys 1271, IT stu) (A–N only)
0915-1000 MTWF, East Bank, Huber, 4 cr

R3300 Elements of Soil Mechanics (prereq AEM 1015, IT stu) (A–N only)
1015-1200 TTh, East Bank, Haitjema, 4 cr

R3301 Soil Mechanics Laboratory (prereq 3300, IT stu) (A–N only)
–1 LAB 0915-1200 M, East Bank, Haitjema, 1 cr
–2 LAB 1315-1600 M, East Bank, Haitjema, 1 cr
–3 LAB 0915-1200 T, East Bank, Haitjema, 1 cr
–4 LAB 1315-1600 T, East Bank, Haitjema, 1 cr

R3400 Fluid Mechanics (§AEM 5200; prereq Math 3221, AEM 1015 or 3016, IT stu or forest products maj) (A–N only)
★LECT 1115-1200 MWF, East Bank, Parker
–1 LAB 1415-1700 M, East Bank, Farell, 4 cr
–2 LAB 1415-1700 T, East Bank, Farell, 4 cr
–3 LAB 1415-1700 W, East Bank, Farell, 4 cr
–4 LAB 1415-1700 Th, East Bank, 4 cr
–5 LAB 1415-1700 F, East Bank, 4 cr

R3500 Introduction to Environmental Engineering Problems and Analysis (prereq Chem 1005)
1015-1100 MTWTh, East Bank, Semmens, 4 cr

3602 Structural Design for Architects (prereq architecture maj or adult special, AEM 3092, 3093, CE 3600, 3601) (A–N only)
0915-1000 MTWThF, East Bank, Cerny, 4 cr

5001 Building and Construction Contracts and Specifications (prereq 3rd yr IT or adult special or grad or #) (A–N only)
1415-1600 TTh, East Bank, 4 cr

R5002 Engineering Economics (prereq jr or sr IT stu or adult special or grad) (A–N only)
1115-1200 TTh, East Bank, Huber, 2 cr

5099 **Advanced Design, Analysis, Research or Tutorial in Civil Engineering** (prereq approval by faculty adviser) (A-N only)
ar cr

5201 **Highway Traffic Characteristics and Operation** (prereq 3200, IT stu or grad) (A-N only)
1515-1700 TTh, East Bank, Michalopoulos, 4 cr

5301 **Applied Soil Mechanics** (prereq 3300, 5300, IT stu or grad) (A-N only)
1615-1800 MW, East Bank, Vardoulakis, 4 cr

5302 **Applied Rock Mechanics** (prereq 5300, IT stu or grad) (A-N only)
0815-0900 MTWF, East Bank, Crouch, 4 cr

5304 **Design of Highway and Airport Pavements** (prereq 3300, 3700, IT stu or grad) (A-N only)
1415-1700 F, East Bank, 4 cr

R**5402** **Computational Hydraulics** (prereq 5401, CSci 3101 or #, IT stu or grad) (A-N only)
★LECT 0915-1000 MWF, East Bank, Gulliver
–1 LAB 1415-1700 T, East Bank, 4 cr

R**5403** **Hydraulic Structures** (prereq 5401 or #, IT or grad stu) (A-N only)
★LECT 1315-1400 MWF, East Bank, Stefan
–1 LAB 1415-1700 F, East Bank, 4 cr

R**5405** **Hydrology and Hydrologic Design** (prereq 5401 or #, IT stu or grad) (A-N only)
★LECT 1115-1200 MWF, East Bank, Bowers
–1 LAB 1415-1700 M, East Bank, 4 cr
–2 LAB 1415-1700 W, East Bank, 4 cr

R**5501** **Analysis and Design of Wastewater Systems** (prereq 3400, 3500 or #, IT stu or grad) (A-N only)
★LECT 0815-0900 MWF, East Bank, Maier
–1 LAB 1315-1500 T, East Bank, 4 cr
–2 LAB 1415-1600 W, East Bank, 4 cr
–3 LAB 1315-1500 Th, East Bank, 4 cr

R**5600** **Linear Structural Systems** (prereq AEM 1015, 3016, IT stu or grad) (A-N only)
1015-1100 MTWF, East Bank, 4 cr

R**5601** **Matrix Analysis of Structures** (prereq 5600, IT stu or grad) (A-N only)
1115-1200 MWF, East Bank, 4 cr

R**5610** **Design of Metal Structures** (prereq 5600, IT stu or grad) (A-N only)
–1 1415-1600 MW, East Bank, Galambos, 4 cr
–2 1415-1600 MW, East Bank, 4 cr

R**5615** **Prestressed Concrete** (prereq 5611, IT or grad stu...5613 rec) (A-N only)
1715-1900 TTh, East Bank, Cerny, 4 cr

R**5703** **Project Management** (prereq sr standing, IT maj) (A-N only)
1820-2020 MTh, East Bank, Yourzak, 4 cr

8099 **Civil Engineering Research** (prereq #) (A-N only)
1-5 cr

8202 **Freeway Operations** (prereq #)
1515-1700 MW, East Bank, Michalopoulos, 4 cr

8321 **Mechanics of Granular Media** (prereq 5300)
1015-1200 TTh, East Bank, Drescher, 4 cr

8419 **Water Resources Systems Simulation** (prereq 5401 or #)
1315-1500 TTh, East Bank, Song, 4 cr

8421 **Incompressible Potential Flow** (§AEM 5204; prereq 5435 or #)
1615-1800 MW, East Bank, Arndt, 3 cr

8425 **Advanced Grounderwater Mechanics** (prereq 5425 or #)
1415-1600 MW, East Bank, Strack, 4 cr

8437 **Topics: Hydrodynamics Theory** (prereq #)
3 cr

8499 **Advanced Hydraulic Laboratory** (prereq #)
Bowers, 2 cr

8506 **Aquatic Chemistry for Environmental Engineers** (prereq 8505)
0915-1100 TTh, East Bank, Eisenreich, 4 cr

8507 **Physical Chemical Processes for Water and Wastewater Treatment - Part II** (prereq 5500, 5501, 8505 or #)
1115-1200 MWF, East Bank, Semmens, 3 cr

8551 **Seminar: Models of Aquatic Environments** (prereq 8550)
1615-1800 T, East Bank, Stefan, 1-5 cr

8560 **Seminar: Special Topics in Environmental Engineering** (prereq #)
1515-1600 Th, East Bank, Semmens, 1 cr

8621 **Structural Dynamics II** (prereq 8620 or #)
1315-1500 MW, East Bank, Krauthammer, 4 cr

8699 **Seminar: Structures** (prereq 8698, #)
1215-1400 F, East Bank, ar cr

CLASSICAL CIVILIZATION (ClCv)
Liberal Arts
Winter Quarter

3970 **Directed Studies** (prereq #, △, college approval)
1-15 cr

3990 **Directed Research** (prereq #, △, college approval)
1-15 cr

Spring Quarter

R**3340** **Practicum in Archaeological Field Techniques** (prereq classical civilization maj or #, one course in ancient art or archaeology)
1015-1200 TTh, East Bank, Gunter, 4 cr
(Field work 1015-1600 TTh, May-June)

3940 **Proseminar: Classical Traditions in Western Culture: Social and Political Thought** (prereq #)
1515-1700 M, East Bank, Sibley, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-15 cr

3990 **Directed Research** (prereq #, △, college approval)
1-15 cr

CLASSICS (Clas)
Classics
Liberal Arts
Winter Quarter

1005 **Age of Augustus**
1015-1100 MWF, East Bank, Miller, 4 cr

1043 **Introduction to Greek and Roman Archaeology**
1215-1300 MWF, East Bank, Gunter, 4 cr

1045 **Greek and Latin Elements in English: Introduction** (prereq ¶1048, 3046)
2 cr (Orientation 0815-0900 T, Jan 3 or 0915-1000 W, Jan 4 or 0815-0900 M, Jan 9, Arch 25. Independent study ar)

1048 **Greek and Latin Terminology in the Medical and Biological Sciences** (§3048; prereq 1045 or ¶)
2 cr (Orientation 0815-0900 T, Jan 3 or 0915-1000 W, Jan 4 or 0815-0900 M, Jan 9, Arch 25. Independent study ar)

1141 **Greek and Latin Terminology for Nursing** (§1048)
3 cr (Orientation 0815-0900 T, Jan 3 or 0915-1000 W, Jan 4 or 0815-0900 M, Jan 9, Arch 25. Independent study ar)

3046 **Advanced Etymology: Vocabulary of the Sciences and Humanities** (prereq 1045 or ¶)
2 cr (Orientation 0815-0900 T, Jan 3 or 0915-1000 W, Jan 4 or 0815-0900 M, Jan 9, Arch 25. Independent study ar)

R**3145** **Greek and Roman Mythology II-Analysis and Tradition** (§5145; prereq 1042 or #)
1115-1200 MWF, East Bank, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-5 cr

5112 **Greek Sculpture: Archaic, Classical, and Hellenistic** (§ArtH 5112; prereq jr or #)
1415-1500 MWF, East Bank, Coulson, 4 cr

R**5145** **Greek and Roman Mythology II** (§3145; prereq 1042 or #) (A-N only)
1115-1200 MWF, East Bank, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-5 cr

5980 **Directed Instruction** (prereq #, △, CLA approval)
4 cr

5990 **Directed Research** (prereq #, △, CLA approval)
4 cr

8910 **Seminar: Problems in Ancient Art** (prereq #)
1515-1700 M, East Bank, Gunter, 4 cr

Spring Quarter

R**1002** **Age of Pericles**
1015-1100 MWF, East Bank, Solomon, 4 cr

1006 **Age of Nero**
1115-1200 MWF, East Bank, Sheets, 4 cr

1045 **Greek and Latin Elements in English: Introduction** (§3045; prereq ¶1048, 3046)
3 cr (Orientation 0815-0900 M, March 26 or 0915-1000 T, March 27 or 0815-0900 M, April 2, FolH 308. Independent study ar)

1048 **Greek and Latin Terminology in the Medical and Biological Sciences** (§3048; prereq 1045 or ¶)
3 cr (Orientation 0815-0900 M, March 26 or 0915-1000 T, March 27 or 0815-0900 M, April 2, FolH 308. Independent study ar)

1141 **Greek and Latin Terminology for Nursing** (§1048)
3 cr (Orientation 0815-0900 M, March 26 or 0915-1000 T, March 27 or 0815-0900 M, April 2, FolH 308. Independent study ar)

3046 **Advanced Etymology: Vocabulary of the Sciences and Humanities** (prereq 1045 or ¶)
2 cr (Orientation 0815-0900 M, March 26 or 0915-1000 T, March 27 or 0815-0900 M, April 2, FolH 308. Independent study ar)

3970 **Directed Studies** (prereq #, △, college approval)
1-5 cr

5004 **Eroticism and Family Life in the Graeco-Roman World** (prereq soph)
1315-1500 MW, East Bank, Erickson, 4 cr

5080 **New Testament Proseminar** (max 12 cr; prereq 3072, 5072 or #)
1315-1430 TTh, East Bank, 4 cr

R**5107** **Roman Sculpture** (§ArtH 5107; prereq jr or #)
1215-1300 MWF, East Bank, McNally, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-5 cr

5980 **Directed Instruction** (prereq #, △, CLA approval)
4 cr

5990 **Directed Research** (prereq #, △, CLA approval)
4 cr

8910 **Seminar: Problems in Ancient Art** (prereq #)
1515-1700 W, East Bank, Keuls, 4 cr

COLLEGE HONORS SEMINAR (CHS)
Honors Program
Liberal Arts
Winter Quarter

R**3769** **Analyzing Medical Literature** (prereq jr, sr, reg honors div)
1415-1600 M, East Bank, Stephen Haines, 4 cr

R**3771** **Russian Publishers and Readers, 1800-1914** (prereq jr, sr, reg honors div)
1315-1500 T, West Bank, Miranda Beaven, 4 cr

R**3772** **Housing Research-A Woman's Perspective** (prereq jr, sr, reg honors div)
1315-1500 Th, West Bank, Christine Cook, 4 cr

R**3773** **Karl Marx, Marxism, and Classical Antiquity: The Development of Marxist Analysis of Ancient Greek and Roman Societies** (prereq jr, sr, reg honors div)
1315-1600 W, East Bank, Gerald Erickson, 4 cr

R**3774** **Future of the World's Food Supply** (prereq jr, sr, reg honors div)
1415-1600 M, East Bank, Albert Frenkel, 4 cr

R**3784** **Religion and Revolution in the Third World, 1945-1975** (prereq jr, sr, reg honors div)
1015-1200 W, West Bank, Lansine Kaba, 4 cr

Spring Quarter

R3775 **The Norman Conquest-1066** (prereq jr, sr, reg honors div)
1315-1500 W, West Bank, B Bachrach, 4 cr

R3777 **Religious Ethics in America** (prereq jr, sr, reg honors div)
1415-1600 T, East Bank, Roland DeLattre, 4 cr

R3778 **The Literature of Australia** (prereq jr, sr, reg honors div)
0915-1100 M, East Bank, Wlad Godzich, 4 cr

R3779 **Genetics and Human Disease** (prereq jr, sr, reg honors div)
1415-1600 W, East Bank, Burt Shapiro, 4 cr

R3781 **Regulation/Competition in Health** (prereq jr, sr, reg honors div)
1315-1500 T, East Bank, Lester E Block, 4 cr

R3785 **Law and Literature** (prereq jr, sr, reg honors div)
1315-1500 M, East Bank, K Van D'Elden, 4 cr

COMMUNICATION DISORDERS (CDis)
Liberal Arts

Winter Quarter

R3100 **Clinical and Research Observation** (prereq department written permission) (S-N only)
2 cr

5102 **Communication Problems of Adults**
1515-1700 W, East Bank, Haroldson, others, 3 cr

5304 **Speech Science** (prereq 5301, 5302, 5303 or #)
0815-1000 MW, East Bank, Van Tasell, 4 cr

5504 **Articulation Disorders** (prereq 5301, 5302)
0915-1100 TTh, East Bank, McDermott, 4 cr

5508 **Voice Disorders**
1415-1500 T, 1415-1600 Th, East Bank, Starr, Haroldson, 4 cr

5513 **Language Delay** (prereq 5305 or #)
1015-1200 MW, East Bank, Reichle, 4 cr

R5701 **Hearing Loss and Audiometry** (prereq 5301, 5302 or #)
★LECT 1115-1200 T, 1115-1300 Th, East Bank, Yanz
–1 LAB 0915-1000 W, Yanz, 4 cr
–2 LAB 1015-1100 W, Yanz, 4 cr
–3 LAB 1115-1200 W, Yanz, 4 cr
–4 LAB 1215-1300 W, Yanz, 4 cr

5703 **Communication Problems of the Hearing-Impaired** (prereq 5701 or #)
1315-1500 MW, 1315-1400 F, East Bank, Van Tasell, Carlstrom, 5 cr

5704 **Noise and Man** (prereq 5301 or #)
1515-1700 MW, East Bank, Ward, 4 cr

R5900 **Topics in Communication Disorders: Conversational Signed English**
1630-1930 T, East Bank, Carlstrom, Reichle, 2 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
ar cr

8511 **Seminar: Current Issues in Speech Pathology** (prereq grad maj or #)
1415-1700 T, East Bank, Siegel, 3 cr

R8512 **Seminar: Language Retardation** (prereq 5305 or #)
0915-1200 F, East Bank, Broen, 3 cr

8520 **Clinical Education in Speech/Language Pathology** (prereq #)
2-6 cr

8521 **Clinical Education in Speech/Language Pathology** (prereq #)
2-6 cr

8716 **Seminar: Hearing** (prereq #)
1615-1800 Th, East Bank, Lassman, 3 cr

8720 **Clinical Education in Audiology** (prereq #)
2-6 cr

8721 **Clinical Education in Audiology** (prereq #)
2-6 cr

8990 **Research** (prereq #)
ar cr

Spring Quarter

R3100 **Clinical and Research Observation** (prereq department written permission) (S-N only)
2 cr

3101 **Introduction to Speech Pathology and Audiology**
1015-1200 MW, East Bank, Martin, others, 4 cr

5101 **Communication Problems of Children**
1630-1830 M, East Bank, S Doyle, others, 3 cr

5306 **Hearing Science** (prereq 5301, 5302 or #)
0815-1000 MW, East Bank, Ward, 4 cr

5502 **Stuttering**
1415-1600 TTh, East Bank, Martin, Haroldson, 4 cr

5506 **Aphasia** (prereq 5302 or #)
1700-1845 TTh, East Bank, Brookshire, 4 cr

5707 **Audiology in Educational Settings** (prereq 5703 or #)
0915-1100 T, 0915-1000 Th, East Bank, Van Tasell, 3 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
ar cr

R8305 **Laboratory Instrumentation** (prereq 5301 or #)
★LECT 1315-1500 W, Speaks, Van Tasell, Yanz
–1 LAB 1315-1400 M, 2 cr
–2 LAB 1415-1500 M, 2 cr
–3 LAB 1515-1600 M, 2 cr
★LECT 1315-1500 WF, Speaks, Van Tasell, Yanz
–4 LAB 1315-1400 M, 1515-1600 F, 4 cr
–5 LAB 1415-1500 M, 1515-1600 F, 4 cr
–6 LAB 1515-1600 MF, 4 cr

8503 **Seminar: Voice** (prereq 5508 or #)
0815-1000 T, East Bank, Starr, 3 cr

R8504 **Seminar: Articulation** (prereq 5504 or #)
1215-1400 Th, East Bank, McDermott, 3 cr

R8507 **Seminar: Cleft Palate** (prereq 5507 or #)
0915-1100 F, East Bank, Moller, Starr, 3 cr

8512 **Seminar: Language Retardation** (prereq 5305 or #)
1615-1900 W, East Bank, Reichle, 3 cr

8520 **Clinical Education in Speech/Language Pathology** (prereq #)
2-6 cr

8521 **Clinical Education in Speech/Language Pathology** (prereq #)
2-6 cr

8718 **Seminar: Hearing** (prereq #)
1315-1600 Th, East Bank, Yanz, 3 cr

8720 **Clinical Education in Audiology** (prereq #)
2-6 cr

8721 **Clinical Education in Audiology** (prereq #)
2-6 cr

8990 **Research** (prereq #)
ar cr

COMPARATIVE LITERATURE (CLit)
Liberal Arts

Winter Quarter

5243 **Art and Ideology: Living Cinema** (§Hum 5243)
1415-1600 WF, East Bank, Bensmaia, 4 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
1-4 cr

8920 **Advanced Comparative Literature Seminar: Literary Historiography** (prereq 8910)
1415-1530 TTh, East Bank, Houe, 4 cr

8952 **Seminar in Comparative Literature** (8951-8952-8955†; prereq 8951)
1415-1700 M, East Bank, Sousa, 4 cr

8970 **Directed Reading** (prereq grad student in comparative lit, △)
1-4 cr

Spring Quarter

5910 **Topics in Comparative Literature** (prereq reading knowledge of Fren, Ger or Span or #)
–1 1115-1200 MWF, East Bank, Firchow, 4 cr
–2 1245-1400 TTh, East Bank, Grottanelli, 4 cr (Social Dynamics and the Structure of Mythic Narrative)
–3 1415-1700 F, East Bank, Wierzewski, 4 cr (East European Cinema Since 1945)

5970 **Directed Readings** (prereq #, △, CLA approval)
1-4 cr

8930 **Advanced Comparative Literature Seminar** (prereq 8920)
1415-1700 M, East Bank, Schulte-Sasse, 4 cr

8955 **Seminar: Comparative Literature** (8951-8952-8955†; prereq 8952)
1415-1700 T, East Bank, Sousa, 4 cr

8970 **Directed Reading** (prereq grad student in comparative lit, △)
1-4 cr

COMPOSITION AND COMMUNICATION (Comp)
Liberal Arts

Winter Quarter

R0011 **Preparation for Writing Practice** (prereq assignment to category 4; # after first day of class) (S-N only)
–1 0815-0900 MWF, East Bank, 0 cr
–2 0915-1000 MWF, East Bank, 0 cr
–3 1315-1400 MWF, East Bank, 0 cr
(ESL/MLK only)

R1011 **Writing Practice I** (prereq assignment to category 2 or 3)
–1 LECT 0815-0900 MWF, East Bank, 5 cr
–2 LECT 0915-1000 MWF, East Bank, 5 cr
–3 LECT 1015-1100 MWF, East Bank, 5 cr
–4 LECT 1115-1200 MWF, East Bank, 5 cr
–5 LECT 1215-1300 MWF, East Bank, 5 cr
–6 LECT 1315-1400 MWF, East Bank, 5 cr
★LAB 0815-0930 TTh, East Bank,
–7 LECT 0815-0900 MWF, East Bank, 5 cr
–8 LECT 0915-1000 MWF, East Bank, 5 cr
–9 LECT 1015-1100 MWF, East Bank, 5 cr
–10 LECT 1015-1100 MWF, East Bank, 5 cr
–11 LECT 1115-1200 MWF, East Bank, 5 cr
–12 LECT 1215-1300 MWF, East Bank, 5 cr
–13 LECT 1315-1400 MWF, East Bank, 5 cr
★LAB 0815-0930 TTh, East Bank,
–14 LECT 0815-0900 MWF, East Bank, 5 cr
–15 LECT 0915-1000 MWF, East Bank, 5 cr
–16 LECT 1015-1100 MWF, East Bank, 5 cr
–17 LECT 1115-1200 MWF, East Bank, 5 cr
–18 LECT 1215-1300 MWF, East Bank, 5 cr
–19 LECT 1315-1400 MWF, East Bank, 5 cr
–20 LECT 1415-1500 MWF, East Bank, 5 cr
★LAB 0945-1100 TTh, East Bank,
–21 LECT 0815-0900 MWF, East Bank, 5 cr
–22 LECT 0915-1000 MWF, East Bank, 5 cr
–23 LECT 1015-1100 MWF, East Bank, 5 cr
–24 LECT 1115-1200 MWF, East Bank, 5 cr
–25 LECT 1215-1300 MWF, East Bank, 5 cr
–26 LECT 1315-1400 MWF, East Bank, 5 cr
★LAB 0945-1100 TTh, East Bank,
–27 LECT 0815-0900 MWF, East Bank, 5 cr
–28 LECT 0915-1000 MWF, East Bank, 5 cr
–29 LECT 1015-1100 MWF, East Bank, 5 cr (MLK only)
–30 LECT 1115-1200 MWF, East Bank, 5 cr
–31 LECT 1215-1300 MWF, East Bank, 5 cr
–32 LECT 1315-1400 MWF, East Bank, 5 cr
–33 LECT 1415-1500 MWF, East Bank, 5 cr
★LAB 1115-1230 TTh, East Bank,

–34 LECT 0815-0900 MWF, East Bank, 5 cr
–35 LECT 0915-1000 MWF, East Bank, 5 cr
–36 LECT 1015-1100 MWF, East Bank, 5 cr
–37 LECT 1115-1200 MWF, East Bank, 5 cr
–38 LECT 1215-1300 MWF, East Bank, 5 cr
–39 LECT 1315-1400 MWF, East Bank, 5 cr
–40 LECT 1415-1500 MWF, East Bank, 5 cr
★LAB 1115-1230 TTh, East Bank,
–41 LECT 1115-1200 MWF, East Bank, 5 cr (ESL only)
–42 LECT 1315-1400 MWF, East Bank, 5 cr (ESL only)
★LAB 1115-1230 TTh, East Bank,
–43 LECT 0815-0900 MWF, East Bank, 5 cr
–44 LECT 0915-1000 MWF, East Bank, 5 cr
–45 LECT 1015-1100 MWF, East Bank, 5 cr
–46 LECT 1115-1200 MWF, East Bank, 5 cr
–47 LECT 1215-1300 MWF, East Bank, 5 cr
–48 LECT 1415-1500 MWF, East Bank, 5 cr
★LAB 1245-1400 TTh, East Bank,
–49 LECT 0815-0900 MWF, East Bank, 5 cr
–50 LECT 0915-1000 MWF, East Bank, 5 cr
–51 LECT 1015-1100 MWF, East Bank, 5 cr
–52 LECT 1115-1200 MWF, East Bank, 5 cr
–53 LECT 1215-1300 MWF, East Bank, 5 cr
–54 LECT 1415-1500 MWF, East Bank, 5 cr
–55 LECT 1415-1500 MWF, East Bank, 5 cr
★LAB 1245-1400 TTh, East Bank,
–56 LECT 0815-0900 MWF, East Bank, 5 cr
–57 LECT 0915-1000 MWF, East Bank, 5 cr
–58 LECT 1015-1100 MWF, East Bank, 5 cr
–59 LECT 1115-1200 MWF, East Bank, 5 cr
–60 LECT 1215-1300 MWF, East Bank, 5 cr
–61 LECT 1215-1300 MWF, East Bank, 5 cr
–62 LECT 1315-1400 MWF, East Bank, 5 cr
★LAB 1415-1530 TTh, East Bank,

R1012 **Writing Practice and Literature** (prereq assignment to category 2)
–1 0915-1000 MWF, East Bank, 4 cr
–2 1015-1100 MWF, East Bank, 4 cr
–3 1115-1230 TTh, East Bank, 4 cr

R1013 **Writing Practice II** (prereq grade of X in 1011 or 1012, △) (S-N only)
–1 0815-0900 MWF, East Bank, 4 cr
–2 0915-1000 MWF, East Bank, 4 cr
–3 1015-1100 MWF, East Bank, 4 cr (ESL only)
–4 1115-1200 MWF, East Bank, 4 cr
–5 1315-1400 MWF, East Bank, 4 cr

R1027 **Intermediate Expository Writing** (prereq compl Writing Practice requirement; pre-Fall 1982 students:1001 or Comm 1001 or eqv)
–1 0815-0900 MWF, East Bank, 4 cr
–2 0815-0900 MWF, East Bank, 4 cr
–3 0915-1000 MWF, East Bank, 4 cr
–4 1015-1100 MWF, East Bank, 4 cr
–5 1015-1100 MWF, East Bank, 4 cr
–6 1015-1100 MWF, East Bank, 4 cr
–7 1115-1200 MWF, East Bank, 4 cr
–8 1215-1300 MWF, East Bank, 4 cr
–9 1215-1300 MWF, East Bank, 4 cr
–10 1315-1400 MWF, East Bank, 4 cr (MKL only)
–11 1315-1400 MWF, East Bank, 4 cr
–12 1415-1500 MWF, East Bank, 4 cr
–13 0815-0930 TTh, East Bank, 4 cr
–14 0815-0930 TTh, East Bank, 4 cr
–15 0945-1100 TTh, East Bank, 4 cr
–16 1115-1230 TTh, East Bank, 4 cr
–17 1115-1230 TTh, East Bank, 4 cr
–18 1115-1230 TTh, East Bank, 4 cr
–19 1245-1400 TTh, East Bank, 4 cr
–20 1245-1400 TTh, East Bank, 4 cr
–21 1415-1530 TTh, East Bank, 4 cr

R3011 **Writing About Literature** (prereq fulfillment of writing practice req, jr, written permission of major advisor)
–1 1015-1100 MWF, East Bank, 4 cr
–2 1115-1200 MWF, East Bank, 4 cr
–3 1315-1400 MWF, East Bank, 4 cr (honors student or △)

R3012 **Writing About Non-Fiction Texts** (prereq fulfillment of writing practice req, jr, written permission of major advisor)
–1 0945-1100 TTh, East Bank, 4 cr
–2 1245-1400 TTh, East Bank, 4 cr

R3013 **Writing for Arts other than Literature** (prereq fulfillment of writing practice req, jr, written permission of major advisor)
–1 0945-1100 TTh, East Bank, 4 cr
–2 1115-1230 TTh, East Bank, 4 cr
–3 1415-1530 TTh, East Bank, 4 cr

R3014 **Writing for the Quantitative Social Sciences** (prereq fulfillment of writing practice req, jr, written permission of major advisor)
–1 0945-1100 TTh, East Bank, 4 cr
–2 1115-1230 TTh, East Bank, 4 cr
–3 1245-1400 TTh, East Bank, 4 cr

R3015 **Writing about Science** (prereq fulfillment of writing practice req, jr, written permission of major advisor)
–1 0815-0900 MWF, East Bank, 4 cr
–2 1115-1200 MWF, East Bank, 4 cr
–3 0815-0930 TTh, East Bank, 4 cr

R3027 **Advanced Expository Writing** (prereq fulfillment of writing practice req, jr, written permission of major advisor)
–1 0815-0900 MWF, West Bank, 4 cr
–2 1015-1100 MWF, West Bank, 4 cr
–3 1115-1200 MWF, West Bank, 4 cr
–4 1315-1400 MWF, West Bank, 4 cr
–5 1415-1500 MWF, West Bank, 4 cr
–6 0815-0930 TTh, West Bank, 4 cr
–7 0945-1100 TTh, West Bank, 4 cr
–8 1115-1230 TTh, West Bank, 4 cr
–9 1415-1530 TTh, West Bank, 4 cr
–10 1415-1530 TTh, West Bank, 4 cr

R3031 **Technical Writing for Engineers** (prereq fulfillment of Writing Practice req, jr, written permission of major advisor)
–1 0915-1000 MWF, East Bank, 4 cr (ESL only)
–2 1015-1100 MWF, East Bank, 4 cr
–3 1115-1200 MWF, East Bank, 4 cr
–4 1115-1200 MWF, East Bank, 4 cr (ESL only)
–5 1315-1400 MWF, East Bank, 4 cr
–6 0815-0930 TTh, East Bank, 4 cr
–7 0945-1100 TTh, East Bank, 4 cr
–8 1115-1230 TTh, East Bank, 4 cr
–9 1115-1230 TTh, East Bank, 4 cr

R3032 **Pre-Professional Writing for Business** (prereq fulfillment of Writing Practice req, jr, written permission of major advisor)
–1 0815-0900 MWF, West Bank, 4 cr
–2 0915-1000 MWF, West Bank, 4 cr
–3 1215-1300 MWF, West Bank, 4 cr
–4 1315-1400 MWF, West Bank, 4 cr
–5 1415-1500 MWF, West Bank, 4 cr
–6 0945-1100 TTh, West Bank, 4 cr
–7 0945-1100 TTh, West Bank, 4 cr
–8 1115-1230 TTh, West Bank, 4 cr
–9 1245-1400 TTh, West Bank, 4 cr
–10 1245-1400 TTh, East Bank, 4 cr

R3080 **Special Projects in Advanced Composition** (max 6 cr; prereq fulfillment of writing practice req, jr, written perm of major advisor, △)
2 cr (CLA majs only)

R3085 **Conference Course in Advanced Composition** (prereq fulfillment of Writing Practice req, jr, written permission of major advisor, △)
–1 1-4 cr (CLA majs only)
–2 1-4 cr (ESL only)

Spring Quarter

R1011 **Writing Practice I** (prereq assignment to category 2 or 3)
–1 LECT 0815-0900 MWF, East Bank, 5 cr
–2 LECT 0915-1000 MWF, East Bank, 5 cr
–3 LECT 1015-1100 MWF, East Bank, 5 cr
–4 LECT 1215-1300 MWF, East Bank, 5 cr
–5 LECT 1315-1400 MWF, East Bank, 5 cr
★LAB 0815-0930 TTh, East Bank,
–6 LECT 0915-1000 MWF, East Bank, 5 cr
–7 LECT 0915-1000 MWF, East Bank, 5 cr
–8 LECT 1115-1200 MWF, East Bank, 5 cr
–9 LECT 1215-1300 MWF, East Bank, 5 cr
–10 LECT 1415-1500 MWF, East Bank, 5 cr
★LAB 0945-1100 TTh, East Bank,
–11 LECT 0815-0900 MWF, East Bank, 5 cr
–12 LECT 0915-1000 MWF, East Bank, 5 cr
–13 LECT 1015-1100 MWF, East Bank, 5 cr
–14 LECT 1115-1200 MWF, East Bank, 5 cr
–15 LECT 1415-1500 MWF, East Bank, 5 cr
★LAB 1115-1230 TTh, East Bank,
–16 LECT 1015-1100 MWF, East Bank, 5 cr (ESL only)
–17 LECT 1115-1200 MWF, East Bank, 5 cr (ESL only)
–18 LECT 1315-1400 MWF, East Bank, 5 cr (ESL only)
★LAB 1115-1230 TTh, East Bank,
–19 LECT 0815-0900 MWF, East Bank, 5 cr
–20 LECT 1015-1100 MWF, East Bank, 5 cr
–21 LECT 1115-1200 MWF, East Bank, 5 cr
–22 LECT 1215-1300 MWF, East Bank, 5 cr
–23 LECT 1315-1400 MWF, East Bank, 5 cr (MLK only)
–24 LECT 1415-1500 MWF, East Bank, 5 cr
★LAB 1245-1400 TTh, East Bank,

R1012 **Writing Practice and Literature** (prereq assignment to category 2)
1015-1100 MWF, East Bank, 4 cr

R1013 **Writing Practice II** (prereq grade of X in 1011 or 1012, △) (S-N only)
–1 0815-0900 MWF, East Bank, 4 cr
–2 0915-1000 MWF, East Bank, 4 cr (ESL only)
–3 1115-1200 MWF, East Bank, 4 cr (ESL only)
–4 1215-1300 MWF, East Bank, 4 cr
–5 1315-1400 MWF, East Bank, 4 cr

R1027 **Intermediate Expository Writing** (prereq compl Writing Practice requirement; pre-Fall 1982 students:1001 or Comm 1001 or eqv)
–1 0815-0900 MWF, East Bank, 4 cr
–2 0815-0900 MWF, East Bank, 4 cr
–3 0915-1000 MWF, East Bank, 4 cr
–4 0915-1000 MWF, East Bank, 4 cr
–5 0915-1000 MWF, East Bank, 4 cr
–6 0915-1000 MWF, East Bank, 4 cr (ESL only)
–7 1015-1100 MWF, East Bank, 4 cr
–8 1015-1100 MWF, East Bank, 4 cr
–9 1015-1100 MWF, East Bank, 4 cr
–10 1015-1100 MWF, East Bank, 4 cr
–11 1115-1200 MWF, East Bank, 4 cr
–12 1115-1200 MWF, East Bank, 4 cr
–13 1115-1200 MWF, East Bank, 4 cr
–14 1215-1300 MWF, East Bank, 4 cr
–15 1215-1300 MWF, East Bank, 4 cr
–16 1215-1300 MWF, East Bank, 4 cr
–17 1315-1400 MWF, East Bank, 4 cr
–18 1315-1400 MWF, East Bank, 4 cr (MLK only)
–19 1315-1400 MWF, East Bank, 4 cr
–20 1415-1500 MWF, East Bank, 4 cr
–21 1415-1500 MWF, East Bank, 4 cr

R3011 **Writing About Literature** (prereq fulfillment of writing practice req, jr, written permission of major advisor)
–1 0915-1000 MWF, East Bank, 4 cr
–2 1015-1100 MWF, East Bank, 4 cr
–3 1115-1200 MWF, East Bank, 4 cr

R3012 **Writing About Non-Fiction Texts** (prereq fulfillment of writing practice req, jr, written permission of major advisor)
–1 1215-1300 MWF, East Bank, 4 cr
–2 1415-1500 MWF, East Bank, 4 cr

R3013 **Writing for Arts other than Literature** (prereq fulfillment of writing practice req, jr, written permission of major advisor)
–1 0945-1100 TTh, East Bank, 4 cr
–2 0945-1100 TTh, East Bank, 4 cr
–3 1115-1230 TTh, East Bank, 4 cr

R3014 **Writing for the Quantitative Social Sciences** (prereq fulfillment of writing practice req, jr, written permission of major advisor)
–1 0945-1100 TTh, East Bank, 4 cr
–2 1115-1230 TTh, East Bank, 4 cr
–3 1115-1230 TTh, East Bank, 4 cr (honors student or △)

R3015 **Writing about Science** (prereq fulfillment of writing practice req, jr, written permission of major advisor)
–1 1015-1100 MWF, East Bank, 4 cr
–2 1315-1400 MWF, East Bank, 4 cr
–3 0815-0930 TTh, East Bank, 4 cr

R3027 **Advanced Expository Writing** (prereq fulfillment of writing practice req, jr, written permission of major advisor)
–1 0815-0900 MWF, West Bank, 4 cr
–2 0815-0900 MWF, West Bank, 4 cr
–3 0915-1000 MWF, East Bank, 4 cr
–4 0915-1000 MWF, East Bank, 4 cr
–5 1115-1200 MWF, East Bank, 4 cr
–6 1315-1400 MWF, West Bank, 4 cr
–7 0815-0930 TTh, West Bank, 4 cr
–8 0945-1100 TTh, West Bank, 4 cr
–9 0945-1100 TTh, West Bank, 4 cr
–10 1115-1230 TTh, West Bank, 4 cr

R3031 **Technical Writing for Engineers** (prereq fulfillment of Writing Practice req, jr, written permission of major advisor)
–1 0915-1000 MWF, East Bank, 4 cr (ESL only)
–2 1215-1300 MWF, East Bank, 4 cr
–3 0815-0930 TTh, East Bank, 4 cr
–4 0945-1100 TTh, East Bank, 4 cr

R3032 **Pre-Professional Writing for Business** (prereq fulfillment of Writing Practice req, jr, written permission of major advisor)
–1 0815-0900 MWF, West Bank, 4 cr
–2 0915-1000 MWF, West Bank, 4 cr
–3 1115-1200 MWF, West Bank, 4 cr
–4 1215-1300 MWF, West Bank, 4 cr
–5 1315-1400 MWF, West Bank, 4 cr
–6 1415-1500 MWF, West Bank, 4 cr
–7 0815-0930 TTh, East Bank, 4 cr
–8 0945-1100 TTh, West Bank, 4 cr
–9 1115-1230 TTh, West Bank, 4 cr
–10 1245-1400 TTh, West Bank, 4 cr

R3080 **Special Projects in Advanced Composition** (max 6 cr; prereq fulfillment of writing practice req, jr, written perm of major advisor, △)
2 cr (ESL only)

COMPUTER SCIENCE (CSci)
Institute of Technology

Winter Quarter

R3002 **Creative and Analytical Applications of Computers in the Arts and Literature**
1415-1500 MWF, East Bank, Walsh, 4 cr

R3101 **A FORTRAN Introduction to Computer Programming** (prereq non-computer science maj, Math 1111 or 1201 or equiv or #)
–1 0815-0900 MWF, East Bank, Venkatesan, 4 cr
–2 0915-1000 MWF, East Bank, Venkatesan, 4 cr
–3 1015-1100 MWF, East Bank, Boley, 4 cr
–4 1115-1200 MWF, East Bank, Rosen, 4 cr
–5 1215-1300 MWF, East Bank, Du, 4 cr

R3102 **Introduction to Pascal Programming** (prereq non-computer science maj, Math 1111 or 1201 or equiv or #)
–1 0815-0900 MWF, East Bank, 4 cr
–2 1015-1100 MWF, East Bank, 4 cr
–3 1215-1300 MWF, East Bank, 4 cr

R3104 **Introduction to Programming and Problem Solving** (prereq Math 1211 or equiv or #)
★LECT 1415-1530 MW, East Bank,
–1 LAB 1115-1200 Th, East Bank, 5 cr (CSci maj only)
–2 LAB 1215-1300 Th, East Bank, 5 cr (CSci maj only)
–3 LAB 1315-1400 Th, East Bank, 5 cr (CSci maj only)
–4 LAB 1415-1500 Th, East Bank, 5 cr
–5 LAB 0915-1000 F, East Bank, 5 cr

R3105 **Fundamentals of Algorithms and Languages I** (prereq 3101 or 3102 or 3104 or #)
–1 1115-1200 MWF, East Bank, Maly, 4 cr (CSci maj only)
–2 1115-1200 MWF, East Bank, Maly, 4 cr

R3106 **Fundamentals of Algorithms and Languages II** (prereq computer science maj, 3104, 3105 or #)
1615-1730 TTh, East Bank, Gini, 4 cr

R3107 **Introduction to the Structure and Programming of Computer Systems** (§5101; prereq computer science maj, 3104 or #)
0945-1100 TTh, East Bank, Boley, 4 cr

R3400 **Discrete Structures of Computer Science** (prereq computer science maj, Math 1231 or 1331 or #)
1115-1230 TTh, East Bank, Stein, 4 cr

R5117 **Computer Graphics II** (prereq 5107 or #)
0815-0930 TTh, East Bank, Miller, 4 cr (CSci maj only)

R5122 **Advanced Data Structures** (prereq 5121 or #)
–1 1245-1400 TTh, East Bank, Du, 4 cr (CSci maj only)
–2 1245-1400 TTh, East Bank, 4 cr

R5181 **Software Engineering** (prereq 5180)
0815-1000 M, 0815-0900 W, 1315-1400 WF, East Bank, Berzins, Gray, 5 cr

R5199 **Problems in Languages and Systems** (prereq #)
1315-1430 TTh, East Bank, Bruell, 1–4 cr

R5280 **Computer Aided Design** (prereq 5122, 5201)
–1 0915-1000 W, 0815-1000 F, East Bank, Berzins, Singley, 4 cr

R5301 **Numerical Analysis** (prereq Math 3142 or equiv or #...a knowledge of Pascal or FORTRAN is assumed)
–1 1115-1230 TTh, East Bank, Rosen, 4 cr

R5302 **Numerical Analysis** (prereq 5301 or #)
1245-1400 TTh, East Bank, Munro, 4 cr

R5304 **Computational Aspects of Matrix Theory** (prereq 5302 or #)
1115-1230 TTh, East Bank, Boley, 4 cr

R5401 **Introduction to Formal Languages** (prereq 5400)
0945-1100 TTh, East Bank, Ibarra, 4 cr

R5501 **Artificial Intelligence** (prereq 5121 or #)
1115-1230 TTh, East Bank, Gini, 4 cr

R5502 **Introduction to Operating Systems** (prereq 5102, 5121 or #)
–1 0815-0930 TTh, East Bank, Afshari, 4 cr

R5503 **Introduction to Compilers** (prereq CLA or upper division IT computer science maj, 5106, 5504 or #)
–1 1545-1700 TTh, 1515-1630 F, East Bank, Borgwardt, 4 cr

R5703 **Database System Design** (prereq 5702 or #)
–1 0945-1100 TTh, East Bank, Carlis, 4 cr

R8102 **Computer Operating Systems: Modeling and Analysis** (prereq 8101)
–1 1615-1830 W, East Bank, Franta, 3 cr

R8199 **Seminar: Languages and Systems** (prereq #)
1315-1430 MW, East Bank, Berzins, 1–3 cr

R8299 **Seminar: Machine Design** (prereq #)
1415-1530 TTh, East Bank, Stein, 1–3 cr

R8401 **Algorithms-Techniques and Theory** (prereq 5121, 5400 or #)
1415-1530 MW, East Bank, Stein, 4 cr

R8403 **Theory of Computation** (prereq 5400 or equiv or #)
1415-1530 TTh, East Bank, Ibarra, 4 cr

R8899 **Computer Science Colloquium** (prereq grad) (S–N only)
–1 1530-1700 M, East Bank, 1 cr

Spring Quarter

R3001 **Perspectives on Computers and Society** (prereq soph or #)
1115-1230 TTh, East Bank, Borgwardt, 4 cr

R3101 **A FORTRAN Introduction to Computer Programming** (prereq non-computer science maj, Math 1111 or 1201 or equiv or #)
–1 0815-0900 MWF, East Bank, Venkatesan, 4 cr
–2 0915-1000 MWF, East Bank, Venkatesan, 4 cr
–3 1015-1100 MWF, East Bank, Borgwardt, 4 cr
–4 1115-1200 MWF, East Bank, Afshari, 4 cr
–5 1215-1300 MWF, East Bank, Afshari, 4 cr
–6 1315-1400 MWF, East Bank, Gini, 4 cr
–7 1415-1500 MWF, East Bank, Rosen, 4 cr
–8 1515-1600 MWF, East Bank, Berzins, 4 cr

R3102 **Introduction to Pascal Programming** (prereq non-computer science maj, Math 1111 or 1201 or equiv or #)
–1 0815-0900 MWF, East Bank, Venkatesan, 4 cr
–2 0915-1000 MWF, East Bank, Venkatesan, 4 cr
–3 1215-1300 MWF, East Bank, Boley, 4 cr

R3104 **Introduction to Programming and Problem Solving** (prereq Math 1211 or equiv or #)
★LECT 1415-1530 MW, East Bank,
–1 LAB 1115-1200 Th, East Bank, Nau, 5 cr (CSci maj only)
–2 LAB 1215-1300 Th, East Bank, Nau, 5 cr (CSci maj only)
–3 LAB 1315-1400 Th, East Bank, Nau, 5 cr (CSci maj only)
–4 LAB 1415-1500 Th, East Bank, Nau, 5 cr (CSci maj only)
–5 LAB 0915-1000 F, East Bank, Nau, 5 cr
–6 LAB 1015-1100 F, East Bank, Nau, 5 cr
–7 LAB 1115-1200 F, East Bank, Nau, 5 cr
–8 LAB 1215-1300 F, East Bank, Nau, 5 cr

R3106 **Fundamentals of Algorithms and Languages II** (prereq computer science maj, 3104, 3105 or #)
1615-1730 MW, East Bank, Berzins, 4 cr

R3107 **Introduction to the Structure and Programming of Computer Systems** (§5101; prereq computer science maj, 3104 or #)
0945-1100 TTh, East Bank, Boley, 4 cr

R3400 **Discrete Structures of Computer Science** (prereq computer science maj, Math 1231 or 1331 or #)
1115-1230 TTh, East Bank, Stein, 4 cr

R5102 **Structure and Programming of Software Systems II** (prereq 3107 or 5101 or #)
–1 1415-1530 TTh, East Bank, 4 cr (CSci maj only)
–2 1415-1530 TTh, East Bank, 4 cr

R5105 **Theory of Machine Arithmetic** (prereq 3107 or 5101 or #)
1545-1700 TTh, East Bank, Stein, 4 cr

R5106 **Structure of Higher Level Languages** (prereq CLA or upper division IT computer science maj, 5102, 5121 or #)
1115-1200 MWF, East Bank, Berzins, 4 cr

R5107 **Computer Graphics I** (prereq CLA or upper division IT computer science maj, 3107 or 5101, 5121 or #)
0815-0930 TTh, East Bank, Miller, 4 cr

R5121 **Introduction to Data Structures** (prereq CLA or upper division IT computer science maj, 3106, 3400 or #)
0915-1030 WF, East Bank, Du, 4 cr

R5122 **Advanced Data Structures** (prereq 5121 or #)
–1 1115-1230 WF, East Bank, Du, 4 cr (CSci maj only)
–2 1115-1230 WF, East Bank, Du, 4 cr

R5201 **Introduction to Computer Architecture** (prereq 3400, 3107 or 5101 or #)
–1 1415-1530 TTh, East Bank, Borgwardt, 4 cr (CSci maj only)
–2 1415-1530 TTh, East Bank, Borgwardt, 4 cr

R5211 **Data Communications and Computer Networks** (prereq CLA or upper division IT computer science maj, 5102 or #)
1245-1400 TTh, East Bank, Afshari, 4 cr

R5281 **Computer Aided Design** (prereq 5122, 5201)
–1 0815-0930 MW, East Bank, Sahni, 4 cr

R5301 **Numerical Analysis** (prereq Math 3142 or equiv or #...a knowledge of Pascal or FORTRAN is assumed)
1545-1700 TTh, East Bank, Rosen, 4 cr

R5302 **Numerical Analysis** (prereq 5301 or #)
–1 1115-1230 TTh, East Bank, Rosen, 4 cr

R5305 **Numerical Methods for Ordinary Differential Equations** (prereq 5302 or #)
1245-1400 TTh, East Bank, Munro, 4 cr

R5400 **Introduction to Automata Theory** (prereq CLA or upper division IT computer science maj, 3105, 3400 or #)
0945-1100 TTh, East Bank, Venkatesan, 4 cr

R5521 **Pattern Recognition** (prereq 5301, Stat 3091 or #)
0945-1100 TTh, East Bank, Gini, 4 cr

R5702 **The Principles of Database Systems** (prereq 5122 or #)
0945-1100 TTh, East Bank, Carlis, 4 cr

R8399 **Seminar: Numerical Analysis** (prereq #)
1115-1230 TTh, East Bank, Boley, 1–3 cr

R8402 **Algorithms-Techniques and Theory** (prereq 8401)
1015-1130 MW, East Bank, Sahni, 4 cr

R8404 **Theory of Computation** (prereq 8403)
1415-1530 TTh, East Bank, Ibarra, 4 cr

R8599 **Seminar: Nonnumeric Computation** (prereq #)
–1 1415-1600 TTh, East Bank, Afshari, 1–3 cr
–2 1515-1630 TTh, East Bank, Gini, 1–3 cr

R8799 **Seminar: Information Sciences** (prereq #)
1330-1500 TTh, East Bank, Hoare, 1–3 cr

R8899 **Computer Science Colloquium** (prereq grad) (S–N only)
–1 1530-1700 M, East Bank, 1 cr

CURRICULUM AND INSTRUCTIONAL SYSTEMS (CISy)
Curriculum And Instruction Education

Winter Quarter

5000 **Educational Technology: Instructional Systems** (§SeEd 5000 or 5102) (A–N only)
1615-1800 M, Carrier, 1 cr

R5003 **Educational Technology: Computers in the Classroom** (§SeEd 5003 or 5102) (A-N only)
–1 1015-1215 S, East Bank, 1 cr (Jan 14, 21, 28)
–2 1615-1800 M, East Bank, 1 cr

5004 **Educational Technology: Classroom Video** (§SeEd 5102 or 5004) (A-N only)
1615-1700 M, 1 cr

R5006 **Educational Technology: Instructional Computer Programming** (A-N only)
1615-1800 W, 1 cr

R5201 **Systems Approach to Design of Instruction** (§SeEd 5201; prereq SeEd 5000 or CISy 5000 or #) (A-N only)
1615-1815 W, Tennyson, 3 cr

R5205 **Applications of Computers in Education** (§SeEd 5205; prereq 5003 or SeEd 5003) (A-N only)
1615-1815 T, East Bank, Tennyson, 3 cr

5207 **Applications of Video in Education** (A-N only)
1715-1915 M, East Bank, 4 cr

R5216 **Instructional Simulations and Learning Games: Development and Classroom Use** (§SeEd 5131) (A-N only)
1015-1200 W, 3 cr

5507 **Seminar: Practical Research in Curriculum and Instruction** (§SeEd 5174; prereq #) (A-N only)
Ahlgren, 1-4 cr

5509 **Directed Individual Study** (max 6 cr; prereq △) (A-N only)
Carrier, Kimpston, others, 1-6 cr

5605 **Principles and Procedures in Designing Curriculum** (§SeEd 5114) (A-N only)
1615-1800 T, Kimpston, 3 cr

5800 **Supervision of Secondary Instruction** (§SeEd 5172; prereq 5600 or SeEd 5113) (A-N only)
1900-2100 T, E Anderson, 3 cr

8102 **Curriculum and Instruction Core: Teaching** (prereq PhD student and △)
1615-1815 Th, East Bank, Mackey, 2 cr

8307 **Designing Instructional Materials: Research and Theory** (prereq 5209)
1615-1815 Th, Carrier, 3 cr

8416 **Curriculum and Instructional Systems Seminar** (prereq △)
1015-1115 T, East Bank, Kimpston, Tennyson, 1-4 cr

8501 **Problems: Instructional Systems** (prereq △)
Carrier, Kimpston, others, ar cr

8600 **Seminar: Curriculum Implementation and Change** (max 4 cr; prereq 5605 or SeEd 5114 or △)
1615-1800 W, Kimpston, 2 cr

8700 **Curriculum and Instructional Systems Field Experience** (max 6 cr; prereq #)
Kimpston, 3-6 cr

8800 **Problems: Secondary School Supervision** (prereq △)
E Anderson, ar cr

Spring Quarter

5000 **Educational Technology: Instructional Systems** (§SeEd 5000 or 5102) (A-N only)
1615-1800 T, Carrier, 1 cr

5002 **Educational Technology: Instructional Equipment Resources** (§SeEd 5002 or 5102) (A-N only)
1615-1800 M, 1 cr

R5003 **Educational Technology: Computers in the Classroom** (§SeEd 5003 or 5102) (A-N only)
1615-1800 T, East Bank, 1 cr

R5006 **Educational Technology: Instructional Computer Programming** (A-N only)
1615-1800 M, 1 cr

5209 **Principles and Procedures in Designing Instruction** (prereq 5000) (A-N only)
1615-1815 Th, Carrier, 4 cr

R5212 **Preparation of Media Materials: Computer** (§SeEd 5212; prereq 5201, 5205 or SeEd 5201, 5205) (A-N only)
1015-1200 W, 2 cr

R5216 **Instructional Simulations and Learning Games: Development and Classroom Use** (§SeEd 5131) (A-N only)
1615-1815 W, East Bank, 3 cr

5219 **Media Production Techniques** (prereq 5001, 5005) (A-N only)
1615-1815 Th, 4 cr

5509 **Directed Individual Study** (max 6 cr; prereq △) (A-N only)
Carrier, Kimpston, others, 1-6 cr

5600 **Introduction to Curriculum Systems** (§SeEd 5113) (A-N only)
1615-1815 T, Willie, 3 cr

5700 **Curriculum Planning Processes** (§SeEd 5170; prereq 5600 or SeEd 5113 or Elem 5100) (A-N only)
1615-1815 T, East Bank, Kimpston, 4 cr

R8100 **Curriculum and Instruction Core: Curriculum** (prereq PhD student or △)
1615-1800 Th, Ahlgren, 2 cr

R8101 **Curriculum and Instruction Core: Instruction** (prereq PhD student or △)
1015-1200 Th, Tennyson, 2 cr

8309 **Instructional Systems: Development and Management Theory** (prereq 5201, 5203)
1615-1830 T, Tennyson, 4 cr

8416 **Curriculum and Instructional Systems Seminar** (prereq △)
1015-1115 T, East Bank, Carrier, Tennyson, 1-4 cr

8501 **Problems: Instructional Systems** (prereq △)
Carrier, Ahlgren, others, ar cr

8600 **Seminar: Curriculum Implementation and Change** (max 4 cr; prereq 5605 or SeEd 5114 or △)
1615-1815 W, Kimpston, 2 cr

8700 **Curriculum and Instructional Systems Field Experience** (max 6 cr; prereq #)
Kimpston, 3-6 cr

8800 **Problems: Secondary School Supervision** (prereq △)
E Anderson, ar cr

DANCE (Dnce)
School of Physical Ed, Rec, School Health Ed
Education

Winter Quarter

R1022 **Ballroom Dance**
–1 1415-1510 TTh, Lampe, 1 cr (men only)
–2 1415-1510 TTh, Lampe, 1 cr (women only)

R1023 **Folk and Square Dance**
–1 1315-1410 TTh, Stern, 1 cr (men only)
–2 1315-1410 TTh, Stern, 1 cr (women only)

R1024 **Modern Dance**
–1 1315-1410 TTh, East Bank, Jette, 1 cr
–2 1415-1510 TTh, East Bank, Jette, 1 cr

R1025 **Ballet**
0815-0915 TTh, East Bank, Atwood, 1 cr

R1122 **Ballroom Dance** (prereq 1022)
–1 1115-1210 TTh, Lampe, 1 cr (men only)
–2 1115-1210 TTh, Lampe, 1 cr (women only)

R1124 **Modern Dance** (prereq 1024)
0815-0910 MW, East Bank, Delattre, 1 cr

R1125 **Ballet** (prereq 1025 or #)
0915-1000 TTh, East Bank, Atwood, 1 cr

R1224 **Modern Dance** (prereq 1124)
1115-1210 TTh, Cheng, 1 cr

R1615 **Modern Dance Technique and Improvisation II** (prereq 1515 or #) (A-N only)
0915-1100 TThF, Cheng, 2 cr

R1618 **Ballet II** (prereq 1518, △) (A-N only)
1115-1300 MW, Savino, 2 cr

R3282 **Modern Dance Technique and Improvisation V** (prereq 3281 or #) (A-N only)
0915-1100 MTWTh, Bonsignore, 3 cr

R3285 **Ballet V** (prereq 3284 or #) (A-N only)
1115-1300 F, Savino, 1 cr

R3326 **Teaching of Modern Dance** (prereq 1024, 1124, 1224 or 1515, 1615, △) (A-N only)
1315-1500 TTh, East Bank, Cheng, 4 cr

R3382 **Modern Dance Technique and Improvisation** (prereq 3381, dance maj, △) (A-N only)
0915-1100 MTWThF, Voss, 5 cr

R3391 **Dance Composition** (prereq 3390, △) (A-N only)
1115-1300 MW, East Bank, Jasmin, 2 cr

R3396 **Dance Repertory Theatre** (max 9 cr; prereq audition, △) (A-N only)
1315-1600 MW, Hauser, 3 cr

R3399 **Dance Composition** (prereq 3398, △) (A-N only)
1115-1300 TTh, East Bank, Cheng, 2 cr

3608 **Student Teaching: College Modern Dance** (prereq 1715, △, ¶3326) (A-N only)
0815-0910 T, Jette, 1 cr

3610 **Student Teaching in Dance: Elementary** (prereq 3394, △) (A-N only)
1615-1800 T, East Bank, Jette, 6 cr

3611 **Student Teaching in Dance: Secondary** (prereq 3326, △) (A-N only)
1615-1800 T, East Bank, Jette, 6 cr

3612 **Field Experiences in Teaching Dance** (prereq 3326, 3608, △) (A-N only)
1615-1800 T, East Bank, Jette, 6 cr

Spring Quarter

R1022 **Ballroom Dance**
–1 1315-1410 TTh, Lampe, 1 cr (men only)
–2 1315-1410 TTh, Lampe, 1 cr (women only)

R1023 **Folk and Square Dance**
–1 1415-1510 TTh, East Bank, Stern, 1 cr (men only)
–2 1415-1510 TTh, East Bank, Stern, 1 cr (women only)

R1024 **Modern Dance**
–1 1115-1210 TTh, East Bank, Voss, 1 cr
–2 1215-1310 MW, East Bank, 1 cr

R1025 **Ballet**
0815-0910 TTh, East Bank, Atwood, 1 cr

R1122 **Ballroom Dance** (prereq 1022)
–1 1515-1600 MWF, Lampe, 1 cr (men only)
–2 1515-1600 MWF, Lampe, 1 cr (women only)

R1124 **Modern Dance** (prereq 1024)
0815-0910 TTh, Bonsignore, 1 cr

R1224 **Modern Dance** (prereq 1124)
1115-1210 TTh, East Bank, 1 cr

R1225 **Ballet** (prereq 1125 or #)
0915-1010 TTh, East Bank, Atwood, 1 cr

R1324 **Modern Dance** (prereq 1224)
1115-1210 TTh, 1 cr

R1514 **Improvisation** (prereq △) (A-N only)
1515-1700 M, East Bank, Jasmin, 1 cr

R1715 **Modern Dance Technique and Improvisation III** (prereq 1615, △) (A-N only)
0915-1100 TThF, Fargnoli, 2 cr

R1718 **Ballet III** (prereq 1618, △) (A-N only)
1115-1300 MW, Savino, 2 cr

R3283 **Modern Dance Technique and Improvisation VI** (prereq 3282 or #) (A-N only)
0915-1100 MTWTh, Bonsignore, 3 cr

R3286 **Ballet VI** (prereq 3285 or #) (A-N only)
1115-1300 F, East Bank, Savino, 1 cr

R3383 **Modern Dance Technique and Improvisation** (prereq 3382, dance maj, △) (A-N only)
0915-1100 MTWThF, East Bank, 5 cr

R3392 **Dance Production** (prereq △) (A-N only)
1515-1700 TTh, Jette, 3 cr

R3395 **Advanced Improvisation** (prereq 1515, 1615, 1715, △) (A-N only)
1500-1700 W, Jasmin, 1 cr

R3610 **Student Teaching in Dance: Elementary** (prereq 3394, △) (A-N only)
1715-1900 T, East Bank, Jette, 6 cr

R3611 **Student Teaching in Dance: Secondary** (prereq 3326, △) (A-N only)
1715-1900 T, East Bank, Jette, 6 cr

R3612 **Field Experiences in Teaching Dance** (prereq 3326, 3608, △) (A-N only)
1715-1900 T, East Bank, Jette, 6 cr

DANISH (Dan)
Scandinavian Languages
Liberal Arts

Winter Quarter

R1102 **Beginning Danish** (prereq 1101)
1115-1200 MTWThF, East Bank, 5 cr

1105 **Intermediate Danish** (prereq 1104)
1245-1400 TTh, East Bank, Houe, 4 cr

3670 Readings in Danish Literary Texts (max 28 cr; prereq 3101)
1245-1400 TTh, East Bank, Houe, 4 cr

Spring Quarter

R1103 Beginning Danish (prereq 1102)
1115-1200 MTWThF, East Bank, 5 cr

3101 Advanced Danish (prereq 1105)
1245-1400 TTh, East Bank, Houe, 4 cr

3670 Readings in Danish Literary Texts (max 28 cr; prereq 3101)
1245-1400 TTh, East Bank, Houe, 4 cr

DENTAL HYGIENE (DH)
Dentistry

Winter Quarter

1010 Principles of Communication and Education in Dentistry (A-N only)
1415-1600 M, East Bank, Bryan, 2 cr

1092 Dental Hygiene Core II (prereq 1091) (A-N only)
★LECT 0845-0930 T, East Bank, Grayden, 2 cr
–1 LAB 1000-1200 T, East Bank, Grayden

1191 Dental Hygiene Clinic I (prereq 1091) (S-N only)
–1 CLN 0945-1215 Th, Stoltenberg, 3 cr
–2 CLN 1315-1600 TTh, Stoltenberg, 3 cr

1310 Critiquing Dental Literature (A-N only)
0845-0930 Th, East Bank, Onomiya, 1 cr

3061 Community Outreach (prereq 1301) (A-N only)
0845-1200 WF, Newell, 2 cr

3095 Dental Hygiene Core V (prereq 1093, 3094, 1202 or equiv or #) (A-N only)
–1 LAB 1315-1500 T, East Bank, Fellows, 2 cr
–2 LAB 1315-1500 Th, East Bank, Fellows, 2 cr
★CLN 0930-1200 T, Fellows

3171 Patient Assessment for the Dental Hygienist (prereq 1091) (A-N only)
–1 0815-0900 WTh, East Bank, Little, 3 cr
–2 1315-1400 WF, East Bank, Little, 3 cr
(Jan 4-Feb 3)

3193 Dental Hygiene Clinic III (prereq 3192) (A-N only)
★LECT 0745-0830 M, East Bank, Stoltenberg, 6 cr
–1 CLN 0945-1215 MWThF, Stoltenberg
–2 CLN 1315-1600 MTWThF, Stoltenberg

3278 Radiographic Analysis (A-N only)
0845-0930 M, East Bank, Kuba, 1 cr

3399 Independent Study
ar cr

Spring Quarter

1016 Issues in Dental Hygiene (A-N only)
★LECT 0745-0830 T, East Bank, Newell, 3 cr
–1 LAB 0845-1000 T, East Bank, Newell
–2 LAB 0845-1000 Th, East Bank, Newell

1093 Dental Hygiene Core III (prereq 1092) (A-N only)
★LECT 1215-1400 W, East Bank, Sander, 3 cr
–1 LAB 1015-1200 Th, East Bank, Sander

1192 Dental Hygiene Clinic II (prereq 1191) (A-N only)
★LECT 0845-0930 Th, East Bank, Stoltenberg, 4 cr
–1 CLN 0945-1215 TWF, Stoltenberg
–2 CLN 1330-1600 ThF, Stoltenberg

1203 Dental Specialties (A-N only)
★LECT 0745-0930 F, East Bank, Fellows, 3 cr
–1 LAB 1415-1615 W, East Bank, Fellows

1204 Dental Specialties Practicum (prereq 1203) (S-N only)
Tuchner, 1 cr

3061 Community Outreach (prereq 1301) (A-N only)
0845-1200 WF, Newell, 2 cr

3094 Dental Hygiene Core IV (prereq 1093) (A-N only)
–1 LAB 0845-1000 M, East Bank, Lowe, 3 cr
★CLN 1330-1600 M, Lowe

3096 Dental Hygiene Core VI (prereq 3095) (A-N only)
0745-0930 M, East Bank, Grayden, 3 cr

3176 General and Oral Pathology (A-N only)
0745-0930 T, 0745-0830 Th, East Bank, Sauk, 3 cr

3194 Dental Hygiene Clinic IV (prereq 3193) (A-N only)
★LECT 0745-0830 Th, East Bank, Stoltenberg, 6 cr
–1 CLN 0945-1215 MTWThF, Stoltenberg
–2 CLN 1330-1600 MTWThF, Stoltenberg

3275 Oral Radiology I (A-N only)
0745-0930 W, East Bank, Brand, 2 cr

3276 Clinical Radiology (A-N only)
Kuba, 2 cr

3399 Independent Study
ar cr

DESIGN (Dsgn)
Home Economics

Winter Quarter

R1501 Introduction to Design
0900-0945 MWF, St. Paul, Miller, 3 cr

R1521 Design Process: Color (prereq △)
–1 LAB 0900-1045 MWF, St. Paul, Ginthner, 4 cr
–2 LAB 1100-1245 MWF, St. Paul, 4 cr
–3 LAB 1300-1445 MWF, St. Paul, 4 cr

R1523 Design Process: Visual Presentations (prereq △)
–1 LAB 0900-1045 MWF, St. Paul, 4 cr
–2 LAB 1100-1245 MWF, St. Paul, 4 cr
–3 LAB 1300-1545 TTh, St. Paul, 4 cr

R1525 Design Process: Two Dimensional Design (prereq △)
1300-1445 MWF, St. Paul, Blade, 4 cr

R1533 Metalsmithing: Introduction to Techniques (prereq 1521, 1523, 1525 or #, △)
1000-1145 MWF, St. Paul, Ordos, 4 cr

R1544 Costume Design: Special Techniques (prereq 1531, 1541, △)
0900-1045 MWF, St. Paul, Amir-Fazli, 4 cr

R1551 Consumer Aspects of Housing (prereq 1501)
1400-1445 MWF, St. Paul, 4 cr

R1554 Interior Design I: Spatial Design Experiences (prereq 1501, 1521, 1523, 1552, Ind 1600, △)
0900-1145 TTh, St. Paul, Scudder, 3 cr

R1555 Interior Design I: Interior Design Problems (prereq 1554, △)
1300-1445 MWF, St. Paul, Ginthner, 3 cr

R3517 History of Costume: Primative Through 18th Century (prereq a general art history course, △)
1100-1145 MWF, St. Paul, Shenoi, 3 cr

R3521 Design Process: Color II (prereq 1521, 1523 or #, △)
0900-1145 TTh, St. Paul, Bagley, 4 cr

R3525 Design Process: Two Dimensional Design II (prereq 1525 or equiv, △)
1300-1445 MWF, St. Paul, Larkin, 4 cr

R3527 Design Process: Three Dimensional Design (prereq 1525, 1521, 1523 or #, △)
0900-1045 MWF, St. Paul, Larkin, 4 cr

R3531 Surface-Fabric Design II (prereq 1531 or #, △)
1300-1545 MW, St. Paul, Abell, 4 cr

R3535 Design Process: Materials (prereq 1521, 1523, 1525 or #, △)
0900-1145 MW, St. Paul, Abell, 4 cr

R3536 Metalsmithing: Enameling (prereq 1533 or #, some metals experience, △)
1300-1445 MWF, St. Paul, Ordos, 4 cr

R3541 Costume Design II (prereq 1543, 1544, △)
0900-1145 TTh, St. Paul, Amir-Fazli, 4 cr

R3550 Interior Design Presentation (prereq 1555, pass portfolio review, △)
1300-1545 TTh, St. Paul, Birkeland, 3 cr

R3553 Interior Design II (prereq 3550 or #, △)
0900-1045 MWF, St. Paul, 4 cr

3562 Real Estate Practice (prereq 1551, 1552 or #)
1810-2110 M, West Bank, Musil, 3 cr

R3580 Internship in Housing (max 15 cr; prereq completion one-half professional sequence, #) (S-N only)
1200-1245 M, St. Paul, Franklin, 5-15 cr

R3583 Field Experience in Costume Design (prereq completion of at least one-half of professional sequence or #) (S-N only)
Amir-Fazli, 4 cr

R3584 Field Experience in Design (max 15 cr; prereq #, plan to be submitted, approved in advance by adviser, employer) (S-N only)
ar cr

3586 Design Problems
1-3 cr

R5507 History of Decorative Arts: Textiles (prereq 5505)
1300-1345 MWF, St. Paul, Erickson, 4 cr

R5514 History of American Furniture and Interiors (prereq 5505 or equiv, 5512)
1100-1145 MWF, St. Paul, Blade, 4 cr

R5552 Interior Design III: Residential Design (prereq 3553, 3557, TexC 3621, FSoS 1401 or #, △...ForP 3310, TexC 3622 rec)
0900-1045 MWF, St. Paul, Erickson, 4 cr

R5555 Honors Thesis: Interior Design (prereq completion of all other professional courses, # program committee approval)
15 cr

R5567 Housing Alternatives for the Family (prereq 1551 or 1552, 3563 or #)
1400-1545 MW, St. Paul, Nagle, 4 cr

R5568 Housing Problems of the Family (prereq 1551 or 1555, 3563 or #)
1200-1445 TTh, St. Paul, Franklin, 5 cr

R5581 Designed Environment and Aging (prereq 1551, 3563 or #)
1800-2045 Th, St. Paul, Franklin, 4 cr

R5584 Readings in Design (no srs; prereq #)
1-3 cr

R5585 Problems in Design: General (max 12 cr; prereq #, △)
2-4 cr

R5586 Problems in Design: Housing and/or Interiors (max 12 cr; prereq #, △)
2-4 cr

R5587 Problems in Design: Jewelry (max 12 cr; prereq #, △, passed portfolio review)
3-4 cr

R5588 Problems in Design: Textiles (max 12 cr; prereq #, △, passed portfolio review)
3-4 cr

R5589 Problems in Design: Costume (max 12 cr; prereq 5518 or equiv, #, passed portfolio review)
3-4 cr

R8521 Design Process: Color (prereq 1501, 1521, 1523, 1525, 3527, 5505 or equiv, △)
1300-1545 TTh, St. Paul, Bagley, 4 cr

R8576 Seminar: Design Instruction (max 6 cr)
1200-1245 W, St. Paul, Bagley, Larkin, 1 cr

R8584 Readings in Design (prereq #)
1-3 cr

R8585 Problems in Design (prereq #)
1-5 cr

R8586 Problems in Interior Design (prereq #)
1-5 cr

R8587 Problems in Design (prereq #)
1-5 cr

8588 Directed Study in Design (prereq #) (A-N only)
–1 Abell, Blade, others, 1-5 cr
–2 1500-1545 W, St. Paul, Bagley, 1-5 cr
–3 1500-1545 W, St. Paul, Larkin, 1-5 cr

Spring Quarter

R1521 Design Process: Color (prereq △)
–1 LAB 1100-1245 MWF, St. Paul, 4 cr
–2 LAB 0900-1145 TTh, St. Paul, Ginthner, 4 cr

R1523 Design Process: Visual Presentations (prereq △)
–1 LAB 1100-1245 MWF, St. Paul, 4 cr
–2 LAB 1300-1545 TTh, St. Paul, 4 cr

R1525 Design Process: Two Dimensional Design (prereq △)
0900-1045 MWF, St. Paul, Larkin, 4 cr

R1531 Surface Fabric Design (prereq 1521, 1523, 1525 or #, △)
0900-1145 MW, St. Paul, Abell, 4 cr

R1533 Metalsmithing: Introduction to Techniques (prereq 1521, 1523, 1525 or #, △)
1000-1145 MWF, St. Paul, Ordos, 4 cr

R1543 Fashion Illustration (prereq 1541 or #, △)
1545-1730 MW, St. Paul, Ryan, 4 cr

R1544 Costume Design: Special Techniques (prereq 1531, 1541, △)
0900-1045 MWF, St. Paul, Amir-Fazli, 4 cr

R1552 **Introduction to Housing, Interior Design** (§1551; prereq soph)
1300-1345 MWF, St. Paul, Nagle, 3 cr

R1554 **Interior Design I: Spatial Design Experiences** (prereq 1501, 1521, 1523, 1552, Ind 1600, △)
0915-1145 TTh, St. Paul, Scudder, 3 cr

R1555 **Interior Design I: Interior Design Problems** (prereq 1554, △)
1300-1445 MWF, St. Paul, Erickson, 3 cr

R3527 **Design Process: Three Dimensional Design** (prereq 1525, 1521, 1523 or #, △)
–1 LAB 1300-1445 MWF, St. Paul, 4 cr
–2 LAB 0900-1145 TTh, St. Paul, 4 cr

R3533 **Metalsmithing: Fabrication** (prereq 1533, △)
1300-1445 MWF, St. Paul, Ordos, 4 cr

R3548 **Lighting Design for Environmental Spaces**
1600-1900 Th, St. Paul, Ginthner, 3 cr

R3550 **Interior Design Presentation** (prereq 1555, pass portfolio review, △)
1300-1545 TTh, St. Paul, Birkeland, 3 cr

R3559 **Interior Design Business Procedures and Client Relationships** (prereq 3553) (A-N only)
1800-2000 W, St. Paul, Lee, 3 cr

3562 **Real Estate Practice** (prereq 1551, 1552 or #)
1810-2110 W, West Bank, Musil, 3 cr

R3563 **Environment: Housing and Community** (prereq 1501, 1551 or 1552 or #)
1000-1145 TTh, St. Paul, Franklin, 4 cr

R3575 **Senior Seminar: Interior Design** (to be taken last two qtrs prior to graduation or #) (S-N only)
1200-1245 M, St. Paul, Erickson, 1 cr

R3580 **Internship in Housing** (max 15 cr; prereq completion one-half professional sequence, #) (S-N only)
1200-1245 M, St. Paul, Franklin, 5-15 cr

R3581 **Field Experience in Interior Design: Retail or Community Service** (prereq 3553, Psy 1001) (S-N only)
1200-1245 W, St. Paul, Erickson, 3 cr

R3583 **Field Experience in Costume Design** (prereq completion of at least one-half of professional sequence or #) (S-N only)
Amir-Fazli, 4 cr

R3584 **Field Experience in Design** (max 15 cr; prereq #, plan to be submitted, approved in advance by adviser, employer) (S-N only)
ar cr

R5509 **History of Decorative Arts: Metal, Ceramics, Wood, and Glass** (prereq 5505 or equiv)
1100-1145 MWF, St. Paul, Blade, 4 cr

R5515 **20th Century Interiors and Furnishings** (prereq 5514 or #)
1500-1615 MW, St. Paul, Nagle, 4 cr

R5518 **History of Costume: 19th and 20th Century** (prereq 3517 or #)
1300-1445 MWF, St. Paul, Shenoi, 4 cr

R5531 **Surface Fabric Design III** (prereq 3531, portfolio review, △)
1300-1545 MW, St. Paul, Abell, 4 cr

R5544 **Costume Design Problems** (prereq 5541 or #, △)
0900-1145 TTh, St. Paul, Amir-Fazli, 4 cr

R5554 **Interior Design IV: Contract Design** (prereq 3553, 3557, TexC 3621 or #, △...ForP 3310, TexC 3622 rec)
0900-1145 TTh, St. Paul, Hutchins, 4 cr

R5555 **Honors Thesis: Interior Design** (prereq completion of all other professional courses, # program committee approval)
15 cr

R5561 **Housing Management** (prereq 1551 or 1552, 3563 or #)
1600-1800 TTh, St. Paul, Franklin, 5 cr

R5584 **Readings in Design** (no srs; prereq #)
1-3 cr

R5585 **Problems in Design: General** (max 12 cr; prereq #, △)
2-4 cr

R5586 **Problems in Design: Housing and/or Interiors** (max 12 cr; prereq #, △)
2-4 cr

R5587 **Problems in Design: Jewelry** (max 12 cr; prereq #, △, passed portfolio review)
3-4 cr

R5588 **Problems in Design: Textiles** (max 12 cr; prereq #, △, passed portfolio review)
3-4 cr

R5589 **Problems in Design: Costume** (max 12 cr; prereq 5518 or equiv, #, passed portfolio review)
3-4 cr

R8525 **Design Process: Two-Dimensional Design** (prereq 1501, 1521, 1523, 1525, 3527, 5505 or equiv, △)
1300-1445 MWF, St. Paul, Larkin, 4 cr

R8576 **Seminar: Design Instruction** (max 6 cr)
1200-1245 W, St. Paul, Larkin, 1 cr

R8584 **Readings in Design** (prereq #)
1-3 cr

R8585 **Problems in Design** (prereq #)
1-5 cr

R8586 **Problems in Interior Design** (prereq #)
1-5 cr

R8587 **Problems in Design** (prereq #)
1-5 cr

8588 **Directed Study in Design** (prereq #) (A-N only)
–1 Abell, Blade, others, 1-5 cr
–2 1500-1545 W, St. Paul, Bagley, 1-5 cr
–3 1500-1545 W, St. Paul, Larkin, 1-5 cr

DUTCH (Dtch)
German
Liberal Arts

Winter Quarter

R1102 **Beginning and Intermediate Dutch: Classroom Reading, Listening, Writing, Speaking** (§1110; prereq 1101)
1215-1300 MTWThF, East Bank, Van Kampen, 5 cr

R1110 **Beginning Dutch: Individualized Reading, Listening, Writing** (first 3 cr must be completed as a unit, max 15 cr, §1101-1102-1103)
1115-1200 T, Wakefield, 1-15 cr (1st meeting) (addnl hrs ar)

3310 **Studies in Dutch Authors** (prereq 1103 or 15 cr of 1110 or #)
1615-1800 T, 1715-1800 Th, East Bank, van Kerkwijk, 4 cr

3610 **Dutch Authors in Translation** (no knowledge of Dutch req)
1615-1800 M, 1615-1700 Th, East Bank, van Kerkwijk, 4 cr

3970 **Directed Studies** (prereq 1105, #, △, college approval)
van Kerkwijk, 1-5 cr

Spring Quarter

R1103 **Beginning and Intermediate Dutch: Classroom Reading, Listening, Writing, Speaking** (§1110; prereq 1102)
1215-1300 MTWThF, East Bank, Van Kampen, 5 cr

R1110 **Beginning Dutch: Individualized Reading, Listening, Writing** (first 3 cr must be completed as a unit, max 15 cr, §1101-1102-1103)
1115-1200 T, Wakefield, 1-15 cr (1st meeting) (addnl hrs ar)

R3011 **Conversation and Composition** (prereq 1105 or #)
1615-1800 T, 1715-1800 Th, East Bank, van Kerkwijk, 4 cr

R3012 **Conversation and Composition** (prereq 3011)
1615-1800 T, 1715-1800 Th, East Bank, van Kerkwijk, 4 cr

3310 **Studies in Dutch Authors** (prereq 1103 or 15 cr of 1110 or #)
1615-1800 M, 1615-1700 Th, East Bank, van Kerkwijk, 4 cr

3970 **Directed Studies** (prereq 1105, #, △, college approval)
van Kerkwijk, 1-5 cr

EAST ASIAN STUDIES (EAS)
East Asian Studies
Liberal Arts

Winter Quarter

1063 **China: The Middle Kingdom**
0915-1000 MWF, East Bank, Cass, 4 cr

1462 **Introduction to East Asia: The Imperial Age** (§Hist 1462, 3462)
1315-1400 MWF, West Bank, Marshall, Farmer, 4 cr

3467 **The Nationalist Revolution in China 1900 to Present** (§Hist 3467, 5467)
0945-1100 TTh, West Bank, Farmer, 4 cr

3471 **20th Century Japan** (§Hist 3471, 5471)
1115-1200 MWF, West Bank, Marshall, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-15 cr

Spring Quarter

1032 **Religions of East Asia** (§RelS 1032)
1415-1500 MWF, East Bank, Mather, 4 cr

3201 **Introduction to the World of Ancient Japan**
1315-1400 MWF, East Bank, Marshall, Copeland, others, 4 cr

3300 **Proseminar: Interdisciplinary Topics in East Asian Studies** (max 12 cr)
1415-1600 T, East Bank, Cass, 4 cr

3868 **Asians in America: An Ethnic Perspective** (§Hist 3868)
1115-1230 TTh, West Bank, Tsuchida, 4 cr

ECOLOGY AND BEHAVIORAL BIOLOGY (EBB)
Biological Sciences

Winter Quarter

R3001 **Introduction to Ecology** (open to jrs and above but not to biol majs)
1215-1300 MTWThF, East Bank, Corbin, 4 cr

R3101 **Ecology for Engineers and Physical Scientists** (§3001, not open to biology majs; prereq Math 1231)
1115-1200 MWF, East Bank, Bright, 4 cr

R5051 **Analysis of Populations** (prereq 3004 or Biol 3041 or #)
1015-1200 MW, East Bank, Siniff, 4 cr

R5052 **Theoretical Population Ecology** (prereq Biol 3041 or #)
0815-1000 MWF, East Bank, Tilman, 4 cr

R5122 **Plant/Animal Interactions** (prereq Biol 3011, 3012 or #)
★LECT 0900-1015 TTh, East Bank, Morrow
–1 REC 1030-1130 T, East Bank, 4 cr
–2 REC 1030-1130 Th, East Bank, 4 cr

R5134 **Introduction to Ornithology** (prereq Biol 1106 or 3011)
★LECT 1315-1500 TTh, Tordoff, 5 cr (Field trips F, plus one F-Sun ar Spring quarter)
–1 LAB 1515-1700 Th,

R5136 **Ichthyology** (prereq 15 cr incl Biol 1106 or 3011)
★LECT 0800-0930 TTh, East Bank, Underhill
–1 LAB 1315-1615 T, East Bank, 4 cr

R5322 **Comparative Ethology** (prereq 5321 or ¶, #)
1015-1215 TTh, East Bank, McKinney, 4 cr

R5601 **Limnology** (§Geo 5601; prereq Chem 1005 or #)
0915-1000 MWF, East Bank, Megard, 4 cr

R5613 **Assessing the Ecological Effects of Pollution** (prereq Biol 3041 or equiv, Chem 3301, 3302)
1115-1200 MWF, East Bank, Gorham, 4 cr

5970 **Directed Studies** (prereq #, △)
ar cr

5990 **Directed Research** (prereq #, △)
ar cr

8004 **Topics in Ecological Genetics** (prereq #)
1515-1700 T, East Bank, Merrell, Underhill, 2 cr

R8061 **Social Systems** (prereq 5322, #)
McKinney, 5 cr

R8091 **Hormones and Behavior** (§AnSc 8091; prereq AnSc 5327 or GCB 5134, EBB 3111 or #)
1400-1700 T, St. Paul, Phillips, 3 cr

R8162 **Winter Ecology** (prereq #)
1415-1600 TTh, East Bank, Schmid, 4 cr (lab ar)

8390 **Graduate Seminar** (prereq #)
ar cr

8391 **Advanced Work in Ecology and Behavioral Biology** (prereq #)
ar cr

8990 Graduate Research (prereq #)
ar cr

Spring Quarter

R3001 Introduction to Ecology (open to jrs and above but not to biol majs)
★LECT 1015-1145 TTh, East Bank, Tester
–1 REC 0915-1000 M, East Bank, 4 cr
–2 REC 1315-1400 T, East Bank, 4 cr
–3 REC 1315-1400 Th, East Bank, 4 cr
–4 REC 1015-1100 F, East Bank, 4 cr

R3111 Vertebrate Behavior (§AnSc 3111; prereq Biol 1106 or 3011 or #)
1400-1545 TTh, St. Paul, Phillips, 4 cr (StP)

R5112 Invertebrate Biology (prereq Biol 1106 or 3011 or #)
★LECT 1315-1400 MWF, East Bank, Barnwell
–1 LAB 1415-1700 WF, East Bank, 5 cr

R5116 Introduction to Animal Parasitology (prereq Biol 1106 or 3011)
★LECT 0915-1000 MWF, East Bank, Gilbertson
–1 LAB 1415-1630 TTh, East Bank, 5 cr

R5128 Adaptation and Macroevolution: Vertebrates (prereq Biol 1106 or 3011)
1315-1400 MWF, East Bank, Regal, 4 cr

R5134 Introduction to Ornithology (prereq Biol 1106 or 3011)
★LECT 0815-1000 MW, Warner, 5 cr (Field trips F plus 1 F-Sun ar)
–1 LAB 0815-1200 F,

R5149 Behavioral Genetics (prereq Biol 5003 or GCB 3022 or 5022 or equiv) (A-N only)
1015-1130 TTh, East Bank, Merrell, 4 cr

R5156 Comparative Animal Physiology (prereq Biol 1106 or 3011, Chem 3302 or #)
★LECT 0815-0900 MWF, East Bank, Schmid, 5 cr
–1 REC 0815-0900 T, East Bank,
★LAB 1315-1700 T, East Bank,
–2 REC 0815-0900 Th, East Bank,
★LAB 1315-1700 Th, East Bank,

5970 Directed Studies (prereq #, △)
ar cr

5990 Directed Research (prereq #, △)
ar cr

R8012 Theoretical Community Ecology (prereq 5052, Math 5427 or #)
Abrams, 4 cr

R8014 Paleoecological Methods (prereq #)
Bright, 5 cr

8390 Graduate Seminar (prereq #)
ar cr

8391 Advanced Work in Ecology and Behavioral Biology (prereq #)
ar cr

8990 Graduate Research (prereq #)
ar cr

ECONOMICS (Econ)
Liberal Arts

Winter Quarter

R1001 Principles of Macroeconomics (§1004; prereq 3rd qtr fr or CDS student, knowledge of elem algebra at level of Math 0006)
★LECT 1115-1200 T, West Bank, Heller
–1 REC 0815-0900 MWF, West Bank, 4 cr
–2 REC 0915-1000 MWF, West Bank, 4 cr
–3 REC 1015-1100 MWF, West Bank, 4 cr
–4 REC 1115-1200 MWF, West Bank, 4 cr
–5 REC 1215-1300 MWF, West Bank, 4 cr
–6 REC 1315-1400 MWF, West Bank, 4 cr
★LECT 0815-0930 TTh, 1115-1200 T, West Bank, Heller
–7 REC 0815-0900 M, West Bank, 5 cr
–8 REC 1215-1300 M, West Bank, 5 cr
–9 REC 0815-0900 W, West Bank, 5 cr
–10 REC 0915-1000 W, West Bank, 5 cr
–11 REC 1215-1300 W, West Bank, 5 cr
–12 REC 0815-0900 F, West Bank, 5 cr
–13 REC 0915-1000 F, West Bank, 5 cr
–14 REC 1015-1100 F, West Bank, 5 cr
–15 REC 1115-1200 F, West Bank, 5 cr
–16 REC 1215-1300 F, West Bank, 5 cr

R1001H Honors Course: Principles of Macroeconomics (§1004, 1014; prereq 3rd qtr fr, knowl of elem algebra at level Math 0006...B average rec)
★LECT 1115-1200 T, West Bank, Heller
–80 REC 1115-1200 MWF, West Bank, 5 cr

R1002 Principles of Microeconomics (§1015, 1005, 3001, 3002; prereq 3rd qtr freshman, knowl of elem algebra at level Math 0006)
–1 0815-0900 MWF, 1115-1200 M, West Bank, 4 cr
–2 0815-0900 MWF, 1215-1300 M, West Bank, 4 cr
–3 0815-0900 MWF, 1315-1400 M, West Bank, 4 cr
–4 0815-0900 MWF, 1015-1100 W, West Bank, 4 cr
–5 0815-0900 MWF, 1115-1200 W, West Bank, 4 cr
–6 0815-0900 MWF, 1215-1300 W, West Bank, 4 cr
–7 0815-0900 MWF, 0915-1000 F, West Bank, 4 cr
–8 0815-0900 MWF, 1015-1100 F, West Bank, 4 cr
–9 0815-0900 MWF, West Bank, 4 cr
–10 0915-1000 MWF, West Bank, 4 cr
–11 1015-1100 MWF, West Bank, 4 cr
–12 1115-1200 MWF, West Bank, 4 cr
–13 1215-1300 MWF, West Bank, 4 cr
–14 1315-1400 MWF, West Bank, 4 cr

R1002H Honors Course: Principles of Microeconomics (§1005, 1015; prereq 3rd qtr fr, knowl of elem alegebra at level of Math 0006...B avg rec)
1215-1300 MWF, West Bank, 5 cr

R1004 Principles of Macroeconomics (§1001; prereq 1 qtr calculus)
1315-1400 MWF, East Bank, 4 cr

R1005 Principles of Microeconomics (§1002; prereq 1 qtr calculus)
1415-1500 MWF, East Bank, 4 cr

R3002 Ecoomic Problems of American Economy (§1001, 1002, 1004, 1005, 1014, 1015; prereq 3001)
1315-1400 MWF, West Bank, Smith, 4 cr

R3101 Microeconomic Theory (§3105, 5151, no cr SMgt student; prereq 1001, 1002, Math 1111 or 1131 or equiv)
–1 0815-0900 MWF, West Bank, 4 cr
–2 1015-1100 MWF, West Bank, 4 cr
–3 1115-1200 MWF, West Bank, 4 cr
–4 1215-1300 MWF, West Bank, 4 cr
–5 1300-1345 MTWTh, St. Paul, Waelti, 4 cr (StP)

R3102 Macroeconomic Theory (prereq 1001, 1002, Math 1111 or 1131 or equiv...3101 rec)
–1 0915-1000 MWF, West Bank, 4 cr
–2 1215-1300 MWF, West Bank, 4 cr
–3 1315-1400 MWF, West Bank, 4 cr

R3103 Welfare Economics (prereq 3101 or 3101H)
1115-1200 MWF, West Bank, Coen, 4 cr

R3105 Managerial Economics (§3101, BGS 3001; prereq pre-Mgmt or SMgt student, 1001, 1002, 1 qtr calculus)
★LECT 0945-1100 TTh, West Bank, Meurer
–1 REC 0815-0900 M, West Bank, 4 cr
–2 REC 1315-1400 M, West Bank, 4 cr
–3 REC 0815-0900 W, West Bank, 4 cr
–4 REC 1215-1300 W, West Bank, 4 cr
–5 REC 1315-1400 W, West Bank, 4 cr
–6 REC 0815-0900 F, West Bank, 4 cr
–7 REC 1215-1300 F, West Bank, 4 cr

R3701 Money and Banking (§5721, 5701; prereq 1001, 1002, non maj)
★LECT 0815-0930 TTh, West Bank,
–1 REC 0815-0900 W, West Bank, 4 cr
–2 REC 0815-0900 F, West Bank, 4 cr
–3 REC 0915-1000 F, West Bank, 4 cr
–4 REC 1015-1100 F, West Bank, 4 cr
–5 REC 1115-1200 F, West Bank, 4 cr
–6 REC 1215-1300 F, West Bank, 4 cr
–7 REC 1315-1400 F, West Bank, 4 cr

R3701H Honors Course: Money and Banking (§5721, 5701; prereq 1001, 1002, non maj...3.0 GPA rec)
0945-1100 TTh, West Bank, Dalgaard, 5 cr

R3801 Elements of Public Finance (§5821; prereq 1001, 1002, non maj)
0915-1000 MWF, West Bank, 4 cr

R3960 Topics in Economics: Economic Growth (prereq 3102, 3103, 1 qtr calculus)
1215-1300 MWF, West Bank, 4 cr

3970 Directed Studies (prereq #, △, college approval)
ar cr

5161 Microeconomic Theory (no grad cr; prereq 3103, Math 3211, #...1 qtr linear algebra rec)
★LECT 1245-1400 TTh, West Bank, Richter, 5 cr
–1 REC 0800-0915 T, West Bank,

5162 Microeconomic Theory (no grad cr; prereq 5161)
★LECT 0945-1100 TTh, West Bank, Jordan, 5 cr
–1 REC 1545-1700 W, West Bank,

5165 Macroeconomic Theory (no grad cr; prereq 5164)
★LECT 1415-1530 TTh, West Bank, Sims, 5 cr
–1 REC 1700-1800 W, West Bank,

5262 Applied Econometrics (no grad cr; prereq 5261)
★LECT 1415-1530 MW, West Bank, Lee, 5 cr
–1 REC 1415-1530 F, West Bank,

5271 Bayesian Decision Making (§AgEc 5271; prereq ¶Stat 5122 or equiv, Econ 1002 or equiv)
0945-1100 MW, West Bank, Hildreth, 4 cr

5301 Economic Development (§5331; prereq 1001, 1002, non maj)
1245-1430 TTh, Pitt, 4 cr

5331 Economic Development (§5301; prereq 3101, 3102 or equiv or #)
0945-1130 TTh, Pitt, 4 cr

R5401 International Economics (§5431; prereq 1001, 1002, non maj)
1115-1230 TTh, West Bank, 4 cr

R5431 International Economics (§5401; prereq 3102, 3103 or equiv or #)
0815-0930 TTh, West Bank, 4 cr

5462 International Trade and Payments Theory (no grad cr; prereq 5461)
1115-1230 TTh, West Bank, Chipman, 5 cr

R5534 Economic Security (§Ins 3210)
0915-1000 MWF, West Bank, Williams, 4 cr

5621 Economics of Urban Problems (prereq 1001, 1002)
1115-1200 MWF, West Bank, Mohring, 4 cr

R5631 Industrial Organization and Antitrust Policy (§3601; prereq 3101...3131 rec)
0915-1000 MWF, West Bank, Porter, 4 cr

5672 Industrial Organization and Government Regulation (no grad cr; prereq 5671)
1115-1200 MWF, West Bank, Porter, 5 cr

R5721 Money and Banking (§3701, 5701; prereq 3102)
1315-1400 MWF, West Bank, 4 cr

R5731H Honors Course: Macroeconomic Policy (prereq 3102...B average rec)
1115-1230 TTh, West Bank, 5 cr

R5821 Elements of Public Finance (§3801; prereq 3101...3103 rec)
1015-1100 MWF, West Bank, 4 cr

R5831 Cost-Benefit Analysis (prereq 3101...3103 rec)
1315-1400 MWF, West Bank, 4 cr

5862 Public Finance (no grad cr; prereq 5861)
1545-1700 TTh, West Bank, Slemrod, 5 cr

5970 Directed Studies (prereq #, △, CLA approval)
ar cr

8101 Microeconomic Theory (prereq 3101 or 5151, Math 3211...1 qtr linear algebra rec)
★LECT 1245-1400 TTh, West Bank, Richter, 4 cr
–1 REC 0800-0915 T, West Bank,

8102 Microeconomic Theory (prereq 8101)
★LECT 0945-1100 TTh, West Bank, Jordan, 4 cr
–1 REC 1545-1700 W, West Bank,

8105 Macroeconomic Theory (prereq 8104)
★LECT 1415-1530 TTh, West Bank, Sargent, 4 cr
–1 REC 1700-1800 W, West Bank,

8112 Introduction to Mathematical Economics (prereq 8111)
0945-1100 TTh, West Bank, 3 cr

8161 Mathematical Economics (prereq 5163 or 8113, Math 3142, 3211, ¶5162...5243 rec)
1115-1230 TTh, West Bank, Hurwicz, 3 cr

8184 Advanced Topics in Macroeconomics (prereq #)
Prescott, 3 cr

8192 Workshop in Mathematical Economics (prereq 8191)
1515-1700 M, West Bank, Richter, ar cr

8202 Applied Econometrics (prereq 8201)
★LECT 1415-1530 MW, West Bank, Lee, 4 cr
–1 REC 1415-1530 F, West Bank,

8212 Econometrics (prereq 8211)
0915-1030 MW, West Bank, Lee, 3 cr

8292 Workshop in Econometrics (prereq #)
Sims, ar cr

8312 Technology and Development (prereq 8103, 8105, plus a course in this section)
1245-1400 TTh, West Bank, Ruttan, 3 cr

8402 International Trade and Payments Theory (prereq 8401)
1115-1230 TTh, West Bank, Chipman, 3 cr

8492 Workshop in Trade and Development (prereq 8491)
1530-1700 T, West Bank, ar cr

8602 Industrial Organization and Government Regulation (prereq 8601)
1115-1200 MWF, West Bank, Porter, 3 cr

8692 Workshop in Applied Microeconomics (prereq 8691)
1530-1700 W, West Bank, ar cr

8702 Monetary Economics (prereq 8701)
1245-1400 TTh, West Bank, Sargent, 3 cr

8782 Advanced Topics in Monetary Economics (prereq #)
1115-1230 TTh, West Bank, Prescott, 3 cr

8792 Workshop in Macroeconomics (prereq 8791)
1415-1600 F, West Bank, ar cr

8802 Public Finance (prereq 8801)
1545-1700 TTh, West Bank, 3 cr

8990 Individual Research
ar cr

Spring Quarter

R1001 Principles of Macroeconomics (§1004; prereq 3rd qtr fr or CDS student, knowledge of elem algebra at level of Math 0006)
★LECT 1115-1200 T, West Bank, Green, Heller
–1 REC 0815-0900 MWF, West Bank, 4 cr
–2 REC 0915-1000 MWF, West Bank, 4 cr
–3 REC 1015-1100 MWF, West Bank, 4 cr
–4 REC 1115-1200 MWF, West Bank, 4 cr
–5 REC 1215-1300 MWF, West Bank, 4 cr
–6 REC 1315-1400 MWF, West Bank, 4 cr
★LECT 0815-0930 TTh, 1115-1200 T, West Bank, Green, Heller
–7 REC 0815-0900 M, West Bank, 5 cr
–8 REC 1215-1300 M, West Bank, 5 cr
–9 REC 0815-0900 W, West Bank, 5 cr
–10 REC 0915-1000 W, West Bank, 5 cr
–11 REC 1215-1300 W, West Bank, 5 cr
–12 REC 0815-0900 F, West Bank, 5 cr
–13 REC 0915-1000 F, West Bank, 5 cr
–14 REC 1015-1100 F, West Bank, 5 cr
–15 REC 1115-1200 F, West Bank, 5 cr
–16 REC 1215-1300 F, West Bank, 5 cr

R1001H Honors Course: Principles of Macroeconomics (§1004, 1014; prereq 3rd qtr fr, knowl of elem algebra at level Math 0006...B average rec)
★LECT 1115-1200 T, West Bank, Green, Heller
–80 REC 1115-1200 MWF, West Bank, 5 cr

R1002 Principles of Microeconomics (§1015, 1005, 3001, 3002; prereq 3rd qtr freshman, knowl of elem algebra at level Math 0006)
–1 1115-1200 MWF, 0815-0900 M, West Bank, 4 cr
–2 1115-1200 MWF, 0815-0900 W, West Bank, 4 cr
–3 1115-1200 MWF, 0915-1000 W, West Bank, 4 cr
–4 1115-1200 MWF, 1315-1400 W, West Bank, 4 cr
–5 1115-1200 MWF, 0815-0900 F, West Bank, 4 cr
–6 1115-1200 MWF, 0915-1000 F, West Bank, 4 cr
–7 1115-1200 MWF, 1015-1100 F, West Bank, 4 cr
–8 1115-1200 MWF, 1115-1200 F, West Bank, 4 cr
–9 0815-0900 MWF, West Bank, 4 cr
–10 0915-1000 MWF, West Bank, 4 cr
–11 1015-1100 MWF, West Bank, 4 cr
–12 1115-1200 MWF, West Bank, 4 cr
–13 1215-1300 MWF, West Bank, 4 cr
–14 1315-1400 MWF, West Bank, 4 cr

R1002H Honors Course: Principles of Microeconomics (§1005, 1015; prereq 3rd qtr fr, knowl of elem alegebra at level of Math 0006...B avg rec)
1215-1300 MWF, West Bank, 5 cr

R1004 Principles of Macroeconomics (§1001; prereq 1 qtr calculus)
1315-1400 MWF, East Bank, 4 cr

R1005 Principles of Microeconomics (§1002; prereq 1 qtr calculus)
1415-1500 MWF, East Bank, 4 cr

R3101 Microeconomic Theory (§3105, 5151, no cr SMgt student; prereq 1001, 1002, Math 1111 or 1131 or equiv)
–1 0815-0900 MWF, West Bank, 4 cr
–2 1015-1100 MWF, West Bank, 4 cr
–3 1115-1200 MWF, West Bank, 4 cr
–4 1215-1300 MWF, West Bank, 4 cr

R3102 Macroeconomic Theory (prereq 1001, 1002, Math 1111 or 1131 or equiv...3101 rec)
–1 0915-1000 MWF, West Bank, 4 cr
–2 1115-1200 MWF, West Bank, 4 cr
–3 1215-1300 MWF, West Bank, 4 cr
–4 1100-1145 MTWTh, St. Paul, Helmberger, 4 cr (StP)

R3103 Welfare Economics (prereq 3101 or 3101H)
1115-1200 MWF, West Bank, Coen, 4 cr

R3105 Managerial Economics (§3101, BGS 3001; prereq pre-Mgmt or SMgt student, 1001, 1002, 1 qtr calculus)
★LECT 0945-1100 TTh, West Bank, Meurer
–1 REC 0815-0900 M, West Bank, 4 cr
–2 REC 1315-1400 M, West Bank, 4 cr
–3 REC 0815-0900 W, West Bank, 4 cr
–4 REC 1215-1300 W, West Bank, 4 cr
–5 REC 1315-1400 W, West Bank, 4 cr
–6 REC 0815-0900 F, West Bank, 4 cr
–7 REC 1215-1300 F, West Bank, 4 cr

R3701 Money and Banking (§5721, 5701; prereq 1001, 1002, non maj)
★LECT 0815-0930 TTh, West Bank,
–1 REC 0815-0900 W, West Bank, 4 cr
–2 REC 0815-0900 F, West Bank, 4 cr
–3 REC 0915-1000 F, West Bank, 4 cr
–4 REC 1015-1100 F, West Bank, 4 cr
–5 REC 1115-1200 F, West Bank, 4 cr
–6 REC 1215-1300 F, West Bank, 4 cr
–7 REC 1315-1400 F, West Bank, 4 cr

R3801 Elements of Public Finance (§5821; prereq 1001, 1002, non maj)
0915-1000 MWF, West Bank, 4 cr

R3960 Topics in Economics: Economic Growth (prereq 3102, 3103, 1 qtr calculus)
0915-1000 MWF, West Bank, 4 cr

3970 Directed Studies (prereq #, △, college approval)
ar cr

R5021 Economics, Ethics, Economic Philosophy (prereq 1001, 1002)
1415-1500 MWF, West Bank, Smith, 3-5 cr

5113 Introduction to Mathematical Economics (prereq 3101 or #, Math 3142, 3211)
4 cr

R5152 Elements of Economic Analysis: Income and Employment (§3102; prereq 1001, 1002, 1 qtr calculus, grad student or #)
0945-1100 TTh, West Bank, 3 cr

R5162 Microeconomic Theory (no grad cr; prereq 5161)
1245-1400 TTh, West Bank, Ito, 5 cr

5163 Microeconomic Theory (no grad cr; prereq 5162)
★LECT 0945-1100 TTh, West Bank, Ito
–1 REC 1545-1700 M, West Bank, 5 cr
–2 REC 1545-1700 W, West Bank, 5 cr

R5166 Macroeconomic Theory (no grad cr; prereq 5165)
1415-1530 TTh, West Bank, Prescott, 5 cr

R5231 Introduction to Econometrics (prereq QA 3053 or Stat 5022 or #)
1115-1230 TTh, West Bank, Swan, 4 cr

5263 Applied Econometrics (no grad cr; prereq 5262)
★LECT 1415-1530 MW, West Bank, Lee, 5 cr
–1 REC 1415-1530 F, West Bank,

5272 Bayesian Decision Making (§AgEc 5272; prereq 5271)
0945-1100 MW, West Bank, Hildreth, 4 cr

R5401 International Economics (§5431; prereq 1001, 1002, non maj)
1115-1230 TTh, West Bank, 4 cr

R5421 Prospective World Economy (§IntR 5802; prereq 5401 or 5431 or #)
1315-1400 MWF, West Bank, Smith, 4 cr

R5431 International Economics (§5401; prereq 3102, 3103 or equiv or #)
0815-0930 TTh, West Bank, 4 cr

5463 International Trade and Payments Theory (no grad cr; prereq 5462)
1115-1230 TTh, West Bank, Chipman, 5 cr

R5531 Labor Economics (§3501; prereq 3101, 3102)
1245-1400 TTh, West Bank, Simler, 4 cr

5673 Industrial Organization and Government Regulation (no grad cr; prereq 5672)
1115-1200 MWF, West Bank, Mohring, 5 cr

R5721H Honors Course: Money and Banking (prereq 3102...B average rec)
1115-1200 MWF, West Bank, 5 cr

R5731 Macroeconomic Policy (§3711; prereq 3102)
0945-1100 TTh, West Bank, 4 cr

R5821H Honors Course: Elements of Public Finance (prereq 3101, 3103...B average rec)
1015-1100 MWF, West Bank, 5 cr

R5831 Cost-Benefit Analysis (prereq 3101...3103 rec)
1215-1300 MWF, West Bank, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
ar cr

8102 Microeconomic Theory (prereq 8101)
1245-1400 TTh, West Bank, Ito, 4 cr

8103 Microeconomic Theory (prereq 8102)
★LECT 0945-1100 TTh, West Bank, Ito
–1 REC 1545-1700 M, West Bank, 4 cr
–2 REC 1545-1700 W, West Bank, 4 cr

8106 Macroeconomics Theory (prereq 8105)
1415-1530 TTh, West Bank, Prescott, 4 cr

8162 Mathematical Economics (prereq 8161)
Jordan, 3 cr

8185 Advanced Topics in Macroeconomics (prereq #)
Sargent, 3 cr

8193 Workshop in Mathematical Economics (prereq 8192)
1515-1700 M, West Bank, Jordan, 3 cr

8203 Applied Econometrics (prereq 8202)
★LECT 1415-1530 MW, West Bank, Lee, 4 cr
–1 REC 1415-1530 F, West Bank,

8213 Econometrics (prereq 8212)
0915-1030 MW, West Bank, Sims, 3 cr

8281 Advanced Topics in Econometrics (prereq #)
1215-1330 MW, West Bank, Sims, 3 cr

8293 Workshop in Econometrics (prereq #)
Sims, ar cr

8311 Economic Growth and Development Theory (prereq 8103, 8105, plus a course in this section)
Pitt, 3 cr

8403 International Trade and Payments Theory (prereq 8402)
1115-1230 TTh, West Bank, Chipman, 3 cr

8493 Workshop in Trade and Development (prereq 8492)
1530-1700 T, West Bank, ar cr

8603 Industrial Organization and Government Regulation (prereq 8602)
1115-1200 MWF, West Bank, Mohring, 3 cr

8693 Workshop in Applied Microeconomics (prereq 8692)
1530-1700 W, West Bank, ar cr

8793 Workshop in Macroeconomics (prereq 8792)
ar cr

8990 Individual Research
ar cr

EDUCATIONAL ADMINISTRATION (EdAd)

Educational Policy And Administration

Education

Winter Quarter

5101 Public School Administration (prereq sr, 9 cr in education, non educ admin maj) (A-N only)
1615-1800 Th, East Bank, Morgan, 3 cr

5128 Workshop: Educational Administration (S-N optional)
0800-1000 S, East Bank, Nickerson, 1-6 cr

5180 Seminar: Administration of Special Education (§SpEd 8560, 8561 or PsyS 8560, 8561; prereq 5103 or SpEd 5160 or PsyS 5160 or #) (A-N only)
1615-1800 M, East Bank, Weatherman, 3 cr

5201 **Formal Organizations in Education** (§8201) (A-N only)
1000-1200 S, East Bank, Popper, 3 cr

5202 **Politics of Education** (§8202, SPFE 8202, 5202) (A-N only)
1615-1800 T, East Bank, Mazzoni, 3 cr

5275 **Two-Year College Administration** (§8274; prereq 5274 or VoEd 5274) (A-N only)
1830-2030 M, East Bank, Morgan, 3 cr

5280 **Introduction to the Economics of Education** (§SPFE 5180) (A-N only)
1615-1900 W, East Bank, Lewis, 4 cr

8213 **Financial Resource Management** (prereq 8212 or #)
1830-2030 T, East Bank, Sederberg, 3 cr

8221 **Quantitative Models for Program Analysis and Research** (prereq 8220)
1615-1800 W, East Bank, Hendrix, 3 cr

8225 **Educational Policy and the Law**
1830-2030 Th, West Bank, Hooker, 3 cr

8228 **Problems: Higher Education** (§HiEd 8228; prereq #)
ar cr

8234 **Seminar: Educational Finance** (prereq 8210 or #)
1830-2030 Th, East Bank, Mueller, 3 cr

8237 **Seminar: Theory and Research in Educational Law** (prereq 5224 or 5292 or 8225)
1830-2030 M, West Bank, Hooker, 1-3 cr

8238 **Seminar: Theory and Research** (prereq 8218, 8235, educ admin maj or #)
1615-1800 M, East Bank, Mazzoni, 3 cr

8241 **Seminar: Internship**
1315-1500 Th, East Bank, Alkire, Nickerson, 0-9 cr

8242 **Seminar: Public School Personnel Programs** (prereq 5227 or #)
1830-2030 W, East Bank, Alkire, 3 cr

8265 **Administering the High School Program**
1615-1800 T, East Bank, Nickerson, 3 cr

8270 **Problems: Elementary School Administration** (prereq #)
ar cr

8271 **Problems: Secondary School Administration** (prereq #)
ar cr

8272 **Problems: Educational Administration**
1-3 cr

8273 **Field Study** (prereq #)
0-10 cr

8278 **Recent Research in Two-Year College Administration** (max 3 cr; prereq #)
1615-1800 T, East Bank, Hendrix, Morgan, 1-3 cr

8290 **Financing Higher Education** (§HiEd 8290; prereq #)
1830-2030 W, East Bank, Ammentorp, 3 cr

8340 **Policy Systems in Education** (prereq 8220)
1830-2030 T, East Bank, Ammentorp, 3 cr

Spring Quarter

5128 **Workshop: Educational Administration: Microcomputing in Health and the Human Services** (S-N optional)
1615-1800 Th, East Bank, Ammentorp, 1-6 cr

5167 **The American Middle School** (A-N only)
1000-1200 S, East Bank, Popper, 3 cr

5181 **Seminar: Administration of Special Education** (§PsyS 8560, 8561; prereq 5103 or SpEd 5160 or PsyS 5160 or #) (A-N only)
1615-1800 M, East Bank, Weatherman, 3 cr

5200 **Design and Management of Education Services** (A-N only)
1830-2030 Th, East Bank, Ammentorp, 3 cr

5210 **Financing Elementary and Secondary Schools** (§8210) (A-N only)
1830-2030 M, East Bank, Mueller, 3 cr

5214 **School Management Information Systems** (§8214) (A-N only)
1830-2030 Th, East Bank, 3 cr

5224 **Legal Implications of Acts by School Boards, Administrators, and Teachers** (§8224) (A-N only)
1615-1800 T, West Bank, Hooker, 3 cr

5226 **Educational Facilities Planning** (§8226) (A-N only)
1615-1800 W, East Bank, Alkire, 3 cr

5250 **American Higher Education** (§Educ 5250, HIEd 5250) (S-N optional)
1615-1800 Th, East Bank, Hearn, Corcoran, 4 cr

5292 **The Law and Postsecondary Educational Institutions** (§HiEd 5292) (A-N only)
1830-2030 W, West Bank, Hooker, 3 cr

8212 **School Budgeting** (prereq 5210)
1830-2030 T, East Bank, Sederberg, 3 cr

8216 **Recent Research: Elementary School Administration** (prereq 8215)
1830-2030 T, East Bank, Alkire, 3 cr

8218 **Seminar: The Social Organization of Schools** (prereq 5201 or #)
1615-1800 M, East Bank, Popper, 3 cr

8220 **Quantitative Foundations for Management Methods**
1615-1800 T, East Bank, 3 cr

8223 **Quantitative Techniques for Decision Making** (prereq 8220 or #)
1615-1800 W, East Bank, Hendrix, 3 cr

8228 **Problems: Higher Education** (§HiEd 8228; prereq #)
ar cr

8235 **Seminar: Applied Humanism in Administrative Behavior: The Modern Perspective** (prereq 5201 or #)
1615-1800 Th, East Bank, Popper, 3 cr

8238 **Seminar: Theory and Research** (prereq 8218, 8235, educ admin maj or #)
1615-1800 M, East Bank, Morgan, Mazzoni, 3 cr

8241 **Seminar: Internship**
1315-1500 Th, East Bank, Alkire, Nickerson, 0-9 cr

8248 **Seminar: Metropolitan School Governance** (prereq 8202)
1830-2030 Th, East Bank, Mazzoni, 3 cr

8253 **Administration in Higher Education** (§HiEd 8255; prereq 5250 or HiEd 5250)
1615-1800 W, East Bank, Hearn, 3 cr

8264 **Secondary School Principalship**
1830-2030 W, East Bank, Nickerson, 3 cr

8270 **Problems: Elementary School Administration** (prereq #)
ar cr

8271 **Problems: Secondary School Administration** (prereq #)
ar cr

8272 **Problems: Educational Administration**
1-3 cr

8273 **Field Study** (prereq #)
0-10 cr

8276 **Seminar: Administration of Curriculum in the Two-Year College** (prereq 5274)
1830-2030 Th, East Bank, Morgan, 3 cr

8341 **Analysis of Education Policy Systems** (prereq 8340)
1830-2030 W, East Bank, Ammentorp, 3 cr

ELECTRICAL ENGINEERING (EE)

Institute of Technology

Winter Quarter

R1000 **Introduction to Electrical Engineering** (prereq IT lower division or △) (S-N only)
1415-1700 M, East Bank, 1 cr

R1400 **Circuits Laboratory** (prereq 3009 or ¶, IT maj)
-1 LAB 1515-1700 M, East Bank, 1 cr
-2 LAB 0815-1000 T, East Bank, 1 cr
-3 LAB 1015-1200 T, East Bank, 1 cr
-4 LAB 1515-1700 T, East Bank, 1 cr
-5 LAB 1515-1700 W, East Bank, 1 cr
-6 LAB 0815-1000 Th, East Bank, 1 cr
-7 LAB 1315-1500 Th, East Bank, 1 cr
-8 LAB 1415-1600 F, East Bank, 1 cr

R3003 **Circuits and Electronics** (no EE majs; prereq IT student, Phys 1291, Math 3221 or ¶)
1215-1300 MTWF, East Bank, 4 cr

R3004 **Circuits and Electronics Laboratory** (no EE majs; prereq IT student, 3003 or ¶)
-1 LAB 1315-1500 M, East Bank, 1 cr
-2 LAB 1515-1700 M, East Bank, 1 cr
-3 LAB 0815-1000 T, East Bank, 1 cr
-4 LAB 1015-1200 T, East Bank, 1 cr
-5 LAB 1315-1500 T, East Bank, 1 cr
-6 LAB 1515-1700 T, East Bank, 1 cr
-7 LAB 1515-1700 W, East Bank, 1 cr
-8 LAB 0815-1000 Th, East Bank, 1 cr
-9 LAB 1015-1200 Th, East Bank, 1 cr
-10 LAB 1415-1600 Th, East Bank, 1 cr

R3009 **Linear Circuits I** (prereq IT maj, at least C grades in Math 3212 or ¶ or 3221 or ¶, Phys 1281 or ¶) (A-N only)
★LECT 1115-1200 MWThF, East Bank, 4 cr
-1 REC 1315-1400 M, East Bank,
-2 REC 1415-1500 M, East Bank,
-3 REC 1515-1600 M, East Bank,
-4 REC 1615-1700 M, East Bank,
-5 REC 1415-1500 T, East Bank,
-6 REC 1515-1600 T, East Bank,

R3011 **Signal Analysis** (prereq 3010, upper division elec engr maj)
★LECT 0915-1000 MTWF, East Bank, 4 cr
-1 REC 1415-1500 W, East Bank,
-2 REC 1515-1600 W, East Bank,
-3 REC 1615-1700 W, East Bank,

R3012 **System Design** (prereq 3011, upper division elec engr maj)
0815-0900 MWThF, East Bank, 4 cr

R3060 **Semiconductor Devices** (prereq 3010 or ¶, Phys 1291, upper division elec engr or mech engr maj)
★LECT 1315-1400 MTWF, East Bank, 4 cr
-1 REC 1415-1500 T, East Bank,
-2 REC 1515-1600 T, East Bank,
-3 REC 1615-1700 T, East Bank,

R3061 **Analog Electronics** (prereq 3010, 3060, upper division elec engr or mech engr maj)
★LECT 1115-1200 MWThF, East Bank, 4 cr
-1 REC 1315-1400 W, East Bank,
-2 REC 1415-1500 W, East Bank,
-3 REC 1515-1600 W, East Bank,
-4 REC 1615-1700 W, East Bank,
-5 REC 1315-1400 Th, East Bank,
-6 REC 1415-1500 Th, East Bank,

R3110 **Electric and Magnetic Fields** (prereq upper div elec or mech engr maj, at least C grades in Phys 1291, Math 3212 or 3231) (A-N only)
★LECT 1015-1100 MWThF, East Bank, 4 cr
-1 REC 1315-1400 M, East Bank,
-2 REC 1415-1500 M, East Bank,
-3 REC 1515-1600 M, East Bank,
-4 REC 1615-1700 M, East Bank,
-5 REC 1315-1400 T, East Bank,
-6 REC 1415-1500 T, East Bank,

R3351 **Introduction to Logic Design and Microprocessors** (§5051; prereq soph standing in IT)
★LECT 1015-1100 MWF, East Bank, 4 cr
-1 REC 1415-1500 W, East Bank,
-2 REC 1515-1600 W, East Bank,
-3 REC 1615-1700 W, East Bank,
-4 REC 1315-1400 Th, East Bank,
-5 REC 1415-1500 Th, East Bank,
-6 REC 1315-1400 W, East Bank,
-1 LAB 0815-1000 T, East Bank,
-2 LAB 0815-1000 T, East Bank,
-3 LAB 1315-1500 T, East Bank,
-4 LAB 1315-1500 T, East Bank,
-5 LAB 1515-1700 T, East Bank,
-6 LAB 1515-1700 T, East Bank,
-7 LAB 1515-1700 W, East Bank,
-8 LAB 1515-1700 W, East Bank,
-9 LAB 0815-1000 Th, East Bank,
-10 LAB 0815-1000 Th, East Bank,
-11 LAB 1315-1500 Th, East Bank,
-12 LAB 1315-1500 Th, East Bank,
-13 LAB 1515-1700 Th, East Bank,
-14 LAB 0815-1000 F, East Bank,
-15 LAB 1415-1600 F, East Bank,
-16 LAB 1415-1600 F, East Bank,

R3400 **Junior Electrical Engineering Laboratory** (prereq IT stu, 1400, 3060 or ¶3060) (A-N only)
★LECT 1215-1300 W, East Bank,
-1 LAB 0815-1100 Th, East Bank, 2 cr
-2 LAB 0815-1100 Th, East Bank, 2 cr
-3 LAB 1115-1400 Th, East Bank, 2 cr
-4 LAB 1115-1400 Th, East Bank, 2 cr
-5 LAB 1415-1700 Th, East Bank, 2 cr
-6 LAB 1415-1700 F, East Bank, 2 cr

R3401 **Junior Electrical Engineering Laboratory** (prereq 3400, 3011 or ¶, 3061 or ¶) (A-N only)
★LECT 1215-1300 M, East Bank,
-1 LAB 1415-1700 M, East Bank, 2 cr
-2 LAB 1415-1700 M, East Bank, 2 cr
-3 LAB 0815-1100 T, East Bank, 2 cr
-4 LAB 0815-1100 T, East Bank, 2 cr
-5 LAB 1115-1400 T, East Bank, 2 cr
-6 LAB 1115-1400 T, East Bank, 2 cr
-7 LAB 1415-1700 T, East Bank, 2 cr
-8 LAB 1415-1700 T, East Bank, 2 cr
-9 LAB 1415-1700 W, East Bank, 2 cr
-10 LAB 1415-1700 W, East Bank, 2 cr
-11 LAB 1415-1700 Th, East Bank, 2 cr
-12 LAB 1415-1700 F, East Bank, 2 cr

R3476 **Industrial Assignment I** (prereq regis in intern program)
2 cr

R5002 **Digital Signal Processing** (prereq 3012, IT stu or grad IT maj)
1215-1300 TWThF, East Bank, 4 cr

R5055 **Instrumentation and Control Electronics** (prereq 3012 or ¶, 3052 or #, IT stu or grad IT maj)
1115-1200 MTWF, East Bank, 4 cr

R5056 **Electronic Circuits Laboratory** (prereq 3401, ¶5055, IT stu or grad IT maj)
–1 LAB 1315-1700 T, East Bank, 1 cr (alt T)
–2 LAB 0815-1200 Th, East Bank, 1 cr (alt Th)
–3 LAB 1315-1700 Th, East Bank, 1 cr (alt Th)

R5202 **Analog Communication** (prereq upper division elec engr maj or grad IT, 3012, Stat 3091 or #)
1315-1400 MWF, East Bank, 3 cr

5240 **Analog Communications Laboratory** (prereq ¶5202)
1 cr

R5253 **Linear Control Systems** (prereq upper division elec engr maj or grad IT, 3012 or #) (A-N only)
0915-1000 MWF, East Bank, 3 cr

5291 **Linear Control Systems Laboratory** (prereq ¶5253)
1 cr

R5310 **Electric Power Systems** (prereq 5300 or #, IT stu or grad IT maj)
LECT 0815-0900 MWF, East Bank, 4 cr (lab ar)

R5332 **Energy Conversion Methods** (prereq 3060, 3111, Phys 3501 or ME 3301 or #) (A-N only)
1515-1600 MWF, 1515-1700 T, East Bank, 4 cr

R5352 **Microprocessor Based Design** (prereq IT student, grad IT maj, 5051, 5052)
★LECT 1415-1500 MWF, East Bank, 4 cr
–1 LAB 1115-1300 M, East Bank,
–2 LAB 1515-1700 F, East Bank,
–3 LAB 1515-1700 M, East Bank,
–4 LAB 0815-1000 T, East Bank,
–5 LAB 1315-1500 T, East Bank,
–6 LAB 1515-1700 T, East Bank,
–7 LAB 1515-1700 W, East Bank,
–8 LAB 0815-1000 Th, East Bank,
–9 LAB 1015-1200 Th, East Bank,
–10 LAB 1315-1500 Th, East Bank,
–11 LAB 1515-1700 Th, East Bank,
–12 LAB 1115-1300 F, East Bank,

R5470 **Directed Study** (prereq △)
ar cr

R5478 **Industrial Assignment III** (5478-5479†; prereq 3477, regis in intern program) (A-N only)
2 cr

R5479 **Industrial Assignment IV** (5478-5479†; prereq 5478)
2 cr

R5491H **Honors Project** (prereq 5490H)
1315-1600 Th, East Bank, 3 cr

R5501 **Synthesis of Active and Passive Networks** (prereq 5500)
–1 0945-1100 TTh, East Bank, 3 cr

R5512 **Digital Filters and Signal Processing** (prereq 5511)
–1 1415-1500 MWF, East Bank, 3 cr

R5572 **VLSI Circuit Design** (prereq 5571 and/or 5574)
–1 1015-1100 MWF, East Bank, 3 cr

R5575 **VLSI Design Laboratory** (prereq ¶5572)
3 cr

R5605 **Microwave Circuits** (prereq 3111, 3062 or #)
0815-0930 TTh, East Bank, 3 cr

R5630 **Contemporary Optics** (prereq 5100 or Phys 3012 or #)
–1 1515-1600 MTWF, East Bank, 4 cr

R5655 **High-Speed, Compound Semiconductor Devices II** (prereq 5654)
0815-0900 MWF, East Bank, 3 cr

R5661 **Semiconductor Properties and Devices** (prereq 5660)
–1 1115-1200 MWF, East Bank, 3 cr

5667 **Magnetic Properties of Materials and Applications** (prereq 5666)
1115-1230 TTh, East Bank, 3 cr

R5700 **Information Theory and Coding** (prereq Stat 3091 or #, IT sr, grad or adult special)
–1 0915-1000 MWF, East Bank, 3 cr

R5751 **Optimization Techniques** (prereq grad standing or #)
1215-1300 MWF, East Bank, 3 cr

R5820 **Electromechanical System Dynamics** (prereq #)
0815-0930 TTh, East Bank, 3 cr

R5853 **Digital Computer Systems** (prereq 5852)
–1 1015-1100 MWF, East Bank, 3 cr

R5854 **Advanced Computer Networks** (prereq grad IT maj or EE adult special, CSci 5211 or #) (A-N only)
–1 1315-1400 MWF, East Bank, 3 cr

8251 **Advanced Control Topics** (prereq 8250)
1245-1400 TTh, East Bank, 3 cr

R8290 **Seminar: Control Theory** (prereq #)
–1 1415-1500 Th, East Bank, ar cr

8340 **Seminar: Electric Power** (prereq #)
Albertson, ar cr

R8355 **Computer Architecture I** (prereq 5853, CSci 5101 or #)
–1 1215-1300 MWF, East Bank, 3 cr

8451 **Advanced Topics in Electrical Engineering** (prereq #)
–1 0815-0930 TTh, East Bank, E B Lee, 3 cr

8460 **Plan B Project** (prereq #)
4 cr

Spring Quarter

R1400 **Circuits Laboratory** (prereq 3009 or ¶, IT maj)
–1 LAB 0815-1000 T, East Bank, 1 cr
–2 LAB 1015-1200 T, East Bank, 1 cr
–3 LAB 1315-1500 T, East Bank, 1 cr
–4 LAB 1515-1700 T, East Bank, 1 cr
–5 LAB 1515-1700 W, East Bank, 1 cr
–6 LAB 0815-1000 Th, East Bank, 1 cr
–7 LAB 1515-1700 Th, East Bank, 1 cr
–8 LAB 1515-1700 F, East Bank, 1 cr

R3003 **Circuits and Electronics** (no EE majs; prereq IT student, Phys 1291, Math 3221 or ¶)
1215-1300 MTWF, East Bank, 4 cr

R3004 **Circuits and Electronics Laboratory** (no EE majs; prereq IT student, 3003 or ¶)
–1 LAB 1315-1500 M, East Bank, 1 cr
–2 LAB 1515-1700 M, East Bank, 1 cr
–3 LAB 0815-1000 T, East Bank, 1 cr
–4 LAB 1015-1200 T, East Bank, 1 cr
–5 LAB 1315-1500 T, East Bank, 1 cr
–6 LAB 1015-1200 Th, East Bank, 1 cr
–7 LAB 1215-1400 Th, East Bank, 1 cr
–8 LAB 1415-1600 Th, East Bank, 1 cr

R3010 **Linear Circuits II** (prereq IT student, at least C grades in 3009, Math 3212 or 3221, Phys 1291 or ¶Phys 1291) (A-N only)
★LECT 1115-1200 MWThF, East Bank, 4 cr
–1 REC 1315-1400 M, East Bank,
–2 REC 1415-1500 M, East Bank,
–3 REC 1515-1600 M, East Bank,
–4 REC 1615-1700 M, East Bank,
–5 REC 1415-1500 T, East Bank,
–6 REC 1515-1600 T, East Bank,

R3012 **System Design** (prereq 3011, upper division elec engr maj)
0915-1000 MTWF, East Bank, 4 cr

R3061 **Analog Electronics** (prereq 3010, 3060, upper division elec engr or mech engr maj)
★LECT 1315-1400 MTWF, East Bank, 4 cr
–1 REC 1415-1500 M, East Bank,
–2 REC 1515-1600 M, East Bank,
–3 REC 1615-1700 M, East Bank,

R3062 **Digital Electronics** (prereq 3061, 3352 or ¶, upper division elec engr or mech engr maj)
1115-1200 MWThF, East Bank, 4 cr

R3110 **Electric and Magnetic Fields** (prereq upper div elec or mech engr maj, at least C grades in Phys 1291, Math 3212 or 3231) (A-N only)
★LECT 0815-0900 MTWF, East Bank, 4 cr
–1 REC 1415-1500 T, East Bank,
–2 REC 1515-1600 T, East Bank,
–3 REC 1615-1700 T, East Bank,

R3111 **Electromagnetic Waves** (prereq 3110, Math 3221, upper division elec engr maj)
★LECT 1015-1100 MWThF, East Bank, 4 cr
–1 REC 1315-1400 W, East Bank,
–2 REC 1415-1500 W, East Bank,
–3 REC 1515-1600 W, East Bank,
–4 REC 1615-1700 W, East Bank,
–5 REC 1315-1400 Th, East Bank,
–6 REC 1315-1400 Th, East Bank,

R3352 **Microprocessors** (prereq soph IT maj) (A-N only)
★LECT 1015-1100 MWF, East Bank, 4 cr
–1 REC 1415-1500 W, East Bank,
–2 REC 1515-1600 W, East Bank,
–3 REC 1615-1700 W, East Bank,
–4 REC 1315-1400 W, East Bank,
–5 REC 1315-1400 Th, East Bank,
–6 REC 1415-1500 Th, East Bank,
–1 LAB 1315-1500 M, East Bank,
–2 LAB 1315-1500 M, East Bank,
–3 LAB 0815-1000 T, East Bank,
–4 LAB 0815-1000 T, East Bank,
–5 LAB 1015-1200 T, East Bank,
–6 LAB 1015-1200 T, East Bank,
–7 LAB 1515-1700 T, East Bank,
–8 LAB 1515-1700 T, East Bank,
–9 LAB 1315-1500 W, East Bank,
–10 LAB 1315-1500 W, East Bank,
–11 LAB 0815-1000 Th, East Bank,
–12 LAB 0815-1000 Th, East Bank,
–13 LAB 1515-1700 Th, East Bank,
–14 LAB 1515-1700 Th, East Bank,
–15 LAB 1515-1700 F, East Bank,
–16 LAB 1515-1700 F, East Bank,

R3401 **Junior Electrical Engineering Laboratory** (prereq 3400, 3011 or ¶, 3061 or ¶) (A-N only)
★LECT 1215-1300 W, East Bank,
–1 LAB 1415-1700 W, East Bank, 2 cr
–2 LAB 0815-1100 Th, East Bank, 2 cr
–3 LAB 0815-1100 Th, East Bank, 2 cr
–4 LAB 1115-1400 Th, East Bank, 2 cr
–5 LAB 1115-1400 Th, East Bank, 2 cr
–6 LAB 1415-1700 Th, East Bank, 2 cr
–7 LAB 1415-1700 Th, East Bank, 2 cr
–8 LAB 1415-1700 F, East Bank, 2 cr

R3402 **Junior Electrical Engineering Laboratory** (prereq 3401, 3062 or ¶) (A-N only)
★LECT 1215-1300 M, East Bank,
–1 LAB 1415-1700 M, East Bank, 2 cr
–2 LAB 1415-1700 M, East Bank, 2 cr
–3 LAB 0815-1100 T, East Bank, 2 cr
–4 LAB 0815-1100 T, East Bank, 2 cr
–5 LAB 1115-1400 T, East Bank, 2 cr
–6 LAB 1115-1400 T, East Bank, 2 cr
–7 LAB 1415-1700 T, East Bank, 2 cr
–8 LAB 1415-1700 T, East Bank, 2 cr
–9 LAB 1415-1700 W, East Bank, 2 cr
–10 LAB 1415-1700 F, East Bank, 2 cr

R3476 **Industrial Assignment I** (prereq regis in intern program)
2 cr

R3477 **Industrial Assignment II** (prereq 3476)
2 cr

R5002 **Digital Signal Processing** (prereq 3012, IT stu or grad IT maj)
1215-1300 TWThF, East Bank, 4 cr

R5053 **Design of Digital Circuits** (prereq upper division elec engr or grad IT, 3351, 3062 or equiv) (A-N only)
1115-1200 MWF, East Bank, 3 cr

R5062 **Communication Circuits** (prereq upper division elec engr maj or grad IT, 3012, 5055 or #) (A-N only)
0915-1000 MWF, East Bank 3 cr

5090 **Digital Circuit Design Laboratory** (prereq ¶5053)
1 cr

5091 **Communications Circuits Laboratory** (prereq ¶5062)
1 cr

R5120 **Acoustics for Architects and Planners** (no EE majs; prereq Math 1231, Phys 1122 or 1052 or #...background in stat meth desirable)
0815-0900 MWF, East Bank, 3 cr

R5161 **Physical Electronics** (prereq 5160, IT stu or grad IT maj)
LECT 0945-1100 TTh, East Bank, 4 cr (lab ar)

R5203 **Data Communication** (prereq upper division elec engr maj or grad IT, 3012, Stat 3091 or #) (A-N only)
1315-1400 MWF, 3 cr

5241 **Data Communications Laboratory** (prereq ¶5203)
1 cr

R5252 **Digital Control Systems** (prereq upper division elec engr maj or grad IT, 3351, 3352 or equiv, 5002 or ¶5002) (A-N only)
1415-1500 MWF, 3 cr

5290 **Digital Control Systems Laboratory** (prereq ¶5252)
1 cr

R5322 **Electromechanical Processes and Devices** (prereq 5300 or #, IT stu or grad IT maj)
LECT 0815-0900 MWF, East Bank, 4 cr (lab ar)

R5333 **Energy Conversion Methods** (prereq 3060, 3111, Phys 3501 or ME 3301 or #) (A-N only)
1515-1600 MWF, 1515-1700 T, East Bank, 4 cr

R5470 **Directed Study** (prereq △)
ar cr

R5478 **Industrial Assignment III** (5478-5479†; prereq 3477, regis in intern program) (A-N only)
2 cr

R5479 **Industrial Assignment IV** (5478-5479†; prereq 5478)
2 cr

R5492H **Honors Project** (prereq 5491H)
1315-1600 Th, East Bank, 3 cr

R5502 **Synthesis of Active and Passive Networks** (prereq 5501)
–1 0945-1100 TTh, East Bank, 3 cr

R5573 **Test and Diagnostics** (prereq 5572)
–1 0915-1100 M, 0915-1000 W, East Bank, 3 cr

R5576 **VLSI Device Modeling** (prereq 5572)
–1 1015-1100 W, 0915-1100 F, East Bank, 3 cr

R5656 **High-Speed, Compound Semiconductor Devices III** (prereq 5655)
0815-0900 MWF, East Bank, 3 cr

R5662 **Semiconductor Properties and Devices** (prereq 5661)
–1 1115-1200 MWF, East Bank, 3 cr

R5669 **Magnetic Recording** (prereq #)
1115-1230 TTh, East Bank, 3 cr

R5670 **Basic Microelectronics** (prereq #)
★LECT 0815-0900 TTh, East Bank, 4 cr
–1 LAB 1415-1700 T, East Bank,
–2 LAB 1415-1700 W, East Bank,
–3 LAB 1415-1700 Th, East Bank,
–4 LAB 1415-1700 F, East Bank,

R5680 **Principles of Thin Film Technology** (prereq #)
0815-0930 TTh, East Bank, 4 cr (lab ar)

R5752 **Nonlinear System Design** (prereq grad standing or #)
1215-1300 MWF, East Bank, 3 cr

R5760 **Biological System Modelling and Analysis** (prereq #)
4 cr

R5815 **Semiconductor Power Devices and Applications** (prereq 3052, 3402 or grad standing)
0815-0930 TTh, East Bank, 3 cr

R8060 **Bipolar Transistor Theory** (prereq 5660 or #)
1215-1300 MWF, East Bank, 3 cr

R8090 **Seminar: Electronics** (prereq #)
–1 1515-1700 F, East Bank, ar cr

8191 **Seminar: Surface Physics** (prereq #)
Cohen, ar cr

R8206 **Digital Image Processing** (prereq #)
–1 0945-1100 TTh, East Bank, 3 cr

8252 **Advanced Control Topics** (prereq 8251)
1245-1400 TTh, East Bank, 3 cr

R8290 **Seminar: Control Theory** (prereq #)
–1 1415-1500 Th, East Bank, ar cr

8340 **Seminar: Electric Power** (prereq #)
Albertson, ar cr

R8356 **Computer Architecture II** (prereq 8355)
–1 1315-1400 MWF, East Bank, 3 cr

8460 **Plan B Project** (prereq #)
4 cr

ELEMENTARY EDUCATION (Elem)

Curriculum And Instruction Education

Winter Quarter

R3100 **Psychological Foundation of Elementary Education** (prereq 5 cr introductory psychology) (A-N only)
★LECT 1115-1200 MWF, East Bank, Samuels
–1 LAB 1215-1300 W, East Bank, 4 cr
–2 LAB 1215-1300 W, East Bank, 4 cr

R3101 **Introduction to Elementary School Teaching** (prereq ¶3100, elementary education maj) (A-N only)
★LECT 1315-1400 MWF, East Bank, Ellis
–1 LAB 1215-1300 F, East Bank, 3 cr
–2 LAB 1215-1300 F, East Bank, 3 cr

R3300 **Children's Literature** (A-N only)
1315-1400 TTh, East Bank, Odland, 3 cr

R3316 **Teaching English in the Elementary School** (prereq 3100, 3101, Engl 3851) (A-N only)
–1 1015-1100 MWF, East Bank, Monson, 3 cr (Blk W) (¶sec 1, 3331)
–2 1015-1100 MWF, East Bank, 3 cr (Blk X) (¶sec 2, 3331)

R3331 **Teaching Reading in the Elementary School** (prereq 3100, 3101) (A-N only)
–1 1115-1200 MWF, East Bank, Manning, 3 cr (Blk W) (¶sec 1, 3316)
–2 1115-1200 MWF, East Bank, Taylor, 3 cr (Blk X) (¶sec 2, 3316)

R3346 **Teaching Science in the Elementary School** (prereq 3100, 3101, 10 cr in natural science) (A-N only)
–1 1015-1200 MWF, East Bank, Humphreys, 3 cr (Blk Y) (¶sec 1, 3361, sec 1, 3391)
–2 1015-1200 MWF, Johnson, 3 cr (Blk Z) (¶sec 2, 3361, sec 2, 3391)
–3 1015-1200 MWF, East Bank, 3 cr (IIIA)

R3361 **Teaching Social Studies in the Elementary School** (prereq 3100, 3101) (A-N only)
–1 0915-1000 MWF, East Bank, Ellis, 3 cr (Blk Y) (¶sec 1, 3346, sec 1, 3391)
–2 0915-1000 MWF, 3 cr (Blk Z) ((¶sec 2, 3346, sec 2, 3391)
–3 0915-1000 MWF, East Bank, Cogan, 3 cr (IIIA)

R3376 **Nursery School-Kindergarten Curriculum I** (prereq 3100) (A-N only)
1315-1600 T, East Bank, Hansen, 3 cr

R3377 **Nursery School-Kindergarten Curriculum II** (prereq 3376) (A-N only)
1315-1600 Th, East Bank, 3 cr

R3378 **Social Learning in Early Childhood Education** (prereq CPsy 3301) (A-N only)
1630-1745 TTh, East Bank, Adolf, 3 cr

R3391 **Teaching Mathematics in the Elementary School** (prereq 3100, 3101, Math 1005, 1006) (A-N only)
–1 0815-0900 MWF, Stochl, 3 cr (Blk Y) (¶sec 1, 3346, sec 1, 3361)
–2 0815-0900 MWF, East Bank, Post, 3 cr (Blk Z) (¶sec 2, 3346, sec 2, 3361)
–3 0815-0900 MWF, East Bank, Jackson, 3 cr (IIIA)

3600 **Student Teaching in the Elementary School, Half Days** (prereq 12 cr methods, △) (S-N only)
6 cr

3603 **Student Teaching in the Kindergarten** (prereq 6 cr elem student tchg, △) (S-N only)
6 cr

3604 **Student Teaching in the Nursery School** (prereq approval of major adviser, director student teaching) (S-N only)
3-6 cr

3605 **Student Teaching in Elementary School: Half Days, Full Days** (prereq 15 cr methods, △) (S-N only)
9 cr

3607 **Student Teaching in Elementary School: Full Days** (prereq 18 cr methods, △) (S-N only)
12 cr

3621 **Junior Practicum in Elementary Education** (max 6 cr; prereq elementary education maj) (S-N only)
1-2 cr

3630 **Student Teaching in Elementary School Literature** (prereq 10 cr in elem student tchg, △) (S-N only)
3 cr

3631 **Student Teaching in Elementary School English** (prereq 10 cr in elem student tchg, △) (S-N only)
3 cr

3633 **Student Teaching in Elementary School Reading** (prereq 10 cr in elem student tchg, △) (S-N only)
3 cr

3634 **Student Teaching in Elementary School Science** (prereq 10 cr in elem student tchg, △) (S-N only)
3 cr

3636 **Student Teaching in Elementary School Social Studies** (prereq 10 cr in elem student tchg, △) (S-N only)
3 cr

3639 **Student Teaching in Elementary School Mathematics** (prereq 10 cr in elem student tchg, △) (S-N only)
3 cr

3900 **Directed Study** (max 6 cr; prereq elementary maj, △) (A-N only)
1-3 cr

5100 **Elementary School Curriculum** (prereq 3101) (A-N only)
Ellis, 3 cr (Rochester)

R5316 **Teaching and Supervision of English in the Elementary Schools** (prereq 3316 or elementary school teaching experience) (A-N only)
1615-1800 Th, East Bank, Monson, 3 cr

5333 **Instructional Leadership in Elementary Reading** (prereq 5331 or #) (A-N only)
1615-1800 M, East Bank, Manning, 3 cr

5334 **Reading Difficulties** (prereq 5331 or SeEd 5344) (A-N only)
1615-1800 T, East Bank, Schreiner, 3 cr

5338 **Teaching Reading in the Intermediate Grades** (prereq 3331, #) (A-N only)
1615-1800 W, East Bank, Taylor, 3 cr

R5348 **Workshop: Outdoor Science Education** (prereq elementary teaching experience) (A-N only)
Johnson, 3 cr (1800-2100 Jan 27, 0830-1630 Jan 28, 29, Mar 5, Woodlake Nature Center, Richfield, MN; 0830-1700 Feb 11, 0830-1300 Feb 12, Long Lake Conservation Center, Aitkin, MN)

R5378 **Contemporary Programs for Young Children** (max 3 cr; prereq MEd student in early childhood education) (A-N only)
1900-2100 M, East Bank, Moore, 2 cr

R5602 **Practicum: Improvement of Teaching** (prereq MEd student in elementary education, #) (S-N only)
3 cr

R8916 **Problems: Teaching English** (prereq #)
Dykstra, ar cr

R8931 **Problems: Teaching Reading** (prereq 5331 or SeEd 5344, #)
ar cr

R8961 **Problems: Teaching Social Studies** (prereq 5361 or SeEd 5155 or 8104, #)
ar cr

R8976 **Problems: Teaching Kindergarten** (prereq #)
Hansen, 3 cr

R8991 **Problems: Improvement of Instruction** (prereq #)
ar cr

Spring Quarter

1001 **Teaching in American Schools** (§SeEd 1001) (S-N optional)
1315-1500 TTh, East Bank, Cogan, 3 cr

3103 **The Teacher and the Elementary School** (§3101; prereq 3102) (A-N only)
1615-1830 W, East Bank, Cogan, 2 cr

R3300 **Children's Literature** (A-N only)
–1 1315-1400 TTh, East Bank, 3 cr
–2 1315-1400 TTh, East Bank, 3 cr

R3316 **Teaching English in the Elementary School** (prereq 3100, 3101, Engl 3851) (A-N only)
–1 1015-1100 MWF, East Bank, Monson, 3 cr (Blk Y) (¶sec 1, 3331)
–2 1015-1100 MWF, East Bank, Taylor, 3 cr (Blk Z) (¶sec 2, 3331)

R3331 **Teaching Reading in the Elementary School** (prereq 3100, 3101) (A-N only)
–1 1115-1200 MWF, East Bank, Manning, 3 cr (Blk Y) (¶sec 1, 3316)
–2 1115-1200 MWF, East Bank, Taylor, 3 cr (Blk Z) (¶sec 2, 3316)

R3346 **Teaching Science in the Elementary School** (prereq 3100, 3101, 10 cr in natural science) (A-N only)
–1 1015-1200 MWF, Johnson, 3 cr (Blk W) (¶sec 1, 3361, sec 1, 3391)
–2 1015-1200 MWF, Humphreys, 3 cr (Blk X) (¶sec 2, 3361, sec 2, 3391)

R3361 **Teaching Social Studies in the Elementary School** (prereq 3100, 3101) (A-N only)
–1 0915-1000 MWF, East Bank, Cogan, 3 cr (Blk W) (¶sec 1, 3346, sec 1, 3391)
–2 0915-1000 MWF, East Bank, Ellis, 3 cr (Blk X) (¶sec 2, 3346, sec 2, 3391)

R3377 **Nursery School-Kindergarten Curriculum II** (prereq 3376) (A–N only)
–1 1315-1500 TTh, East Bank, 3 cr
–2 1630-1745 TTh, East Bank, Weigand, 3 cr

R3378 **Social Learning in Early Childhood Education** (prereq CPsy 3301) (A–N only)
1515-1630 TTh, East Bank, McLoone, 3 cr

R3391 **Teaching Mathematics in the Elementary School** (prereq 3100, 3101, Math 1005, 1006) (A–N only)
–1 0815-0900 MWF, East Bank, Stochl, 3 cr (Blk W) (¶sec 1, 3346, sec 1, 3361)
–2 0815-0900 MWF, East Bank, Post, 3 cr (Blk X) (¶sec 2, 3346, sec 2, 3361)

3600 **Student Teaching in the Elementary School, Half Days** (prereq 12 cr methods, △) (S–N only)
6 cr

3603 **Student Teaching in the Kindergarten** (prereq 6 cr elem student tchg, △) (S–N only)
6 cr

3604 **Student Teaching in the Nursery School** (prereq approval of major adviser, director student teaching) (S–N only)
3–6 cr

3605 **Student Teaching in Elementary School: Half Days, Full Days** (prereq 15 cr methods, △) (S–N only)
9 cr

3607 **Student Teaching in Elementary School: Full Days** (prereq 18 cr methods, △) (S–N only)
12 cr

3621 **Junior Practicum in Elementary Education** (max 6 cr; prereq elementary education maj) (S–N only)
1–2 cr

3630 **Student Teaching in Elementary School Literature** (prereq 10 cr in elem student tchg, △) (S–N only)
3 cr

3631 **Student Teaching in Elementary School English** (prereq 10 cr in elem student tchg, △) (S–N only)
3 cr

3633 **Student Teaching in Elementary School Reading** (prereq 10 cr in elem student tchg, △) (S–N only)
3 cr

3634 **Student Teaching in Elementary School Science** (prereq 10 cr in elem student tchg, △) (S–N only)
3 cr

3636 **Student Teaching in Elementary School Social Studies** (prereq 10 cr in elem student tchg, △) (S–N only)
3 cr

3639 **Student Teaching in Elementary School Mathematics** (prereq 10 cr in elem student tchg, △) (S–N only)
3 cr

3900 **Directed Study** (max 6 cr; prereq elementary maj, △) (A–N only)
1–3 cr

5100 **Elementary School Curriculum** (prereq 3101) (A–N only)
1615-1800 W, East Bank, Ellis, 3 cr

5107 **Diagnosis and Treatment of Learning Difficulties** (A–N only)
Schreiner, 3 cr (Morris)

5140 **Microcomputer Uses in Elementary Classrooms** (§CISy 5206) (A–N only)
1615-1900 W, Stochl, 3 cr (off campus)

R5300 **Literature for the Elementary School** (A–N only)
1615-1800 T, East Bank, Odland, 3 cr

5305 **Survey of Special Collections in Children's Literature** (prereq 5300 or #) (A–N only)
1615-1800 Th, East Bank, Odland, 3 cr

R5335 **Clinical Diagnosis of Reading Difficulties** (prereq 5334) (A–N only)
1615-1800 W, East Bank, Schreiner, 3 cr

5337 **Beginning Reading Instruction** (prereq 3331, #) (A–N only)
1615-1800 M, East Bank, Manning, 3 cr

R5347 **Workshop: Curriculum Implementation in Elementary School Science** (prereq elementary teaching experience) (A–N only)
0900-1200 S, Johnson, 3–6 cr

5350 **Elementary School Science: Materials and Resources** (prereq 5349) (A–N only)
Humphreys, 3 cr (Rochester)

R5362 **Materials Laboratory for Elementary Social Studies Teachers** (prereq 3361 or 5361 or #) (A–N only)
1615-1800 Th, Ellis, 3 cr

R5377 **Early Childhood Education: Materials and Resources** (prereq 3377 or 5376, teaching experience) (A–N only)
1615-1830 W, East Bank, Hansen, 3 cr

5378 **Contemporary Programs for Young Children** (max 3 cr; prereq MEd student in early childhood education) (A–N only)
Moore, 1–3 cr

R5602 **Practicum: Improvement of Teaching** (prereq MEd student in elementary education, #) (S–N only)
3 cr

R8300 **Research in Special Collections of Children's Literature** (max 6 cr)
1615-1800 Th, East Bank, Odland, 1–3 cr

R8916 **Problems: Teaching English** (prereq #)
Dykstra, ar cr

R8931 **Problems: Teaching Reading** (prereq 5331 or SeEd 5344, #)
ar cr

R8961 **Problems: Teaching Social Studies** (prereq 5361 or SeEd 5155 or 8104, #)
ar cr

R8976 **Problems: Teaching Kindergarten** (prereq #)
Hansen, 3 cr

R8991 **Problems: Improvement of Instruction** (prereq #)
ar cr

8992 **Research: Educational Diagnosis**
1015-1230 T, East Bank, Schreiner, 3 cr

ENGLISH AS A SECOND LANGUAGE (ESL)
Linguistics
Liberal Arts

Winter Quarter

R0100 **English as a Second Language** (prereq △)
–1 0915-1000 MTWThF, East Bank, 0 cr
–2 0915-1000 MTWThF, East Bank, 0 cr
–3 0915-1000 MTWThF, East Bank, 0 cr
–4 0915-1000 MTWThF, East Bank, 0 cr
–5 1015-1100 MTWThF, East Bank, 0 cr
–6 1015-1100 MTWThF, East Bank, 0 cr
–7 1115-1200 MTWThF, East Bank, 0 cr
–8 1115-1200 MTWThF, East Bank, 0 cr
–9 1115-1200 MTWThF, East Bank, 0 cr

R0110 **English as a Second Language** (prereq △)
–1 0915-1000 MTWThF, East Bank, 0 cr
–2 1015-1100 MTWThF, East Bank, 0 cr
–3 1115-1200 MTWThF, East Bank, 0 cr
–4 1115-1200 MTWThF, East Bank, 0 cr
–5 1315-1400 MTWThF, East Bank, 0 cr
–6 1315-1400 MTWThF, East Bank, 0 cr
–7 1315-1400 MTWThF, East Bank, 0 cr
–8 1315-1400 MTWThF, East Bank, 0 cr
–9 1415-1500 MTWThF, East Bank, 0 cr
–10 1415-1500 MTWThF, East Bank, 0 cr
–11 1415-1500 MTWThF, East Bank, 0 cr

R0120 **English as a Second Language** (prereq △)
–1 0815-0900 MTWThF, East Bank, 0 cr
–2 0815-0900 MTWThF, East Bank, 0 cr
–3 0915-1000 MTWThF, East Bank, 0 cr
–4 0915-1000 MTWThF, East Bank, 0 cr
–5 1015-1100 MTWThF, East Bank, 0 cr
–6 1015-1100 MTWThF, East Bank, 0 cr
–7 1315-1400 MTWThF, East Bank, 0 cr
–8 1415-1500 MTWThF, East Bank, 0 cr
–9 1415-1500 MTWThF, East Bank, 0 cr

R0130 **English as a Second Language** (prereq △)
–1 1015-1100 MTWThF, East Bank, 0 cr
–2 1115-1200 MTWThF, East Bank, 0 cr
–3 1415-1500 MTWThF, East Bank, 0 cr

Spring Quarter

R0100 **English as a Second Language** (prereq △)
–1 0815-0900 MTWThF, East Bank, 0 cr
–2 0915-1000 MTWThF, East Bank, 0 cr
–3 0915-1000 MTWThF, East Bank, 0 cr
–4 1015-1100 MTWThF, East Bank, 0 cr
–5 1015-1100 MTWThF, East Bank, 0 cr
–6 1115-1200 MTWThF, East Bank, 0 cr
–7 1115-1200 MTWThF, East Bank, 0 cr
–8 1315-1400 MTWThF, East Bank, 0 cr
–9 1415-1500 MTWThF, East Bank, 0 cr
–10 1415-1500 MTWThF, East Bank, 0 cr

R0110 **English as a Second Language** (prereq △)
–1 0815-0900 MTWThF, East Bank, 0 cr
–2 0815-0900 MTWThF, East Bank, 0 cr
–3 0915-1000 MTWThF, East Bank, 0 cr
–4 0915-1000 MTWThF, East Bank, 0 cr
–5 0915-1000 MTWThF, East Bank, 0 cr
–6 1015-1100 MTWThF, East Bank, 0 cr
–7 1015-1100 MTWThF, East Bank, 0 cr
–8 1115-1200 MTWThF, East Bank, 0 cr
–9 1115-1200 MTWThF, East Bank, 0 cr
–10 1115-1200 MTWThF, East Bank, 0 cr
–11 1315-1400 MTWThF, East Bank, 0 cr
–12 1315-1400 MTWThF, East Bank, 0 cr
–13 1315-1400 MTWThF, East Bank, 0 cr
–14 1415-1500 MTWThF, East Bank, 0 cr
–15 1415-1500 MTWThF, East Bank, 0 cr

R0120 **English as a Second Language** (prereq △)
–1 0815-0900 MTWThF, East Bank, 0 cr
–2 0815-0900 MTWThF, East Bank, 0 cr
–3 0815-0900 MTWThF, East Bank, 0 cr
–4 0915-1000 MTWThF, East Bank, 0 cr
–5 0915-1000 MTWThF, East Bank, 0 cr
–6 0915-1000 MTWThF, East Bank, 0 cr
–7 1015-1100 MTWThF, East Bank, 0 cr
–8 1015-1100 MTWThF, East Bank, 0 cr
–9 1015-1100 MTWThF, East Bank, 0 cr
–10 1315-1400 MTWThF, East Bank, 0 cr
–11 1315-1400 MTWThF, East Bank, 0 cr
–12 1415-1500 MTWThF, East Bank, 0 cr

R0130 **English as a Second Language** (prereq △)
–1 0815-0900 MTWThF, East Bank, 0 cr
–2 0815-0900 MTWThF, East Bank, 0 cr
–3 0815-0900 MTWThF, East Bank, 0 cr
–4 0915-1000 MTWThF, East Bank, 0 cr
–5 1015-1100 MTWThF, East Bank, 0 cr
–6 1015-1100 MTWThF, East Bank, 0 cr
–7 1115-1200 MTWThF, East Bank, 0 cr
–8 1115-1200 MTWThF, East Bank, 0 cr
–9 1315-1400 MTWThF, East Bank, 0 cr
–10 1315-1400 MTWThF, East Bank, 0 cr
–11 1415-1500 MTWThF, East Bank, 0 cr
–12 1415-1500 MTWThF, East Bank, 0 cr
–13 1515-1600 MTWThF, East Bank, 0 cr
–14 1515-1600 MTWThF, East Bank, 0 cr

ENGLISH LANGUAGE AND LITERATURE (Engl)
Liberal Arts

Winter Quarter

R1009 **Introduction to the Study of Literature**
–1 0815-0900 MWF, East Bank, Taylor, 4 cr
–2 0915-1000 MWF, East Bank, Stave, 4 cr
–3 1215-1300 MWF, East Bank, Johnson, 4 cr
–4 0945-1100 TTh, East Bank, Martin, 4 cr

R1016 **Introduction to American Literature**
0815-0900 MWF, East Bank, Pankake, 4 cr

R1018 **Introduction to Modern Fiction**
1015-1100 MWF, East Bank, Westrum, 4 cr

R1019 **Introduction to Modern Literature: Drama**
0815-0930 TTh, East Bank, Luke, 4 cr

R1020 **Introduction to Literature: Topics: Masterpieces of World Literature**
1315-1400 MWF, East Bank, L Durham, 4 cr

R1241 **Introduction to Shakespeare**
1215-1300 MWF, East Bank, Clayton, 4 cr

R1671 **The Short Story**
1245-1400 TTh, East Bank, Savage, 4 cr

R3112 **Survey of English Literature**
1015-1100 MWF, East Bank, Rosendahl, 4 cr

R3119 **The Victorian Age**
0815-0930 TTh, East Bank, M Durham, 4 cr

R3218 **Medieval Literature in Translation**
1215-1300 MWF, East Bank, Kendall, 4 cr

R3241 **Shakespeare** (§3243)
–1 0915-1000 MWF, East Bank, Haley, 4 cr
–2 1215-1300 MWF, East Bank, Haley, 4 cr
–3 1245-1400 TTh, East Bank, Solotaroff, 4 cr

R3242 **Shakespeare** (§3243)
–1 1015-1100 MWF, East Bank, E Anderson, 4 cr
–2 1015-1100 MWF, East Bank, L Durham, 4 cr
–3 1115-1200 MWF, East Bank, Unger, 4 cr
–4 1415-1500 MWF, East Bank, Rosendahl, 4 cr
–5 1115-1230 TTh, East Bank, Reed, 4 cr

R3243 **Shakespeare: Major and Representative Plays** (§3241, 3242)
1315-1500 MWF, East Bank, Sugnet, 8 cr

R3356 **Modern British Literature 1914-1939**
1115-1230 TTh, East Bank, Firchow, 4 cr

R3413 **Survey of American Literature, 1900-1945**
1315-1400 MWF, East Bank, Ross, 4 cr

R3718 **Practical Criticism** (prereq 1009 or equiv, two courses in literature or △)
1115-1230 TTh, East Bank, M Durham, 4 cr

R3852 **Aspects of the English Language**
1115-1200 MWF, East Bank, MacLeish, 4 cr

R3910 **Topics in English and American Literature: Shakespeare's Sonnets**
1415-1500 MWF, East Bank, Haley, 4 cr

R3920 **Topics in English and American Literature**
–1 1015-1100 MWF, East Bank, Sugnet, 4 cr (American Nature Writing)
–2 1545-1700 TTh, East Bank, Beyer, Wilbers, 4 cr (American Authors in Person)

R3960 **Junior-Senior Seminar** (prereq consent of director of undergrad studies, △)
–1 1415-1530 MW, East Bank, Przybylowicz, 4 cr
–2 1115-1230 TTh, East Bank, Hancher, 4 cr (Robert Browning and Elizabeth Barrett Browning)

R3960H **Junior-Senior Seminar: Blake and Byron** (prereq consent of director of undergrad studies, Engl honors advisor, △)
1115-1230 TTh, East Bank, Luke, 4 cr

3963H **Honors Thesis** (prereq honors candidacy in Engl, consent of Engl honors adviser)
4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1–15 cr

3980 **Directed Instruction** (prereq #, △, college approval)
ar cr

R5100 **Advanced Nonfiction Writing: Computers and Writing** (prereq △)
1245-1400 TTh, East Bank, Bridwell, 4 cr

R5102 **Advanced Fiction Writing** (prereq △) (S–N only)
1415-1700 Th, East Bank, Hampl, 4 cr

R5105 **Advanced Poetry Writing** (prereq △) (S–N only)
1415-1700 T, East Bank, Browne, 4 cr

R5151 **18th Century English Novel**
1245-1400 TTh, East Bank, Hirsch, 4 cr

R5174 **Modern Drama, 1880-1920**
1415-1530 TTh, East Bank, Hurrell, 4 cr

R5212 **Readings in Old English Prose and Verse** (prereq 5211)
0915-1000 MWF, East Bank, Kendall, 4 cr

R5221 **Chaucer I: The Canterbury Tales**
1315-1430 MWF, East Bank, MacLeish, 5 cr

R5261 **Milton**
1115-1200 MWF, East Bank, O'Brien, 4 cr

R5364 **James Joyce**
0815-0900 MWF, East Bank, Anderson, 4 cr

R5365 **T. S. Eliot**
0945-1100 TTh, East Bank, Wright, 4 cr

R5431 **American Poetry**
1315-1400 MWF, East Bank, Geffen, 4 cr

R5452 **American Novel**
0815-0930 TTh, East Bank, Bales, 4 cr

R5610 **20th Century Writers: Recent American Novel**
0945-1100 TTh, East Bank, Solotaroff, 4 cr

R5620 **British and American Women Writers: American Women Poets: Emily Dickinson, H.D., Adrienne Rich** (max 16 cr)
1415-1530 TTh, East Bank, McNaron, 4 cr

R5671 **Theory of the Novel**
1215-1300 MWF, East Bank, Przybylowicz, 4 cr

R5711 **Classics of Literary Criticism**
1315-1400 MWF, East Bank, Clayton, 4 cr

R5860 **Studies in the English Language: Old Irish II** (prereq 5851 or #)
1115-1200 MWF, East Bank, Ward, 4 cr

5970 **Directed Study in Writing** (prereq #, △, CLA approval)
1–4 cr

R8050 **Studies in Special Subjects** (prereq #)
1415-1615 T, East Bank, Brown, 4 cr

R8230 **Renaissance Studies: Studies in Spenser**
1415-1615 W, East Bank, O'Brien, 4 cr

R8310 **Seminar: Studies in the English Romantic Movement: Wordsworth's Prelude**
1415-1615 M, East Bank, Fruman, 4 cr

R8330 **Victorian Studies: Space and Time in the Victorian Novel**
1415-1615 T, East Bank, Madden, 4 cr

R8410 **Studies in Writing: Writing for Special Purposes and Audiences: Readers' Response to 'Ordinary' Texts** (prereq #)
1415-1615 W, East Bank, Ross, 4 cr

R8610 **Studies in 20th-Century British and American Literature**
1415-1615 M, East Bank, Furia, 4 cr

R8650 **Studies in Poetry: Changes in English Poetic Styles, 1560-1960**
1415-1615 W, East Bank, Wright, 4 cr

8970 **Independent Readings** (prereq #)
1–15 cr

Spring Quarter

R1009 **Introduction to the Study of Literature**
–1 0815-0900 MWF, East Bank, Tregeser, 4 cr
–2 1315-1400 MWF, East Bank, Murray, 4 cr
–3 1515-1600 MWF, East Bank, Young, 4 cr

R1016 **Introduction to American Literature**
0945-1100 TTh, East Bank, Solotaroff, 4 cr

R1017 **Introduction to Modern Poetry**
1315-1400 MWF, East Bank, Ward, 4 cr

R1018 **Introduction to Modern Fiction**
–1 0815-0900 MWF, East Bank, Santelman, 4 cr
–2 0915-1000 MWF, East Bank, Reed, 4 cr

R1019 **Introduction to Modern Literature: Drama**
1315-1400 MWF, East Bank, Savage, 4 cr

R1101 **Introduction to Fiction Writing** (prereq compl of writing practice or equiv)
1115-1230 TTh, East Bank, Sullivan, 4 cr

R1241 **Introduction to Shakespeare**
1215-1300 MWF, East Bank, Haley, 4 cr

R1671 **The Short Story**
1015-1100 MWF, East Bank, Madden, 4 cr

R3113 **Survey of English Literature**
1015-1100 MWF, East Bank, Rosendahl, 4 cr

R3116 **The Renissance**
0915-1000 MWF, East Bank, Haley, 4 cr

R3117 **The Restoration and 18th Century**
1315-1400 MWF, East Bank, Leyasmeyer, 4 cr

R3241 **Shakespeare** (§3243)
1415-1500 MWF, East Bank, Hancher, 4 cr

R3242 **Shakespeare** (§3243)
–1 0915-1000 MWF, East Bank, Wright, 4 cr
–2 1115-1200 MWF, East Bank, Wright, 4 cr
–3 1415-1500 MWF, East Bank, Haley, 4 cr
–4 0815-0930 TTh, East Bank, M Durham, 4 cr
–5 1115-1230 TTh, East Bank, M Durham, 4 cr
–6 1415-1530 TTh, East Bank, Eaton, 4 cr

R3357 **Modern British Literature, 1939-1975**
1015-1100 MWF, East Bank, Firchow, 4 cr

R3412 **Survey of American Literature, 1850-1900**
1245-1400 TTh, East Bank, Przybylowicz, 4 cr

R3718 **Practical Criticism** (prereq 1009 or equiv, two courses in literature or △)
–1 1415-1500 MWF, East Bank, Fruman, 4 cr
–2 0815-0930 TTh, East Bank, Bales, 4 cr

R3851 **The English Language** (§5851)
0915-1000 MWF, East Bank, Bridwell, 4 cr

R3852 **Aspects of the English Language**
1115-1230 TTh, East Bank, Escure, 4 cr

R3960 **Junior-Senior Seminar** (prereq consent of director of undergrad studies, △)
–1 1015-1130 MW, East Bank, Roth, 4 cr (Poe and Romantic Fiction)
–2 1315-1430 MW, East Bank, Hurrell, 4 cr (Fiction and Film)
–3 1415-1530 MW, East Bank, L Durham, 4 cr (English Lyric Poetry of the 16th Century)

3963H **Honors Thesis** (prereq honors candidacy in Engl, consent of Engl honors adviser)
4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1–15 cr

3980 **Directed Instruction** (prereq #, △, college approval)
ar cr

R5103 **Advanced Fiction Writing** (prereq △) (S–N only)
1415-1700 Th, East Bank, Hampl, 4 cr

R5153 **20th Century English Novel**
1115-1200 MWF, East Bank, Reed, 4 cr

R5171 **English Drama to the Time of Shakespeare** (prereq 3241 or 3242)
1215-1300 MWF, East Bank, L Durham, 4 cr

R5175 **Modern Drama Since 1920**
1015-1100 MWF, East Bank, Leyasmeyer, 4 cr

R5213 **Beowulf** (prereq 5211)
0945-1100 TTh, East Bank, Kendall, 4 cr

R5216 **Major 14th Century Poets** (prereq 5221)
1115-1200 MWF, East Bank, Ward, 4 cr

R5240 **Advanced Shakespeare** (max 12 cr; prereq 3241, 3242 or 3243 or #)
0815-0930 TTh, East Bank, McNaron, 4 cr

R5261 **Milton**
1115-1200 MWF, East Bank, Unger, 4 cr

R5483 **Folklore** (prereq 5481 or 5482 or #)
0815-0930 TTh, East Bank, Stekert, 4 cr

R5530 **Early 19th-Century American Writers: Emerson, Thoreau, Whitman** (max 12 cr)
1245-1400 TTh, East Bank, Ross, 4 cr

R5620 **British and American Women Writers: Silence and Breaking as Feminist and Literary Traditions** (max 16 cr)
0945-1100 TTh, East Bank, Garner, 4 cr

R5632 **Romantic Tradition**
1015-1100 MWF, East Bank, Fruman, 4 cr

R5831 **American English**
1015-1100 MWF, East Bank, MacLeish, 4 cr

R5851 **Structure of Modern English** (§3851)
1245-1400 TTh, East Bank, Brown, 4 cr

R5910 **Topics in English and American Literature**
–1 1245-1400 TTh, East Bank, McNaron, 4 cr (Women Novelists)
–2 1415-1530 TTh, East Bank, Anderson, 4 cr (Irish Poetry After Yeats)

R5920 **Topics in English and American Literature**
–1 1115-1230 TTh, East Bank, Stekert, 4 cr (Folklore and Women)
–2 1415-1530 TTh, East Bank, Sugnet, 4 cr (Imperial Psychology in Western Literature)

R5940 **Figures in English and American Literature: Marlowe and Sidney**
1315-1400 MWF, East Bank, O'Brien, 4 cr

5970 **Directed Study in Writing** (prereq #, △, CLA approval)
1–4 cr

R8240 **Shakespeare: Feminist Criticism of Shakespeare**
1415-1615 T, East Bank, Garner, 4 cr

R8250 **Seminar in 17th-Century Studies: Metaphysical Poetry and Modern Criticism**
1415-1615 W, East Bank, Unger, 4 cr

R8430 **Writing of Poetry** (prereq #)
1415-1700 T, East Bank, Hampl, 4 cr

R8530 **Studies in 19th Century American Literature: Hawthorne**
1415-1615 M, East Bank, Roth, 4 cr

R8610 **Studies in 20th-Century British and American Literature: Poetry and Critical Prose of Hopkins and Joyce**
1000-1200 T, East Bank, Anderson, 4 cr

R8670 **Studies in Prose Fiction: Huxley and Orwell**
1415-1615 W, East Bank, Firchow, 4 cr

R8690 **Seminar: Studies in Drama: Dramatic Theory**
1515-1700 M, East Bank, Hurrell, 4 cr

R8810 **Studies in the English Language**
–1 1415-1615 M, East Bank, Bridwell, 4 cr (Psycholinguistic Foundations of the Reading and Writing Processes)
–2 1415-1615 T, East Bank, Escure, 4 cr (American Pidgins and Creoles)

8970 **Independent Readings** (prereq #)
1-15 cr

ENTOMOLOGY (Ent)
Agriculture

Winter Quarter

3100 **Entomological Techniques** (prereq 3175 or equiv or #)
ar cr

5000 **Professional Experience Program** (prereq #) (S-N only)
4 cr

5001 **Basic Entomology** (prereq #)
ar cr

5027 **Insect Physiology** (prereq #...BioC 5001, 5002 or MdBc 5100 rec)
1300-1345 MTWThF, St. Paul, Brooks-Wallace, Jones, 5 cr

R5050 **Forest Entomology** (prereq any two courses among the forestry, zoological, botanical, biol and/or agri scieces)
★LECT 0900-0945 MWF, St. Paul, Kulman
–1 LAB 1300-1445 Th, St. Paul, 4 cr
–2 LAB 1300-1445 Th, St. Paul, 4 cr
–3 LAB 1500-1645 Th, St. Paul, 4 cr
–4 LAB 1500-1645 Th, St. Paul, 4 cr

5150 **Lepidopterology** (prereq one course in entomology or #...one course each in ecology and genetics rec)
1500-1545 TTh, St. Paul, Miller, 2 cr

5200 **Apiculture** (prereq 9 cr entomology or biology)
★LECT 0800-0845 MWF, St. Paul, Furgala, 4 cr
–1 LAB 0900-1045 F, St. Paul,

5210 **Integrated Pest Management** (prereq 1005 or #, ¶5212)
1100-1145 MTWThF, St. Paul, Radcliffe, 5 cr

R5212 **Entomophagous Insects** (prereq 1005 or 3175 or 5050)
0800-1045 MW, St. Paul, Cook, 2 cr

5215 **Insects in Relation to Plant Diseases** (§PlPa 5215; prereq 5 cr plant pathology, entomology or equiv or #)
0800-0945 TTh, St. Paul, Ragsdale, Wilcoxson, 4 cr (lab ar)

5280 **Livestock Entomology** (prereq 3175 or #...AnSc 1100 or equiv, Ent 5275 helpful but not required)
0800-0930 TTh, St. Paul, Moon, 3 cr

5425 **Special Lectures in Entomology**
ar cr

5901 **Special Problems in Entomology** (prereq #)
ar cr

8200 **Seminar** (prereq #)
ar cr

8210 **Current Topics: Forest Entomology**
1500-1645 M, St. Paul, Kulman, 1-3 cr

8250 **Topics in Apiculture** (prereq 3175, 5200 or #)
1200-1345 W, St. Paul, Furgala, 1-3 cr

8305 **Insect Ecology** (prereq 5400 or #)
★LECT 1300-1345 TTh, St. Paul, Chiang, 3 cr
–1 LAB 1400-1545 TTh, St. Paul, Chiang

8323 **Topics in Insect Physiology** (prereq #)
Jones, ar cr

8400 **Insecticides and Their Action** (prereq 15 cr including 1005 or #, inorganic, organic chemistry)
1100-1145 MWF, St. Paul, Cutkomp, 3 cr

8405 **Insecticides Laboratory** (prereq 8400 or ¶)
0800-1045 MW, St. Paul, Cutkomp, 2 cr

8500 **Research in Entomology** (prereq #)
ar cr

Spring Quarter

R1005 **Economic Entomology** (prereq Biol 1011 or #)
★LECT 1100-1145 MWF, St. Paul, Ragsdale
–1 LAB 1400-1545 MW, St. Paul, 4 cr
–2 LAB 1600-1745 MW, St. Paul, 4 cr
–3 LAB 0800-0945 TTh, St. Paul, 4 cr
–4 LAB 1000-1145 TTh, St. Paul, 4 cr
–5 LAB 1300-1445 TTh, St. Paul, 4 cr

R3020 **Principles of Beekeeping** (prereq Biol 1011 or #)
★LECT 0800-0845 TTh, St. Paul, Furgala, 4 cr
–1 LAB 0900-1045 TTh, St. Paul,

3100 **Entomological Techniques** (prereq 3175 or equiv or #)
ar cr

5000 **Professional Experience Program** (prereq #) (S-N only)
4 cr

5001 **Basic Entomology** (prereq #)
ar cr

R5275 **Medical Entomology** (prereq 3175 or #)
★LECT 1300-1345 TTh, St. Paul, Price, 4 cr
–1 LAB 1400-1545 TTh, St. Paul,

5425 **Special Lectures in Entomology**
ar cr

5901 **Special Problems in Entomology** (prereq #)
ar cr

8027 **Advanced Insect Physiology** (prereq 5027)
★LECT 0900-0945 T, St. Paul, Jones, 3 cr
–1 LAB 1300-1645 Th, St. Paul,

8200 **Seminar** (prereq #)
ar cr

8500 **Research in Entomology** (prereq #)
ar cr

FAMILY SOCIAL SCIENCE (FSoS)
Home Economics

Winter Quarter

R1001 **Dynamics of Family Relationships** (§1002)
–1 0845-1000 MW, East Bank, Turnbloom, 3 cr (Mpls)
–2 0945-1100 TTh, West Bank, Thibault, 3 cr (Mpls)
–3 1200-1315 TTh, St. Paul, Thibault, 3 cr

R1002 **Dynamics of Dating, Courtship, Marriage** (§1001; prereq upper division, married or engaged student)
1500-1700 TTh, St. Paul, Olson, 3 cr

R1025 **Parenthood**
1245-1400 TTh, West Bank, Kwiecien, 4 cr (Mpls)

R1401 **Household Equipment** (prereq soph or #...GC 1163 or Phys 1001 or 1041 rec)
1300-1430 TTh, St. Paul, Yust, 4 cr (lab ar)

R3001 **Communications Skills, Interviewing Techniques: An Introduction** (prereq 1001)
1400-1630 T, St. Paul, Berry, 3 cr

R3240 **Special Topics** (max 9 cr; prereq soph or above)
3 cr

R3260 **Home Management Principles** (prereq AgEc 1030)
1000-1045 MWF, St. Paul, Guadagno, 3 cr

R5001 **Human Sexual Behavior** (prereq 15 cr psychology or sociology)
1000-1115 TTh, St. Paul, Neubeck, 4 cr

R5200 **Family Relationships** (prereq Psy 1001, Soc 1001)
1400-1530 MW, St. Paul, Hey, 5 cr

R5210 **Family in World Perspective** (prereq 5200, Anth 1102 or #)
1000-1030 MW, St. Paul, Rosenblatt, 5 cr

R5219 **Problems in Family Financial Management** (prereq 3260 or 5260, 3001 or #)
1500-1700 T, St. Paul, Gage, 3-4 cr

5230 **Independent Study in Family Social Science** (max 16 cr; prereq #)
1-5 cr

5231 **Internship: Planning** (prereq #)
Yust, 1 cr

5232 **Internship: Work Experience** (prereq 5231)
Yust, 5 cr

5233 **Internship: Evaluation** (prereq 5232)
Yust, 1 cr

R5240 **Special Topics in Family Social Science** (max 16 cr)
–1 1500-1700 Th, St. Paul, Gage, Zimmerman, 3 cr (Public Policy and Consumer)
–2 1715-1930 Th, East Bank, Terrell, Maddock, others, 3 cr (Mpls)

R5249 **Field Work: Directed Community Work Experience** (max 15 cr; prereq 5200, #)
–1 0900-1030 T, St. Paul, Berry, 3-5 cr
–2 1530-1700 W, St. Paul, Berry, 3-5 cr

R5301 **The Family and Energy Issues** (prereq 5 cr in FSoS or #)
1000-1130 TTh, St. Paul, Yust, 3 cr

8203 **Family Stress, Coping, Adaptation** (§SW 8203, PubH 5620)
1300-1600 Th, St. Paul, McCubbin, 3 cr

R8214 **Marriage and Family Counseling I** (§Psy 8214; prereq #) (A-N only)
1000-1215 T, St. Paul, Boss, 3 cr

R8217 **Family-of-Origin Seminar I** (prereq family counseling intern, #) (A-N only)
1230-1345 T, St. Paul, Boss, 2 cr

8222 **Internship in Teaching College Level Family Courses II** (prereq 12 cr in FSoS, #)
1400-1530 W, St. Paul, Neubeck, 3-6 cr

8230 **Directed Study** (prereq #)
1-5 cr

R8251 **Problems: Family Social Science** (prereq #)
1-5 cr

8252 **Problems: Family Social Science** (prereq #)
4 cr

8262 **Process Seminar for Family II** (prereq #)
1600-1800 M, Hey, 2 cr

8266 **Family Research Methology I** (prereq 8255 or #) (A-N only)
0915-1100 MF, St. Paul, Guadagno, 4 cr

8270 **Practicum: Family Research** (prereq #)
1-5 cr

8552 **Marriage and Family Counseling Internship II** (prereq 8214, 8215, 8216, #)
1500-1630 M, St. Paul, ar cr

8666 **Dissertation Research** (max 15 cr; prereq #) (S-N only)
1-5 cr

Spring Quarter

R1001 **Dynamics of Family Relationships** (§1002)
–1 1200-1315 TTh, St. Paul, Thibault, 3 cr
–2 0915-1030 TTh, West Bank, Thibault, 3 cr (Mpls)
–3 1115-1230 MW, East Bank, Turnbloom, 3 cr (Mpls)

R1002 **Dynamics of Dating, Courtship, Marriage** (§1001; prereq upper division, married or engaged student)
1530-1700 TTh, East Bank, Leach, 3 cr (Mpls)

R1025 **Parenthood**
1215-1330 MW, West Bank, Markoff, 4 cr (Mpls)

R1401 **Household Equipment** (prereq soph or #...GC 1163 or Phys 1001 or 1041 rec)
1000-1130 TTh, St. Paul, Yust, 4 cr (lab ar)

3240 **Special Topics** (max 9 cr; prereq soph or above)
3 cr

R3260 **Home Management Principles** (prereq AgEc 1030)
1400-1530 TTh, St. Paul, Hogan, 3 cr

5001 **Human Sexual Behavior** (prereq 15 cr psychology or sociology)
1015-1130 TTh, West Bank, Neubeck, 4 cr (Mpls)

R5200 **Family Relationships** (prereq Psy 1001, Soc 1001)
1400-1530 MW, St. Paul, Hey, 5 cr

R5218 **Family Financial Management** (prereq 3260, 5 cr in FSoS or #)
1400-1515 TTh, St. Paul, Guadagno, 3 cr

R5220 **Family Economics** (prereq 3260 or #)
1400-1445 MWF, St. Paul, Gage, 3 cr

5230 **Independent Study in Family Social Science** (max 16 cr; prereq #)
1-5 cr

5231 **Internship: Planning** (prereq #)
Yust, 1 cr

5232 **Internship: Work Experience** (prereq 5231)
Yust, 5 cr

5233 **Internship: Evaluation** (prereq 5232)
Yust, 1 cr

R5240 **Special Topics in Family Social Science** (max 16 cr)
–1 1300-1530 Th, St. Paul, Zimmerman, 3 cr
–2 1715-1930 Th, East Bank, Maddock, Terrel, others, 3 cr (Mpls)

R5242 **Death, Other Losses and the Family** (prereq 5202 or equiv)
1810-2040 Th, St. Paul, Rosenblatt, 3 cr

R5249 **Field Work: Directed Community Work Experience** (max 15 cr; prereq 5200, #)
–1 1400-1530 M, St. Paul, Yust, 3-5 cr
–2 0900-1030 T, St. Paul, Berry, 3-5 cr
–3 1530-1700 W, St. Paul, Berry, 3-5 cr

R8215 **Marriage and Family Counseling II** (§Psy 8215; prereq #) (A-N only)
1000-1215 T, St. Paul, Boss, 3 cr

R8218 **Family-of-Origin Seminar II** (prereq 8217, #) (A-N only)
1230-1345 T, St. Paul, Boss, 2 cr

8223 **Internship in Teaching College Level Family Courses III** (prereq 12 cr in FSoS, #)
1400-1530 W, St. Paul, Neubeck, 3-6 cr

8230 **Directed Study** (prereq #)
1-5 cr

8251 **Problems: Family Social Science** (prereq #)
1-5 cr

8252 **Problems: Family Social Science** (prereq #)
4 cr

8267 **Family Research Methology II** (prereq 8266, #)
1400-1800 W, St. Paul, Olson, 4 cr

8270 **Practicum: Family Research** (prereq #)
1-5 cr

8553 **Marriage and Family Counseling Internship III** (prereq 8214, 8215, 8216, #)
1500-1630 M, St. Paul, ar cr

8666 **Dissertation Research** (max 15 cr; prereq #) (S-N only)
1-5 cr

FINANCE (BFin)
Management

Winter Quarter

R3000 **Finance Fundamentals** (§MBA 8040; prereq Acct 3001 or Acct 1051) (A-N only)
★LECT 1045-1145 TThF, West Bank, Rosko
–1 LAB 1215-1300 Th, West Bank, 4 cr
–2 LAB 1315-1400 Th, West Bank, 4 cr
–3 LAB 0815-0900 F, West Bank, 4 cr
–4 LAB 0915-1000 F, West Bank, 4 cr
–5 LAB 1215-1300 F, West Bank, 4 cr
–6 LAB 1315-1400 F, West Bank, 4 cr
★LECT 1200-1300 TThF, West Bank, Rosko
–7 LAB 1315-1400 Th, West Bank, 4 cr
–8 LAB 1415-1500 Th, West Bank, 4 cr
–9 LAB 0915-1000 F, West Bank, 4 cr
–10 LAB 1015-1100 F, West Bank, 4 cr
–11 LAB 1315-1400 F, West Bank, 4 cr
–12 LAB 1415-1500 F, West Bank, 4 cr
★LECT 1315-1415 TThF, West Bank, Rosko
–13 LAB 1430-1515 Th, West Bank, 4 cr
–14 LAB 1515-1600 Th, West Bank, 4 cr
–15 LAB 1015-1100 F, West Bank, 4 cr
–16 LAB 1115-1200 F, West Bank, 4 cr
–17 LAB 1215-1300 F, West Bank, 4 cr
–18 LAB 1430-1515 F, West Bank, 4 cr

R3100 **Financial Management** (prereq 3000) (A-N only)
1415-1530 MW, West Bank, 4 cr

R3300 **Investment Management and Financial Markets** (§8300; prereq 3000)
–1 0815-0930 MW, West Bank, Reik, 4 cr
–2 1415-1530 TTh, West Bank, Reik, 4 cr

R8100 **Cases in Fincancial Management** (prereq MBA 8040) (A-N only)
0815-0930 MW, West Bank, Schreiner, 4 cr

R8300 **Investment Analysis and Management** (prereq 3000 or MBA 8040)
Resnick, 4 cr

R8400 **Bank Management** (prereq 3000 or MBA 8040)
1415-1700 T, West Bank, Boyd, 4 cr

R8701 **Seminar in Working Capital Management** (prereq 8150) (A-N only)
1415-1700 M, West Bank, Gahlon, 4 cr

8990 **Readings and Research in Finance** (prereq consent of advisor, #)
–1 1415-1700 F, West Bank, Ulman, ar cr (PhD seminar II)
–2 1415-1700 T, West Bank, Dothan, ar cr (PhD seminar V)

Spring Quarter

R3100 **Financial Management** (prereq 3000) (A-N only)
1115-1230 MW, West Bank, 4 cr

R3300 **Investment Management and Financial Markets** (§8300; prereq 3000)
–1 1415-1530 MW, West Bank, Schreiner, 4 cr
–2 1545-1700 MW, West Bank, Schreiner, 4 cr

R3800 **Finance Senior Seminar** (prereq 3100 or 3300, #) (A-N only)
1415-1700 W, West Bank, Carroll, 4 cr

R8702 **Seminar in Capital Budgeting and Financial Structure** (prereq 8150) (A-N only)
1115-1230 TTh, West Bank, Dothan, 4 cr

R8703 **Seminar in Portfolio Theory and Management** (prereq 8300) (A-N only)
1415-1530 TTh, West Bank, Richardson, 4 cr

8990 **Readings and Research in Finance** (prereq consent of advisor, #)
–1 1415-1700 T, West Bank, Dothan, ar cr (PhD seminar III)
–2 1415-1700 W, West Bank, ar cr (PhD seminar VI)

FINNISH (Fin)
Scandinavian Languages
Liberal Arts

Winter Quarter

R1102 **Beginning Finnish** (prereq 1101)
1415-1500 MTWThF, East Bank, 5 cr

1105 **Intermediate Finnish** (prereq 1104)
1015-1100 MTWTh, East Bank, Vahamaki, 4 cr

3670 **Readings: Finnish Texts** (max 28 cr; prereq 3101)
1245-1400 TTh, East Bank, Vahamaki, 4 cr

Spring Quarter

R1103 **Beginning Finnish** (prereq 1102)
1415-1500 MTWThF, East Bank, 5 cr

3101 **Advanced Finnish** (prereq 1105)
1015-1100 MWF, East Bank, Vahamaki, 4 cr

3670 **Readings: Finnish Texts** (max 28 cr; prereq 3101)
1015-1100 MWF, East Bank, Vahamaki, 4 cr

FISHERIES AND WILDLIFE (FW)
Forestry

Winter Quarter

5000 **Professional Experience Program** (prereq #) (S-N only)
4 cr

5103 **Basic Fishery Biology** (prereq #)
ar cr

5106 **Basic Wildlife Biology** (prereq #)
ar cr

5278 **Special Lectures in Wildlife**
ar cr

5279 **Special Lectures in Fisheries**
ar cr

5281 **Senior Seminar: Wildlife**
1500-1645 Th, St. Paul, 1 cr

5393 **Special Problems in Fishery Biology** (prereq #)
ar cr

5398 **Special Problems in Wildlife Biology** (prereq #)
ar cr

5454 **Fishery Ecology of Polluted Waters** (prereq 5451 or #)
0800-0945 MW, 0900-0945 F, St. Paul, Adelman, 5 cr

R5455 **Aquaculture** (prereq Biol 1011, 1103, 1106 or equiv, Chem 1001-1002 or 1004-1005 or equiv or #)
Tave, 4 cr

R5562 **Wildlife Ecology, Management II: Populations** (prereq 5561 or #)
★LECT 1000-1045 MWF, St. Paul, Cooper
–1 LAB 1400-1545 M, St. Paul, 4 cr
–2 LAB 1400-1545 T, St. Paul, 4 cr

5563 **Wildlife Ecology, Management III: Habitats** (prereq wildlife sr or #)
1300-1445 MW, St. Paul, Jordan, 3 cr (Field trips ar)

8200 **Seminar** (prereq #)
ar cr

8364 **Research in Fishery Biology** (prereq #)
ar cr

8377 **Research in Wildlife Biology** (prereq #)
ar cr

8448 **Fishery Science** (prereq 5451, Stat 5021, 5022, AgEn 1030 or #)
0900-1045 TTh, St. Paul, Spangler, 4 cr

8574 **Wildlife Management: Upland Game** (prereq 5563 or #)
3 cr

8576 **Wildlife Management: Large Mammals** (prereq #)
1000-1145 TTh, 1300-1545 F, St. Paul, Jordan, 4 cr

Spring Quarter

3167 **Techniques of Forest Wildlife Management** (given at Cloquet)
Gullion, 1 cr

5000 **Professional Experience Program** (prereq #) (S-N only)
4 cr

5103 **Basic Fishery Biology** (prereq #)
ar cr

5106 **Basic Wildlife Biology** (prereq #)
ar cr

5278 **Special Lectures in Wildlife**
ar cr

5279 **Special Lectures in Fisheries**
ar cr

5393 **Special Problems in Fishery Biology** (prereq #)
ar cr

5398 **Special Problems in Wildlife Biology** (prereq #)
ar cr

5452 **Fishery Management in Inland Waters** (prereq 5454 or #)
★LECT 1300-1445 TTh, St. Paul, Waters, 5 cr
–1 LAB 1500-1545 TTh, St. Paul,

5561 **Wildlife Ecology, Management I: Planning, Policy and Administration** (prereq 3052, sr fisheries or wildlife maj or #)
1400-1545 MW, St. Paul, Cohen, 4 cr

5564 **Wildlife Ecology, Management IV: Field Problems** (prereq sr wildlife maj or #)
1400-1645 F, St. Paul, 4 cr

8200 **Seminar** (prereq #)
ar cr

8364 **Research in Fishery Biology** (prereq #)
ar cr

8377 **Research in Wildlife Biology** (prereq #)
ar cr

FOOD SCIENCE AND NUTRITION (FScN)
Agriculture & Home Econ

Winter Quarter

1102 **Technology of Food Processing** (prereq high school chemistry, biology)
0900-1045 TTh, St. Paul, Labuza, 4 cr

R1212 **Scientific Principles of Food Preparation** (prereq Chem 1002 or 1005)
★LECT 1200-1245 MWF, St. Paul, Vickers, 5 cr
–1 LAB 1300-1445 MW, St. Paul,
–2 LAB 1300-1445 TTh, St. Paul,

R1500 **Meat Science** (§AnSc 1500; prereq Biol 1009)
★LECT 1200-1245 MTWTh, St. Paul, Allen
–1 LAB 1300-1445 T, St. Paul, 4 cr
–2 LAB 1500-1645 W, St. Paul, 4 cr
–3 LAB 1300-1445 Th, St. Paul, 4 cr
–4 LAB 1500-1645 Th, St. Paul, 4 cr

R3272 **Introduction to Food Decision Making** (prereq 3600)
1300-1345 MW, St. Paul, Asp, 2 cr

R3403 **Experimental Foods** (prereq 3110)
★LECT 1400-1445 MWF, St. Paul, Warthesen
–1 LAB 1000-1245 M, St. Paul, 4 cr
–2 LAB 0900-1145 W, St. Paul, 4 cr

R3472 **Principles of Food Purchasing** (prereq 5 cr in food sci, nutrition)
1200-1245 MTWTh, St. Paul, Asp, 4 cr

R3600 **Principles of Nutrition** (prereq Biol 1009, Chem 1004 or equiv)
★LECT 1300-1345 MWF, St. Paul, Swan
–1 REC 1400-1445 M, St. Paul, 4 cr
–2 REC 1400-1445 M, St. Paul, 4 cr
–3 REC 1500-1545 M, St. Paul, 4 cr

3622 **Nutrition in the Life Cycle** (prereq 3272, 3472, 3600, physiology or human biology or #)
1500-1545 MW, St. Paul, Swan, 4 cr

3623 **Nutrition in the Life Cycle** (prereq 3272, 3472, 3600, physiology or human biol, regis coord undergrad prog in dietetics)
1500-1545 MW, St. Paul, Swan, 4 cr

3702 **Principles of Foodservice Organization and Management** (prereq sr, Mgmt 3001, regis in coordinated undergrad program in dietetics)
1500-1645 T, 1400-1545 F, Mullan, 4 cr

3703 **Field Experience in Foodservice Management** (prereq sr, Mgmt 3001, ¶3702, regis in coordinated undergrad program in dietetics)
1300-1345 F, St. Paul, 3 cr

R3730 **Quantity Food Production Management** (prereq 1212 or 3403, 3472)
★LECT 1200-1245 TTh, Mullan
–1 LAB 0800-1145 TTh, 5 cr

R5100 **General Seminar** (prereq sr or #) (S–N only)
–1 1200-1245 T, St. Paul, 1 cr
–2 1200-1245 W, St. Paul, 1 cr
–3 1200-1245 Th, St. Paul, 1 cr
–4 1200-1245 F, St. Paul, 1 cr

5111 **Independent Study in Food Science and Nutrition** (prereq △)
1–5 cr

R5120 **Food Microbiology** (prereq MicB 3103)
★LECT 1300-1345 MWF, St. Paul, Busta
–1 LAB 1100-1245 MW, 1100-1145 F, St. Paul, 5 cr (1 hr ar)
–2 LAB 1400-1545 MW, 1400-1445 F, St. Paul, 5 cr (1 hr ar)

5136 **Food Process Engineering II** (prereq 5135)
★LECT 1000-1045 MW, St. Paul, Bakshi
–1 LAB 1400-1645 T, St. Paul, 4 cr

R5321 **Independent Study in Food Microbiology** (prereq sr, △)
1200-1245 T, St. Paul, McKay, others, 1–5 cr (1st meeting)

R5403 **Experimental Study of Foods** (prereq 5360 or #)
★LECT 1100-1145 MW, St. Paul, Davis, 5 cr
–1 LAB 1200-1445 MW, St. Paul,

R5406 **Current Literature in Foods** (max 6 cr; prereq 5413, △)
1100-1145 M, St. Paul, Gordon, 2–4 cr (1st meeting)

5413 **Structural-Functional Relations in Food Systems** (prereq 3110)
1500-1545 MWF, St. Paul, Gordon, 3 cr

5512 **Meat and Protein Technology** (§AnSc 5512; prereq 1500 or AnSc 1500 or #, BioC 1302 or Biol 5001)
★LECT 0800-1045 T, St. Paul, Addis, 4 cr
–1 LAB 0800-1045 Th, St. Paul,

R5522 **Technology of Fluid and Concentrated Milk Products** (prereq 3110, 5135, 5120 or #)
★LECT 0800-0845 MWF, St. Paul, Smith, 4 cr
–1 LAB 1300-1545 Th, St. Paul,

5622 **Human Nutrition** (prereq 3600, Biol 5001, Phsl 3051 or #)
1300-1450 TTh, St. Paul, Clarke, 5 cr

R5642 **Field Experience in Community Nutrition** (prereq course in human nutrition, #)
–1 1300-1445 Th, St. Paul, Hanson, 3–18 cr (CUP only)
–2 Gormican, 3–18 cr

R5664 **Field Experience in Clinical Nutrition** (prereq course in human nutrition, #)
–1 1100-1230 Th, St. Paul, Hanson, 3–18 cr (CUP only)
–2 Gormican, 3–18 cr

5666 **Applied Clinical Nutrition II** (prereq 5665, 5622 or ¶ or demonstrated equiv)
1600-1745 Th, St. Paul, Gormican, 2 cr

R5676 **Clinical Nutrition Laboratory II** (prereq 5666 or ¶) (S–N only)
–1 1600-1645 M, St. Paul, Gormican, 1 cr
–2 1600-1645 W, St. Paul, Gormican, 1 cr

R8101 **Research Seminar** (prereq #) (S–N only)
Swan, 1 cr

8205 **General Seminar** (prereq #) (S–N only)
1600-1645 M, St. Paul, Csallany, 1 cr

R8312 **Reaction Kinetics of Food Deterioration** (prereq Chem 5520 or #)
1400-1645 Th, St. Paul, Labuza, 3 cr

R8322 **Microbiology and Engineering of Food Sterilization Processes** (prereq 5120, 5122, Stat 3081 or 5021)
★LECT 0815-0900 MWF, East Bank, Pflug, 5 cr (Mpls)
–1 LAB 1315-1600 F, East Bank, (Mpls)

R8323 **Microbial Starter Cultures** (prereq 5123, BioC 5001 or #)
0900-0945 MWF, St. Paul, McKay, 3 cr

R8401 **Independent Study: Food Science** (prereq △)
1100-1400 T, St. Paul, McKay, 1–5 cr

8403 **Advanced Topics in Food Science** (prereq #)
4 cr

R8621 **Independent Study: Nutrition** (prereq #)
1–9 cr

8624 **Advanced Human Nutrition III** (prereq 8623 or #)
0900-1030 MWF, St. Paul, Phinney, 5 cr

Spring Quarter

R1012 **Nutrition and Our Food Supply**
1415-1500 T, 1415-1600 Th, East Bank, Addis, 4 cr (Mpls)

3110 **Food Chemistry** (prereq BioC 1302 or Biol 5001)
1000-1045 MTWF, St. Paul, Warthesen, 4 cr

R3112 **Food Chemistry Laboratory** (prereq 3110 or ¶)
0800-0945 TTh, St. Paul, Smith, 2 cr

3600 **Principles of Nutrition** (prereq Biol 1009, Chem 1004 or equiv)
1415-1515 MWF, East Bank, Swan, 4 cr (Mpls)

3642 **Community Nutrition** (prereq jr, 3600 or equiv, 6 cr of psychology, sociology, anthropology or economics)
1400-1530 TTh, St. Paul, 3 cr

R3730 **Quantity Food Production Management** (prereq 1212 or 3403, 3472)
★LECT 1200-1245 TTh, Mullan
–1 LAB 0800-1145 TTh, 5 cr

3750 **Principles of Foodservice Management** (prereq 3730, Mgmt 3001)
1300-1415 MW, Mullan, 3 cr

R5100 **General Seminar** (prereq sr or #) (S–N only)
–1 1200-1245 T, St. Paul, 1 cr
–2 1200-1245 W, St. Paul, 1 cr
–3 1200-1245 Th, St. Paul, 1 cr
–4 1200-1245 F, St. Paul, 1 cr

5111 **Independent Study in Food Science and Nutrition** (prereq △)
1–5 cr

R5122 **Sanitation and Control of Microorganisms** (prereq 5120 or #...¶5123)
★LECT 1400-1445 MF, St. Paul, Busta
–1 LAB 1300-1345 F, St. Paul, 2 cr
–2 LAB 1500-1545 F, St. Paul, 2 cr

R5123 **Microbiology of Food Fermentations** (prereq 5120 or #...¶5122 advised, especially for food science, technology maj)
★LECT 1300-1345 MW, St. Paul, McKay
–1 LAB 1100-1245 W, St. Paul, 2 cr
–2 LAB 1400-1545 W, St. Paul, 2 cr

R5312 **Chemical and Instrumental Analysis of Foods** (prereq 3112, BioC 5025 or #)
★LECT 1000-1045 MWF, St. Paul, Davis, Reineccius
–1 LAB 1000-1245 TTh, St. Paul, 5 cr
–2 LAB 1400-1645 TTh, St. Paul, 5 cr

R5321 **Independent Study in Food Microbiology** (prereq sr, △)
1200-1245 T, St. Paul, 1–5 cr (1st meeting)

R5406 **Current Literature in Foods** (max 6 cr; prereq 5413, △)
1000-1045 M, St. Paul, Gordon, 2–4 cr (1st meeting)

R5462 **Advanced Topics in Sensory Evaluation of Food** (prereq 5360)
0800-0845 F, St. Paul, Vickers, 2–4 cr (1st meeting)

5474 **Food Consumption Economics** (§AgEc 5550; prereq AgEc 3101, Stat 5021, FScN 3472 or #)
0900-0945 MWF, St. Paul, Senauer, 4 cr

5524 **Sensory Evaluation of Dairy Products** (prereq 5360 or #)
1730-1930 Th, St. Paul, Smith, 1 cr

R5555 **Freezing and Dehydration of Foods** (prereq 5135, 3110, 5120 or #)
1800-2100 TTh, St. Paul, Labuza, 5 cr (lab ar)

R5642 **Field Experience in Community Nutrition** (prereq course in human nutrition, #)
–1 0800-0945 M, St. Paul, Hanson, Olson, 3–18 cr (CUP only)
–2 Gormican, 3–18 cr

5664 **Field Experience in Clinical Nutrition** (prereq course in human nutrition, #)
–1 1800-1845 M, St. Paul, Hanson, Olson, 3–18 cr (CUP only)
–2 Gormican, 3–18 cr

5667 **Applied Clinical Nutrition III** (prereq 5665, 5666 or demonstrated equiv)
1600-1745 Th, St. Paul, Gormican, 2 cr

R5677 **Clinical Nutrition Laboratory III** (prereq 5667 or ¶) (S–N only)
–1 1300-1345 T, St. Paul, Gormican, 1 cr
–2 1600-1645 W, St. Paul, Gormican, 1 cr

R8101 **Research Seminar** (prereq #) (S–N only)
–1 1600-1645 Th, St. Paul, Swan, 1 cr
–2 Phinney, 1 cr

8205 **General Seminar** (prereq #) (S–N only)
1600-1645 M, St. Paul, Smith, 1 cr

8313 **Topics in Lipid Chemistry** (prereq BioC 5002 or #)
1400-1545 W, St. Paul, Csallany, 2 cr

R8324 **Microbial Toxins and Toxic Microorganisms in Foods** (prereq 5120 or 8120 or #)
1300-1445 TTh, St. Paul, Tatini, 4 cr

R8401 **Independent Study: Food Science** (prereq △)
McKay, 1–5 cr

R8621 **Independent Study: Nutrition** (prereq #)
1–9 cr

FOREIGN STUDY (FoSt)
Liberal Arts

Winter Quarter

0900 **Study Abroad** (prereq permission of study abroad advisor) (S–N only)
Peterson, 0 cr

0910 **Study Abroad** (prereq permission of study abroad advisor) (S–N only)
Peterson, 0 cr

3130 **HECUA Literature, Ideology, Society: Latin America**
1–24 cr

3210 **Kansas Program in Costa Rica** (prereq #)
1–54 cr

3220 **Kansas Program in Erlangen, Germany** (prereq #)
1–54 cr

3230 **Kansas Program in Great Britain** (prereq #)
1–54 cr

3240 **Kansas Program in Korea** (prereq #)
1–54 cr

3250 **Kansas Program at Tsukuba University, Japan** (prereq #)
1–54 cr

3410 **IES Program in Durham, England** (prereq #)
1–45 cr

3420 **IES Program in London** (prereq #)
1–54 cr

3430 **IES Program in Nantes, France** (prereq #)
1–54 cr

3440 **IES Program in Paris** (prereq #)
1–54 cr

3450 **IES Program in Madrid** (prereq #)
1–54 cr

3460 **IES Program in Vienna** (prereq #)
1–54 cr

3470 IES Program in Freiburg, Germany (prereq #)
1-54 cr

3480 IES European Community Program in Germany (prereq #)
1-27 cr

3490 IES Comparative European Literature Program (prereq #)
1-54 cr

3610 Exchange Study at University of Essex, England (prereq #)
1-54 cr

3810 Bologna Cooperative Studies Program, Italy (prereq #)
1-54 cr

Spring Quarter

0900 Study Abroad (prereq permission of study abroad advisor) (S-N only)
Peterson, 0 cr

0910 Study Abroad (prereq permission of study abroad advisor) (S-N only)
Peterson, 0 cr

3130 HECUA Literature, Ideology, Society: Latin America
1-24 cr

3210 Kansas Program in Costa Rica (prereq #)
1-54 cr

3220 Kansas Program in Erlangen, Germany (prereq #)
1-54 cr

3230 Kansas Program in Great Britain (prereq #)
1-54 cr

3240 Kansas Program in Korea (prereq #)
1-54 cr

3250 Kansas Program at Tsukuba University, Japan (prereq #)
1-54 cr

3410 IES Program in Durham, England (prereq #)
1-45 cr

3420 IES Program in London (prereq #)
1-54 cr

3430 IES Program in Nantes, France (prereq #)
1-54 cr

3440 IES Program in Paris (prereq #)
1-54 cr

3450 IES Program in Madrid (prereq #)
1-54 cr

3460 IES Program in Vienna (prereq #)
1-54 cr

3470 IES Program in Freiburg, Germany (prereq #)
1-54 cr

3480 IES European Community Program in Germany (prereq #)
1-27 cr

3490 IES Comparative European Literature Program (prereq #)
1-54 cr

3610 Exchange Study at University of Essex, England (prereq #)
1-54 cr

3810 Bologna Cooperative Studies Program, Italy (prereq #)
1-54 cr

FOREST PRODUCTS (ForP)
Forestry

Winter Quarter

1100 Wood in American Life
1415-1500 MWF, East Bank, Bowyer, 3 cr

R1303 Wood Structure and Identification (prereq 1301 or #)
★LECT 1300-1345 T, St. Paul, Bowyer, 2 cr
–1 LAB 1400-1645 T, St. Paul,

3303 Forest Products Marketing (prereq Mktg 3000)
1200-1245 MWF, St. Paul, Petersen, 3 cr

3325 Directed Study Experience (prereq #)
1-5 cr

5301 Mechanical Properties (prereq 1301 or #)
1300-1345 MWF, St. Paul, Quarles, 3 cr

5302 Wood Chemistry I (prereq Chem 3302)
1000-1110 TTh, St. Paul, Sarkanen, 3 cr

5305 Pulp and Paper Technology (prereq 5300, 5302 or #)
★LECT 1400-1445 MWF, St. Paul, Gertjejansen, 4 cr
–1 LAB 1500-1645 W, St. Paul,

5307 Wood Base Panel Technology (prereq 5300, 5301 or #)
0835-0945 TTh, St. Paul, Gertjejansen, 4 cr (lab ar)

5312 Pulp and Paper Process Calculations (prereq ME 3301 or #)
★LECT 1300-1345 MWF, St. Paul, Neuman, 4 cr
–1 REC 1300-1445 T, St. Paul,

5313 Pulp and Paper Process Operations (prereq CE 3400 or #)
★LECT 1500-1545 MWF, St. Paul, Neuman, 5 cr
–1 REC 1500-1645 TTh, St. Paul,

5401 Senior Topics (prereq sr)
ar cr

8300 Research Problems
ar cr

8301 Research Problems
ar cr

8302 Research Problems
ar cr

8303 Advanced Topics: Panel Products Technology
2 cr

Spring Quarter

R1102 Leadership and Management Skills for College of Forestry Students (2 cr with project) (S-N only)
1400-1445 T, St. Paul, Bell, Samaways, 1 cr

R3300 Wood Industry Tours (prereq forest products jr or sr or #)
Petersen, 2 cr (Field trip Mar 19-23. Travel arrangements must be made with dept before Feb 25)

3325 Directed Study Experience (prereq #)
1-5 cr

5310 Pulp and Paper Process Laboratory (prereq 5305 or #)
1400-1545 Th, St. Paul, Gertjejansen, 3 cr (lab ar)

5355 Mechanics and Structural Design with Wood Products (prereq 5301)
★LECT 1400-1445 MWF, St. Paul, Haygreen, 4 cr
–1 LAB 1500-1645 W, St. Paul, Haygreen

5361 Adhesion and Adhesives (prereq Chem 3302 or Chem 5520 or ForP 5359 or #)
0935-1045 TTh, St. Paul, Sarkanen, 3 cr

5401 Senior Topics (prereq sr)
ar cr

8300 Research Problems
ar cr

8301 Research Problems
ar cr

8302 Research Problems
ar cr

8306 Seminar: Forest Products
1500-1645 M, St. Paul, 2 cr

FOREST RESOURCES (FR)
Forestry

Winter Quarter

R1201 Conservation of Natural Resources
1100-1145 MWF, St. Paul, Splett, 3 cr

3220 Beginning Forest Soils (prereq Geo 1001, Itasca session)
0800-0845 TTh, St. Paul, Grigal, 2 cr

3225 Directed Study Experience (prereq #)
1-5 cr

5100 Silviculture (prereq Itasca session, 1100)
1230-1350 TW, Alm, 3 cr

5103 Advanced Forest Tree Biology (prereq #)
Sucoff, 3 cr

5105 Intensive Silviculture (prereq upper division or grad in forestry or #)
1400-1445 MWF, St. Paul, Mohn, 3 cr

R5106 Senior Silviculture Seminar (prereq sr, 5100 or #) (A-N only)
1415-1600 T, St. Paul, Alm, 2-3 cr

5114 Forest Hydrology (prereq Itasca session, Geo 1001, FR 3103 or #)
0800-0845 MWF, Brooks, 3 cr

5152 Forest Genetics (prereq #)
1200-1245 MWF, St. Paul, Mohn, 3 cr

R5200 Aerial Photo Interpretation
★LECT 1000-1045 MW, St. Paul, Meyer
–1 LAB 1300-1545 M, Meyer, 3 cr
–2 LAB 1400-1645 W, Meyer, 3 cr

5212 Natural Resources Inventory (prereq Itasca session, AgET 1030 or equiv, computer programming course with FORTRAN or BASIC, Math 1142 or 1211, Stat 3081 or 5021, ¶Rhet 3562X)
★LECT 1100-1145 MW, Ek, 3 cr
–1 LAB 1100-1245 F,

5222 Forest Policy and Economics (§5265; prereq AgEc 1030 or #, ¶Rhet 3562X)
–1 1000-1045 MTWThF, Ellefson, Gregersen, 5 cr (forestry majs only)
–2 1000-1045 MTWThF, Ellefson, Gregersen, ar cr (non-majs)

5257 Recreational Land Policy (prereq 5232 or #)
0900-1015 TTh, St. Paul, Merriam, 3 cr

5260 Administration Processes for Natural Resources Managers (prereq uppper division or grad in forestry or #)
0800-0845 MWF, Irving, 3 cr

5262 Remote Sensing of Natural Resources
1100-1145 MWF, 1400-1545 Th, Meisner, Johnson, 4 cr

5270 Interdisciplinary Seminar II
1500-1545 TTh, St. Paul, Knopp, Merriam, 4 cr

5401 Senior Topics (prereq sr in forestry or #)
1-5 cr

5500 Urban Forest Management (prereq 5100 or #)
1500-1630 M, 0830-1000 T, St. Paul, Carson, 3 cr

8100 Research Problems: Silviculture
Alm, B Brown, others, ar cr

8101 Research Problems: Forest Tree Physiology
Sucoff, ar cr

8102 Problems: Forest Tree Genetics
Mohn, ar cr

8103 Research Problems: Forest Hydrology
Brooks, ar cr

8106 Topics in Silviculture-Forest Soils (prereq 5100, 5 cr of soils or #)
Grigal, 3 cr

8107 Seminar: Forest Resources
1500-1545 M, St. Paul, 1 cr

8200 Research Problems: Forest Management
B Brown, Hallgren, others, ar cr

8201 Research Problems: Forest Economics
Gregersen, Ellefson, ar cr

8202 Research Problems: Forest Biometry
Ek, ar cr

8203 Research Problems: Forest Recreation
Knopp, Merriam, ar cr

8204 Research Problems: Forest Policy
Ellefson, Irving, others, ar cr

8205 Research Problems: Remote Sensing
Meyer, ar cr

Spring Quarter

R1102 Leadership and Management Skills for College of Forestry Students (2 cr with project) (S-N only)
1400-1445 T, St. Paul, Bell, Samaways, 1 cr

1203 Introduction to Minnesota's Natural Resources (§1201, for non forestry students)
1515-1815 Th, East Bank, Vogt, 3 cr (Mpls)

3104 Forest Ecology (prereq Itasca session)
1300-1345 MWF, St. Paul, Kurmis, 3 cr

3114 Tree Physiology (prereq Chem 1001 or 1004, 10 cr of biology)
0900-0945 MWF, St. Paul, Sucoff, 3 cr

3115 Tree Physiology Laboratory (prereq concurrent or previous regis in 3114)
Sucoff, 1 cr

3225 Directed Study Experience (prereq #)
1-5 cr

5103 Advanced Forest Tree Biology (prereq #)
Sucoff, 3 cr

5110 **Forest Water Quality Management** (prereq Itasca session, 5114, # or similar background in other departments)
0800-0845 MWF, St. Paul, Perry, 4 cr (lab ar)

5215 **Forest Fire Management** (prereq 1100, Itasca session, 3103, 5100 or #)
1100-1145 TTh, Irving, 2 cr

R5216 **Special Topics in Forest Fire Management** (prereq 5215 or #)
Irving, ar cr

R5217 **Field Techniques for Prescribed Burning** (prereq 5215 or #) (S-N only)
Irving, 1 cr

R5218 **Field Techniques for Forest Fire Control** (prereq 5215 or #)
Irving, 1 cr

5223 **Timber Management Planning** (prereq 5212 or #)
0900-0945 MWF, Rose, 3 cr

5231 **Range Management** (prereq Biol 1103 or #)
0800-0845 MWF, St. Paul, Meyer, 3 cr

5232 **Management of Recreational Lands** (prereq jr in forestry or #)
1000-1045 MWF, St. Paul, Merriam, 3 cr

5253 **Forest Biometry** (prereq 5212, Stat 5022 or #)
0945-1100 TTh, St. Paul, Ek, 3 cr

5261 **Advanced Forest Policy and Economics** (prereq 5222 or #)
1400-1645 Th, Ellefson, Gregersen, 3 cr

5265 **Forest Policy Issues** (§5222)
0820-0930 TTh, St. Paul, Ellefson, 3 cr

5401 **Senior Topics** (prereq sr in forestry or #)
1-5 cr

R5501 **Urban Forest Administration** (prereq silviculture, urban forest management, #)
1400-1700 M, St. Paul, Carson, 3 cr

8100 **Research Problems: Silviculture**
Alm, B Brown, others, ar cr

8101 **Research Problems: Forest Tree Physiology**
Sucoff, ar cr

8102 **Problems: Forest Tree Genetics**
Mohn, ar cr

8103 **Research Problems: Forest Hydrology**
Brooks, ar cr

8107 **Seminar: Forest Resources**
1500-1545 M, St. Paul, 1 cr

8200 **Research Problems: Forest Management**
B Brown, Hallgren, others, ar cr

8201 **Research Problems: Forest Economics**
Ellefson, Gregersen, ar cr

8202 **Research Problems: Forest Biometry**
Ek, ar cr

8203 **Research Problems: Forest Recreation**
Knopp, Merriam, ar cr

8204 **Research Problems: Forest Policy**
Ellefson, Irving, others, ar cr

8205 **Research Problems: Remote Sensing**
Meyer, ar cr

8207 **Economic Analysis of Forestry Projects** (prereq 5261 or #)
Gregersen, 3 cr

8210 **Research Methods in Forestry**
Sucoff, 3 cr

8211 **Seminar: Forest Policy Issues**
Ellefson, 3 cr

8212 **Advanced Remote Sensing** (prereq 5262 or #)
0945-1045 MWF, 4 cr

FRENCH (Fren)
French And Italian
Liberal Arts

Winter Quarter

R1101 **Beginning French**
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 1015-1100 MTWThF, East Bank, 5 cr
-3 1015-1100 MTWThF, East Bank, 5 cr
-4 1115-1200 MTWThF, East Bank, 5 cr
-5 1215-1300 MTWThF, East Bank, 5 cr

R1102 **Beginning French** (prereq 1101 or one year high school Fren)
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 0815-0900 MTWThF, East Bank, 5 cr
-3 0915-1000 MTWThF, East Bank, 5 cr
-4 0915-1000 MTWThF, East Bank, 5 cr
-5 0915-1000 MTWThF, East Bank, 5 cr
-6 1015-1100 MTWThF, East Bank, 5 cr
-7 1015-1100 MTWThF, East Bank, 5 cr
-8 1115-1200 MTWThF, East Bank, 5 cr
-9 1115-1200 MTWThF, East Bank, 5 cr
-10 1215-1300 MTWThF, East Bank, 5 cr
-11 1215-1300 MTWThF, East Bank, 5 cr (concurrent registration 1103, sec 3 required)
-12 1215-1300 MTWThF, East Bank, 5 cr
-13 1315-1400 MTWThF, East Bank, 5 cr
-14 1315-1400 MTWThF, East Bank, 5 cr

R1103 **Beginning French** (prereq 1102, 1122 or two yrs high school Fren)
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 0915-1000 MTWThF, East Bank, 5 cr
-3 1115-1200 MTWThF, East Bank, 5 cr (concurrent registration 1102, sec 11 required)

R1104 **Intermediate French** (prereq 1103 or three yrs high school Fren)
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 0915-1000 MTWThF, East Bank, 5 cr
-3 1215-1300 MTWThF, East Bank, 5 cr

R1105 **Intermediate French** (prereq 1104)
-1 1115-1200 MTWThF, East Bank, 5 cr
-2 1315-1400 MTWThF, East Bank, 5 cr

R1112 **Decelerated Beginning French** (§1102; prereq completion of 1101 with C or D, approval of Coordinator)
1115-1200 MTWThF, East Bank, 3 cr

R3015 **French Composition and Conversation** (prereq 1105)
-1 1215-1300 MTWTh, West Bank, Akehurst, 5 cr
-2 1315-1500 TTh, East Bank, Sivert, 5 cr
-3 1015-1200 TTh, East Bank, Reeve, 5 cr

R3016 **Advanced French Composition and Conversation** (prereq 3015 or #)
-1 0915-1100 MW, East Bank, Robinson, 5 cr
-2 1315-1500 MW, East Bank, Robinson, 5 cr

R3017 **Stylistics Through Translation** (prereq 3016 or superior achievement in 3015, #)
0915-1100 TTh, East Bank, Waldauer, 5 cr

R3101 **Introduction to French Literary Texts** (prereq 3015)
1315-1500 MW, East Bank, Waldauer, 5 cr

R3102 **French Literary Texts: Theatre** (prereq 3101)
0915-1100 MW, East Bank, 5 cr

R3107 **French Literary Texts: Cinema** (prereq 3101)
1415-1600 TTh, East Bank, Bensmaia, 5 cr

R3259 **Topics in 18th Century French Literature** (prereq 3102, 3103)
1115-1300 TTh, Caplan, 5 cr

R3289 **Topics in 20th Century French Literature** (prereq 3102, 3103)
0915-1100 TTh, East Bank, Brewer, 5 cr

R3602 **Literature in English Translation** (no cr maj, knowledge of French helpful but not necessary)
1415-1600 TTh, East Bank, Reeve, 5 cr

3970 **Directed Readings** (prereq undergrad student, #, △, college approval)
-1 1-5 cr
-2 1-5 cr

3980 **Directed Instruction** (prereq 3015, #, △, college approval)
3-5 cr

R5017 **Composition et Stylistique** (prereq 3017 or #)
1415-1600 M, 1515-1600 W, East Bank, Paganini, 5 cr

R5207 **Old French** (prereq 3209 or above or #)
1615-1700 MTW, East Bank, Akehurst, 5 cr

R5900 **Topics of French Literature** (max 15 cr; prereq 3209 or above)
-1 1315-1500 M, 1315-1400 W, East Bank, Brewer, 5 cr (Autobiography in France: Twentieth Century Representation)
-2 1515-1600 T, 1415-1600 Th, East Bank, Caplan, 5 cr (The Philosophes from Montesquieu to Kant)

8970 **Directed Readings**
1-5 cr

8980 **Directed Teaching** (prereq #, △)
1-5 cr

Spring Quarter

R1101 **Beginning French**
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 0815-0900 MTWThF, East Bank, 5 cr
-3 0915-1000 MTWThF, East Bank, 5 cr
-4 1015-1100 MTWThF, East Bank, 5 cr
-5 1115-1200 MTWThF, East Bank, 5 cr

R1102 **Beginning French** (prereq 1101 or one year high school Fren)
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 0815-0900 MTWThF, East Bank, 5 cr
-3 0915-1000 MTWThF, East Bank, 5 cr
-4 1015-1100 MTWThF, East Bank, 5 cr

R1103 **Beginning French** (prereq 1102, 1122 or two yrs high school Fren)
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 0815-0900 MTWThF, East Bank, 5 cr
-3 0915-1000 MTWThF, East Bank, 5 cr
-4 0915-1000 MTWThF, East Bank, 5 cr
-5 1015-1100 MTWThF, East Bank, 5 cr
-6 1015-1100 MTWThF, East Bank, 5 cr
-7 1115-1200 MTWThF, East Bank, 5 cr
-8 1115-1200 MTWThF, East Bank, 5 cr
-9 1215-1300 MTWThF, East Bank, 5 cr
-10 1215-1300 MTWThF, East Bank, 5 cr
-11 1315-1400 MTWThF, East Bank, 5 cr

R1104 **Intermediate French** (prereq 1103 or three yrs high school Fren)
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 0915-1000 MTWThF, East Bank, 5 cr
-3 1115-1200 MTWThF, East Bank, 5 cr (concurrent registration 1105, sec 3 required)

R1105 **Intermediate French** (prereq 1104)
-1 0915-1000 MTWThF, East Bank, 5 cr
-2 1015-1100 MTWThF, East Bank, 5 cr
-3 1215-1300 MTWThF, East Bank, 5 cr (concurrent registration 1104, sec 3 required)

R1113 **Decelerated Beginning French** (§1103; prereq 1112 with passing grade or 1102 with C or D and approval of Coordinator)
1215-1300 MTWThF, East Bank, 3 cr

R3015 **French Composition and Conversation** (prereq 1105)
-1 1015-1100 MTWTh, West Bank, Akehurst, 5 cr
-2 0915-1100 TTh, East Bank, Caplan, 5 cr
-3 1315-1500 TTh, East Bank, 5 cr

R3016 **Advanced French Composition and Conversation** (prereq 3015 or #)
-1 1315-1500 MW, East Bank, 5 cr
-2 0915-1100 TTh, East Bank, 5 cr

R3017 **Stylistics Through Translation** (prereq 3016 or superior achievement in 3015, #)
0915-1100 MW, East Bank, 5 cr

R3101 **Introduction to French Literary Texts** (prereq 3015)
0915-1100 MW, East Bank, 5 cr

R3102 **French Literary Texts: Theatre** (prereq 3101)
1315-1500 TTh, East Bank, 5 cr

R3103 **French Literary Texts: Novel** (prereq 3101)
1315-1500 MW, East Bank, 5 cr

R3269 **Topics in 19th Century French Literature** (prereq 3102, 3103)
0915-1100 TTh, Sivert, 5 cr

R3299 **Themes in French Literature** (prereq 3102, 3103)
1115-1300 TTh, East Bank, Paganini, 5 cr

R3502 **French Civilization and Culture** (prereq 1105)
1315-1500 TTh, East Bank, Caplan, 5 cr

R3603 **20th Century French Theatre in Translation** (no cr maj, knowledge of Fren helpful but not necessary)
1115-1300 MW, East Bank, Brewer, 5 cr

3970 **Directed Readings** (prereq undergrad student, #, △, college approval)
1-5 cr

3980 **Directed Instruction** (prereq 3015, #, △, college approval)
3-5 cr

R5303 **Medieval French Drama** (prereq 5207 or #)
1615-1700 MTW, East Bank, Akehurst, 5 cr

R5465 **Stendhal** (prereq 3209 or above)
1315-1500 T, 1315-1400 Th, East Bank, Sivert, 5 cr

R5702 **Structure of Modern French: Phonology, Morphology, Syntax** (prereq 5701)
1515-1600 M, 1415-1600 W, East Bank, Barnes, 5 cr

R8050 **Seminar in Fiction** (max 15 cr)
1515-1600 T, 1415-1600 Th, East Bank, Paganini, 5 cr

R8501 **Methodology, Bibliography**
1215-1500 F, East Bank, Conley, 5 cr

8970 **Directed Readings**
1-5 cr

8980 **Directed Teaching** (prereq #, △)
1-5 cr

FRENCH AND ITALIAN (FrIt)
French And Italian
Liberal Arts

Winter Quarter

R3604 **Cinemas of the Real**
1315-1600 TTh, East Bank, 4 cr

Spring Quarter

R3608 **New Wave Cinemas**
1315-1500 MWF, East Bank, Conley, 4 cr

FRESHMAN-SOPHOMORE COLLOQUIA (HCol)
Honors Program
Liberal Arts

Winter Quarter

R1010 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1020 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1030 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1040 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1050 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1060 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1070 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1080 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1970 **Honors Colloquium: Directed Studies** (prereq fr or soph, reg honors div)
1-4 cr

Spring Quarter

R1010 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1020 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1030 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1040 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1050 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1060 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1070 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1080 **Honors Colloquium** (prereq fr, soph, reg honors div)
2-4 cr

R1970 **Honors Colloquium: Directed Studies** (prereq fr or soph, reg honors div)
1-4 cr

GENERAL COLLEGE (GC)

Winter Quarter

R1113 **Science in Context: Natural Resources, Their Utilization and Management** (§1112)
1415-1500 MTWThF, East Bank, Flynn, 5 cr

R1131 **Biological Science: Principles**
–1 1115-1200 MTWTh, East Bank, 5 cr (lab ar)
–2 1515-1600 MTWTh, East Bank, Hatch, 5 cr (lab ar)

R1132 **Biological Science, Human Body**
–1 0815-0900 MTWThF, East Bank, Dearden, 5 cr
–2 1415-1500 MTWThF, East Bank, 5 cr

R1137 **Biological Science: Laboratory** (prereq 1131 or 1132)
–1 LAB 1015-1200 MW, East Bank, 2 cr
–2 LAB 1215-1400 MW, East Bank, 2 cr
–3 LAB 1415-1600 MW, East Bank, 2 cr

R1163 **Principles of Physics**
1115-1200 MTWThF, East Bank, Policoff, 5 cr

R1166 **Physical Science: Principles of Chemistry**
1315-1400 MTWThF, East Bank, Uthe, 5 cr

R1171 **Earth Science: Physical Geology**
1215-1300 MTWThF, East Bank, Uthe, 5 cr (lab ar)

R1211 **People and Problems**
1215-1300 MTWThF, East Bank, Smith, 5 cr

R1212 **Urban Problems**
–1 1015-1100 MTWThF, East Bank, Smith, 5 cr
–2 1415-1500 MTWThF, East Bank, Jones, 5 cr

R1221 **Minnesota History** (§1223, 1224)
0915-1000 MTWThF, East Bank, Moen, 5 cr

R1230 **United States: Recent History**
1115-1200 MTWThF, East Bank, Moen, 5 cr

R1235 **United States: Law in Society**
–1 0915-1100 MW, 1015-1100 F, East Bank, Hower, 5 cr
–2 1215-1400 MW, 1215-1300 F, East Bank, 5 cr

R1236 **United States: The Crime Problem**
1215-1300 MTWTh, East Bank, F Johnson, 4 cr

R1237 **United States: Juvenile Delinquency**
1115-1200 MTWTh, East Bank, Harris, 4 cr

R1243 **Historical Biography: World War II and Cold War Personalities**
0915-1000 MTWF, East Bank, Buckley, 4 cr

R1251 **World History**
1215-1300 MTWThF, East Bank, Jones, 5 cr

R1264 **Current History: Present Problems and Future Projections**
1015-1100 MTWTh, East Bank, Hathaway, 4 cr

R1281 **Psychology in Modern Society**
★LECT 0915-1000 MWF, East Bank, Brothen
–1 LAB 0915-1000 TTh, East Bank, Brothen, 5 cr
–2 LAB 1015-1100 TTh, East Bank, Brothen, 5 cr
–3 LAB 1015-1100 TTh, East Bank, Brothen, 5 cr
–4 LAB 1115-1200 TTh, East Bank, Brothen, 5 cr
–5 LAB 1115-1200 TTh, East Bank, Brothen, 5 cr
–6 LAB 1215-1300 TTh, East Bank, Brothen, 5 cr
–7 LAB 1215-1300 TTh, East Bank, Brothen, 5 cr
–8 LAB 1315-1400 TTh, East Bank, Brothen, 5 cr
–9 LAB 1415-1500 TTh, East Bank, Brothen, 5 cr

R1282 **Psychology Applied to Human Affairs** (prereq 1281)
1515-1600 MTWThF, East Bank, Wambach, 5 cr

R1284 **Behavior Problems of Children** (§1723)
1315-1500 MW, East Bank, Skovholt, 4 cr

R1291 **The World Today: Geography at Home and Abroad**
1015-1100 MTWThF, East Bank, Steinhauser, 5 cr

R1295 **Economic Perspectives: Micro Principles and History**
1115-1200 MTWThF, East Bank, Killen, 5 cr

R1311 **Art: General Arts** (§3311)
–1 0815-0900 MWThF, East Bank, Byrne, 4 cr
–2 0915-1000 MWThF, East Bank, Gates, 4 cr
–3 1315-1400 MWThF, East Bank, Byrne, 4 cr
–4 1115-1300 TTh, East Bank, MacInnes, 4 cr
–5 1415-1600 TTh, East Bank, 4 cr

R1313 **Art Today II** (S-N only)
1415-1500 MWF, East Bank, Gates, 3 cr

R1333 **Vocal Music and Its Traditions**
1015-1100 MWThF, East Bank, Byrne, 4 cr

R1351 **Philosophy: Functions and Problems** (§1861)
★LECT 0915-1000 MTW, East Bank, Kurak
–1 REC 0915-1000 Th, East Bank, Kurak, 4 cr
–2 REC 0915-1000 F, East Bank, Kurak, 4 cr

R1361 **World Literature: Personal Experience**
1215-1300 MTWThF, East Bank, Rathburn, 5 cr

R1367 **Contemporary Books and Periodicals**
1315-1400 MTWThF, East Bank, C Miller, 5 cr

R1371 **Literature: Reading Short Stories**
0815-0900 MWF, East Bank, Flake, 3 cr

R1376 **Humanities: Modern Living II**
1415-1600 TTh, East Bank, Koch, 4 cr

R1384 **Living Myths of Greece and Rome**
1015-1100 MWF, East Bank, 3 cr

R1401 **Improving Study Skills, Reading Comprehension, and Vocabulary** (§1406 prior to Fall, 1981)
–1 1-3 cr (Individual instruction ar, NichH 1)
–2 1-3 cr (Individual instruction ar, NichH 1)

R1402 **Vocabulary Development** (§1401 prior to Fall, 1981)
–1 0815-0900 MWF, East Bank, Stockdale, 3 cr
–2 1115-1200 MWF, East Bank, Kurak, 3 cr
–3 1215-1300 MWF, East Bank, Stockdale, 3 cr
–4 1515-1600 MWF, East Bank, 3 cr

R1403 **Reading, Comprehension, and Study Skills** (§1402 prior to Fall, 1981)
★LECT 0915-1000 MW, East Bank, Gidmark
–1 REC 0915-1000 Th, East Bank, Gidmark, 3 cr
–2 REC 0915-1000 F, East Bank, Gidmark, 3 cr
★LECT 1015-1100 MW, East Bank, Gidmark
–3 REC 1015-1100 Th, East Bank, Gidmark, 3 cr
–4 REC 1015-1100 F, East Bank, Gidmark, 3 cr
★LECT 1315-1400 MW, East Bank,
–5 REC 1315-1400 Th, East Bank, 3 cr
–6 REC 1315-1400 F, East Bank, 3 cr

R1404 **Vocabulary in Context** (§1407 prior to Fall, 1981)
3 cr (Individual instruction ar, NichH 1)

R1405 **Technical Reading: Tables and Graphs**
1-2 cr (Individual instruction ar, NichH 1)

R1411 **Fundamentals of Usage and Style** (§1405 prior to Fall, 1981)
–1 3 cr (Individual instruction ar, NichH 1)
–2 3 cr (Individual instruction ar, NichH 1)
–3 0815-1000 TTh, East Bank, 3 cr

R1412 **Writing Grammatical Sentences and Developing Organized Paragraphs** (§1404 prior to Fall, 1981)
–1 0815-1000 TTh, East Bank, 1-2 cr
–2 0815-1000 TTh, East Bank, 1-2 cr
–3 1-2 cr (Individual instruction ar, NichH 1)
–4 1-2 cr (Individual instruction ar, NichH 1)

R1417 **Improving Spelling and Punctuation** (§1403 prior to Fall, 1981)
–1 0815-1000 TTh, East Bank, 1-2 cr
–2 0815-1000 TTh, East Bank, 1-2 cr
–3 1-2 cr (Individual instruction ar, NichH 1)
–4 1-2 cr (Individual instruction ar, NichH 1)

R1421 **Writing Laboratory: Personal Writing** (§1412 prior to Fall 1981)
–1 0815-1000 MW, East Bank, 4 cr
–2 0815-1000 M, 0815-0900 WF, East Bank, 4 cr
–3 0815-1000 M, 0815-0900 WF, East Bank, 4 cr
–4 0915-1100 MW, East Bank, 4 cr
–5 1015-1200 MW, East Bank, 4 cr
–6 1015-1200 M, 1115-1200 WF, East Bank, 4 cr
–7 1215-1400 MW, East Bank, 4 cr
–8 1215-1400 M, 1215-1300 WF, East Bank, 4 cr
–9 1415-1600 M, 1515-1600 WF, East Bank, 4 cr
–10 0815-1000 TTh, East Bank, 4 cr
–11 0815-1000 TTh, East Bank, 4 cr
–12 0815-1000 TTh, East Bank, 4 cr
–13 0815-1000 TTh, East Bank, 4 cr
–14 0815-1000 TTh, East Bank, 4 cr
–15 0915-1100 TTh, East Bank, 4 cr
–16 1015-1200 TTh, East Bank, 4 cr
–17 1015-1200 TTh, East Bank, 4 cr
–18 1015-1200 TTh, East Bank, 4 cr
–19 1115-1300 TTh, East Bank, 4 cr
–20 1215-1400 TTh, East Bank, 4 cr
–21 1415-1600 TTh, East Bank, 4 cr

R1422 **Writing Laboratory: Communicating in Society** (§1423; prereq 1421)
–1 0815-1000 MW, East Bank, 4 cr
–2 1015-1200 MW, East Bank, 4 cr
–3 1015-1200 MW, East Bank, 4 cr
–4 1215-1400 MW, East Bank, 4 cr
–5 1215-1400 MW, East Bank, 4 cr
–6 1415-1600 MW, East Bank, 4 cr
–7 1415-1600 MW, East Bank, 4 cr
–8 0815-1000 TTh, East Bank, 4 cr
–9 0815-1000 TTh, East Bank, 4 cr
–10 0915-1100 TTh, East Bank, 4 cr
–11 1015-1200 TTh, East Bank, 4 cr
–12 1015-1200 TTh, East Bank, 4 cr
–13 1215-1400 TTh, East Bank, 4 cr
–14 1215-1400 TTh, East Bank, 4 cr
–15 1415-1600 TTh, East Bank, 4 cr
–16 1415-1600 TTh, East Bank, 4 cr
–17 0915-1100 WF, East Bank, 4 cr
–18 1315-1500 WF, East Bank, 4 cr

R1432 **Basic Mathematics II** (§1434; prereq 1431)
–1 1015-1100 MWF, East Bank, 2 cr
–2 1115-1200 MWF, East Bank, 2 cr

R1433 **Basic Mathematics: Programmed Study** (max 10 cr; prereq GCPP math level A, B or C or 1431 or 1432 or 1434, # or △ for 4+ cr/qtr)
1015-1200 TTh, East Bank, 1–10 cr

R1434 **Mathematics Skills Review** (§1431, 1432; prereq GCPP math level B)
–1 0915-1000 MTWThF, East Bank, 4 cr
–2 0915-1000 MTWThF, East Bank, 4 cr
–3 1215-1300 MTWThF, East Bank, 4 cr
–4 1215-1300 MTWThF, East Bank, 4 cr
–5 1315-1500 MTWThF, East Bank, 4 cr
–6 1315-1500 MTWThF, East Bank, 4 cr

R1435 **Elementary Algebra** (prereq GCPP math level C or 1432 or 1434)
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 1015-1100 MTWThF, East Bank, 5 cr
–3 1115-1200 MTWThF, East Bank, 5 cr
–4 1315-1500 MTWThF, East Bank, 5 cr
–5 1315-1500 MTWThF, East Bank, 5 cr
–6 1515-1600 MTWThF, East Bank, 5 cr

R1442 **Functions and Problems of Logic**
★LECT 1015-1100 MWF, East Bank, Zanoni
–1 REC 1015-1100 T, East Bank, 4 cr
–2 REC 1015-1100 Th, East Bank, 4 cr

R1445 **Intermediate Algebra** (§1443, 1444; prereq GCPP math level D or 1435)
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 0915-1100 MTWThF, East Bank, 5 cr
–3 1315-1500 MTWThF, East Bank, 5 cr
–4 1515-1600 MTWThF, East Bank, 5 cr

R1454 **Statistics** (prereq GCPP math level D or elementary algebra)
1315-1400 MTWThF, East Bank, Garfield, 5 cr

R1461 **Oral Communication: Basic Principles**
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 0915-1000 MTWThF, East Bank, 5 cr
–3 1015-1200 MW, East Bank, 5 cr
–4 1215-1300 MTWThF, East Bank, 5 cr

R1464 **Oral Communication: Group Process and Discussion**
–1 1215-1400 MW, East Bank, Hansen, 4 cr
–2 1015-1200 TTh, East Bank, 4 cr
–3 1215-1400 TTh, East Bank, Hansen, 4 cr

R1465 **Oral Communication: Interpersonal Communication**
–1 1015-1200 M, 1115-1200 WF, East Bank, 4 cr
–2 1315-1500 M, 1315-1400 WF, East Bank, 4 cr
–3 1015-1200 TTh, East Bank, 4 cr
–4 1015-1200 TTh, East Bank, 4 cr

R1469 **Oral Communication: Individual Study** (prereq △)
–1 ar cr (Individual instruction ar, NichH 1)
–2 ar cr (Individual instruction ar, NichH 1)

R1471 **Creativity: Creative Problem Solving-Innovation Techniques**
1215-1300 MWThF, East Bank, Amram, 4 cr

R1473 **Intermediate American Sign Language-Level 2** (§1474 Winter, Spring 1983; prereq 1472 or 1473 Fall 1982 or 1468 Spring 1982 or #)
1415-1600 WF, East Bank, 4 cr

R1481 **Creativity: Art Laboratory: Experiences in the Media** (max 9 cr)
–1 0815-1000 MW, East Bank, 3 cr
–2 1015-1200 MW, East Bank, 3 cr
–3 1015-1200 TTh, East Bank, 3 cr
–4 1315-1500 TTh, East Bank, 3 cr

R1483 **Creativity: Music Laboratory-How to Read and Write Music** (max 6 cr)
–1 1115-1200 MWF, East Bank, 3 cr
–2 1215-1300 MWF, East Bank, 3 cr

R1484 **Creativity: Writing Laboratory-Individual Writing** (max 8 cr; prereq 1421, recommendation of previous writing lab instructor, #, △)
1415-1600 TTh, East Bank, Balfour, 4 cr

R1502 **Career Planning**
–1 1015-1200 M, East Bank, 2 cr
–2 1015-1200 T, East Bank, 2 cr
–3 1015-1200 W, East Bank, 2 cr
–4 1015-1200 Th, East Bank, 2 cr

R1511 **Introduction to Modern Business**
–1 0815-1000 MW, 0815-0900 F, East Bank, Kroll, 5 cr
–2 1315-1400 M, 1215-1400 TTh, East Bank, Nelson, 5 cr

R1513 **Principles of Small Business Operation**
–1 0915-1100 TTh, East Bank, Ludlow, 5 cr (1 hr ar)
–2 1215-1400 TTh, East Bank, Ludlow, 5 cr (1 hr ar)

R1517 **Business Internship in Cooperative Education** (prereq #, △)
1700-1930 W, East Bank, Nelson, 6 cr

R1533 **Financial Mathematics: Procedures and Applications** (prereq GCPP math level C or 1432 or 1434 or elementary algebra)
0815-0900 MTWThF, East Bank, Larson, 5 cr

R1534 **Practical Law**
–1 1415-1500 MTWThF, 1115-1200 F, East Bank, Kahn, 5 cr
–2 1015-1200 TTh, 1115-1200 F, East Bank, Kahn, 5 cr

R1535 **Introduction to Data Processing** (prereq GCPP math level D or 1435 or algebra)
1115-1300 TTh, East Bank, Giese, 4 cr

R1536 **Introduction to Commercial Art** (max 9 cr; prereq previous art experience or #)
–1 1415-1600 MW, East Bank, MacInnes, 3 cr
–2 0815-1000 TTh, East Bank, MacInnes, 3 cr

R1537 **Salesmanship**
1015-1200 MW, East Bank, Nelson, 3 cr

R1540 **Accounting Fundamentals I**
–1 1015-1200 TTh, East Bank, 4 cr
–2 1215-1400 TTh, East Bank, 4 cr
–3 1415-1600 TTh, East Bank, 4 cr

R1551 **Marketing: Introduction**
–1 1115-1300 MW, 1115-1200 F, East Bank, Peterson, 5 cr
–2 1115-1300 MW, 1215-1300 F, East Bank, Peterson, 5 cr

R1552 **Marketing: Sales Promotion** (prereq 1551 or #)
1415-1600 MW, 1415-1500 F, East Bank, 5 cr

R1701 **Psychology of Personal Effectiveness**
–1 0915-1100 WF, East Bank, Willmore, 4 cr
–2 1115-1300 WF, East Bank, Read, 4 cr

R1702 **Survival Seminar I: Introduction to Higher Education** (prereq #, △) (S–N only)
0915-1115 M, East Bank, 2 cr

R1705 **Psychology and the Management of Stress: Theory and Application** (prereq 1281 or #)
0915-1100 TTh, East Bank, Romano, 4 cr

R1721 **Marriage, Family, and Personal Fulfillment**
1215-1300 M, 1215-1400 TTh, East Bank, Thoen, 5 cr

R1731 **Consumer Problems and Personal Finance**
0915-1000 MTWThF, East Bank, Killen, 5 cr

R1812 **American Indian Literature** (prereq △)
1215-1300 MWF, East Bank, 3 cr

R1832 **Contemporary Issues in American Indian Education** (prereq #, △)
1315-1400 MWF, East Bank, Lundy, 3 cr

R1837 **Asian American Women** (prereq #, △) (A–N only)
1415-1600 TTh, East Bank, Tsuchida, 4 cr

R1894 **Planning a General College Baccalaureate Program** (prereq 75 cr) (S–N only)
1415-1600 W, East Bank, Brothen, 1 cr (first 5 weeks)

R3115 **Evolution and the Modern Species** (prereq 1131)
0915-1000 MTWThF, East Bank, Hatch, 5 cr

R3161 **Basic D. C. Electronics** (prereq high school intermediate algebra or 1445, high school physics or 1163, #)
0915-1100 MWF, East Bank, 5 cr

R3212 **Criminal Procedure**
1315-1500 TTh, East Bank, Dwyer, 4 cr

R3217 **Community Service Internship** (prereq #, △)
–1 1415-1600 T, East Bank, Harris, 6–12 cr
–2 1415-1600 Th, East Bank, F Harris, 6–12 cr
–3 1730-2000 W, East Bank, Foat, 6–12 cr

R3243 **Biography: World War II, Cold War Personalities** (§1243)
0915-1000 MWThF, East Bank, Buckley, 4 cr

R3285 **Anthropology of the City**
0915-1000 MTWThF, East Bank, F Johnson, 5 cr

R3286 **Topical Seminar in Psychology** (prereq #, △)
Brothen, 4 cr

R3292 **Urban Decision Making in the Twin Cities** (prereq #, △)
1215-1400 MW, East Bank, Detzner, 4 cr (1 hr ar)

R3311 **Art: General Arts** (§1311)
–1 0815-0900 MWThF, East Bank, Byrne, 4 cr
–2 0915-1000 MWThF, East Bank, Gates, 4 cr
–3 1315-1400 MWThF, East Bank, Byrne, 4 cr
–4 1115-1300 TTh, East Bank, MacInnes, 4 cr
–5 1415-1600 TTh, East Bank, 4 cr

R3342 **Moral Issues in Business**
1215-1400 TTh, East Bank, 4 cr

R3354 **Philosophy, Science, and Religion** (§1354)
0915-1100 WF, East Bank, 4 cr

R3374 **Film and Society**
1015-1200 TTh, East Bank, Yahnke, 4 cr

R3423 **Writing the Research or Survey Report** (prereq 1421...1422 rec)
1115-1300 TTh, East Bank, Kurak, 4 cr

R3454 **Understanding Quantitative Research Methods** (prereq elementary statistics or #)
1700-1930 T, East Bank, Giese, 4 cr

R3464 **Communication in Organizations** (prereq 1461 or 1465, 5 cr in psychology)
1415-1600 MW, East Bank, Amram, 4 cr

R3514 **Research for Starting a Small Business** (prereq 1513, 1540, 1551, #, △)
1700-2030 W, East Bank, Ludlow, 5 cr

R3517 **Advanced Business Internship in Cooperative Education** (prereq #, △)
1700-1930 Th, East Bank, Nelson, 6 cr

R3531 **Writing for Business and the Professions** (prereq 1422)
–1 1315-1500 MW, East Bank, Gidmark, 4 cr
–2 0815-1000 TTh, East Bank, 4 cr
–3 1115-1300 WF, East Bank, Kurak, 4 cr

R3533 **Functional Communication** (prereq #, △, 1421, either 1422 or 1461)
1215-1400 M, 1215-1500 W, East Bank, Adamson, 5 cr

R3560 **Personnel Administration**
0815-1000 TTh, East Bank, Kroll, 4 cr

R3581 **Legal Studies: Business Organizations** (prereq 1235, 1534, 1540, paralegal student, #, △)
1730-2000 T, West Bank, 4 cr

R3582 **Legal Studies: Real Estate** (prereq 1235, 1534, 1540, paralegal student or #)
1730-2000 Th, West Bank, 4 cr

R3587 **Legal Studies: Internship** (prereq paralegal student, △) (S-N only)
Templeton, ar cr

R3592 **Legal Studies: Domestic Relations** (prereq 1235, 1534, 1540, paralegal student or #)
1730-2000 W, West Bank, Marron, 4 cr

R3605 **Interviewing** (prereq #, △)
1415-1500 M, 1415-1600 TTh, East Bank, Skovholt, 5 cr

R3614 **Psychological Intervention Techniques** (prereq #, △)
1215-1400 MW, East Bank, Wambach, 4 cr

R3616 **Creativity: Crafts** (prereq soph or above, enrolled in RSG or HSG or pre-OT or #)
1215-1400 MW, East Bank, Gates, 4 cr

R3643 **Seminar: Individual Helping Skills** (prereq HSG student, #)
1730-2000 M, East Bank, Foat, 3 cr

R3721 **The Family and Society** (1721, 1211, 1212 rec)
1415-1500 MTWTh, East Bank, Latts, 4 cr

R3722 **Principles of Marriage and Family Interventions** (prereq △) (A-N only)
0915-1100 TTh, East Bank, Thoen, 4 cr

R3726 **Dynamics of Family Interaction**
0815-1000 MW, East Bank, Latts, 4 cr

R3732 **Consumer Transactions and the Law** (prereq 1534...1731 rec)
1115-1200 MTWTh, East Bank, Kahn, 4 cr

R3826 **Toward a Good Life: Humanities** (prereq 3823, 3824, 3825 or #, ¶3827, ¶3828)
1730-2100 TTh, East Bank, MacInnes, 3 cr

R3827 **Toward a Good Life: Social Science** (prereq 3823, 3824, 3825 or #, ¶3826, ¶3828)
1730-2100 TTh, East Bank, Hathaway, 3 cr

R3828 **Toward a Good Life: Natural Science** (prereq 3823, 3824, 3825 or #, ¶3826, ¶3827)
1730-2100 TTh, East Bank, 3 cr

R3894 **Planning Your GC Baccalaureate Senior Report** (prereq 135 credits, #, △...3423 rec) (S-N only)
1415-1600 Th, East Bank, Giese, 1 cr

R3921 **Energy and Environment: Humanities** (prereq ¶3922, ¶3923)
0915-1200 TTh, 3 cr

R3922 **Enery and Environment: Social Science** (prereq ¶3921, ¶3923)
0915-1200 TTh, Detzner, 3 cr

R3923 **Energy and Environment: Natural Science** (prereq ¶3921, ¶3922)
0915-1200 TTh, A Johnson, 3 cr

Spring Quarter

R1111 **Science in Context: Weather and Climate**
0915-1000 MTWThF, East Bank, A Johnson, 5 cr (lab ar)

R1112 **Science in Context: Human Uses of the Environment** (§1113)
1215-1300 MTWThF, East Bank, Hatch, 5 cr

R1131 **Biological Science: Principles**
–1 0915-1000 MTWTh, East Bank, Dearden, 5 cr (lab ar)
–2 0915-1000 MTWTh, East Bank, Dearden, 5 cr (lab ar)
–3 1415-1500 MTWTh, East Bank, 5 cr (lab ar)

R1132 **Biological Science, Human Body**
–1 1115-1200 MTWThF, East Bank, 5 cr
–2 1315-1400 MTWThF, East Bank, 5 cr

R1133 **Nature Study**
0815-1000 TTh, East Bank, Hatch, 4 cr

R1137 **Biological Science: Laboratory** (prereq 1131 or 1132)
–1 LAB 0815-1000 MW, East Bank, 2 cr
–2 LAB 1015-1200 MW, East Bank, 2 cr

R1162 **Stellar Astronomy**
1115-1200 MTWThF, East Bank, Policoff, 5 cr

R1163 **Principles of Physics**
1315-1400 MTWThF, East Bank, Policoff, 5 cr

R1166 **Physical Science: Principles of Chemistry**
1315-1400 MTWThF, East Bank, Schwabacher, 5 cr

R1173 **Geology of the National Parks: An Approach to Regional Geology**
1215-1300 MTWThF, East Bank, Uthe, 5 cr

R1211 **People and Problems**
1215-1300 MTWThF, East Bank, F Johnson, 5 cr

R1212 **Urban Problems**
0915-1000 MTWThF, East Bank, Smith, 5 cr

R1217 **Human Services and Community Resources** (prereq #, △)
0915-1100 MWF, East Bank, Detzner, 6 cr

R1221 **Minnesota History** (§1223, 1224)
1115-1200 MTWThF, East Bank, Moen, 5 cr

R1230 **United States: Recent History**
0915-1000 MTWThF, East Bank, Moen, 5 cr

R1231 **United States: Growth of National Power**
0915-1000 MTWThF, East Bank, Buckley, 5 cr

R1233 **United States: Government and Politics**
1015-1100 MTWThF, East Bank, Hathaway, 5 cr

R1235 **United States: Law in Society**
–1 1315-1500 MW, 1315-1400 F, East Bank, Kahn, 5 cr
–2 1015-1200 TTh, 1015-1100 F, East Bank, Hower, 5 cr

R1236 **United States: The Crime Problem**
0815-0900 MTWTh, East Bank, F Johnson, 4 cr

R1252 **International Relations**
1215-1300 MTWThF, East Bank, Jones, 5 cr

R1281 **Psychology in Modern Society**
★LECT 0915-1000 MWF, East Bank, Brothen
–1 LAB 0915-1000 TTh, East Bank, Brothen, 5 cr
–2 LAB 1015-1100 TTh, East Bank, Brothen, 5 cr
–3 LAB 1015-1100 TTh, East Bank, 5 cr
–4 LAB 1115-1200 TTh, East Bank, Brothen, 5 cr
–5 LAB 1115-1200 TTh, East Bank, 5 cr
–6 LAB 1215-1300 TTh, East Bank, Brothen, 5 cr
–7 LAB 1215-1300 TTh, East Bank, 5 cr
–8 LAB 1315-1400 TTh, East Bank, Brothen, 5 cr
–9 LAB 1415-1500 TTh, East Bank, Brothen, 5 cr

R1282 **Psychology Applied to Human Affairs** (prereq 1281)
1315-1400 MTWThF, East Bank, Wambach, 5 cr

R1283 **Psychology of Human Development**
0915-1000 MTWThF, East Bank, Latts, 5 cr

R1291 **The World Today: Geography at Home and Abroad**
1015-1100 MTWThF, East Bank, Steinhauser, 5 cr

R1294 **Economics in Contemporary Society** (§1295, 1296)
0815-0900 MTWThF, East Bank, Killen, 5 cr

R1296 **Economic Perspectives: Macro Principles and History**
1115-1200 MTWThF, East Bank, Killen, 5 cr

R1311 **Art: General Arts** (§3311)
–1 0815-0900 MWThF, East Bank, Byrne, 4 cr
–2 1115-1200 MWThF, East Bank, Byrne, 4 cr
–3 1215-1300 MWThF, East Bank, MacInnes, 4 cr
–4 1415-1600 MW, East Bank, Gates, 4 cr
–5 1315-1500 TTh, East Bank, Gates, 4 cr

R1357 **Philosophy: World Religious Beliefs**
0915-1000 MTWThF, East Bank, Yahnke, 5 cr

R1362 **World Literature: Social Experience**
1215-1300 MTWThF, East Bank, Rathburn, 5 cr

R1363 **Literature for Children**
1115-1200 MTWTh, East Bank, Adamson, 4 cr

R1371 **Literature: Reading Short Stories**
0815-0900 MWF, East Bank, C Miller, 3 cr

R1401 **Improving Study Skills, Reading Comprehension, and Vocabulary** (§1406 prior to Fall, 1981)
–1 1–3 cr (Individual instruction ar, NichH 1)
–2 1–3 cr (Individual instruction ar, NichH 1)

R1402 **Vocabulary Development** (§1401 prior to Fall, 1981)
–1 0815-0900 MWF, East Bank, Kurak, 3 cr
–2 1015-1100 MWF, East Bank, Gidmark, 3 cr
–3 1115-1200 MWF, East Bank, Stockdale, 3 cr
–4 1415-1500 MWF, East Bank, Stockdale, 3 cr

R1403 **Reading, Comprehension, and Study Skills** (§1402 prior to Fall, 1981)
★LECT 0915-1000 MW, East Bank, Gidmark
–1 REC 0915-1000 Th, East Bank, Gidmark, 3 cr
–2 REC 0915-1000 F, East Bank, Gidmark, 3 cr
★LECT 1215-1300 MW, East Bank, Yahnke
–3 REC 1215-1300 Th, East Bank, Yahnke, 3 cr
–4 REC 1215-1300 F, East Bank, Yahnke, 3 cr
★LECT 1315-1400 MW, East Bank, Yahnke
–5 REC 1315-1400 Th, East Bank, Yahnke, 3 cr
–6 REC 1315-1400 F, East Bank, Yahnke, 3 cr

R1405 **Technical Reading: Tables and Graphs**
1–2 cr (Individual instruction ar, NichH 1)

R1411 **Fundamentals of Usage and Style** (§1405 prior to Fall, 1981)
–1 3 cr (Individual instruction ar, NichH 1)
–2 3 cr (Individual instruction ar, NichH 1)

R1412 **Writing Grammatical Sentences and Developing Organized Paragraphs** (§1404 prior to Fall, 1981)
–1 1–2 cr (Individual instruction ar, NichH 1)
–2 1215-1400 TTh, East Bank, 1–2 cr

R1417 **Improving Spelling and Punctuation** (§1403 prior to Fall, 1981)
–1 1–2 cr (Individual instruction ar, NichH 1)
–2 1215-1400 TTh, East Bank, 1–2 cr

R1421 **Writing Laboratory: Personal Writing** (§1412 prior to Fall 1981)
–1 0815-1000 M, 0815-0900 WF, East Bank, 4 cr
–2 0815-1000 M, 0815-0900 WF, East Bank, 4 cr
–3 1015-1200 M, 1115-1200 WF, East Bank, 4 cr
–4 1015-1200 M, 1115-1200 WF, East Bank, 4 cr
–5 1215-1400 M, 1215-1300 WF, East Bank, 4 cr
–6 1215-1300 MW, East Bank, 4 cr
–7 1415-1600 M, 1515-1600 WF, East Bank, 4 cr
–8 0815-1000 TTh, East Bank, 4 cr
–9 1015-1200 TTh, East Bank, 4 cr
–10 1015-1200 TTh, East Bank, 4 cr
–11 1115-1300 TTh, East Bank, 4 cr
–12 1215-1400 TTh, East Bank, 4 cr
–13 1215-1400 TTh, East Bank, 4 cr
–14 1215-1400 TTh, East Bank, 4 cr
–15 0915-1100 WF, East Bank, 4 cr
–16 0915-1100 WF, East Bank, 4 cr

R1422 **Writing Laboratory: Communicating in Society** (§1423; prereq 1421)
–1 0815-1000 MW, East Bank, 4 cr
–2 0915-1100 MW, East Bank, 4 cr
–3 1015-1200 MW, East Bank, 4 cr
–4 1015-1200 MW, East Bank, 4 cr
–5 1115-1300 MW, East Bank, 4 cr
–6 1215-1400 MW, East Bank, 4 cr
–7 1315-1500 MW, East Bank, 4 cr
–8 1415-1600 MW, East Bank, 4 cr
–9 0815-1000 TTh, East Bank, 4 cr
–10 0915-1100 TTh, East Bank, 4 cr
–11 0915-1100 TTh, East Bank, 4 cr
–12 1015-1200 TTh, East Bank, 4 cr
–13 1115-1300 TTh, East Bank, 4 cr
–14 1115-1300 TTh, East Bank, 4 cr
–15 1115-1300 TTh, East Bank, 4 cr
–16 1215-1400 TTh, East Bank, 4 cr
–17 1215-1400 TTh, East Bank, 4 cr
–18 1415-1600 TTh, East Bank, 4 cr
–19 0815-1000 WF, East Bank, 4 cr
–20 0915-1100 WF, East Bank, 4 cr

R1426 **Information Strategies and Research Methods** (§1408, 3408, 3426)
1015-1100 TTh, East Bank, Oberman, 2 cr

R1432 **Basic Mathematics II** (§1434; prereq 1431)
–1 1015-1100 MWF, East Bank, 2 cr
–2 1115-1200 MWF, East Bank, 2 cr

R1433 **Basic Mathematics: Programmed Study** (max 10 cr; prereq GCPP math level A, B or C or 1431 or 1432 or 1434, # or △ for 4+ cr/qtr)
1015-1200 TTh, East Bank, 1-10 cr

R1434 **Mathematics Skills Review** (§1431, 1432; prereq GCPP math level B)
–1 0915-1000 MTWThF, East Bank, 4 cr
–2 0915-1000 MTWThF, East Bank, 4 cr
–3 1215-1300 MTWThF, East Bank, 4 cr
–4 1215-1300 MTWThF, East Bank, 4 cr
–5 1315-1500 MTWThF, East Bank, 4 cr
–6 1315-1500 MTWThF, East Bank, 4 cr

R1435 **Elementary Algebra** (prereq GCPP math level C or 1432 or 1434)
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 1015-1100 MTWThF, East Bank, 5 cr
–3 1115-1200 MTWThF, East Bank, 5 cr
–4 1315-1500 MTWThF, East Bank, 5 cr
–5 1315-1500 MTWThF, East Bank, 5 cr
–6 1515-1600 MTWThF, East Bank, 5 cr

R1442 **Functions and Problems of Logic**
★LECT 0915-1000 MWF, East Bank, Zanoni
–1 REC 0915-1000 T, East Bank, Zanoni, 4 cr
–2 REC 0915-1000 Th, East Bank, Zanoni, 4 cr

R1445 **Intermediate Algebra** (§1443, 1444; prereq GCPP math level D or 1435)
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 0915-1100 MTWThF, East Bank, 5 cr
–3 1315-1500 MTWThF, East Bank, 5 cr
–4 1315-1500 MTWThF, East Bank, 5 cr
–5 1515-1600 MTWThF, East Bank, 5 cr

R1452 **Trigonometry and Problem Solving** (prereq GC PP Math level E or 1445)
–1 1315-1400 MTWThF, East Bank, Barnes, 5 cr
–2 1315-1400 MTWThF, East Bank, Barnes, 5 cr

R1454 **Statistics** (prereq GCPP math level D or elementary algebra)
1215-1300 MTWThF, East Bank, Garfield, 5 cr

R1461 **Oral Communication: Basic Principles**
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 0915-1000 MTWThF, East Bank, 5 cr
–3 1215-1300 MTWThF, East Bank, 5 cr

R1464 **Oral Communication: Group Process and Discussion**
–1 1015-1200 MW, East Bank, Amram, 4 cr
–2 1015-1200 TTh, East Bank, 4 cr
–3 1315-1500 TTh, East Bank, Amram, 4 cr

R1465 **Oral Communication: Interpersonal Communication**
–1 1215-1400 MW, East Bank, 4 cr
–2 0915-1100 TTh, East Bank, Hansen, 4 cr
–3 1215-1400 TTh, East Bank, Hansen, 4 cr

R1474 **Creativity: Camera in Communication**
1015-1200 TTh, East Bank, 4 cr

R1481 **Creativity: Art Laboratory: Experiences in the Media** (max 9 cr)
–1 0815-1000 MW, East Bank, 3 cr
–2 1215-1400 MW, East Bank, 3 cr
–3 1415-1600 MW, East Bank, 3 cr
–4 0915-1100 TTh, East Bank, 3 cr

R1483 **Creativity: Music Laboratory-How to Read and Write Music** (max 6 cr)
–1 1015-1100 MWF, East Bank, 3 cr
–2 1315-1400 MWF, East Bank, 3 cr

R1484 **Creativity: Writing Laboratory-Individual Writing** (max 8 cr; prereq 1421, recommendation of previous writing lab instructor, #, △)
1315-1500 TTh, East Bank, Balfour, 4 cr

R1502 **Career Planning**
–1 1015-1200 M, East Bank, 2 cr
–2 1015-1200 T, East Bank, 2 cr
–3 1015-1200 W, East Bank, 2 cr
–4 1015-1200 Th, East Bank, 2 cr

R1511 **Introduction to Modern Business**
–1 0815-1000 MW, 0915-1000 F, East Bank, Kroll, 5 cr
–2 1015-1200 MW, 1015-1100 F, East Bank, Nelson, 5 cr

R1513 **Principles of Small Business Operation**
1115-1300 MW, 1115-1200 F, East Bank, Goldfarb, 5 cr

R1517 **Business Internship in Cooperative Education** (prereq #, △)
1700-1930 W, East Bank, Nelson, 6 cr

R1533 **Financial Mathematics: Procedures and Applications** (prereq GCPP math level C or 1432 or 1434 or elementary algebra)
0815-0900 MTWThF, East Bank, Long, 5 cr

R1534 **Practical Law**
–1 1015-1200 MW, 1115-1200 F, East Bank, O'Hare, 5 cr
–2 1315-1500 TTh, 1415-1500 F, East Bank, Kahn, 5 cr

R1535 **Introduction to Data Processing** (prereq GCPP math level D or 1435 or algebra)
0815-0900 TWThF, East Bank, Giese, 4 cr

R1536 **Introduction to Commercial Art** (max 9 cr; prereq previous art experience or #)
–1 1015-1200 MW, East Bank, MacInnes, 3 cr
–2 1315-1500 TTh, East Bank, 3 cr

R1537 **Salesmanship**
1015-1200 TTh, East Bank, Nelson, 3 cr

R1540 **Accounting Fundamentals I**
–1 0815-1000 MW, East Bank, 4 cr
–2 1415-1600 MW, East Bank, 4 cr
–3 0815-1000 TTh, East Bank, 4 cr

R1542 **Accounting Fundamentals II** (prereq 1540)
1115-1300 TTh, East Bank, 4 cr

R1553 **Marketing: Principles of Management** (prereq 1551 or #)
–1 1115-1300 MW, 1115-1200 F, East Bank, 5 cr
–2 1115-1300 MW, 1215-1300 F, East Bank, 5 cr

R1701 **Psychology of Personal Effectiveness**
0915-1100 WF, East Bank, Willmore, 4 cr

R1702 **Survival Seminar I: Introduction to Higher Education** (prereq #, △) (S-N only)
1015-1200 T, East Bank, 2 cr

R1705 **Psychology and the Management of Stress: Theory and Application** (prereq 1281 or #)
1315-1500 TTh, East Bank, Romano, 4 cr

R1722 **Home Life: Parent-Child Relationships**
1315-1500 MW, East Bank, Latts, 4 cr

R1814 **The American Indian in American Law** (prereq #, △)
1115-1200 MWF, East Bank, wiger, 3 cr

R1822 **Contemporary Race Relations: Comparative Third World Literature**
1015-1200 TTh, East Bank, 5 cr (1 hr ar)

R1831 **American Indian Chemical Dependency** (prereq #, △)
1315-1400 MWF, East Bank, Lundy, 3 cr

R1836 **Asian American Literature** (prereq #, △)
0915-1100 WF, East Bank, 4 cr

R1847 **Contemporary Minnesota**
0815-0900 MTWTh, East Bank, Hathaway, 4 cr

R1894 **Planning a General College Baccalaureate Program** (prereq 75 cr) (S-N only)
1415-1600 W, East Bank, Brothen, 1 cr (first 5 weeks)

R3114 **Personal Environmental Health** (prereq 1132)
0815-0900 MTWThF, East Bank, Dearden, 5 cr

R3162 **Basic AC Electronics** (prereq 3161, #, △)
0915-1100 MWF, East Bank, 5 cr

R3173 **Geology of the National Parks**
1215-1300 MTWThF, East Bank, Uthe, 5 cr

R3213 **Police in the Community**
1315-1530 TTh, East Bank, Dwyer, 4 cr

R3217 **Community Service Internship** (prereq #, △)
–1 1415-1600 T, East Bank, Harris, 6-12 cr
–2 1215-1400 W, East Bank, Foat, 6-12 cr
–3 1415-1600 Th, East Bank, Harris, 6-12 cr

R3235 **Poverty Law** (prereq soph, 1235 or #, △...1212 rec)
1215-1400 MW, 1215-1300 F, East Bank, Hower, 5 cr

R3236 **Minnesota Corrections: Penal Alternatives**
1115-1200 MTWTh, East Bank, Harris, 4 cr

R3251 **Great Cities of Europe**
1415-1500 MTWThF, East Bank, Jones, 5 cr

R3276 **Multicultural Relations** (§3848; prereq soph or #, △)
1215-1300 M, 1215-1400 WF, East Bank, Smith, 5 cr

R3286 **Topical Seminar in Psychology** (prereq #, △)
Brothen, 4 cr

R3292 **Urban Decision Making in the Twin Cities** (prereq #, △)
1515-1600 MTWThF, East Bank, Flynn, 4 cr

R3311 **Art: General Arts** (§1311)
–1 0815-0900 MWThF, East Bank, Byrne, 4 cr
–2 1115-1200 MWThF, East Bank, Byrne, 4 cr
–3 1215-1300 MWThF, East Bank, MacInnes, 4 cr
–4 1415-1600 MW, East Bank, 4 cr
–5 1315-1500 TTh, East Bank, Gates, 4 cr

R3335 **Music of the Twentieth Century** (§1355; prereq 1 music course or #)
0915-1100 TTh, East Bank, Byrne, 4 cr

R3342 **Moral Issues in Business**
1015-1200 MW, East Bank, Kurak, 4 cr

R3345 **Morality and the Law**
1415-1600 TTh, East Bank, 4 cr

R3352 **Philosophy Through Literature** (§1861, 1862)
1415-1500 MTWTh, East Bank, Kurak, 4 cr

R3377 **Murder, Mystery, and Mayhem: Whodunit△**
1415-1500 MTWTh, East Bank, MacInnes, 4 cr

R3423 **Writing the Research or Survey Report** (prereq 1421...1422 rec)
–1 1415-1600 TTh, East Bank, Stockdale, 4 cr
–2 1215-1500 Th, East Bank, Flake, 4 cr

R3426 **Information Strategies and Research Methods** (§1408 or 3408 in Spring, 1981, §1426)
1015-1100 TTh, East Bank, Oberman, 2 cr

R3454 **Understanding Quantitative Research Methods** (prereq elementary statistics or #)
1700-1930 T, East Bank, Giese, 4 cr

R3464 **Communication in Organizations** (prereq 1461 or 1465, 5 cr in psychology)
1015-1200 TTh, East Bank, Amram, 4 cr

R3465 **Communication for Health Workers** (1465 rec)
1315-1500 MW, East Bank, Amram, 4 cr

R3517 **Advanced Business Internship in Cooperative Education** (prereq #, △)
1700-1930 Th, East Bank, Nelson, 6 cr

R3531 **Writing for Business and the Professions** (prereq 1422)
–1 0815-1000 TTh, East Bank, Adamson, 4 cr
–2 1315-1500 WF, East Bank, Gidmark, 4 cr

R3532 **Legal Writing** (prereq 1421, △...1422 rec)
1615-1845 W, East Bank, C Miller, 4 cr (paralegal students only)

R3533 **Functional Communication** (prereq #, △, 1421, either 1422 or 1461)
1315-1500 M, 1315-1600 W, East Bank, Adamson, 5 cr

R3571 **Computer Approach: Problem Solving** (prereq high school algebra or #)
1115-1300 TTh, East Bank, Robertson, 4 cr

R3583 **Legal Studies: Estate Planning and Administration** (prereq 1235, 1534, 1540, paralegal student or #)
1730-2000 Th, West Bank, 4 cr

R3587 **Legal Studies: Internship** (prereq paralegal student, △) (S-N only)
Templeton, ar cr

R3594 **Legal Studies: Special Topics: Computers in the Law Firm** (§3588; prereq 3584, 3586, #, △)
1720-2000 T, West Bank, 4 cr

R3602 **Applied Supervision** (prereq 45 cr, 1511, one course in psychology and sociology or #)
0815-1000 TTh, East Bank, Kroll, 4 cr

R3605 **Interviewing** (prereq #, △)
1415-1500 M, 1415-1600 WF, East Bank, Skovholt, 5 cr

R3612 **Mental Health: Principles and Practices** (prereq #, △)
1015-1200 WF, East Bank, Skovholt, 4 cr

R3616 **Creativity: Crafts** (prereq soph or above, enrolled in RSG or HSG or pre-OT or #)
1115-1300 TTh, East Bank, Gates, 4 cr

R3644 **Human Services: Counseling, Work With Community Resources** (prereq HSG student, #, △)
1730-2000 M, East Bank, Foat, 4 cr

R3723 **Principles of Marriage and Family Interventions Internship** (prereq 3722, #) (A-N only)
1415-1600 W, East Bank, Thoen, 6 cr

R3725 **The Individual, Sexuality and Society**
1015-1100 MTWTh, East Bank, Thoen, 4 cr

R3834 **Conflict and Social Change: Humanities** (prereq ¶3835, 3836)
1730-2100 MW, East Bank, Koch, 3 cr

R3835 **Conflict and Social Change: Social Sciences** (¶3834, 3836)
1730-2100 MW, East Bank, Wambach, 3 cr

R3836 **Conflict and Social Change: Natural Sciences** (¶3834, 3835)
1730-2100 MW, East Bank, 3 cr

R3847 **Contemporary Minnesota**
0815-0900 MTWTh, East Bank, Hathaway, 4 cr

R3894 **Planning Your GC Baccalaureate Senior Report** (prereq 135 credits, #, △...3423 rec) (S-N only)
1415-1600 Th, East Bank, 1 cr

GENETICS AND CELL BIOLOGY (GCB)
Biological Sciences

Winter Quarter

R3022 **Genetics** (§Biol 5003; prereq Biol 1009, non-biology maj)
–2 LECT 1800-1930 TTh, East Bank, Snyder, 4 cr (Mpls)
★LECT 0930-1045 TTh, St. Paul, Enfield
–1 REC 1200-1245 T, St. Paul, 4 cr
–2 REC 1300-1345 T, St. Paul, 4 cr
–3 REC 1100-1145 W, St. Paul, 4 cr
–4 REC 1300-1345 W, St. Paul, 4 cr

3960 **Research Topics** (prereq Biol 5001) (S-N only)
1500-1545 M, St. Paul, V Woodward, 1 cr

R5011 **General and Comparative Embryology** (prereq Biol 1106 or 3011)
★LECT 1115-1230 MW, St. Paul, McKinnell
–1 LAB 1245-1500 M, St. Paul, 4 cr
–2 LAB 1245-1500 W, St. Paul, 4 cr

R5022 **Genetics** (§3022, Biol 5003, not open to grad students in genetics)
–2 LECT 1800-1930 TTh, East Bank, Snyder, 3 cr (Mpls)
★LECT 0930-1045 TTh, St. Paul, Enfield
–1 REC 1200-1245 T, St. Paul, 3 cr
–2 REC 1300-1345 T, St. Paul, 3 cr
–3 REC 1100-1145 W, St. Paul, 3 cr
–4 REC 1300-1345 W, St. Paul, 3 cr

5024 **The Genetics of Development** (prereq Biol 5003 or #)
1045-1145 MWF, St. Paul, R Herman, 4 cr

5031 **Advanced Genetics I** (prereq 3022 or Biol 5003 and 5001 or BioC 5751 or #)
1400-1500 MWF, St. Paul, Lefebvre, Snyder, 4 cr

5044 **Human Population Genetics** (prereq 5043, biostatistics such as PubH 5452 or equiv or #)
1415-1530 TTh, East Bank, Anderson, 4 cr (Mpls)

5049 **Advanced Cell Biology II** (prereq 5048, Biol 5001, 5003)
0815-0945 TTh, St. Paul, Silflow, 4 cr

5062 **Genetics and Speciation** (prereq 15 cr biology including genetics)
1315-1400 MWF, East Bank, Merrell, 4 cr (Mpls)

5134 **Endocrinology** (prereq Biol 3011, 5001 or #)
0945-1045 MWF, St. Paul, W Herman, 4 cr

5970 **Directed Studies** (prereq #, △)
ar cr

5990 **Directed Research** (prereq #, △)
ar cr

8060 **Current Topics**
1400-1530 M, St. Paul, Sauerbier, 2 cr

8900 **Seminar** (S-N only)
1530-1700 Th, St. Paul, 1 cr

8910 **Journal Clubs** (prereq △) (S-N only)
1 cr

8920 **Special Topics** (prereq △) (S-N only)
1-5 cr

8970 **Directed Studies** (prereq #, △)
ar cr

8990 **Research** (prereq #)
ar cr

Spring Quarter

3008 **The Biology of Cancer** (prereq Biol 1009)
1315-1430 TTh, St. Paul, McKinnell, 3 cr

R3022 **Genetics** (§Biol 5003; prereq Biol 1009, non-biology maj)
★LECT 0945-1100 TTh, East Bank, Sauerbier, (Mpls)
–1 REC 1115-1200 T, East Bank, 4 cr (Mpls)
–2 REC 1215-1300 T, East Bank, 4 cr (Mpls)
–3 REC 0900-0945 W, St. Paul, 4 cr
–4 REC 1000-1045 W, St. Paul, 4 cr

5002 **Transmission Electron Microscopy Lab** (prereq #) (S-N only)
4 cr

R5015 **Histology: Cell and Tissue Organization** (prereq Biol 1106 or 3011, plus 4 additional credits in the biological sciences)
★LECT 0830-0945 TTh, St. Paul, Cunningham
–1 LAB 1000-1145 TTh, St. Paul, 5 cr
–2 LAB 1300-1445 TTh, St. Paul, 5 cr
–3 LAB 1300-1445 WF, St. Paul, 5 cr

R5022 **Genetics** (§3022, Biol 5003, not open to grad students in genetics)
★LECT 0945-1100 TTh, East Bank, Sauerbier, (Mpls)
–1 REC 1115-1200 T, East Bank, 3 cr (Mpls)
–2 REC 1215-1300 T, East Bank, 3 cr (Mpls)
–3 REC 0900-0945 W, St. Paul, 3 cr
–4 REC 1000-1045 W, St. Paul, 3 cr

R5030 **Laboratory: Genetics** (prereq 3022 or 5022 or Biol 5003 or #)
1400-1615 MW, St. Paul, Snustad, 2 cr

5032 **Advanced Genetics II** (prereq 5031)
1515-1730 MWF, St. Paul, Hackett, 4 cr

5033 **Population and Quantitative Genetics** (prereq 3022 or Biol 5003, course in biometry or statistics or #)
1300-1445 TTh, St. Paul, Curtsinger, 4 cr

5052 **Quantitative Techniques, Cell Biology** (calculus, introductory cellular or molecular biology, biochemistry rec)
0815-0945 TTh, St. Paul, 4 cr

5970 **Directed Studies** (prereq #, △)
ar cr

5990 **Directed Research** (prereq #, △)
ar cr

8060 **Current Topics**
–1 1400-1530 M, St. Paul, Simmons, 2 cr
–2 1530-1700 M, St. Paul, Hackett, 2 cr

8900 **Seminar** (S-N only)
1530-1700 Th, St. Paul, 1 cr

8910 **Journal Clubs** (prereq △) (S-N only)
1 cr

8920 **Special Topics** (prereq △) (S-N only)
1-5 cr

8970 **Directed Studies** (prereq #, △)
ar cr

8990 **Research** (prereq #)
ar cr

GEO-ENGINEERING (GeoE)
Civil And Mineral Engineering
Institute of Technology

Winter Quarter

3300 **Geo-Engineering Materials** (prereq AEM 1015, 3016, IT stu) (A-N only)
1115-1200 MTWF, East Bank, Fairhurst, 4 cr

5300 **Theory of Geomechanics** (prereq CE 3300, IT stu or grad IT) (A-N only)
1615-1800 MW, East Bank, Vardoulakis, 4 cr

5660 **Special Geo-Engineering Problems** (prereq IT sr or #) (A-N only)
ar cr

5661 **Special Geo-Engineering Problems** (prereq IT sr or #) (A-N only)
ar cr

8336 **Analytical Methods in Rock Mechanics** (prereq #)
1115-1200 MTWF, East Bank, Crouch, 4 cr

8602 **Seminar: Geo-Engineering** (prereq #) (S-N only)
1515-1600 Th, East Bank, ar r

Spring Quarter

5262 **Geo-Engineering Analysis** (prereq IT sr or grad IT maj or #) (A-N only)
1315-1400 TTh, East Bank, 4 cr

5302 **Applied Rock Mechanics** (prereq 5300, IT stu or grad IT maj) (A-N only)
0815-0900 MTWF, East Bank, Crouch, 4 cr

5662 **Special Geo-Engineering Problems** (prereq IT sr or #) (A-N only)
ar cr

8350 **Advanced Rock Mechanics I** (prereq 5302)
1115-1200 MWF, East Bank, Cundall, 4 cr

8603 **Seminar: Geo-Engineering** (prereq #) (S-N only)
ar cr

8614 **Geo-Engineering Research Problems** (prereq #) (A-N only)
ar cr

GEOGRAPHY (Geog)
Liberal Arts

Winter Quarter

R1301 **Human Geography**
★LECT 1115-1200 MWF, West Bank, Hart
–1 REC 0815-0900 M, West Bank, 5 cr
–2 REC 0915-1000 M, West Bank, 5 cr
–3 REC 0915-1000 M, West Bank, 5 cr
–4 REC 1015-1100 M, West Bank, 5 cr
–5 REC 1015-1100 M, West Bank, 5 cr
–6 REC 1215-1300 M, West Bank, 5 cr
–7 REC 1215-1300 M, West Bank, 5 cr
–8 REC 1115-1200 T, West Bank, 5 cr
–9 REC 1115-1200 T, West Bank, 5 cr
–10 REC 1015-1100 W, West Bank, 5 cr
–11 REC 1015-1100 W, West Bank, 5 cr
–12 REC 1215-1300 W, West Bank, 5 cr
–13 REC 1215-1300 W, West Bank, 5 cr
–14 REC 1115-1200 Th, West Bank, 5 cr
–15 REC 1115-1200 Th, West Bank, 5 cr

R1401 **Physical Geography** (§NSci 1501)
★LECT 1015-1100 MWF, West Bank, Barrett
–1 REC 0815-0900 TTh, West Bank, 5 cr
–2 REC 0815-0900 TTh, West Bank, 5 cr
–3 REC 0915-1000 TTh, West Bank, 5 cr
–4 REC 1015-1100 TTh, West Bank, 5 cr
–5 REC 1015-1100 TTh, West Bank, 5 cr
–6 REC 1015-1100 TTh, West Bank, 5 cr
–7 REC 0815-0900 WF, West Bank, 5 cr
–8 REC 0815-0900 WF, West Bank, 5 cr
–9 REC 0915-1000 WF, West Bank, 5 cr
–10 REC 0915-1000 WF, West Bank, 5 cr
–11 REC 0915-1000 WF, West Bank, 5 cr
–12 REC 1115-1200 WF, West Bank, 5 cr
–13 REC 1115-1200 WF, West Bank, 5 cr
–14 REC 1115-1200 WF, West Bank, 5 cr
–15 REC 1215-1300 WF, West Bank, 5 cr

R1501 **The Language of Maps** (§3311)
★LECT 0915-1000 MWF, Wes Bank, Gersmehl
–1 REC 0815-0900 T, West Bank, 5 cr
–2 REC 0915-1000 T, West Bank, 5 cr
–3 REC 0815-0900 W, West Bank, 5 cr
–4 REC 0815-0900 Th, West Bank, 5 cr
–5 REC 0915-1000 Th, West Bank, 5 cr
–6 REC 0815-0900 F, West Bank, 5 cr
–7 REC 1015-1100 F, West Bank, 5 cr
–8 REC 1215-1300 F, West Bank, 5 cr

3101 **Geography of United States and Canada**
1115-1200 MWF, West Bank, Gersmehl, 4 cr

3121 **Latin America**
0945-1100 TTh, West Bank, Weil, 4 cr

3141 **Africa**
0915-1000 MWF, West Bank, Porter, 4 cr

3161 **Europe**
1015-1100 MWF, West Bank, Rice, 4 cr

3213 **Southeast Asia**
1115-1200 MWF, West Bank, Schwartzberg, 4 cr

3331 **Introduction to Economic Geography**
1015-1100 MWF, West Bank, Sheppard, 4 cr

3344 **The Land Ethic in the United States**
1215-1300 MWF, West Bank, Squires, 4 cr

3371 **Introduction to Urban Geography**
1115-1200 MWF, West Bank, 4 cr

3378 **Modernization and the Third World**
0915-1000 MWF, West Bank, Scott, 4 cr

3381 **Population Geography**
1315-1400 MWF, West Bank, Rice, 4 cr

3421 **Climatology** (prereq 1401 or #)
1415-1530 TTh, West Bank, Skaggs, 4 cr

3531 Quantitative Methods
0945-1100 TTh, West Bank, Skaggs, 4 cr

3801 Development of Geographic Thought (§5801; prereq 3 courses in geog)
1115-1200 MWF, West Bank, 4 cr

3940 Directed Field Study (prereq #) (A-N only)
2-4 cr

3970 Directed Readings (prereq #, △, college approval)
1-15 cr

5001 Geographical Analysis I
1315-1400 MWF, West Bank, Sheppard, 4 cr

5111 Selected Regions: Eastern United States
1315-1400 MWF, West Bank, Hart, 4 cr

5131 Colonial Mexico and the Caribbean
1415-1500 MWF, West Bank, Barrett, 4 cr

5191 Agricultural Marketing in Africa
1115-1200 MWF, West Bank, Scott, 4 cr

5372 Metropolitan Analysis I
0815-1000 TTh, West Bank, J Adams, 4 cr

5411 Medical Geography
1245-1400 TTh, West Bank, Weil, 4 cr

R5511 Cartographic Analysis (prereq 3511 or 3531)
1015-1130 TTh, West Bank, Andrews, 4 cr

R5522 Computer Cartography (prereq basic knowledge of FORTRAN, 3511 or #)
★LECT 0915-1000 MWF, West Bank, Hsu
–1 REC 1315-1500 W, West Bank, 4 cr

R5900 Topics in Geography: Geographic Information Systems (prereq sr or grad, △)
1315-1500 F, West Bank, Brown, 1-4 cr

8020 Seminar: Economic Geography (prereq #)
1515-1700 W, West Bank, Sheppard, 1-3 cr

8126 Seminar: Historical Geography of Public Lands (prereq 8125)
Squires, 1-3 cr

8210 Seminar: South Asia (prereq #)
1515-1700 W, West Bank, Schwartzberg, 1-3 cr

8400 Seminar: Physical Geography (prereq #)
1315-1500 M, West Bank, Brown, 1-3 cr

8970 Directed Readings
1-5 cr

8980 Topics in Geography (prereq △)
–1 1315-1500 W, West Bank, Porter, 1-3 cr
–2 1415-1600 Th, West Bank, Squires, 1-3 cr

8990 Research Problems
ar cr

Spring Quarter

R1301 Human Geography
★LECT 1015-1100 MWF, East Bank, Weil
–1 REC 1215-1300 MW, East Bank, 5 cr
–2 REC 1215-1300 MW, East Bank, 5 cr
–3 REC 1015-1100 TTh, East Bank, 5 cr
–4 REC 1015-1100 TTh, East Bank, 5 cr
–5 REC 0915-1000 WF, East Bank, 5 cr
–6 REC 0915-1000 WF, East Bank, 5 cr
★LECT 1215-1300 MWF, West Bank, Rice
–7 REC 0915-1000 TTh, West Bank, 5 cr
–8 REC 0915-1000 TTh, West Bank, 5 cr
–9 REC 1015-1100 TTh, West Bank, 5 cr
–10 REC 1115-1200 TTh, West Bank, 5 cr
–11 REC 1115-1200 TTh, West Bank, 5 cr
–12 REC 1115-1200 TTh, West Bank, 5 cr
–13 REC 1215-1300 TTh, West Bank, 5 cr
–14 REC 1215-1300 TTh, West Bank, 5 cr
–15 REC 0915-1000 WF, West Bank, 5 cr
–16 REC 0915-1000 WF, West Bank, 5 cr
–17 REC 0915-1000 WF, West Bank, 5 cr
–18 REC 1015-1100 WF, West Bank, 5 cr
–19 REC 1015-1100 WF, West Bank, 5 cr
–20 REC 1315-1400 WF, West Bank, 5 cr
–21 REC 1315-1400 WF, West Bank, 5 cr

R1401 Physical Geography (§NSci 1501)
★LECT 0915-1000 MWF, West Bank, Gersmehl
–1 REC 0815-0900 MF, West Bank, 5 cr
–2 REC 0815-0900 MF, West Bank, 5 cr
–3 REC 0815-0900 MF, West Bank, 5 cr
–4 REC 1015-1100 MF, West Bank, 5 cr
–5 REC 1015-1100 MF, West Bank, 5 cr
–6 REC 1015-1100 MF, West Bank, 5 cr
–7 REC 1115-1200 MF, West Bank, 5 cr
–8 REC 1115-1200 MF, West Bank, 5 cr
–9 REC 0815-0900 TTh, West Bank, 5 cr
–10 REC 0815-0900 TTh, West Bank, 5 cr
–11 REC 0815-0900 TTh, West Bank, 5 cr
–12 REC 0915-1000 TTh, West Bank, 5 cr
–13 REC 0915-1000 TTh, West Bank, 5 cr
–14 REC 0915-1000 TTh, West Bank, 5 cr
–15 REC 1015-1100 TTh, West Bank, 5 cr

R1425 Introduction to Meteorology (§Soil 1262)
★LECT 1830-2045 M, West Bank, Skaggs
–1 REC 1830-2000 W, West Bank, 4 cr
–2 REC 1830-2000 Th, West Bank, 4 cr

R1501 The Language of Maps (§3311)
★LECT 1015-1100 MWF, West Bank, Andrews
–1 REC 1015-1100 T, West Bank, 5 cr
–2 REC 1015-1100 T, West Bank, 5 cr
–3 REC 1115-1200 T, West Bank, 5 cr
–4 REC 1015-1100 Th, West Bank, 5 cr
–5 REC 1015-1100 Th, West Bank, 5 cr
–6 REC 1115-1200 Th, West Bank, 5 cr
–7 REC 0915-1000 F, West Bank, 5 cr
–8 REC 0915-1000 F, West Bank, 5 cr

3001 Introduction to Geographic Inquiry
1115-1200 MWF, West Bank, Porter, 4 cr

3101 Geography of United States and Canada
1115-1200 MWF, West Bank, Hart, 4 cr

3111 Minnesota
1415-1500 MWF, West Bank, Rice, Squires, 4 cr

3131 Middle America
0915-1000 MWF, West Bank, Barrett, 4 cr

3141 Africa
0915-1000 MWF, West Bank, Scott, 4 cr

3221 Australia, New Zealand, Oceania
1215-1300 MWF, West Bank, Barrett, 4 cr

3321 Political Geography
0915-1000 MWF, West Bank, Schwartzberg, 4 cr

3341 Industrialization and World Trade
0945-1100 TTh, West Bank, R Adams, 4 cr

3355 Environmental Problems
1800-2100 T, West Bank, Squires, 4 cr

3371 Introduction to Urban Geography
1315-1500 TTh, West Bank, J Adams, 4 cr

3431 Introduction to Plant and Animal Geography (prereq non biology maj)
1015-1100 MWF, West Bank, Squires, 4 cr

3451 Geography of Soils (§Soil 5512)
1315-1400 MWF, West Bank, Gersmehl, 4 cr

R3511 Introduction to Cartography (prereq 5 cr in geog or #)
★LECT 1315-1500 M, West Bank, Andrews
–1 REC 1515-1700 M, West Bank, 5 cr
–2 REC 1315-1500 T, West Bank, 5 cr
–3 REC 1315-1500 W, West Bank, 5 cr

3801 Development of Geographic Thought (§5801; prereq 3 courses in geog)
1115-1200 MWF, West Bank, 4 cr

3940 Directed Field Study (prereq #) (A-N only)
2-4 cr

3970 Directed Readings (prereq #, △, college approval)
1-15 cr

5132 South America
0815-1000 MF, West Bank, Mather, 4 cr

5142 Geography of East Africa
1415-1500 MWF, West Bank, Porter, 4 cr

5373 Metropolitan Analysis II (prereq 5372)
0815-1000 TTh, West Bank, J Adams, 4 cr

5383 Transportation Geography (prereq 3331 or #)
1820-2050 T, West Bank, R Adams, 4 cr

5391 Rural Geography
1215-1400 MF, West Bank, Mather, 4 cr

5423 Advanced Climatology (prereq 3421 or #)
1315-1500 MF, West Bank, Skaggs, 4 cr

5444 Geography of Water Resources (prereq 2 courses physical geog or #)
1415-1530 TTh, West Bank, Brown, 4 cr

R5512 Cartography: Topics (prereq 3511 or 3531)
1115-1200 MWF, West Bank, 4 cr

5531 Quantitative Research Design (prereq 3531 or #)
0915-1000 MWF, West Bank, Sheppard, 4 cr

5801 Development of Geographic Thought (§3801; prereq 3 courses in geog)
1115-1200 MWF, West Bank, 4 cr

8020 Seminar: Economic Geography (prereq #)
1515-1700 W, West Bank, Sheppard, 1-3 cr

8120 Seminar: Historical Geography (prereq #)
1515-1700 W, West Bank, Barrett, 1-3 cr

8140 Seminar: Africa (prereq #)
1300-1500 F, West Bank, Scott, 3 cr

8210 Seminar: South Asia (prereq #)
Schwartzberg, 1-3 cr

8380 Seminar: Medical Geography (prereq 5411 or #)
1300-1500 T, West Bank, Weil, 1-3 cr

8800 Seminar: Development of Geographic Thought (prereq #)
1900-2100 W, West Bank, Lukermann, 1-3 cr

8970 Directed Readings
1-5 cr

8980 Topics in Geography (prereq △)
1415-1600 Th, West Bank, Squires, 1-3 cr

8990 Research Problems
ar cr

GEOLOGY AND GEOPHYSICS (Geo)
Institute of Technology

Winter Quarter

R1001 Physical Geology
♦–1 LECT 0915-1000 MTWF, East Bank, 5 cr
♦–2 LECT 1115-1200 MTWF, East Bank, 5 cr
–1 LAB 0915-1100 M, East Bank,
–2 LAB 1315-1500 M, East Bank,
–3 LAB 1315-1500 M, East Bank,
–4 LAB 0815-1000 T, East Bank,
–5 LAB 0915-1100 T, East Bank,
–6 LAB 1315-1500 T, East Bank,
–7 LAB 1315-1500 T, East Bank,
–8 LAB 1315-1500 W, East Bank,
–9 LAB 1315-1500 W, East Bank,
–10 LAB 1515-1700 W, East Bank,
–11 LAB 0815-1000 Th, East Bank,
–12 LAB 1015-1200 Th, East Bank,
–13 LAB 1015-1200 Th, East Bank,
–14 LAB 1215-1400 Th, East Bank,
–15 LAB 1315-1500 Th, East Bank,
–16 LAB 1515-1700 Th, East Bank,

R1002 Historical Geology (prereq 1001)
★LECT 1215-1300 MWF, East Bank, Hartman
–1 LAB 1315-1500 M, East Bank, 4 cr
–2 LAB 0815-1000 T, East Bank, 4 cr
–3 LAB 1215-1400 T, East Bank, 4 cr
–4 LAB 1115-1300 Th, East Bank, 4 cr

R1005 Geologic Perspectives on Energy
0915-1000 MTWF, East Bank, Alexander, Shaw, 4 cr

3099 Problems in Geology and Geophysics (prereq #, △)
1-6 cr

R3401 Introductory Mineralogy (prereq 1001 or 1111 or #, 1 qtr college chemistry, Math 1221)
★LECT 1015-1100 MWF, East Bank, Zoltai
–1 LAB 0815-1000 MWF, East Bank, 5 cr
–2 LAB 1115-1300 MWF, East Bank, 5 cr
–3 LAB 1315-1500 MWF, East Bank, 5 cr
–4 LAB 1515-1700 MWF, East Bank, 5 cr
–5 LAB 1215-1500 TTh, East Bank, 5 cr
–6 LAB 0915-1200 TTh, East Bank, 5 cr

R5004 Mineralogy (§3401, no geo, geophys, geo-eng, min eng majs; prereq Math 1221, one term college chem, #)
★LECT 1015-1100 MWF, East Bank, Zoltai
–1 LAB 1115-1300 MWF, East Bank, 4 cr
–2 LAB 1215-1500 TTh, East Bank, 4 cr

5099 Senior Thesis (prereq geology or geophysics maj with 4th yr standing, #)
Stout, 2 cr

R5108 Advanced Environmental Geology (prereq geology core curriculum 1111 through 3103 for maj or #)
0815-1000 TTh, East Bank, Pfannkuch, 4 cr

5202 Tectonic Styles (prereq 3103 or #)
1315-1400 MWF, East Bank, Hudleston, 3 cr

R5255 Glaciology (prereq Math 3221 or #)
Hooke, 4-5 cr

R5312 General Geochemistry II (prereq 5311, 5452 or #)
1115-1300 TTh, East Bank, Ito, 4 cr

5315 Stable Isotope Geochemistry (prereq 5312 or #...Chem 5521 rec)
1315-1500 MW, East Bank, Ito, 4 cr

R5501 Geophysical Methods in Geology (prereq 3102, Phys 1291, upper division stu or #)
1115-1200 MWF, East Bank, Shaw, Chase, 4 cr

R5506 **Physics and Chemistry of the Earth II** (prereq 1111, Phys 1291...Geo 5505 is not required)
0915-1000 MWF, East Bank, Banerjee, 4 cr

R5512 **Principles of Seismic Exploration** (§5522; prereq Phys 1291)
Mooney, 3 cr 1015-1100 TTh, PillsH 110, 1015-1100 F or 1315-1400 F, PillsH 207C,

5601 **Limnology** (§EBB 5601; prereq Chem 1005 or equiv)
0915-1000 MWF, East Bank, Megard, 4 cr

R5615 **Petroleum Reservoir Geology** (prereq 1001 or #)
0815-1000 M, East Bank, Pfannkuch, 2 cr

5653 **Depositional Systems** (prereq 3102)
1115-1200 MWF, East Bank, 5 cr (lab ar)

8098 **Seminar: Current Topics in Geology and Geophysics** (prereq #)
1-6 cr

8099 **Research in Geology and Geophysics** (prereq #)
1-6 cr

8262 **Quaternary Paleoecology and Climate** (prereq 5261 or #)
Wright, 4 cr

8404 **X-Ray Crystallography** (prereq 8402 or #)
Zoltai, 4 cr

R8453 **Phase Equilibrium in Mineral Systems** (prereq 5452, Chem 5520, Math 3221)
Stout, 3 cr

R8532 **Theory of Elastic Wave Propagation II** (prereq 8531)
0815-0900 MWF, East Bank, Mooney, 3 cr

8542 **Principles of Rock Magnestism I** (prereq 5541 or #)
Banerjee, 3 cr

8602 **Advanced Limnology** (prereq 5601, #)
Shapiro, 3 cr

R8612 **Analytical Geohydrology** (4 cr with term paper; prereq Math 3221, CE 3400 or #)
0815-1000 WF, East Bank, Pfannkuch, 3-4 cr

Spring Quarter

R1001 **Physical Geology**
★LECT 1315-1400 MTWF, East Bank, Paola, 5 cr
–1 LAB 1015-1200 M, East Bank,
–2 LAB 1415-1600 M, East Bank,
–3 LAB 0815-1000 T, East Bank,
–4 LAB 1015-1200 T, East Bank,
–5 LAB 1415-1600 T, East Bank,
–6 LAB 0815-1000 W, East Bank,
–7 LAB 1015-1200 W, East Bank,
–8 LAB 0915-1100 Th, East Bank,
–9 LAB 1015-1200 Th, East Bank,
–10 LAB 1215-1400 Th, East Bank,

R1002 **Historical Geology** (prereq 1001)
★LECT 1215-1300 MWF, East Bank, Hartman
–1 LAB 1015-1200 T, East Bank, 4 cr
–2 LAB 1415-1600 T, East Bank, 4 cr
–3 LAB 0915-1100 Th, East Bank, 4 cr
–4 LAB 1115-1300 Th, East Bank, 4 cr

R1005 **Geologic Perspectives on Energy**
0915-1000 MTWF, East Bank, Alexander, Shaw, 4 cr

R1111 **Introductory Physical Geology** (prereq high school or college chemistry or #)
★LECT 1315-1400 MWF, East Bank, Stout, Shaw
★REC 1415-1500 F, East Bank,
–1 LAB 0915-1100 MW, East Bank, 5 cr
–2 LAB 1315-1500 TTh, East Bank, 5 cr
–3 LAB 1515-1700 TTh, East Bank, 5 cr

3099 **Problems in Geology and Geophysics** (prereq #, △)
1-6 cr

R3102 **Petrology** (prereq 3401, geology, geophysics, geo-engineering or mining engineering maj or #)
★LECT 1115-1200 MWF, East Bank, Weiblen
–1 LAB 1215-1400 MW, East Bank, 5 cr
–2 LAB 1415-1600 MW, East Bank, 5 cr
–3 LAB 0915-1100 TTh, East Bank, 5 cr
–4 LAB 1515-1700 TTh, East Bank, 5 cr

R3103 **Structural Geology** (prereq 3401, 3102, upper division geology, geophysics, geo-engr or mining engr maj or #)
★LECT 1015-1100 MWF, East Bank, Hudleston
–1 LAB 1315-1500 MW, East Bank, 5 cr
–2 LAB 1515-1700 MW, East Bank, 5 cr
–3 LAB 0915-1100 TTh, East Bank, 5 cr
–4 LAB 1115-1300 TTh, East Bank, 5 cr

R5002 **Structural Geology** (§3103, no geology, geophysics, geo-engineering or mining engr majs; prereq 3401 or 5004, #)
★LECT 1115-1200 MWF, East Bank, Hudleston
–1 LAB 1315-1500 MW, East Bank, 4 cr
–2 LAB 1515-1700 MW, East Bank, 4 cr
–3 LAB 0915-1100 TTh, East Bank, 4 cr
–4 LAB 1115-1300 TTh, East Bank, 4 cr

5099 **Senior Thesis** (prereq geology or geophysics maj with 4th yr standing, #)
Stout, 2 cr

R5102 **Stratigraphic Analysis** (prereq 1002 or 3112)
0815-1000 TTh, East Bank, 4 cr

R5313 **Aqueous Geochemistry** (prereq 5311, Chem 5520 or #)
1415-1500 MWF, East Bank, Seyfried, 4 cr

R5352 **Economic Geology: Ferrous Metal and Uranium Deposits** (prereq 3401, 3103 or #)
0915-1000 MWF, East Bank, Sawkins, 4 cr

R5507 **Physics and Chemistry of the Earth III** (5505 or 5506 are not required)
1115-1300 TTh, East Bank, Alexander, 4 cr

R5513 **Principles of Electrical Exploration** (prereq Phys 1291)
1015-1100 TTh, East Bank, Mooney, 3 cr
1015-1100 F or 1315-1400 F, PillsH 207C,

R5521 **Data Processing Methods in Geophysics** (prereq 5512, 1 yr calculus)
0815-0900 MWF, East Bank, Mooney, 3 cr

R5611 **Groundwater Geology** (prereq 1001 or 1111, Math 1231, 1 qtr physics, chemistry or #)
★LECT 0815-1000 MW, East Bank, Pfannkuch, 4 cr
–1 LAB 0815-1000 F, East Bank,

5655 **Sandstone Petrology** (prereq 3110 or #)
★LECT 1415-1545 MW, East Bank, 4 cr
–1 LAB 1315-1500 TTh, East Bank,

8098 **Seminar: Current Topics in Geology and Geophysics** (prereq #)
1-6 cr

8099 **Research in Geology and Geophysics** (prereq #)
1-6 cr

8351 **Advanced Mineral Deposits** (prereq 5313, 5351 or #)
Sawkins, Seyfried, 3 cr

8402 **X-Ray Mineralogy** (prereq 1 yr college physics, chemistry)
1115-1200 MWF, East Bank, Zoltai, 4 cr (lab ar)

8455 **Metamorphic Petrology** (prereq 8453)
Stout, 3 cr

8521 **Linear Data Processing with Geophysical Applications** (prereq 5512, 1 yr calculus)
0815-0900 MWF, East Bank, Mooney, 3 cr

8543 **Principles of Rock Magnetism II** (prereq 8542 or #)
Banerjee, 3 cr

8564 **Properties of the Earth's Mantle: Relationship to Crustal Motion** (prereq 5505 or 5506 or 5507 or #)
Banerjee, 3 cr

GERMAN (Ger)
German
Liberal Arts

Winter Quarter

R1010 **Beginning German Individualized Reading, Listening** (first 3 cr must be completed as a unit, max 15 cr, §1101-1102-1103, 1110, 1201-1203, 1210)
–1 1215-1300 W, East Bank, Baker, 1-15 cr (1st meeting) (addnl hrs ar)
–2 1215-1300 Th, East Bank, Mueller, 1-15 cr (1st meeting) (addnl hrs ar)

R1101 **Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking** (§1010, 1110, 1201-1202-1203-1204-1205, 1210)
0915-1000 MTWThF, East Bank, Brewster, 5 cr

R1102 **Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking** (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1101)
–1 0915-1000 MTWThF, East Bank, Steckel, 5 cr
–2 1015-1100 MTWThF, East Bank, Peterson, 5 cr
–3 1115-1200 MTWThF, East Bank, Stephens, 5 cr
–4 1215-1300 MTWThF, East Bank, Wakefield, 5 cr

R1104 **Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking** (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1103, 15 cr of 1110 or #)
–1 0915-1000 MTWTh, East Bank, Rauch, 5 cr
–2 1015-1100 MTWThF, East Bank, Oberle, 5 cr

R1105 **Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking** (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1104)
–1 0915-1000 MTWTh, East Bank, Hennings, 4 cr
–2 1115-1200 MTWTh, East Bank, Bryant-Bertail, 4 cr

R1110 **Beginning German: Individualized Reading, Listening, Writing** (first 3 cr must be completed as one unit, max 15 cr, §1010, 1101-1103, 1201-1203, 1210)
–1 1215-1300 M, East Bank, Rusch, 1-15 cr (1st meeting) (addnl hrs ar)
–2 1215-1300 T, East Bank, Nelson, 1-15 cr (1st meeting) (addnl hrs ar)

R1202 **Beginning and Intermediate German: Classroom Reading, Listening, Writing** (§1010, 1101-1102-1103-1104-1105, 1110, 1210; prereq 1201)
1115-1200 MTWThF, East Bank, Winter, 5 cr

R1205 **Beginning and Intermediate German: Classroom Reading, Listening, Writing** (§1010, 1101-1102-1103-1104-1105, 1110, 1210; prereq 1204)
1015-1100 MTWTh, East Bank, 4 cr

1210 **Reading and Listening: Independent Study** (§1010, 1102-1103-1104, 1110, 1202-1203-1204; prereq 1201)
1215-1300 T, East Bank, Metcalf, 1-15 cr (1st meeting) (addnl hrs ar)

R3011 **Conversation and Composition** (prereq 1105 or placement)
1215-1300 MTWF, East Bank, Achberger, 4 cr

R3012 **Conversation and Composition** (prereq 3011)
–1 0915-1000 TWThF, East Bank, Michel, 4 cr
–2 1215-1300 TWThF, East Bank, Taraba, 4 cr

R3013 **Conversation and Composition** (prereq 3012)
1315-1400 MTWTh, East Bank, Brewster, 4 cr

R3015 **Conversation and Composition** (prereq 3013 or #)
1115-1200 MWF, East Bank, Weiss, 4 cr

R3021 **Business German** (prereq 1105 or equiv)
1820-2050 W, East Bank, Michel, 4 cr

R3104 **Reading and Analysis of Prose** (prereq 1105 or #)
1115-1200 MWF, East Bank, Duroche, 4 cr

R3105 **Reading and Analysis of Drama and Poetry** (prereq 1105 or #)
1015-1100 MWF, East Bank, Plummer, 4 cr

R3106 **Introduction to German Literary Criticism and Theory** (prereq 3104 or 3105 or #)
1015-1100 MWF, East Bank, Brewster, 4 cr

3342 **Senior Project in German** (prereq #) (A-N only)
2 cr

3342H **Senior Project in German** (prereq #) (A-N only)
2 cr

R3431 **Romanticism** (prereq 3104, 3105)
1315-1400 MWF, East Bank, Schulte-Sasse, 4 cr

R3501 **Contemporary Germany** (prereq 1 yr of college German or 3 yrs high school German)
0915-1000 TWThF, East Bank, Hirschbach, 4 cr

R3512 **German Civilization and Culture: Reformation to 1800** (prereq 3104, 3105, one additional 3xxx German lit course)
1415-1500 MW, 1415-1600 F, East Bank, Weiss, 4 cr

3590 **Directed Studies: German-Speaking Countries** (prereq 3501, #)
5 cr

R3602 **German Literature in Translation: Age of Goethe** (no knowledge of German req; prereq non maj or minor)
1415-1500 MWF, East Bank, Achberger, 4 cr

R3604 **German Literature in Translation and the Film** (no knowledge of German req)
1415-1600 TTh, East Bank, Plummer, 4 cr

3970 **Directed Studies** (prereq 3104 or 3105, #, △, college approval)
1-5 cr

5970 **Directed Studies** (prereq 3104, 3105, 3 addnl German literature courses, #, △, CLA approval)
1-5 cr

8221 **Romanticism**
1515-1700 F, East Bank, Schulte-Sasse, 4 cr

8262 **German Literature Since World War II**
1515-1700 T, East Bank, Taraba, 4 cr

8701 **Philological Proseminar: Bibliography**
1515-1730 W, East Bank, Firchow, 4 cr

8722 **Middle High German Language** (prereq 8721)
1245-1400 MW, East Bank, Firchow, 4 cr

8732 **Old High German** (prereq 8731)
1515-1700 Th, East Bank, Liberman, 4 cr

8990 **Reading and Research** (prereq #)
3-6 cr

Spring Quarter

R1010 **Beginning German Individualized Reading, Listening** (first 3 cr must be completed as a unit, max 15 cr, §1101-1102-1103, 1110, 1201-1203, 1210)
–1 1215-1300 W, East Bank, Baker, 1-15 cr (1st meeting) (addnl hrs ar)
–2 1215-1300 Th, East Bank, Mueller, 1-15 cr (1st meeting) (addnl hrs ar)

R1102 **Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking** (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1101)
0915-1000 MTWThF, East Bank, Michel, 5 cr

R1103 **Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking** (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1102)
–1 0915-1000 MTWThF, East Bank, Steckel, 5 cr
–2 1015-1100 MTWThF, East Bank, Peterson, 5 cr
–3 1115-1200 MTWThF, East Bank, Stephens, 5 cr
–4 1215-1300 MTWThF, East Bank, Bryant-Bertail, 5 cr

R1105 **Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking** (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1104)
–1 0915-1000 MTWTh, East Bank, Rauch, 4 cr
–2 1015-1100 MTWTh, East Bank, Oberle, 4 cr

R1110 **Beginning German: Individualized Reading, Listening, Writing** (first 3 cr must be completed as one unit, max 15 cr, §1010, 1101-1103, 1201-1203, 1210)
–1 1215-1300 M, East Bank, Rusch, 1-15 cr (1st meeting) (addnl hrs ar)
–2 1215-1300 T, East Bank, Nelson, 1-15 cr (1st meeting) (addnl hrs ar)

R1203 **Beginning and Intermediate German: Classroom Reading, Listening, Writing** (§1010, 1101-1102-1103-1104-1105, 1110, 1210; prereq 1202)
1115-1200 MTWThF, East Bank, Winter, 5 cr

1210 **Reading and Listening: Independent Study** (§1010, 1102-1103-1104, 1110, 1202-1203-1204; prereq 1201)
1215-1300 T, East Bank, Metcalf, 1-15 cr (1st meeting) (addnl hrs ar)

R3011 **Conversation and Composition** (prereq 1105 or placement)
1115-1200 MTWF, East Bank, Michel, 4 cr

R3012 **Conversation and Composition** (prereq 3011)
1015-1100 MTWF, East Bank, Plummer, 4 cr

R3013 **Conversation and Composition** (prereq 3012)
–1 1315-1400 MTWF, East Bank, Achberger, 4 cr
–2 0915-1000 TWThF, East Bank, Brewster, 4 cr

R3016 **Techniques of Translation** (prereq 3013 or #)
1315-1400 MWF, East Bank, Hirschbach, 4 cr

R3104 **Reading and Analysis of Prose** (prereq 1105 or #)
0945-1100 TTh, East Bank, Thomas, 4 cr

R3105 **Reading and Analysis of Drama and Poetry** (prereq 1105 or #)
1015-1100 MWF, East Bank, Taraba, 4 cr

3342 **Senior Project in German** (prereq #) (A-N only)
2 cr

3342H **Senior Project in German** (prereq #) (A-N only)
2 cr

R3422 **Storm and Stress** (prereq 3104, 3105)
1315-1400 MWF, East Bank, Schulte-Sasse, 4 cr

R3442 **Twentieth-Century Literature: 1918-1933** (prereq 3104, 3105)
1215-1300 MWF, East Bank, Plummer, 4 cr

R3513 **German Civilization and Culture: 1800 to Present** (prereq 3104, 3105, one additional 3xxx German course)
1415-1500 MW, 1415-1600 F, East Bank, Weiss, 4 cr

3590 **Directed Studies: German-Speaking Countries** (prereq 3501, #)
5 cr

R3603 **German Literature in Translation: Modern Literature** (no knowledge of German required; prereq non maj or minor)
1115-1200 MWF, East Bank, Achberger, 4 cr

R3610 **German Authors and/or Topics in Translation** (max 12 cr, no knowledge of German req; prereq non maj or minor)
1415-1500 MWF, East Bank, Plummer, 4 cr

R3701 **History of German Language** (prereq 3104, 3105)
0945-1100 TTh, East Bank, Firchow, 4 cr

3970 **Directed Studies** (prereq 3104 or 3105, #, △, college approval)
1-5 cr

5970 **Directed Studies** (prereq 3104, 3105, 3 addnl German literature courses, #, △, CLA approval)
1-5 cr

8203 **Middle High German Courtly Lyric** (prereq 8202, 8723 or #)
1515-1700 Th, East Bank, Wakefield, 4 cr

8302 **The 19th Century Novel**
1615-1800 T, East Bank, Brewster, 4 cr

8431 **Heine**
1515-1700 M, East Bank, Duroche, 4 cr

8723 **Middle High German Language** (prereq 8722)
1315-1530 T, East Bank, Firchow, 4 cr

8733 **Old High German** (prereq 8732)
1515-1700 F, East Bank, Liberman, 4 cr

8820 **Advanced Theoretical Seminar** (max 12 cr; prereq 8112 or 8113 or #)
1515-1700 W, East Bank, Duroche, 4 cr

8990 **Reading and Research** (prereq #)
3-6 cr

GREEK (Grk)
Classics
Liberal Arts

Winter Quarter

R1102 **Beginning Classical Greek** (1101-1102†; prereq 1101)
0915-1000 MTWThF, East Bank, 5 cr

1120 **Individualized Introduction to Biblical Greek** (max 15 cr, 2-10 cr in any one qtr, §1101-1102-1103, 1110; prereq #)
1-15 cr

1122H **Honors Course: Beginning Classical Greek** (prereq 1111H)
0915-1000 MTWThF, East Bank, Sheets, 5 cr

3052 **Beginning Ancient Greek: Accelerated** (3051-3052†; prereq 3051)
0915-1000 MTWThF, East Bank, Sheets, 5 cr

3105 **Greek Drama** (prereq 1104 or △)
1215-1300 MWF, East Bank, Hershbell, 5 cr

3456 **Advanced Undergraduate Greek: Plato** (prereq 3106 or 5 cr of 3120 or 3 yrs high school Greek or △)
1115-1200 MWF, East Bank, Belfiore, 5 cr

3960H **Honors Tutorial** (prereq △)
5 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-5 cr

5390 **Greek Literature: Romance** (max 12 cr)
1415-1530 TTh, East Bank, Keuls, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-5 cr

5980 **Directed Teaching** (prereq #, △, CLA approval)
ar cr

5990 **Directed Research** (prereq #, △, CLA approval)
ar cr

8120 **Greek Text Course** (prereq 3052 or △)
–1 1115-1200 MWF, East Bank, Belfiore, 4 cr
–2 1215-1300 MWF, East Bank, Hershbell, 4 cr

8264 **Survey of Greek Literature: Archaic** (prereq 5012)
1515-1700 W, East Bank, Belfiore, 4 cr

Spring Quarter

1103 **Selections from Greek Literature** (§3051-3052; prereq 1102 or equiv) (A-N only)
0915-1000 MTWThF, East Bank, 5 cr

1120 **Individualized Introduction to Biblical Greek** (max 15 cr, 2-10 cr in any one qtr, §1101-1102-1103, 1110; prereq #)
1-15 cr

3106 **Greek Poetry** (prereq 1122 or 3052 or 3105 or △))
1115-1200 MWF, East Bank, 5 cr

3457 **Advanced Undergraduate Greek: Euripides** (prereq 3106 or 5 cr of 3120 or 3 yrs high school Greek or △)
1115-1230 TTh, East Bank, Coulson, 5 cr

3960H **Honors Tutorial** (prereq △)
5 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-5 cr

5320 **Greek Literature: Tragedy** (max 12 cr)
1315-1400 MWF, East Bank, Keuls, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-5 cr

5980 **Directed Teaching** (prereq #, △, CLA approval)
ar cr

5990 **Directed Research** (prereq #, △, CLA approval)
ar cr

R8120 **Greek Text Course** (prereq 3052 or △)
–1 1115-1200 MWF, East Bank, 4 cr
–2 1115-1230 TTh, East Bank, Coulson, 4 cr

HEALTH SCIENCE UNITS (HSU)
Health Sciences

Winter Quarter

R5008 **Social and Psychological Aspects of Physical Disability**
1615-1800 TTh, East Bank, Athelstan, Crewe, 4 cr

R5013 **Systems Approach to Design of Instruction** (§CISy 5201)
1615-1800 W, Tennyson, 3 cr

R5017 **Written Communication Skills for Health Professionals** (prereq knowledge of medical terminology, upper div students, students in prof degree prog)
1815-2100 W, East Bank, Maneval, Garloff, 4 cr

R5018 **Computer Applications for Health Care Providers** (§LMed 5346; prereq health exper or current enrollment in health studies; # for others)
1615-1900 T, East Bank, Gatewood, 3-4 cr

R5024 **Human Interaction Laboratory for Health Professionals** (§PubH 5851)
1615-1800 W, East Bank, Ayers, 4 cr (lab ar)

R5026 Program Evaluation in Health and Mental Health Settings (prereq PubH 5414 or equiv basic statistics course)
1515-1700 MW, East Bank, Garrard, 4 cr

R5027 Human Sexuality for the Health and Helping Professionals II (prereq completion of human sexuality for health and helping professional I or #)
1715-1930 Th, East Bank, Maddock, Larson, others, 3 cr

R5029 Humanistic Case Studies in Health Care
1830-2100 W, East Bank, Galle; 3 cr

R5035 Contriubutors to Alcohol and Drug Problems (§PubH 5035)
1415-1630 T, East Bank, Kincannon, 3 cr

R5039 Alcohol and Drug Problems: Assessment and Response (§PubH 5039; prereq PubH 5035 or #)
1415-1630 W, East Bank, Kincannon, 3 cr

R5040 Dying and Death in Contemporary Society (§Hlth 5402; prereq educ sr, lic tchr, hlth sci maj, mort sci maj, sch or pubh nurs or #)
1615-1800 M, 1615-1700 W, East Bank, Slater, Rothenberger, 3 cr

5210 Terminology of the Health Sciences (§Phar 5210)
Bast, 2 cr

Spring Quarter

R5011 The Teaching-Learning Process in the Health Care Setting (§PubH 5064)
1515-1800 M, East Bank, Garloff, 3 cr

R5019 The Rights of Children and Youth: Abuse and Neglect
1615-1800 MW, East Bank, tenBensel, 4 cr

R5021 Health Care for the Elderly (§AdPy 5509)
1615-1800 M, 1615-1800 W, East Bank, Garetz, 3 cr

R5022 Health Sciences Education in the 20th Century (§PubH 5850)
1615-1800 W, East Bank, Garrard, Harris, others, 3 cr

R5024 Human Interaction Laboratory for Health Professionals (§PubH 5851)
1615-1800 W, East Bank, Ayers, 4 cr

R5028 Human Sexuality for the Health and Helping Professionals III (prereq completion of human sexuality for health and helping professionals II or #)
1715-1930 Th, East Bank, Maddock, Larson, others, 3 cr

R5033 Fundamentals of Alcohol and Drug Problems (§PubH 5033)
1315-1400 T, 1315-1500 Th, East Bank, Kincannon, Rothenberger, 3 cr

R5039 Alcohol and Drug Problems: Assessment and Response (§PubH 5039; prereq PubH 5035 or #)
1415-1630 T, East Bank, Kincannon, 3 cr

5210 Terminology of the Health Sciences (§Phar 5210)
Bast, 2 cr

HEBREW (Hebr)
Near And Middle Eastern Studies
Liberal Arts

Winter Quarter

R1013 Beginning Hebrew for Students with Prior Exposure (prereq 1012)
1315-1400 MTWThF, East Bank, 5 cr

R1102 Beginning Hebrew (prereq 1101)
1115-1200 MTWThF, East Bank, 5 cr

R1105 Introduction to Biblical Hebrew (prereq 1104)
1615-1800 TTh, East Bank, 5 cr

R3012 Intermediate Hebrew (prereq 3011)
1115-1200 MTWThF, East Bank, 5 cr

R3016 Advanced Modern Hebrew (prereq 3015)
1315-1400 MWF, East Bank, 4 cr

R3112 Rabbinical Texts (prereq 3111)
1415-1530 TTh, East Bank, 4 cr

R3202 Readings in Biblical Hebrew (prereq 1103 or 1104 or #)
1615-1800 MW, East Bank, 4 cr

R3205 A Book of the Bible (prereq 3013 or #)
0915-1000 MWF, East Bank, 4 cr

3205H A Book of the Bible (prereq 3013 or #)
0915-1000 MWF, East Bank, Reisman, 4 cr

3301 Modern Hebrew Essay (prereq 3017 or #)
0915-1000 MWF, East Bank, 4 cr

3980 Directed Instruction (prereq #, △, college approval)
1-5 cr

5970 Directed Readings (prereq 3013, #, △, CLA approval)
ar cr

R5990H Honors Course: Research (prereq 5970, #, △, CLA approval)
ar cr

Spring Quarter

R1103 Beginning Hebrew (prereq 1102)
1115-1200 MTWThF, East Bank, 5 cr

R1106 Introduction to Biblical Hebrew (prereq 1105)
1615-1800 TTh, East Bank, 5 cr

R1301 Survey of Hebrew Grammar (prereq 1102 or 1013 or #)
1315-1400 MWF, East Bank, 2 cr

R3013 Intermediate Hebrew (prereq 3012)
1115-1200 MTWThF, East Bank, 5 cr

R3017 Advanced Modern Hebrew (prereq 3016)
1315-1400 MWF, East Bank, 4 cr

R3203 Readings in Biblical Hebrew (prereq 1103 or 1104 or #)
1615-1800 MW, East Bank, 4 cr

R3980 Directed Instruction (prereq #, △, college approval)
1-5 cr

R5970 Directed Readings (prereq 3013, #, △, CLA approval)
ar cr

R5990H Honors Course: Research (prereq 5970, #, △, CLA approval)
ar cr

HIGHER EDUCATION (HiEd)
Educational Policy And Administration
Education

Winter Quarter

5540 Seminar: The College Student (§CSPP 5540, PsyS 5540; prereq 6 cr in psychology or educational psychology) (A-N only)
1900-2115 M, East Bank, Rest, 3 cr

8228 Problems: Higher Education (§EdAd 8228; prereq #)
ar cr

8230 Seminar: Dissertation Research in Higher Education (prereq #)
1615-1800 M, East Bank, Kellogg, Hearn, 1 cr

8250 The Higher Education Institution: Organization and Environment (§Educ 8250; prereq 5250 or EdAd 5250)
1515-1700 T, East Bank, Hearn, 3 cr

8251 Development and Evaluation of Academic Programs (§Educ 8251; prereq 5250 or EdAd 5250)
1615-1800 Th, East Bank, Kellogg, 3 cr

8290 Financing Higher Education (§EdAd 8290; prereq #)
1830-2030 W, East Bank, Ammentorp, 3 cr

Spring Quarter

5250 American Higher Education (§Educ 5250, EdAd 5250) (S-N optional)
1615-1800 Th, East Bank, Hearn, Corcoran, 4 cr

5292 The Law and Postsecondary Educational Institutions (§EdAd 5292) (A-N only)
1830-2030 W, West Bank, Hooker, 3 cr

8228 Problems: Higher Education (§EdAd 8228; prereq #)
ar cr

8229 Seminar: Higher Education (§EdAd 8229; prereq #)
1830-2030 T, East Bank, Hearn, 1-4 cr

8230 Seminar: Dissertation Research in Higher Education (prereq #)
1615-1800 M, East Bank, Clark, Lewis, 1 cr

8252 Effective College Teaching (§Educ 8252; prereq 5250 or EdAd 5250)
1615-1800 T, East Bank, Burris, 3 cr

8253 Seminar: Improvement of College Instruction (prereq #)
1415-1600 T, East Bank, 3 cr

8255 Administration in Higher Education (§EdAd 8253; prereq 8250 or EdAd 5250)
1615-1800 W, East Bank, Hearn, 3 cr

HINDI (Hndi)
South And Southwest Asian Studies
Liberal Arts

Winter Quarter

1102 Beginning Hindi (prereq 1101)
–1 1315-1400 MTWThF, East Bank, Staneslow, 5 cr
–2 1615-1800 MTh, 1615-1700 W, East Bank, Staneslow, 5 cr

5132 Intermediate Hindi (§3032; prereq 5131)
1415-1500 MTWThF, East Bank, 5 cr

5162 Advanced Hindi (prereq 5161)
Munda, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
Staneslow, ar cr

5990 Directed Research (prereq #, △, CLA approval)
Staneslow, ar cr

8990 Directed Research (prereq #)
1015-1100 MF, Staneslow, ar cr

Spring Quarter

1103 Beginning Hindi (prereq 1102)
–1 1315-1400 MTWThF, East Bank, Staneslow, 5 cr
–2 1615-1800 MTh, 1615-1700 W, East Bank, Staneslow, 5 cr

5133 Intermediate Hindi (§3033; prereq 5132)
1415-1500 MTWThF, East Bank, Staneslow, 5 cr

5163 Advanced Hindi (prereq 5162)
Junghare, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
Junghare, Staneslow, ar cr

5990 Directed Research (prereq #, △, CLA approval)
Junghare, Staneslow, ar cr

8990 Directed Research (prereq #)
Junghare, Staneslow, ar cr

HISTORY (Hist)
Liberal Arts

Winter Quarter

R1002 Introduction to Modern European History Since the Middle Ages (§1002H, 3002, not open to jrs, srs)
★LECT 0945-1030 TTh, West Bank, Kieft
–1 REC 0915-1000 M, West Bank, 4 cr
–2 REC 0915-1000 M, West Bank, 4 cr
–3 REC 1215-1300 M, West Bank, 4 cr
–4 REC 0815-0900 T, West Bank, 4 cr
–5 REC 1115-1200 T, West Bank, 4 cr
–6 REC 1115-1200 T, West Bank, 4 cr
–7 REC 1215-1300 T, West Bank, 4 cr
–8 REC 0815-0900 W, West Bank, 4 cr
–9 REC 0915-1000 W, West Bank, 4 cr
–10 REC 0915-1000 W, West Bank, 4 cr
–11 REC 0815-0900 Th, West Bank, 4 cr
–12 REC 1315-1400 Th, West Bank, 4 cr
–13 REC 1315-1400 Th, West Bank, 4 cr

R1002H Honors Course: Introduction to Modern European History Since the Middle Ages (§1002, 3002, not open to jrs, srs; prereq #)
★LECT 0945-1030 TTh, West Bank, Kieft
–80 REC 1315-1400 Th, West Bank, Kieft, 4 cr

R1052 Ancient Civilization (§3052)
★LECT 1215-1300 MWF, West Bank, Kelly
–1 REC 1015-1100 Th, West Bank, 4 cr
–2 REC 1215-1300 Th, West Bank, 4 cr
–3 REC 0915-1000 F, West Bank, 4 cr
–4 REC 1115-1200 F, West Bank, 4 cr

R1101 Introduction to Medieval History
★LECT 1015-1100 MWF, West Bank, Bachrach
–1 REC 1215-1300 M, West Bank, 4 cr
–2 REC 1115-1200 T, West Bank, 4 cr
–3 REC 1315-1400 T, West Bank, 4 cr
–4 REC 1115-1200 Th, West Bank, 4 cr
–5 REC 1315-1400 Th, West Bank, 4 cr
–6 REC 1215-1300 F, West Bank, 4 cr

1152 English History from the 17th Century to the Present (§3152)
★LECT 1115-1200 MWF, West Bank, Lehmberg
–1 REC 1115-1200 T, West Bank, 4 cr
–2 REC 0815-0900 F, West Bank, 4 cr
–3 REC 1215-1300 F, West Bank, 4 cr

R1301 American History (§1301H)
★LECT 1115-1200 MWF, West Bank, Menard
–1 REC 0815-0900 M, West Bank, 4 cr
–2 REC 1215-1300 M, West Bank, 4 cr
–3 REC 1215-1300 M, West Bank, 4 cr
–4 REC 0815-0900 T, West Bank, 4 cr
–5 REC 1115-1200 T, West Bank, 4 cr
–6 REC 1215-1300 T, West Bank, 4 cr
–7 REC 0815-0900 W, West Bank, 4 cr
–8 REC 1015-1100 W, West Bank, 4 cr
–9 REC 1215-1300 W, West Bank, 4 cr
–10 REC 1215-1300 W, West Bank, 4 cr
–11 REC 1315-1400 W, West Bank, 4 cr
–12 REC 0815-0900 Th, West Bank, 4 cr
–13 REC 1115-1200 Th, West Bank, 4 cr
–14 REC 1215-1300 Th, West Bank, 4 cr
–15 REC 0815-0900 F, West Bank, 4 cr
–16 REC 1215-1300 F, West Bank, 4 cr

R1301H Honors Course: American History (§1301; prereq #)
★LECT 1115-1200 MWF, West Bank, Menard
–80 REC 1315-1500 W, West Bank, Menard, 4 cr

R1302 American History (§1302H)
★LECT 0915-1000 MWF, West Bank,
–1 REC 0815-0900 M, West Bank, 4 cr
–2 REC 1015-1100 M, West Bank, 4 cr
–3 REC 1215-1300 M, West Bank, 4 cr
–4 REC 0815-0900 T, West Bank, 4 cr
–5 REC 1015-1100 T, West Bank, 4 cr
–6 REC 1215-1300 T, West Bank, 4 cr
–7 REC 0815-0900 W, West Bank, 4 cr
–8 REC 1215-1300 W, West Bank, 4 cr
–9 REC 0815-0900 Th, West Bank, 4 cr
–10 REC 1015-1100 Th, West Bank, 4 cr
–11 REC 1215-1300 Th, West Bank, 4 cr
–12 REC 0815-0900 F, West Bank, 4 cr
–13 REC 1015-1100 F, West Bank, 4 cr
–14 REC 1215-1300 F, West Bank, 4 cr

R1302H Honors Course: American History (§1302; prereq #)
★LECT 0915-1000 MWF, West Bank,
–80 REC 1315-1500 M, West Bank, 4 cr

R1402 Survey of Latin American History: 1800-1929 (§3402)
★LECT 1115-1230 TTh, West Bank,
–1 REC 1115-1200 M, West Bank, 4 cr
–2 REC 1245-1330 T, West Bank, 4 cr

1432 History of Africa: 1800 to Present (§3432)
1115-1230 TTh, West Bank, Isaacman, 4 cr

1462 Introduction to East Asia: The Imperial Age (§3462, EAS 1462)
1315-1400 MWF, West Bank, Farmer, Marshall, 4 cr

R1952 World Military History: A Survey (§Mil 1012)
0815-0900 TTh, East Bank, Westhaus, 2 cr

1958 Allied Airpower in World War II and the Berlin Airlift (§Air 1205; prereq #)
–1 0815-0945 TTh, East Bank, Holden, 2 cr
–2 1115-1245 TTh, East Bank, Holden, 2 cr

R3002 Introduction to Modern European History Since the Middle Ages (§1002, 1002H)
★LECT 0945-1030 TTh, West Bank, Kieft
–1 REC 0915-1000 M, West Bank, 4 cr
–2 REC 0815-0900 T, West Bank, 4 cr
–3 REC 0815-0900 T, West Bank, 4 cr
–4 REC 1215-1300 T, West Bank, 4 cr
–5 REC 1115-1200 Th, West Bank, 4 cr
–6 REC 1315-1400 Th, West Bank, 4 cr

3032 Medicine, Disease in History (§HMed 3002)
0915-1000 MWF, East Bank, Eyler, 4 cr

R3052 Ancient Civilization (§1052)
★LECT 1215-1300 MWF, West Bank, Kelly
–1 REC 1315-1400 Th, West Bank, 4 cr
–2 REC 1115-1200 F, West Bank, 4 cr

3152 English History from the 17th Century to the Present (§1152)
★LECT 1115-1200 MWF, West Bank, Lehmberg
–1 REC 0815-0900 W, West Bank, 4 cr
–2 REC 1215-1300 W, West Bank, 4 cr
–3 REC 1115-1200 Th, West Bank, 4 cr

3200 Selected Contemporary Problems in Historical Perspectives: Revolution in the Third World: China, Cuba, and Southern Africa
0945-1100 TTh, West Bank, Isaacman, 4 cr

3245 History of Eastern Europe: 19th and 20th Centuries
1115-1230 TTh, West Bank, Rudolph, 4 cr

3271 The Vikings at Home and Away
0815-0900 MWF, West Bank, Metcalf, 4 cr

3282 Intellectual and Cultural History of Modern Europe
1215-1300 MWF, West Bank, Thayer, 4 cr

3348 Women in Modern America: 1890-1980
0945-1100 TTh, West Bank, S Evans, 4 cr

R3402 Survey of Latin American History: 1800-1929 (§1402)
★LECT 1115-1230 TTh, West Bank,
–1 REC 0815-0900 T, West Bank, 4 cr
–2 REC 1115-1200 W, West Bank, 4 cr
–3 REC 1245-1330 Th, West Bank, 4 cr
–4 REC 1115-1200 F, West Bank, 4 cr

3424 History of Mexico: Pre-Columbian Period Through Independence
1015-1100 MWF, West Bank, Schwartz, 4 cr

3427 History of Cuba and Puerto Rico (§Chic 3427)
1115-1200 MWF, West Bank, Valdes, 4 cr

3432 History of Africa: 1800 to Present (§1432)
1115-1230 TTh, West Bank, Isaacman, 4 cr

3434 History of Islam, Islamic Civilization, Politics in Africa
1245-1400 TTh, West Bank, Kaba, 4 cr

3442 Survey of Chicano History, 1900 to Present (§Chic 3442)
0915-1000 MWF, West Bank, Valdes, 4 cr

3462 Introduction to East Asia: The Imperial Age (§1462, EAS 1462)
1315-1400 MWF, West Bank, Farmer, Marshall, 4 cr

3467 The Nationalist Revolution in China, 1900 to Present (§5467)
0945-1100 TTh, West Bank, Farmer, 4 cr

3471 Twentieth Century Japan (§5471)
1115-1200 MWF, West Bank, Marshall, 4 cr

3505 Survey of the Middle East (§MidE 3505, 5505)
1015-1100 MWF, West Bank, Farah, 4 cr

3509 Military History: Ancient World
1115-1200 MWF, West Bank, Kelly, 4 cr

3542 History of the Arabs (§MESA 3542)
0915-1000 MWF, West Bank, Farah, 4 cr

3621 Renaissance Italy, 1200-1530
0815-0930 TTh, West Bank, Tracy, 4 cr

3632 History of Germany: Absolutism and Revolution, 1648-1848
0945-1100 TTh, West Bank, Maynes, 4 cr

3636 Russian History from the Origins to the Present
1115-1200 MWF, West Bank, Noonan, 4 cr

3652 England in the Age of Elizabeth I
0945-1100 TTh, West Bank, Lehmberg, 4 cr

3708 Social and Economic History of Modern Europe
0945-1100 TTh, West Bank, Rudolph, 4 cr

3722 Europe in the Era of World War II (§3224)
0915-1000 MWF, West Bank, Munholland, 4 cr

3748 The Austrian Republic From World War I to Present
1315-1430 TTh, West Bank, Wright, 4 cr

3755 History of Italy: the Period of Spanish Dominion, 1559-1713
0915-1000 MWF, West Bank, Thayer, 4 cr

3822 United States in the 20th Century: 1917-1945
1015-1100 MWF, West Bank, Spear, 4 cr

3837 Minnesota History
1115-1200 MWF, West Bank, Spear, 4 cr

3844 American Economic History, Colonial to Civil War
0815-0900 MWF, West Bank, Green, 4 cr

3851 American Labor History in the 19th Century
1015-1100 MWF, West Bank, Berman, 4 cr

3864 Afro-American History (§Afro 3864)
4 cr

3867 American Jewish History
0915-1000 MWF, West Bank, Berman, 4 cr

3871 American Indian History from Mid-15th Century to 1850 (§AmIn 3111)
1015-1100 MWF, West Bank, 4 cr

3882 History of American Foreign Relations
1115-1200 MWF, West Bank, Brauer, 4 cr

3901 Urban History of Preindustrial America
0815-0930 TTh, West Bank, Holt, 4 cr

3910 Topics in American History: The University in American Intellectual Life, 1865 to the Present
0915-1000 MWF, West Bank, Grossman, 4 cr

3951H Honors Course: History (3951H-3952H†; prereq honors candidacy in history, #)
1315-1500 M, West Bank, Menard, 4 cr

R3955 Introduction to Writing History (prereq △)
–1 1315-1500 M, West Bank, Metcalf, 4 cr
–2 1315-1500 T, West Bank, 4 cr

3960 Internship (prereq #, △, college approval)
4–5 cr

3961 Major Paper (prereq △)
1215-1300 MW, West Bank, Vecoli, 5 cr

3970 Directed Study (prereq #, △, college approval)
1–15 cr

3990 Directed Research (prereq #, △, college approval)
1–15 cr

5071 History of Rome
0945-1100 TTh, West Bank, J Evans, 4 cr

5231 Modern France from 1848 to DeGaulle
1215-1300 MWF, West Bank, Munholland, 4 cr

5265 Modern Russia: 19th Century
1015-1100 MWF, West Bank, Stavrou, 4 cr

5285 Diplomatic History of Europe, 1871-1918
1115-1230 TTh, West Bank, Kieft, 4 cr

5332 American Constitutional History
1015-1100 MWF, West Bank, Murphy, 4 cr

5337 Criminal Justice in American History (prereq jr, sr or grad)
0815-0930 TTh, West Bank, Samaha, 4 cr

5467 The Nationalist Revolution in China, 1900 to Present (§3467)
0945-1100 TTh, West Bank, Farmer, 4 cr

5471 Twentieth Century Japan (§3471)
1115-1200 MWF, West Bank, Marshall, 5 cr

5572 Proseminar: Roman History (5571-5572-5573†; prereq 5571)
J Evans, 3 cr

5625 Proseminar: The German Reformation (prereq #)
1315-1500 T, West Bank, Tracy, 3 cr

5745 Proseminar: Topics in Modern German History (prereq 5744)
1315-1500 Th, West Bank, Maynes, 3 cr

5778 Proseminar: History of the Habsburg Monarchy (5777-5778†, §8245; prereq 5777)
1515-1700 Th, West Bank, Rath, Wright, 4 cr

5806 Proseminar: Jacksonian America (prereq #)
1315-1500 W, West Bank, Howe, 4 cr

R5821 Proseminar: American History in 20th Century (5821-5822†; prereq #)
1315-1500 T, West Bank, Chambers, 4 cr

5832 Proseminar: American Political and Constitutional History (5831-5832†; prereq 5831)
1515-1700 W, West Bank, Murphy, 4 cr

5858 Proseminar: Social History of American Women (5857-5858†; prereq 5857)
1315-1600 T, West Bank, S Evans, 4 cr

5861 Proseminar: History of American Immigration (5861-5862†; prereq #)
1515-1700 Th, West Bank, Vecoli, 4 cr

5882 Proseminar: American Foreign Relations (prereq #)
1315-1500 F, West Bank, Brauer, 4 cr

5902 Proseminar: Latin American History (prereq reading knowledge of Span, #)
1415-1600 Th, West Bank, Schwartz, 4 cr

5939 Proseminar: Methodology for the Study of African History (prereq #)
1315-1500 W, West Bank, Isaacman, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
1315-1500 T, West Bank, 1-15 cr

5990 Directed Research (prereq #, △, CLA approval)
1-15 cr

8142 Medieval French History (8141-8142-8143†; prereq 8141)
1315-1530 W, West Bank, Bachrach, 3 cr

8245 History of Habsburg Monarchy (8244-8245†, §5778; prereq 8244)
1515-1700 Th, West Bank, Rath, Wright, 3 cr

8501 Archives Practicum (prereq #)
Klaasen, 4 cr

8970 Directed Studies (prereq #)
–1 1-15 cr
–2 1-15 cr

8990 Directed Research (prereq #)
1-15 cr

Spring Quarter

R1002 Introduction to Modern European History Since the Middle Ages (§1002H, 3002, not open to jrs, srs)
★LECT 1015-1100 MWF, West Bank, Maynes
–1 REC 0815-0900 W, West Bank, 4 cr
–2 REC 0915-1000 F, West Bank, 4 cr
–3 REC 1215-1300 F, West Bank, 4 cr

R1003 Introduction to Modern European History Since the Middle Ages (§1003H, 3003, not open to jrs, srs)
★LECT 0945-1030 TTh, West Bank, Kieft
–1 REC 0915-1000 M, West Bank, 4 cr
–2 REC 1215-1300 M, West Bank, 4 cr
–3 REC 0815-0900 T, West Bank, 4 cr
–4 REC 1215-1300 T, West Bank, 4 cr
–5 REC 1315-1400 T, West Bank, 4 cr
–6 REC 0815-0900 W, West Bank, 4 cr
–7 REC 0915-1000 W, West Bank, 4 cr
–8 REC 0915-1000 W, West Bank, 4 cr
–9 REC 1315-1400 W, West Bank, 4 cr
–10 REC 0815-0900 Th, West Bank, 4 cr
–11 REC 1315-1400 Th, West Bank, 4 cr
–12 REC 0915-1000 F, West Bank, 4 cr

R1003H Honors Course: Introduction to Modern European History Since the Middle Ages (§1003, 3003, not open to jrs, srs; prereq #)
★LECT 0945-1030 TTh, West Bank, Kieft
–80 REC 1315-1400 Th, West Bank, Kieft, 4 cr

R1053 Ancient Civilization (§3053)
★LECT 1215-1300 MWF, West Bank, Kelly
–1 REC 1015-1100 Th, West Bank, 4 cr
–2 REC 1215-1300 Th, West Bank, 4 cr
–3 REC 0915-1000 F, West Bank, 4 cr
–4 REC 1115-1200 F, West Bank, 4 cr

R1101 Introduction to Medieval History
★LECT 0915-1000 MWF, West Bank, Reyerson
–1 REC 1215-1300 M, West Bank, 4 cr
–2 REC 1115-1200 T, West Bank, 4 cr
–3 REC 0815-0900 W, West Bank, 4 cr
–4 REC 1115-1200 Th, West Bank, 4 cr
–5 REC 1015-1100 F, West Bank, 4 cr
–6 REC 1215-1300 F, West Bank, 4 cr

R1301 American History (§1301H)
★LECT 1015-1100 MWF, West Bank, Howe
–1 REC 0815-0900 M, West Bank, 4 cr
–2 REC 1115-1200 M, West Bank, 4 cr
–3 REC 1215-1300 M, West Bank, 4 cr
–4 REC 1315-1400 M, West Bank, 4 cr
–5 REC 1015-1100 T, West Bank, 4 cr
–6 REC 1215-1300 T, West Bank, 4 cr
–7 REC 0915-1000 W, West Bank, 4 cr
–8 REC 1215-1300 W, West Bank, 4 cr
–9 REC 1015-1100 Th, West Bank, 4 cr
–10 REC 0815-0900 F, West Bank, 4 cr
–11 REC 1115-1200 F, West Bank, 4 cr
–12 REC 1215-1300 F, West Bank, 4 cr

R1301H Honors Course: American History (§1301; prereq #)
★LECT 1015-1100 MWF, West Bank, Howe
–80 REC 1315-1500 M, West Bank, Howe, 4 cr

R1302 American History (§1302H)
★LECT 1115-1200 MWF, West Bank, Murphy
–1 REC 0815-0900 M, West Bank, 4 cr
–2 REC 1015-1100 M, West Bank, 4 cr
–3 REC 1215-1300 M, West Bank, 4 cr
–4 REC 0815-0900 T, West Bank, 4 cr
–5 REC 1215-1300 T, West Bank, 4 cr
–6 REC 0815-0900 W, West Bank, 4 cr
–7 REC 1015-1100 W, West Bank, 4 cr
–8 REC 1215-1300 W, West Bank, 4 cr
–9 REC 1315-1400 W, West Bank, 4 cr
–10 REC 1015-1100 Th, West Bank, 4 cr
–11 REC 1215-1300 Th, West Bank, 4 cr
–12 REC 1215-1300 F, West Bank, 4 cr

R1302H Honors Course: American History (§1302; prereq #)
★LECT 1115-1200 MWF, West Bank, Murphy
–80 REC 0915-1100 M, West Bank, Murphy, 4 cr

R1403 Survey of Latin American History: 1929 to Present (§3403)
★LECT 1115-1230 TTh, West Bank,
–1 REC 1115-1200 M, West Bank, 4 cr
–2 REC 1315-1400 T, West Bank, 4 cr

1422 The World and the West (§3422)
0815-0930 TTh, West Bank, Kopf, 4 cr

1453 Survey of Asian Civilizations in the Modern Era (§1453H, 3453)
0945-1100 TTh, West Bank, Kopf, 4 cr

1453H Honors Course: Survey of Asian Civilizations in the Modern Era (§1453, 3453; prereq #)
0945-1100 TTh, West Bank, Kopf, 4 cr

R1953 World Military History: A Survey (§Mil 1013)
0815-0900 TTh, East Bank, Westhaus, 2 cr

R1959 Modern Employment of Air Power (§Air 1206; prereq #)
–1 0815-0900 T, 0815-0945 W, East Bank, Holden, 2 cr
–2 1115-1245 TTh, East Bank, Holden, 2 cr

R3002 Introduction to Modern European History Since the Middle Ages (§1002, 1002H)
★LECT 1015-1100 MWF, West Bank, Maynes
–1 REC 0915-1000 W, West Bank, 4 cr
–2 REC 1215-1300 W, West Bank, 4 cr
–3 REC 0815-0900 F, West Bank, 4 cr

R3003 Introduction to Modern European History Since the Middle Ages (§1003, 1003H)
★LECT 0945-1030 TTh, West Bank, Kieft
–1 REC 0915-1000 M, West Bank, 4 cr
–2 REC 0815-0900 T, West Bank, 4 cr
–3 REC 1215-1300 T, West Bank, 4 cr
–4 REC 1215-1300 T, West Bank, 4 cr
–5 REC 1315-1400 Th, West Bank, 4 cr
–6 REC 0915-1000 F, West Bank, 4 cr

3033 Medicine, Disease in History (§HMed 3003)
0915-1000 MWF, East Bank, Eyler, 4 cr

R3053 Ancient Civilization (§1053)
★LECT 1215-1300 MWF, West Bank, Kelly
–1 REC 1315-1400 Th, West Bank, 4 cr
–2 REC 1115-1200 F, West Bank, 4 cr

3273 Modern Scandinavia Since 1807
0815-0900 MWF, West Bank, Metcalf, 4 cr

3283 Intellectual and Cultural History of Modern Europe
1215-1300 MWF, West Bank, Thayer, 4 cr

R3403 Survey of Latin American History: 1929 to Present (§1403)
★LECT 1115-1230 TTh, West Bank,
–1 REC 0815-0900 T, West Bank, 4 cr
–2 REC 1115-1200 W, West Bank, 4 cr
–3 REC 1315-1400 Th, West Bank, 4 cr
–4 REC 1115-1200 F, West Bank, 4 cr

3412 History of Brazil, 1808 to Present
0915-1000 MWF, West Bank, Schwartz, 4 cr

3422 The World and the West (§1422)
0815-0930 TTh, West Bank, Kopf, 4 cr

3425 History of Mexico: The 19th, 20th Centuries
1015-1100 MWF, West Bank, Valdes, 4 cr

3453 Survey of Asian Civilizations in the Modern Era (§1453, 1453H)
0945-1100 TTh, West Bank, Kopf, 4 cr

3487 Great Ideas in South Asia
1245-1400 TTh, West Bank, Kopf, 4 cr

3489 Modern India
1245-1400 TTh, West Bank, Lelyveld, 4 cr

3544 The Arab World in Recent Times (§MESA 3544)
0915-1000 MWF, West Bank, Farah, 4 cr

3609 Military History of Medieval Western Europe
0915-1000 MWF, West Bank, Bachrach, 4 cr

3614 Women in Medieval Europe, ca. 500-1500
1115-1200 MWF, West Bank, Reyerson, 4 cr

3624 France from the Renaissance to Richelieu
0815-0900 MWF, West Bank, Tracy, 4 cr

R3633 History of Germany: Empire to Hitler, 1848-1945
0945-1100 TTh, West Bank, Fellner, 4 cr

3653 The English Civil War and Restoration
0945-1100 TTh, West Bank, Lehmberg, 4 cr

3706 European Agriculture, Rome to Present
0945-1100 TTh, St. Paul, Wright, 4 cr (StP)

3756 History of Italy: 1713-1943
0915-1000 MWF, West Bank, Thayer, 4 cr

3775 History of the European Jews from the Middle Ages to the Present
0945-1100 TTh, West Bank, Rudolph, 4 cr

3823 United States in the 20th Century: 1945 to Present
1015-1100 MWF, West Bank, Berman, 4 cr

3845 American Economic History, 1870 to the Present
0815-0900 MWF, West Bank, Green, 4 cr

3852 American Labor History in the 20th Century
0915-1000 MWF, West Bank, Berman, 4 cr

3865 Afro-American History (§Afro 3865)
4 cr

3868 Asians in America: An Ethnic Perspective
1115-1230 TTh, West Bank, Tsuchida, 4 cr

3872 American Indian History, 1850 to the Present (§AmIn 3112)
0915-1000 MWF, West Bank, 4 cr

3883 History of American Foreign Relations
1115-1200 MWF, West Bank, Brauer, 4 cr

3902 Urban History of Industrial America
0815-0930 TTh, West Bank, Holt, 4 cr

3952H Honors Course: History (3951H-3952H†; prereq 3951H)
1315-1500 M, West Bank, Menard, 4 cr

R3955 Introduction to Writing History (prereq △)
–1 1315-1500 M, West Bank, 4 cr
–2 1315-1500 W, West Bank, Lelyveld, 4 cr

3960 Internship (prereq #, △, college approval)
4-5 cr

3961 Major Paper (prereq △)
1215-1300 MW, West Bank, Vecoli, 5 cr

3970 Directed Study (prereq #, △, college approval)
1-15 cr

3990 Directed Research (prereq #, △, college approval)
1-15 cr

5045 Medical Profession in America (§HMed 5045)
1315-1430 TTh, East Bank, Eyler, 4 cr

5072 History of Rome
0945-1100 TTh, West Bank, J Evans, 4 cr

5200 Topics in European History: 17th Century Absolutism
1315-1430 MW, West Bank, Metcalf, 4 cr

5266 Modern Russia: The 20th Century
1015-1100 MWF, West Bank, Stavrou, 4 cr

5286 Diplomatic History of Europe, 1918 to Present
1115-1230 TTh, West Bank, Kieft, 4 cr

5334 American Legal History
1315-1400 MWF, West Bank, Murphy, 4 cr

R5389 Russian-American Relations, 1917 to Present
1315-1500 MF, West Bank, Brauer, 5 cr

5420 Topics in Latin American History (prereq #)
–1 1115-1200 MWF, West Bank, Valdes, 4 cr
–2 1415-1600 W, West Bank, Schwartz, 4 cr

5432 Problems in Contemporary Africa
1245-1400 TTh, West Bank, Kaba, 4 cr

5519 Proseminar: Topics in Chinese History: Intellectuals and the State in Modern China (prereq #)
1515-1700 F, West Bank, Farmer, 5 cr

5573 Proseminar: Roman History (5571-5572-5573†; prereq 5572)
J Evans, 3 cr

5785 Proseminar: Diplomatic History of 19th and 20th Century Europe (5784-5785†; prereq 5784)
Fellner, 3 cr

5807 **Proseminar: Research in Revolutionary and Jacksonian America** (prereq 5805 or 5806 or #)
1315-1500 W, West Bank, Howe, 4 cr

R5822 **Proseminar: American History in 20th Century** (5821-5822†; prereq 5821, #)
1315-1500 T, West Bank, Chambers, 4 cr

5862 **Proseminar: History of American Immigration** (5861-5862†; prereq 5861)
1515-1700 Th, West Bank, Vecoli, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-15 cr

5990 **Directed Research** (prereq #, △, CLA approval)
1-15 cr

8143 **Medieval French History** (8141-8142-8143†; prereq 8142)
1315-1530 W, West Bank, Bachrach, 3 cr

8150 **Seminar: English History** (prereq #)
Lehmberg, 3 cr

8501 **Archives Practicum** (prereq #)
Klaasen, 4 cr

8511 **Archives Administration** (prereq 8501, #)
Hinding, 4 cr

8970 **Directed Studies** (prereq #)
1-15 cr

8990 **Directed Research** (prereq #)
1-15 cr

HISTORY OF MEDICINE (HMed)
Medical School

Winter Quarter

3002 **Doctors and Disease in History** (§Hist 3032, primarily for CLA students)
0915-1000 MWF, East Bank, Eyler, 4 cr

5401 **Medicine During Scientific Revolution 1500-1800**
1515-1630 TTh, Wilson, 4 cr

5411 **Seminar: Emergence of Modern Medicine 1750-1900** (prereq 3001, 3002, 3003, Hist 3031, 3032, 3033 or 5400, 5401, 5402)
Wilson, 3 cr

8231 **Readings: History of Science**
Wilson, 3 cr

8631 **Directed Study** (prereq #)
Wilson, 3-15 cr

Spring Quarter

3003 **Doctors and Disease in History** (§Hist 3033, primarily for CLA students)
0915-1000 MWF, East Bank, Eyler, 4 cr

5402 **Medicine in the 19th, 20th Centuries**
1515-1630 TTh, Wilson, 4 cr

5412 **Seminar: Emergence of Modern Medicine 1750-1900** (prereq 3001, 3002, 3003, Hist 3031, 3032, 3033 or 5400, 5401, 5402)
Wilson, 3 cr

8232 **Readings: History of Science**
Wilson, 3 cr

8632 **Directed Study** (prereq #)
3-15 cr

HISTORY OF SCIENCE AND TECHNOLOGY (HSci)
Liberal Arts

Winter Quarter

R1712 **Technology and Western Civilization: Renaissance to Industrial Revolution** (§3712)
★LECT 1315-1400 MWF, East Bank, Layton
–1 REC 1315-1400 T, East Bank, 4 cr
–2 REC 1015-1100 W, East Bank, 4 cr
–3 REC 1215-1300 W, East Bank, 4 cr
–4 REC 1215-1300 Th, East Bank, 4 cr
–5 REC 1415-1500 Th, East Bank, 4 cr
–6 REC 1115-1200 F, East Bank, 4 cr

R1812 **Introduction to History of Science: The Scientific Revolution** (§3812)
★LECT 0915-1000 MWF, East Bank, Shapiro
–1 REC 1015-1100 M, East Bank, 4 cr
–2 REC 0915-1000 T, East Bank, 4 cr
–3 REC 1315-1400 W, East Bank, 4 cr
–4 REC 0915-1000 Th, East Bank, 4 cr
–5 REC 1115-1200 Th, East Bank, 4 cr
–6 REC 1215-1300 F, East Bank, 4 cr

R3712 **Technology and Western Civilization: Renaissance to Industrial Revolution** (§1712)
★LECT 1315-1400 MWF, East Bank, Layton
–1 REC 1315-1400 T, East Bank, 4 cr
–2 REC 1015-1100 W, East Bank, 4 cr
–3 REC 1215-1300 W, East Bank, 4 cr
–4 REC 1215-1300 Th, East Bank, 4 cr
–5 REC 1415-1500 Th, East Bank, 4 cr
–6 REC 1115-1200 F, East Bank, 4 cr

R3812 **Introduction to History of Science: The Scientific Revolution** (§1812)
★LECT 0915-1000 MWF, East Bank, Shapiro
–1 REC 1015-1100 M, East Bank, 4 cr
–2 REC 0915-1000 T, East Bank, 4 cr
–3 REC 1315-1400 W, East Bank, 4 cr
–4 REC 0915-1000 Th, East Bank, 4 cr
–5 REC 1115-1200 Th, East Bank, 4 cr
–6 REC 1215-1300 F, East Bank, 4 cr

5242 **Evolution Before and After Darwin** (prereq Biol 1009 or 1101 or #)
1245-1400 TTh, East Bank, Kottler, 4 cr

5321 **History of Computing**
1415-1530 TTh, East Bank, Norberg, 4 cr

5812 **Science Policy in the United States Since World War II**
0945-1100 TTh, East Bank, Norberg, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-15 cr

5990 **Directed Research** (prereq #, △, CLA approval)
1-15 cr

8970 **Directed Study** (max 15 cr; prereq #)
1-5 cr

8990 **Directed Research** (max 15 cr; prereq #)
1-5 cr

Spring Quarter

R1713 **Technology and Western Civilization: 19th and 20th Centuries** (§3713)
★LECT 1315-1400 MWF, East Bank, Layton
–1 REC 1315-1400 T, East Bank, 4 cr
–2 REC 1015-1100 W, East Bank, 4 cr
–3 REC 1215-1300 W, East Bank, 4 cr
–4 REC 0915-1000 Th, East Bank, 4 cr
–5 REC 1415-1500 Th, East Bank, 4 cr
–6 REC 1115-1200 F, East Bank, 4 cr

R1813 **Introduction to History of Science: Modern Science** (§3813)
★LECT 0915-1000 MWF, East Bank, Shapiro
–1 REC 1215-1300 M, East Bank, 4 cr
–2 REC 0915-1000 T, East Bank, 4 cr
–3 REC 1115-1200 W, East Bank, 4 cr
–4 REC 1115-1200 Th, East Bank, 4 cr
–5 REC 1315-1400 Th, East Bank, 4 cr
–6 REC 1015-1100 F, East Bank, 4 cr

3203 **History of Biology: Evolution and Genetics Since 1700** (§5203)
1245-1400 TTh, East Bank, Kottler, 4 cr

R3713 **Technology and Western Civilization: 19th and 20th Centuries** (§1713)
★LECT 1315-1400 MWF, East Bank, Layton
–1 REC 1315-1400 T, East Bank, 4 cr
–2 REC 1015-1100 W, East Bank, 4 cr
–3 REC 1215-1300 W, East Bank, 4 cr
–4 REC 0915-1000 Th, East Bank, 4 cr
–5 REC 1415-1500 Th, East Bank, 4 cr
–6 REC 1115-1200 F, East Bank, 4 cr

R3813 **Introduction to History of Science: Modern Science** (§1813)
★LECT 0915-1000 MWF, East Bank, Shapiro
–1 REC 1215-1300 M, East Bank, 4 cr
–2 REC 0915-1000 T, East Bank, 4 cr
–3 REC 1115-1200 W, East Bank, 4 cr
–4 REC 1115-1200 Th, East Bank, 4 cr
–5 REC 1315-1400 Th, East Bank, 4 cr
–6 REC 1015-1100 F, East Bank, 4 cr

5203 **History of Biology: Evolution and Genetics Since 1700** (§3203)
1245-1400 TTh, East Bank, Kottler, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-15 cr

5990 **Directed Research** (prereq #, △, CLA approval)
1-15 cr

8970 **Directed Study** (max 15 cr; prereq #)
1-5 cr

8990 **Directed Research** (max 15 cr; prereq #)
1-5 cr

HOME ECONOMICS (HE)
Home Economics

Winter Quarter

3010 **International Topics Seminar** (S-N only)
1500-1630 T, St. Paul, Grindereng, others, 1 cr

Spring Quarter

R5191 **Development in Home Economics**
1200-1300 MW, St. Paul, Strinden, 2 cr

HOME ECONOMICS EDUCATION (HEEd)
Vocational And Technical Education Education

Winter Quarter

1500 **Introduction to Home Economics Education** (prereq soph) (A-N only)
1200-1330 T, St. Paul, McClelland, 2 cr

1510 **Knowledge and Values in Teaching** (prereq 1500 or #) (A-N only)
1345-1430 T, 1200-1430 Th, St. Paul, Plihal, 4 cr

3601 **Clinical Experience** (prereq 3620, ¶3611, △) (S-N only)
0900-1200 MTWThF, 1300-1600 MTWThF, St. Paul, Plihal, others, 3-18 cr

3611 **Field Work** (prereq 3620, ¶3601, △) (S-N only)
0900-1200 MTWThF, 1300-1600 MTWThF, St. Paul, Plihal, others, 3 cr

3910 **Educational Methods for Home Economists** (S-N optional; prereq jr, non HEEd maj)
0900-1030 TTh, St. Paul, Olson, 3 cr

R5023 **Extension Methods for Developing Countries** (§AgEd 5023) (A-N only)
1500-1730 M, St. Paul, Marvin, 3 cr

R5025 **Extension Program Development** (§AgEd 5025) (A-N only)
1000-1100 T, 1000-1200 Th, St. Paul, Anderson, 3 cr

R5027 **Practicum: Placement for Extension Experiences** (max 9 cr, S-N optional, §HEEd 3605 or AgEd 5027)
Norenberg, 2-9 cr

5102 **Service Occupations Work Experience** (max 12 cr, §5336; prereq #)
McClelland, 3-6 cr

5106 **Coordination Techniques for Service Occupations** (A-N only)
1600-1830 W, St. Paul, Ashmun, 3 cr

5200 **Seminar: Working with Youth Through Adults** (max 9 cr including AgEd 5200 and YoSt 5200; prereq △) (S-N optional)
Olson, 1-3 cr

5300 **Home Economics Curriculum** (A-N only)
1600-1830 M, St. Paul, Thomas, 3 cr

5315 **Evaluation: Theoretical and Technical Aspects** (A-N only)
1600-1830 T, St. Paul, Rossmann, 3 cr

5430 **Workshop: Contemporary Problems in Home Economics Education** (max 12 cr) (A-N only)
1600-1830 W, St. Paul, McClelland, 1-6 cr

5440 **Computer Applications in Home Economics** (A-N only)
1600-1830 W, St. Paul, McClelland, 3 cr

5600 **Practicum: Adult Education** (prereq #) (A-N only)
1600-1745 M, St. Paul, Cooke, 3 cr

8530 **Seminar: Home Economics Education** (max 3 cr)
1900-2100 M, St. Paul, 1 cr

Spring Quarter

3315 **Adult Education in Home Economics** (A-N only)
0900-1030 TTh, St. Paul, Cooke, 3 cr

3325 **Practicum in Child Development** (prereq 3320 or ¶, △) (A-N only)
0930-1200 M, St. Paul, Cooke, 1 cr

3520 **Home Economics Curriculum and Instruction: Cognitive Learning** (prereq 1510) (A-N only)
0800-1000 M, 0800-1100 WF, St. Paul, Jackman, 5 cr

5021 **Education Through Extension Methods** (§AgEd 5021; prereq grad or #) (A-N only)
1500-1730 Th, St. Paul, Norenberg, 3 cr

5024 Extension History and Philosophy (§AgEd 5024; prereq #) (A-N only)
1400-1630 T, St. Paul, Lewis, 3 cr

R5027 Practicum: Placement for Extension Experiences (max 9 cr, S-N optional, §HEEd 3605 or AgEd 5027)
Norenberg, 2-9 cr

5102 Service Occupations Work Experience (max 12 cr, §5336; prereq #)
McClelland, 3-6 cr

5200 Seminar: Working with Youth Through Adults (max 9 cr including AgEd 5200 and YoSt 5200; prereq △) (S-N optional)
Olson, 1-3 cr

5407 Family Life Education (max 12 cr) (A-N only)
1600-1830 W, St. Paul, Rossmann, 3 cr

5900 Readings: Home Economics Education (max 12 cr; prereq #) (A-N only)
1-3 cr

8305 Research Methods (prereq 8300, 9 cr in history, philosophy of education or history or philosophy, #)
1600-1830 Th, St. Paul, Plihal, 3 cr

8500 Seminar: Curriculum Development (prereq 5300, 5305, 8300)
1600-1745 M, St. Paul, Rossmann, 2 cr

8525 Seminar: Administration, Supervision of Home Economics Programs (prereq 5320, 8520 or # ... EdAd 8201 or 8253 rec)
1600-1745 T, St. Paul, Thomas, 2 cr

8631 Practicum: Home Economics Teacher Education (max 6 cr; prereq #)
3 cr

8900 Problems: Home Economics Education (prereq 8300, #)
1-9 cr

HORTICULTURAL SCIENCE (Hort)
Agriculture
Winter Quarter

R1036 Plant Propagation (prereq 1100 or ¶)
★LECT 1100-1145 TTh, St. Paul, Read
–1 LAB 1200-1430 Th, Read, 4 cr
–2 LAB 1430-1700 Th, Read, 4 cr

R1100 Biology of Horticultural Production (prereq Biol 1103)
★LECT 1300-1445 MF, Mullin, 4 cr
–1 REC 1300-1345 W, St. Paul,

R3026 Residential Landscape Design (prereq 1021, LA 1025 or Ind 1600)
1400-1645 MW, St. Paul, Hard, 4 cr

R3053 Ornamentals for Interior Design
0800-1045 TTh, Brown, 4 cr

R3077 Floral Design
★LECT 1200-1245 Th, St. Paul, Wilkins
–1 LAB 1200-1445 T, St. Paul, Wilkins, 3 cr

3097 Horticulture Practicum (prereq upper division horticulture maj)
4 cr

3098 Undergraduate Research Project (prereq 8 cr upper division horticulture courses)
2-6 cr

3099 Seminar (max 2 cr; prereq jr)
1100-1145 TTh, St. Paul, Desborough, 1 cr

5000 Professional Experience Program (prereq #) (S-N only)
4 cr

5034 Commercial Vegetable Production: Tuber, Bulb, Root Crops (prereq 1016, 1036, Soil 1122 or #)
0900-1045 MW, Davis, 3 cr

5036 Topics: Optimizing Horticultural Food Production (prereq 3031 or 5034 or 5035)
1200-1245 Th, St. Paul, Davis, 1 cr

5038 Research Methods in Plant Propagation (prereq 1036 or #)
1400-1645 T, Read, 3 cr

5040 Plant Growth Regulators (prereq 15 cr plant sciences including 3 cr plant physiology)
1300-1345 MWF, St. Paul, Brenner, 3 cr

5053 Commercial Floriculture, Winter Crops (prereq Biol 1103, PlPh 3091 or #)
1100-1145 MWF, 1400-1645 Th, St. Paul, Wilkins, 4 cr

5091 Special Problems (prereq #)
1-4 cr

8007 Extension Horticulture Practicum (max 6 cr; prereq 12 grad cr)
Hertz, 1-5 cr

8041 Discussions in Administration Organization
Bartz, 2 cr

8042 Horticultural Seminar (prereq 9 cr in horticulture)
1600-1645 W, St. Paul, Markhart, 1 cr

8045 Plant Hardiness (prereq 15 cr plant sciences including 6 cr in plant physiology plus 6 cr in biochemistry)
1000-1045 MWF, St. Paul, Carter, 3 cr

8051 Advanced Problems in Horticultural Crop Breeding (prereq #)
3-9 cr

8052 Advanced Problems in Physiology of Horticultural Crops (prereq #)
3-9 cr

8060 Discussions in Potato Research
Lauer, 1 cr

8061 Discussions in Incompatibility (prereq #)
Ascher, 1 cr

8062 Discussions in Plant Hardiness (prereq #)
Li, 1 cr

8063 Discussions in Plant Breeding (prereq #)
Davis, 1 cr

8064 Discussions in Floricultural Science (prereq #)
Widmer, 1 cr

8065 Discussions in Postharvest Physiology (prereq #)
Wilkins, 1 cr

8066 Discussions in Horticulture Research (prereq #)
Stadelmann, 1 cr

Spring Quarter

R1016 Greenhouse Management (prereq 1100)
★LECT 1100-1215 TTh, St. Paul, Widmer
–1 LAB 1300-1545 W, Widmer, 4 cr

R1022 Herbaceous Plant Materials
★LECT 1400-1445 TTh, St. Paul, Mullin
–1 LAB 1200-1345 TTh, St. Paul, Mullin, 5 cr
–2 LAB 1500-1545 TTh, 1545-1645 TTh, St. Paul, Mullin, 5 cr

R3072 Turf Management (prereq Soil 1122, Hort 1100 or Agro 3020)
★LECT 1200-1245 MWF, St. Paul, White, 4 cr
–1 LAB 1300-1545 M,

3076 Arboriculture (prereq 1021, Soil 1122 or FR 1100)
1600-1745 TTh, St. Paul, 3 cr

3079 Ornamental Horticulture Business Practices
★LECT 1200-1245 MWF, St. Paul, Wilkins, 3 cr
–1 LAB 1300-1545 M, St. Paul, Wilkins

3097 Horticulture Practicum (prereq upper division horticulture maj)
4 cr

3098 Undergraduate Research Project (prereq 8 cr upper division horticulture courses)
2-6 cr

5000 Professional Experience Program (prereq #) (S-N only)
4 cr

5020 Horticultural Techniques for Education Majors (prereq education maj or #)
1630-1900 W, St. Paul, Read, 3 cr

5035 Commercial Vegetable Production: Fruit, Seed, and Leafy Types (prereq 1016, 1036, Soil 1122 or #)
0800-0945 TTh, Davis, 3 cr

5048 Nursery Management and Production II (5046-5048†; prereq 5046)
★LECT 0830-0945 TTh, St. Paul, Swanson, 4 cr
–1 LAB 1300-1645 T,

R5054 Commercial Floriculture, Spring Crops (prereq 1016)
★LECT 0900-0945 TTh, Widmer, 3 cr
–1 LAB 1400-1645 Th,

5092 Special Problems (prereq #)
1-4 cr

8007 Extension Horticulture Practicum (max 6 cr; prereq 12 grad cr)
Hertz, 1-5 cr

8042 Horticultural Seminar (prereq 9 cr in horticulture)
1600-1645 W, St. Paul, Markhart, 1 cr

8051 Advanced Problems in Horticultural Crop Breeding (prereq #)
3-9 cr

8052 Advanced Problems in Physiology of Horticultural Crops (prereq #)
3-9 cr

8060 Discussions in Potato Research
Desborough, Lauer, 1 cr

8061 Discussions in Incompatibility (prereq #)
Ascher, 1 cr

8062 Discussions in Plant Hardiness (prereq #)
Li, 1 cr

8064 Discussions in Floricultural Science (prereq #)
Wilkins, 1 cr

8065 Discussions in Postharvest Physiology (prereq #)
Li, Munson, others, 1 cr

8066 Discussions in Horticulture Research (prereq #)
Stadelmann, 1 cr

HUMANITIES (Hum)
Liberal Arts
Winter Quarter

R1001 Humanities in the Modern World I (§3001, Rhet 1301)
–1 1015-1100 MTWTh, East Bank, Mowitt, 5 cr
–2 1115-1200 MTWTh, East Bank, Powell, 5 cr
–3 1415-1600 TTh, East Bank, Leppert, 5 cr
–4 1015-1100 MTWTh, East Bank, Mowitt, 5 cr (business and pre-business majs only)
–5 1115-1200 MTWTh, East Bank, Powell, 5 cr (business and pre-business majs only)
–6 1415-1600 TTh, East Bank, Leppert, 5 cr (business and pre-business majs only)

R1002 Humanities in the Modern World II (§3002, Rhet 1302)
–1 1415-1500 MTWTh, East Bank, Powell, 5 cr
–2 1415-1500 MTWTh, East Bank, Powell, 5 cr (business and pre-business majs only)

R1003 Humanities in the Modern World III (§3003, Rhet 1303)
–1 1415-1500 MTWTh, East Bank, Tapp, 5 cr
–2 1415-1500 MTWTh, East Bank, Tapp, 5 cr (business and pre-business majs only)

1301 Life of the Mind: Introduction to Methods in the Humanities
–1 1015-1100 MTWTh, East Bank, Cromwell, 5 cr
–2 1115-1200 MTWTh, East Bank, Cromwell, 5 cr
–3 1415-1500 MTWTh, East Bank, Mowitt, 5 cr
–4 0915-1100 TTh, East Bank, Brown, 5 cr
–5 1315-1500 TTh, East Bank, Thomas, 5 cr

3004 Humanities in the Modern World (§1004, Rhet 3381)
1315-1500 TTh, East Bank, Kliger, 5 cr

3113 European Heritage: Rome (prereq jr or sr)
1015-1100 MTWTh, East Bank, Erickson, 5 cr

3119 European Heritage: The Age of the Baroque
0915-1100 TTh, East Bank, Thomas, 5 cr

3202 The Heritage of China II: Medieval to Modern (§Chn 3202)
1015-1100 MTWTh, East Bank, Huters, 5 cr

3211 The Heritage of India (§Indc 3501)
1215-1400 TTh, East Bank, Lincoln, 5 cr

3625 Science and the Humanities (prereq jr or sr or #)
1115-1300 TTh, East Bank, D'Andrea, 5 cr

R3815 Great Monasteries of the Middle Ages (§ArtH 3232; prereq ArtH 3009)
0915-1000 MWF, East Bank, Stones, 4 cr

3910 Topics in the Humanities: Isaac Bashevis Singer and the Shtetl: A Way of Life and Its Literature (prereq jr, sr or #)
1015-1200 MW, East Bank, Michel, 4 cr

3944H Honors Thesis (prereq sr, candidate for magna or summa honors in humanities, △)
4 cr

3970 Directed Studies (prereq #, △, college approval)
ar cr

R5243 Art and Ideology: Living Cinema (§CLit 5243)
1415-1600 WF, East Bank, Bensmaia, 4 cr

5711 Interpretation of Myth (§RelS 5111; prereq jr or sr or #)
1415-1530 TTh, East Bank, Lincoln, 4 cr

R5910 Topics in the Humanities (prereq jr, sr or grad)
–1 1015-1200 MW, East Bank, Michel, 4 cr (Isaac Bashevis Singer and the Shtetl: A Way of Life and Its Literature)
–2 1415-1600 M, East Bank, Schulte-Sasse, 4 cr (Modernism, Avant-Garde, Post Modernism)

R5930 Humanities Proseminar (prereq sr)
–1 1415-1600 T, East Bank, D'Andrea, 3 cr
–2 1315-1500 W, East Bank, Kliger, 3 cr (The Aesthetics and Art of Symbolism)

Spring Quarter

R1001 Humanities in the Modern World I (§3001, Rhet 1301)
–1 0815-0900 MTWTh, East Bank, Leppert, 5 cr
–2 1015-1100 MTWTh, East Bank, 5 cr
–3 1415-1500 MTWTh, East Bank, 5 cr
–4 0815-0900 MTWTh, East Bank, Leppert, 5 cr (business and pre-bus majs only)
–5 1015-1100 MTWTh, East Bank, 5 cr (business and pre-business majs only)
–6 1415-1500 MTWTh, East Bank, 5 cr (business and pre-business majs only)

R1002 Humanities in the Modern World II (§3002, Rhet 1302)
–1 0915-1000 MTWTh, East Bank, 5 cr
–2 0915-1000 MTWTh, East Bank, 5 cr (business and pre-business majs only)

R1003 Humanities in the Modern World III (§3003, Rhet 1303)
–1 1415-1500 MTWTh, East Bank, 5 cr
–2 1415-1500 MTWTh, East Bank, 5 cr (business and pre-business majs only)

1111 European Heritage: Greece
1315-1500 TTh, East Bank, Hershbell, 5 cr

R1301 Life of the Mind: Introduction to Methods in the Humanities
–1 0915-1000 MTWTh, East Bank, D'Andrea, 5 cr
–2 1015-1100 MTWTh, East Bank, Cromwell, 5 cr
–3 1215-1300 MTWTh, East Bank, Mowitt, 5 cr
–4 1015-1200 MW, East Bank, Erickson, 5 cr
–5 1415-1600 TTh, East Bank, 5 cr

R3002 Humanities in the Modern World (§1002, Rhet 1302)
–1 1415-1600 TTh, East Bank, 5 cr
–2 1415-1600 TTh, East Bank, 5 cr (business and pre-business majs only)

3004 Humanities in the Modern World (§1004, Rhet 3381)
1115-1200 MTWTh, East Bank, Cromwell, 5 cr

3005 Humanities in the Modern World V (prereq jr or sr)
1315-1500 TTh, East Bank, Kliger, 5 cr

3115 European Heritage: Middle Ages (prereq jr or sr)
1315-1500 TTh, East Bank, Kendall, 5 cr

3117 European Heritage: Renaissance, Reformation (prereq jr or sr)
1115-1200 MTWTh, East Bank, D'Andrea, 5 cr

3212 The Heritage of India (§SoAS 3502)
1415-1530 TTh, West Bank, Lelyveld, 5 cr

R3321 Theories of Culture (prereq jr or sr)
1415-1500 MTWTh, East Bank, Mowitt, 5 cr

R3701 A Time to Laugh: A Study of the Comic Spirit
1415-1600 TTh, East Bank, Thomas, 5 cr

3871 Revolutions in Science and the Arts: 1900-1931 (prereq jr or sr or #)
1315-1500 MW, East Bank, Kliger, 5 cr

R3910 Topics in the Humanities (prereq jr, sr or #)
–1 1215-1300 MWF, West Bank, Stavrou, 4 cr
–2 0945-1100 TTh, West Bank, Kaba, 4 cr
–3 1015-1200 TTh, East Bank, Sugnet, 4 cr
–4 1315-1500 TTh, East Bank, Conley, 4 cr
–5 1415-1600 TTh, East Bank, Furia, 4 cr (New York in the 1920s)
–6 1415-1600 T, East Bank, Stones, 4 cr

3944H Honors Thesis (prereq sr, candidate for magna or summa honors in humanities, △)
4 cr

3970 Directed Studies (prereq #, △, college approval)
ar cr

5232 Pre-Christian Europe: Germans and Celts (prereq jr or sr or #)
1215-1400 TTh, East Bank, Lincoln, 4 cr

R5910 Topics in the Humanities (prereq jr, sr or grad)
–1 1215-1300 MWF, West Bank, Stavrov, 4 cr
–2 1015-1200 TTh, East Bank, Sugnet, 4 cr
–3 1415-1600 T, East Bank, Stones, 4 cr

R5930 Humanities Proseminar: Secular Humanism and Its Critics (prereq sr)
1415-1600 W, East Bank, Tapp, 3 cr

INDUSTRIAL EDUCATION (Ind)
Vocational And Technical Education Education

Winter Quarter

1400 Industrial Technology in Society (A-N only)
1400-1545 Th, St. Paul, Cote, 3 cr (1 hr ar)

R1600 Drafting (A-N only)
1200-1345 MWF, St. Paul, 3 cr

R1602 Drawing and Design (prereq 1600 or #) (A-N only)
1400-1545 MWF, St. Paul, Quistad, 3 cr

R1610 Construction Technology I (prereq 1600, 1604, 1606) (A-N only)
0800-0945 MWF, St. Paul, Donnerberg, 3 cr

R1620 Graphic Communications I (prereq 1600, Math 1111) (A-N only)
1300-1545 TTh, St. Paul, Weber, 3 cr

R1622 Graphic Communications II (prereq 1620) (A-N only)
0800-0945 MWF, St. Paul, Weber, 3 cr

R1632 Manufacturing II, Production (prereq 1602, 1630) (A-N only)
1300-1545 TTh, St. Paul, Summers, 3 cr

R1640 Introduction to Power and Energy (prereq 1604, Phys 1014, 1015 or GC 1163, 1451, Math 1111 or 1131) (A-N only)
1000-1145 MWF, St. Paul, Druker, 3 cr

R1652 Transportation II (prereq 1650) (A-N only)
0900-1145 TTh, St. Paul, 3 cr

1800 Career Planning Practicum I (prereq △) (A-N only)
1200-1245 Th, St. Paul, Schoonmaker, 1 cr

1801 Career Planning Practicum II (prereq 1800, △) (A-N only)
1200-1245 Th, St. Paul, Schoonmaker, 1 cr

1802 Career Planning Practicum III (prereq 1801, △) (A-N only)
1200-1245 Th, St. Paul, Schoonmaker, 1 cr

3110 Construction: Intermediate (prereq 1612, #) (A-N only)
Miletich, 3-9 cr

3111 Construction: Advanced (prereq 3110, #) (A-N only)
Miletich, 3-9 cr

R3120 Graphic Communication: Intermediate (prereq 1622, #) (A-N only)
–1 Miletich, 3-9 cr
–2 0900-1145 TTh, St. Paul, Quistad, 3 cr

3121 Graphic Communication: Advanced (prereq 3120, #) (A-N only)
Miletich, 3-9 cr

3130 Manufacturing: Intermediate (prereq 1632, #) (A-N only)
Miletich, 3-9 cr

3131 Manufacturing: Advanced (prereq 3130, #) (A-N only)
Miletich, 3-9 cr

3140 Power and Energy: Intermediate (prereq 1642, #) (A-N only)
Miletich, 3-9 cr

3141 Power and Energy: Advanced (prereq 3140, #) (A-N only)
Miletich, 3-9 cr

3150 Transportation: Intermediate (prereq 1652, #) (A-N only)
Miletich, 3-9 cr

3151 Transportation: Advanced (prereq 3150, #) (A-N only)
Miletich, 3-9 cr

3900 Independent Study (prereq #) (A-N only)
3 cr

3901 Independent Study (prereq #) (A-N only)
3 cr

3902 Independent Study (prereq #) (A-N only)
3 cr

R5100 Communications Occupational Experience (max 15 cr; prereq #) (A-N only)
Miletich, 1-5 cr

R5101 Production/Manufacturing Occupational Experience (max 15 cr; prereq #) (A-N only)
Miletich, 1-5 cr

R5102 Power/Energy Occupational Experience (max 15 cr; prereq #) (A-N only)
Miletich, 1-5 cr

R5103 Construction Occupational Experience (max 15 cr; prereq #) (A-N only)
Miletich, 1-5 cr

5112 Construction: Specialization (prereq △) (A-N only)
Miletich, 1-9 cr

5122 Graphic Communications: Specialization (prereq △) (A-N only)
Miletich, 1-9 cr

5132 Manufacturing: Specialization (prereq △) (A-N only)
Miletich, 1-9 cr

5142 Power and Energy: Specialization (prereq △) (A-N only)
Miletich, 1-9 cr

5152 Transportation: Specialization (prereq △) (A-N only)
Miletich, 1-9 cr

5301 Tests in Industrial Subjects (A-N only)
1600-1845 T, St. Paul, Pucel, 3 cr

5320 Vocational Guidance (A-N only)
1600-1845 M, St. Paul, Bjorkquist, 3 cr

5325 Foundations of Industrial Education (A-N only)
1600-1845 Th, St. Paul, Kavanaugh, 3 cr

5360 Industrial Instruction (A-N only)
1600-1845 W, St. Paul, Schoonmaker, 3 cr

5900 School-Based Project in Industrial Education (max 12 cr; prereq 5305, 5325, MEd student) (S-N optional)
1-6 cr

8700 Seminar: Industrial Education
1200-1245 T, St. Paul, Schoonmaker, 0 cr

8900 Research Problems (prereq approval of candidacy)
3-9 cr

8901 Research Problems (prereq approval of candidacy)
3-9 cr

Spring Quarter

R1600 Drafting (A-N only)
1300-1545 TTh, St. Paul, Quistad, 3 cr

R1604 Industrial Materials and Measurement (A-N only)
1000-1045 M, 1000-1145 WF, St. Paul, Donnerberg, 3 cr (1 hr ar)

R1606 Introduction to Industrial Process (A-N only)
1100-1145 M, 1000-1145 TTh, St. Paul, Summers, 3 cr (1 hr ar)

R1612 Construction Technology II (prereq 1610) (A-N only)
0800-0945 MWF, St. Paul, Donnerberg, 3 cr

R1622 Graphic Communications II (prereq 1620) (A-N only)
1400-1545 MWF, St. Paul, Weber, 3 cr

R1630 Manufacturing I, Processes (prereq 1604, 1606) (A-N only)
1200-1345 MWF, St. Paul, Summers, 3 cr

R1640 Introduction to Power and Energy (prereq 1604, Phys 1014, 1015 or GC 1163, 1451, Math 1111 or 1131) (A-N only)
0900-1145 TTh, St. Paul, Druker, 3 cr

R1650 Transportation I (prereq 1604, 1606) (A-N only)
1300-1545 TTh, St. Paul, 3 cr

1800 Career Planning Practicum I (prereq △) (A-N only)
1200-1245 Th, St. Paul, Schoonmaker, 1 cr

1801 **Career Planning Practicum II** (prereq 1800, △) (A-N only)
1200-1245 Th, St. Paul, Schoonmaker, 1 cr

1802 **Career Planning Practicum III** (prereq 1801, △) (A-N only)
1200-1245 Th, St. Paul, Schoonmaker, 1 cr

3110 **Construction: Intermediate** (prereq 1612, #) (A-N only)
Miletich, 3-9 cr

3111 **Construction: Advanced** (prereq 3110, #) (A-N only)
Miletich, 3-9 cr

R3120 **Graphic Communication: Intermediate** (prereq 1622, #) (A-N only)
-1 Miletich, 3-9 cr
-2 0800-0945 MWF, St. Paul, Quistad, 3 cr
-3 1200-1345 MWF, St. Paul, Cote, 3 cr

3121 **Graphic Communication: Advanced** (prereq 3120, #) (A-N only)
Miletich, 3-9 cr

3130 **Manufacturing: Intermediate** (prereq 1632, #) (A-N only)
Miletich, 3-9 cr

3131 **Manufacturing: Advanced** (prereq 3130, #) (A-N only)
Miletich, 3-9 cr

3140 **Power and Energy: Intermediate** (prereq 1642, #) (A-N only)
Miletich, 3-9 cr

3141 **Power and Energy: Advanced** (prereq 3140, #) (A-N only)
Miletich, 3-9 cr

3150 **Transportation: Intermediate** (prereq 1652, #) (A-N only)
Miletich, 3-9 cr

3151 **Transportation: Advanced** (prereq 3150, #) (A-N only)
Miletich, 3-9 cr

3700 **Student Teaching** (prereq 1300, 5360, △) (S-N only)
Schoonmaker, 3 cr

3701 **Seminar: Student Teaching** (prereq ¶3700, 3702, 3704, 3706) (S-N only)
1400-1545 F, St. Paul, Schoonmaker, 1-3 cr

3702 **Student Teaching** (prereq 1300, 5360, △) (S-N only)
Schoonmaker, 3 cr

3704 **Student Teaching** (prereq 1300, 5360, △) (S-N only)
Schoonmaker, 3 cr

3706 **Student Teaching** (prereq △) (S-N only)
Schoonmaker, 3 cr

R3750 **Industrial Practices and Processes** (prereq #) (A-N only)
1300-1545 T, St. Paul, Miletich, 3 cr

3900 **Independent Study** (prereq #) (A-N only) 3 cr

3901 **Independent Study** (prereq #) (A-N only) 3 cr

3902 **Independent Study** (prereq #) (A-N only) 3 cr

R5100 **Communications Occupational Experience** (max 15 cr; prereq #) (A-N only)
Miletich, 1-5 cr

R5101 **Production/Manufacturing Occupational Experience** (max 15 cr; prereq #) (A-N only)
Miletich, 1-5 cr

R5102 **Power/Energy Occupational Experience** (max 15 cr; prereq #) (A-N only)
Miletich, 1-5 cr

R5103 **Construction Occupational Experience** (max 15 cr; prereq #) (A-N only)
Miletich, 1-5 cr

5112 **Construction: Specialization** (prereq △) (A-N only)
Miletich, 1-9 cr

5122 **Graphic Communications: Specialization** (prereq △) (A-N only)
Miletich, 1-9 cr

5132 **Manufacturing: Specialization** (prereq △) (A-N only)
Miletich, 1-9 cr

5142 **Power and Energy: Specialization** (prereq △) (A-N only)
Miletich, 1-9 cr

5152 **Transportation: Specialization** (prereq △) (A-N only)
Miletich, 1-9 cr

5300 **Vocational Education Surveys** (prereq 5314 or 5325) (A-N only)
1600-1845 T, St. Paul, Bjorkquist, 3 cr

R5303 **Instructional Aids** (prereq educ or grad stu) (A-N only)
1600-1845 M, St. Paul, Kavanaugh, 3 cr

5309 **Conference Leading for Industry** (prereq #) (A-N only)
1600-1845 Th, St. Paul, Kavanaugh, 3 cr

5330 **Industrial Course Construction** (prereq educ or grad stu) (A-N only)
1600-1845 W, St. Paul, Kavanaugh, 3 cr

5900 **School-Based Project in Industrial Education** (max 12 cr; prereq 5305, 5325, MEd student) (S-N optional)
1-6 cr

8300 **Literature of Industrial Education** (prereq #)
1600-1845 M, St. Paul, Schoonmaker, 3 cr

8700 **Seminar: Industrial Education**
1200-1245 T, St. Paul, 0 cr

8900 **Research Problems** (prereq approval of candidacy)
3-9 cr

8901 **Research Problems** (prereq approval of candidacy)
3-9 cr

INDUSTRIAL ENGINEERING/OPERATIONS RESEARCH (IEOR)
Mechanical Engineering
Institute of Technology

Winter Quarter

R5000 **Introduction to Industrial Engineering Analysis** (prereq Math 1231, IT stu...ME 3900 rec)
0915-1000 MWThF, East Bank, 4 cr

R5010 **Introduction to Work Analysis** (prereq 5000, IT or grad)
★LECT 1515-1630 TTh, East Bank, 4 cr
-1 LAB 1515-1700 W, East Bank,

R5020 **Engineering Cost Accounting, Analysis and Control** (prereq 5000, IT or grad...ME 3900 rec)
1115-1200 MWThF, East Bank, 4 cr

R5030 **Quality Control and Reliability** (prereq Math 1231, ME 3900, IT or grad...IEOR 5000 rec)
1115-1200 MWThF, East Bank, 4 cr

R5040 **Introduction to Operations Research** (prereq Math 1231, IT or grad...IEOR 5000 rec)
1015-1100 MWThF, East Bank, 4 cr

R5180 **Applied Industrial Engineering** (prereq 5000, 5010, 5020, 5030, 5040)
3-5 cr

R5254 **Design Morphology with Applications** (prereq completion of sequences ME 3201/3 or 5, ME 3303 or 5342, upper div mech engr maj)
★LECT 1315-1400 TTh, East Bank, 4 cr
-1 LAB 1415-1700 TTh, East Bank,

R5361 **Inventory and Production Control** (prereq 5000, 5040, ME 3900, IT stu or grad)
1015-1100 MWThF, East Bank, 4 cr

R5441 **Operations Research II** (prereq 5040, IT stu or grad)
-1 0915-1000 MWThF, East Bank, 4 cr
-2 0915-1000 MWThF, East Bank, 4 cr

R5480 **Man-Machine Systems** (prereq 5070 or #, IT or grad stu)
1315-1500 TTh, East Bank, 4 cr

R5710 **Transit Systems Analysis and Design** (prereq sr engineering stu, IT stu or grad)
1015-1100 MWThF, East Bank, 4 cr

8411 **Industrial Engineering Research** (prereq 8410)
3-5 cr

8412 **Industrial Engineering Research** (prereq 8411)
3-5 cr

8773 **Graduate Seminar** (S-N only)
1515-1700 W, East Bank, 1 cr

8774 **Graduate Seminar** (S-N only)
1515-1700 W, East Bank, 1 cr

8775 **Graduate Seminar** (S-N only)
1515-1700 W, East Bank, 1 cr

Spring Quarter

R5000 **Introduction to Industrial Engineering Analysis** (prereq Math 1231, IT stu...ME 3900 rec)
0815-1000 TTh, East Bank, 4 cr

R5040 **Introduction to Operations Research** (prereq Math 1231, IT or grad...IEOR 5000 rec)
1015-1100 MWThF, East Bank, 4 cr

R5071 **Human Factors in System Design** (prereq 5070 and/or 5010, IT stu or grad)
★LECT 1415-1500 MW, East Bank, 4 cr
-1 REC 1415-1500 M, 1415-1700 W, East Bank,

R5180 **Applied Industrial Engineering** (prereq 5000, 5010, 5020, 5030, 5040)
3-5 cr

R5221 **Industrial Plants** (prereq 5010, IT stu or grad)
1315-1400 MWThF, East Bank, 4 cr

R5254 **Design Morphology with Applications** (prereq completion of sequences ME 3201/3 or 5, ME 3303 or 5342, upper div mech engr maj)
★LECT 1315-1400 TTh, East Bank, 4 cr
-1 LAB 1415-1700 TTh, East Bank,

R5311 **Management for Engineers** (prereq 5000, IT stu or grad)
-1 1215-1300 MWF, East Bank, 3-5 cr

R5442 **Operations Research III** (prereq 5441, IT stu or grad)
0915-1000 MWThF, East Bank, 4 cr

R5445 **Topics in Management Science** (prereq 5010, 5020, 5030, 5040, IT stu or grad)
1015-1100 MWThF, East Bank, 3-5 cr

R5550 **Design and Analysis of Experiments I** (prereq ME 3900, IT stu or grad)
1115-1200 MWThF, East Bank, 4 cr

R5710 **Transit Systems Analysis and Design** (prereq sr engineering stu, IT stu or grad)
1115-1200 MWF, East Bank, 4 cr

R5711 **Transit Systems Design** (prereq 5710, IT stu or grad)
1015-1100 MWThF, East Bank, 4 cr

8773 **Graduate Seminar** (S-N only)
1515-1700 W, East Bank, 1 cr

8774 **Graduate Seminar** (S-N only)
1515-1700 W, East Bank, 1 cr

8775 **Graduate Seminar** (S-N only)
1515-1700 W, East Bank, 1 cr

INDUSTRIAL RELATIONS (IR)
Management

Winter Quarter

R3000 **Topics in Industrial Relations**
1545-1645 MWF, West Bank, Zaidi, ar cr

R3002 **Industrial Relations Systems: Labor Markets and the Management of Human Resources** (§8002; prereq Econ 1001, 1002, Psy 1001)
★LECT 0815-0900 MWF, West Bank,
-1 REC 0915-1000 M, West Bank, 4 cr
-2 REC 1115-1200 M, West Bank, 4 cr
-3 REC 1215-1300 M, West Bank, 4 cr
-4 REC 0915-1000 W, West Bank, 4 cr
-5 REC 1115-1200 W, West Bank, 4 cr
-6 REC 1215-1300 W, West Bank, 4 cr
-7 REC 0915-1000 F, West Bank, 4 cr
-8 REC 1115-1200 F, West Bank, 4 cr
-9 REC 1215-1300 F, West Bank, 4 cr

R3007 **Collective Bargaining Negotiations and Modern Labor Relations**
-1 1315-1415 MWF, West Bank, Schumann, 4 cr
-2 1415-1600 TTh, West Bank, Duffy, 4 cr

R3010 **Human Relations and Applied Organization Theory**
-1 1430-1530 MWF, West Bank, Smythe, 4 cr
-2 0915-1100 TTh, West Bank, Rosse, 4 cr

R8001 **Quantitative Methods in Industrial Relations** (prereq 8002, Stat 5021, computer access course or # and IR grad student or △)
★LECT 1015-1200 MW, West Bank, Ahlburg, 4 cr
-1 LAB 1015-1200 F, West Bank,

R8003 **Staffing, Training and Development** (prereq 8002 or # and IR grad student or △)
1015-1200 TTh, West Bank, Arvey, 4 cr

R8005 Employee Compensation and Reward (prereq 8002 or # and IR grad student or △)
1315-1500 MWF, West Bank, Fossum, 4 cr

R8006 Labor Markets Analysis (prereq 8002 or # and IR grad student or △)
1515-1700 TTh, West Bank, Ahlburg, 4 cr

R8007 Collective Bargaining in the Public and Private Sectors (prereq 8002 or # and IR grad student or △)
1315-1500 TTh, West Bank, Bognanno, 4 cr

R8012 Industrial Relations Systems (prereq completion of the core sequence in IR or # and IR grad student or △)
1515-1700 MW, West Bank, Seltzer, 4 cr

R8015 Compensation, Reward, Motivation and Performance (prereq 8005 or # and IR grad student or △)
0815-1000 MWF, West Bank, Fossum, 4 cr

R8032 Comparative and International Labor Movements (prereq 8002 or # and IR grad student or △)
1515-1700 MWF, West Bank, Scouille, 4 cr

R8035 Motivation and Work Behavior (prereq 8005 or 8004 or # and IR grad student or △)
0815-1000 TTh, West Bank, Miller, 4 cr

R8036 Human Resource Planning (prereq 8006 or # and IR grad student or △)
1515-1700 TTh, West Bank, Azevedo, 4 cr

R8990 Independent Study in Industrial Relations (prereq #)
Zaidi, ar cr

Spring Quarter

R3000 Topics in Industrial Relations
1545-1645 MWF, West Bank, Pinto, ar cr

R3002 Industrial Relations Systems: Labor Markets and the Management of Human Resources (§8002; prereq Econ 1001, 1002, Psy 1001)
★LECT 0815-0900 MWF, West Bank, Gagala
–1 REC 0915-1000 M, West Bank, 4 cr
–2 REC 1115-1200 M, West Bank, 4 cr
–3 REC 1215-1300 M, West Bank, 4 cr
–4 REC 0915-1000 W, West Bank, 4 cr
–5 REC 1115-1200 W, West Bank, 4 cr
–6 REC 1215-1300 W, West Bank, 4 cr
–7 REC 0915-1000 F, West Bank, 4 cr
–8 REC 1115-1200 F, West Bank, 4 cr
–9 REC 1215-1300 F, West Bank, 4 cr

R3007 Collective Bargaining Negotiations and Modern Labor Relations
–1 1315-1415 MWF, West Bank, Flagler, 4 cr
–2 1415-1600 TTh, West Bank, Seltzer, 4 cr

R3010 Human Relations and Applied Organization Theory
–1 1430-1530 MWF, West Bank, Rosse, 4 cr
–2 0915-1100 TTh, West Bank, 4 cr

R8001 Quantitative Methods in Industrial Relations (prereq 8002, Stat 5021, computer access course or # and IR grad student or △)
★LECT 0815-1000 MW, West Bank, Schumann, 4 cr
–1 LAB 0815-1000 F, West Bank,

R8002 An Introduction to Industrial Relations (§3002; prereq Econ 1001, 1002, Psy 1001, IR grad student or △)
–1 1015-1200 TTh, West Bank, Scoville, 4 cr
–2 0815-1000 TTh, West Bank, Miller, 4 cr

R8004 Organization Theory and Analysis (prereq 8002 or # and IR grad student or △)
1315-1500 TTh, West Bank, Miller, 4 cr

R8007 Collective Bargaining in the Public and Private Sectors (prereq 8002 or # and IR grad student or △)
1315-1500 MWF, West Bank, Schumann, 4 cr

R8012 Industrial Relations Systems (prereq completion of the core sequence in IR or # and IR grad student or △)
1515-1700 MW, West Bank, Seltzer, 4 cr

R8013 Organization and Staffing (prereq 8003 or # and IR grad student or △)
0815-1000 TTh, West Bank, Arvey, 4 cr

R8014 Organization Design and Administration (prereq 8004 or # and IR grad student or △)
1515-1700 TTh, West Bank, Arvey, 4 cr

R8025 Employee Benefits Administration and Practice (prereq 8005 or # and IR grad student or △)
1015-1100 MWF, West Bank, Williams, 4 cr

R8990 Independent Study in Industrial Relations (prereq #)
Flagler, ar cr

INSTITUTE OF TECHNOLOGY (IofT)
Institute of Technology

Winter Quarter

R1222 Introduction to Careers in Science and Industry (prereq IT student or △) (S-N only)
1415-1600 Th, East Bank, Lent, 2 cr

R1821H Science and Technology in Society (prereq 1811H, college approval) (A-N only)
1415-1545 Th, East Bank, Holt, Johnson, 2 cr

Spring Quarter

1831H Science and Technology in Society (prereq college approval) (A-N only)
Johnson, Holt, 2 cr

R5211 Information Sources for Science and Technology
0915-1000 TTh, East Bank, Marion, 2 cr

R5290 Human Powered Technology for Engineering Students (prereq Phys 1271, 1281, 1291)
★LECT 1415-1530 MW, East Bank, Halley, 4 cr
–1 LAB 0900-1200 S, East Bank, Halley

INSURANCE (Ins)
Management

Winter Quarter

R3100 Risk Management and Insurance (§8100) (A-N only)
–1 0915-1015 MWF, West Bank, Cho, 4 cr
–2 1030-1130 MWF, West Bank, Cho, 4 cr
–3 1145-1245 MWF, West Bank, Whitman, 4 cr

R3200 Life and Health Insurance (§8200; prereq 3100)
1315-1400 MWF, West Bank, Whitman, 4 cr

R3210 Economic and Social Security (§8210, Econ 5534)
0915-1000 MWF, West Bank, Williams, 4 cr

R5230 Life Contingencies I (§Math 5056; prereq Math 1211, 1221, plus Math 1231 or 1131 or #)

R8100 Risk Management and Insurance I (§3100)
–1 0915-1015 MWF, West Bank, Cho, 4 cr
–2 1030-1130 MWF, West Bank, Cho, 4 cr
–3 1145-1245 MWF, West Bank, Whitman, 4 cr
–4 1700-1930 M, West Bank, Whitman, 4 cr

R8200 Life and Health Insurance (§3200; prereq 3100 or 8100)
1315-1400 MWF, West Bank, Whitman, 4 cr

R8210 Economic and Social Security (§3210, Econ 5534)
0915-1000 MWF, West Bank, Williams, 4 cr

8990 Readings in Risk Management and Insurance (prereq consent of advisor, #)
ar cr

8995 Graduate Research in Risk Management and Insurance
ar cr

Spring Quarter

R3100 Risk Management and Insurance (§8100) (A-N only)
–1 0915-1015 MWF, West Bank, Cho, 4 cr
–2 1030-1130 MWF, West Bank, Cho, 4 cr

R5231 Life Contingencies II (§Math 5057; prereq 5230 or #)
0815-1000 TTh, West Bank, Staub, 4 cr

R8100 Risk Management and Insurance I (§3100)
–1 0915-1015 MWF, West Bank, Cho, 4 cr
–2 1030-1130 MWF, West Bank, Cho, 4 cr

8990 Readings in Risk Management and Insurance (prereq consent of advisor, #)
ar cr

8995 Graduate Research in Risk Management and Insurance
ar cr

INTERDEPARTMENTAL STUDY (ID)
Liberal Arts

Winter Quarter

R1002 Social Science Colloquium (prereq ¶Anth 1101 or 1102 or Geog 1301 or 1401 or any 1xxx level history course or Soc 1001) (S-N only)
1515-1700 T, East Bank, 1-3 cr

3101 An Introduction to Marxism
1015-1100 MWF, East Bank, Marquit, 4 cr

3970 Directed Studies (prereq consult with Office for Special Learning Opportunities, JohH 220, college approval)
1-15 cr

R5403 Ecology, Technology and Society (prereq 5402)
1115-1200 MWF, East Bank, Anderson, 4 cr

Spring Quarter

R1003 Social Science Colloquium (prereq ¶Anth 1101 or 1102 or Geog 1301 or 1401 or any 1xxx level history course or Soc 1001)
1515-1700 T, East Bank, 1-3 cr

3101 An Introduction to Marxism
0915-1100 TTh, East Bank, Rowe, 4 cr

3252 Metro Intern Seminar (prereq #)
0815-1000 MWF, Cooke, 2 cr (1901 University Ave SE)

3970 Directed Studies (prereq consult with Office for Special Learning Opportunities, JohH 220, college approval)
1-15 cr

INTERNATIONAL RELATIONS (IntR)
Liberal Arts

Winter Quarter

R3091H Honors Course: Supervised Research Paper (prereq sr honors candidate in international relations, △)
Job, 3 cr

3970 Directed Studies (prereq #, △, college approval)
1-15 cr

R5900 Topics in International Relations: Russia and the West in the Brezhnev Era (prereq international relations maj or #)
0815-0930 TTh, West Bank, Hayes, 4 cr

R5910 Topics in International Policy Analysis: The Practice of Public Diplomacy (prereq international relations maj or #)
1030-1200 MW, East Bank, Browne, 4 cr

R5920 Topics in International Decision Making: Strategic Arms Negotiation (prereq △)
★LECT 1115-1300 T, West Bank, Hopmann
–1 REC 1115-1300 Th, West Bank, 4 cr
–2 REC 1115-1300 Th, West Bank, 4 cr

R5930 Topics in International Development (prereq international relations maj or #)
1245-1400 TTh, East Bank, 4 cr

Spring Quarter

3091H Honors Course: Supervised Research Paper (prereq sr honors candidate in international relations, △)
Job, 3 cr

3970 Directed Studies (prereq #, △, college approval)
1-15 cr

R5802 Prospective World Economy (§Econ 5421; prereq Econ 5401 or 5431 or #)
1315-1400 MWF, West Bank, Smith, 4 cr

5831 Analysis of World Futures Models (prereq #)
1015-1100 MWThF, East Bank, Starr, 4 cr

5900 Topics in International Relations (prereq international relations maj or #)
1215-1400 MW, West Bank, 4 cr

R5910 Topics in International Policy Analysis (prereq international relations maj or #)
–1 0815-0930 TTh, West Bank, Hayes, 4 cr (US Policy Towards the USSR)
–2 1245-1400 TTh, West Bank, Knudson, 4 cr (Sex Roles and International Policy)

5930 Topics in International Development (prereq international relations maj or #)
1415-1600 TTh, West Bank, 4 cr

ITALIAN (Ital)
French And Italian
Liberal Arts

Winter Quarter

R1101 **Beginning Italian**
–1 0915-1000 MTWThF, East Bank, 5 cr
–2 1015-1100 MTWThF, East Bank, 5 cr

R1102 **Beginning Italian**
–1 1115-1200 MTWThF, East Bank, Martinez, 5 cr
–2 1215-1300 MTWThF, East Bank, 5 cr

R1104 **Intermediate Italian** (prereq 1103)
1115-1200 M, 1015-1200 TTh, East Bank, Pipa, 5 cr

R1105 **Intermediate Italian** (prereq 1104)
1115-1200 M, 1015-1200 TTh, East Bank, Pipa, 5 cr

R3201 **Italian Literary Tradition** (prereq 3015 or #)
1315-1500 TTh, East Bank, Martinez, 5 cr

3970 **Directed Readings** (prereq undergrad, #, △, college approval)
1-5 cr

8970 **Directed Readings**
1-5 cr

Spring Quarter

R1102 **Beginning Italian**
–1 0915-1000 MTWThF, East Bank, 5 cr
–2 1015-1100 MTWThF, East Bank, 5 cr

R1103 **Beginning Italian**
1115-1200 MTWThF, East Bank, 5 cr

R1105 **Intermediate Italian** (prereq 1104)
1115-1200 M, 1015-1200 TTh, East Bank, Pipa, 5 cr

R3015 **Intermediate Italian Conversation and Composition** (prereq 1105 or 1104 with A, recommendation of instructor)
0915-1100 MW, East Bank, Martinez, 5 cr

R3016 **Advanced Italian Composition, Conversation** (prereq 3015 or #)
0915-1100 MW, East Bank, Martinez, 5 cr

R3289 **Modern Italian Literature** (prereq 3015)
1415-1600 TTh, East Bank, Pipa, 5 cr

3970 **Directed Readings** (prereq undergrad, #, △, college approval)
1-5 cr

R5609 **Dante (in English)**
1315-1500 MW, East Bank, Martinez, 5 cr

JAPANESE (Jpn)
East Asian Studies
Liberal Arts

Winter Quarter

R1012 **Beginning Japanese** (prereq 1011)
–1 LECT 0915-1000 TTh, East Bank, Jacobsen
–2 LECT 1115-1200 TTh, East Bank, Jacobsen
♦–1 REC 0815-0900 MTWThF, East Bank, 5 cr
♦–2 REC 1215-1300 MTWThF, East Bank, 5 cr
♦–3 REC 1015-1100 MTWThF, East Bank, 5 cr

3022 **Intermediate Japanese** (prereq 3021)
0915-1000 MTWThF, East Bank, 5 cr

3032 **Third Year Japanese** (prereq 3031)
0915-1000 MWF, East Bank, 5 cr

3052 **Advanced Japanese Conversation and Composition** (§5052; prereq 3033 or #)
1215-1300 MWF, East Bank, Matsumoto, 4 cr

3090H **Honors Course: Tutorial** (prereq △)
1-4 cr

3164 **Modern Japanese Literature in English Translation**
1115-1200 MWF, East Bank, Copeland, 4 cr

3970 **Directed Study** (prereq 3032, #, △, college approval)
–1 1-4 cr
–2 1-4 cr

5042 **Classical Japanese** (prereq 5041)
1415-1500 MWF, East Bank, Shohara, 5 cr

5052 **Advanced Japanese Conversation and Composition** (§3052; prereq 3033 or #)
1215-1300 MWF, East Bank, Matsumoto, 4 cr

5452 **Structure of Japanese-Phonology/Morphology** (prereq 5451)
1245-1400 TTh, Jacobsen, 4 cr

5970 **Directed Studies in Japanese** (prereq #, △, CLA approval)
1-4 cr

Spring Quarter

R1013 **Beginning Japanese** (prereq 1012)
–1 LECT 0915-1000 TTh, East Bank, Jacobsen
–2 LECT 1115-1200 TTh, East Bank, Jacobsen
♦–1 REC 0815-0900 MTWThF, East Bank, 5 cr
♦–2 REC 1215-1300 MTWThF, East Bank, 5 cr

3023 **Intermediate Japanese** (prereq 3022)
0915-1000 MTWThF, East Bank, 5 cr

3033 **Third Year Japanese** (prereq 3032)
0915-1000 MWF, East Bank, 5 cr

3053 **Advanced Japanese Conversation and Composition** (§5053; prereq 3033 or #)
1215-1300 MWF, East Bank, Matsumoto, 4 cr

3090H **Honors Course: Tutorial** (prereq △)
1-4 cr

3970 **Directed Study** (prereq 3032, #, △, college approval)
1-4 cr

5043 **Classical Japanese** (prereq 5042)
1415-1500 MWF, East Bank, Shohara, 5 cr

5362 **Readings in Modern Japanese Literature I** (prereq 3033)
1115-1200 MWF, East Bank, Copeland, 4 cr

5970 **Directed Studies in Japanese** (prereq #, △, CLA approval)
1-4 cr

JEWISH STUDIES (JwSt)
Near And Middle Eastern Studies
Liberal Arts

Winter Quarter

3126 **Modern Judaism**
1015-1100 MWF, East Bank, Zahavy, 4 cr

R3402 **Art and Architecture of Jewish People**
0915-1000 MWF, East Bank, Chiat, 4 cr

R3521 **Holocaust**
1215-1300 MWF, East Bank, Ross, 4 cr

R5900 **Topics in Jewish Studies**
1115-1200 MWF, East Bank, Chiat, 4 cr

5970 **Directed Readings** (max 12 cr; prereq #, △, CLA approval)
1-12 cr

Spring Quarter

3100 **Judaism in the Time of Early Christianity (70-640 A.D.)**
1215-1300 MWF, East Bank, Zahavy, 4 cr

3315 **Contemporary Israeli Literature in Translation**
0915-1000 MWF, East Bank, Paradise, 4 cr

R3403 **Art and Architecture of Jewish People**
1015-1100 MWF, East Bank, Chiat, 4 cr

5970 **Directed Readings** (max 12 cr; prereq #, △, CLA approval)
1-12 cr

JOURNALISM AND MASS COMMUNICATION (Jour)
Liberal Arts

Winter Quarter

R1001 **Introduction to Mass Communication** (prereq △...completion of freshman composition rec) (A-N only)
1215-1300 TTh, East Bank, Brovald, 2 cr

R1003 **Producting Mass Media Messages** (prereq freshman composition or exemption, △) (A-N only)
★LECT 1315-1400 TTh, East Bank, Roberts, 4 cr
–1 LAB 1215-1300 W, East Bank,
–2 LAB 1315-1400 W, East Bank,
–3 LAB 1415-1500 W, East Bank,
–4 LAB 1515-1600 W, East Bank,
–5 LAB 1215-1300 F, East Bank,
–6 LAB 1315-1400 F, East Bank,
–7 LAB 1415-1500 F, East Bank,
–8 LAB 1515-1600 F, East Bank,

R1004 **Information for Mass Communication** (prereq freshman composition or exemption, △) (A-N only)
1315-1400 MWF, East Bank, Ward, K Hansen, 4 cr

R3007 **The Media in American History and Law: Case Studies** (prereq 1001, △) (A-N only)
1215-1300 MWF, East Bank, Gillmor, Dicken-Garcia, 4 cr

R3008 **Mass Communication Processes and Structure** (prereq 1001, △)
1115-1200 MWF, East Bank, Tichenor, 4 cr

R3101 **Reporting** (prereq prof jour maj status, type 25 wpm, △) (A-N only)
–1 0915-1200 M, 0915-1300 W, East Bank, 4 cr
–2 0915-1200 T, 0915-1300 Th, East Bank, Glasser, 4 cr
–3 1315-1600 T, 1315-1700 Th, East Bank, 4 cr

R3121 **Public Affairs Reporting** (prereq 3101, type 40 wpm, △) (A-N only)
1315-1500 MW, East Bank, Ismach, 4 cr

R3155 **Publications Editing** (prereq 3101, △) (A-N only)
1315-1600 TTh, East Bank, 4 cr (1 hr ar)

R3241 **Advertising Copywriting** (prereq prof jour maj status, 3201 or #, △) (A-N only)
★LECT 1115-1230 MW, East Bank, 4 cr
–1 LAB 1315-1400 M, East Bank,

R3301 **Photojournalism** (prereq professional jour maj status, △) (A-N only)
1315-1600 MW, East Bank, 4 cr

R3970 **Directed Studies** (prereq maj status for prof jour, mass comm students, #, △, college approval) (A-N only)
1-4 cr

R5141 **Opinion Writing in America** (prereq 3xxx level writing course, maj or grad status for prof jour students with #, △) (A-N only)
1015-1200 TTh, East Bank, Emery, 4 cr

R5174 **Magazine Editing and Production** (prereq 3173 or 5376 or 5221, #, △) (A-N only)
0915-1100 MW, East Bank, Wilson, Roberts, 4 cr

5251 **Psychology of Advertising** (§Psy 5751; prereq Psy 1001) (A-N only)
0915-1000 TThF, East Bank, Jones, 4 cr

R5261 **Advertising: Media Analysis** (prereq prof jour maj status, 3201 or #, △) (A-N only)
1415-1600 TTh, East Bank, Jones, 4 cr

R5272 **Advertising Copy-Graphics** (prereq 3231, 3241, #, △) (A-N only)
★LECT 0915-1000 TTh, East Bank, Wilson, 4 cr
–1 LAB 1015-1200 TTh, East Bank, Wilson

R5274 **Current Advertising Developments and Problems** (prereq 5263 or 5272 or #, △) (A-N only)
0915-1000 MWF, East Bank, J Busterna, 4 cr

R5302 **Advanced Photographic Communication** (prereq 3301, △) (A-N only)
0915-1200 TThF, East Bank, Schwartz, 4 cr

R5441 **Electronic Newsgathering** (prereq 3451 or 5376, △) (A-N only)
1315-1500 MWF, East Bank, Ettema, 4 cr

R5442 **Advanced Television News** (prereq 3451, △) (A-N only)
0915-1100 TTh, East Bank, Fang, 4 cr (lab ar)

5531 **Communication and Public Opinion II** (prereq 5501 or Soc 5355) (A-N only)
1015-1130 MW, East Bank, Lee, 4 cr

5611 **Development of American Broadcasting** (A-N only)
0915-1000 MWF, East Bank, Fang, 4 cr

5615 **History of Visual Communication in the Mass Media** (A-N only)
0915-1100 MW, East Bank, Schwartz, 4 cr

5725 **The Management of Media Organizations** (prereq 16 cr in social science depts)
1115-1200 MWF, East Bank, Wackman, 4 cr

5777 **Contemporary Problems in Freedom of Speech and Press** (prereq 16 cr in social science depts) (A-N only)
1015-1200 TTh, East Bank, Gillmor, 4 cr

5825 **World Communication Systems** (prereq 16 crs in social science depts) (A-N only)
1015-1100 MWF, East Bank, Lindsay, 4 cr

R5970 **Advanced Projects in Journalism** (max 8 cr; prereq maj status for prof jour, mass comm students, B avg, #, △, CLA approval) (A-N only)
1-4 cr

R5970H **Honors Course: Advanced Projects in Journalism** (max 8 cr; prereq maj status for prof jour, mass comm students, B avg, #, △, CLA approval) (A-N only)
1-4 cr

R8001 **Seminar: Mass Communication Research** (prereq introductory course in statistics or ¶, #, △) (A-N only)
1515-1700 MF, East Bank, Wackman, 4 cr

8102 **Mass Communication Research in Action** (A-N only)
1515-1700 TTh, East Bank, Ismach, Glasser, 4 cr

R8514 **Seminar: Mass Communication Theory** (prereq 5531, #, △) (A-N only)
1315-1600 M, East Bank, Lee, 4 cr

R8601 **Seminar: History of Mass Communication** (prereq 5601, #, △) (A-N only)
1215-1400 T, East Bank, Dicken-Garcia, 4 cr

R8602 **Seminar: History of Mass Communication** (prereq 5601, #, △) (A-N only)
1315-1500 Th, East Bank, Emery, 4 cr

R8970 **Advanced Projects in Mass Communication** (max 8 cr; prereq grad maj or min in mass comm, #, △) (A-N only)
1-4 cr

R8990 **Special Problems in Mass Communication** (prereq #, △) (A-N only)
4 cr

Spring Quarter

R1001 **Introduction to Mass Communication** (prereq △...completion of freshman composition rec) (A-N only)
1415-1500 MW, East Bank, 2 cr

R1002 **Visual Communication** (prereq △) (A-N only)
0915-1100 TTh, East Bank, 2 cr

R1003 **Producting Mass Media Messages** (prereq freshman composition or exemption, △) (A-N only)
★LECT 1115-1200 TTh, East Bank, Glasser, 4 cr
–1 LAB 0915-1000 M, East Bank,
–2 LAB 1015-1100 M, East Bank,
–3 LAB 1215-1300 M, East Bank,
–4 LAB 0915-1000 W, East Bank,
–5 LAB 1015-1100 W, East Bank,
–6 LAB 1315-1400 W, East Bank,
–7 LAB 0915-1000 F, East Bank,
–8 LAB 1015-1100 F, East Bank,

R1004 **Information for Mass Communication** (prereq freshman composition or exemption, △) (A-N only)
1115-1200 MWF, East Bank, K Hansen, Dicken-Garcia, 4 cr

R3008 **Mass Communication Processes and Structure** (prereq 1001, △)
0915-1000 MWF, East Bank, Wackman, 4 cr

R3101 **Reporting** (prereq prof jour maj status, type 25 wpm, △) (A-N only)
1315-1600 T, 1315-1700 Th, East Bank, 4 cr

R3121 **Public Affairs Reporting** (prereq 3101, type 40 wpm, △) (A-N only)
1215-1400 TTh, East Bank, 4 cr

R3155 **Publications Editing** (prereq 3101, △) (A-N only)
0915-1200 TTh, East Bank, 4 cr (1 hr ar)

R3173 **Magazine Writing and Editing** (prereq 3101, △) (A-N only)
1315-1400 MWF, East Bank, Roberts, 4 cr

R3193 **Community Newspaper** (prereq prof jour maj status, #, △) (A-N only)
1115-1200 MWF, East Bank, Brovald, 4 cr

3201 **Principles of Advertising** (prereq maj status for prof jour, mass comm stu; 1001, study plan filed for intended MC min) (A-N only)
1315-1400 MWF, East Bank, Wackman, 4 cr

R3241 **Advertising Copywriting** (prereq prof jour maj status, 3201 or #, △) (A-N only)
★LECT 1115-1230 MW, East Bank, 4 cr
–1 LAB 1315-1400 M, East Bank,

R3321 **Basic Media Graphics** (prereq 3101 or 3201 or 3301, professional jour maj status, △) (A-N only)
–1 LECT 1315-1400 TTh, East Bank, Wilson, 4 cr
★LECT 1315-1400 TTh, East Bank, Wilson
–1 LAB 1415-1600 TTh, East Bank, Wilson, 4 cr

R3451 **Television and Radio News** (prereq 3101 or maj status in spch with #, △) (A-N only)
1315-1500 MW, East Bank, Fang, 4 cr (lab ar)

3776 **Mass Communication Law** (A-N only)
0915-1000 MWF, East Bank, Gillmor, 4 cr

3796 **Mass Media and Politics** (§Pol 3796, jour student must have maj status; prereq 1001 or Pol 1001 or #) (A-N only)
1245-1400 TTh, East Bank, Flanigan, 4 cr

R3970 **Directed Studies** (prereq maj status for prof jour, mass comm students, #, △, college approval) (A-N only)
1-4 cr

R5131 **Interpretive Reporting** (prereq sr, 3121, △) (A-N only)
–1 0915-1100 TTh, East Bank, Roberts, 4 cr
–2 1415-1600 TTh, East Bank, Ward, 4 cr

R5143 **Interpretation of Science and Technology** (prereq prof jour maj status, 5133 or #, △) (A-N only)
1315-1400 MWF, East Bank, Tichenor, 4 cr

5251 **Psychology of Advertising** (§Psy 5751; prereq Psy 1001) (A-N only)
1215-1300 MWF, East Bank, Jones, 4 cr

R5263 **Advertising Campaign Planning and Media Strategy** (prereq prof jour maj status, 3241, 5261, Mktg 3000 or #, △) (A-N only)
1415-1500 MWF, East Bank, J Busterna, 4 cr

R5274 **Current Advertising Developments and Problems** (prereq 5263 or 5272 or #, △) (A-N only)
0915-1000 MWF, East Bank, J Busterna, 4 cr

R5303 **Projects in Photographic Communication** (prereq 5302, △) (A-N only)
0915-1200 TTh, East Bank, Schwartz, 4 cr

R5322 **Newspaper Design** (prereq 3321, △) (A-N only)
0915-1100 TTh, East Bank, Wilson, 4 cr

R5444 **Television and Radio Documentary** (prereq 5442, △) (A-N only)
1315-1500 TTh, East Bank, Ettema, 4 cr (lab ar)

5501 **Communication and Public Opinion I** (prereq 16 cr in social science depts) (A-N only)
1315-1400 MWF, East Bank, Carter, 4 cr

5601 **History of Journalism** (A-N only)
1015-1100 MWF, East Bank, Emery, 4 cr

5721 **Mass Media in a Dynamic Society** (prereq 16 crs in social science depts) (A-N only)
1215-1300 MWF, East Bank, Ward, 4 cr

R5731 **Current Communications Problems** (prereq 16 cr in social science dept, jour, mass comm sr, △) (A-N only)
1515-1730 Th, East Bank, Dicken-Garcia, 4 cr

R5731H **Honors Course: Current Communications Problems** (prereq prof jour, mass comm sr, 16 crs in social science depts, #, △) (A-N only)
1515-1730 Th, East Bank, Dicken-Garcia, 4 cr

5801 **International Communication** (prereq 16 crs in social science depts) (A-N only)
1015-1130 MW, East Bank, Lee, 4 cr

5826 **Mass Communication Systems of Western Europe** (prereq 16 cr in social science departments) (A-N only)
1015-1100 MWF, East Bank, Lindsay, 4 cr

R5970 **Advanced Projects in Journalism** (max 8 cr; prereq maj status for prof jour, mass comm students, B avg, #, △, CLA approval) (A-N only)
1-4 cr

R5970H **Honors Course: Advanced Projects in Journalism** (max 8 cr; prereq maj status for prof jour, mass comm students, B avg, #, △, CLA approval) (A-N only)
1-4 cr

8002 **Seminar: Mass Communication Research** (prereq 8001) (A-N only)
1015-1200 TTh, East Bank, Carter, 4 cr

8211 **Seminar: Advertising Research** (A-N only)
1415-1600 MF, East Bank, Jones, 4 cr

8442 **Seminar: Broadcast News** (prereq 5442 or #) (A-N only)
1315-1600 T, East Bank, Fang, 4 cr

8515 **Seminar: Communication Analysis** (prereq course in statistics, #) (A-N only)
1015-1200 MW, East Bank, Tichenor, 4 cr

R8603 **Seminar: History of Mass Communication** (prereq 5601, #, △) (A-N only)
1315-1500 Th, East Bank, Emery, 4 cr

R8722 **Communication Agencies as Social Institutions** (prereq 5721 or equiv or #, △) (A-N only)
Ettema, Ismach, 4 cr

R8776 **Government and Mass Communication: Administrative Law** (prereq 5777 or #, △) (A-N only)
1315-1500 W, East Bank, Gillmor, Glasser, 4 cr

8825 **Seminar: International Mass Communication** (prereq 8801, 5801 or 5825 or #) (A-N only)
1315-1500 T, East Bank, Lee, 4 cr

8828 **Mass Communication Problems of Developing Countries** (prereq 8825 or 8826 or #) (A-N only)
1330-1530 M, East Bank, Lindsay, 4 cr

R8970 **Advanced Projects in Mass Communication** (max 8 cr; prereq grad maj or min in mass comm, #, △) (A-N only)
1-4 cr

R8990 **Special Problems in Mass Communication** (prereq #, △) (A-N only)
4 cr

LANDSCAPE ARCHITECTURE (LA)
Architecture & Landscape Architecture
Institute of Technology

Winter Quarter

R1022 **History of Environmental Development** (§Arch 1022; prereq 1021)
1115-1300 TTh, East Bank, Winterowd, 4 cr (Mpls)

R1024 **Landscape Theory**
1015-1200 MWF, East Bank, Hard, 4 cr (Mpls)

R1026 **Basic Visualization II** (prereq 1025) (A-N only)
1000-1200 MWF, St. Paul, Pitz, 4 cr

R3002 **Environmental Design: Tools and Processes** (prereq 3001)
1315-1500 TTh, East Bank, Lavine, 4 cr (Mpls)

3075 **Landscape Techniques: Materials and Construction Design** (prereq 3072, 3092) (A-N only)
1000-1200 MWF, St. Paul, 4 cr

3082 **Basic Design** (prereq 3081) (A-N only)
1330-1730 MWF, St. Paul, Close, Cline, 6 cr

3092 **Intermiate Design** (prereq 3091) (A-N only)
1330-1730 MWF, St. Paul, Sand, 6 cr

3094 **Independent Study in Graphics** (prereq landscape architecture student, #) (A-N only)
1-4 cr

3095 **Independent Study in Planting Design** (prereq landscape architecture student, #) (A-N only)
1-4 cr

3096 **Independent Study in History or Theory** (prereq landscape architecture student, #) (A-N only)
1-4 cr

3097 **Independent Study in Computer Aided Design** (prereq landscape architecture, #) (A-N only)
1-4 cr

3098 **Independent Study in Design** (prereq landscape architecture student, #) (A-N only)
1-4 cr

3099 **Independent Study in Technology** (prereq landscape architecture student, #) (A-N only)
1-4 cr

3101 Communicating Landscape Quality (prereq 1025, 3082) (A-N only)
0800-1000 MWF, St. Paul, Pitz, 4 cr

3200 Landscape Architecture Practicum (prereq landscape architecture student, #) (S-N only)
1-6 cr

5100 Resource and Community Development Interdisciplinary Seminar II (§RCD 5100; prereq RCD sr or #) (A-N only)
1500-1645 TTh, St. Paul, 4 cr

5103 Urban Landscape Design I (prereq 3093) (A-N only)
1330-1730 MWF, St. Paul, Sykes, 6 cr

5105 Recreational Planning and Design I (prereq 5010) (A-N only)
1330-1730 MWF, St. Paul, Elnicky, 6 cr

5109 Special Problems: Thesis Proposal (A-N only)
Olin, 2 cr

5131 Directed Studies in Landscape Architecture History and Theory (prereq third yr landscape architecture student, △) (A-N only)
1-6 cr

5132 Directed Studies in Landscape Architecture Design (prereq third yr landscape architecture student, △) (A-N only)
1-6 cr

5133 Directed Studies in Landscape Architecture Technology (prereq third yr landscape architecture student, △) (A-N only)
1-6 cr

5134 Directed Studies in Emerging Areas for Landscape Architecture (prereq third yr landscape architecture student, △) (A-N only)
1-6 cr

5226 Professional Practice (prereq terminal yr of study) (A-N only)
1000-1200 MW, St. Paul, Sykes, 4 cr

5261 History of Landscape Architecture: The European, Oriental and American Tradition (prereq first yr LA student) (A-N only)
0800-0945 MF, St. Paul, Martin, 4 cr

Spring Quarter

R1023 History of Environmental Development: Planning (§Arch 1023; prereq 1022)
1115-1300 TTh, East Bank, Showalter, 4 cr (Mpls)

R3003 Environmental Design: Implementation and Evaluation (prereq 3002)
1315-1500 TTh, East Bank, Lavine, 4 cr (Mpls)

R3071 Landscape Technology: Ground Form Design (prereq 3083, CE 3100 or AgEn 1400) (A-N only)
1000-1200 MWF, St. Paul, Sykes, 4 cr

3073 Landscape Technology: Land Analysis Techniques (prereq 3072) (A-N only)
1000-1200 MWF, St. Paul, Nassauer, 4 cr

3083 Basic Design (prereq 3082) (A-N only)
1330-1730 MWF, St. Paul, Elnicky, Close, 6 cr

3093 Detail Site Design (prereq 3092 or #) (A-N only)
1330-1730 MWF, St. Paul, Sykes, 6 cr

3094 Independent Study in Graphics (prereq landscape architecture student, #) (A-N only)
1-4 cr

3095 Independent Study in Planting Design (prereq landscape architecture student, #) (A-N only)
1-4 cr

3096 Independent Study in History or Theory (prereq landscape architecture student, #) (A-N only)
1-4 cr

3097 Independent Study in Computer Aided Design (prereq landscape architecture, #) (A-N only)
1-4 cr

3098 Independent Study in Design (prereq landscape architecture student, #) (A-N only)
1-4 cr

3099 Independent Study in Technology (prereq landscape architecture student, #) (A-N only)
1-4 cr

3200 Landscape Architecture Practicum (prereq landscape architecture student, #) (S-N only)
1-6 cr

5110 Advanced Landscape Planning and Design (prereq terminal qtr of study) (A-N only)
1330-1730 MWF, St. Paul, Cline, Nassauer, 6 cr

5131 Directed Studies in Landscape Architecture History and Theory (prereq third yr landscape architecture student, △) (A-N only)
1-6 cr

5132 Directed Studies in Landscape Architecture Design (prereq third yr landscape architecture student, △) (A-N only)
1-6 cr

5133 Directed Studies in Landscape Architecture Technology (prereq third yr landscape architecture student, △) (A-N only)
1-6 cr

5134 Directed Studies in Emerging Areas for Landscape Architecture (prereq third yr landscape architecture student, △) (A-N only)
1-6 cr

5224 Contemporary Issues in Landscape Architecture (prereq terminal yr of study) (A-N only)
1000-1200 MF, St. Paul, Martin, 4 cr

5228 Seminar: Topics in Campus Planning (prereq 3093 or #) (A-N only)
0800-0945 MF, East Bank, Hewitt, 4 cr (Mpls)

5265 History of Landscape Architecture: Individual Influences (prereq third yr LA student) (A-N only)
0800-0945 MF, St. Paul, Elnicky, 4 cr

LATIN (Lat)
Classics
Liberal Arts

Winter Quarter

R1102 Beginning Latin (1101-1102†; prereq 1101)
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 0915-1000 MTWThF, East Bank, 5 cr
–3 1015-1100 MTWThF, East Bank, 5 cr
–4 1315-1400 MTWThF, East Bank, 5 cr

R1122H Honors Course: Beginning Latin (prereq 1111)
1315-1400 MTWThF, East Bank, Erickson, 5 cr

R3052 Accelerated Beginning Latin (3051-3052†; prereq 3051)
1315-1400 MTWThF, East Bank, Erickson, 5 cr

3105 Latin Poetry (prereq 1103 or 1104 or △)
0815-0900 MWF, East Bank, Sonkowsky, 5 cr

3456 Advanced Undergraduate Latin (prereq 3106 or 4 yrs high school Latin or △)
1115-1230 TTh, East Bank, Keuls, 5 cr

3960H Honors Tutorial (prereq △)
5 cr

3970 Directed Studies (prereq #, △, college approval)
1-5 cr

5733 Vulgar Latin (prereq 3 yrs Lain or #)
1315-1430 TTh, East Bank, Sheets, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
1-5 cr

5980 Directed Instruction (prereq #, △, CLA approval)
ar cr

5990 Directed Research (prereq #, △, CLA approval)
ar cr

R8120 Latin Text Course (prereq 3052 or △, non-maj)
–1 0815-0900 MWF, East Bank, Sonkowsky, 4 cr
–2 1115-1230 TTh, East Bank, Keuls, 4 cr

8265 Graduate Survey: Literature of the Augustan Age (prereq 5012)
1415-1500 MWF, East Bank, Miller, 4 cr

Spring Quarter

1103 Selections from Latin Literature (§3051-3052; prereq 1102 or equiv)
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 0915-1000 MTWThF, East Bank, 5 cr
–3 1015-1100 MTWThF, East Bank, 5 cr

3106 Latin Poetry (prereq 1122H or 3052 or 3105 or △)
0915-1000 MTWThF, East Bank, Belfiore, 5 cr

3457 Advanced Undergraduate Latin (prereq 3106 or 4 yrs high school Latin or △)
0815-0900 MWF, East Bank, Sonkowsky, 5 cr

3960H Honors Tutorial (prereq △)
5 cr

3970 Directed Studies (prereq #, △, college approval)
1-5 cr

5235 Medieval Latin (prereq #)
1515-1630 MW, East Bank, Sonkowsky, 4 cr

5340 Latin Literature: Epic, Pastoral Poetry (max 12 cr)
1415-1530 TTh, East Bank, Miller, 4 cr

5621 Latin Palaeography (prereq three cr Latin, 3-5 level or #)
1415-1500 MWF, East Bank, Aris, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
1-5 cr

5980 Directed Instruction (prereq #, △, CLA approval)
ar cr

5990 Directed Research (prereq #, △, CLA approval)
ar cr

8120 Latin Text Course (prereq 3052 or △, non-maj)
–1 0915-1000 MTWThF, East Bank, Belfiore, 4 cr
–2 0815-0900 MWF, East Bank, Sonkowsky, 4 cr

LATIN AMERICAN STUDIES (LAS)
Liberal Arts

Winter Quarter

R5101 Methods and Sources for Latin American Studies (prereq jr or sr or grad student, reading knowledge of Span or Port or #)
1415-1645 T, East Bank, Wiemers, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
ar cr

Spring Quarter

5120 Seminar: Topics
1415-1645 Th, East Bank, 4 cr

R5970 Directed Studies (prereq #, △, CLA approval)
ar cr

LIBRARY (Lib)
Liberal Arts

Winter Quarter

5204 Print Materials in Libraries for Youth
Olson, 3 cr

8223 General Bibliography (prereq 5221, 5401 or #)
Maack, 4 cr

8302 Reference/Information Services (8302-8303†; prereq 5101, 5221, 5401, 5601 or #)
Rohde, 4 cr

8402 Organization of Information II (prereq 5101, 5221, 5401, 5601 or #)
Simonton, 4 cr

8702 Statistical Analysis of Library Data (prereq 8701 or #)
D'Elia, 4 cr

8950 Special Topics in Library Science (prereq #)
Crickman, ar cr

8970 Independent Study in Library Science (prereq #)
ar cr

8990 Library Research (prereq #)
ar cr

Spring Quarter

5301 **Reading, Listening, and Viewing Guidance for Youth in Libraries**
Olson, 3 cr

8003 **Publishers and Publishing** (prereq 5221 or #)
Maack, 4 cr

8303 **Reference/Information Services** (8302-8303†; prereq 8302)
Rohde, ar cr

R8304 **Adult Services** (prereq 5101, 5221, 5401, 5601 or #)
Rohde, 5 cr

8411 **Library Mechanization and Systems Analysis** (prereq 5101, 5221, 5401, 5601 or #)
Simouton, 4 cr

8503 **Seminar: Library Personnel Problems** (prereq 5101 or #)
D'Elia, 3 cr

8950 **Special Topics in Library Science** (prereq #)
Crickman, 3 cr

8970 **Independent Study in Library Science** (prereq #)
ar cr

8990 **Library Research** (prereq #)
ar cr

LINGUISTICS (Ling)
Linguistics
Liberal Arts

Winter Quarter

R1001 **The Nature of Human Language**
1415-1500 MWF, East Bank, Gundel, 4 cr

3052H **Honors Course: Linguistics** (prereq 3051H)
4 cr

3970 **Directed Studies** (prereq linguistics maj, #, △, college approval)
1-5 cr

5002 **Linguistic Analysis** (§5201, 5302; prereq 3001 or 5001 or #)
1115-1200 MWF, East Bank, Gundel, 4 cr

5012 **Mathematical Linguistics** (prereq 5011)
1015-1100 MWF, East Bank, Hutchinson, 4 cr

5201 **Introduction to Syntax** (prereq 3001 or 5001 or #)
1115-1200 MWF, East Bank, Kac, 4 cr

5211 **Semantics** (prereq 5011, 5202 or #)
1515-1600 MWF, East Bank, Yule, 4 cr

5302 **Introduction to Phonology** (prereq 3301 or 5301 or #)
0945-1100 TTh, East Bank, Pinkerton, 4 cr

5304 **Advanced Phonology** (prereq 5201, 5303 or #)
1415-1500 MWF, East Bank, Thomas-Flinders, 4 cr

5603 **Language Change and Linguistic Reconstruction** (prereq 3601 or 5601, 5201, 5302 or #)
1115-1200 MWF, East Bank, Sanders, 4 cr

5606 **Indo-European Linguistics** (prereq 5605)
1415-1530 TTh, East Bank, Miranda, 4 cr

5702 **Second-Language Acquisition** (prereq 3001 or 5001, 5002 or 5201, 5302, 5701 or #)
1245-1400 TTh, East Bank, Tarone, 4 cr

5711 **Field Methods in Linguistics** (prereq 5202, 5303 or #)
1115-1230 TTh, 1315-1400 F, East Bank, Stenson, 4 cr

5721 **English as a Second Language: Methods** (prereq 3001 or 5001 or #)
1415-1530 TTh, East Bank, Pinkerton, 4 cr

5723 **English as a Second Language: Materials** (prereq 5721, 5722, #)
1545-1700 TTh, East Bank, Tarone, 3 cr

5732 **A Contrastive Approach to Modern English** (prereq 5731)
1630-1745 MW, East Bank, Downing, 4 cr

5741 **Linguistic Description of Modern English** (prereq 3001 or 5001 or #)
1415-1500 MWF, East Bank, Yule, 4 cr

5805 **Psycholinguistics** (prereq 5002 or 5201, 5302 or #)
1545-1700 TTh, East Bank, Sheldon, 4 cr

5970 **Directed Studies** (prereq linguistics or ESL maj, #, △, CLA approval)
1-5 cr

8200 **Topics in Syntax and Semantics** (prereq 5206 or #)
0815-0945 TTh, East Bank, Downing, 4 cr

8841 **Philosophy of Linguistics** (prereq 5011, 5202, 5303, Phil 5601 or #)
0915-1000 MWF, East Bank, Kac, 4 cr

8900 **Independent Study** (prereq maj, #)
1-5 cr

Spring Quarter

R1001 **The Nature of Human Language**
1115-1200 MWF, East Bank, Thomas-Flinders, 4 cr

R1005 **Language and Society**
1015-1100 MWF, East Bank, Kac, 4 cr

R3001 **Introduction to Linguistics** (§3005, 5001)
★LECT 1115-1200 MTW, East Bank, Gundel
–1 REC 1115-1200 Th, East Bank, 5 cr
–2 REC 1115-1200 F, East Bank, 5 cr

3051H **Honors Course: Linguistics** (prereq candidacy for honors in linguistics or #)
4 cr

3601 **Introduction to Historical Linguistics** (§5601; prereq 3001 or #)
1415-1500 MWF, East Bank, Miranda, 4 cr

3970 **Directed Studies** (prereq linguistics maj, #, △, college approval)
1-5 cr

5006 **Experimental Phonetics** (prereq 3301 or 5301 or #)
0945-1100 TTh, East Bank, Pinkerton, 4 cr

5013 **Mathematical Linguistics** (prereq 5012)
1015-1100 MWF, East Bank, Hutchinson, 4 cr

R5101 **Language Types, Linguistic Universals** (prereq 3001 or 5001 or #)
1115-1200 TTh, East Bank, Sanders, 4 cr

5202 **Introduction to Syntax** (prereq 5201)
1615-1700 MWF, East Bank, Sanders, 4 cr

5212 **Linguistic Pragmatics** (prereq 5002, 5201 or #)
1415-1500 MWF, East Bank, Gundel, 4 cr

5303 **Introduction to Phonology** (prereq 5302)
1515-1600 MWF, East Bank, Thomas-Flinders, 4 cr

5601 **Introduction to Historical Linguistics** (§3601; prereq 3001 or 5001 or #)
1415-1500 MWF, East Bank, Miranda, 4 cr

R5712 **Field Methods in Linguistics** (prereq 5711)
1115-1230 TTh, 1315-1400 F, East Bank, Stenson, 4 cr

R5722 **English as a Second Language: Practicum** (prereq maj or min in ESL, 5721, #) (S-N only)
1415-1530 TTh, East Bank, Tarone, 3 cr

5742 **Linguistic Description of Modern English** (prereq 5741)
1415-1500 MWF, East Bank, Yule, 4 cr

5821 **Sociolinguistics** (prereq 3001 or 5001 or #)
1545-1730 TTh, East Bank, Pinkerton, 4 cr

5970 **Directed Studies** (prereq linguistics or ESL maj, #, △, CLA approval)
1-5 cr

8200 **Topics in Syntax and Semantics** (prereq 5206 or #)
0815-0900 MWF, East Bank, Kac, 4 cr

8500 **Seminar: Topics in Linguistics** (prereq #)
1615-1730 M, Eliasson, 4 cr

8510 **Linguistics Structures** (prereq 5202, 5303 or #)
1415-1530 TTh, East Bank, Jacobson, 4 cr

8600 **Topics in Historical Linguistics** (prereq 5603 or #)
0915-1000 MWF, East Bank, Miranda, 4 cr

8731 **Research Methods in Language Acquisition** (prereq 5702 or 5805 or CDis 5305 or CPsy 5345 or #)
1115-1230 TTh, East Bank, Tarone, 4 cr

8900 **Independent Study** (prereq maj, #)
1-5 cr

MANAGEMENT (Mgmt)
Management

Winter Quarter

R3002 **Psychology in Management** (§8006) (A-N only)
1315-1500 MW, West Bank, Albert, 4 cr

R3004 **Business Policy: Strategy Formulation and Implementation** (prereq sr, completion of business core or ¶final core course) (A-N only)
–1 0815-1000 MWF, West Bank, 5 cr
–2 1015-1200 MWF, West Bank, Grambsch, 5 cr
–3 1415-1600 MWF, West Bank, 5 cr

R3008 **Entrepreneurship and the Smaller Enterprise** (prereq completion of the business core courses or #)
–1 1015-1200 MW, West Bank, Wickesberg, 4 cr
–2 1015-1200 TTh, West Bank, Wickesberg, 4 cr

R8006 **Psychology in Management** (§3002)
1730-2015 M, West Bank, Albert, 4 cr

R8008 **Entrepreneurship and the Smaller Enterprise** (prereq completion of the business core courses or #)
–1 1015-1200 MW, West Bank, Wickesberg, 4 cr
–2 1015-1200 TTh, West Bank, Wickesberg, 4 cr

R8009 **Planning and Control for Line Management**
1730-2015 T, West Bank, Schroeder, 4 cr

R8022 **Career Management**
1730-2015 T, West Bank, Angle, 4 cr

R8101 **Seminar in StraTEGIC Management** (prereq PhD student, or # and Mgmt Grad School approval)
1415-1700 W, West Bank, 4 cr

R8201 **Foundations of Business-Government-Society** (prereq Ph.D. student or # and management grad school approval)
1015-1200 TTh, West Bank, Maitland, 4 cr

R8301 **Seminar in Organization Behavior** (prereq PhD student, or # and Mgmt Grad School approval)
1315-1600 Th, West Bank, Angle, 4 cr

R8303 **Organizational Research Seminar** (prereq PhD student, or # and Mgmt Grad School approval)
1315-1600 T, West Bank, Manz, 4 cr

8990 **Readings in Theory and Administration** (prereq 2nd yr grad student, requisite introductory courses, consent of adviser, #)
ar cr

8995 **Research in Management Theory and Administration** (prereq 2nd yr grad student, requisite introductory courses, consent of adviser, #)
ar cr

Spring Quarter

R3001 **Fundamentals of Management** (§8001) (A-N only)
–1 0815-0915 MWF, West Bank, Roberts, 4 cr
–2 1415-1515 MWF, West Bank, 4 cr

R3002 **Psychology in Management** (§8006) (A-N only)
0915-1100 TTh, West Bank, Buckeye, 4 cr

R3004 **Business Policy: Strategy Formulation and Implementation** (prereq sr, completion of business core or ¶final core course) (A-N only)
–1 0815-1000 MWF, West Bank, 5 cr
–2 0915-1100 MWF, West Bank, 5 cr
–3 1015-1200 MWF, West Bank, 5 cr
–4 1315-1500 MWF, West Bank, 5 cr

R3008 **Entrepreneurship and the Smaller Enterprise** (prereq completion of the business core courses or #)
1015-1200 TTh, West Bank, Wickesberg, 4 cr

R5101 **Advanced Topics** (prereq sr or grad, #, SMgt approval)
1415-1700 TTh, West Bank, Whitney, Wickesberg, ar cr (Application required, available in Mgmt/Econ 830)

R5175 **Business Forecasting** (prereq 3001 or 8001 or MBA 8010, QA 3055 or #) (A-N only)
1415-1600 MW, West Bank, Schroeder, 4 cr

R8008 **Entrepreneurship and the Smaller Enterprise** (prereq completion of the business core courses or #)
1015-1200 TTh, West Bank, Wickesberg, 4 cr

R8012 **Organizational Behavior and Management Analysis**
1730-2015 T, West Bank, Nichols, 4 cr

R8021 **Organization Design and Development**
1730-2015 M, West Bank, J P Miller, 4 cr

8303 **Organizational Research Seminar** (prereq PhD student, or # and Mgmt Grad School approval)
–1 1315-1600 T, West Bank, Albert, 4 cr
–2 1315-1600 Th, West Bank, Roberts, 4 cr

R8802 **Seminar: Management** (prereq 3001 or 8001 or MBA 8010 or #)
–1 1515-1730 MW, West Bank, Keating, Wickesberg, 4 cr
–2 1315-1600 Th, West Bank, Nichols, 4 cr

8990 **Readings in Theory and Administration** (prereq 2nd yr grad student, requisite introductory courses, consent of adviser, #)
ar cr

8995 **Research in Management Theory and Administration** (prereq 2nd yr grad student, requisite introductory courses, consent of adviser, #)
ar cr

MANAGEMENT INFORMATION SYSTEMS (MIS)
Management
Winter Quarter

R3098 **Elementary COBOL** (prereq 3040 or ¶ or 3100 or ¶ or 3300 or ¶) (S–N only)
0915-1000 W, West Bank, Naumann, 1 cr

R3099 **Elementary FORTRAN** (prereq 3040 or ¶ or 3100 or ¶ or 3300 or ¶) (S–N only)
–1 1015-1100 W, West Bank, Naumann, 1 cr
–2 1115-1200 W, West Bank, 1 cr

R3300 **Introduction to Computers and Management Information Systems** (§3100, 5100, 5300) (A–N only)
★LECT 1245-1400 MW, West Bank, Dickson
–1 LAB 1415-1500 W, West Bank, 4 cr
–2 LAB 1515-1600 W, West Bank, 4 cr
–3 LAB 1615-1700 W, West Bank, 4 cr
–4 LAB 0815-0900 Th, West Bank, 4 cr
–5 LAB 0915-1000 Th, West Bank, 4 cr
–6 LAB 1015-1100 Th, West Bank, 4 cr
★LECT 1515-1630 MW, West Bank, DeSanctis
–7 LAB 1115-1200 Th, West Bank, 4 cr
–8 LAB 1215-1300 Th, West Bank, 4 cr
–9 LAB 1315-1400 Th, West Bank, 4 cr
–10 LAB 1415-1500 Th, West Bank, 4 cr
–11 LAB 1515-1600 Th, West Bank, 4 cr
–12 LAB 1615-1700 Th, West Bank, 4 cr
–13 LAB 0815-0900 F, West Bank, 4 cr
–14 LAB 0915-1000 F, West Bank, 4 cr
–15 LAB 1015-1100 F, West Bank, 4 cr
–16 LAB 1115-1200 F, West Bank, 4 cr
–17 LAB 1215-1300 F, West Bank, 4 cr
–18 LAB 1415-1500 F, West Bank, 4 cr

R5098 **Intermediate COBOL** (prereq 3098) (S–N only)
1215-1300 W, West Bank, Naumann, 2 cr

R5102 **Introduction to Information Systems Analysis** (prereq 3098, 3100, 3101) (A–N only)
1015-1200 TTh, West Bank, 4 cr

R8301 **Program Design and Programming** (prereq MBA 8005, MIS 8300 or ¶) (A–N only)
1730-2050 M, West Bank, Lehman, 4 cr

R8302 **Systems Analysis and Design** (prereq 8301) (A–N only)
–1 0915-1100 MW, West Bank, Naumann, 4 cr
–2 1215-1400 MW, West Bank, Naumann, 4 cr

R8303 **Data Structures, File Processing, and Retrieval Languages** (§5103; prereq 8301) (A–N only)
1515-1700 MW, West Bank, Everest, 4 cr

8990 **Readings in Management Information Systems** (prereq consent of adviser, #, 2nd yr grad, requisite introductory courses) (A–N only)
ar cr

8995 **Graduate Research** (prereq consent of adviser, #, 2nd yr grad, requisite introductory courses) (A–N only)
ar cr

Spring Quarter

R3098 **Elementary COBOL** (prereq 3040 or ¶ or 3100 or ¶ or 3300 or ¶) (S–N only)
0915-1000 W, West Bank, Naumann, 1 cr

R3099 **Elementary FORTRAN** (prereq 3040 or ¶ or 3100 or ¶ or 3300 or ¶) (S–N only)
1015-1100 W, West Bank, Naumann, 1 cr

R5098 **Intermediate COBOL** (prereq 3098) (S–N only)
1115-1200 W, West Bank, Naumann, 2 cr

R5103 **Data Structures and File Processing** (prereq 5098, 3100, 3101) (A–N only)
1315-1500 MW, West Bank, Everest, 4 cr

R8302 **Systems Analysis and Design** (prereq 8301) (A–N only)
1730-2050 T, West Bank, Naumann, 4 cr

R8304 **MIS Administration** (§8269; prereq 8302) (A–N only)
0915-1200 W, West Bank, Wetherbe, 4 cr

R8312 **Advanced Systems Development and Administration** (prereq 8302) (A–N only)
1730-2050 T, West Bank, March, 4 cr

R8313 **Advanced Database Design, Management Systems, and Administration** (§8249; prereq 8303) (A–N only)
1530-1715 MW, West Bank, Everest, 4 cr

R8850 **Topics: Management Information Systems** (prereq #) (A–N only)
1515-1800 Th, West Bank, ar cr

8990 **Readings in Management Information Systems** (prereq consent of adviser, #, 2nd yr grad, requisite introductory courses) (A–N only)
ar cr

8995 **Graduate Research** (prereq consent of adviser, #, 2nd yr grad, requisite introductory courses) (A–N only)
ar cr

MARATHI (Mar)
South And Southwest Asian Studies
Liberal Arts
Winter Quarter

5970 **Directed Readings** (prereq #, △, CLA approval)
Junghare, ar cr

Spring Quarter

5970 **Directed Readings** (prereq #, △, CLA approval)
Junghare, ar cr

MARKETING (Mktg)
Management
Winter Quarter

R3000 **Principles of Marketing** (§8000; prereq Econ 1002) (A–N only)
–1 0900-1030 MWF, West Bank, Berkowitz, 4 cr
–2 0815-0945 TTh, West Bank, 4 cr

R3010 **Buyer Behavior and Marketing Analysis** (prereq 3000, QA 1050)
–1 0915-1045 MW, West Bank, 4 cr
–2 1115-1245 MW, West Bank, 4 cr
–3 1415-1545 TTh, West Bank, Gardner, 4 cr

R3020 **Marketing Operations Management** (prereq 3010)
–1 0815-0945 MW, West Bank, 4 cr
–2 1315-1445 MW, West Bank, 4 cr

R8078 **Marketing Communications** (prereq either MBA core courses or MBA 8045)
1515-1645 MW, West Bank, Ross, 4 cr

R8086 **Product Policy** (prereq either MBA core courses, or MBA 8045 and △)
–1 1315-1445 MWF, West Bank, Cardozo, 4 cr

R8090 **Marketing Topics** (prereq either MBA core courses, or MBA 8045 and △)
1315-1530 M, West Bank, Berkowitz, 4 cr

R8095 **Marketing Research** (prereq either MBA core courses, or MBA 8045 and △)
1730-2000 M, West Bank, 4 cr (students must contact instructor by Dec 16)

R8096 **Marketing Research: Advanced Analysis and Field Work** (prereq 8095)
1730-2000 Th, West Bank, Gardner, 4 cr

R8098 **Introduction to Consumer Behavior** (prereq either MBA core courses or MBA 8045)
1115-1245 MW, West Bank, Ross, 4 cr

8990 **Readings in Marketing** (prereq either MBA core courses, or MBA 8045 and △, consent of advisor, #)
ar cr

8995 **Graduate Research in Marketing** (prereq either MBA core courses, or MBA 8045 and △, consent of advisor, #)
ar cr

Spring Quarter

R3000 **Principles of Marketing** (§8000; prereq Econ 1002) (A–N only)
–1 1200-1330 MW, West Bank, Ruekert, 4 cr
–2 1415-1545 MW, West Bank, Ruekert, 4 cr
–3 0930-1100 TTh, West Bank, Walker, 4 cr

R3010 **Buyer Behavior and Marketing Analysis** (prereq 3000, QA 1050)
–1 0815-0945 TTh, West Bank, 4 cr
–2 1415-1545 TTh, West Bank, Gardner, 4 cr

R3020 **Marketing Operations Management** (prereq 3010)
0915-1045 TTh, West Bank, 4 cr

R3030 **Sales and Distribution Management** (prereq 3020)
1515-1645 MW, West Bank, 4 cr

R3050 **Marketing Communications** (prereq 3020)
–1 1015-1145 TTh, West Bank, 4 cr
–2 1415-1545 TTh, West Bank, 4 cr

R3065 **Retail Management** (§8065; prereq 3010)
–1 1015-1145 MW, West Bank, Werner, 4 cr
–2 1315-1445 MW, West Bank, Werner, 4 cr

R8076 **Sales Management** (prereq either MBA core courses, or MBA 8045 and △)
1315-1445 TTh, West Bank, Walker, 4 cr

R8086 **Product Policy** (prereq either MBA core courses, or MBA 8045 and △)
1315-1445 MW, West Bank, Hansen, 4 cr

R8095 **Marketing Research** (prereq either MBA core courses, or MBA 8045 and △)
1730-2000 T, West Bank, Gardner, 4 cr (students must contact instructor by March 16)

R8098 **Introduction to Consumer Behavior** (prereq either MBA core courses or MBA 8045)
1515-1645 MW, West Bank, 4 cr

R8800 **Seminar: Marketing Theory** (prereq either MBA core courses, or MBA 8045 and △)
0915-1130 T, West Bank, Ruekert, 4 cr

8990 **Readings in Marketing** (prereq either MBA core courses, or MBA 8045 and △, consent of advisor, #)
ar cr

8995 **Graduate Research in Marketing** (prereq either MBA core courses, or MBA 8045 and △, consent of advisor, #)
ar cr

MASTER OF BUSINESS ADMINISTRATION (MBA)
Management
Winter Quarter

R8015 **Human Resources Management** (prereq MBA students only)
–1 1015-1200 MW, West Bank, 4 cr
–2 1015-1200 TTh, West Bank, 4 cr

R8025 **Decision Sciences and Information Systems** (prereq MBA students only)
–1 0915-1100 TTh, West Bank, March, 4 cr
–2 1315-1500 MW, West Bank, Fox, 4 cr

R8035 **Managerial Economics and Accounting** (prereq MBA students only)
–1 1315-1500 MW, West Bank, Kanodia, 4 cr
–2 1515-1700 MW, West Bank, Kanodia, 4 cr

R8065 **Field Project** (prereq MBA students only)
1315-1500 F, West Bank, Naumann, 5 cr

Spring Quarter

R8040 **Financial Management** (prereq MBA students only)
–1 0915-1100 TTh, West Bank, Nantell, 4 cr
–2 1415-1600 TTh, West Bank, Nantell, 4 cr

R8045 **Marketing Management** (prereq MBA students only)
–1 0915-1045 MWF, West Bank, Berkowitz, 4 cr
–2 1315-1445 MWF, West Bank, Berkowitz, 4 cr

R8050 **Operations Management** (prereq MBA students only)
–1 0815-1000 MW, West Bank, Treleven, 4 cr
–2 1315-1500 MW, West Bank, Hill, 4 cr

R8060 **Strategy and Policy** (prereq MBA students only)
–1 0815-1000 MWF, West Bank, Mauriel, 4 cr
–2 1015-1200 MWF, West Bank, Mauriel, 4 cr
–3 1015-1200 MWF, West Bank, Grambsch, 4 cr
–4 1415-1600 MWF, West Bank, Grambsch, 4 cr

R8065 **Field Project** (prereq MBA students only)
1315-1500 F, West Bank, 5 cr

MATERIALS SCIENCE (MatS)
Chemical Engineering & Materials Science
Institute of Technology

Winter Quarter

3091 **Industrial Employment**
1–2 cr

R3400 **Mechanical Properties of Materials** (prereq 2nd yr IT student)
★LECT 1315-1400 MWF, East Bank, Wellinghoff
–1 LAB 1415-1700 M, East Bank, 4 cr
–2 LAB 1415-1700 W, East Bank, 4 cr
–3 LAB 1415-1700 F, East Bank, 4 cr

5012 **Introduction to Dislocations and Physical Metallurgy** (prereq upper division IT standing, 5011 or #)
1115-1200 MTWThF, East Bank, Gerberich, 4 cr

R5101 **Thermodynamics of Solids** (prereq Chem 5534 or #)
1015-1100 MTWF, East Bank, Oriani, 4 cr

R5112 **Ceramics** (prereq 5102 or #)
1115-1300 TTh, East Bank, Koepke, 4 cr

R5411 **Materials Design** (prereq sr mat sci maj)
0915-1000 MTWF, East Bank, Sivertsen, 4 cr

5460 **Oxidation of Metals** (prereq upper division IT, 5102)
0815-0900 MWThF, East Bank, Shores, 4 cr

5500 **Senior Design Project** (prereq sr mat sci maj)
2 cr

R5620 **Polymer Processing** (prereq engineering transport phenomena or #)
1215-1300 MWF, East Bank, Macosko, 3-4 cr

R8213 **Structure, Cohesion of Metals, Semiconductors** (prereq 8212)
1315-1400 MWF, East Bank, Weaver, 3 cr

R8311 **Theories of Mechanical Behavior of Solids** (prereq 8310)
1515-1600 MWF, East Bank, Gerberich, 3 cr

8471 **Seminar: Materials Science and Engineering** (prereq 8470)
1315-1500 TTh, East Bank, ar cr

8481 **Selected Topics in Materials Science and Engineering** (prereq 8480)
ar cr

8520 **Electron Diffraction, Electron Microscopy**
1515-1700 TTh, East Bank, Wellinghoff, 3 cr

Spring Quarter

3091 **Industrial Employment**
1–2 cr

R3400 **Mechanical Properties of Materials** (prereq 2nd yr IT student)
★LECT 1415-1500 MWF, East Bank, Gerberich
–1 LAB 1515-1800 M, East Bank, 4 cr
–2 LAB 1515-1800 W, East Bank, 4 cr
–3 LAB 1515-1800 F, East Bank, 4 cr

R5013 **Introduction to Electrical and Magnetic Properties of Materials** (prereq upper division IT standing, 5011 or #)
0815-0900 MWThF, East Bank, Weaver, 4 cr

R5102 **Diffusion and Solid State Kinetics** (prereq 5101 or #)
1015-1100 MTWF, East Bank, Shores, 4 cr

5202 **X-Ray Structural Analysis** (prereq upper divison)
1415-1800 TTh, East Bank, Sivertsen, 4 cr

R5304 **Failure Analysis** (prereq 3400, 5013, 5411 or #)
1515-1715 MWF, East Bank, Sivertsen, 4 cr

5483 **Special Problems in Physical Metallurgy and Materials Science** (prereq sr)
ar cr

5500 **Senior Design Project** (prereq sr mat sci maj)
2 cr

R5630 **Polymer Physical Properties** (prereq 5011 or 3400, MatS/Chem 5610 or #)
0915-1000 MWF, East Bank, Wellinghoff, 4 cr (lab ar)

R8214 **Structure, Cohesion of Metals, Semiconductors** (prereq 8212)
1015-1200 TTh, East Bank, Franciosi, 3 cr

R8320 **High Temperature Properties of Materials**
1315-1400 MWF, East Bank, Shores, 3 cr

8472 **Seminar: Materials Science and Engineering** (prereq 8471)
1315-1600 TTh, East Bank, 1 cr

8482 **Selected Topics in Materials Science and Engineering** (prereq 8481)
ar cr

R8521 **Topics in Electron Microscopy**
0815-1000 TTh, East Bank, Wellinghoff, 3 cr

MATHEMATICS (Math)
Institute of Technology

Winter Quarter

R0009 **Intermediate Algebra** (prereq 1 yr high school algebra or grade of C or better in 0006)
–1 0815-0900 MTWThF, East Bank, 0 cr
–2 0915-1000 MTWThF, East Bank, 0 cr
–3 1315-1400 MTWThF, East Bank, 0 cr

R1005 **Foundations of Arithmetic** (prereq plane geometry, 2 yrs hs algebra, or plane geometry, grade of C or better in 0009)
–1 0915-1000 MWF, East Bank, 4 cr
–2 1215-1300 MWF, East Bank, 4 cr

R1006 **Foundations of Arithmetic** (prereq 1005)
–1 1015-1100 MWF, East Bank, 4 cr
–2 1315-1400 MWF, East Bank, 4 cr

R1008 **Trigonometry** (§1111, 1201; prereq plane geometry, 2 yrs hs algebra or grade of C or better in 0009)
–1 0815-1000 MWF, East Bank, 4 cr
–2 0915-1000 MWF, West Bank, 4 cr
–3 1315-1400 MWF, East Bank, 4 cr

R1111 **College Algebra and Analytic Geometry** (§1201; prereq plane geometry, 2 yrs hs alg or plane geometry, grade of C or better in 0009)
–1 0900-0945 MTWThF, St. Paul, 5 cr (StP)
–2 0815-0900 MTWThF, East Bank, 5 cr
–3 0915-1000 MTWThF, East Bank, 5 cr
–4 1215-1300 MTWThF, West Bank, 5 cr
–5 1215-1300 MTWThF, East Bank, 5 cr
–6 1315-1400 MTWThF, East Bank, 5 cr
–7 1415-1500 MTWThF, East Bank, 5 cr

R1131 **Finite Mathematics** (prereq 3 1/2 yrs high school math or grade of C or better in 1111)
★LECT 1115-1200 MWF, East Bank,
–1 REC 1115-1200 TTh, West Bank, 5 cr
–2 REC 1115-1200 TTh, West Bank, 5 cr
–3 REC 1115-1200 TTh, West Bank, 5 cr
–4 REC 1115-1200 TTh, West Bank, 5 cr
–5 REC 1115-1200 TTh, West Bank, 5 cr
–6 REC 1115-1200 TTh, West Bank, 5 cr
★LECT 1215-1300 MWF, East Bank,
–7 REC 1215-1300 TTh, East Bank, 5 cr
–8 REC 1215-1300 TTh, East Bank, 5 cr
–9 REC 1215-1300 TTh, East Bank, 5 cr
–10 REC 1215-1300 TTh, East Bank, 5 cr
–11 REC 1215-1300 TTh, East Bank, 5 cr
★LECT 1315-1400 MWF, East Bank,
–12 REC 1315-1400 TTh, East Bank, 5 cr
–13 REC 1315-1400 TTh, East Bank, 5 cr
–14 REC 1315-1400 TTh, East Bank, 5 cr
–15 REC 1315-1400 TTh, East Bank, 5 cr
–16 REC 1315-1400 TTh, East Bank, 5 cr
–17 REC 1315-1400 TTh, East Bank, 5 cr

R1142 **Short Calculus** (§1211, 1511H, 1611; prereq 3 1/2 yrs hs math or grade of C or better in 1111 or 1201)
★LECT 0800-0845 MWF, St. Paul, (StP)
–1 REC 0800-0845 TTh, St. Paul, 5 cr (StP)
★LECT 0915-1000 MWF, East Bank,
–2 REC 0915-1000 TTh, East Bank, 5 cr
–3 REC 0915-1000 TTh, East Bank, 5 cr
–4 REC 0915-1000 TTh, East Bank, 5 cr
–5 REC 0915-1000 TTh, East Bank, 5 cr
★LECT 1115-1200 MWF, East Bank,
–6 REC 1115-1200 TTh, East Bank, 5 cr
–7 REC 1115-1200 TTh, East Bank, 5 cr
–8 REC 1115-1200 TTh, East Bank, 5 cr
–9 REC 1115-1200 TTh, East Bank, 5 cr
★LECT 1315-1400 MWF, West Bank,
–10 REC 1315-1400 TTh, East Bank, 5 cr
–11 REC 1315-1400 TTh, East Bank, 5 cr
–12 REC 1315-1400 TTh, East Bank, 5 cr

R1201 **Pre-Calculus** (§1008, 1111; prereq 4 yrs high school math including trigonometry)
–1 0915-1000 MTWThF, East Bank, 5 cr
–2 1115-1200 MTWThF, East Bank, 5 cr

R1211 **Calculus I** (§1142, 1511H; prereq 4 yrs hs math incl trig or grade of C or better in 1201 or 1008, 1111)
★LECT 0815-0900 MWF, East Bank,
–1 REC 0815-0900 TTh, East Bank, 5 cr
–2 REC 0815-0900 TTh, East Bank, 5 cr
–3 REC 0815-0900 TTh, East Bank, 5 cr
–4 REC 0815-0900 TTh, East Bank, 5 cr
★LECT 0915-1000 MWF, East Bank,
–5 REC 0915-1000 TTh, East Bank, 5 cr
–6 REC 0915-1000 TTh, East Bank, 5 cr
–7 REC 0915-1000 TTh, East Bank, 5 cr
–8 REC 0915-1000 TTh, East Bank, 5 cr
–9 REC 0915-1000 TTh, East Bank, 5 cr
★LECT 0915-1000 MWF, East Bank,
–10 REC 0915-1000 TTh, East Bank, 5 cr
–11 REC 0915-1000 TTh, East Bank, 5 cr
–12 REC 0915-1000 TTh, East Bank, 5 cr
–13 REC 0915-1000 TTh, East Bank, 5 cr
★LECT 1015-1100 MWF, East Bank,
–14 REC 1015-1100 TTh, East Bank, 5 cr
–15 REC 1015-1100 TTh, East Bank, 5 cr
–16 REC 1015-1100 TTh, East Bank, 5 cr
–17 REC 1015-1100 TTh, 5 cr
–18 REC 1015-1100 TTh, East Bank, 5 cr
★LECT 1115-1200 MWF, East Bank,
–19 REC 1115-1200 TTh, East Bank, 5 cr
–20 REC 1115-1200 TTh, East Bank, 5 cr
–21 REC 1115-1200 TTh, East Bank, 5 cr
–22 REC 1115-1200 TTh, East Bank, 5 cr
–23 REC 1115-1200 TTh, East Bank, 5 cr
★LECT 1215-1300 MWF, West Bank,
–24 REC 1215-1300 TTh, East Bank, 5 cr
–25 REC 1215-1300 TTh, East Bank, 5 cr
–26 REC 1215-1300 TTh, East Bank, 5 cr
–27 REC 1215-1300 TTh, East Bank, 5 cr
–28 REC 1215-1300 TTh, East Bank, 5 cr
★LECT 1315-1400 MWF, East Bank,
–29 REC 1315-1400 TTh, East Bank, 5 cr
–30 REC 1315-1400 TTh, East Bank, 5 cr
–31 REC 1315-1400 TTh, East Bank, 5 cr
–32 REC 1315-1400 TTh, East Bank, 5 cr
★LECT 1415-1500 MWF, East Bank,
–33 REC 1415-1500 TTh, East Bank, 5 cr
–34 REC 1415-1500 TTh, East Bank, 5 cr
–35 REC 1415-1500 TTh, East Bank, 5 cr
–36 REC 1415-1500 TTh, East Bank, 5 cr
★LECT 0815-0900 MWF, East Bank,
–37 REC 0815-0900 TTh, East Bank, 5 cr
–38 REC 0815-0900 TTh, East Bank, 5 cr
–39 REC 0815-0900 TTh, East Bank, 5 cr

R1221 **Calculus II** (§1321, 1521H, 1621; prereq grade of C or better in 1211)
★LECT 0815-0900 MWF, East Bank,
–1 REC 0815-0900 TTh, East Bank, 5 cr
–2 REC 0815-0900 TTh, East Bank, 5 cr
–3 REC 0815-0900 TTh, East Bank, 5 cr
–4 REC 0815-0900 TTh, East Bank, 5 cr
★LECT 0915-1000 MWF, East Bank,
–5 REC 0915-1000 TTh, East Bank, 5 cr
–6 REC 0915-1000 TTh, East Bank, 5 cr
–7 REC 0915-1000 TTh, East Bank, 5 cr
–8 REC 0915-1000 TTh, East Bank, 5 cr
–9 REC 0915-1000 TTh, East Bank, 5 cr
★LECT 1015-1100 MWF, East Bank,
–10 REC 1015-1100 TTh, East Bank, 5 cr
–11 REC 1015-1100 TTh, East Bank, 5 cr
–12 REC 1015-1100 TTh, East Bank, 5 cr
–13 REC 1015-1100 TTh, East Bank, 5 cr
★LECT 1115-1200 MWF, East Bank,
–14 REC 1115-1200 TTh, East Bank, 5 cr
–15 REC 1115-1200 TTh, East Bank, 5 cr
–16 REC 1115-1200 TTh, East Bank, 5 cr
–17 REC 1115-1200 TTh, East Bank, 5 cr
★LECT 1115-1200 MWF, East Bank,
–18 REC 1115-1200 TTh, East Bank, 5 cr
–19 REC 1115-1200 TTh, East Bank, 5 cr
–20 REC 1115-1200 TTh, East Bank, 5 cr
–21 REC 1115-1200 TTh, East Bank, 5 cr
–22 REC 1115-1200 TTh, East Bank, 5 cr
★LECT 1215-1300 MWF, East Bank,
–23 REC 1215-1300 TTh, East Bank, 5 cr
–24 REC 1215-1300 TTh, East Bank, 5 cr
–25 REC 1215-1300 TTh, East Bank, 5 cr
–26 REC 1215-1300 TTh, East Bank, 5 cr
★LECT 1215-1300 MWF, East Bank,
–27 REC 1215-1300 TTh, East Bank, 5 cr
–28 REC 1215-1300 TTh, East Bank, 5 cr
–29 REC 1215-1300 TTh, East Bank, 5 cr
–30 REC 1215-1300 TTh, East Bank, 5 cr

★LECT 1315-1400 MWF, East Bank,
–31 REC 1315-1400 TTh, East Bank, 5 cr
–32 REC 1315-1400 TTh, East Bank, 5 cr
–33 REC 1315-1400 TTh, East Bank, 5 cr
–34 REC 1315-1400 TTh, East Bank, 5 cr
★LECT 1315-1400 MWF, East Bank,
–35 REC 1315-1400 TTh, East Bank, 5 cr
–36 REC 1315-1400 TTh, East Bank, 5 cr
–37 REC 1315-1400 TTh, East Bank, 5 cr
–38 REC 1315-1400 TTh, East Bank, 5 cr
★LECT 1415-1500 MWF, East Bank,
–39 REC 1415-1500 TTh, East Bank, 5 cr
–40 REC 1415-1500 TTh, East Bank, 5 cr
–41 REC 1415-1500 TTh, East Bank, 5 cr
–42 REC 1415-1500 TTh, East Bank, 5 cr

R1231 **Calculus III** (§1331, 1531H, 1621; prereq grade of C or better in 1221)
★LECT 1115-1200 MWF, East Bank,
–1 REC 1115-1200 TTh, West Bank, 5 cr
–2 REC 1115-1200 TTh, West Bank, 5 cr
–3 REC 1115-1200 TTh, West Bank, 5 cr
–4 REC 1115-1200 TTh, West Bank, 5 cr
–5 REC 1115-1200 TTh, West Bank, 5 cr
★LECT 1215-1300 MWF, East Bank,
–6 REC 1215-1300 TTh, West Bank, 5 cr
–7 REC 1215-1300 TTh, West Bank, 5 cr
–8 REC 1215-1300 TTh, West Bank, 5 cr
–9 REC 1215-1300 TTh, East Bank, 5 cr
–10 REC 1215-1300 TTh, East Bank, 5 cr
★LECT 1415-1500 MWF, East Bank,
–11 REC 1415-1500 TTh, East Bank, 5 cr
–12 REC 1415-1500 TTh, East Bank, 5 cr
–13 REC 1415-1500 TTh, East Bank, 5 cr
–14 REC 1415-1500 TTh, East Bank, 5 cr
–15 REC 1415-1500 TTh, East Bank, 5 cr

R1321 **Calculus II Computer Option** (§1221, 1521H, 1621; prereq C grade or better in 1211 or 1511H or 1611, knowl of prog lang)
★LECT 0915-1000 MWF, East Bank,
–1 REC 0915-1000 TTh, East Bank, 5 cr
–2 REC 0915-1000 TTh, East Bank, 5 cr
–3 REC 1015-1100 TTh, East Bank, 5 cr
–4 REC 1015-1100 TTh, East Bank, 5 cr
★LECT 1015-1100 MWF, East Bank,
–5 REC 0915-1000 TTh, East Bank, 5 cr
–6 REC 0915-1000 TTh, East Bank, 5 cr
–7 REC 1015-1100 TTh, East Bank, 5 cr
–8 REC 1015-1100 TTh, East Bank, 5 cr

R1521H **Honors Calculus II** (§1221, 1321, 1621; prereq 1511H)
★LECT 0915-1000 MWF, East Bank,
–80 REC 0915-1000 TTh, East Bank, 5 cr

R1621 **Accelerated Calculus II** (§1231, 1331, 1531H; prereq 1611)
★LECT 1215-1300 MWF, East Bank,
–1 REC 1215-1300 TTh, East Bank, 5 cr
–2 REC 1215-1300 TTh, East Bank, 5 cr

R3066 **Elementary Differential Equations** (§3213, 3221, 3521; prereq grade of C or better in 1231 or equiv)
1115-1200 MWF, East Bank, 4 cr

R3142 **Introduction to Linear Algebra** (§3213, 3221, 3511; prereq grade of C or better in 1231 or equiv)
–1 0815-0900 MWF, East Bank, 4 cr
–2 0915-1000 MWF, East Bank, 4 cr
–3 1015-1100 MWF, East Bank, 4 cr
–4 1015-1100 MWF, East Bank, 4 cr
–5 1315-1400 MWF, East Bank, 4 cr

R3211 **Multivariable Calculus** (§3521; prereq grade of C or better in 1231 or equiv)
★LECT 0915-1000 MWF, East Bank,
–1 REC 0915-1000 TTh, East Bank, 5 cr
–2 REC 0915-1000 TTh, East Bank, 5 cr
–3 REC 0915-1000 TTh, East Bank, 5 cr
–4 REC 0915-1000 TTh, East Bank, 5 cr
–5 REC 0915-1000 TTh, East Bank, 5 cr
★LECT 1015-1100 MWF, East Bank,
–6 REC 1015-1100 TTh, East Bank, 5 cr
–7 REC 1015-1100 TTh, East Bank, 5 cr
–8 REC 1015-1100 TTh, East Bank, 5 cr
–9 REC 1015-1100 TTh, East Bank, 5 cr
★LECT 1315-1400 MWF, West Bank,
–10 REC 1315-1400 TTh, East Bank, 5 cr
–11 REC 1315-1400 TTh, East Bank, 5 cr
–12 REC 1315-1400 TTh, East Bank, 5 cr
–13 REC 1315-1400 TTh, East Bank, 5 cr
–14 REC 1315-1400 TTh, East Bank, 5 cr
★LECT 1415-1500 MWF, East Bank,
–15 REC 1415-1500 TTh, East Bank, 5 cr
–16 REC 1415-1500 TTh, East Bank, 5 cr
–17 REC 1415-1500 TTh, East Bank, 5 cr
–18 REC 1415-1500 TTh, East Bank, 5 cr

R3212 **Vector and Linear Analysis I** (§3231; prereq grade of C or better in 3211 or equiv)
★LECT 0915-1000 MWF, East Bank,
–1 REC 0915-1000 TTh, East Bank, 5 cr
–2 REC 0915-1000 TTh, East Bank, 5 cr
–3 REC 0915-1000 TTh, East Bank, 5 cr
–4 REC 0915-1000 TTh, East Bank, 5 cr
★LECT 1315-1400 MWF, East Bank,
–5 REC 1315-1400 TTh, East Bank, 5 cr
–6 REC 1315-1400 TTh, East Bank, 5 cr
–7 REC 1315-1400 TTh, East Bank, 5 cr
–8 REC 1315-1400 TTh, East Bank, 5 cr

R3213 **Vector and Linear Analysis II** (§3066, 3142, 3221, 3511; prereq grade of C or better in 3212 or equiv)
★LECT 1015-1100 MWF, East Bank,
–1 REC 1015-1100 TTh, East Bank, 4 cr
–2 REC 1015-1100 TTh, East Bank, 4 cr
–3 REC 1015-1100 TTh, East Bank, 4 cr
–4 REC 1015-1100 TTh, East Bank, 4 cr
★LECT 1315-1400 MWF, East Bank,
–5 REC 1315-1400 TTh, East Bank, 4 cr
–6 REC 1315-1400 TTh, East Bank, 4 cr
–7 REC 1315-1400 TTh, East Bank, 4 cr
–8 REC 1315-1400 TTh, East Bank, 4 cr

R3221 **Introduction to Linear Algebra and Linear Differential Equations** (§3066, 3142, 3212, 3511; prereq grade of C or better in 1231 or equiv)
★LECT 1015-1100 MWF, East Bank,
–1 REC 1015-1100 TTh, East Bank, 5 cr
–2 REC 1015-1100 TTh, East Bank, 5 cr
–3 REC 1015-1100 TTh, East Bank, 5 cr
–4 REC 1015-1100 TTh, East Bank, 5 cr
–5 REC 1015-1100 TTh, East Bank, 5 cr
★LECT 1115-1200 MWF, East Bank,
–6 REC 1115-1200 TTh, East Bank, 5 cr
–7 REC 1115-1200 TTh, East Bank, 5 cr
–8 REC 1115-1200 TTh, East Bank, 5 cr
–9 REC 1115-1200 TTh, East Bank, 5 cr
–10 REC 1115-1200 TTh, East Bank, 5 cr
★LECT 1415-1500 MWF, East Bank,
–11 REC 1415-1500 TTh, East Bank, 5 cr
–12 REC 1415-1500 TTh, East Bank, 5 cr
–13 REC 1415-1500 TTh, East Bank, 5 cr
–14 REC 1415-1500 TTh, East Bank, 5 cr
–15 REC 1415-1500 TTh, East Bank, 5 cr

R3231 **Vector Analysis** (§3212, 3531; prereq grade of C or better in 3211 or equiv)
–1 1015-1100 MWF, East Bank, 4 cr
–2 1215-1300 MWF, East Bank, 4 cr

R3521 **Linear Analysis II** (§3066, 3211; prereq grade of C or better in 3511)
★LECT 1315-1400 MWF, East Bank,
–1 REC 1315-1400 TTh, East Bank, 5 cr
–2 REC 1315-1400 TTh, East Bank, 5 cr

R3531 **Linear Analysis III** (prereq grade of C or better in 3521)
★LECT 1215-1300 MWF, East Bank,
–1 REC 1215-1300 TTh, East Bank, 5 cr

R5057 **Actuarial Science Principles - Life Contingencies I** (prereq 1231, 5056 or 1131, 1221, 5056) (A–N only)
0815-0930 TTh, West Bank, 4 cr

R5082 **Fundamentals of Algebra** (prereq 3511 or 3142 or 3221 or equiv) (A–N only)
1610-1725 MW, East Bank, 4 cr

R5151 **Elementary Set Theory** (prereq 3211 or #)
0915-1000 MWF, East Bank, 4 cr

R5163 **Mathematical Logic** (prereq 5162)
1415-1500 MWF, East Bank, 4 cr

R5200 **Topics in Algebra** (prereq #)
1015-1100 MWF, East Bank, 4 cr

R5232 **Computer Oriented Linear Algebra** (§5242-5243, 5262, 5282, 5264, 5284; prereq 3142 or 3221 or #)
1415-1500 MWF, East Bank, 4 cr

R5242 **Linear Algebra with Applications** (§5232-5233, 5262, 5282, 5264, 5284; prereq 3142 or 3221)
–1 1015-1100 MWF, East Bank, 4 cr
–2 1015-1100 MWF, East Bank, 4 cr

R5243 **Linear Algebra with Applications** (§5232-5233, 5262, 5282, 5264, 5284; prereq 5242)
–1 1215-1300 MWF, East Bank, 4 cr
–2 1315-1400 MWF, East Bank, 4 cr

R5283 **Fundamental Structures of Algebra** (prereq 5282)
1115-1200 MWF, East Bank, 4 cr

R5341 **Introduction to Topology** (prereq one sophomore sequence or #...some previous abstract mathematics rec)
1015-1100 MWF, East Bank, 4 cr

R5342 **Introduction to Topology** (prereq 5341)
1415-1500 MWF, East Bank, 4 cr

R5376 **Differential Geometry** (prereq 5375, 1 qtr linear algebra)
0915-1000 MWF, East Bank, 4 cr

R5458 **Methods of Applied Mathematics** (prereq 5457)
–1 1015-1100 MWF, East Bank, 4 cr
–2 1015-1100 MWF, East Bank, 4 cr

R5474 **Analysis of Numerical Methods** (prereq 3211, 3142 or equiv) (A–N only)
0915-1000 MWF, East Bank, 4 cr

R5477 **Applied Numerical Analysis of Partial Differential Equations** (prereq 5567 or 5571 or equiv)
1015-1100 MWF, East Bank, 4 cr

R5512 **Differential Equations with Applications I** (prereq 3211 or 3521 or 3611, 3221 or 3066 or 3531 or 3621)
–1 1315-1400 MWF, East Bank, 4 cr
–2 1315-1400 MWF, East Bank, 4 cr

R5513 **Differential Equations with Applications II** (prereq 5512)
1415-1500 MWF, East Bank, 4 cr

R5522 **Introduction to Ordinary Differential Equations** (prereq 5521) (A–N only)
1315-1400 MWF, East Bank, 4 cr

R5567 **Fourier Series and Boundary Values Problems** (§5571; prereq 3211, 3066 or 3211, 3221 or equiv or #)
1415-1500 MWF, East Bank, 4 cr

R5568 **Elementary Theory of Complex Variables** (§5572; prereq 3231 or 5602 or equiv vector analysis course)
1315-1400 MWF, East Bank, 4 cr

R5572 **Elementary Partial Differential Equations** (prereq 5571)
0915-1000 MWF, East Bank, 4 cr

R5601 **Advanced Calculus** (prereq 3211 or #)
–1 1115-1200 MWF, East Bank, 4 cr
–2 1115-1200 MWF, East Bank, 4 cr

R5602 **Advanced Calculus** (prereq 5601)
1015-1100 MWF, East Bank, 4 cr

R5613 **Introduction to Analysis** (prereq 5612)
–1 1215-1300 MWF, East Bank, 4 cr
–2 1315-1400 MWF, East Bank, 4 cr

R5682 **Introduction to Probability** (prereq 5681)
1415-1500 MWF, East Bank, 4 cr

R5702 **Graph Theory and Optimization** (prereq 3211 or equiv, 3rd yr standing...soph level linear algebra is helpful)
1315-1400 MWF, East Bank, 4 cr

R8141 **Applied Logic: Set Theory** (prereq 8140)
0915-1000 MWF, East Bank, 3 cr

R8151 **Axiomatic Set Theory** (prereq 8150)
1415-1500 MWF, East Bank, 3 cr

R8201 **General Algebra** (prereq 8200)
1115-1200 MWF, East Bank, 3 cr

R8260 **Topics in Number Theory and Algebraic Geometry** (prereq 5572, 8201 or #)
1015-1100 MWF, East Bank, 1–3 cr

R8271 **Lie Groups, Algebras** (prereq 8270)
1415-1500 MWF, East Bank, 3 cr

R8291 **Topics in Algebra** (prereq 8290)
1315-1400 MWF, East Bank, 1–3 cr

R8307 **Algebraic Topology** (prereq 8306)
1015-1100 MWF, East Bank, 3 cr

R8366 **Riemannian Geometry** (prereq 8365)
1115-1200 MWF, East Bank, 3 cr

R8375 **Topics in Algebraic Geometry** (prereq 8374)
1215-1300 MWF, East Bank, 3 cr

R8407 **Advanced Methods of Applied Mathematics** (prereq 8406)
1415-1500 MWF, East Bank, 3 cr

R8446 **Numberical Analysis of Ordinary and Partial Differential Equations** (prereq 8445) (A–N only)
1215-1300 MWF, East Bank, 1–3 cr

R8501 **Theory of Ordinary Differential Equations** (prereq 8500)
1315-1400 MWF, East Bank, 3 cr

R8541 **Topics: Differential, Difference Equations** (prereq 8540)
0915-1000 MWF, East Bank, 1–3 cr

R8551 **Theory of Partial Differential Equations** (prereq 8550)
1015-1100 MWF, East Bank, 3 cr

R8601 **Real Analysis** (prereq 8600)
1215-1300 MWF, East Bank, 3 cr

R8641 **Topics in Real Analysis** (prereq 8640)
1115-1200 MWF, East Bank, 1–3 cr

R8651 **Theory of Probability** (prereq 8650)
1015-1100 MWF, East Bank, 3 cr

R8657 **Measure Theory and Probability** (prereq 8656)
1015-1100 MWF, East Bank, 3 cr

R8673 **Topics in Combinatorial Theory** (prereq #)
1415-1500 MWF, East Bank, 3 cr

R8691 **Topics in the Theory of Probability** (prereq 8690)
1415-1500 MWF, East Bank, 1-3 cr

R8701 **Complex Analysis** (prereq 8700)
1315-1400 MWF, East Bank, 3 cr

R8790 **Topics in the Theory of Analytic Functions** (prereq 8702 or #)
1115-1200 MWF, East Bank, 1-3 cr

R8801 **Functional Analysis** (prereq 8800)
0915-1000 MWF, East Bank, 3 cr

R8991 **Reading and Research** (prereq 8990)
ar cr

R8992 **Reading and Research** (prereq 8991)
ar cr

Spring Quarter

R0009 **Intermediate Algebra** (prereq 1 yr high school algebra or grade of C or better in 0006)
–1 0815-0900 MTWThF, East Bank, 0 cr
–2 0815-0900 MTWThF, East Bank, 0 cr

R1005 **Foundations of Arithmetic** (prereq plane geometry, 2 yrs hs algebra, or plane geometry, grade of C or better in 0009)
1015-1100 MWF, East Bank, 4 cr

R1006 **Foundations of Arithmetic** (prereq 1005)
–1 0915-1000 MWF, East Bank, 4 cr
–2 1215-1300 MWF, East Bank, 4 cr

R1008 **Trigonometry** (§1111, 1201; prereq plane geometry, 2 yrs hs algebra or grade of C or better in 0009)
–1 0915-1000 MWF, East Bank, 4 cr
–2 1315-1400 MWF, East Bank, 4 cr

R1111 **College Algebra and Analytic Geometry** (§1201; prereq plane geometry, 2 yrs hs alg or plane geometry, grade of C or better in 0009)
–1 0900-0945 MTWThF, St. Paul, 5 cr (StP)
–2 0815-0900 MTWThF, East Bank, 5 cr
–3 0915-1000 MTWThF, East Bank, 5 cr
–4 1115-1200 MTWThF, East Bank, 5 cr
–5 1315-1400 MTWThF, East Bank, 5 cr

R1131 **Finite Mathematics** (prereq 3 1/2 yrs high school math or grade of C or better in 1111)
★LECT 1115-1200 MWF, East Bank,
–1 REC 1115-1200 TTh, East Bank, 5 cr
–2 REC 1115-1200 TTh, East Bank, 5 cr
–3 REC 1115-1200 TTh, East Bank, 5 cr
–4 REC 1215-1300 TTh, East Bank, 5 cr
–5 REC 1215-1300 TTh, East Bank, 5 cr
–6 REC 1215-1300 TTh, East Bank, 5 cr
★LECT 1215-1300 MWF, East Bank,
–7 REC 1215-1300 TTh, East Bank, 5 cr
–8 REC 1215-1300 TTh, East Bank, 5 cr
–9 REC 1215-1300 TTh, East Bank, 5 cr
–10 REC 1315-1400 TTh, East Bank, 5 cr
–11 REC 1315-1400 TTh, East Bank, 5 cr
–12 REC 1315-1400 TTh, East Bank, 5 cr

R1142 **Short Calculus** (§1211, 1511H, 1611; prereq 3 1/2 yrs hs math or grade of C or better in 1111 or 1201)
★LECT 0800-0845 MWF, St. Paul, (StP)
–1 REC 0800-0845 TTh, St. Paul, 5 cr (StP)
★LECT 1215-1300 MWF, East Bank,
–2 REC 1215-1300 TTh, East Bank, 5 cr
–3 REC 1215-1300 TTh, East Bank, 5 cr
–4 REC 1215-1300 TTh, East Bank, 5 cr
–5 REC 1215-1300 TTh, East Bank, 5 cr
–6 REC 1315-1400 TTh, East Bank, 5 cr
–7 REC 1315-1400 TTh, East Bank, 5 cr

R1201 **Pre-Calculus** (§1008, 1111; prereq 4 yrs high school math including trigonometry)
1415-1500 MTWThF, East Bank, 5 cr

R1211 **Calculus I** (§1142, 1511H; prereq 4 yrs hs math incl trig or grade of C or better in 1201 or 1008, 1111)
★LECT 0915-1000 MWF, East Bank,
–1 REC 0915-1000 TTh, East Bank, 5 cr
–2 REC 0915-1000 TTh, East Bank, 5 cr
–3 REC 0915-1000 TTh, East Bank, 5 cr
–4 REC 0915-1000 TTh, East Bank, 5 cr
★LECT 1115-1200 MWF, East Bank,
–5 REC 1115-1200 TTh, East Bank, 5 cr
–6 REC 1115-1200 TTh, East Bank, 5 cr
–7 REC 1115-1200 TTh, East Bank, 5 cr
–8 REC 1115-1200 TTh, East Bank, 5 cr
★LECT 1215-1300 MWF, East Bank,
–9 REC 1215-1300 TTh, East Bank, 5 cr
–10 REC 1215-1300 TTh, East Bank, 5 cr
–11 REC 1215-1300 TTh, East Bank, 5 cr
–12 REC 1215-1300 TTh, East Bank, 5 cr
–13 REC 1215-1300 TTh, East Bank, 5 cr
★LECT 1315-1400 MWF, East Bank,
–14 REC 1315-1400 TTh, East Bank, 5 cr
–15 REC 1315-1400 TTh, East Bank, 5 cr
–16 REC 1315-1400 TTh, East Bank, 5 cr
–17 REC 1315-1400 TTh, East Bank, 5 cr

R1221 **Calculus II** (§1321, 1521H, 1621; prereq grade of C or better in 1211)
★LECT 0815-0900 MWF, East Bank,
–1 REC 0815-0900 TTh, East Bank, 5 cr
–2 REC 0815-0900 TTh, East Bank, 5 cr
–3 REC 0815-0900 TTh, East Bank, 5 cr
–4 REC 0815-0900 TTh, East Bank, 5 cr
–5 REC 0815-0900 TTh, East Bank, 5 cr
★LECT 0915-1000 MWF, East Bank,
–6 REC 0915-1000 TTh, East Bank, 5 cr
–7 REC 0915-1000 TTh, East Bank, 5 cr
–8 REC 0915-1000 TTh, East Bank, 5 cr
–9 REC 0915-1000 TTh, East Bank, 5 cr
–10 REC 0915-1000 TTh, East Bank, 5 cr
★LECT 1015-1100 MWF, East Bank,
–11 REC 1015-1100 TTh, East Bank, 5 cr
–12 REC 1015-1100 TTh, East Bank, 5 cr
–13 REC 1015-1100 TTh, East Bank, 5 cr
–14 REC 1015-1100 TTh, East Bank, 5 cr
–15 REC 1015-1100 TTh, East Bank, 5 cr
★LECT 1115-1200 MWF, East Bank,
–16 REC 1115-1200 TTh, East Bank, 5 cr
–17 REC 1115-1200 TTh, East Bank, 5 cr
–18 REC 1115-1200 TTh, East Bank, 5 cr
–19 REC 1115-1200 TTh, East Bank, 5 cr
★LECT 1215-1300 MWF, East Bank,
–20 REC 1215-1300 TTh, East Bank, 5 cr
–21 REC 1215-1300 TTh, East Bank, 5 cr
–22 REC 1215-1300 TTh, East Bank, 5 cr
–23 REC 1215-1300 TTh, East Bank, 5 cr
★LECT 1415-1500 MWF, East Bank,
–24 REC 1415-1500 TTh, East Bank, 5 cr
–25 REC 1415-1500 TTh, East Bank, 5 cr
–26 REC 1415-1500 TTh, East Bank, 5 cr
–27 REC 1415-1500 TTh, East Bank, 5 cr
★LECT 0815-0900 MWF, East Bank,
–28 REC 0815-0900 TTh, East Bank, 5 cr

R1231 **Calculus III** (§1331, 1531H, 1621; prereq grade of C or better in 1221)
★LECT 0815-0900 MWF, East Bank,
–1 REC 0815-0900 TTh, East Bank, 5 cr
–2 REC 0815-0900 TTh, East Bank, 5 cr
–3 REC 0815-0900 TTh, East Bank, 5 cr
–4 REC 0815-0900 TTh, East Bank, 5 cr
★LECT 0915-1000 MWF, East Bank,
–5 REC 0915-1000 TTh, East Bank, 5 cr
–6 REC 0915-1000 TTh, East Bank, 5 cr
–7 REC 0915-1000 TTh, East Bank, 5 cr
–8 REC 0915-1000 TTh, East Bank, 5 cr
★LECT 1015-1100 MWF, East Bank,
–9 REC 1015-1100 TTh, East Bank, 5 cr
–10 REC 1015-1100 TTh, East Bank, 5 cr
–11 REC 1015-1100 TTh, East Bank, 5 cr
–12 REC 1015-1100 TTh, East Bank, 5 cr
★LECT 1115-1200 MWF, East Bank,
–13 REC 1115-1200 TTh, East Bank, 5 cr
–14 REC 1115-1200 TTh, East Bank, 5 cr
–15 REC 1115-1200 TTh, East Bank, 5 cr
–16 REC 1115-1200 TTh, East Bank, 5 cr
★LECT 1115-1200 MWF, East Bank,
–17 REC 1115-1200 TTh, East Bank, 5 cr
–18 REC 1115-1200 TTh, East Bank, 5 cr
–19 REC 1115-1200 TTh, East Bank, 5 cr
–20 REC 1115-1200 TTh, East Bank, 5 cr
★LECT 1215-1300 MWF, East Bank,
–21 REC 1215-1300 TTh, East Bank, 5 cr
–22 REC 1215-1300 TTh, East Bank, 5 cr
–23 REC 1215-1300 TTh, East Bank, 5 cr
–24 REC 1215-1300 TTh, East Bank, 5 cr
★LECT 1315-1400 MWF, East Bank,
–25 REC 1315-1400 TTh, East Bank, 5 cr
–26 REC 1315-1400 TTh, East Bank, 5 cr
–27 REC 1315-1400 TTh, East Bank, 5 cr
–28 REC 1315-1400 TTh, East Bank, 5 cr
★LECT 1415-1500 MWF, East Bank,
–29 REC 1415-1500 TTh, East Bank, 5 cr
–30 REC 1415-1500 TTh, East Bank, 5 cr
–31 REC 1415-1500 TTh, East Bank, 5 cr
–32 REC 1415-1500 TTh, East Bank, 5 cr

R1331 **Calculus III Computer Option** (§1231, 1531H, 1621; prereq grade of C or better in 1321)
★LECT 0915-1000 MWF, East Bank,
–1 REC 0915-1000 TTh, East Bank, 5 cr
–2 REC 0915-1000 TTh, East Bank, 5 cr
–3 REC 1015-1100 TTh, East Bank, 5 cr
–4 REC 1015-1100 TTh, East Bank, 5 cr
★LECT 1015-1100 MWF, East Bank,
–5 REC 0915-1000 TTh, East Bank, 5 cr
–6 REC 0915-1000 TTh, East Bank, 5 cr
–7 REC 1015-1100 TTh, East Bank, 5 cr
–8 REC 1015-1100 TTh, East Bank, 5 cr

R1531H **Honors Calculus III** (§1231, 1331, 1621; prereq 1521H)
★LECT 0915-1000 MWF, East Bank,
–80 REC 0915-1000 TTh, East Bank, 5 cr

R3066 **Elementary Differential Equations** (§3213, 3221, 3521; prereq grade of C or better in 1231 or equiv)
1215-1300 MWF, East Bank, 4 cr

R3142 **Introduction to Linear Algebra** (§3213, 3221, 3511; prereq grade of C or better in 1231 or equiv)
–1 1015-1100 MWF, East Bank, 4 cr
–2 1015-1100 MWF, East Bank, 4 cr
–3 1115-1200 MWF, East Bank, 4 cr
–4 1115-1200 MWF, East Bank, 4 cr

R3211 **Multivariable Calculus** (§3521; prereq grade of C or better in 1231 or equiv)
★LECT 1115-1200 MWF, East Bank,
–1 REC 1115-1200 TTh, East Bank, 5 cr
–2 REC 1115-1200 TTh, East Bank, 5 cr
–3 REC 1115-1200 TTh, East Bank, 5 cr
–4 REC 1115-1200 TTh, East Bank, 5 cr
–5 REC 1115-1200 TTh, East Bank, 5 cr
–6 REC 1115-1200 TTh, East Bank, 5 cr
★LECT 1315-1400 MWF, East Bank,
–7 REC 1315-1400 TTh, East Bank, 5 cr
–8 REC 1315-1400 TTh, East Bank, 5 cr
–9 REC 1315-1400 TTh, East Bank, 5 cr
–10 REC 1315-1400 TTh, East Bank, 5 cr
–11 REC 1315-1400 TTh, East Bank, 5 cr
–12 REC 1315-1400 TTh, East Bank, 5 cr

R3212 **Vector and Linear Analysis I** (§3231; prereq grade of C or better in 3211 or equiv)
★LECT 1015-1100 MWF, East Bank,
–1 REC 1015-1100 TTh, East Bank, 5 cr
–2 REC 1015-1100 TTh, East Bank, 5 cr
–3 REC 1015-1100 TTh, East Bank, 5 cr
–4 REC 1015-1100 TTh, East Bank, 5 cr
★LECT 1215-1300 MWF, East Bank,
–5 REC 1215-1300 TTh, East Bank, 5 cr
–6 REC 1215-1300 TTh, East Bank, 5 cr
–7 REC 1215-1300 TTh, East Bank, 5 cr
–8 REC 1215-1300 TTh, East Bank, 5 cr

R3213 **Vector and Linear Analysis II** (§3066, 3142, 3221, 3511; prereq grade of C or better in 3212 or equiv)
★LECT 0915-1000 MWF, East Bank,
–1 REC 0915-1000 TTh, East Bank, 4 cr
–2 REC 0915-1000 TTh, East Bank, 4 cr
–3 REC 0915-1000 TTh, East Bank, 4 cr
–4 REC 0915-1000 TTh, East Bank, 4 cr
★LECT 1315-1400 MWF, East Bank,
–5 REC 1315-1400 TTh, East Bank, 4 cr
–6 REC 1315-1400 TTh, East Bank, 4 cr
–7 REC 1315-1400 TTh, East Bank, 4 cr
–8 REC 1315-1400 TTh, East Bank, 4 cr

R3221 **Introduction to Linear Algebra and Linear Differential Equations** (§3066, 3142, 3212, 3511; prereq grade of C or better in 1231 or equiv)
★LECT 0915-1000 MWF, East Bank,
–1 REC 0915-1000 TTh, East Bank, 5 cr
–2 REC 0915-1000 TTh, East Bank, 5 cr
–3 REC 0915-1000 TTh, East Bank, 5 cr
–4 REC 0915-1000 TTh, East Bank, 5 cr
★LECT 1215-1300 MWF, East Bank,
–5 REC 1215-1300 TTh, East Bank, 5 cr
–6 REC 1215-1300 TTh, East Bank, 5 cr
–7 REC 1215-1300 TTh, East Bank, 5 cr
–8 REC 1215-1300 TTh, East Bank, 5 cr

R3231 **Vector Analysis** (§3212, 3531; prereq grade of C or better in 3211 or equiv)
–1 0915-1000 MWF, East Bank, 4 cr
–2 1315-1400 MWF, East Bank, 4 cr

R3511 **Linear Analysis I** (§3142, 3213, 3221; prereq grade of B or better in 1231 or equiv)
★LECT 1215-1300 MWF, East Bank,
–1 REC 1215-1300 TTh, East Bank, 5 cr
–2 REC 1215-1300 TTh, East Bank, 5 cr
–3 REC 1215-1300 TTh, East Bank, 5 cr
–4 REC 1215-1300 TTh, East Bank, 5 cr

R3531 **Linear Analysis III** (prereq grade of C or better in 3521)
★LECT 1315-1400 MWF, East Bank,
–1 REC 1315-1400 TTh, East Bank, 5 cr
–2 REC 1315-1400 TTh, East Bank, 5 cr
–3 REC 1315-1400 TTh, East Bank, 5 cr
–4 REC 1315-1400 TTh, East Bank, 5 cr

R3675 **Introductory Mathematics** (prereq 1231)
1315-1400 MWF, East Bank, 4 cr

R5058 **Actuarial Science Principles-Life Contingencies II** (prereq 5057) (A-N only)
0815-0930 TTh, West Bank, 4 cr

R5083 **Fundamentals of Geometry** (prereq 3511 or 3211, 3221 or 3142 or equiv) (A-N only)
1610-1725 MW, East Bank, 4 cr

R5152 **Elementary Mathematical Logic** (§5162; prereq 3211 or #)
0915-1000 MWF, East Bank, 4 cr

R5164 **Mathematical Logic** (prereq 5163)
1415-1500 MWF, East Bank, 4 cr

R5200 **Topics in Algebra** (prereq #)
1015-1100 MWF, East Bank, 4 cr

R5209 **Theory of Numbers** (prereq 3211 or #)
0915-1000 MWF, East Bank, 4 cr

R5233 **Computer Oriented Linear Algebra** (prereq 5232)
1415-1500 MWF, East Bank, 4 cr

R5243 **Linear Algebra with Applications** (§5232-5233, 5262, 5282, 5264, 5284; prereq 5242)
1015-1100 MWF, East Bank, 4 cr

R5244 **Group Theory** (§5262, 5282; prereq 3142 or 3221 or #)
1215-1300 MWF, East Bank, 4 cr

R5284 **Fundamental Structures of Algebra** (prereq 5283)
1115-1200 MWF, East Bank, 4 cr

R5342 **Introduction to Topology** (prereq 5341)
1015-1100 MWF, East Bank, 4 cr

R5343 **Introduction to Algebraic Topology** (prereq 5342)
1415-1500 MWF, East Bank, 4 cr

R5377 **Differential Geometry** (prereq 5376)
0915-1000 MWF, East Bank, 4 cr

R5428 **Mathematical Models in Economics, the Social Management Sciences** (prereq 3211, 3221 or 3511, 3521, 3531)
1115-1200 MWF, East Bank, 4 cr

R5459 **Methods of Applied Mathematics** (prereq 5458)
1015-1100 MWF, East Bank, 4 cr

R5475 **Analysis of Numerical Methods** (prereq 3211, 3221 or 3211, 3142, 3066 or equiv) (A-N only)
0915-1000 MWF, East Bank, 4 cr

R5478 **Applied Numerical Analysis of Partial Differential Equations** (prereq 5477)
1015-1100 MWF, East Bank, 4 cr

R5513 **Differential Equations with Applications II** (prereq 5512)
1315-1400 MWF, East Bank, 4 cr

R5521 **Introduction to Ordinary Differential Equations** (prereq one sophomore sequence or #...some previous abstract math rec) (A-N only)
1115-1200 MWF, East Bank, 4 cr

R5523 **Introduction to Ordinary Differential Equations** (prereq 5522) (A-N only)
1315-1400 MWF, East Bank, 4 cr

R5567 **Fourier Series and Boundary Values Problems** (§5571; prereq 3211, 3066 or 3211, 3221 or equiv of #)
1215-1300 MWF, East Bank, 4 cr

R5568 **Elementary Theory of Complex Variables** (§5572; prereq 3231 or 5602 or equiv vector analysis course)
1415-1500 MWF, East Bank, 4 cr

R5569 **Operational Mathematics** (§5573; prereq 5568)
1315-1400 MWF, East Bank, 4 cr

R5573 **Elementary Partial Differential Equations** (prereq 5572)
0915-1000 MWF, East Bank, 4 cr

R5602 **Advanced Calculus** (prereq 5601)
1115-1200 MWF, East Bank, 4 cr

R5603 **Advanced Calculus** (prereq 5602)
–1 1015-1100 MWF, East Bank, 4 cr
–2 1115-1200 MWF, East Bank, 4 cr

R5614 **Introduction to Analysis** (prereq 5613)
–1 1215-1300 MWF, East Bank, 4 cr
–2 1315-1400 MWF, East Bank, 4 cr

R5679 **Probability** (§5681; prereq 3211 or #)
1315-1400 MWF, East Bank, 4 cr

R5683 **Introduction to Probability** (prereq 5682)
1415-1500 MWF, East Bank, 4 cr

R5701 **Enumerative Combinatorics** (prereq 3211 or equiv, 3rd yr standing...sophomore level linear algebra is helpful)
1215-1300 MWF, East Bank, 4 cr

R5703 **Constructive Combinatorics** (prereq 5701 or equiv, some knowl of a programming language)
1315-1400 MWF, East Bank, 4 cr

R8142 **Applied Logic: Model Theory** (prereq 8141)
0915-1000 MWF, East Bank, 3 cr

R8202 **General Algebra** (prereq 8201)
1115-1200 MWF, East Bank, 3 cr

R8261 **Topics in Number Theory and Algebraic Geometry** (prereq 8260)
1015-1100 MWF, East Bank, 1-3 cr

R8272 **Lie Groups, Algebras** (prereq 8271)
1415-1500 MWF, East Bank, 3 cr

R8292 **Topics in Algebra** (prereq 8291)
1315-1400 MWF, East Bank, 3 cr

R8308 **Algebraic Topology** (prereq 8307)
1015-1100 MWF, East Bank, 3 cr

R8367 **Riemannian Geometry** (prereq 8366)
1115-1200 MWF, East Bank, 3 cr

R8376 **Topics in Algebraic Geometry** (prereq 8375)
1215-1300 MWF, East Bank, 3 cr

R8408 **Advanced Methods of Applied Mathematics** (prereq 8407)
1415-1500 MWF, East Bank, 3 cr

R8447 **Numberical Analysis of Ordinary and Partial Differential Equations** (prereq 8446) (A-N only)
1215-1300 MWF, East Bank, 1-3 cr

R8502 **Theory of Ordinary Differential Equations** (prereq 8501)
1315-1400 MWF, East Bank, 3 cr

R8542 **Topics: Differential, Difference Equations** (prereq 8541)
0915-1000 MWF, East Bank, 3 cr

R8552 **Theory of Partial Differential Equations** (prereq 8551)
1015-1100 MWF, East Bank, 3 cr

R8602 **Real Analysis** (prereq 8601)
1215-1300 MWF, East Bank, 3 cr

R8642 **Topics in Real Analysis** (prereq 8641)
1115-1200 MWF, East Bank, 3 cr

R8652 **Theory of Probability** (prereq 8651)
1015-1100 MWF, East Bank, 3 cr

R8658 **Measure Theory and Probability** (prereq 8657)
1015-1100 MWF, East Bank, 3 cr

R8674 **Topics in Combinatorial Theory** (prereq #)
1415-1500 MWF, East Bank, 3 cr

R8692 **Topics in the Theory of Probability** (prereq 8691)
1415-1500 MWF, East Bank, 1-3 cr

R8702 **Complex Analysis** (prereq 8701)
1315-1400 MWF, East Bank, 3 cr

R8791 **Topics in the Theory of Analytic Functions** (prereq 8790)
1115-1200 MWF, East Bank, 3 cr

R8802 **Functional Analysis** (prereq 8801)
0915-1000 MWF, East Bank, 3 cr

8992 **Reading and Research** (prereq 8991)
ar cr

MATHEMATICS EDUCATION (MthE)
Curriculum And Instruction Education

Winter Quarter

5101 **Workshop: Elementary School Mathematics** (max 12 cr; prereq #, non math educ majs) (A-N only)
0900-1200 S, East Bank, Stochl, 3 cr

R5102 **Workshop: Mathematics Education** (max 12 cr) (A-N only)
–1 1500-1600 MW, House, 2 cr (Algebra)
–2 Post, 3 cr (off campus)

5311 **Teaching and Supervision of Mathematics in the Elementary School** (prereq Elem 3391 or #) (A-N only)
1615-1900 M, East Bank, Jackson, 3 cr

5312 **Teaching and Supervision of Mathematics in the Secondary School** (prereq mathematics teaching experience or #) (A-N only)
1615-1900 M, East Bank, Jackson, 3 cr

R5366 **Computer Assisted Mathematics Instruction** (prereq 5311 or 5312 or SeEd 3365 or #) (A-N only)
1615-1900 Th, East Bank, 3 cr

5680 **Practicum in Mathematics Education** (max 9 cr; prereq #) (A-N only)
3-9 cr

5980 **Directed Studies** (max 9 cr; prereq #) (A-N only)
3-9 cr

R8590 **Seminar: Mathematics Education** (max 8 cr; prereq #)
1615-1800 T, East Bank, House, 2 cr

8680 **Internship: Mathematics Education**
ar cr

8980 **Problems: Mathematics Education** (prereq 8500 or 8570)
ar cr

Spring Quarter

5102 **Workshop: Mathematics Education** (max 12 cr) (A-N only)
–1 1500-1600 MW, House, 2 cr (Geometry)
–2 Jackson, 3 cr (Osseo)

5355 **Mathematics for Slow Learning Children** (prereq 5311 or Elem 3391 or #) (A-N only)
1615-1900 Th, Jackson, 3 cr

5680 **Practicum in Mathematics Education** (max 9 cr; prereq #) (A-N only)
3-9 cr

5980 **Directed Studies** (max 9 cr; prereq #) (A-N only)
3-9 cr

8500 **Theory and Classical Research in Mathematics Education** (prereq 5311 or 5312 or #)
1615-1900 T, East Bank, Post, 3 cr

8680 **Internship: Mathematics Education**
ar cr

8980 **Problems: Mathematics Education** (prereq 8500 or 8570)
ar cr

MECHANICAL ENGINEERING (ME)
Mechanical Engineering Institute of Technology

Winter Quarter

R1001 **Introduction to Mechanical Engineering** (S-N only)
1315-1400 T, East Bank, 1 cr

R1025 **Engineering Graphics** (prereq ¶Math 1211 or equiv, IT stu)
–1 LECT 1015-1100 MTWThF, East Bank, 4 cr
–2 LECT 1315-1400 MTWThF, East Bank, 4 cr
★LAB open hrs, MechE 314

R3201 **Mechanical Engineering Systems Analysis** (§AEM 3401; prereq AEM 3036, mech engr or aerospace engr maj)
★LECT 1315-1400 MWF, East Bank,
–1 REC 1415-1600 M, East Bank, 4 cr
–2 REC 1215-1400 T, East Bank, 4 cr
–3 REC 1415-1600 W, East Bank, 4 cr

R3203 **Analysis of Mechanism Systems** (prereq AEM 3036 or equiv, upper division mech engr maj)
★LECT 1115-1200 MWF, East Bank,
–1 REC 1415-1600 M, East Bank, 4 cr
–2 REC 1115-1300 T, East Bank, 4 cr
–3 REC 1215-1400 Th, East Bank, 4 cr
–4 REC 1415-1600 Th, East Bank, 4 cr
–5 REC 1415-1600 F, East Bank, 4 cr

R3301 **Thermodynamics** (prereq Chem 1014 or Phys 1281, Math 3221 or equiv, IT stu)
–1 0915-1000 MTWThF, East Bank, 4 cr
–2 1015-1100 MTWThF, East Bank, 4 cr

R3303 **Applied Thermodynamics** (§3305; prereq 3301 or equiv, upper division mech engr or aerospace engr maj)
–1 0815-0900 MTWThF, East Bank, 4 cr
–2 1415-1500 MTWThF, East Bank, 4 cr

R3305 **Propulsion Thermodynamics** (§3303; prereq 3301, AEM 5200 or equiv, mech engr or aerospace engr maj)
1215-1300 MTWThF, East Bank, 4 cr

R3701 **Basic Measurements Laboratory I** (prereq 3301 or ¶, upper division mech engr maj)
1215-1300 T, East Bank, 2 cr (Open lab ar, MechE 370-388)

R3702 **Basic Measurements Laboratory II** (prereq 3701, upper division mech engr maj)
1215-1300 Th, East Bank, 2 cr (Open lab ar, MechE 370-388)

R3741 **Industrial Assignment** (prereq regis in intern program)
2 cr

R3742 **Industrial Assignment** (prereq 3741)
2 cr

R3743 **Industrial Assignment** (prereq 3742)
2 cr

R3900 **Introduction to Engineering Statistics** (prereq Math 1231 or equiv, IT stu)
1315-1400 MWThF, East Bank, 4 cr

R5190 **Advanced Engineering Problems** (prereq submission of approved departmental permission form)
2-4 cr

R5207 **Experimental Stress Analysis** (prereq AEM 3016, IT upper division or grad)
1015-1100 MWF, East Bank, 4 cr (lab ar)

R5220 **Computer Aided Design** (prereq 3203, 3205, FORTRAN programming, IT stu or grad)
–1 LECT 0915-1000 MWF, East Bank, 4 cr
★LAB 1115-1200 Th, East Bank,

R5221 **Computer Graphics in Design** (prereq 5220 or #, IT stu or grad)
–1 LECT 1015-1100 MWF, East Bank, 4 cr
★LAB 1015-1100 Th, East Bank,

R5225 **Finite Elements in Mechanical Design** (prereq 3205, 5342, programming, IT stu or grad) (A-N only)
1515-1800 M, East Bank, 4 cr

R5244 **Vibration Engineering** (prereq 3201 or equiv, IT stu or grad)
1015-1100 MWThF, 4 cr

R5254 **Design Morphology with Applications** (prereq completion of sequences 3201/3203/3205, 3303/5342 or #, upper div mech engr maj)
★LECT 1315-1400 TTh, East Bank,
–1 LAB 1415-1700 TTh, East Bank, 4 cr
–2 LAB 1415-1700 TTh, East Bank, 4 cr
–3 LAB 1415-1700 TTh, East Bank, 4 cr
–4 LAB 1415-1700 TTh, East Bank, 4 cr

R5255 **Engineering Design Project** (prereq 5254, upper division mech engr maj)
★LECT 1315-1400 TTh, East Bank, 4 cr
–1 LAB 1415-1700 TTh, East Bank,

R5260 **Engineering Materials and Processing** (prereq Phys 1291, Chem 1004, 1st yr calculus, upper division mech engr maj)
★LECT 1315-1400 MWF, East Bank,
–1 REC 1415-1700 M, East Bank, 4 cr
–2 REC 0815-1100 T, East Bank, 4 cr
–3 REC 1415-1700 T, East Bank, 4 cr
–4 REC 1415-1700 W, East Bank, 4 cr
–5 REC 1415-1700 Th, East Bank, 4 cr

R5264 **Material Consolidation Processes** (prereq 5260, IT stu or grad)
0915-1100 TTh, East Bank, 4 cr

R5271 **Computer Aided Manufacturing: Robotics** (prereq 5260, 5283 or equiv)
1215-1300 MWThF, East Bank, 4 cr

R5275 **Computer Controlled Experimentation** (prereq 5283 or equiv)
1315-1400 MF, 1315-1500 W, East Bank, 4 cr

R5284 **Control Systems** (prereq 5283 or equiv, IT stu or grad)
0915-1045 TTh, East Bank, 4 cr

R5285 **Control Systems Laboratory** (prereq 5283 or equiv, IT or grad IT maj)
1015-1130 TTh, East Bank, 2 cr

R5342 **Heat Transfer** (prereq 3301, CE 3400 or AEM 3200, IT upper division or grad)
–1 1015-1100 MTWThF, East Bank, 4 cr
–2 1515-1700 MW, East Bank, 4 cr

R5446 **An Introduction to Combustion** (prereq 5342 or equiv, IT stu or grad)
1115-1200 MWThF, East Bank, 4 cr

R5460 **Internal Combustion Engines** (prereq 3301, IT stu or grad)
1015-1100 MTWThF, East Bank, 4 cr

R5462 **Gas Turbines** (prereq 3301, IT stu or grad)
0915-1000 MTWThF, East Bank, 4 cr

R5603 **Thermal Environmental Engineering** (prereq 3303, 5342 or equiv, IT stu or grad)
1315-1400 MWThF, East Bank, 4 cr

R5605 **Refrigeration** (prereq 3303, IT stu or grad)
1215-1300 MWThF, 4 cr

R5607 **Industrial Ventilation and Contaminant Control** (prereq 3303, CE 3400, IT stu or grad)
1115-1200 MWThF, East Bank, 4 cr

R5614 **Principles of Particle Technology** (prereq 5613, IT stu or grad)
0815-1000 TTh, East Bank, 4 cr

R5703 **Advanced Mechanical Engineering Laboratory** (prereq 3702, sr)
2 cr 1415-1700 M or W or F, (Obtain experiment cards from MechE 121 prior to registering)

R5704 **Advanced Mechanical Engineering Laboratory** (prereq 5703)
2 cr 1415-1700 M or W or F, (Obtain experiment cards from MechE 121 prior to registering)

R5705 **Advanced Mechanical Engineering Laboratory** (prereq 5704)
2 cr 1415-1700 M or W or F, (Obtain experiment cards from MechE 121 prior to registering)

R5712 **Solar Energy Utilization** (prereq 5342 or #, IT stu or grad)
0815-0900 MWThF, East Bank, 4 cr

R5741 **Industrial Assignment and Design Project** (5741-5742†; prereq 3742)
4 cr

R5742 **Industrial Assignment and Design Project** (5741-5742†; prereq 5741)
4 cr

8331 **Convection** (prereq 8330)
0915-1000 MWF, East Bank, 3 cr

8361 **Introduction to Plasma Technology** (prereq 8360 or #)
0915-1000 MWF, East Bank, 3 cr

8444 **Thermodynamics and Chemical Kinetics of Combustion** (prereq 5446 or ¶)
3 cr

8453 **Advanced Gas Turbines, Jet Propulsion** (prereq 5462)
3 cr

8485 **Biomedical-Engineering Seminar** (§Surg 8785)
1515-1630 T, East Bank, 1-3 cr

8486 **Biomedical-Engineering Seminar** (§Surg 8785; prereq 8485)
1515-1630 T, East Bank, 1-3 cr

8487 **Biomedical-Engineering Seminar** (§Surg 8785; prereq 8486)
1515-1630 T, East Bank, 1-3 cr

8771 **Mechanical Engineering Research** (prereq 8770, △)
ar cr

8772 **Mechanical Engineering Research** (prereq 8771, △)
ar cr

8773 **Graduate Seminar** (S-N only)
1515-1700 W, East Bank, 1 cr

R8774 **Graduate Seminar** (prereq 8773) (S-N only)
–1 1515-1700 W, East Bank, 1 cr

8775 **Graduate Seminar** (prereq 8774) (S-N only)
1515-1700 W, East Bank, 1 cr

Spring Quarter

R1025 **Engineering Graphics** (prereq ¶Math 1211 or equiv, IT stu)
–1 LECT 1015-1100 MTWThF, East Bank, 4 cr
–2 LECT 1315-1400 MTWThF, East Bank, 4 cr
★LAB open hrs, MechE 314

R3201 **Mechanical Engineering Systems Analysis** (§AEM 3401; prereq AEM 3036, mech engr or aerospace engr maj)
★LECT 0815-0900 MWF, East Bank,
–1 LAB 1315-1500 M, East Bank, 4 cr
–2 LAB 1415-1600 W, East Bank, 4 cr

R3203 **Analysis of Mechanism Systems** (prereq AEM 3036 or equiv, upper division mech engr maj)
★LECT 1015-1100 MWF, East Bank,
–1 REC 1415-1600 M, East Bank, 4 cr
–2 REC 1015-1200 T, East Bank, 4 cr
–3 REC 1415-1600 W, East Bank, 4 cr
–4 REC 1415-1600 Th, East Bank, 4 cr

R3205 **Engineering Systems Design** (prereq AEM 3016, upper division mech engr maj)
★LECT 1315-1400 MWF, East Bank,
–1 REC 1415-1600 M, East Bank, 4 cr
–2 REC 0915-1100 T, East Bank, 4 cr
–3 REC 1415-1600 T, East Bank, 4 cr
–4 REC 1415-1600 W, East Bank, 4 cr
–5 REC 1415-1600 Th, East Bank, 4 cr

R3301 **Thermodynamics** (prereq Chem 1014 or Phys 1281, Math 3221 or equiv, IT stu)
–1 0815-0900 MTWThF, East Bank, 4 cr
–2 1015-1100 MTWThF, East Bank, 4 cr

R3303 **Applied Thermodynamics** (§3305; prereq 3301 or equiv, upper division mech engr or aerospace engr maj)
–1 0815-0900 MTWThF, East Bank, 4 cr
–2 0915-1000 MTWThF, East Bank, 4 cr

R3701 **Basic Measurements Laboratory I** (prereq 3301 or ¶, upper division mech engr maj)
1215-1300 T, East Bank, 2 cr (Open lab ar, MechE 370-388)

R3702 **Basic Measurements Laboratory II** (prereq 3701, upper division mech engr maj)
1215-1300 Th, East Bank, 2 cr (Open lab ar, MechE 370-388)

R3741 **Industrial Assignment** (prereq regis in intern program)
2 cr

R3742 **Industrial Assignment** (prereq 3741)
2 cr

R3743 **Industrial Assignment** (prereq 3742)
2 cr

R3900 **Introduction to Engineering Statistics** (prereq Math 1231 or equiv, IT stu)
1315-1400 MWThF, East Bank, 4 cr

R5190 **Advanced Engineering Problems** (prereq submission of approved departmental permission form)
2-4 cr

R5203 **Advanced Analysis and Synthesis of Mechanical Systems** (prereq 3203 or equiv, IT stu or grad...computer programming desirable)
0915-1000 MWF, East Bank, 3-4 cr

R5209 **Friction and Lubrication** (prereq CE 3400, AEM 3200 or equiv, IT stu or grad)
1215-1300 MWF, East Bank, 3-4 cr

R5221 **Computer Graphics in Design** (prereq 5220 or #, IT stu or grad)
1015-1100 MWThF, East Bank, 4 cr (lab ar)

R5225 **Finite Elements in Mechanical Design** (prereq 3205, 5342, programming, IT stu or grad) (A-N only)
1515-1800 M, East Bank, 4 cr

R5254 **Design Morphology with Applications** (prereq completion of sequences 3201/3203/3205, 3303/5342 or #, upper div mech engr maj)
★LECT 1315-1400 TTh, East Bank,
–1 LAB 1415-1700 TTh, East Bank, 4 cr
–2 LAB 1415-1700 TTh, East Bank, 4 cr
–3 LAB 1415-1700 TTh, East Bank, 4 cr
–4 LAB 1415-1700 TTh, East Bank, 4 cr
–5 LAB 1415-1700 TTh, East Bank, 4 cr

R5255 **Engineering Design Project** (prereq 5254, upper division mech engr maj)
★LECT 1315-1400 TTh, East Bank, 4 cr
–1 LAB 1415-1700 TTh, East Bank,

R5260 **Engineering Materials and Processing** (prereq Phys 1291, Chem 1004, 1st yr calculus, upper division mech engr maj)
★LECT 1315-1400 MWF, East Bank,
–1 REC 1415-1700 M, East Bank, 4 cr
–2 REC 0815-1100 T, East Bank, 4 cr
–3 REC 1415-1700 T, East Bank, 4 cr
–4 REC 1415-1700 W, East Bank, 4 cr
–5 REC 1415-1700 Th, East Bank, 4 cr

R5270 **Materials-Design Requirements** (prereq 5260, IT stu or grad)
0915-1100 TTh, East Bank, 4 cr

R5272 **Computer Aided Manufacturing: Automation** (prereq 5271 or equiv)
1215-1300 MWThF, East Bank, 4 cr

R5285 **Control Systems Laboratory** (prereq 5283 or equiv, IT or grad IT maj)
0915-1100 TTh, East Bank, 2 cr

R5288 **Modelling and Simulation of Dynamic Systems** (prereq 5283 or equiv, IT stu or grad)
★LECT 0915-1000 MWF, East Bank, 4 cr
–1 LAB 1015-1100 Th, East Bank,

R5342 **Heat Transfer** (prereq 3301, CE 3400 or AEM 3200, IT upper division or grad)
–1 0915-1000 MTWThF, East Bank, 4 cr
–2 1115-1200 MTWThF, East Bank, 4 cr

R5344 **Thermodynamics of Fluid Flow** (prereq CE 3400 or AEM 3200, IT stu or grad)
1115-1200 MWThF, East Bank, 4 cr

R5443 **Turbomachinery** (prereq 3301, IT stu or grad)
0815-0900 MWF, East Bank, 3-5 cr

R5455 **Rocket Propulsion** (prereq 3303, IT stu or grad)
1315-1400 MWF, East Bank, 3-5 cr

R5460 **Internal Combustion Engines** (prereq 3301, IT stu or grad)
1015-1100 MWThF, East Bank, 4 cr

R5461 **Advanced Internal Combustion Engines** (prereq 5460, IT stu or grad)
0915-1000 MWF, East Bank, 3-5 cr

R5480 **Biological Fluid Flow** (prereq CE 3400, AEM 3200 or equiv, IT stu or grad)
1215-1300 MWF, East Bank, 3-4 cr

R5703 **Advanced Mechanical Engineering Laboratory** (prereq 3702, sr)
2 cr 1415-1500 M or W or F, (Obtain experiment cards from MechE 121 prior to registering)

R5704 **Advanced Mechanical Engineering Laboratory** (prereq 5703)
2 cr 1415-1500 M or W or F, (Obtain experiment cards from MechE 121 prior to registering)

R5705 **Advanced Mechanical Engineering Laboratory** (prereq 5704)
2 cr 1415-1500 M or W or F, (Obtain experiment cards from MechE 121 prior to registering)

R5712 **Solar Energy Utilization** (prereq 5342 or #, IT stu or grad)
0815-0900 MTWF, East Bank, 4 cr

R5721 **Propulsive Systems for Surface Transportation** (prereq IT stu or grad...3301 rec)
1415-1500 MWF, East Bank, 4 cr

R5741 **Industrial Assignment and Design Project** (5741-5742†; prereq 3742)
4 cr

R5742 **Industrial Assignment and Design Project** (5741-5742†; prereq 5741)
4 cr

R8221 **Advanced Computer Graphics Topics** (prereq 5221 or equiv)
1315-1400 MWF, East Bank, 4 cr

R8326 **Boiling Heat Transfer, Multiphase Flow** (prereq 5342 or #)
1015-1100 MWF, 3 cr

8332 **Radiation** (prereq 8331)
0915-1000 MWF, East Bank, 3 cr

R8353 **Computation of Boundary Layer Flows** (prereq 8351 or #)
1415-1545 TTh, East Bank, 3 cr

8362 **Introduction to Plasma Technology** (prereq 8360 or 8361 or #)
0915-1000 MWF, East Bank, 3 cr

8445 **Thermodynamics and Chemical Kinetics of Combustion** (prereq 8444)
3 cr

8485 **Biomedical-Engineering Seminar** (§Surg 8785)
1515-1630 T, East Bank, 1-3 cr

8486 **Biomedical-Engineering Seminar** (§Surg 8785; prereq 8485)
1515-1630 T, East Bank, 1-3 cr

8487 **Biomedical-Engineering Seminar** (§Surg 8785; prereq 8486)
1515-1630 T, East Bank, 1-3 cr

8770 **Mechanical Engineering Research** (prereq △)
ar cr

8771 **Mechanical Engineering Research** (prereq 8770, △)
ar cr

8772 **Mechanical Engineering Research** (prereq 8771, △)
ar cr

8773 **Graduate Seminar** (S-N only)
1515-1700 W, East Bank, 1 cr

8774 **Graduate Seminar** (prereq 8773) (S-N only)
1515-1700 W, East Bank, 1 cr

R8775 **Graduate Seminar** (prereq 8774) (S-N only)
-1 1515-1700 W, East Bank, 1 cr

MEDICAL TECHNOLOGY (MedT)
Medical School

Winter Quarter

1031 **Introduction to Clinical Medicine** (prereq soph) (S-N only)
1215-1300 T, East Bank, Rausch, 1 cr

5075 **Principles of Clinical Hematology I** (prereq △)
★LECT 0915-1000 MF, East Bank, Lofsness, 3 cr
-1 LAB 1315-1600 MF, East Bank,

5082 **Applied Clinical Chemistry** (prereq 5111) (S-N only)
4 cr

5085 **Applied Clinical Hematology** (prereq 5067, 5076) (S-N only)
4 cr

5086 **Applied Clinical Immunohematology** (prereq 5066) (S-N only)
4 cr

5088 **Applied Diagnostic Microbiology** (prereq 5102) (S-N only)
4 cr

5090 **Special Laboratory Methods** (prereq #)
2 cr

5092 **Honors Program: Laboratory Methods** (prereq #)
5 cr

5102 **Principles of Diagnostic Microbiology** (prereq MicB 5233) (A-N only)
★LECT 1115-1200 MW, 0815-0900 F, East Bank, Wells, 5 cr
-1 LAB 0915-1100 TWTh, East Bank,
-2 LAB 1315-1500 TWTh, East Bank,

5110 **Introduction to Clinical Chemistry** (prereq Chem 3100-3101, MdBc 5300, △)
★LECT 1015-1100 M, 1015-1200 F, East Bank, Bowers, 4 cr
-1 LAB 0915-1200 TTh, East Bank,
-2 LAB 1315-1600 TTh, East Bank,

5120 **Seminar**
1-3 cr

5125 **Practicum: Teaching** (max 3 cr)
ar cr

5138 **Seminar: Clinical Microbiology**
1115-1200 W, East Bank, 1 cr (Eustis Amph)

5141 **Techniques for Teaching** (prereq 5140)
1015-1100 MWF, East Bank, Rausch, 3 cr

5145 **Development of Medical Technology**
3 cr

5155 **Advanced Clinical Hematology** (prereq #)
5 cr

5165 **Advanced Clinical Immunohematology** (prereq #)
5 cr

5175 **Advanced Clinical Chemistry** (prereq #)
5 cr

5179 **Chemistry Seminar** (prereq #)
1 cr

8176 **Advanced Topics in Clinical Chemistry**
0815-1000 MWF, East Bank, Bowers, 3 cr

Spring Quarter

1032 **Introduction to Clinical Medicine** (prereq soph) (S-N only)
1215-1300 T, East Bank, Rausch, 1 cr

5066 **Introduction to Clinical Immunohematology** (prereq MicB 5233)
★LECT 0815-0900 MWF, East Bank, Carter, 5 cr
-1 LAB 1315-1600 TTh, East Bank,

5076 **Principles of Clinical Hematology II** (prereq 5075)
★LECT 0815-0900 TTh, East Bank, Lofsness, 2 cr
-1 LAB 0915-1200 TTh, East Bank,

5082 **Applied Clinical Chemistry** (prereq 5111) (S-N only)
4 cr

5085 **Applied Clinical Hematology** (prereq 5067, 5076) (S-N only)
4 cr

5086 **Applied Clinical Immunohematology** (prereq 5066) (S-N only)
4 cr

5088 **Applied Diagnostic Microbiology** (prereq 5102) (S-N only)
4 cr

5090 **Special Laboratory Methods** (prereq #)
2 cr

5092 **Honors Program: Laboratory Methods** (prereq #)
5 cr

5111 **Principles of Clinical Chemistry** (prereq 5110)
★LECT 1315-1400 MWF, 1215-1300 T, East Bank, Stewart, 6 cr
-1 LAB 0915-1200 MWF, East Bank,

5120 **Seminar**
1-3 cr

5125 **Practicum: Teaching** (max 3 cr)
ar cr

5128 **Elements of Laboratory Administration** (prereq △)
1730-1945 MW, East Bank, Karni, 3 cr

5130 **Practicum in Laboratory Administration** (prereq #)
3 cr

5135 **Advanced Clinical Microbiology** (prereq #)
5 cr

5136 **Anaerobic Bacteriology** (prereq biochemistry, medical microbiology, diagnostic microbiology or #)
★LECT 1315-1400 TTh, East Bank, Wells, 3 cr
-1 LAB 1415-1700 TTh, East Bank,

5138 **Seminar: Clinical Microbiology**
ar cr

5145 **Development of Medical Technology**
3 cr

5155 **Advanced Clinical Hematology** (prereq #)
5 cr

5165 **Advanced Clinical Immunohematology** (prereq #)
5 cr

5175 **Advanced Clinical Chemistry** (prereq #)
5 cr

5179 **Chemistry Seminar** (prereq #)
1 cr

METALLURGICAL ENGINEERING (MetE)
Chem Engr, Materials Sci, Civil, Mineral Engr
Institute of Technology

Winter Quarter

5101 **Chemical Metallurgy II** (prereq 5100 or MatS 5100 or #)
1015-1100 MTWF, East Bank, Bitsianes, 4 cr

R5201 **Ore Microscopy** (prereq Geo 3401 or #, △)
1315-1400 WF, East Bank, Boucher, 3 cr (lab ar)

5501 **Metallurgical Engineering Design II** (prereq #)
Smith, 4 cr

5800 **Mineral Processing I** (prereq #)
1415-1600 MW, East Bank, Smith, 4 cr

5902 **Pyrometallurgical Process** (prereq 5901 or #)
★LECT 1115-1200 MWF, East Bank, Bitsianes, 4 cr
-1 LAB 1415-1700 T, East Bank,

5941 **Special Problems in Extractive Metallurgical Engineering** (prereq sr, grad student)
Smith, 1-6 cr

8001 **Applied Process Metallurgy II** (prereq #)
0815-0900 MWF, East Bank, Moore, 3 cr

8830 **Electric and Magnetic Separation of Minerals** (prereq #)
Reid, 4 cr

8842 **Surface Chemistry of Mineral Suspensions**
1215-1300 MWF, East Bank, Iwasaki, 3 cr

8922 **Research in Extractive Metallurgical Engineering** (prereq #) (A-N only)
Moore, ar cr

8932 **Physical Chemistry of High Temperature Metallurgical Reactions II** (prereq 8930 or #)
1115-1230 TTh, East Bank, Moore, 3 cr

Spring Quarter

5102 **Chemical Metallurgy III** (prereq 5101 or MatS 5101 or #)
1015-1100 MTWF, East Bank, Iwasaki, 4 cr

R5503 **Metallurgical Engineering Design III** (prereq IT student)
Smith, 4 cr

R5901 **Principles of Metals Extraction** (prereq 5102 or #)
0915-1000 MTWF, East Bank, Moore, 4 cr

R5903 **Hydrometallurgy** (prereq 5100, 5101, 5102 or #)
★LECT 0815-0900 MWF, East Bank, Smith, 4 cr
-1 LAB 1315-1700 Th, East Bank,

R5942 **Special Problems in Extractive Metallurgical Engineering** (prereq grad student)
Smith, 1-6 cr

R8839 **Optimization and Control Techniques in Mineral Processing II** (prereq 8838 or #)
1315-1400 MW, East Bank, Reid, 3 cr

R8923 **Research in Extractive Metallurgical Engineering** (prereq #) (A-N only)
Bitsianes, ar cr

R8934 **Physical Chemistry of High Temperature Metallurgical Reactions III** (prereq 8932)
1115-1230 TTh, East Bank, Bitsianes, 3 cr

MICROBIOLOGY (MicB)
Medical School

Winter Quarter

R1101 **Elementary Microbiology** (prereq Biol 1009 or ¶, open to liberal arts students, DH, PT, mort sci, others #)
★LECT 1015-1100 MWF, East Bank, Prince
–1 LAB 0815-0900 M, 0815-1000 F, East Bank, 4 cr (dental hygienists, others)

R3103 **General Microbiology** (prereq soph with C avg in prereq courses to maj seq or jr, 10 cr chem, 5 cr biol sci or #)
★LECT 1215-1300 MWF, East Bank, Schmidt, 5 cr
–1 LAB 1315-1500 MWF, East Bank,

5205 **Microbiology for Medical Students** (prereq regis med freshman, all others #)
★LECT 1415-1500 MWF, 1315-1400 Th, East Bank, Brand, 5 cr
–1 LAB 1015-1200 M, 1515-1700 W, East Bank,
–2 LAB 1515-1700 M, 1015-1200 W, East Bank,

5225 **Microbiology for Medical Students** (prereq microbiology grad student, all others #)
1415-1500 MWF, 1315-1400 Th, East Bank, Brand, 3 cr

5232 **Medical Microbiology** (prereq 5216 or 5218, 5105 or 3103 or 8110 or Biol 5013)
1015-1130 TTh, East Bank, Cleary, 3 cr

R5234 **Medical Microbiology Laboratory** (prereq 5232 or ¶)
1315-1500 TTh, East Bank, Cleary, 2 cr

5321 **Physiology of Bacteria** (prereq 3103 or 5105 or Biol 5013 or VPB 3013, 10 cr organic chem or biochem, 3 cr genetics)
0815-0930 TTh, Rogers, 3 cr

R5322 **Physiology of Bacteria Laboratory** (prereq 5321 or ¶, a lab course in basic bacteriology)
1315-1500 TTh, East Bank, Rogers, 2 cr

5900 **Topics in Microbiology** (S-N only)
1515-1600 W, East Bank, Rogers, 1 cr

5970 **Directed Studies** (prereq #, △)
Rogers, others, ar cr

5990 **Directed Research** (prereq #, △)
Rogers, others, ar cr

5992 **Practicum: Teaching** (prereq #)
1 cr

R8122 **Advanced Microbiology Laboratory** (prereq 5321 or ¶ or #)
1200-1500 TTh, East Bank, Rogers, 2 cr

R8218 **Immunochemistry and Immunology** (prereq 5216, #...LMed 5274 rec)
1215-1500 F, East Bank, Gray, 3 cr

8240 **Preceptorship in Medical Microbiology** (max 6 cr; prereq #)
Prince, ar cr

8242 **Diagnostic Microbiology** (prereq grad student in microbiology, #)
Wells, ar cr

R8910 **Seminar** (prereq #)
1215-1300 W, East Bank, Dworkin, 1 cr

8911 **Colloquium in Microbiology**
1 cr

8990 **Research in Microbiology**
Cleary, ar cr

Spring Quarter

R5106 **Advanced General Microbiology Laboratory** (prereq 5105 or equiv)
1315-1630 TTh, East Bank, Dworkin, 3 cr

5125 **Laboratory in Recombinant DNA Technology** (§Biol 5125; prereq #)
1200-1700 TTh, East Bank, 4 cr

5206 **Microbiology for Medical Students** (prereq ¶5205, regis med fr, all others #)
★LECT 0915-1000 MTWThF, East Bank, Brand, 5 cr
–1 LAB 1415-1600 W, East Bank,
–2 LAB 1015-1200 W, East Bank,

5226 **Microbiology for Medical Students** (prereq microbiology grad student or #)
0915-1000 MTWThF, East Bank, Brand, 3 cr

5351 **Industrial Microbiology** (prereq 5321 or #)
1330-1500 MW, East Bank, Hanson, 3 cr

5355 **Genetic and Molecular Aspects of Biotechnology** (prereq 5105 or equiv or 5321)
0815-0930 TTh, East Bank, Faras, 3 cr

R5424 **Biology of Viruses** (prereq 5321 or Biol 5001 or #)
★LECT 1015-1100 MWF, East Bank, Plagemann, 4 cr
–1 LAB 1115-1300 F, East Bank,

5900 **Topics in Microbiology** (S-N only)
1515-1600 W, East Bank, Rogers, 1 cr

5970 **Directed Studies** (prereq #, △)
Rogers, ar cr

5990 **Directed Research** (prereq #, △)
Rogers, ar cr

5992 **Practicum: Teaching** (prereq #)
1 cr

R8112 **Microbial Genetics** (prereq #)
1215-1330 TTh, East Bank, Zissler, 3 cr

8242 **Diagnostic Microbiology** (prereq grad student in microbiology, #)
Wells, ar cr

R8320 **Immunogenetics** (§Path 8320; prereq 5216 or #)
1415-1700 F, East Bank, Fan, 3 cr

R8910 **Seminar** (prereq #)
1215-1300 W, East Bank, Dworkin, 1 cr

8911 **Colloquium in Microbiology**
1 cr

8990 **Research in Microbiology**
Cleary, ar cr

MIDDLE EASTERN STUDIES (MidE)
South And Southwest Asian Studies
Liberal Arts

Winter Quarter

1504 **Introduction to the Religions of South and Southeast Asia** (§RelS 1031)
1115-1200 MWF, East Bank, Malandra, 4 cr

3202 **Modern Indian Literature in Translation**
1215-1300 MWF, East Bank, Munda, 4 cr

3412 **Hinduism** (some background in Indian civilization is helpful)
1015-1100 MWF, East Bank, Junghare, 4 cr

3501 **The Heritage of India** (§Hum 3211)
1215-1300 TTh, Lincoln, 5 cr

3505 **Survey: The Middle East** (§5505)
1015-1100 MWF, West Bank, Farah, 4 cr

3508 **Islam: Iran to India** (§5508)
1215-1300 MWF, East Bank, Alvi, 4 cr

3542 **History of the Arabs** (§Hist 3542)
0915-1000 MWF, West Bank, Farah, 4 cr

5970 **Directed Study** (prereq #, △, CLA approval)
ar cr

5990 **Research** (prereq #, △, CLA approval)
ar cr

8990 **Research** (prereq #)
ar cr

Spring Quarter

1506 **Introduction to Contemporary South Asia**
1315-1400 MWF, West Bank, Schwartzberg, 5 cr

3203 **Comparative Indian Literature in Translation**
1215-1300 MWF, East Bank, Munda, 4 cr

3412 **Hinduism** (some background in Indian civilization is helpful)
1015-1100 MWF, East Bank, Junghare, 4 cr

3502 **The Heritage of India** (§Hum 3212)
1415-1530 TTh, West Bank, Lelyveld, 5 cr

3506 **Introduction to Contemporary South Asia** (§1506)
1315-1400 MWF, West Bank, Schwartzberg, 5 cr

3544 **The Arab World in Recent Times**
0915-1000 MWF, West Bank, Farah, 4 cr

5535 **Tribal Peoples and Cultures of South Asia** (prereq 1203, 1504, 1506, 3501, 3506...Anth 5261 rec)
1015-1100 MWF, East Bank, Munda, 5 cr

5970 **Directed Study** (prereq #, △, CLA approval)
ar cr

5990 **Research** (prereq #, △, CLA approval)
ar cr

8990 **Research** (prereq #)
ar cr

MILITARY SCIENCE (Mil)

Winter Quarter

R1012 **World Military History** (§Hist 1952; prereq △) (A-N only)
0815-0900 TTh, East Bank, Westhaus, 2 cr

R1022 **U.S. International Perspectives: Analysis of the U.S. Military Role** (prereq △) (A-N only)
1315-1400 TTh, East Bank, Heffelfinger, 2 cr

R3111 **Leadership Communication** (§3142) (A-N only)
–1 0815-0930 TTh, East Bank, Bomersheim, 3-4 cr
–2 1415-1530 TTh, East Bank, Bomersheim, 3-4 cr

R3132 **Land Navigation and Map Reading** (prereq △, Leadership Laboratory) (A-N only)
–1 0945-1100 TTh, East Bank, Deca, 3 cr
–2 1130-1245 TTh, East Bank, Deca, 3 cr

3970 **Directed Studies** (prereq #, △) (A-N only)
1-3 cr

Spring Quarter

R1013 **World Military History** (prereq △) (A-N only)
0815-0900 TTh, East Bank, Westhaus, 2 cr

R1023 **U.S. International Perspectives: Analysis of the U.S. Military Role** (prereq △) (A-N only)
1315-1400 TTh, East Bank, Heffelfinger, 2 cr

R3133 **Small Unit Tactics** (prereq △, Leadership Lab) (A-N only)
–1 0945-1100 TTh, East Bank, Deca, 3 cr
–2 1130-1245 TTh, East Bank, Deca, 3 cr

R3143 **Military Law, Service Orientation** (prereq △, Leadership Lab) (A-N only)
–1 0945-1100 TTh, East Bank, Pearson, 3 cr
–2 1130-1245 TTh, East Bank, Pearson, 3 cr

3970 **Directed Studies** (prereq #, △) (A-N only)
1-3 cr

MINING ENGINEERING (MinE)
Civil And Mineral Engineering
Institute of Technology

Winter Quarter

5610 **Mineral Evaluation** (prereq 5600, Stat 3091)
0915-1000 MTWF, East Bank, Dorenfeld, 4 cr

5650 **Mineral Engineering Design I** (prereq 5720, 5722 or #, IT stu or grad IT) (A-N only)
1315-1700 MWF, East Bank, 4 cr

5660 **Special Mineral Engineering Problems** (prereq IT stu or grad IT maj) (A-N only)
ar cr

5700 **Mineral Economics: Systems Analysis for Mineral Engineers** (prereq #, IT stu or grad IT) (A-N only)
1215-1300 MTWF, East Bank, Smith, 4 cr

8471 **Research Problems** (prereq #) (A-N only)
ar cr

8602 **Seminar: Mineral Engineering** (prereq #) (S-N only)
ar cr

8641 **Selected Minerals in National and World Affairs** (prereq 5642)
1315-1400 MWF, East Bank, Dorenfeld, 3-4 cr

Spring Quarter

5620 **Underground Mining Methods** (prereq 5600, IT stu or grad IT) (A-N only)
Brady, 4 cr

5652 **Mineral Engineering Design II** (prereq 5650 or #, IT stu or grad IT maj) (A-N only)
1315-1700 MWF, East Bank, 4 cr

5660 **Special Mineral Engineering Problems** (prereq IT stu or grad IT maj) (A-N only)
ar cr

5710 **Environmental Aspects of Mineral Engineering** (prereq 5613, 5820 or #, IT stu or grad IT maj) (A-N only)
1015-1100 MTWF, East Bank, Schulz, 4 cr

8603 **Seminar: Mineral Engineering** (prereq #) (S-N only)
ar cr

MORTUARY SCIENCE (Mort)
Health Sciences

Winter Quarter

R3001 **Orientation in Funeral Services** ((A–N only)
1015-1200 TTh, East Bank, 4 cr

R3040 **Psychology of Funeral Service** (prereq introductory course in general psychology) (A–N only)
1415-1500 MWF, Burger, 3 cr

R3050 **Restorative Art** (prereq regis mortuary science) (A–N only)
★LECT 1115-1200 TTh, East Bank, Burger
–1 LAB 0915-1200 M, East Bank, Burger, 4 cr
–2 LAB 0915-1200 W, East Bank, Burger, 4 cr
–3 LAB 0915-1200 F, East Bank, Burger, 4 cr

3061 **Embalming** (prereq 3060) (A–N only)
★LECT 0915-1100 TTh, East Bank, 4 cr
–1 LAB 0915-1200 W, East Bank, Stroud
–2 LAB 0915-1200 F, East Bank, Stroud
–3 LAB 0915-1200 M, East Bank, Stroud

R3062 **Gross Human Anatomy** (prereq biology, human anatomy, regis in mortuary science) (A–N only)
–1 LAB 0915-1200 F, East Bank, Lee, 3 cr
–2 LAB 0915-1200 M, East Bank, Lee, 3 cr
–3 LAB 0915-1200 W, East Bank, Lee, 3 cr

R3070 **Funeral Management** (prereq regis mortuary science) (A–N only)
1115-1200 MWF, East Bank, Mathews, 3 cr

R3071 **Funeral Management** (prereq regis mortuary science) (A–N only)
★LECT 1015-1100 MWF, Mathews
–1 LAB 0815-1000 W, East Bank, Mathews, 4 cr
–2 LAB 0815-1000 F, East Bank, Mathews, 4 cr
–3 LAB 0815-1000 M, East Bank, Mathews, 4 cr

R3072 **Funeral Management** (prereq regis in mortuary science, 3071) (A–N only)
1315-1400 MW, East Bank, Slater, 2 cr

R3074 **Funeral Service Laws and Rules** (prereq regis in mortuary science) (A–N only)
1315-1500 Th, East Bank, Grayson, Stroud, 2 cr

3080 **Practicum in Funeral Service** (prereq 3001, 3010, 3030, 3040, 3050, 3060, 3061, 3070, 3071, 3270, 3271, LaMP 3050, min of 8 non-dept upper division cr, △) (S–N only)
15 cr

R3090 **Independent Study** (prereq sr)
Burger, Mathews, others, 1 cr

R3271 **Seminar: Funeral Mangement** (prereq regis mortuary science) (S–N only)
1315-1500 T, Slater, 1 cr

R5040 **Dying and Death in Contemporary Society** (prereq hlth sci maj, pubh grad student, educ sr, certified teacher, mort sci maj, #)
1615-1800 M, 1615-1700 W, East Bank, Slater, Rothenberger, 3 cr

Spring Quarter

R3010 **Mortuary Law** (A–N only)
1315-1500 MF, Grayson, 3 cr

R3030 **Embalming Chemistry** (prereq introductory course in general chemistry, regis in mortuary science) (A–N only)
1115-1200 MTWThF, East Bank, Mathews, 4 cr

R3073 **Funeral Management** (prereq regis in mortuary science, 3070) (A–N only)
0900-1100 TTh, East Bank, Slater, 3 cr

R3080 **Practicum in Funeral Service** (prereq 3001, 3010, 3030, 3040, 3050, 3060, 3061, 3070, 3071, 3270, 3271, LaMP 3050, min of 8 non-dept upper division cr, △) (S–N only)
Stroud, Burger, others, 15 cr

R3090 **Independent Study** (prereq sr)
Burger, Mathews, others, 1 cr

MUSIC (Mus)
Music
Liberal Arts

Winter Quarter

R1001 **Fundamentals of Music** (prereq nonmus maj)
–1 0815-0900 MWF, East Bank, Byrne, 4 cr
–2 1115-1200 MWF, East Bank, 4 cr
–3 1315-1400 MWF, East Bank, 4 cr

R1051 **Piano Class for Non-Music Majors**
1515-1600 MW, 2 cr

R1052 **Piano Class for Non-Music Majors** (prereq 1051 or #)
–1 1315-1400 MW, 2 cr
–2 1415-1500 MW, 2 cr

R1152 **Piano: Class Lessons** (prereq 1151)
–1 0815-0900 MW, Arrau, 2 cr (written permission required)
–2 1015-1100 MW, Arrau, 2 cr
–3 1115-1200 MW, Arrau, 2 cr

R1160 **Voice: Class Lessons**
–1 1215-1300 MW, East Bank, 2 cr
–2 1315-1400 MW, 2 cr
–3 1415-1500 MW, East Bank, 2 cr
–4 1215-1300 TTh, East Bank, 2 cr
–5 1315-1400 TTh, East Bank, 2 cr

1330 **Jazz Improvisation** (max 12 cr; prereq audition, #)
–1 1215-1300 TTh, East Bank, Buckner, 2 cr
–2 1315-1400 TTh, East Bank, Buckner, 2 cr

1340 **Jazz Ensemble** (max 6 cr; prereq audition, #)
–1 1315-1400 MW, Bencriscutto, 1 cr
–2 1115-1300 TTh, Bencriscutto, 1 cr
–3 1315-1400 TTh, East Bank, Bencriscutto, 1 cr
–4 1715-1800 TTh, East Bank, Bencriscutto, 1 cr

R1352 **Jazz Class Piano** (prereq 1153 or #)
1215-1300 MW, Buckner, 2 cr

1410 **Band** (prereq #)
1515-1700 MTWThF, Bencriscutto, Sanford, 1 cr

1420 **Orchestra** (prereq #)
1515-1700 MTTh, East Bank, Massmann, 1 cr

1430 **University Chorus, Concert Choir, Women's Chorus, Men's Chorus, St. Paul Campus Chorus** (prereq #)
–1 1115-1200 MWF, 1900-2130 T, Jorgenson, 1 cr
–2 1315-1400 MWF, 1900-2130 T, Jorgenson, 1 cr
–3 1215-1300 MWF, Jorgenson, 1 cr (Men's Chorus)

1440 **Ensemble** (prereq #)
–1 1 cr (Guitar)
–2 Miller, 1 cr (Harp)
–3 1 cr (Piano)
–4 1 cr (Strings)
–5 Kim, 1 cr (Concerto Grosso)
–6 1 cr

R1502 **Theory II** (prereq 1501)
♦–1 LECT 1215-1300 TTh, East Bank, Lubet, 3 cr
♦–2 LECT 1215-1300 WF, East Bank, Lubet, 3 cr
–1 REC 0815-0900 WF,
–2 REC 1115-1200 WF,
–3 REC 1215-1300 WF,
–4 REC 1415-1500 WF,

R1512 **Ear-Training and Sight-Singing I** (prereq 1511)
–1 0815-0900 TTh, 1 cr
–2 0915-1000 TTh, 1 cr
–3 1015-1100 TTh, East Bank, 1 cr
–4 1115-1200 TTh, 1 cr
–5 1215-1300 TTh, 1 cr

R1515 **Ear-Training and Sight-Singing II** (prereq 1514)
–1 0815-0900 TTh, 1 cr
–2 0815-0900 TTh, 1 cr
–3 1115-1200 TTh, East Bank, 1 cr
–4 1215-1300 TTh, 1 cr
–5 1315-1400 TTh, 1 cr

1602 **Music and Society** (prereq 1501 or #)
0915-1100 MW, East Bank, Kagan, 3 cr

1605 **History of Westen Music** (prereq 1604)
0915-1100 TTh, Laudon, 4 cr

1804 **World Music**
1215-1300 MTWTh, East Bank, Kagan, 4 cr

3440 **Ensemble** (prereq #)
–1 1 cr (Guitar)
–2 Miller, 1 cr (Harp)
–3 1 cr (Piano)
–4 1 cr (Strings)
–5 Kim, 1 cr (Concerto Grosso)
–6 1 cr

R3502 **Theory V** (prereq 3501)
♦–1 LECT 1115-1200 TTh, East Bank, Damschroder, 3 cr
♦–2 LECT 1115-1200 WF, East Bank, Damschroder, 3 cr
–1 REC 0815-0900 WF,
–2 REC 0915-1000 WF,
–3 REC 1015-1100 WF,
–4 REC 1215-1300 WF,

3505 **Theory VIII** (prereq 3504)
0915-1100 T, 0915-1000 Th, East Bank, Lubet, 3 cr

3550 **Composition** (max 12 cr; prereq 1506, #)
–1 Argento, 2 cr
–2 Fetler, 2 cr
–3 0915-1200 F, Stokes, 2 cr

3709 **Afro-Caribbean, Afro-Hispanic, and Afro-Brizilia Music** (§Afro 3301)
0945-1100 TTh, West Bank, Southall, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1–15 cr

3980 **Directed Teaching** (prereq #, △, college approval)
1–4 cr

5330 **Jazz Improvisation** (max 12 cr; prereq 12 cr of 1330 or audition)
–1 1215-1300 TTh, East Bank, Buckner, 2 cr
–2 1315-1400 TTh, East Bank, Buckner, 2 cr

5340 **Jazz Ensemble** (prereq 6 cr of 1340 or audition by instructor)
–1 1315-1400 MW, Bencriscutto, 1 cr
–2 1115-1300 MW, Bencriscutto, 1 cr
–3 1315-1400 TTh, East Bank, Bencriscutto, 1 cr
–4 1715-1800 TTh, East Bank, Bencriscutto, 1 cr

5352 **Piano Pedagogy I** (prereq 5351)
0915-1100 T, Arrau, 2 cr

5358 **Graduate Piano Seminar** (prereq #)
1515-1700 T, East Bank, Freed, 2 cr

5360 **Woodwind Ensemble** (prereq audition)
1115-1300 F, Anderson, 1 cr

R5370 **Vocal Performance Seminar** (prereq 18 cr applied voice, #)
1515-1700 T, East Bank, Ware, 2 cr

5372 **Diction for Singers** (prereq 5371)
1515-1700 Th, Weller, 2 cr

5380 **Brass Choir** (prereq #)
–1 1115-1300 TTh, East Bank, Baldwin, 1 cr
–2 0915-1100 F, East Bank, Baldwin, 1 cr

5390 **Percussion Ensemble** (prereq #)
1315-1500 MW, East Bank, Schultz, 1 cr

5399 **Performance in Conducting** (prereq 5388 or 5385, #)
Lancaster, 4 cr

5410 **Band** (prereq #)
1515-1700 MTWThF, Bencriscutto, Sanford, 1 cr

5420 **Orchestra** (prereq #)
1515-1700 MTTh, East Bank, Massmann, 1 cr

5430 **University Chorus, Concert Choir, Women's Chorus, Men's Chorus, St. Paul Campus Chorus** (prereq #)
–1 1115-1200 MWF, 1900-2130 T, Jorgenson, 1 cr
–2 1315-1400 MWF, 1900-2130 T, Jorgenson, 1 cr
–3 1215-1300 MWF, Jorgenson, 1 cr (Men's Chorus)

R5440 **Ensemble** (prereq #)
–1 1 cr (Guitar)
–2 Miller, 1 cr (Harp)
–3 1 cr (Piano)
–4 1 cr (Strings)
–5 Kim, 1 cr (Concerto Grosso)
–6 1715-1900 T, East Bank, Ware, 1 cr (Minnesingers)
–7 1 cr

5450 **Collegium Musicum** (prereq #)
McClary, 1 cr

5460 **Contemporary Music Ensemble** (prereq #)
1315-1600 F, Stokes, 2 cr

5470 **Opera Workshop** (prereq #)
0915-1100 MWF, Sutton, 3 cr 429 Ontario SE,

5490 **Chamber Singers** (prereq audition)
1515-1700 MWF, East Bank, Lancaster, 1 cr

5511 **Advanced Ear Training I** (prereq 1516 or #)
1315-1400 MWF, East Bank, Fetler, 3 cr

5522 **Keyboard Harmony** (prereq 1506, sr or grad)
1215-1300 TTh, Billmeyer, 2 cr

5540 **Jazz Composition, Arranging** (prereq 1506, #)
Bencriscutto, 2 cr

5550 **Composition I** (max 12 cr; prereq 1506, #)
–1 Argento, 2 cr
–2 Fetler, 2 cr
–3 0915-1200 F, Stokes, 2 cr

5560 **Electronic Music Laboratory** (prereq 3791 or #)
1415-1700 M, Stokes, 2 cr

5562 **Orchestration** (prereq 5561)
1415-1500 MW, Argento, 2 cr

5602 **History of Opera** (prereq 9 cr in history of music, art, theatre or European history from 1600 or #)
1315-1400 MTW, Argento, 3 cr

5635 **Baroque Era** (prereq 1606)
1015-1200 TTh, East Bank, McClary, 4 cr

5742 **Vocal Literature** (prereq 12 cr in 1104 or 1204 or 1304 or #)
0915-1100 TTh, East Bank, Sutton, 4 cr

R5810 **Asian Music: Performance** (prereq #)
Kagan, 2 cr

5950 **Topics in Music: The Phenomenon of Liszt**
1315-1500 MW, East Bank, Laudon, 4 cr

8550 **Composition** (max 18 cr;prereq compl undergrad maj seq in mus theory, comp incl 3543,5503,5553,5563 or #)
–1 Argento, 3 cr
–2 Fetler, 3 cr
–3 0915-1200 F, Stokes, 3 cr

R8570 **Seminar in Composition** (max 12 cr; prereq grad, #)
1015-1200 TTh, East Bank, Ultan, 4 cr

8647 **Contemporary Musical Styles** (prereq undergrad degree in music)
1015-1200 MW, East Bank, Jackson, 4 cr

8754 **Choral Literature: Renaissance Through Baroque Eras** (prereq grad student, #)
1230-1400 MWF, East Bank, Lancaster, 4 cr

8845 **Seminar: Advances Research in Music**
1015-1200 MW, East Bank, McClary, 4 cr

8847 **Notation of Polyphonic Music** (prereq #)
1015-1200 TTh, East Bank, Jackson, 5 cr

8852 **History of Music Theory, 1600-1900** (prereq undergrad degree in music)
1415-1600 TTh, East Bank, Damschroder, 4 cr

8990 **Special Problems** (prereq △)
2-12 cr

Spring Quarter

R1001 **Fundamentals of Music** (prereq nonmus maj)
–1 0815-0900 MWF, East Bank, Byrne, 4 cr
–2 1115-1200 MWF, East Bank, 4 cr
–3 1315-1400 MWF, East Bank, 4 cr

R1051 **Piano Class for Non-Music Majors**
1515-1600 MW, 2 cr

R1052 **Piano Class for Non-Music Majors** (prereq 1051 or #)
1415-1500 MW, 2 cr

R1053 **Piano Class for Non-Music Majors** (prereq 1051 or #)
1315-1400 MW, 2 cr

R1153 **Piano: Class Lessons** (prereq 1152)
–1 0815-0900 MW, Arrau, 2 cr (written permission required)
–2 1015-1100 MW, Arrau, 2 cr
–3 1115-1200 MW, Arrau, 2 cr

R1160 **Voice: Class Lessons**
–1 1215-1300 MW, 2 cr
–2 1315-1400 MW, 2 cr
–3 1415-1500 MW, 2 cr
–4 1215-1300 TTh, 2 cr
–5 1315-1400 TTh, East Bank, 2 cr

1330 **Jazz Improvisation** (max 12 cr; prereq audition, #)
–1 1215-1300 TTh, East Bank, Buckner, 2 cr
–2 1315-1400 TTh, East Bank, Buckner, 2 cr

1340 **Jazz Ensemble** (max 6 cr; prereq audition, #)
–1 1315-1400 MW, Bencriscutto, 1 cr
–2 1115-1300 TTh, Bencriscutto, 1 cr
–3 1315-1400 TTh, East Bank, Bencriscutto, 1 cr
–4 1715-1800 TTh, East Bank, Bencriscutto, 1 cr

R1353 **Jazz Class Piano** (prereq 1153 or #)
1215-1300 MW, Buckner, 2 cr

1410 **Band** (prereq #)
1515-1700 MTWThF, Bencriscutto, Sanford, 1 cr

1420 **Orchestra** (prereq #)
1515-1700 MTTh, East Bank, Massmann, 1 cr

1430 **University Chorus, Concert Choir, Women's Chorus, Men's Chorus, St. Paul Campus Chorus** (prereq #)
–1 1115-1200 MWF, 1900-2130 T, Jorgenson, 1 cr
–2 1315-1400 MWF, 1900-2130 T, Jorgenson, 1 cr
–3 1215-1300 MWF, Jorgenson, 1 cr (Men's chorus)

1440 **Ensemble** (prereq #)
–1 1 cr (Guitar)
–2 Miller, 1 cr (Harp)
–3 1 cr (Piano)
–4 1 cr (Strings)
–5 Massmann, 1 cr (Chamber Orchestra)
–6 1 cr

R1503 **Theory III** (prereq 1502)
♦–1 LECT 1215-1300 TTh, East Bank, Lubet, 3 cr
♦–2 LECT 1215-1300 WF, East Bank, Lubet, 3 cr
–1 REC 0815-0900 WF,
–2 REC 0815-0900 WF,
–3 REC 1115-1200 WF,
–4 REC 1215-1300 WF,

R1513 **Ear-Training and Sight-Singing I** (prereq 1512)
–1 0815-0900 TTh, 1 cr
–2 0915-1000 TTh, 1 cr
–3 1015-1100 TTh, 1 cr
–4 1115-1200 TTh, 1 cr
–5 1215-1300 TTh, 1 cr

R1516 **Ear-Training and Sight-Singing II** (prereq 1515)
–1 0815-0900 TTh, 1 cr
–2 0815-0900 TTh, East Bank, 1 cr
–3 1115-1200 TTh, 1 cr
–4 1215-1300 TTh, 1 cr

1603 **History of Western Music** (prereq 1502)
0915-1100 MW, Laudon, 4 cr

1606 **History of Western Music** (prereq 1605)
0915-1100 TTh, East Bank, Jackson, 4 cr

R3021 **Introduction to Music** (§1021)
1215-1300 MTWThF, Sutton, 5 cr

3027 **Lyric Song in Medieval and Renaissance Culture**
1015-1200 MW, East Bank, Jackson, 4 cr

3440 **Ensemble** (prereq #)
–1 1 cr (Guitar)
–2 Miller, 1 cr (Harp)
–3 1 cr (Piano)
–4 1 cr (Strings)
–5 Massmann, 1 cr (Chamber Orchestra)
–6 1 cr

R3503 **Theory VI** (prereq 3502)
♦–1 LECT 1115-1200 TTh, East Bank, Damschroder, 3 cr
♦–2 LECT 1115-1200 WF, East Bank, Damschroder, 3 cr
–1 REC 0815-0900 WF,
–2 REC 0915-1000 WF,
–3 REC 1015-1100 WF,
–4 REC 1215-1300 WF,

3506 **Theory IX** (prereq 3505)
0915-1100 T, 0915-1000 Th, East Bank, Stokes, 3 cr

R3550 **Composition** (max 12 cr; prereq 1506, #)
–1 Argento, 2 cr
–2 Fetler, 2 cr
–3 0915-1200 F, Stokes, 2 cr
–4 Ultan, 2 cr

3708 **Black Music Prior to WW I** (§Afro 3105)
0945-1100 TTh, West Bank, Southall, 5 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-15 cr

3980 **Directed Teaching** (prereq #, △, college approval)
1-4 cr

5330 **Jazz Improvisation** (max 12 cr; prereq 12 cr of 1330 or audition)
–1 1215-1300 TTh, East Bank, Buckner, 2 cr
–2 1315-1400 TTh, East Bank, Buckner, 2 cr

5340 **Jazz Ensemble** (prereq 6 cr of 1340 or audition by instructor)
–1 1315-1400 MW, Bencriscutto, 1 cr
–2 1115-1300 TTh, Bencriscutto, 1 cr
–3 1315-1400 TTh, East Bank, Bencriscutto, 1 cr
–4 1715-1800 TTh, East Bank, Bencriscutto, 1 cr

5353 **Piano Pedagogy I** (prereq 5352)
0915-1100 T, Arrau, 2 cr

5359 **Graduate Piano Seminar** (prereq #)
1515-1700 T, East Bank, McNab, 2 cr

5360 **Woodwind Ensemble** (prereq audition)
1115-1300 F, Anderson, 1 cr

R5373 **Diction for Singers** (prereq 5372)
1515-1700 Th, Weller, 2 cr

R5375 **Vocal Pedagogy** (prereq 18 cr applied voice, MuEd 3431 or #)
1515-1700 T, East Bank, Ware, 4 cr

R5380 **Brass Choir** (prereq #)
–1 1115-1300 TTh, East Bank, Baldwin, 1 cr
–2 0915-1100 F, East Bank, Baldwin, 1 cr

5390 **Percussion Ensemble** (prereq #)
1315-1500 MW, East Bank, Schultz, 1 cr

5399 **Performance in Conducting** (prereq 5388 or 5385, #)
Lancaster, 4 cr

5410 **Band** (prereq #)
1515-1700 MTWThF, Bencriscutto, Sanford, 1 cr

5420 **Orchestra** (prereq #)
1515-1700 MTTh, East Bank, Massmann, 1 cr

5430 **University Chorus, Concert Choir, Women's Chorus, Men's Chorus, St. Paul Campus Chorus** (prereq #)
–1 1115-1200 MWF, 1900-2130 T, Jorgenson, 1 cr
–2 1315-1400 MWF, 1900-2130 T, Jorgenson, 1 cr
–3 1215-1300 MWF, Jorgenson, 1 cr (Men's Chorus)

R5440 **Ensemble** (prereq #)
–1 1 cr (Guitar)
–2 Miller, 1 cr (Harp)
–3 1 cr (Piano)
–4 1 cr (Strings)
–5 Massmann, 1 cr (Chamber Orchestra)
–6 Ware, 1 cr (Minnesingers)
–7 1 cr

5450 **Collegium Musicum** (prereq #)
McClary, 1 cr

5470 **Opera Workshop** (prereq #)
0915-1100 MWF, Sutton, 3 cr 429 Ontario SE,

5490 **Chamber Singers** (prereq audition)
1515-1700 MWF, East Bank, Lancaster, 1 cr

5512 **Advanced Ear Training II** (prereq 1516 or #)
1315-1400 MWF, East Bank, Fetler, 3 cr

5523 **Keyboard Harmony** (prereq 1506, sr or grad)
1215-1300 TTh, Billmeyer, 2 cr

5532 **Analysis II** (prereq 5531)
1515-1700 T, 1515-1600 Th, East Bank, Lubet, 3 cr

5540 **Jazz Composition, Arranging** (prereq 1506, #)
Bencriscutto, 2 cr

R5550 **Composition I** (max 12 cr; prereq 1506, #)
–1 Argento, 2 cr
–2 Fetler, 2 cr
–3 0915-1200 F, Stokes, 2 cr
–4 Ultan, 2 cr

R5560 **Electronic Music Laboratory** (prereq 3791 or #)
1415-1700 M, Stokes, 2 cr

R5563 **Orchestration** (prereq 5562)
1415-1500 MW, Argento, 2 cr

5643 **Romantic Concert Music** (prereq 1606 or #)
1315-1500 MW, East Bank, Laudon, 4 cr

5662 **Heinrich Schutz: Life and Works** (prereq 8 cr in music or art history or German literature or political history to 1700 or #)
1015-1200 TTh, East Bank, McClary, 4 cr

5667 **Chamber Music of Beethoven** (prereq 1506, 1606)
0915-1100 MW, East Bank, McClary, 4 cr

R5810 **Asian Music: Performance** (prereq #)
Kagan, 2 cr

5811 **Traditional Indian Music: The Sacred and the Profane**
1515-1700 MW, East Bank, Kagan, 5 cr

5861 **Introduction to Ethnomusicology** (prereq #)
1315-1500 TTh, East Bank, Kagan, 5 cr

R8550 **Composition** (max 18 cr;prereq compl undergrad maj seq in mus theory, comp incl 3543,5503,5553,5563 or #)
–1 Argento, 3 cr
–2 Fetler, 3 cr
–3 0915-1200 F, Stokes, 3 cr
–4 Ultan, 3 cr

8755 **Choral Literature: Classical Era Through the Twentieth Century** (prereq grad student, #)
1230-1400 MWF, East Bank, Lancaster, 4 cr

8990 **Special Problems** (prereq △)
2-12 cr

MUSIC APPLIED (MusA)
Music
Liberal Arts

Winter Quarter
See fall quarter

Spring Quarter
See fall quarter

MUSIC EDUCATION (MuEd)
Education

Winter Quarter

R3011 **Teaching Music in the Elementary School** (prereq Mus 1001, elementary educ maj) (A-N only)
–1 0915-1000 MWF, Borg, 4 cr
–2 1215-1300 MWF, 4 cr
–3 1515-1600 MWF, Caswell, 4 cr (IIIA only)

3302 **Teaching Vocal and General Music Grades 5-12** (prereq music education maj or #) (A-N only)
1015-1100 MTWThF, Borg, 4 cr

3415 **Choral Laboratory** (prereq music education maj or #) (A-N only)
1315-1500 MWF, East Bank, Caswell, 4 cr

R3501 **String Techniques II** (prereq music education maj or #) (A-N only)
1115-1200 MWF, East Bank, Remenikova, 3 cr

R3503 **Woodwind Techniques** (prereq music education maj or #) (A-N only)
0915-1000 MTWTh, Schultz, 4 cr

R3504 **Brass Techniques** (§1525; prereq music education maj or #) (A-N only)
0915-1000 MTWTh, Turrentine, 4 cr

R3516 **Instrumental Laboratory II** (prereq music education maj or #) (A-N only)
1015-1100 MTWTh, Schultz, 4 cr

3650 **Student Teaching in Music** (prereq #) (A-N only)
–1 1415-1600 M, Schultz, 3-12 cr
–2 1615-1800 W, Borg, Buckner, 3-12 cr

3801 **Psychology of Music I** (prereq Psy 1001, 3604 or #) (A-N only)
1015-1100 MTWTh, East Bank, Turrentine, 4 cr

3804 **Music Therapy Techniques I** (prereq maj in music therapy) (A-N only)
1115-1300 T, 1115-1200 Th, Jellison, 4 cr

3850 **Field Experiences: Music Therapy** (max 10 cr; prereq 3800, 3804) (S-N only)
–1 1215-1300 Th, Jellison, 1-2 cr
–2 1315-1400 Th, Jellison, 1-2 cr

3851 **Internship: Music Therapy** (prereq #) (S-N only)
Jellison, 6 cr

3852 **Internship: Music Therapy** (prereq 3852) (S-N only)
Jellison, 6 cr

5621 **Supervision and Administration of School Music** (§5231; prereq #) (A-N only)
1615-1800 Th, East Bank, Borg, 3 cr

5661 **Music in Therapy** (A-N only)
1615-1800 W, Jellison, 3 cr

5970 **Independent Study** (prereq educ or grad stu) (A-N only)
1-4 cr

8282 **Seminar: Historical, Philosophical, and Psychological Issues** (8281-8282-8283†; prereq 8281)
1615-1800 T, Schultz, 2 cr

8990 **Research Problems** (prereq knowledge of elementary statistics)
1-12 cr

Spring Quarter

1201 **Introduction to Music Education** (A-N only)
1115-1200 M, Borg, 1 cr

1801 **Introduction to Music Therapy** (A-N only)
0915-1000 F, Jellison, 1 cr

R3011 **Teaching Music in the Elementary School** (prereq Mus 1001, elementary educ maj) (A-N only)
–1 0915-1000 MWF, Borg, 4 cr
–2 1315-1400 MWF, 4 cr

3302 **Teaching Vocal and General Music Grades 5-12** (prereq music education maj or #) (A-N only)
1015-1100 MTWThF, Borg, 4 cr

3331 **Practicum: Music Education** (prereq music education maj or #) (A-N only)
0815-1000 T, Borg, Caswell, 2 cr

R3501 **String Techniques II** (prereq music education maj or #) (A-N only)
1115-1200 MWF, East Bank, Remenikova, 3 cr

R3505 **Percussion Techniques** (prereq music education maj) (A-N only)
0815-0900 MTWTh, Dahlgren, 4 cr

3650 **Student Teaching in Music** (prereq #) (A-N only)
–1 1415-1600 M, Schultz, 3-12 cr
–2 1615-1800 W, Borg, Buckner, 3-12 cr

3802 **Psychology of Music II** (prereq 3801) (A-N only)
1015-1100 MTWTh, Turrentine, 4 cr

3806 **Music Therapy Techniques III** (3805-3806†; prereq 3805) (A-N only)
1115-1300 T, 1115-1200 Th, Jellison, 3 cr

3850 **Field Experiences: Music Therapy** (max 10 cr; prereq 3800, 3804) (S-N only)
1215-1300 Th, Jellison, 1-2 cr

3851 **Internship: Music Therapy** (prereq #) (S-N only)
Jellison, 6 cr

3852 **Internship: Music Therapy** (prereq 3852) (S-N only)
Jellison, 6 cr

5631 **Techniques and Materials: Choral Conducting** (§5421; prereq #) (A-N only)
1615-1800 W, East Bank, Caswell, 3 cr

5655 **New Dimensions in Music Education** (A-N only)
1615-1800 M, East Bank, Schultz, 3 cr

5970 **Independent Study** (prereq educ or grad stu) (A-N only)
1-4 cr

8283 **Seminar: Historical, Philosophical, and Psychological Issues** (8281-8282-8283†; prereq 8282)
1615-1800 T, Caswell, 2 cr

8661 **Research in Music Therapy** (prereq #)
1015-1200 M, Jellison, 3 cr 1141 University Ave SE,

8990 **Research Problems** (prereq knowledge of elementary statistics)
1-12 cr

NAVAL SCIENCE (Nav)

Winter Quarter

R0204 **Professional Training in Naval Science** (prereq #) (S-N only)
1515-1700 W, East Bank, Conrad, 0 cr

R1101 **Naval Ships Systems I** (prereq #)
–1 0915-1000 TTh, East Bank, May, 2 cr
–2 1215-1300 TTh, East Bank, May, 2 cr

R1104 **Science and Technology in the Design, Construction, and Use of Modern Weapons Systems** (prereq 1103, #)
–1 0915-1000 MW, East Bank, Wilson, 2 cr
–2 1115-1200 MW, East Bank, Wilson, 2 cr

R3303 **Inland and Coastal Navigation** (prereq #)
1215-1300 MTWThF, East Bank, Currie, 3 cr

R3304 **Celestial and Electronic Navigation** (prereq #)
★LECT 0915-1100 TTh, East Bank, Graening, 4 cr
–1 LAB 0915-1100 M, East Bank, Graening

R3453 **Amphibious Warfare II** (prereq 3452) (A-N only)
0915-1000 MF, East Bank, Conrad, 2 cr

Spring Quarter

R0204 **Professional Training in Naval Science** (prereq #) (S-N only)
0715-0900 W, East Bank, Conrad, 0 cr

R1102 **Naval Ships Systems II** (prereq #)
–1 0915-1000 TTh, East Bank, May, 2 cr
–2 1215-1300 TTh, East Bank, May, 2 cr

R3301 **Advanced Naval Operations** (prereq #)
–1 1115-1200 TWTh, East Bank, Currie, 3 cr
–2 1215-1300 TWTh, East Bank, Currie, 3 cr

R3304 **Celestial and Electronic Navigation** (prereq #)
★LECT 1500-1700 MT, East Bank, Graening, 4 cr
–1 LAB 1500-1700 Th, East Bank, Graening

R3406 **Principles of Naval Management III** (prereq #) (A-N only)
–1 1115-1200 TTh, East Bank, Chauncey, 2 cr
–2 1215-1300 TTh, East Bank, Chauncey, 2 cr

R3454 **Amphibious Warfare III** (prereq 3453) (A-N only)
0915-1000 MW, East Bank, Conrad, 2 cr

NORWEGIAN (Nor)
Scandinavian Languages
Liberal Arts

Winter Quarter

R1102 **Beginning Norwegian** (prereq 1101)
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 1115-1200 MTWThF, East Bank, 5 cr
–3 1315-1400 MTWThF, East Bank, 5 cr

1105 **Intermediate Norwegian** (prereq 1104)
0915-1000 MWF, East Bank, Simpson, 4 cr

3670 **Readings in Norwegian Literary Texts** (max 28 cr; prereq 3101)
1015-1100 MWF, East Bank, Mishler, 4 cr

Spring Quarter

R1103 **Beginning Norwegian** (prereq 1102)
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 1315-1400 MTWThF, East Bank, 5 cr

3101 **Advanced Norwegian** (prereq 1105)
0915-1000 MWF, East Bank, Simpson, 4 cr

3670 **Readings in Norwegian Literary Texts** (max 28 cr; prereq 3101)
1015-1100 MWF, East Bank, Mishler, 4 cr

NURSING, SCHOOL OF (Nurs)

Winter Quarter

R5200 **Introduction to Nursing** (prereq nursing student or △)
1015-1200 WF, East Bank, 4 cr

R5204 **Helping Relationships I** (prereq 5200 or 5201, psychology, growth and development or ¶)
–1 1015-1200 MW, East Bank, 2 cr
–2 1215-1400 TTh, East Bank, 2 cr
–3 1415-1600 TTh, East Bank, 2 cr
–4 1415-1600 TTh, East Bank, 2 cr
–5 0815-1000 WF, East Bank, 2 cr

R5205 **Tools I** (prereq admission to nursing, 5200 or 5201, microbiology, physiology or ¶)
–1 LAB 1015-1200 W, East Bank, 1 cr
–2 LAB 1015-1200 W, East Bank, 1 cr
–4 LAB 1015-1200 F, East Bank, 1 cr

R5404 **Tools II** (prereq 5206, LaMP 5170 or ¶, anatomy, MdBc 3050, Phcl 1009 or ¶)
–1 LAB 0815-1000 TTh, East Bank, 2 cr
–2 LAB 0815-1000 TTh, East Bank, 2 cr
–3 LAB 1015-1200 TTh, East Bank, 2 cr
–4 LAB 1015-1200 TTh, East Bank, 2 cr
–5 LAB 1315-1500 TTh, East Bank, 2 cr

R5405 **Tools II** (prereq 5404, LaMP 5171 or ¶)
–1 0815-1000 M, East Bank, 1 cr
–2 1015-1200 M, East Bank, 1 cr
–3 1215-1400 F, East Bank, 1 cr
–5 1415-1600 F, East Bank, 1 cr

R5408 **Adaptation II** (prereq 5207, LaMP 5170 or ¶LaMP 5170)
1215-1400 F, East Bank, 2 cr

R5409 **Helping Relationships II** (prereq group theory or 5208 or ¶, 5207, abnormal psychology or ¶)
–1 0815-1000 MW, East Bank, 2 cr
–2 1015-1200 MW, East Bank, 2 cr
–3 0815-1000 WF, East Bank, 2 cr
–4 1315-1500 TTh, East Bank, 2 cr
–5 1015-1200 WF, East Bank, 2 cr

R5611 **Synthesis Incorporating Concepts of Chronicity** (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1400 T, East Bank, 4 cr
–1 CLN
–2 CLN
–3 CLN
–4 CLN
–5 CLN
–6 CLN
–7 CLN
–8 CLN
–9 CLN

R5612 **Synthesis Incorporating Concepts of Stress and Crisis** (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1500 T, East Bank, 4 cr (RN only)
–1 CLN
–2 CLN

R5613 **Synthesis Incorporating Concepts of Loss** (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1400 Th, East Bank, 4 cr
–1 CLN
–2 CLN
–3 CLN
–4 CLN
–5 CLN
–6 CLN
–7 CLN
–8 CLN

R5614 **Synthesis Incorporating Concepts of Health** (prereq 5404, 5405 or ¶5405, 5407, 5408, 5409, abnormal psy, Phcl 1009, LaMP 5171 or ¶5171)
★LECT 1315-1500 Th, East Bank, 3 cr (RN only)
–1 CLN
–2 CLN

R5615 **Synthesis in Complex Nursing Situations I** (prereq 5611, 5612, 5613, 5614, FScN 3602)
★LECT 1315-1500 W, East Bank, 5 cr
–1 CLN
–2 CLN
–3 CLN
–4 CLN
–5 CLN

R5616 **Synthesis in Complex Nursing Situations II** (prereq 5611, 5612, 5613, 5614, FScN 3602)
★LECT 5 cr
–1 CLN
–2 CLN
–3 CLN
–4 CLN
–5 CLN
–6 CLN

R5714 **Nursing History and Physical Assessment** (prereq sr, 2 level II synthesis courses, grad student in nursing or RN, #)
1215-1500 TTh, East Bank, Burns, 3 cr (lab ar)

R5722 **An Introduction to The Nurse as a Leader for Change Through Participation in the Legislative Process** (prereq any two of the following: 5611, 5612, 5613, 5614 or # or grad)
1415-1600 W, East Bank, 5 cr

5750 **Assessments of Parents and Infants**
1800-2000 Th, East Bank, Sonstegard, 2 cr

R5751 **Foundations of Perinatal Care** (A-N only)
1415-1600 TTh, East Bank, Sonstegard, 2 cr

5799 **Self-Directed Study as a Means of Accomplishing Nursing Electives** (prereq any two of the following: 5611, 5612, 5613, 5614)
ar cr

R5801 **Gerontological Nursing Seminar** (prereq #)
1515-1700 W, East Bank, Taylor, 2 cr

R5816 **Leadership/Management** (prereq 5611, 5612, 5613, 5614, 5615 or 5616, FScN 3602)
★LECT 1015-1200 M, East Bank, 6 cr
–1 CLN
–2 CLN
–3 CLN
–4 CLN
–5 CLN

R5999 **Clinical Study** (prereq any two of the following: 5611, 5612, 5613, 5614)
0815-1000 M, East Bank, 1 cr

8001 **Special Educational Experiences in Nursing** (prereq △)
ar cr

8009 **Special Topics** (prereq #)
ar cr

R8011 **Moral and Ethical Positions in Nursing** (prereq △)
0815-1100 W, East Bank, Crisham, 3 cr

R8012 **Conceptual Framework for Nursing Practice** (prereq 8010)
–1 1615-1900 W, East Bank, Egan, 3 cr
–2 Weise, 3 cr (Rochester)

R8014 **Research in Nursing** (prereq inferential statistics, △)
0915-1200 F, East Bank, King, 3 cr

R8030 **Nursing Intervention Models** (8 cr must be completed before any cr is given; prereq 8011, 8012 or ¶8011, #)
–1 0915-1100 T, 1215-1400 T, East Bank, Sodergren, 8 cr (cln ar) (Med Surg)
–2 1215-1400 TTh, East Bank, Gordon, 8 cr (cln ar) (Psych Mental Health)
–3 0915-1300 W, East Bank, Rossi, 8 cr (cln ar) (NMW)

8050 **Problems in Nursing** (prereq #)
1-9 cr

8051 **Special Topics in Nursing Research**
1-9 cr

8060 **Advanced Clinical Nursing** (prereq △, #)
3-9 cr

8063 **Nursing Consultation**
3 cr

R8313 **Care of the Childbearing Family in Risk** (prereq physiology, #)
0915-1300 W, East Bank, Hangsleben, 4-6 cr (lab ar)

R8415 **Nurse Clinician Role Development** (prereq any nursing Focus I course, a course dealing with the health care delivery system)
1215-1500 T, Snyder, 6-9 cr (lab ar)

R8422 **Psychiatric-Mental Health Nursing: Family Dynamics and Therapy** (prereq 8421)
1015-1200 T, East Bank, Kjervik, 3 cr (lab ar)

R8431 **Childbearing-Childrearing Family Nursing I** (prereq 8030)
1515-1800 T, East Bank, Rode, 4-6 cr (lab ar)

8451 **Teaching-Learning Process in Nursing** (prereq 8030, ¶course in learning theory, #)
0915-1200 TTh, East Bank, Corcoran, 4 cr (lab ar)

R8455 **Nurse Educator in Higher Education** (prereq 8451, ¶course in educational measurement, #)
1415-1600 TTh, East Bank, Kintgen-Andrews, 6 cr (cln ar)

8509 **Special Topics: Nursing Education** (prereq #)
ar cr

8601 **Clinical Nursing Leadership I** (prereq 8600)
6 cr (cln ar)

8609 **Special Topics in Nursing Supervision** (prereq #)
ar cr

R8702 **Nursing Administration II** (prereq 8701, #)
1015-1200 T, East Bank, Edwardson, 6 cr (cln ar)

Spring Quarter

R5204 **Helping Relationships I** (prereq 5200 or 5201, psychology, growth and development or ¶)
–1 1015-1200 TTh, East Bank, 2 cr
–2 1015-1200 TTh, East Bank, 2 cr
–3 1215-1400 TTh, East Bank, 2 cr
–4 1215-1400 TTh, East Bank, 2 cr
–5 1215-1400 TTh, East Bank, 2 cr

R5205 **Tools I** (prereq admission to nursing, 5200 or 5201, microbiology, physiology or ¶)
–1 LAB 1015-1200 T, East Bank, 1 cr
–2 LAB 1215-1400 T, East Bank, 1 cr
–3 LAB 1415-1600 T, East Bank, 1 cr

R5206 **Tools I** (prereq 5205, anatomy or ¶)
–1 LAB 1215-1400 T, East Bank, 1 cr
–2 LAB 1415-1600 T, East Bank, 1 cr
–3 LAB 1415-1600 Th, East Bank, 1 cr

R5207 **Synthesis** (prereq 5202, 5203 or 5200, 5204, growth and development, 5206 or ¶)
–1 CLN 0815-1130 WF, 2 cr (1st 5 weeks)
–2 CLN 0815-1130 WF, 2 cr (1st 5 weeks)
–3 CLN 0815-1130 WF, 2 cr (2nd 5 weeks)
–4 CLN 0815-1130 WF, 2 cr (2nd 5 weeks)
–5 CLN 0815-1130 WF, 2 cr (1st 5 weeks)
–6 CLN 1315-1630 WF, 2 cr (2nd 5 weeks)

R5208 **Small Group Analysis, Nursing Practice**
★LECT 0915-1000 T, East Bank,
–1 LAB 1015-1200 TTh, East Bank, 3 cr
–2 LAB 1015-1200 TTh, East Bank, 3 cr
–3 LAB 1015-1200 TTh, East Bank, 3 cr
–4 LAB 1015-1200 TTh, East Bank, 3 cr
–5 LAB 1015-1200 TTh, East Bank, 3 cr
–6 LAB 1015-1200 TTh, East Bank, 3 cr
–7 LAB 1015-1200 TTh, East Bank, 3 cr
–8 LAB 1015-1200 TTh, East Bank, 3 cr

R5209 **Clinical Application of Nursing Tools: Level I** (prereq 5202, 5203 or 5200, 5204, 5205, 5206 or ¶5206)
–1 CLN 1 cr (1st 5 weeks)
–2 CLN 1 cr (1st 5 weeks)
–3 CLN 1 cr (2nd 5 weeks)
–4 CLN 1 cr (2nd 5 weeks)

R5405 **Tools II** (prereq 5404, LaMP 5171 or ¶)
–1 LAB 0815-1000 M, East Bank, 1 cr
–2 LAB 1015-1200 M, East Bank, 1 cr
–3 LAB 1215-1400 W, East Bank, 1 cr
–4 LAB 1215-1400 F, East Bank, 1 cr
–5 LAB 1 cr

5407 **Systematic Process II** (prereq 5207)
1015-1200 F, East Bank, 2 cr

R5611 **Synthesis Incorporating Concepts of Chronicity** (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1500 T, East Bank, 4 cr
–1 CLN
–2 CLN
–3 CLN
–4 CLN
–5 CLN
–6 CLN
–7 CLN
–8 CLN
–9 CLN

R5612 **Synthesis Incorporating Concepts of Stress and Crisis** (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1500 T, East Bank, 4 cr
–1 CLN
–2 CLN
–3 CLN
–4 CLN
–5 CLN
–6 CLN
–7 CLN
–8 CLN

R5613 **Synthesis Incorporating Concepts of Loss** (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1500 Th, East Bank, 4 cr
–1 CLN
–2 CLN
–3 CLN
–4 CLN
–5 CLN
–6 CLN
–7 CLN
–8 CLN
–9 CLN

R5614 **Synthesis Incorporating Concepts of Health** (prereq 5404, 5405 or ¶5405, 5407, 5408, 5409, abnormal psy, Phcl 1009, LaMP 5171 or ¶5171)
★LECT 1315-1500 Th, East Bank, 3 cr
–1 CLN
–2 CLN
–3 CLN
–4 CLN
–5 CLN
–6 CLN
–7 CLN
–8 CLN

R5615 **Synthesis in Complex Nursing Situations I** (prereq 5611, 5612, 5613, 5614, FScN 3602)
★LECT 1315-1500 W, 5 cr
–1 CLN
–2 CLN

R5616 **Synthesis in Complex Nursing Situations II** (prereq 5611, 5612, 5613, 5614, FScN 3602)
★LECT 5 cr
–1 CLN
–2 CLN
–3 CLN

R5704 **Human Sexuality: Significance for Nursing** (prereq 2 level II synthesis courses...S.A.R. weekend rec)
1015-1200 F, East Bank, 3 cr

5714 **Nursing History and Physical Assessment** (prereq sr, 2 level II synthesis courses, grad student in nursing or RN, #)
1015-1300 TTh, East Bank, Burns, 3 cr (lab ar)

R5722 **An Introduction to The Nurse as a Leader for Change Through Participation in the Legislative Process** (prereq any two of the following: 5611, 5612, 5613, 5614 or # or grad)
1415-1600 T, 5 cr (hrs ar)

R5725 **Legal Parameters of Nursing Practice** (prereq any two of the following: 5611, 5612, 5613, 5614, or RN with abnormal psych, 5409)
1015-1100 M, 2 cr

5799 **Self-Directed Study as a Means of Accomplishing Nursing Electives** (prereq any two of the following: 5611, 5612, 5613, 5614)
ar cr

R5801 **Gerontological Nursing Seminar** (prereq #)
1415-1600 W, East Bank, Taylor, 2 cr

R5816 **Leadership/Management** (prereq 5611, 5612, 5613, 5614, 5615 or 5616, FScN 3602)
★LECT 1015-1200 M, East Bank, 6 cr
–1 CLN
–2 CLN
–3 CLN
–4 CLN
–5 CLN

5901 **Financial Management of Nursing Services** (prereq #)
1615-2000 M, Edwardson, 3 cr

R5999 **Clinical Study** (prereq any two of the following: 5611, 5612, 5613, 5614)
0815-1000 M, East Bank, 1 cr

8001 **Special Educational Experiences in Nursing** (prereq △)
ar cr

8009 **Special Topics** (prereq #)
ar cr

R8010 **Structure of the Discipline of Nursing** (prereq △)
–1 1215-1500 TTh, East Bank, Sodergren, 3 cr (1st 5 weeks)
–2 0915-1200 W, East Bank, Egan, 3 cr

R8011 **Moral and Ethical Positions in Nursing** (prereq △)
1615-1900 Th, East Bank, 3 cr

R8012 **Conceptual Framework for Nursing Practice** (prereq 8010)
1215-1500 TTh, East Bank, 3 cr (2nd 5 weeks)

R8014 **Research in Nursing** (prereq inferential statistics, △)
–1 1615-1900 T, East Bank, Feldman, 3 cr
–2 0815-1100 F, King, 3 cr (Rochester)

R8030 **Nursing Intervention Models** (8 cr must be completed before any cr is given; prereq 8011, 8012 or ¶8011, #)
–1 1315-1600 TTh, East Bank, Sonstegard, 8 cr (cln ar) (Perinatal)
–2 0915-1100 W, 1215-1400 W, East Bank, Snyder, 8 cr (cln ar) (Med-Surg)
–3 1515-1800 T, 1615-1800 Th, East Bank, Taylor, 8 cr (cln ar) (CCFN)

8050 **Problems in Nursing** (prereq #)
1-9 cr

8051 **Special Topics in Nursing Research**
Norris, 1-9 cr

8060 **Advanced Clinical Nursing** (prereq △, #)
3-9 cr

8063 **Nursing Consultation**
Mansfield, 3 cr

8314 **Nurse-Midwifery Management During Childbearing** (prereq #)
0915-1300 W, East Bank, 6-10 cr (cln ar)

R8411 **Knowledge Development Underlying Nursing Therapy** (prereq 8030, advanced physiology)
1615-1800 W, East Bank, Sime, 4-6 cr (cln ar)

8421 **Psychiatric-Mental Health Nursing: Group Dynamics and Leadership Skills** (prereq 8030, Psych-Mental health section, a course in psychopathology)
1015-1200 Th, East Bank, Kjervik, 3 cr (cln ar)

8425 **Psychiatric-Mental Health Nursing: Role Development** (prereq 8422)
0915-1100 T, East Bank, Mansfield, 6 cr (cln ar)

8435 **Childbearing-Childrearing Family Nursing II** (prereq 8431 or #)
0915-1200 W, East Bank, Rode, 6-9 cr (cln ar)

8451 **Teaching-Learning Process in Nursing** (prereq 8030, ¶course in learning theory, #)
1315-1600 TTh, East Bank, Gustafson, 4 cr

R8455 **Nurse Educator in Higher Education** (prereq 8451, ¶course in educational measurement, #)
1015-1200 TTh, East Bank, Kintgen-Andrews, 6 cr (cln ar)

8509 **Special Topics: Nursing Education** (prereq #)
ar cr

8600 **Health Care Institutions and Nursing Leadership**
0815-1000 MTh, East Bank, Duxbury, 3 cr

8601 **Clinical Nursing Leadership I** (prereq 8600)
Hinsvark, 6 cr (cln ar)

8609 **Special Topics in Nursing Supervision** (prereq #)
ar cr

NUTRITION (Nutr)
Agriculture & Home Econ

Winter Quarter

8745 **Seminar** (prereq #)
1600-1645 T, St. Paul, Savaiano, 1 cr

8990 **Graduate Research** (prereq #)
2-5 cr

Spring Quarter

8745 **Seminar** (prereq #)
1600-1645 T, St. Paul, Phinney, 1 cr

8990 **Graduate Research** (prereq #)
2-5 cr

OPERATIONS MANAGEMENT (OM)
Management

Winter Quarter

R3000 **Introduction to Operations Management** (A-N only)
1045-1230 MW, West Bank, Daniels, 4 cr

R8041 **Project Management** (§5050; prereq 3000 or MBA 8050) (A-N only)
1730-2050 T, West Bank, Armstrong, 4 cr

R8057 **Operations Process Management** (§5057; prereq 3000 or MBA 8050) (A-N only)
–1 1315-1500 MW, West Bank, Scudder, 4 cr

R8850 **Topics in Operations Management** (prereq 3000) (A-N only)
0915-1200 M, West Bank, Schroeder, ar cr

8990 **Readings in Operations Management** (prereq consent of adviser, #, 2nd yr grad student, requisite introductory courses) (A-N only)
ar cr

8995 **Graduate Research in Operations Management** (prereq consent of adviser, #, 2nd yr grad student, requisite introductory courses) (A-N only)
ar cr

Spring Quarter

R3000 **Introduction to Operations Management** (A-N only)
–1 1215-1400 MW, West Bank, Treleven, 4 cr
–2 1215-1400 TTh, West Bank, Daniels, 4 cr
–3 1415-1600 TTh, West Bank, Daniels, 4 cr

R8058 **Operations Strategy** (§5058; prereq 8056, 8057) (A-N only)
1730-2050 T, West Bank, Schroeder, 4 cr

8990 **Readings in Operations Management** (prereq consent of adviser, #, 2nd yr grad student, requisite introductory courses) (A-N only)
ar cr

8995 **Graduate Research in Operations Management** (prereq consent of adviser, #, 2nd yr grad student, requisite introductory courses) (A-N only)
ar cr

PERSIAN (Per)
South And Southwest Asian Studies
Liberal Arts

Winter Quarter

1102 **Beginning Persian** (prereq 1101)
1315-1500 MW, 1315-1400 F, East Bank, Tavakoli, 5 cr

3012 **Intermediate Persian** (prereq 3011)
1615-1800 MW, East Bank, Alvi, 4 cr

5970 **Directed Readings** (prereq 3013, #, △, CLA approval)
ar cr

Spring Quarter

1103 **Beginning Persian** (prereq 1102)
1315-1500 MW, 1315-1400 F, East Bank, Tavakoli, 5 cr

3013 **Intermediate Persian** (prereq 3012)
1615-1800 MW, East Bank, Alvi, 4 cr

5970 **Directed Readings** (prereq 3013, #, △, CLA approval)
ar cr

PERSONAL ORIENTATION (PO)
Liberal Arts

Winter Quarter

R1001 **How to Study** (cannot be applied toward any CLA degree)
–1 0915-1000 MWF, East Bank, 2 cr
–2 1115-1200 MWF, East Bank, 2 cr
–3 1215-1300 MWF, East Bank, 2 cr
–4 1315-1400 MWF, East Bank, 2 cr
–5 0900-0945 MWF, St. Paul, 2 cr (StP)
–8 1515-1700 M, 1515-1600 W, 2 cr (Comstock Hall Study Lounge)

Spring Quarter

R1001 **How to Study** (cannot be applied toward any CLA degree)
–1 0915-1000 MWF, East Bank, 2 cr
–2 1115-1200 MWF, East Bank, 2 cr
–3 1215-1300 MWF, East Bank, 2 cr
–4 1315-1400 MWF, East Bank, 2 cr
–5 0900-0945 MWF, 2 cr (StP)

PHARMACOLOGY (Phcl)
Medical School

Winter Quarter

1001 **Dental Therapeutics** (prereq regis dental hygiene program or #)
0745-0930 W, Holte, 2 cr

5102 **Pharmacology for Pharmacy Students** (prereq 5101 or #) (A-N only)
★LECT 1015-1100 MWF, East Bank, Dunham, 4 cr
–1 LAB 1315-1400 F, East Bank,

5104 **Pharmacology for Dental Students**
0845-0930 MTWTh, East Bank, Wilcox, 4 cr

5109 **Problems in Pharmacology** (prereq #)
Shideman, ar cr

5515 **Clinical Pharmacology at the University Hospitals**
Mirkin, 9 cr

8203 **Research in Pharmacology** (prereq #)
ar cr

8204 **Seminar: Selected Topics in Pharmacology** (max 3 cr; prereq 5110 or #)
1215-1300 W, Sladek, 1 cr

8207 **Seminar: Psychopharmacology** (max 3 cr; prereq #)
Sparber, 1 cr

8211 Physiological Disposition of Drugs (prereq MdBc 5101 or #)
1515-1600 MWF, East Bank, Mannering, 3-4 cr

8217 Cardiovascular-Renal Pharmacology (prereq 5110 or #)
1515-1630 TTh, East Bank, Zimmerman, 3 cr

Spring Quarter

5106 Dental Therapeutics (prereq 5104)
Holte, 1 cr

5109 Problems in Pharmacology (prereq #)
Shideman, ar cr

8203 Research in Pharmacology (prereq #)
ar cr

8204 Seminar: Selected Topics in Pharmacology (max 3 cr; prereq 5110 or #)
1215-1300 W, Sladek, Wilcox, 1 cr

8205 Problems in Investigative Pharmacology (prereq MdBc 5100 or equiv, Phsl 8111 or ¶ or equiv or #) (A-N only)
O'Dea, 3 cr

8207 Seminar: Psychopharmacology (max 3 cr; prereq #)
Sparber, 1 cr

8214 Toxicology (prereq MdBc 5101 or #)
3 cr

PHILOSOPHY (Phil)
Liberal Arts

Winter Quarter

R1001 Introduction to Logic
★LECT 0915-1000 MWF, East Bank, Dolan
–1 REC 0915-1000 T, East Bank, 5 cr
–2 REC 0915-1000 T, East Bank, 5 cr
–3 REC 0915-1000 T, East Bank, 5 cr
–4 REC 1015-1100 T, East Bank, 5 cr
–5 REC 1015-1100 T, East Bank, 5 cr
–6 REC 1015-1100 T, East Bank, 5 cr
–7 REC 0915-1000 Th, East Bank, 5 cr
–8 REC 0915-1000 Th, East Bank, 5 cr
–9 REC 0915-1000 Th, East Bank, 5 cr
★LECT 1315-1400 MWF, East Bank, Lewis
–10 REC 1315-1400 T, East Bank, 5 cr
–11 REC 1315-1400 T, East Bank, 5 cr
–12 REC 1415-1500 T, East Bank, 5 cr
–13 REC 1315-1400 Th, East Bank, 5 cr
–14 REC 1315-1400 Th, East Bank, 5 cr
–15 REC 1415-1500 Th, East Bank, 5 cr

R1002 Introduction to Philosophy
★LECT 0915-1000 MWF, East Bank, Kitcher
–1 REC 0815-0900 T, East Bank, 5 cr
–2 REC 0915-1000 T, East Bank, 5 cr
–3 REC 0915-1000 Th, East Bank, 5 cr
★LECT 1115-1200 MWF, Root
–4 REC 1115-1200 T, East Bank, 5 cr
–5 REC 1115-1200 Th, East Bank, 5 cr
–6 REC 1215-1300 Th, East Bank, 5 cr

R1002H Honors Course: Introduction to Philosophy (prereq honors regis or #)
1115-1200 MTWF, East Bank, Mason, 5 cr

R1003 Introduction to Ethics
1015-1100 MTWF, East Bank, Dahl, 5 cr

R3002 General History of Western Philosophy
★LECT 1015-1100 MWF, East Bank, Terrell
–1 REC 1015-1100 T, East Bank, 5 cr
–2 REC 1015-1100 Th, East Bank, 5 cr

R3004 General History of Western Philosophy
★LECT 1115-1230 TTh, East Bank, Gunderson
–1 REC 1115-1200 M, East Bank, 5 cr
–2 REC 1115-1200 W, East Bank, 5 cr

R3005 Introduction to the Philosophy of Plato
1115-1200 MWF, East Bank, Dolan, 4 cr

R3202 Symbolic Logic II (§5202; prereq 3201 or #)
★LECT 1315-1400 MWF, East Bank, Hanson
–1 REC 1315-1400 Th, East Bank, 5 cr

3231 Introduction to the Philosophy of Language (prereq 1001 or 3201 or 5201 or #)
0915-1000 MWF, East Bank, 4 cr

R3302 Moral Problems of Contemporary Society
0915-1000 MWF, East Bank, 5 cr

R3631 Logic of Scientific Reasoning (§5631; prereq 1001 or 3201)
1015-1100 MWF, East Bank, Savage, 4 cr

R3910 Major Seminar (prereq upper division standing, philosophy maj)
1245-1400 TTh, East Bank, Peterson, 4 cr

3970 Directed Studies (prereq #, △, college approval)
1-5 cr

3980 Directed Instruction (prereq #, △, college approval)
1-5 cr

5046 Kant (prereq 3003 or #)
1215-1300 MWF, East Bank, Kitcher, 4 cr

5101 Metaphysics (prereq one qtr history of philosophy or #)
1015-1100 MWF, East Bank, C A Anderson, 4 cr

R5202 Symbolic Logic II (§3202; prereq 3201 or 5201 or #)
★LECT 1315-1400 MWF, East Bank, Hanson
–1 REC 1315-1400 T, East Bank, 5 cr

5324 Ethics and Education (prereq 8 cr in phil or educ or #)
0945-1100 TTh, East Bank, Scheman, 2-4 cr

5414 Political Philosophy (prereq 1004 or #)
1015-1100 MWF, East Bank, Wallace, 4 cr

5415 Philosophy of Law (prereq 1003 or 1004 or 3302 or social science maj or #)
1415-1645 W, East Bank, Sartorius, 4 cr

5512 Philosophy and Literary Criticism (prereq 5 cr in philosophy or #)
1115-1200 MWF, East Bank, Eaton, 4 cr

5611 Philosophy of the Social Sciences I (prereq 12 cr in philosophy or social sciences or #)
1315-1400 MWF, East Bank, Root, 4 cr

5615 Minds, Bodies, and Machines (prereq 4 cr in philosophy or #)
1415-1530 TTh, East Bank, Gunderson, 4 cr

5760 Selected Topics in Philosophy: Perception and Cognition (prereq 4 3xxx-5xxx cr in philosophy or #)
1415-1500 MWF, East Bank, Savage, 4 cr

5770 Selected Topics in Philosophy (prereq 4 3xxx-5xxx cr in philosophy or #)
1245-1400 TTh, East Bank, Earman, 4 cr

5970 Directed Studies and Research (prereq #, △, CLA approval)
1-5 cr

5990 Directed Studies and Research (prereq #, △, CLA approval)
1-5 cr

8090 Seminar in History of Philosophy (prereq #)
1515-1700 Th, East Bank, Terrell, 4 cr

8180 Seminar: Philosophy of Language (prereq #)
1515-1700 W, East Bank, Owens, 4 cr

8310 Seminar: Moral Philosophy (prereq 5311 or #)
1515-1700 T, East Bank, Dahl, 4 cr

8970 Directed Study and Research (prereq passing grade on written prelim exam for PhD in philosophy)
1-4 cr

8990 Directed Study and Research (prereq passing grade on written prelim exam for PhD in philosophy)
1-4 cr

Spring Quarter

R1001 Introduction to Logic
★LECT 0915-1000 MWF, East Bank, Earman
–1 REC 0915-1000 T, East Bank, 5 cr
–2 REC 0915-1000 T, East Bank, 5 cr
–3 REC 0915-1000 T, East Bank, 5 cr
–4 REC 1015-1100 T, East Bank, 5 cr
–5 REC 1015-1100 T, East Bank, 5 cr
–6 REC 1015-1100 T, East Bank, 5 cr
–7 REC 0915-1000 Th, East Bank, 5 cr
–8 REC 0915-1000 Th, East Bank, 5 cr
–9 REC 0915-1000 Th, East Bank, 5 cr
★LECT 1315-1400 MWF, East Bank, Scheman
–10 REC 1315-1400 T, East Bank, 5 cr
–11 REC 1315-1400 T, East Bank, 5 cr
–12 REC 1415-1500 T, East Bank, 5 cr
–13 REC 1315-1400 Th, East Bank, 5 cr
–14 REC 1315-1400 Th, East Bank, 5 cr
–15 REC 1415-1500 Th, East Bank, 5 cr

R1002 Introduction to Philosophy
★LECT 1015-1100 MWF, East Bank, Eaton
–1 REC 0915-1000 T, East Bank, 5 cr
–2 REC 1015-1100 T, East Bank, 5 cr
–3 REC 1015-1100 Th, East Bank, 5 cr
★LECT 1315-1400 MWF, East Bank, Anderson
–4 REC 1215-1300 T, East Bank, 5 cr
–5 REC 1315-1400 T, East Bank, 5 cr
–6 REC 1315-1400 Th, East Bank, 5 cr

R1003 Introduction to Ethics
1115-1200 MTWF, East Bank, Mason, 5 cr

R1004 Introduction to Political Philosophy
0945-1100 TTh, East Bank, Sartorius, 5 cr

R1004H Introduction to Political Philosophy (prereq honors regis or #)
★LECT 0945-1100 TTh, East Bank, Sartorius
–80 REC 1115-1200 T, East Bank, 5 cr

R1103 Ethics with Emphasis on Writing (§1003)
1215-1300 MTWF, East Bank, Peterson, 5 cr

R3003 General History of Western Philosophy
★LECT 1015-1100 MWF, East Bank, Lewis
–1 REC 1015-1100 T, East Bank, 5 cr
–2 REC 1015-1100 Th, East Bank, 5 cr

R3003H Honors Course: General History of Western Philosophy (prereq honors regis or #)
★LECT 1015-1100 MWF, East Bank, Lewis
–80 REC 1015-1100 T, East Bank, 5 cr

R3105 Introduction to the Theory of Knowledge (prereq 1001 or 3201 or #)
0915-1000 MWF, East Bank, Root, 4 cr

3234 Philosophy of Feminism (prereq #)
1115-1200 MWF, East Bank, Scheman, 4 cr

R3304 Law and Morality
1245-1400 TTh, East Bank, Sartorius, 5 cr

R3304H Honors Course: Law and Morality
1245-1400 TTh, East Bank, Sartorius, 5 cr

R3305 Medical Ethics (§PubH 5623)
0945-1100 TTh, East Bank, J Zita, 5 cr

3502 Introduction to Aesthetics
1115-1230 TTh, East Bank, Gunderson, 4 cr

3781 Contemporary Existentialism (prereq 3003 or 3004 or 5054 or #)
0815-0930 TTh, East Bank, 4 cr

3970 Directed Studies (prereq #, △, college approval)
1-5 cr

3980 Directed Instruction (prereq #, △, college approval)
1-5 cr

5004 Socratic Dialogues (prereq 3001 or #)
1015-1100 MWF, East Bank, Dahl, 4 cr

5052 Brentano (prereq 3003 or #)
1115-1200 MWF, East Bank, Terrell, 4 cr

5105 Theory of Knowledge (prereq 1001 or 3201 or #)
1415-1500 MWF, East Bank, Anderson, 4 cr

5221 Philosophy of Logic (prereq 3202 or 5202 or Math 5162 or #)
1015-1100 MWF, East Bank, Hanson, 4 cr

5301 History of Ethics: British Moralists (prereq 1003 or one qtr history of philosophy or #)
1315-1400 MWF, East Bank, Terrell, 4 cr

5321 Theories of Justice (prereq 1003 or 1004 or 5311 or #)
0915-1000 MWF, East Bank, Mason, 4 cr

5601 Philosophy of Science (prereq 1001 or 3201 or #)
1115-1200 MWF, East Bank, Earman, 4 cr

5701 Survey of Contemporary Philosophy (prereq 3003 or #)
1245-1400 TTh, East Bank, Lewis, 4 cr

5760 Selected Topics in Philosophy (prereq 4 3xxx-5xxx cr in philosophy or #)
1415-1530 TTh, East Bank, Gunderson, 4 cr

5770 Selected Topics in Philosophy (prereq 4 3xxx-5xxx cr in philosophy or #)
1415-1630 W, East Bank, Dolan, 4 cr

5970 Directed Studies and Research (prereq #, △, CLA approval)
1-5 cr

5990 Directed Studies and Research (prereq #, △, CLA approval)
1-5 cr

8090 Seminar in History of Philosophy (prereq #)
1515-1700 T, East Bank, Kitcher, 4 cr

8510 Seminar: Studies in Aesthetics (prereq #)
1515-1700 W, East Bank, Eaton, 4 cr

8690 Research in Philosophy of Science (prereq #)
1515-1700 Th, East Bank, Savage, 4 cr

8970 **Directed Study and Research** (prereq passing grade on written prelim exam for PhD in philosophy)
1-4 cr

8990 **Directed Study and Research** (prereq passing grade on written prelim exam for PhD in philosophy)
1-4 cr

PHYSICAL EDUCATION (PE)
School of Physical Ed, Rec, School Health Ed
Education

Winter Quarter

R1007 **Swimming**
0915-1000 MWF, East Bank, 1 cr

R1014 **Conditioning**
–1 1015-1100 MWF, 1 cr
–2 0815-0910 TTh, 1 cr
–3 0915-1010 TTh, 1 cr
–4 1115-1210 TTh, 1 cr
–5 1800-2000 T, 1 cr
–6 1000-1055 TTh, St. Paul, 1 cr

R1015 **Weight Training**
–1 0915-1000 MWF, 1 cr
–2 1015-1100 MWF, 1 cr
–3 0815-0910 TTh, 1 cr
–4 0915-1010 TTh, 1 cr

R1032 **Badminton**
0815-0910 TTh, 1 cr

R1033 **Foil Fencing**
0915-1010 TTh, Jacobson, 1 cr

R1034 **Judo**
–1 1215-1310 TTh, Holm, 1 cr
–2 1315-1410 TTh, Holm, 1 cr

R1035 **Karate**
–1 0915-1010 MW, East Bank, Fusaro, 1 cr
–2 1015-1110 MW, East Bank, Fusaro, 1 cr

R1036 **Racquetball**
–1 1015-1110 MW, 1 cr
–2 1315-1410 MW, 1 cr
–3 1415-1510 MW, 1 cr
–4 0915-1010 TTh, 1 cr
–5 1015-1100 TTh, 1 cr
–6 1315-1410 TTh, 1 cr
–7 1415-1510 TTh, 1 cr

R1043 **Beginning Horsemanship**
–1 1600-1800 M, Bryant Lake Stables, Krotee, 1 cr
–2 1600-1800 T, Bryant Lake Stables, Krotee, 1 cr
–3 1600-1800 Th, Bryant Lake Stables, Krotee, 1 cr

R1044 **Self Defense**
–1 1415-1510 TTh, East Bank, Holm, 1 cr
–2 1800-2000 T, East Bank, Holm, 1 cr
–3 1800-2000 Th, Bendickson, Brandl, 1 cr

R1046 **Apparatus**
1015-1110 MW, Roethlisberger, 1 cr

R1047 **Archery** (moderate intensity)
1015-1110 MW, 1 cr

R1048 **Bowling** (moderate intensity)
–1 0915-1010 TTh, 1 cr
–2 1015-1110 TTh, 1 cr

R1052 **Rifle Marksmanship** (moderate intensity)
–1 0915-1010 MW, East Bank, Coons, 1 cr
–2 1015-1110 MW, East Bank, Coons, 1 cr

R1053 **Ice Skating**
–1 0815-0900 MWF, 1 cr
–2 0915-1000 MWF, 1 cr

R1056 **Nordic (Cross Country) Skiing**
1400-1530 MWF, 1 cr (StP) (Jan 3-Feb 3)

R1057 **Skiing**
–1 1330-1530 T or 1530-1730 T, Krotee, 1 cr
–2 1330-1530 Th or 1530-1730 Th, Krotee, 1 cr
–3 1530-1730 F or 1900-2100 F, Krotee, 1 cr

R1060 **Tumbling, Floor Exercise, and Trampoline**
1215-1310 MW, East Bank, Roethlisberger, 1 cr

R1067 **Basketball**
1315-1400 MWF, 1 cr

R1070 **Ice Hockey**
–1 1315-1400 MWF, Buetow, 1 cr
–2 1315-1410 TTh, Buetow, 1 cr

R1074 **Volleyball**
–1 0915-1000 MWF, East Bank, 1 cr
–2 1015-1100 MWF, 1 cr
–3 1115-1200 MWF, 1 cr

R1107 **Swimming** (prereq 1007)
1315-1410 TTh, 1 cr

R1135 **Karate** (prereq 1035)
1115-1210 MW, East Bank, Fusaro, 1 cr

R1143 **Intermediate Horsemanship** (prereq 1043 or #)
1600-1800 W, Bryant Lake Stables, Krotee, 1 cr

R1154 **Figure Skating** (prereq 1053)
0915-1010 TTh, Drew, 1 cr

R1157 **Skiing** (prereq 1057)
–1 1330-1530 T or 1530-1730 T, 1 cr
–2 1330-1530 Th or 1530-1730 Th, 1 cr

R1248 **Bowling** (prereq 160 average) (moderate intensity
1115-1210 TTh, Sleezer, 1 cr

R1257 **Skiing** (prereq 1157)
1330-1530 T or 1530-1730 T, 1 cr

R1306 **Advanced Lifesaving** (prereq ability to swim 440 yds)
0915-1100 TTh, East Bank, 1 cr

R1410 **Water Safety Instructor** (prereq curr ARC adv Lifesaving Cert, have or concurrently acquire ARC First Aid, CPR Cert)
0915-1100 TTh, Stoner, 2 cr

R1415 **Theory, Practice of Weight Training, Conditioning** (prereq 1014, 1015 or #)
1615-1710 MTWTh, Rohde, 2 cr

R1497 **Directed Study** (prereq 3 cr in physical education, △)
Krotee, 1-6 cr

R1521 **Gymnastics** (A-N only)
–1 1115-1200 MWF, Roethlisberger, 1 cr (women's events)
–2 1115-1200 MWF, Roethlisberger, 1 cr (men's events)

R1522 **Gymnastics** (prereq 1521) (A-N only)
–1 1115-1230 TTh, Yeboah, 1 cr (women's events)
–2 1115-1230 TTh, Roethlisberger, 1 cr (men's events)

R1871 **Introduction to Physical Education** (prereq physical education maj) (A-N only)
0930-1100 TTh, Shick, 3 cr

R1875 **Orientation to Teaching Physical Education** (prereq physical education maj) (A-N only)
0800-0900 MWF, Jonas, 4 cr

R1990 **Directed Study** (prereq △) (A-N only)
Stoner, 1-6 cr

R3113 **Motor Learning and Motor Development** (A-N only)
1015-1200 TTh, Plack, 4 cr

3114 **Prevention and Care of Injuries** (prereq 3110 or Anat 1027) (A-N only)
1015-1100 MWF, Marshall, 3 cr

R3143 **Organization and Management of Sport** (prereq 2 cr coaching course) (A-N only)
0915-1000 MWF, Krotee, 3 cr

R3144 **Administration** (§3120; prereq physical education maj, sr) (A-N only)
0915-1000 TTh, Anderson, 2 cr

R3150 **Introduction to Evaluation** (A-N only)
0815-0900 MTWTh, Shick, 4 cr

R3169 **Volleyball Coaching** (prereq 1174 or #) (A-N only)
0815-0900 TTh, Wells, 2 cr

R3178 **Track and Field Coaching** (prereq 1654 or 1059 or #) (A-N only)
0915-1000 TTh, East Bank, Griak, 2 cr

R3322 **Teaching Physical Education: Elementary School** (prereq 1871, 1875) (A-N only)
1015-1200 MWF, Lampe, 5 cr

R3327 **Teaching Physical Education in the Elementary School** (prereq elementary education maj) (A-N only)
–1 1315-1400 MWF, Lampe, 3 cr (IIIA only)
–2 1415-1500 MWF, Berseth, 3 cr

R3621 **Student Teaching: Elementary** (prereq 3322, 3323, SeEd 3150, 3155 or Elem 3100, PubH 3385, 3386) (S-N optional)
1615-1800 W, East Bank, Lampe, Stube, 6 cr (addnl hrs ar)

R3622 **Student Teaching: Secondary** (prereq 3322, 3323, SeEd 3150, 3155 or Elem 3100, PubH 3385, 3386) (S-N optional)
1615-1800 W, East Bank, Anderson, Winters, 6 cr (addnl hrs ar)

R3624 **Student Teaching: Coaching** (S-N only)
1815-1930 W, East Bank, Winters, 3 cr

R3625 **Supervised Practical Experience** (max 6 cr; prereq △) (S-N only)
Stoner, 3 cr

R3900 **Directed Study** (prereq △) (A-N only)
Stoner, 1-9 cr

5101 **Physical Education Activities for the Handicapped** (prereq 5100 or SpEd 5101 or PsyS 5101) (A-N only)
1800-2000 M, Breihan, 3 cr (1 hr ar)

5103 **Practicum: Physical Education for the Handicapped in a Mainstreamed Setting** (prereq 5100, 5101 or #) (S-N only)
1800-2000 T, East Bank, Breihan, 1-3 cr (1 hr ar)

5121 **Contributions of Basic Science to Physical Education** (prereq #) (A-N only)
1600-1800 M, East Bank, Stoner, 3 cr (1 hr ar)

5131 **Motor Development** (prereq 3112 or #) (A-N only)
1600-1800 W, East Bank, Plack, 3 cr (1 hr ar)

5136 **Psychology of Coaching** (prereq 3113 or #) (A-N only)
1600-1800 T, East Bank, Krotee, 3 cr (1 hr ar)

5351 **Seminar: Teaching Physical Education in Colleges and Universities** (max 3 cr, §Rec 5351, Hlth 5351; prereq △) (A-N only)
1 cr

5387 **Detection and Prevention of Coronary Heart Disease** (§PubH 5387) (A-N only)
1615-1800 MW, Serfass, 4 cr

5981 **Problems** (prereq MEd candidate, #) (A-N only)
ar cr

5983 **Readings: Physical Education** (max 9 cr; prereq educ or grad stu) (A-N only)
ar cr

8381 **Laboratory Research Techniques** (prereq 5980 or ¶)
1800-2000 T, Serfass, 1-3 cr

8980 **Research Problems** (max 2 cr; prereq 5980, PsyF 5110 or #) (S-N only)
1615-1800 Th, Alexander, 1 cr

8981 **Research Problems** (prereq 8980 or #) (S-N only)
ar cr

Spring Quarter

R1014 **Conditioning**
–1 0815-0900 MWF, 1 cr
–2 1015-1100 MWF, 1 cr
–3 1115-1200 MWF, 1 cr
–4 0915-1010 TTh, 1 cr
–5 1015-1110 TTh, 1 cr
–6 1115-1210 TTh, 1 cr
–7 0900-0945 MWF, St. Paul, 1 cr

R1015 **Weight Training**
–1 0915-1000 MWF, 1 cr
–2 1015-1100 MWF, 1 cr
–3 0915-1010 TTh, 1 cr

R1033 **Foil Fencing**
0915-1010 TTh, Jacobson, 1 cr

R1034 **Judo**
–1 1315-1410 TTh, Holm, 1 cr
–2 1415-1510 TTh, Holm, 1 cr

R1035 **Karate**
–1 0915-1010 MW, East Bank, Fusaro, 1 cr
–2 1015-1110 MW, East Bank, Fusaro, 1 cr

R1036 **Racquetball**
–1 0915-1010 MW, 1 cr
–2 1015-1110 MW, 1 cr

R1038 **Tennis**
–1 0915-1000 MWF, 1 cr
–2 1015-1100 MWF, 1 cr
–3 1115-1200 MWF, 1 cr
–4 0815-0910 TTh, 1 cr
–5 0915-1010 TTh, 1 cr
–6 1015-1110 TTh, 1 cr
–7 1215-1310 TTh, 1 cr
–8 1000-1055 MW, St. Paul, 1 cr

R1041 **Cycling** (supply own bicycle)
1015-1110 TTh, East Bank, 1 cr

R1042 **Orienteering**
1315-1410 TTh, East Bank, Coons, 1 cr (addnl hrs ar) (May 1-31)

R1043 **Beginning Horsemanship**
–1 1600-1800 M, Bryant Lake Stables, Krotee, 1 cr
–2 1600-1800 T, Bryant Lake Stables, Krotee, 1 cr
–3 1600-1800 Th, Bryant Lake Stables, Krotee, 1 cr

R1044 Self Defense
–1 1015-1110 TTh, East Bank, Bendickson, Brandl, 1 cr
–2 1115-1210 TTh, East Bank, Holm, 1 cr

R1050 Golf (moderate intensity)
–1 0915-1000 MWF, 1 cr
–2 1015-1100 MWF, 1 cr
–3 0815-0910 TTh, 1 cr

R1072 Soccer
–1 0915-1010 MW, 1 cr
–2 1015-1110 MW, 1 cr

R1073 Softball
–1 0915-1010 MW, 1 cr
–2 1015-1110 MW, 1 cr

R1074 Volleyball
1115-1210 TTh, 1 cr

R1134 Judo (prereq 1034)
1215-1310 TTh, Holm, 1 cr

R1138 Tennis (prereq 1038)
1115-1210 TTh, 1 cr TCts,

R1143 Intermediate Horsemanship (prereq 1043 or #)
1600-1800 W, Bryant Lake Stables, Krotee, 1 cr

R1160 Tumbling, Floor Exercise, and Trampoline (prereq 1060 or equiv)
0915-1010 MW, East Bank, Roethlisberger, 1 cr

R1205 Scuba and Skin Diving (prereq 1107)
1015-1200 TTh, Aubineau, 1 cr

R1306 Advanced Lifesaving (prereq ability to swim 440 yds)
1015-1200 TTh, East Bank, 1 cr

R1410 Water Safety Instructor (prereq curr ARC adv Lifesaving Cert, have or concurrently acquire ARC First Aid, CPR Cert)
1015-1200 MW, Freeman, 2 cr

R1497 Directed Study (prereq 3 cr in physical education, △)
Krotee, 1–6 cr

R1522 Gymnastics (prereq 1521) (A–N only)
–1 0815-0930 TTh, 1 cr (women's events)
–2 0815-0930 TTh, Roethlisberger, 1 cr (men's events)

R1654 Track and Field (prereq 1059, physical education maj) (A–N only)
0915-1000 MWF, 1 cr

R1871 Introduction to Physical Education (prereq physical education maj) (A–N only)
0930-1100 TTh, East Bank, Shick, 3 cr

R1875 Orientation to Teaching Physical Education (prereq physical education maj) (A–N only)
0800-0900 MWF, East Bank, Jonas, 4 cr

R1990 Directed Study (prereq △) (A–N only)
Stoner, 1–6 cr

R3100 Adapted Physical Education (A–N only)
1315-1400 MWF, Breihan, 3 cr

R3111 Mechanics of Movement (prereq Anat 1027) (A–N only)
0815-0900 MWF, Stoner, 3 cr

R3113 Motor Learning and Motor Development (A–N only)
1015-1200 TTh, East Bank, Plack, 4 cr

R3114 Prevention and Care of Injuries (prereq 3110 or Anat 1027) (A–N only)
0915-1000 MWF, Monroe, 3 cr

R3115 Physiological Application to Sports (§PubH 3385, 3386; prereq Phsl 3051 or #) (A–N only)
1615-1730 TTh, Alexander, 3 cr

R3126 Psychological and Sociological Dimensions of Physical Activity (A–N only)
1215-1400 TTh, Krotee, 3 cr

R3174 Gymnastics Coaching (A–N only)
1015-1100 MWF, East Bank, Roethlisberger, 2 cr

R3310 Athletic Training Laboratory (prereq 3114) (A–N only)
0915-1000 T, Marshall, 1 cr

R3322 Teaching Physical Education: Elementary School (prereq 1871, 1875) (A–N only)
1115-1300 MWF, Lampe, 5 cr

R3323 Teaching Physical Education: Secondary School (prereq all required activity courses) (A–N only)
1015-1200 MWF, Anderson, 5 cr

R3327 Teaching Physical Education in the Elementary School (prereq elementary education maj) (A–N only)
–1 1315-1400 MWF, Plack, 3 cr
–2 1415-1500 MWF, East Bank, Lampe, 3 cr

R3621 Student Teaching: Elementary (prereq 3322, 3323, SeEd 3150, 3155 or Elem 3100, PubH 3385, 3386) (S-N optional)
1615-1800 W, Lampe, Stube, 6 cr (addnl hrs ar)

R3622 Student Teaching: Secondary (prereq 3322, 3323, SeEd 3150, 3155 or Elem 3100, PubH 3385, 3386) (S-N optional)
1615-1800 W, Anderson, Winters, 6 cr (addnl hrs ar)

R3624 Student Teaching: Coaching (S–N only)
1815-1930 W, East Bank, Winters, 3 cr

R3625 Supervised Practical Experience (max 6 cr; prereq △) (S–N only)
Stoner, 1–6 cr

R3900 Directed Study (prereq △) (A–N only)
Stoner, 1–9 cr

5102 Practicum: Physical Education for Handicapped in an Adapted Setting (max 3 cr; prereq 5100, 5101 or #) (S–N only)
1800-2000 M, Breihan, 3 cr (1 hr ar)

5111 Physical Education Facilities (A–N only)
1615-1815 W, East Bank, Jaeger, 3 cr (1 hr ar)

5126 Advanced Psychological and Sociological Dimensions: Physical Activity (prereq #) (A–N only)
1600-1800 Th, East Bank, Krotee, 3 cr (1 hr ar)

5140 Biomechanics of Sport Safety (prereq undergrad kinesiology) (A–N only)
1600-1800 M, East Bank, Stoner, 3 cr (1 hr ar)

R5151 Curriculum (prereq sr, 3322, 3323 or #) (A–N only)
0915-1000 MWF, East Bank, Young, 3 cr

5351 Seminar: Teaching Physical Education in Colleges and Universities (max 3 cr, §Rec 5351, Hlth 5351; prereq △) (A–N only)
1 cr

5388 Exercise Testing, Conditioning, and Cardiac Rehabilitation (§PubH 5388; prereq PubH 5387 or PE 5387, #) (A–N only)
1615-1800 MW, Serfass, 4 cr

5720 Topics in Physical Education (prereq #) (A–N only)
1800-2000 T, Alexander, Serfass, others, 3 cr (1 hr ar)

5981 Problems (prereq MEd candidate, #) (A–N only)
ar cr

5983 Readings: Physical Education (max 9 cr; prereq educ or grad stu) (A–N only)
ar cr

5985 Application of Research (A–N only)
1800-2000 T, Shick, 3 cr (1 hr ar)

8113 College Physical Education Administration (prereq 8110)
1600-1800 T, East Bank, Jaeger, 3 cr (1 hr ar)

8980 Research Problems (max 2 cr; prereq 5980, PsyF 5110 or #) (S–N only)
1600-1800 W, Alexander, 1 cr

8981 Research Problems (prereq 8980 or #) (S–N only)
ar cr

PHYSICS (Phys)
Institute of Technology

Winter Quarter

R1001 The Physical World (§any physics courses other than 1061, no cr for IT stu; prereq one yr high school algebra)
1015-1100 MTWF, East Bank, 4 cr (Companion lab is 1005)

R1005 Physics Laboratory (no cr for IT students; prereq 1001 or ¶) (S–N only)
1 cr (Lab time assigned first 2 days of class)

R1041 Introductory Physics (§other intro phys crse, no cr IT ex arch, pre-arch, env des; prereq hs alg, plane geometry)
1415-1500 MTWF, East Bank, 4 cr (Companion lab is 1045)

R1042 Introductory Physics (§other intro physics course, no cr IT except arch, pre-arch, env design; prereq 1041) (Companion lab is 1046)
–1 1415-1500 MTWF, East Bank, 4 cr
–2 1400-1445 MTWF, St. Paul, 4 cr

R1045 Introductory Physics Laboratory (no cr IT except arch, pre-arch, environmental design; prereq 1041 or ¶) (S–N only)
1 cr (Lab time assigned first 2 days of class)

R1046 Introductory Physics Laboratory (no cr IT except arch, pre-arch, environmental design; prereq 1042 or ¶) (S–N only)
–1 1 cr (Mpls) (Lab time assigned first 2 days of class)
–2 1 cr (StP) (Lab time assigned first 2 days of class)

R1105 General Physics (no cr for IT students; prereq 1104)
1115-1200 MTWThF, East Bank, 4 cr (Companion lab is 1108)

R1108 General Physics Laboratory (no cr for IT students; prereq 1107, 1105 or ¶) (S–N only)
1 cr (Lab time assigned first 2 days of class)

R1271 General Physics (prereq Math 1221 or 1321 or 1621 or ¶) (Companion lab is 1275)
–1 0815-0900 MTWThF, East Bank, 4 cr
–2 1015-1100 MTWThF, East Bank, 4 cr
–3 1115-1200 MTWThF, East Bank, 4 cr
–4 1315-1400 MTWThF, East Bank, 4 cr

R1275 General Physics Laboratory (prereq 1271 or 1311 or ¶) (S–N only)
1 cr (Lab time assigned first 2 days of class)

R1281 General Physics (prereq 1271, completion of or ¶Math 1231, 1331, 1621) (Companion lab is 1285)
–1 0815-0900 MTWThF, East Bank, 4 cr
–2 1215-1300 MTWThF, East Bank, 4 cr

R1285 General Physics Laboratory (prereq 1275, 1281 or 1331 or ¶) (S–N only)
1 cr (Lab time assigned first 2 days of class)

R1291 General Physics (prereq 1281) (Companion lab is 1295)
–1 0915-1000 MTWThF, East Bank, 4 cr
–2 1315-1400 MTWThF, East Bank, 4 cr

R1295 General Physics Laboratory (prereq 1285, 1291 or 1341 or ¶) (S–N only)
1 cr (Lab time assigned first 2 days of class)

R1321 Introductory Physics with Calculus (prereq 1311, ¶Math 1221 or 1521 or 1621 or equiv)
1015-1100 MTWF, East Bank, 4 cr

R3011 Oscillations (prereq 1291, Math 3221 or ¶ or equiv)
0915-1000 MTWF, East Bank, 4 cr

R3501 Modern Physics (§3511, 3512, 3513, no cr for physics majs; prereq 1291 or 1106)
1315-1400 MTWF, East Bank, 4 cr

R3512 Modern Physics (prereq 3511, Math 3221 or ¶ or 3066 or ¶)
1015-1100 MTWF, East Bank, 4 cr

R3515 Physics Laboratory (prereq 3501 or ¶ or 3512 or ¶)
–1 LAB 1415-1700 T, East Bank, Blair, 1 cr
–2 LAB 0815-1100 Th, East Bank, Blair, 1 cr
–3 LAB 1415-1700 Th, East Bank, Blair, 1 cr
–4 LAB 1415-1700 F, East Bank, Blair, 1 cr

R3970 Directed Study (prereq #, △)
1–5 cr

R5022 Introduction to Analytic Mechanics (prereq 5021)
0915-1000 MTWF, East Bank, 4 cr

R5023 Introduction to Electric and Magnetic Fields (prereq 3011, Math 3231 or equiv)
1115-1200 MTWF, East Bank, 4 cr

R5032 Topics in Mathematical Physics (prereq 5031)
0915-1000 MTWF, East Bank, 4 cr

R5052 Classical Physics (prereq 5051)
0800-0900 MWF, East Bank, 4 cr

R5091 Physical Acoustics of Music (no cr for phys grad student; prereq 1 yr high school algebra, upper div or grad standing in music or music educ or equiv background in music theory, practice or #)
0915-1000 MTWF, East Bank, Roll, 5 cr

R5102 **Introduction to Quantum Mechanics** (prereq 5101)
1315-1400 MTWF, East Bank, 4 cr

R5122 **Methods of Experimental Physics II** (prereq 5121 or #)
1215-1300 MWF, East Bank, 4 cr (lab ar)

R5124 **Experimental Project** (prereq 5123, #)
ar cr

R5152 **Quantum Mechanics** (prereq 5151)
0800-0910 T, 0800-0950 Th, East Bank, Valls, 4 cr

R5202 **Thermal and Statistical Physics** (prereq 5201)
1015-1100 MTWF, East Bank, 4 cr

R5232 **Introduction to Solid State Physics** (prereq 5231)
0915-1000 MTWF, East Bank, 4 cr

R5451 **Cloud Physics** (prereq Math 3211 or equiv, 1 yr general physics)
1215-1300 MWF, East Bank, G Freier, 3 cr

R5805 **Contemporary Optics** (prereq #)
1415-1500 MTWF, East Bank, 4 cr

R5950 **Seminar** (prereq △)
1600-1730 W, East Bank, ar cr

R5970 **Directed Studies** (prereq #, △)
1-5 cr

R5990 **Directed Research** (prereq 3rd yr, △)
ar cr

R8082 **General Relativity** (prereq 8081)
1215-1300 MWF, East Bank, 3 cr

R8122 **Relativistic Quantum Mechanics** (prereq 8121 or #)
1315-1400 MWF, East Bank, 3 cr

R8200 **Seminar: Solid-State and Low-Temperature Physics**
1415-1600 Th, East Bank, ar cr

R8212 **Transport Theory** (prereq 5153 or #)
1015-1100 MWF, East Bank, 3 cr

R8222 **Solid-State Physics** (prereq 8221)
1115-1200 MWF, East Bank, 3 cr

R8300 **Seminar: Nuclear Physics**
1415-1600 W, East Bank, ar cr

R8312 **Nuclear Physics** (prereq 8311)
1415-1500 MTF, East Bank, 3 cr

R8360 **Seminar: Mass Spectroscopy**
1515-1700 F, East Bank, ar cr

R8370 **Seminar: Elementary Particle Physics**
1515-1700 T, East Bank, ar cr

R8372 **Elementary Particle Physics** (prereq 8122 or #)
1415-1500 MWF, East Bank, 3 cr

R8380 **Advanced Topics in Elementary Particle Physics** (prereq #, 1105 or ¶)
1315-1430 TTh, East Bank, ar cr

R8400 **Seminar: Cosmic-Ray and Space Physics**
1515-1700 Th, East Bank, ar cr

R8411 **Cosmic Ray and Space Physics** (prereq 5102, 5053 or #)
0915-1000 MWF, East Bank, 3 cr

R8420 **Seminar: Magnetospheric Physics** (max 3 cr)
1515-1700 F, East Bank, 1-3 cr

R8440 **Seminar: Atmospheric Physics**
1215-1300 T, East Bank, ar cr

R8500 **Plan B Project** (no cr toward PhD; prereq #) (S-N only)
4 cr

R8950 **Seminar: Problems of Physics Teaching and Higher Education** (prereq grad standing in physics or #)
1615-1700 T, East Bank, 1 cr

R8990 **Research in Physics** (prereq #)
ar cr

Spring Quarter

R1001 **The Physical World** (§any physics courses other than 1061, no cr for IT stu; prereq one yr high school algebra)
0800-0845 MTWF, St. Paul, 4 cr (StP)
(Companion lab is 1005)

R1002 **The Physical World in Transition** (§any other introductory physics courses except 1001, 1061, no cr for IT stu; prereq 1001)
1115-1200 MTWF, East Bank, 4 cr

R1005 **Physics Laboratory** (no cr for IT students; prereq 1001 or ¶) (S-N only)
1 cr (StP) (Lab time assigned first 2 days of class)

R1041 **Introductory Physics** (§other intro phys crse, no cr IT ex arch, pre-arch, env des; prereq hs alg, plane geometry)
1415-1500 MTWF, East Bank, 4 cr
(Companion lab is 1045)

R1042 **Introductory Physics** (§other intro physics course, no cr IT except arch, pre-arch, env design; prereq 1041)
1415-1500 MTWF, East Bank, 4 cr
(Companion lab is 1046)

R1045 **Introductory Physics Laboratory** (no cr IT except arch, pre-arch, environmental design; prereq 1041 or ¶) (S-N only)
1 cr (Lab time assigned first 2 days of class)

R1046 **Introductory Physics Laboratory** (no cr IT except arch, pre-arch, environmental design; prereq 1042 or ¶) (S-N only)
1 cr (Lab time assigned first 2 days of class)

R1106 **General Physics** (no cr for IT students; prereq 1105)
1115-1200 MTWThF, East Bank, 4 cr
(Companion lab is 1109)

R1109 **General Physics Laboratory** (no cr for IT students; prereq 1108, 1106 or ¶) (S-N only)
1 cr (Lab time assigned first 2 days of class)

R1271 **General Physics** (prereq Math 1221 or 1321 or 1621 or ¶) (Companion lab is 1275)
–1 0915-1000 MTWThF, East Bank, 4 cr
–2 1315-1400 MTWThF, East Bank, 4 cr

R1275 **General Physics Laboratory** (prereq 1271 or 1311 or ¶) (S-N only)
1 cr (Lab time assigned first 2 days of class)

R1281 **General Physics** (prereq 1271, completion of or ¶Math 1231, 1331, 1621) (Companion lab is 1285)
–1 0815-0900 MTWThF, East Bank, 4 cr
–2 1015-1100 MTWThF, East Bank, 4 cr
–3 1315-1400 MTWThF, East Bank, 4 cr

R1285 **General Physics Laboratory** (prereq 1275, 1281 or 1331 or ¶) (S-N only)
1 cr (Lab time assigned first 2 days of class)

R1291 **General Physics** (prereq 1281) (Companion lab is 1295)
–1 0815-0900 MTWThF, East Bank, 4 cr
–2 1215-1300 MTWThF, East Bank, 4 cr

R1295 **General Physics Laboratory** (prereq 1285, 1291 or 1341 or ¶) (S-N only)
1 cr (Lab time assigned first 2 days of class)

R1331 **Introductory Physics with Calculus** (prereq 1321, ¶Math 1231 or 1531 or 1621 or equiv)
1015-1100 MTWF, East Bank, 4 cr

R3015 **Laboratory in Oscillations and Waves** (prereq 3011 or ¶)
–1 LAB 1415-1700 T, East Bank, Blair, 1 cr
–2 LAB 0815-1100 Th, East Bank, Blair, 1 cr
–3 LAB 1415-1700 Th, East Bank, Blair, 1 cr
–4 LAB 1415-1700 F, East Bank, Blair, 1 cr

R3201 **Thermodynamics** (prereq 1281)
0915-1000 MTWF, East Bank, 4 cr

R3513 **Modern Physics** (prereq 3512)
1015-1100 MTWF, East Bank, 4 cr

R3801 **Introduction to the Physics of Photography** (prereq high school algebra, some photographic experience)
1415-1500 MTWF, East Bank, 5 cr

R3970 **Directed Study** (prereq #, △)
1-5 cr

R5024 **Introduction to Electric and Magnetic Fields** (prereq 5023)
1115-1200 MTWF, East Bank, 4 cr

R5033 **Topics in Mathematical Physics** (prereq 5032)
0915-1000 MTWF, East Bank, 4 cr

R5053 **Classical Physics** (prereq 5052)
0800-0900 MWF, East Bank, 4 cr

R5123 **Methods of Experimental Physics III** (prereq 5122 or #)
1215-1300 TTh, East Bank, 4 cr (lab ar)

R5124 **Experimental Project** (prereq 5123, #)
ar cr

R5153 **Quantum Mechanics** (prereq 5152)
0800-0910 T, 0800-0950 Th, East Bank, Valls, 4 cr

R5211 **Introductory Solid State Physics** (prereq 5101, 5202 or equiv)
1015-1100 MTWF, East Bank, 4 cr

R5233 **Introduction to Solid State Physics** (prereq 5232)
0915-1000 MTWF, East Bank, 4 cr

R5301 **Introduction to Nuclear Physics** (prereq 5102 or equiv)
1315-1400 MTWF, East Bank, 4 cr

R5371 **Introduction to Elementary Particle Physics** (prereq 5102 or equiv)
1215-1300 MTWF, East Bank, 4 cr

R5452 **Cloud Systems** (prereq Math 3211 or equiv, 1 yr general physics)
1215-1300 MWF, East Bank, G Freier, 3 cr

R5950 **Seminar** (prereq △)
1600-1730 W, East Bank, ar cr

R5970 **Directed Studies** (prereq #, △)
1-5 cr

R5990 **Directed Research** (prereq 3rd yr, △)
ar cr

R8123 **Relativistic Quantum Field Theory** (prereq 8122 or #)
1315-1400 MWF, East Bank, 3 cr

R8200 **Seminar: Solid-State and Low-Temperature Physics**
1415-1600 Th, East Bank, ar cr

R8216 **Many-Body Theory** (prereq 8121 or #)
1015-1100 MWF, East Bank, 3 cr

R8223 **Solid-State Physics** (prereq 8222)
1115-1200 MWF, East Bank, 3 cr

R8233 **Superconductivity** (prereq #)
0915-1000 MWF, East Bank, 3 cr

R8300 **Seminar: Nuclear Physics**
1415-1600 W, East Bank, ar cr

R8313 **Nuclear Physics** (prereq 8312)
1415-1500 MTF, East Bank, 3 cr

R8360 **Seminar: Mass Spectroscopy**
1515-1700 F, East Bank, ar cr

R8370 **Seminar: Elementary Particle Physics**
1515-1700 T, East Bank, ar cr

R8373 **Elementary Particle Physics** (prereq 8372)
1415-1500 MWF, East Bank, 3 cr

R8380 **Advanced Topics in Elementary Particle Physics** (prereq #, 1105 or ¶)
1315-1430 TTh, East Bank, ar cr

R8400 **Seminar: Cosmic-Ray and Space Physics**
1515-1700 Th, East Bank, ar cr

R8420 **Seminar: Magnetospheric Physics** (max 3 cr)
1515-1700 F, East Bank, 1-3 cr

R8421 **Solar and Magnetospheric Physics** (prereq #)
0915-1000 MWF, East Bank, 3 cr

R8440 **Seminar: Atmospheric Physics**
1215-1300 T, East Bank, ar cr

R8500 **Plan B Project** (no cr toward PhD; prereq #) (S-N only)
4 cr

R8950 **Seminar: Problems of Physics Teaching and Higher Education** (prereq grad standing in physics or #)
1615-1700 T, East Bank, 1 cr

R8990 **Research in Physics** (prereq #)
ar cr

PHYSIOLOGY (Phsl)
Medical School

Winter Quarter

1002 **Human Physiology** (prereq 1 qtr biology, 1 qtr chemistry or #, human anatomy)
★LECT 1115-1200 MWF, East Bank, Blackshear, 4 cr
–1 DEM 1315-1500 W, East Bank,
–2 DEM 1515-1700 W, East Bank,

3051 **Human Physiology for Nursing and Physical Therapy Students** (prereq 1 yr chemistry, biology)
★LECT 0915-1000 MWThF, East Bank, Love, 5 cr
–1 LAB 0815-1000 T, East Bank,
–2 LAB 1015-1200 T, East Bank,

3053 **Principles of Physiology** (prereq 1 yr college chemistry, physics, math thru integ calculus)
1015-1100 MWF, Levitt, 3 cr

3056 Principles of Physiology (prereq 1 yr college chemistry, physics, math thru integ calculus)
1015-1100 MWF, Levitt, 5 cr

3071 Human Physiology (prereq 3070)
★LECT 0915-1000 MTWTh, East Bank, Meyer, 5 cr
–1 LAB 1315-1500 M, East Bank,

3091H Readings (prereq honors candidates in physiology)
Poppele, ar cr

3092H Problems (prereq honors candidates in physiology)
Poppele, ar cr

5095 Human Physiology (prereq 5094)
1415-1500 MWF, Kepner, 3 cr

5101 Human Physiology (prereq biochemistry, 5100)
★LECT 0915-1000 MTWTh, East Bank, Meyer, 5 cr
–1 LAB 1315-1500 Th, East Bank,
–2 LAB 1515-1700 Th, East Bank,

5102 Physiology and Dentistry (prereq 5101, dental student)
0745-0830 Th, East Bank, Meyer, 1 cr

5107 Alimentary Physiology (prereq #)
Grim, 3 cr

5110 Human Physiology (prereq anatomy, biochemistry)
★LECT 0815-0900 TTh, East Bank, Grim, 5 cr
–1 LAB 0815-1200 M, East Bank,
–2 LAB 0815-1200 W, East Bank,
–3 LAB 0815-1200 F, East Bank,

5113 Problems in Physiology (prereq #)
ar cr

5115 Mathematical Neurophysiology (prereq calculus through ordinary differential equations, Stat 8501 or #)
Knox, 4 cr

5441 Quantitative Physiology (prereq 5440)
1015-1100 MWF, East Bank, Levitt, 3 cr

5551 Literature Seminar
1215-1300 M, 1-2 cr

5552 Readings in Physiology
ar cr

5553 Research in Physiology
ar cr

8107 Alimentary Physiology (prereq #)
Grim, 3 cr

8110 Human Physiology (prereq anatomy, biochemistry)
★LECT 0815-0900 TTh, East Bank, Grim, 5 cr
–1 LAB 0815-1200 M, East Bank,
–2 LAB 0815-1200 W, East Bank,
–3 LAB 0815-1200 F, East Bank,

8113 Problems in Physiology (prereq #)
ar cr

8115 Mathematical Neurophysiology (prereq calculus through ordinary differential equations, Stat 8501 or #)
Knox, 4 cr

8201 Literature Seminar
1215-1300 M, 1 cr

8202 Readings in Physiology
ar cr

8203 Research in Physiology
ar cr

Spring Quarter

3091H Readings (prereq honors candidates in physiology)
Poppele, ar cr

3092H Problems (prereq honors candidates in physiology)
Poppele, ar cr

5100 Neuroscience for Dental Students (prereq ¶Anat 5110, courses in biochemistry, human anatomy)
★LECT 1315-1400 TWTh, East Bank, 2 cr
–1 LAB 1415-1700 W, East Bank,

5108 Nephrology (prereq #)
Harvey, 3 cr

5111 Human Physiology (prereq 5110)
★LECT 0815-0900 MTWThF, East Bank, Grim, 6 cr
–1 LAB 1315-1700 Th, East Bank,
–2 LAB 1215-1600 F, East Bank,
–3 LAB 1315-1700 T, East Bank,

5113 Problems in Physiology (prereq #)
ar cr

5116 Biophysical Approaches (prereq 3055 or #)
Kepner, 4 cr

5551 Literature Seminar
1215-1300 M, 1-2 cr

5552 Readings in Physiology
ar cr

5553 Research in Physiology
ar cr

5567 Properties of Receptor Systems (prereq #)
Poppele, 3 cr

5577 Methods in Physiology (prereq #)
Stish, 3 cr

8108 Nephrology (prereq #)
Harvey, 3 cr

8111 Human Physiology (prereq 8110, anatomy, biochemistry)
★LECT 0815-0900 MTWThF, East Bank, Grim, 6 cr
–1 LAB 1315-1700 Th, East Bank,
–2 LAB 1215-1600 F, East Bank,
–3 LAB 1315-1700 T, East Bank,

8113 Problems in Physiology (prereq #)
ar cr

8116 Biophysical Approaches to Physiology (prereq 3055 or #)
Kepner, 4 cr

8201 Literature Seminar
1215-1300 M, 1 cr

8202 Readings in Physiology
ar cr

8203 Research in Physiology
ar cr

8217 Properties of Receptor Systems (prereq #)
Poppele, 3 cr

8227 Methods in Physiology (prereq #)
Stish, 3 cr

PLANT PATHOLOGY (PlPa)
Agriculture

Winter Quarter

R1001 Introductory Plant Pathology: Lecture and Introduction to Diagnostic Procedures and Laboratory (§3001, 5002; prereq soph, 9 cr plant science)
0800-0945 MWF, St. Paul, MacDonald, 4 cr

R3001 Introductory Plant Pathology: Lecture, Laboratory and Introduction to Diagnosis (§1001, 5002; prereq soph, 9 cr plant science)
★LECT 0800-0945 MWF, St. Paul, MacDonald, 6 cr
–1 LAB 1300-1415 MWF, St. Paul, MacDonald
–2 LAB 1430-1545 MWF, St. Paul, MacDonald

3090 Research in Plant Pathology (prereq 1001 or equiv or #)
ar cr

R5006 Fungi, Algae, and Parasitic Seed Plants in Plant Disease (prereq 20 cr hrs in biology, including botany, biochemistry, plant physiology, 5105)
★LECT 0800-0845 TTh, St. Paul, Kommedahl, Wilcoxson, 4 cr
–1 LAB 1400-1645 TTh, St. Paul, Kommedahl, Wilcoxson

R5104 Agricultural Systems Analysis and Modeling (prereq Math 1142 or #)
1000-1045 MWF, St. Paul, Molina, Teng, 4 cr (lab ar)

R5106 Mycology: Ascomycetes-Fungi Imperfecti (prereq 5105 or MicB 3103 or #)
★LECT 0900-0945 TTh, St. Paul, Stewart, 4 cr
–1 LAB 1000-1145 TTh, St. Paul, Stewart

5215 Insects in Relation to Plant Diseases (§Ent 5215; prereq 5 cr entomology, 5 cr plant pathology or equiv or #)
0800-0945 TThS, St. Paul, Wilcoxson, 4 cr

8002 Plant Disease Theory II: Tissues to Whole Plants (prereq 5005, 5006, 5007 or #, 8001)
1400-1530 TTh, St. Paul, Banttari, Kommedahl, others, 3 cr

8090 Advanced Procedures and Research in Plant Pathology
ar cr

8095 Advanced Procedures and Research in Mychology
Stewart, 1-6 cr

R8201 Seminar
1600-1700 W, St. Paul, Castor, 1 cr

R8202 Seminar
1600-1700 M, St. Paul, Bissonnette, 1 cr

Spring Quarter

3090 Research in Plant Pathology (prereq 1001 or equiv or #)
ar cr

5000 Professional Experience Program (prereq #) (S-N only)
Groth, 4 cr

R5007 Nematodes and Abiotic Agents in Plant Disease (prereq 20 cr hrs in biology, including botany, biochemistry, plant physiology)
★LECT 0800-0845 TTh, St. Paul, Krupa, MacDonald, 4 cr
–1 LAB 1300-1645 TTh, St. Paul, Krupa, MacDonald

R5050 Forest Pathology (prereq Biol 1103 or equiv)
★LECT 0830-0945 TTh, St. Paul, Blanchette
–1 LAB 0800-0945 MW, St. Paul, Blanchette, 4 cr
–2 LAB 1000-1145 MW, St. Paul, Blanchette, 4 cr
–3 LAB 1300-1445 MW, St. Paul, Blanchette, 4 cr

R5107 Mycology: Basidiomycetes (prereq 5105 or MicB 3103 or #)
★LECT 0900-0945 TTh, St. Paul, Stewart, 4 cr
–1 LAB 1000-1145 TTh, St. Paul, Stewart

5200 Poisonous Plants (prereq Biol 1011, 3 cr botany)
1600-1745 Th, St. Paul, Kommedahl, 2 cr

5700 Contemporary Chemical Control of Plant Diseases (prereq 1001, 5005, 5006, BioC 1301)
1100-1145 MWF, St. Paul, Percich, 4 cr

8003 Plant Disease Theory III: Populations (prereq 5005, 5006, 5007 or #, 8001, 8002)
1400-1530 TTh, St. Paul, Groth, Teng, others, 3 cr

8090 Advanced Procedures and Research in Plant Pathology
ar cr

8095 Advanced Procedures and Research in Mychology
Stewart, 1-6 cr

PLANT PHYSIOLOGY (PlPh)
Agriculture

Winter Quarter

3131 Survey of Plant Physiology (§5131, Bot 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 3021 or BioC 5001)
1200-1245 MTWF, St. Paul, Guilfoyle, 4 cr

5131 Survey of Plant Physiology (§3131, Bot 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 3021 or BioC 5001)
1200-1245 MTWF, 1200-1245 Th, St. Paul, Guilfoyle, Frenkel, 4 cr

5183 Water, Minerals, and Translocation (§Bot 5183; prereq 5131)
1450-1550 MWF, St. Paul, Markhart, Stadelmann, 4 cr

R5188 Research Perspectives in Plant Physiology (prereq Chem 3100, 3101, 8 cr biochemistry, #)
ar cr

R5723 Plant Hormones and Tissue Culture (prereq Chem 3100, 3101, 8 cr biochemistry, #)
Brenner, ar cr

R5970 Special Problems in Plant Physiology
ar cr

8251 Seminar: Plant Physiology
1500-1600 Th, St. Paul, Jones, 1 cr

Spring Quarter

3131 Survey of Plant Physiology (§5131, Bot 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 3021 or BioC 5001)
1200-1245 MTWF, St. Paul, 4 cr

5131 Survey of Plant Physiology (§3131, Bot 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 3021 or BioC 5001)
1200-1245 MTWF, 1200-1245 Th, St. Paul, Frenkel, 4 cr

R5168 **Experimental Protoplasmatology** (prereq #)
Stadelmann, 3 cr

5182 **Plant Metabolism** (§Bot 5182; prereq 5131)
0800-0915 TTh, St. Paul, Soulen, 3 cr

R5188 **Research Perspectives in Plant Physiology** (prereq Chem 3100, 3101, 8 cr biochemistry, #)
ar cr

R5725 **Plant Nucleic Acids** (prereq Chem 3100, 3101, 8 cr biochemistry, #)
Li, ar cr

R5970 **Special Problems in Plant Physiology**
ar cr

POLISH (Plsh)
Russian And East European Studies
Liberal Arts

Winter Quarter

R1102 **Beginning Polish** (prereq 1101)
1115-1200 MTWThF, East Bank, Polakiewicz, 5 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
1-4 cr

Spring Quarter

R1103 **Beginning Polish** (prereq 1102)
1115-1200 MTWThF, East Bank, Polakiewicz, 5 cr

5900 **Topics**
1330-1500 TTh, East Bank, Wierzewski, 4 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
Polakiewicz, 1-4 cr

POLITICAL SCIENCE (Pol)
Liberal Arts

Winter Quarter

R1001 **American Government and Politics**
–1 1015-1100 MTWThF, West Bank, Walcott, 5 cr
–2 1215-1300 MTWThF, West Bank, Maranto, 5 cr
–3 0915-1100 TTh, West Bank, Trump, 5 cr

1025 **World Politics**
0815-0900 MWF, West Bank, Lehman, 4 cr

1026 **American Foreign Policy**
1215-1300 MWF, West Bank, Hopmann, 4 cr

1041 **Contemporary Political Ideologies**
1245-1400 TTh, West Bank, Leonard, 4 cr

1054 **Introduction to Comparative Politics**
1115-1200 MWF, West Bank, Jorgensen, 4 cr

3051 **Introduction to Political Analysis**
0915-1100 TTh, West Bank, Kvavik, 5 cr

3070 **Directed Field Studies** (prereq #, △)
1-4 cr

3080 **Internship** (prereq △) (S-N only)
Backstrom, 4 cr

3085 **Introduction to Political Research** (prereq 1051 or #)
1115-1230 TTh, West Bank, Sullivan, 4 cr

R3108H **Perspectives on Political Science Research** (prereq 1001, political science honors program maj and by consent to other honors prog maj)
1315-1430 TTh, West Bank, Shaw, 3 cr

3110H **Honors Course: Selected Fields** (max 6 cr; prereq 3109)
3-6 cr

3306 **The American Presidency** (prereq 1001 or #)
0815-0900 MWF, West Bank, Eyestone, 4 cr

3307 **The American Bureaucracy** (prereq 1001 or #)
1215-1300 MWF, West Bank, Walcott, 4 cr

3308 **The United States Congress** (prereq 1001 or #)
1015-1100 MWF, West Bank, Shaw, 4 cr

R3353 **Field Work in the Local Government** (prereq 1001)
1515-1700 TTh, West Bank, Backstrom, 4 cr

3562 **Delivering Justice**
0915-1000 MWF, West Bank, Olson, 4 cr

3668 **Recent Empirical Theory** (prereq 1051 or #)
0945-1100 TTh, West Bank, Aldrich, 4 cr

3773 **Political Development** (prereq 3051 or #)
1820-2050 Th, West Bank, Duvall, 4 cr

3836 **Foreign Policy Decision Making**
1115-1200 MWF, West Bank, Sampson, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-6 cr

5321 **American Economic Policy** (prereq 1001 or #)
1315-1400 MWF, West Bank, Eyestone, 4 cr

5323 **American Defense Policy** (prereq 3835 or 3836 or 6 cr in ROTC or #)
1115-1230 TTh, West Bank, Goldman, 4 cr

5446 **Govt, Politics of South Asia** (prereq 3 cr up div work in soc sci)
1315-1400 MWF, West Bank, 5 cr

5454 **Chinese Government and Politics** (prereq 1054 or 3051 or #)
1215-1300 MWF, West Bank, Templin, 4 cr

R5501 **Principles of American Constitution I** (prereq 1001 or equiv)
1315-1500 MW, West Bank, Krislov, 5 cr

5655 **Development of Political Thought: Early Modern (Renaissance to the Age of Revolution)** (prereq 3051 or 9 crs in social science or #)
1015-1100 MWF, West Bank, Dietz, 4 cr

5738 **American Political Campaigns and Elections** (prereq 1001 or #)
1215-1350 TTh, West Bank, Backstrom, 4 cr

5877 **Comparative Foreign Policy** (prereq 3835 or 3825 or 3836 or 3826)
1115-1200 MWF, West Bank, Goldman, 4 cr

5885 **International Peace and Violence** (prereq 3835 or 3825 or 3836 or 3826 or #)
0915-1000 MWF, West Bank, Job, 4 cr

R8102 **Approaches to Political Research**
1515-1700 T, West Bank, Simon, 3 cr

8140 **Individual Readings and Research in Methodology** (prereq #, △)
1-3 cr

8150 **Research Seminar: Methodology** (prereq #)
3 cr

8222 **Positive Theory** (prereq #)
1315-1500 Th, West Bank, Aldrich, 3 cr

8240 **Individual Reading and Research in Political Thought** (prereq #, △)
1-3 cr

8250 **Research Seminar: Political Theory** (prereq #)
3 cr

8312 **Seminar: Legislative Process** (prereq #)
1315-1500 F, West Bank, Shaw, 3 cr

8313 **Seminar: Executive Process** (prereq #)
1515-1700 Th, West Bank, Eyestone, 3 cr

8327 **Seminar: Intergovernmental Relations** (prereq #)
1315-1500 T, West Bank, Gray, 3 cr

8331 **Seminar: Constitutional Law** (prereq 5501, 5502 or #)
1315-1500 Th, West Bank, Olson, 3 cr

8340 **Individual Reading and Research in American Politics** (prereq #, △)
1-3 cr

8350 **Research Seminar: American Politics** (prereq #)
3 cr

8412 **American Foreign Policy** (prereq 8411 or #)
1315-1500 W, West Bank, Ostrom, 3 cr

8440 **Individual Reading and Research in International Relations** (prereq #, △)
1-3 cr

8450 **Research Seminar: International Politics and Foreign Policy** (prereq #)
3 cr

8601 **Government and Politics in Western Europe** (prereq 5441)
1515-1700 Th, West Bank, Shively, 3 cr

8633 **Comparative Socio-Political Change** (prereq #)
1515-1700 M, West Bank, Benjamin, 3 cr

8640 **Individual Readings and Research in Comparative Politics** (prereq #, △)
1-3 cr

8650 **Research Seminar: Comparative Politics** (prereq #)
3 cr

Spring Quarter

1001 **American Government and Politics**
–1 0815-0900 MTWThF, West Bank, Simon, 5 cr
–2 1015-1100 MTWThF, West Bank, Lind, 5 cr
–3 0915-1100 TTh, West Bank, Shaw, 5 cr

1025 **World Politics**
0915-1100 MWF, West Bank, Job, 4 cr

1026 **American Foreign Policy**
1115-1200 MWF, West Bank, Sampson, 4 cr

3051 **Introduction to Political Analysis**
1215-1300 MTWThF, West Bank, Schlagheck, 5 cr

3070 **Directed Field Studies** (prereq #, △)
1-4 cr

3080 **Internship** (prereq △) (S-N only)
4 cr

3110H **Honors Course: Selected Fields** (max 6 cr; prereq 3109)
3-6 cr

3308 **The United States Congress** (prereq 1001 or #)
1015-1100 MWF, West Bank, Simon, 4 cr

3309 **Judicial Process** (prereq 1001 or #)
0915-1000 MWF, West Bank, Olson, 4 cr

3310 **Topics in American Politics** (prereq 1001 or #)
1115-1230 TTh, West Bank, Backstrom, 4 cr

R3352 **Field Work in the Legislature** (prereq 1001)
1515-1700 TTh, West Bank, Backstrom, 4 cr

3659 **American Political Thought** (prereq 3051 or 9 cr social science or #)
1215-1300 MWF, West Bank, Shaw, 4 cr

3766 **Political Psychology** (prereq 1001 or #)
0945-1100 TTh, West Bank, Sullivan, 4 cr

3796 **Mass Media and Politics** (§Jour 3796; prereq 1001 or Jour 1001 or #, jour students must have maj status)
1245-1400 TTh, East Bank, Flanigan, Kline, 4 cr

3835 **The International System**
1115-1200 MWF, West Bank, Hopmann, 4 cr

3836 **Foreign Policy Decision Making**
1245-1400 TTh, West Bank, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-6 cr

5303 **The American Democracy** (prereq 1001)
0945-1100 TTh, West Bank, Flanigan, 4 cr

5315 **State Government** (prereq 1001 or #)
1820-2050 W, West Bank, Gray, 4 cr

5441 **Western European Government and Politics** (prereq 1054 or 3051 or 12 cr in social science or #)
1830-2150 Th, West Bank, Shively, 5 cr

5443 **Government and Politics of Soviet Union** (prereq 1054 or 3051 or 12 cr in social science or #)
1115-1230 TTh, West Bank, Christopherson, 4 cr

R5502 **Principles of the American Constitution II** (§3323; prereq 1001 or equiv, 5501)
1315-1500 MW, West Bank, Krislov, 5 cr

5656 **Development of Political Thought: 19th and 20th Centuries (Burke to the Present)** (prereq 3051 or 9 crs in social science or #)
1315-1400 MWF, West Bank, Leyh, 4 cr

5704 **Organizational Theory and Behavior** (prereq 1001)
1115-1200 MWF, West Bank, Walcott, 4 cr

5810 **Advanced Topics in International Politics/Foreign Policy: Politics of Nuclear War** (prereq 3835 or 3825 or 3836 or 3826)
0915-1000 MWF, West Bank, Goldman, 4 cr

8103 Teaching Political Science
1515-1700 M, West Bank, Walcott, 3 cr

8121 Introduction to Quantitative Analysis
1315-1500 M, West Bank, Flanigan, 4 cr

8123 Advanced Topics in Regression Analysis
1315-1500 T, West Bank, Aldrich, 4 cr

8140 Individual Readings and Research in Methodology (prereq #, △)
1-3 cr

8150 Research Seminar: Methodology (prereq #)
3 cr

8211 Linguistic Analysis of Politics (prereq #)
1315-1500 F, West Bank, Ball, 3 cr

8234 Selected Thinkers and Topics in the Development of Political Thought: Feminist Political Theory (prereq #)
1315-1500 W, West Bank, Dietz, 3 cr

8240 Individual Reading and Research in Political Thought (prereq #, △)
1-3 cr

8250 Research Seminar: Political Theory (prereq #)
3 cr

8305 Seminar: Interest Groups (prereq #)
1315-1500 W, West Bank, Kvavik, 3 cr

8332 Seminar: Constitutional Law (prereq 5501, 5502 or #)
1515-1700 T, West Bank, Krislov, 3 cr

8337 Seminar: Policy Evaluation (prereq #)
1315-1500 F, West Bank, Ostrom, 3 cr

8340 Individual Reading and Research in American Politics (prereq #, △)
1-3 cr

8350 Research Seminar: American Politics (prereq #)
3 cr

8403 Conflict Resolution: Bargaining, Negotiation (prereq 8401)
1315-1500 Th, West Bank, Hopmann, 3 cr

8440 Individual Reading and Research in International Relations (prereq #, △)
1-3 cr

8450 Research Seminar: International Politics and Foreign Policy (prereq #)
3 cr

8640 Individual Readings and Research in Comparative Politics (prereq #, △)
1-3 cr

8643 Comparative Political Organization (prereq #)
1515-1700 Th, West Bank, Holt, 3 cr

8650 Research Seminar: Comparative Politics (prereq #)
3 cr

8660 Seminar: Selected Topics in Comparative Politics (prereq #)
1515-1700 W, West Bank, Duvall, 3 cr

PORTUGUESE (Port)
Spanish And Portuguese
Liberal Arts

Winter Quarter

R1001 Beginning Portuguese
0915-1000 MTWThF, East Bank, 5 cr

R1002 Beginning Portuguese (prereq 1001 or #)
0815-0900 MTWThF, East Bank, 5 cr

R1004 Intermediate Portuguese Grammar and Composition (prereq 1003 or 1103)
1215-1300 MTWThF, East Bank, 5 cr

R1005 Intermediate Portuguese (prereq 1004 or 1104)
1115-1200 MTWThF, East Bank, 5 cr

R3910 Topics in Luso-Brazilian Literature (prereq 3104 or #)
1215-1300 MWF, East Bank, 4 cr

3970 Directed Studies (prereq #, △, college approval)
1-5 cr

5521 Literature in Traditionalist/Expansionist Portugal (prereq three 3xxx Port courses or △)
1415-1600 T, 1415-1500 Th, East Bank, Sousa, 4 cr

5970 Directed Readings (max 15 cr; prereq #, △, CLA approval)
1-5 cr

5990 Directed Research (prereq #, △, CLA approval)
1-5 cr

8960 Research: Comparative Lusophone Literary Topics
1415-1500 MWF, East Bank, 4 cr

Spring Quarter

R1002 Beginning Portuguese (prereq 1001 or #)
0915-1000 MTWThF, East Bank, 5 cr

R1003 Beginning Portuguese (prereq 1002 or #)
1015-1100 MTWThF, East Bank, 5 cr

R1005 Intermediate Portuguese (prereq 1004 or 1104)
1115-1200 MTWThF, East Bank, 5 cr

R3014 Conversation and Composition (prereq 1005)
1215-1300 MWF, East Bank, 5 cr

3970 Directed Studies (prereq #, △, college approval)
1-5 cr

5523 Literature Expression in Portuguese America (1500-1807) (prereq three 3xxx Port courses or △)
1315-1400 MWF, East Bank, 4 cr

5970 Directed Readings (max 15 cr; prereq #, △, CLA approval)
1-5 cr

5990 Directed Research (prereq #, △, CLA approval)
1-5 cr

PSYCHOEDUCATIONAL STUDIES (PsyS)
Educational Psychology
Education

Winter Quarter

3106 Exceptional Students in Regular Classes (§5106) (A-N only)
–1 1315-1500 T, East Bank, Walter, 2 cr (elem ed maj only)
–2 1615-1800 W, East Bank, Balow, 2 cr (secondary ed maj only)

5100 Childhood Language Development: Classroom Implications (§SpEd 5100) (A-N only)
1300-1450 TTh, East Bank, 3 cr

R5101 Education of Exceptional Children (§SpEd 5101) (A-N only)
0900-1200 S, East Bank, Knowlton, 4 cr

5106 Exceptional Students in Regular Classes (§3106) (A-N only)
–1 1315-1500 T, East Bank, Walter, 2 cr (elem ed maj only)
–2 1615-1800 W, East Bank, Below, 2 cr (secondary ed maj only)

5108 Parent and Professional Planning for Handicapped Students (§SpEd 5108) (A-N only)
1615-1800 MW, East Bank, Reynolds, 3 cr

R5110 Counseling Procedures (§CSPP 5110) (A-N only)
–1 1615-1845 M, East Bank, 3 cr
–2 1315-1545 T, East Bank, Matross, 3 cr

R5111 Counseling Procedures II (prereq 5110) (A-N only)
1315-1545 M, Shaffer, 3 cr

5114 Diagnosis and Remediation of Learning Disability II (§SpEd 5111; prereq 5113, ¶5611 or SpEd 5110, 5611, #) (A-N only)
1615-1930 Th, East Bank, Walter, 4 cr

5117 Clinical Use of Tests in Psychological Services (§CSPP 5120; prereq PsyF 5110 or Psy 3801, PsyF 5121 or Psy 5862 or #) (A-N only)
1315-1500 TF, East Bank, Snoke, 3 cr

5120 Introduction to Mental Retardation (§SpEd 5120, CPsy 5315; prereq 5101 or SpEd 5101 or #) (A-N only)
0900-1030 TTh, Turnure, 4 cr

5123 Methods and Materials for Severely Retarded Preschool and School Age Pupils (§SpEd 5123; prereq 5101 or SpEd 5101) (A-N only)
1615-1800 TTh, East Bank, 4 cr

5126 Methods and Materials for Teaching Children with Severe Multihandicapping Conditions (§SpEd 5126; prereq 5101 or 5120 or SpEd 5101 or 5120 or CPsy 5315) (A-N only)
1615-1930 W, East Bank, Voeltz, 4 cr

R5152 Disturbed and Disturbing Students I: Background and Assessment (§SpEd 5152) (A-N only)
1630-1900 W, Wood, 3 cr (StP)

R5153 Disturbed and Disturbing Students II: Program Selection, Operation, Modification, and Evaluation (§SpEd 5153; prereq 5152 or SpEd 5152) (A-N only)
1630-1900 T, Wood, 3 cr (Irondale High School)

5170 Introduction to Education of Visually Handicapped Children (§SpEd 5170; prereq #) (A-N only)
1630-1900 W, East Bank, Knowlton, 3 cr

5302 Workshop: Special Education (prereq #) (A-N only)
Deno, 2 cr (Data-Based Management of Instruction)

5306 Behavioral Procedures with Severely and Profoundly Handicapped People (§SpEd 5301, 5304; PsyF 5149 or Psy 5017 rec) (A-N only)
1630-1900 M, East Bank, 4 cr

5320 Group Counseling: Principles and Procedures (§CSPP 5320; prereq course in counseling theory) (A-N only)
1415-1700 Th, East Bank, Anderson, 3 cr (1 hr ar)

R5331 Career Development: Theory and Counseling Applications (§CSPP 5331) (A-N only)
1615-1830 W, East Bank, W Tennyson, 3 cr

R5540 Seminar: The College Student (§CSPP 5540, HiEd 5540; prereq 6 cr in psychology or educational psychology) (A-N only)
1900-2115 M, East Bank, Rest, 3 cr

5601 Practicum: Special Education (S-N optional; prereq #)
–1 Wood, ar cr
–2 Walter, ar cr
–3 Voeltz, ar cr
–4 ar cr

R5900 Independent Study (max 12 cr; prereq #) (A-N only)
–1 ar cr (special ed maj only)
–2 ar cr (counseling maj only)
–3 Egeland, ar cr (school psych maj only)

8150 Psychological Aspects of Counseling Supervision (§CSPP 8150; prereq 8510, 8604 or CSPP 8510, CSPP 8604, #)
Snoke, 3 cr

8153 New Approaches to Psychopathology in Children, Adolescents (§SchP 8512)
1600-1800 TTh, East Bank, Egeland, Sroufe, 3 cr

8301 Behavioral Research with Handicapped Students (max 4 cr; prereq 5101 or SpEd 5101 or Psy 5017 or #)
1530-1800 Th, East Bank, Deno, ar cr

R8303 Counseling Theory and Procedures II (§CSPP 8303; prereq 8302, ¶8603, PsyF 5122, #)
1415-1800 Th, East Bank, A Anderson, 3 cr

8306 Field Placement in Counseling and Student Personnel Psychology (max 9 cr; prereq MA student in CSPP, ¶8303, ¶8603)
1-3 cr

R8311 Techniques of Psychoeducational Assessment: Special Populations (§SchP 8311; prereq 8310 or SchP 8310, #)
1215-1400 TTh, East Bank, 5 cr

8502 Seminar: Special Education (prereq #)
1315-1500 MW, East Bank, Turnure, ar cr

8508 Seminar: School Psychology (prereq #)
Weinberg, 2 cr

R8511 Seminar: Advanced Counseling Research (§CSPP 8511; prereq PhD student, #)
1015-1200 WF, East Bank, W Tennyson, Hummel, 4 cr

8514 Theories and Methods of Intervention: Groups
1600-1900 W, East Bank, Erickson, 3 cr

8520 Seminar: Research in School Psychology (max 6 cr; prereq #)
1315-1500 F, East Bank, Egeland, 2 cr

8542 College Student Personnel Work-Student Activities (§CSPP 8542; prereq 8140 or CSPP 8140)
1515-1700 T, Zander, 2 cr

8560 Seminar: Administration of Special Education (§EdAd 5180; prereq 5160 or SpEd 5160, EdAd 5103 or #)
1615-1800 M, East Bank, Weatherman, 3 cr

8600 Clinical Practice in School Psychology (prereq 8310 or SchP 8310)
Egeland, 1-5 cr

8601 **Advanced Practicum** (prereq #)
ar cr

R8603 **Counseling Practicum II** (§CSPP 8603; prereq ¶8303, 8602, #)
1315-1500 MW, East Bank, Snoke, 3 cr

8610 **Practicum: School Psychological Services** (prereq #)
Lindborg, 1-5 cr

8614 **Counseling Practicum: Student Counseling Bureau** (max 9 cr, §CSPP 8614; prereq 8613)
1415-1600 Th, East Bank, Fiedler, Loeffler, 3 cr

8641 **Clinical Practice in Diagnosis and Treatment of College Learning Difficulties** (§CSPP 8641; prereq 8341 or CSPP 8341)
1415-1600 W, 3 cr

8700 **Internship: School Psychological Services** (prereq 8610 or SchP 8610, #)
Egeland, Lindborg, 5-15 cr

8701 **Internship: Counseling and Student Personnel Psychology** (§CSPP 8701, max 9 cr for MA and specialist students, max 18 cr for PhD students)
Snoke, 0-6 cr

8710 **Internship: Instruction and Supervision in School Psychology** (§SchP 8710; prereq 8700 or SchP 8700 or #, doctoral candidate in school psychology)
1-9 cr

8900 **Research Problems** (prereq #)
-1 ar cr (special ed maj only)
-2 ar cr (counseling maj only)
-3 ar cr (school psych maj only)

8910 **Directed Study** (prereq #)
-1 ar cr (special ed maj only)
-2 ar cr (counseling maj only)
-3 ar cr (school psych maj only)

Spring Quarter

3106 **Exceptional Students in Regular Classes** (§5106) (A-N only)
-1 1315-1500 T, East Bank, Reynolds, 2 cr (elem ed maj only)
-2 1615-1800 W, East Bank, Walter, 2 cr (secondary ed maj only)

5100 **Childhood Language Development: Classroom Implications** (§SpEd 5100) (A-N only)
1600-1730 TTh, East Bank, Walter, 3 cr

5101 **Education of Exceptional Children** (§SpEd 5101) (A-N only)
1615-1800 TTh, East Bank, 4 cr

5104 **Social and Vocational Development of Handicapped Students** (§SpEd 5104; prereq #) (A-N only)
1800-2130 W, East Bank, W Tennyson, 4 cr

5106 **Exceptional Students in Regular Classes** (§3106) (A-N only)
-1 1315-1500 T, East Bank, Reynolds, 2 cr (elem ed maj only)
-2 1615-1800 W, East Bank, Walter, 2 cr (secondary ed maj only)

5108 **Parent and Professional Planning for Handicapped Students** (§SpEd 5108) (A-N only)
1615-1800 MW, East Bank, Reynolds, 3 cr

R5110 **Counseling Procedures** (§CSPP 5110) (A-N only)
-1 1900-2130 M, East Bank, 3 cr
-2 1315-1545 Th, East Bank, 3 cr

5120 **Introduction to Mental Retardation** (§SpEd 5120, CPsy 5315; prereq 5101 or SpEd 5101 or #) (A-N only)
1630-1800 TTh, East Bank, Turnure, 4 cr

5145 **Teaching Speech to the Hearing Impaired I** (§SpEd 5145; prereq #) (A-N only)
1700-1830 TTh, East Bank, 3 cr

R5151 **Managing Problem Behavior in the Classroom** (§SpEd 5151) (A-N only)
1630-1900 M, Wood, 3 cr (Richfield High School)

R5153 **Disturbed and Disturbing Students II: Program Selection, Operation, Modification, and Evaluation** (§SpEd 5153; prereq 5152 or SpEd 5152) (A-N only)
1630-1900 W, Wood, 3 cr (StP)

5155 **Psychoeducational Interventions: Psychotic Children** (§SpEd 5155; prereq 12 cr in psychology, child psychology or special education) (A-N only)
1630-1900 W, East Bank, Voeltz, 3 cr

5175 **Structure and Function of the Eye: Educational Implications** (§SpEd 5175) (A-N only)
1630-1900 TTh, East Bank, Knowlton, 3 cr

5180 **Education of the Disadvantaged** (§SpEd 5180; prereq 12 cr in psychology, educational psychology or sociology) (A-N only)
1800-2100 M, East Bank, Baldwin, 3 cr

5181 **Methods and Materials for Handicapped Infants and Preschool Children** (§SpEd 5181; prereq 12 cr in education or #) (A-N only)
1600-1815 TTh, East Bank, 3 cr

5200 **Assessment and Decision Making in Special Education** (A-N only)
1630-2000 W, East Bank, 4 cr

5301 **Workshop in Developmental Education** (max 6 cr) (A-N only)
0830-1630 S, East Bank, Weinberg, 3-6 cr (April 14, 28, May 12, June 2)

5302 **Workshop: Special Education: Secondary-Postsecondary Instruction for Severely Handicapped Students** (prereq #) (A-N only)
2 cr

5305 **Behavior Analysis Procedures with Mildly and Moderately Handicapped People** (§SpEd 5301, 5303; PsyF 5149 or Psy 5017 rec) (A-N only)
1630-1800 TTh, East Bank, Deno, 4 cr

R5332 **Career Development: Organizational Interventions and Programs** (§CSPP 5332; prereq 5210 or 5331 or #) (A-N only)
1615-1830 T, East Bank, L Hansen, 3 cr (1 hr ar)

5505 **Cross-Cultural Counseling** (§CSPP 5505; prereq #) (A-N only)
1315-1500 MW, East Bank, Snoke, 3 cr

5601 **Practicum: Special Education** (S-N optional; prereq #)
-1 Wood, ar cr
-2 Walter, ar cr
-3 Voeltz, ar cr
-4 ar cr

5900 **Independent Study** (max 12 cr; prereq #) (A-N only)
-1 ar cr (special ed maj only)
-2 ar cr (counseling maj only)
-3 Weinberg, ar cr (school psych maj only)

R8150 **Psychological Aspects of Counseling Supervision** (§CSPP 8150; prereq 8510, 8604 or CSPP 8510, CSPP 8604, #)
Anderson, 3 cr

R8304 **Counseling Theory and Procedures III** (§CSPP 8304; prereq 8303, ¶8604, #)
1415-1800 Th, East Bank, L Hansen, 3 cr

8307 **Field Placement in Counseling and Student Personnel Psychology** (max 9 cr; prereq MA student in CSPP, ¶8304, ¶8604)
1-3 cr

R8312 **Personality Appraisal in Children, Adolescents** (§SchP 8312; prereq #)
1600-1800 TTh, East Bank, Greenberg, 5 cr

R8508 **Seminar: School Psychology** (prereq #)
Lindborg, ar cr

R8512 **Seminar: Advanced Counseling Research** (§CSPP 8512; prereq PhD student, #)
1015-1200 TTh, East Bank, Hummel, Shaffer, others, 4 cr

R8515 **Theories and Methods of Instructional Intervention** (§SchP 8515; prereq 8310, 8311 or SchP 8310, 8311 or #)
1600-1800 TTh, East Bank, Voeltz, 3 cr

8520 **Seminar: Research in School Psychology** (max 6 cr; prereq #)
1300-1500 F, East Bank, Egeland, 2 cr

R8543 **College Student Personnel Work-Discipline, Administration** (§CSPP 8543; prereq 8140 or CSPP 8140)
1415-1600 T, East Bank, Snoke, 2 cr

8561 **Seminar: Administration of Special Education** (§EdAd 5181; prereq 5160 or SpEd 5160, EdAd 5103 or #)
1615-1800 M, East Bank, Weatherman, 3 cr

8600 **Clinical Practice in School Psychology** (prereq 8310 or SchP 8310)
Egeland, 1-5 cr

8601 **Advanced Practicum** (prereq #)
ar cr

8604 **Counseling Practicum III** (§CSPP 8604; prereq ¶8304, 8603, #)
1515-1700 MW, East Bank, Anderson, 3 cr (2 hrs ar)

8610 **Practicum: School Psychological Services** (prereq #)
Lindborg, 1-5 cr

8615 **Counseling Practicum: Student Counseling Bureau** (max 9 cr, §CSPP 8615; prereq 8614)
1415-1600 Th, East Bank, Fiedler, Loeffler, 3 cr (addnl hrs ar)

8641 **Clinical Practice in Diagnosis and Treatment of College Learning Difficulties** (§CSPP 8641; prereq 8341 or CSPP 8341)
1415-1600 W, 3 cr

8700 **Internship: School Psychological Services** (prereq 8610 or SchP 8610, #)
Egeland, Lindborg, 5-15 cr

8701 **Internship: Counseling and Student Personnel Psychology** (§CSPP 8701, max 9 cr for MA and specialist students, max 18 cr for PhD students)
Snoke, 0-6 cr

8710 **Internship: Instruction and Supervision in School Psychology** (§SchP 8710; prereq 8700 or SchP 8700 or #, doctoral candidate in school psychology)
Greenberg, 1-9 cr

8900 **Research Problems** (prereq #)
-1 ar cr (special ed maj only)
-2 ar cr (counseling maj only)
-3 ar cr (school psych maj only)

8910 **Directed Study** (prereq #)
-1 ar cr (special ed maj only)
-2 ar cr (counseling maj only)
-3 ar cr (school psych maj only)
-4 1600-1830 T, East Bank, Erickson, 3 cr

PSYCHOLOGICAL FOUNDATIONS OF EDUCATION (PsyF)
Educational Psychology
Education

Winter Quarter

R3380 **Introduction to Human Relations** (prereq education jr or sr) (S-N only)
★LECT 1615-1800 M, East Bank, Oden, Maruyama
-1 REC 1415-1600 T, East Bank, 3 cr
-2 REC 1900-2045 T, East Bank, 3 cr
-3 REC 0815-1000 W, East Bank, 3 cr
-4 REC 1415-1600 W, East Bank, 3 cr
-5 REC 1415-1600 W, East Bank, 3 cr
-6 REC 0815-1000 Th, East Bank, 3 cr
-7 REC 1415-1600 Th, East Bank, 3 cr

R5110 **Introductory Statistical Methods** (S-N optional)
-1 1015-1200 MWF, East Bank, Stecklein, 4 cr
-2 1615-1800 TTh, East Bank, Stull, 4 cr

5111 **Applied Matrix and Vector Concepts** (S-N only)
0815-0900 MWF, East Bank, Terwilliger, 1 cr (Jan 9-20)

5112 **Statistical Methods Computer Laboratory** (prereq 5110 or equiv) (S-N only)
0815-1000 T, East Bank, Anderson, 2 cr

5120 **Educational Measurement in the Classroom** (S-N optional)
1615-1800 MW, East Bank, Joselyn, 4 cr

5121 **Basic Principles of Measurement** (S-N optional; prereq 5110 or 8110 or Psy 3801 or equiv)
1515-1600 MWF, East Bank, Merwin, 3 cr

5152 **Knowing, Learning, and Thinking** (A-N only)
1730-2000 W, East Bank, Samuels, 4 cr

5162 **Personality and Social Development** (prereq 5 cr introductory psychology) (A-N only)
1630-1900 T, East Bank, Rest, 3 cr

R5172 **Structuring Learning: Social Psychological Approaches** (A-N only)
0800-1600 S, East Bank, D Johnson, 3 cr (Jan 7, 14, 21, March 3)

5330 **Computer Programming** (S-N optional; prereq sr)
0915-1000 MWF, East Bank, Anderson, 3 cr

5333 **Introduction to Computer Operations: U of M Systems, SPSS** (S-N only)
1515-1600 MTWThF, East Bank, Anderson, 1 cr (Jan 9-20)

5525 **Educational Research Colloquium** (max 6 cr) (S-N only)
1215-1330 F, East Bank, Merwin, 1 cr (alt F)

5621 Practicum: Instruments and Procedures for Evaluation (S-N optional; prereq 5125, 5121 or equiv)
1015-1130 TTh, East Bank, Welch, 3 cr

5900 Directed Study (S-N optional; prereq #)
ar cr

8110 Statistical Methods (prereq 5110 or Psy 3801)
0815-0900 MWF, East Bank, MacEachern, 3 cr

R8111 Statistical Methods (prereq 8110)
–1 0915-1000 MWF, East Bank, MacEachern, 3 cr
–2 1415-1530 MW, East Bank, Terwilliger, 3 cr
–3 1615-1730 MW, East Bank, Stecklein, 3 cr

8114 Multiple Regression Analysis (prereq 5111, 8111, ¶5111 or #)
1115-1200 MWF, East Bank, Terwilliger, 3 cr

8120 Methods in Educational Research (prereq PhD student only - spring qtr)
1515-1700 T, East Bank, Corcoran, 3 cr

8520 Seminar: Research Planning (max 3 cr)
Stecklein, 1 cr

8523 Theory of Psychological Scaling (prereq 5121, 8111 or #)
1415-1600 MW, East Bank, Davison, 3 cr

8554 Instructional Psychology (prereq course in learning and/or instructional psychology)
1515-1730 Th, East Bank, Burris, 3 cr

8572 Organizational Development and Change (prereq 5170)
1615-1900 M, East Bank, D Johnson, 4 cr

8721 Internship: Evaluation (max 12 cr; prereq #)
1015-1200 F, East Bank, Welch, 3 cr

8900 Research Problems (prereq #)
ar cr

8910 Problems: Statistics for Students in Education and Psychology
Stecklein, MacEachern, others, ar cr

8920 Problems: Measurement (max 9 cr)
–1 1415-1600 MW, East Bank, Davison, 3 cr
–2 Terwilliger, Stecklein, others, 1–3 cr

R8921 Problems: Evaluation (prereq 5621 or 8525)
–1 1215-1400 F, East Bank, Kellogg, ar cr (alt F)
–2 Merwin, Kellogg, others, ar cr

8930 Research Problems: Computer Applications (prereq #)
Anderson, ar cr

8940 Research Problems: Learning and Cognition (prereq #)
Bart, ar cr

8960 Research Problems: Personality (max 9 cr; prereq #)
Rest, ar cr

8970 Research Problems: Social Psychology (prereq #)
1930-2100 T, East Bank, D Johnson, Maruyama, ar cr (alt T)

Spring Quarter

R3380 Introduction to Human Relations (prereq education jr or sr) (S-N only)
★LECT 1415-1600 M, East Bank, Oden, Maruyama
–1 REC 0815-1000 W, East Bank, 3 cr
–2 REC 1415-1600 W, East Bank, 3 cr
–3 REC 1415-1600 W, East Bank, 3 cr
–4 REC 1900-2045 W, East Bank, 3 cr
–5 REC 0815-1000 Th, East Bank, 3 cr
–6 REC 1400-1545 Th, St. Paul, 3 cr (StP)

R5110 Introductory Statistical Methods (S-N optional)
–1 1015-1200 MW, East Bank, Welch, 4 cr
–2 1615-1800 MW, East Bank, Davison, 4 cr

5112 Statistical Methods Computer Laboratory (prereq 5110 or equiv) (S-N only)
0815-1000 T, East Bank, Anderson, 2 cr

5120 Educational Measurement in the Classroom (S-N optional)
1615-1800 TTh, East Bank, Kellogg, 4 cr

5121 Basic Principles of Measurement (S-N optional; prereq 5110 or 8110 or Psy 3801 or equiv)
1015-1130 TTh, East Bank, Davison, 3 cr

5125 Principles and Methods of Evaluation (S-N optional)
1615-1730 MW, East Bank, Merwin, 3 cr

5149 Behavior Analysis in Education (A-N only)
1600-1900 T, 4 cr (Minnetonka High School 117)

5162 Personality and Social Development (prereq 5 cr introductory psychology) (A-N only)
1615-1730 MW, East Bank, Erickson, 3 cr

5173 Issues in School Desegregation (prereq survey course in social psychology or #) (A-N only)
1615-1900 Th, East Bank, Maruyama, 4 cr

5182 Psychology of Student Learning (A-N only)
1730-1930 W, East Bank, Turnure, 3 cr

5183 Adult Learning and Educational Practice (A-N only)
1730-1930 T, East Bank, Bart, 4 cr

5305 Workshop in Human Relations (max 6 cr, §CSPP 5305) (S-N only)
1630-2130 M, East Bank, Oden, Maruyama, 1–6 cr

5333 Introduction to Computer Operations: U of M Systems, SPSS (S-N only)
1515-1600 MTWThF, East Bank, Anderson, 1 cr (April 2-13)

5520 Evaluation Colloquium (max 6 cr) (A-N only)
1215-1330 F, East Bank, Kellogg, 1 cr (alt F)

5900 Directed Study (S-N optional; prereq #)
ar cr

8111 Statistical Methods (prereq 8110)
0815-0900 MWF, East Bank, MacEachern, 3 cr

R8112 Statistical Methods (prereq 8111)
–1 0915-1000 MWF, East Bank, MacEachern, 3 cr
–2 1415-1530 MW, East Bank, Terwilliger, 3 cr
–3 1615-1730 MW, East Bank, Stecklein, 3 cr

8117 Factor Analysis (prereq 8111, 5111 or ¶5111 or #)
1115-1200 MWF, East Bank, Terwilliger, 3 cr

8120 Methods in Educational Research (prereq PhD student only - spring qtr)
1300-1600 T, East Bank, 3 cr

8130 Computer Application to Statistical Analyses (prereq 8112)
0815-0900 MWF, East Bank, Anderson, 3 cr

8510 Analysis of Results from Nonexperimental Research (prereq 8111 or #)
0945-1100 TTh, East Bank, Maruyama, 4 cr

8525 Seminar: Special Topics in Educational Evaluation (prereq 5125 or #)
1515-1700 T, East Bank, Corcoran, 3 cr

R8544 Knowledge and Skill (prereq #)
1315-1600 Th, East Bank, P Johnson, 3 cr

8721 Internship: Evaluation (max 12 cr; prereq #)
1015-1200 F, East Bank, Welch, 3 cr

8900 Research Problems (prereq #)
ar cr

8910 Problems: Statistics for Students in Education and Psychology
–1 MacEachern, Terwilliger, others, ar cr
–2 1015-1100 MWF, East Bank, Hummel, ar cr

8920 Problems: Measurement (max 9 cr)
Davison, Merwin, others, 1–3 cr

8921 Problems: Evaluation (prereq 5621 or 8525)
Corcoran, Welch, others, ar cr

8930 Research Problems: Computer Applications (prereq #)
Anderson, ar cr

8940 Research Problems: Learning and Cognition (prereq #)
Bart, ar cr

8960 Research Problems: Personality (max 9 cr; prereq #)
Rest, ar cr

8970 Research Problems: Social Psychology (prereq #)
1930-2100 T, East Bank, D Johnson, Maruyama, ar cr (alt T)

8980 Research Problems: Instructional Psychology (max 9 cr; prereq #)
Burris, ar cr

PSYCHOLOGY (Psy)
Liberal Arts
Winter Quarter

1001 Introduction to Psychology
1315-1400 MTWThF, West Bank, Burkhardt, Fox, others, 5 cr

R1004 Introductory Laboratory Psychology (1004-1005†; prereq soph, 1001 or ¶)
★LECT 0915-1000 M, Viemeister
–1 LAB 0915-1200 T, East Bank, 4 cr
–2 LAB 0915-1200 T, East Bank, 4 cr
–3 LAB 1315-1600 T, East Bank, 4 cr
–4 LAB 1315-1600 T, East Bank, 4 cr
–5 LAB 0915-1200 W, East Bank, 4 cr
–6 LAB 1315-1600 W, East Bank, 4 cr

R1005 Introductory Laboratory Psychology (1004-1005†; prereq 1004)
★LECT 0915-1000 W, Fox, Peterson
–1 LAB 0915-1200 Th, East Bank, 4 cr
–2 LAB 0915-1200 Th, East Bank, 4 cr
–3 LAB 1315-1600 Th, East Bank, 4 cr
–4 LAB 1315-1600 Th, East Bank, 4 cr
–5 LAB 0915-1200 F, East Bank, 4 cr
–6 LAB 1315-1600 F, East Bank, 4 cr

R1011 Career Decision Making (cannot be applied toward any CLA degree)
1215-1400 T, East Bank, Sarkissian, 2 cr

3014 Introduction to Applied Psychology (prereq 1001)
0915-1000 MWF, East Bank, Brown, 4 cr

R3051 Introduction to Cognitive Psychology (prereq 1001, 1005 or ¶)
0945-1100 TTh, East Bank, 4 cr

3201 Introduction to Social Psychology (prereq 1001)
1415-1530 TTh, West Bank, Snyder, 4 cr

3960 Undergraduate Seminar (prereq 1001, #, △)
1–5 cr

3970 Directed Studies (prereq #, △, college approval)
1–8 cr

3990 Directed Research (prereq #, △, college approval)
1–8 cr

R5012 Psychology of Learning (prereq 1001, 1005, 3011 or Biol 1107, EBB 3111 or # except for grad students)
1015-1100 MWF, East Bank, Overmier, 4 cr

R5054 Psychology of Language (prereq 3011 except for students in honors sequence, grad students)
1215-1300 MWF, East Bank, 4 cr

R5101 Personality (§3101; prereq 5862 or ¶, honors candidate or grad student)
0945-1100 TTh, East Bank, Tellegen, 4 cr

R5125 Differential Psychology (5125-5126†; prereq 5862 or #, honors candidate or grad student)
1115-1230 TTh, East Bank, Bouchard, 4 cr

R5141 Psychology of Women (prereq 1001)
0815-0930 TTh, East Bank, Schletzer, 4 cr

5206 Research Methods in Social Psychology (prereq 1001, 3201, 3801 or # or grad)
1415-1530 TTh, East Bank, Heath, 4 cr

R5604 Abnormal Psychology (§3604; prereq honors maj; # for grads)
1415-1600 TTh, East Bank, Leon, 4 cr

5609 Psychobiology of Addictive Behavior (prereq 1001)
0945-1100 TTh, Pickens, 4 cr

R5701 Personnel and Industrial Psychology (prereq 1001, 3801 or #)
1245-1400 TTh, East Bank, Dunnette, 4 cr

5751 Psychology of Advertising (§Jour 5251; prereq 1001)
0915-1000 TThF, East Bank, Jones, 4 cr

5861 Quantitative Methods (prereq #)
0915-1030 TTh, East Bank, Viemeister, 4 cr

5884 Methods for Multivariate Covariation Analysis (prereq 5862 or #)
1315-1400 M, 1315-1500 W, East Bank, Cudeck, 4 cr

5901H Honors Project (prereq sr, #)
1–8 cr

5960 Topics in Psychology (prereq 1001, #)
1–5 cr

8004 Seminar: Philosophical Psychology (8004-8005†; prereq course in logic or philosophy, PhD candidate in psych or philosophy)
1515-1700 Th, Meehl, 3 cr

8015 Readings in the Analysis of Operant Behavior (prereq Psy 5017, 5019 or ¶, #)
1330-1500 Th, East Bank, Thompson, 3 cr

8070 Seminar: Psychopharmacology (prereq #)
Meisch, Thompson, 1 cr

8107 Cross-Cultural Study of Personality (prereq 5101, 5604 or equiv or #)
Butcher, 3 cr

8202 Advanced Social Psychology-Close Relationships (prereq #)
1000-1200 Th, East Bank, Berscheid, 3 cr

8205 Seminar: Research in Social Psychology (prereq 8204, #)
1300-1500 Th, East Bank, Berscheid, Snyder, others, 3 cr

8214 Marriage and Family Counseling I (§FSoS 8214; prereq #)
1000-1215 T, St. Paul, Boss, 3 cr (StP)

8217 Theories of Family Interaction (§FSoS 8517; prereq #)
1230-1345 T, St. Paul, Boss, 2 cr (StP)

8502 Counseling Psychology II: Assessment (prereq 5862, counseling psychology stu or #)
★LECT 1415-1500 MW, East Bank, Dawis, 3 cr
–1 LAB 1315-1500 F, East Bank, Dawis

8515 Practicum in Student Counseling (prereq 8514)
1415-1600 Th, East Bank, Loper, 3 cr

8518 Practicum in Rehabilitation Counseling (prereq 8503 or #)
1315-1500 TTh, East Bank, Athelstan, 3 cr

8520 Fieldwork in Applied Psychology (prereq #)
1-6 cr

8525 Seminar: Student Personnel Work (prereq #)
1-6 cr

8542 Seminar: Practices, Approaches and Issues in Counseling Psychology (prereq grad student in counseling psychology or #)
1515-1700 F, East Bank, Lofquist, 1 cr (alt F)

8545 Seminar: Research in Counseling Psychology (prereq 8544)
1615-1800 M, East Bank, Hansen, 1 cr (alt M)

8552 Marriage and Family Counseling: Internship II (prereq 8214, 8215, 8216, #)
1500-1630 M, St. Paul, ar cr (StP)

8560 Internship in Counseling Psychology (prereq #)
1-6 cr

8562 Seminar: Vocational Counseling for Work Adjustment (prereq 8561)
1015-1130 F, East Bank, Dawis, 2 cr

8565 Advanced Seminar: Vocational Counseling for Work Adjustment (prereq 8564)
1015-1130 M, East Bank, Lofquist, 2 cr

8612 Professional Methods in Clinical Psychology I: Assessment (prereq clinical psychology maj or #)
★LECT 1415-1530 TTh, East Bank, Butcher, Tellegen, 4 cr
–1 LAB 1315-1500 W, East Bank, Butcher, Tellegen

8620 Practicum in Clinical Psychology (prereq #)
1-6 cr

8621 Professional Methods: Clinical Psychology II: Methods of Intervention (prereq PhD candidate in clinical psychology, 8611, 8612, 8613, 8614 or #)
Hollon, 2 cr

8632 Professional Methods in Clinical Psychology III: Research in Psychotherapies (prereq PhD candidate in clinical psychology, 8611, 8612, 8613, 8614 or #)
Kendall, 3 cr

8640 Seminar: Topics in Clinical Psychology (prereq #)
1-6 cr

8645 Seminar: Advanced Clinical Psychology (prereq 8644)
1 cr

8648 Seminar: Advanced Child Clinical Psychology (prereq #)
Leon, 2 cr

8670 Internship in Clinical Psychology (prereq PhD candidate in clinical psychology, permission of director of training program)
2-4 cr

8704 Seminar: Industrial and Organizational Psychology (prereq #)
Campbell, 4 cr

8882 Seminar: Psychometric Methods (8881-8882-8883†; prereq 8881)
1115-1300 W, East Bank, Weiss, 1 cr

8900 Seminar: Behavioral Genetics (prereq #)
2 cr

8970 Seminar: Special Areas of Psychology and Related Sciences (prereq #)
1-6 cr

8980 Directed Teaching in Psychology (prereq #)
1-6 cr

8990 Research Problems (prereq #)
1-6 cr

Spring Quarter

1001 Introduction to Psychology
1315-1400 MTWThF, West Bank, Burkhardt, Fox, others, 5 cr

R1005 Introductory Laboratory Psychology (1004-1005†; prereq 1004)
★LECT 0815-0900 T, East Bank, Fox, Peterson
–1 LAB 1315-1600 T, East Bank, 4 cr
–2 LAB 1315-1600 T, East Bank, 4 cr
–3 LAB 0915-1200 W, East Bank, 4 cr
–4 LAB 0915-1200 W, East Bank, 4 cr
–5 LAB 1315-1600 W, East Bank, 4 cr
–6 LAB 1315-1600 W, East Bank, 4 cr
–7 LAB 0915-1200 Th, East Bank, 4 cr
–8 LAB 0915-1200 Th, East Bank, 4 cr
–9 LAB 1315-1600 Th, East Bank, 4 cr
–10 LAB 1315-1600 Th, East Bank, 4 cr
–11 LAB 0915-1200 F, East Bank, 4 cr
–12 LAB 0915-1200 F, East Bank, 4 cr

R1011 Career Decision Making (cannot be applied toward any CLA degree)
1215-1400 Th, East Bank, Sarkissian, 2 cr

R3031 Sensation and Perception (prereq 1001, 1004)
0945-1100 TTh, West Bank, 4 cr

3061 Introduction to Physiological Psychology (§5061; prereq 1001, 1005 or Biol 1011 or #)
1215-1300 MWF, East Bank, Roberts, 4 cr

3124 Psychology of Individual Differences (prereq 3801)
1245-1400 TTh, East Bank, Dunnette, 4 cr

3206 Applied Social Psychology (prereq 1001, 3201)
1245-1400 TTh, East Bank, Heath, 4 cr

3604 Introduction to Abnormal Psychology (§5604; prereq 1001)
1115-1200 MWF, West Bank, Hollon, 4 cr

3801 Introduction to Measurement and Statistical Methods (prereq 1001 or equiv)
1415-1530 TTh, East Bank, Cudeck, 4 cr

3960 Undergraduate Seminar (prereq 1001, #, △)
1-5 cr

3970 Directed Studies (prereq #, △, college approval)
1-8 cr

3990 Directed Research (prereq #, △, college approval)
1-8 cr

R5013 Psychology of Learning (prereq 5012)
1015-1100 MWF, East Bank, Overmier, 4 cr

R5014 Psychology of Human Learning and Memory (prereq 1005 or 3011 or 3051 or # except for student in honors sequence, grad students)
0945-1100 TTh, East Bank, Fox, 4 cr

R5015 Advanced Learning and Cognitive Processing (prereq 3011 or 3051 or 5014 except for students in honors sequence, grad students)
1415-1500 MWF, East Bank, 4 cr

5062 Neuropsychology of Motivation and Learning (prereq 5061 or #)
1115-1230 TTh, East Bank, Roberts, 4 cr

R5126 Differential Psychology (5125-5126†; prereq 5125, honors cand or grad stu)
1115-1230 TTh, East Bank, Bouchard, 4 cr

R5202 Attitudes and Social Behavior (prereq 1001, 3201 or #)
1315-1400 MWF, East Bank, Borgida, 4 cr

R5501 Vocational Psychology (prereq 3801 or #)
0945-1100 TTh, East Bank, Dawis, 4 cr

R5702 Psychology of Individual Behavior in Organizations (prereq 5701 or 8 cr in psychology or #)
0945-1100 TTh, East Bank, Campbell, 4 cr

5751 Psychology of Advertising (§Jour 5251; prereq 1001)
1215-1300 MWF, East Bank, Jones, 4 cr

5865 Measurement of Latent Traits (prereq 5862 or #)
Weiss, 4 cr

R5900H Honors Seminar: Psychology (prereq psychology honors maj or #) (S-N only)
1415-1600 W, East Bank, Peterson, 1 cr

5901H Honors Project (prereq sr, #)
1-8 cr

5960 Topics in Psychology (prereq 1001, #)
1-5 cr

8005 Seminar: Philosophical Psychology (8004-8005†; prereq 8004)
1515-1700 Th, East Bank, Meehl, 3 cr

8019 Seminar of the Analysis of Operant Behavior (prereq Psy 5017, 5019 or ¶, #)
1330-1500 Th, East Bank, Thompson, Overmier, others, 1 cr

8037 Psychophysics and Audition (prereq 8034 or #)
1315-1445 MW, East Bank, Viemeister, 3 cr

8056 Seminar: Psychology of Language (prereq 5054, #)
1300-1500 TTh, East Bank, 3 cr

8070 Seminar: Psychopharmacology (prereq #)
Pickens, 1 cr

8121 Achievement Motivation and Women (prereq 8 cr psychology, grad student, #)
Faunce, 3 cr

8206 Seminar: Research in Social Psychology (prereq 8205, #)
1300-1500 T, East Bank, Berscheid, Snyder, others, 3 cr

8208 Advanced Social Psychology: The Self (prereq #)
Snyder, 3 cr

8215 Marriage and Family Counseling II (§FSoS 8215; prereq #)
1000-1215 T, St. Paul, Boss, 3 cr (StP)

8218 Theories of Family Interaction (§FSoS 8518; prereq #)
1230-1345 T, St. Paul, Bass, 2 cr (StP)

8503 Counseling Psychology III: Interviewing (prereq 8501, 8502, counseling psychology stu or #)
★LECT 1415-1500 MW, East Bank, Brown, 3 cr
–1 LAB 1315-1500 F, East Bank, Brown

8516 Practicum in Student Counseling (prereq 8515)
1415-1600 Th, East Bank, Loper, 3 cr

8519 Practicum in Rehabilitation Counseling (prereq 8503 or #)
1315-1500 TTh, East Bank, Athelstan, 3 cr

8520 Fieldwork in Applied Psychology (prereq #)
1-6 cr

8543 Seminar: Practices, Approaches and Issues in Counseling Psychology (prereq grad student in counseling psychology or #)
1515-1645 F, East Bank, Lofquist, 1 cr (alt F)

8546 Seminar: Research in Counseling Psychology (prereq 8545)
1615-1800 M, East Bank, Betz, 1 cr (alt M)

8553 Marriage and Family Counseling: Internship III (prereq 8214, 8215, 8216, #)
1500-1630 M, St. Paul, ar cr (StP)

8560 Internship in Counseling Psychology (prereq #)
1-6 cr

8563 Seminar: Vocational Counseling for Work Adjustment (prereq 8562)
1015-1130 F, East Bank, Dawis, 2 cr

8566 Advanced Seminar: Vocational Counseling for Work Adjustment (prereq 8565)
1015-1130 M, East Bank, Lofquist, 2 cr

8574 Seminar: Strong Vocational Interest Blank/Strong-Campbell Interest Inventory (prereq grad or #)
Hansen, 2 cr

8613 **Professional Methods in Clincal Psychology I: Assessment** (prereq clinical psychology maj or #)
★LECT 1415-1530 TTh, East Bank, Butcher, others, 4 cr
–1 LAB 1315-1500 W, East Bank, Butcher, others

8620 **Practicum in Clinical Psychology** (prereq #)
1–6 cr

8622 **Professional Methods: Clinical Psychology II: Behavioral Therapy** (prereq PhD candidate in clinical psychology, 8611, 8612, 8613, 8614 or #)
Depue, 2 cr

8640 **Seminar: Topics in Clinical Psychology** (prereq #)
1–6 cr

8646 **Seminar: Advanced Clinical Psychology** (prereq 8645)
1 cr

8670 **Internship in Clinical Psychology** (prereq PhD candidate in clinical psychology, permission of director of training program)
2–4 cr

8883 **Seminar: Psychometric Methods** (8881-8882-8883†; prereq 8882)
1115-1300 W, East Bank, Weiss, 1 cr

8970 **Seminar: Special Areas of Psychology and Related Sciences** (prereq #)
1–6 cr

8980 **Directed Teaching in Psychology** (prereq #)
1–6 cr

8990 **Research Problems** (prereq #)
1–6 cr

PUBLIC AFFAIRS (PA)

Winter Quarter

5141 **Energy Policy I: Supply and Demand Options** (prereq grad or △)
1820-2050 W, West Bank, Abrahamson, 4 cr

5161 **Technology Planning I** (prereq #)
1115-1300 TTh, West Bank, Geesaman, 4 cr

R5521 **Strategy and Tactics in Project Planning**
1900-2130 T, West Bank, Bryson, 4 cr

5525 **Organizational Design and Change** (A-N only)
0815-0930 TTh, West Bank, Bryson, 4 cr

5550 **Proseminar** (prereq #)
–1 1115-1300 F, West Bank, 2 cr (Futures)
–2 1315-1500 F, West Bank, 2 cr (Private Sector Development)

5981 **Directed Study** (prereq #)
ar cr

8121 **Policy Process II** (prereq #)
1515-1700 MTh, West Bank, 3 cr

8203 **Selected Topics: Systems Analysis** (prereq 8201 or #)
1315-1500 W, West Bank, Brandl, 3 cr

8204 **Public Economy** (prereq #)
1515-1700 W, West Bank, Heller, 3 cr

R8207 **Application of Quantitative Methods for Policy Analysis** (prereq #)
–1 1515-1700 TF, West Bank, 3 cr
–2 1515-1700 TF, West Bank, M Dewar, 3 cr

8252 **Workshop** (prereq #)
–1 0915-1100 M, West Bank, ar cr (Budgeting Social Programs)
–2 1315-1500 MW, West Bank, M Dewar, Fass, ar cr (The Minnesota Economy)
–3 1820-2050 M, West Bank, Bradford, ar cr (Community Development)
–4 1315-1500 T, West Bank, Eustis, ar cr (Long Term Care)
–5 1315-1500 Th, West Bank, Kudrle, ar cr (Foreign Policy Analysis)
–6 1315-1500 Th, West Bank, T Dewar, ar cr (Topics in Social Policy)
–7 1900-2100 Th, West Bank, Einsweiler, ar cr (Public Service Redesign)
–8 1015-1200 F, West Bank, Jernberg, ar cr (Financial Management)

8321 **Intergovernmental Administration Relations** (prereq #)
0945-1100 TTh, West Bank, Jernberg, Naftalin, 3 cr

R8405 **Planning and Analysis of Development Projects** (prereq Econ 3101 or #) (A-N only)
0915-1200 M, West Bank, Fass, 4 cr

8526 **Seminar: Urban Public Policy**
0915-1100 W, West Bank, Naftalin, 3 cr

8610 **Seminar: Policy Analysis of the Health Care Sector** (prereq #)
1315-1500 W, West Bank, Kudrle, 3 cr

8630 **Income Maintenance Policy Seminar I** (prereq #)
1115-1300 Th, West Bank, 3 cr

8981 **Individual Readings, Research in Public Policy Analysis, Administration** (prereq #)
ar cr

Spring Quarter

5162 **Technology Planning II** (prereq 5161, #)
1115-1300 TTh, West Bank, Geesaman, 4 cr

R5301 **Multinational Corporation** (prereq Econ 1001, 1002)
1315-1500 TTh, West Bank, Kudrle, 4 cr

5404 **Development and Change** (A-N only)
1315-1500 MW, West Bank, Fass, 4 cr

5505 **Housing Policy** (prereq 12 cr social sciences or #)
1315-1500 TTh, West Bank, Adams, 4 cr

5506 **Topics in Housing Policy**
1820-2050 M, West Bank, Bradford, 4 cr

R5514 **Group Techniques in Public Affairs and Planning** (prereq #)
1900-2130 T, West Bank, Bryson, 4 cr

R5545 **Planning Methods**
1115-1300 MW, West Bank, Lukermann, 4 cr

R5550 **Proseminar** (prereq #)
–1 1315-1500 W, West Bank, Geesaman, 2 cr (Technics and Politics)
–2 1315-1500 F, West Bank, M Dewar, 2 cr (Economic Development)
–3 1315-1500 F, West Bank, Fraser, 2 cr (Women and Social Policy)

R5561 **Case Studies in Planning and Plan Making** (prereq sr or grad)
1900-2130 Th, West Bank, Einsweiler, 3 cr

5991 **Directed Study** (prereq #)
ar cr

8202 **Policy Analysis II** (prereq #)
1515-1700 MTh, West Bank, Hoenack, 3 cr

8206 **Policy Analysis III** (prereq △)
1515-1700 TF, West Bank, N Eustis, 3 cr

8211 **Administrative Theory and Behavior** (prereq 8210, #)
0945-1100 TTh, West Bank, Jernberg, Naftalin, 3 cr

8253 **Workshop** (prereq #)
–1 0915-1100 M, West Bank, ar cr (State/Local Finance)
–2 0915-1100 W, West Bank, Abrahamson, ar cr (Global Environmental Policy)
–3 1900-2130 W, West Bank, Cleveland, ar cr (Management of Peace)
–4 1515-1700 Th, West Bank, M Dewar, ar cr (Economic Development)
–5 1015-1200 F, West Bank, Jernberg, ar cr (Local Budgeting)
–6 1115-1300 F, West Bank, Lukermann, ar cr (Land Use Planning)
–7 1315-1500 F, West Bank, ar cr
–8 1515-1700 F, West Bank, ar cr (Water Planning and Resource Management)

8311 **Legal Environment of Public Administration** (prereq #)
1515-1700 W, West Bank, 3 cr

8330 **Information and Incentives for Improved Decision Making in Bureaus** (prereq #)
1115-1300 W, West Bank, Hoenack, 3 cr

R8410 **Agricultural Development Planning** (prereq #)
1515-1700 W, West Bank, Roe, 3 cr

8511 **Law, Urban Affairs**
1715-1900 T, West Bank, Hetland, 3 cr

8620 **Seminar: Education Policy** (prereq #)
1315-1500 M, West Bank, Brandl, 3 cr

8991 **Individual Readings, Research in Public Policy Analysis, Administration** (prereq #)
ar cr

PUBLIC HEALTH (PubH)

Winter Quarter

R3001 **Personal and Community Health** (§3004, GC 3114)
1015-1100 MWF, West Bank, Rothenberger, 3 cr

R3004 **Basic Concepts in Personal and Community Health** (§3001, 3033, GC 3114)
1015-1100 MTWThF, West Bank, Rothenberger, 5 cr

R3033 **Fundamentals of Alcohol and Drug Abuse** (§3004)
1015-1100 TTh, West Bank, Rothenberger, 2 cr

R3034 **Topics in Alcohol and Drug Problems** (prereq #)
ar cr

3386 **Physiological Hygiene** (prereq 3385)
1215-1300 MTWF, East Bank, Alexander, Serfass, others, 4 cr

3400 **Directed Studies: Biometry** (prereq #)
ar cr

R5001 **Philosophical and Conceptual Bases of Public Health Practice** (prereq public health grad student or #)
1415-1500 M, 1415-1600 W, East Bank, Schwanke, 2 cr

R5004 **Field Instruction in Public Health** (prereq #)
ar cr

R5005 **Topics in Public Health** (prereq advanced proposal, #)
ar cr

R5007 **Health Leadership and Effecting Change** (§HSU 5007; prereq grad student)
1615-1800 M, East Bank, Schwanke, 4 cr

R5015 **Topics in Interdisciplinary Studies** (prereq #)
ar cr

R5022 **Human Sexuality for Health and Helping Professionals II** (§HSU 5027, FSoS 5240, SW 5010; prereq 5021 or #)
1715-1930 Th, East Bank, Larson, Maddock, others, 3 cr

R5040 **Dying and Death in Contemporary Society** (§Hlth 5402, HSU 5040, Mort 5040; prereq health science maj, public health grad, educ sr, mortuary science maj or #)
1615-1800 M, 1615-1700 W, East Bank, Rothenberger, Burger, others, 3 cr

R5044 **Topics in Alcohol and Drug Problems** (prereq advance proposal, #)
1–4 cr

5045 **Contributors to Alcohol and Drug Problems**
1415-1630 T, East Bank, Kincannon, 3 cr

R5049 **Alcohol and Drug Problems: Assessment and Response** (prereq 5043, 5045 or #)
1415-1630 W, East Bank, Kincannon, 3 cr

R5055 **Health Education Methods and the Current Emphasis on Health and Wellness** (prereq health education maj or #)
0815-1100 Th, East Bank, Carlaw, 3 cr

5056 **Planning for Health - Educational Approaches to Change through Planning** (prereq 5055, grad student in health sciences or #)
1715-2000 W, East Bank, Carlaw, Mills, others, 3 cr

R5059 **Interpersonal Behavior in Health Organizations**
1515-1700 MW, East Bank, Gordon, 4 cr

5064 **The Teaching-Learning Process in the Health Care Setting** (§HSU 5011; prereq #)
1315-1600 W, East Bank, Garloff, 3 cr

R5065 **Health in the Workplace: A Health Education Perspective** (prereq grad student in health sciences)
1015-1200 M, 1015-1100 W, East Bank, Veninga, 3 cr

R5080 **Internship in Patient Education Studies** (prereq health education maj)
Carlaw, others, ar cr

R5081 **Internship in Family and Community Studies** (prereq health education maj)
Carlaw, others, ar cr

R5082 **Internship in Occupational Health Studies** (prereq health education maj)
Carlaw, others, ar cr

R5083 **Internship in Health Policies and Planning** (prereq health education maj)
Carlaw, others, ar cr

R5093 **Seminar: Health Education in the Workplace** (prereq 5065 or #)
1015-1200 T, East Bank, Veninga, 2 cr

R5097 **Topics: Selected Readings** (prereq grad student in health sciences)
Carlaw, others, ar cr

5098 **Topics: Selected Readings** (prereq #)
ar cr

R5099 **Advanced Seminar in Health Education II** (prereq 5095, hlth education maj)
1215-1400 Th, East Bank, Carlaw, 2 cr

5150 **Topics: Environmental Health** (prereq #)
Barber, ar cr

5157 **Environmental Health II** (prereq envrionmental health student or #)
1115-1200 TTh, East Bank, 2 cr

5159 **Seminar: Environmental Health** (prereq environmental health student)
1315-1500 Th, East Bank, 1 cr

5171 **Environmental Microbiology** (prereq MicB 3103 or #)
0815-0900 MWF, East Bank, Ruschmeyer, Vesley, 3 cr

R5172 **Environmental Microbiology Laboratory** (prereq 5171, #)
1315-1500 T, Vesley, 2 cr

5184 **Air Analysis** (prereq 5211, #) (S-N only)
Thompson, 3 cr

5201 **Measurement and Application of Ionizing Radiation**
–1 0915-1100 T, East Bank, Barber, 2 cr
–2 0915-1100 T, East Bank, Barber, 3 cr
(lab ar)

5202 **Nuclear Power and the Environment** (prereq 5201 or #)
–1 0915-1100 Th, East Bank, Barber, 2-3 cr
–2 0915-1100 Th, East Bank, Barber, 3 cr
(lab ar)

5212 **Ventilation Control of Environmental Hazards** (prereq 5211, #)
1015-1100 MWF, East Bank, McJilton, 3 cr

5219 **Seminar: Occupational Health** (prereq occupational health student, #)
Johnson, McJilton, others, 1 cr

5243 **Water and Heatlh**
1315-1400 MWF, East Bank, Singer, 3 cr

5263 **Pathophysiology for the Environmental Scientist** (prereq 5262 or #)
0815-0900 MWF, East Bank, Stevens, Garry, 3 cr

5269 **Seminar: Environmental and Occupational Toxicology** (prereq 5261 or #)
1115-1200 F, East Bank, Stevens, 1 cr

R5300 **Comparative Medicine and Public Health**
0915-1000 TTh, East Bank, R K Anderson, 2 cr

R5306 **Animal Models of Human Disease** (prereq VPH maj or #)
R K Anderson, Manning, 3 cr

R5308 **Comparative Medicine and Public Health** (prereq VPH maj or #)
R K Anderson, Robinson, 2 cr

R5317 **Problems in Veterinary Medical Administration and Supervision** (prereq VPH maj or #)
R K Anderson, 3 cr

5326 **Research in Animal/Human Health** (prereq VPH maj or #)
ar cr

R5333 **Biological Bases and Epidemiology of Health and Disease** (prereq course in microbiology, a basic course in biostatistics)
★LECT 1215-1300 MWF, East Bank, Mandel
–1 LAB 1515-1700 T, East Bank, 4 cr
–2 LAB 1515-1700 F, East Bank, 4 cr

5335 **Epidemiology II** (prereq 5330, 5333)
1215-1300 MWF, East Bank, Anderson, 3 cr

5340 **Epidemiology: Strategies and Methods** (prereq 5330, 5333, #)
1115-1300 TTh, East Bank, Mandel, 3 cr

R5342 **Public Health Bacteriology** (prereq MicB 5216, 5232, 5234, #)
1215-1400 MWF, Stickle, ar cr (MN State Health Dept)

5370 **Applied Epidemiology** (prereq 5330, 5333, basic course in biostatistics or #)
R K Anderson, 1-5 cr

5379 **Topics in Epidemiology** (prereq epidemiology student or #)
2 cr

5386 **Public Health Aspects of Cardiovascular Diseases** (prereq basic epidemiology, biostatistics)
1315-1500 MW, East Bank, Luepker, 3 cr

R5387 **Detection of Coronary Heart Disease** (prereq introductory anatomy, physiology, #)
1600-1800 MW, East Bank, Leon, Crow, others, 4 cr

5392 **Public Health Approaches to Health Behavior Change** (prereq grad standing or #)
3 cr

5408 **Biometric Methods II** (prereq grade of B in 5414 or #)
0915-1000 MWF, East Bank, Goldman, 3 cr

5410 **Biometry in Clinical Studies II** (prereq 5409)
1315-1400 MWF, East Bank, Loewenson, 3 cr

R5414 **Biometric Methods I** (prereq public health regis or #)
0915-1100 TTh, East Bank, Boen, 3 cr

5431 **Biomedical Computing II** (prereq 5430 or #)
0915-1000 MTWTh, East Bank, Rich, 4 cr

5434 **Computer Methodology in the Delivery of Health Care II: Introduction to Medical Decision-Making Techniques** (§LMed 5197; prereq 5432, 5452 or #)
1115-1230 TTh, East Bank, Connelly, 3 cr

R5452 **Biometry II** (prereq 5450, ¶5453)
1015-1100 MWF, East Bank, Jeffries, 3 cr

5453 **Biometry Laboratory II** (prereq ¶5452)
1015-1100 TTh, East Bank, Jeffries, 2 cr

5459 **Introduction to Mathematical Theory in Biometry** (prereq 2 qtrs calculus or #)
1115-1200 T, 0815-0900 TF, East Bank, Jeffries, 3 cr

5462 **Clinical Trials and Life Table Techniques** (prereq biometry or epidemiology student, #)
1115-1200 MWF, East Bank, Kjelsberg, 3 cr

5470 **Topics in Biometry** (prereq #)
ar cr

5500 **Public Health-Normal Growth and Development**
1630-1900 T, East Bank, Berkseth, Pflug, 3 cr

5502 **Program Planning and Development in Public Health Nursing** (prereq grad status, 5509, 5333, 5413, 5414, 5806, 5751 or equiv) (A-N only)
1315-1500 W, East Bank, Spradley, 3 cr

5504 **Community Health Systems Maintenance** (prereq 5503 or #)
1315-1500 T, East Bank, Lentsch, 3 cr

5510 **Research Methodology in Nursing**
1115-1300 T, 1115-1200 Th, East Bank, Abanobi, 3 cr

5512 **Adult at Risk: A Public Health Nursing Approach** (prereq 5511 or #) (A-N only)
1015-1200 F, East Bank, Ostwald, 3 cr

5513 **Topics: Adult Health** (prereq #) (S-N only)
Ostwald, 1-3 cr

5521 **Public Health Nursing: Education I** (prereq 5509) (A-N only)
1315-1500 T, East Bank, Aroskar, 3 cr

5523 **Public Ethics/Politics and Public Health** (prereq PubH student or #)
1315-1500 M, East Bank, Aroskar, 2-3 cr

R5530 **Public Health Nursing Practicum** (prereq #) (S-N only)
1315-1500 F, East Bank, Aroskar, Pflug, others, 1-6 cr

5531 **Public Health Nursing Practicum** (prereq #) (S-N only)
Aroskar, 1-6 cr

5544 **Public Health Nursing of Infants and Young Children** (prereq grade of B in 5543)
1015-1100 T, 1015-1200 F, East Bank, Berkseth, 3 cr

5545 **Public Health Nursing of Children 5 to 12** (prereq grade of B in 5543)
1115-1200 T, 1015-1200 F, East Bank, Berkseth, 3 cr

5547 **Topics: Public Health Nursing of Child Populations** (prereq #) (S-N only)
Berkseth, 1-3 cr

5551 **Nursing Administration Seminar II** (prereq 5550)
Spradley, 3 cr

5575 **Topics: Public Health Nursing** (prereq #)
–1 ar cr
–2 ar cr

R5591 **Preventive Aspects of Occupational Health Programming** (prereq occupational health nursing student)
1215-1500 M, East Bank, Gerberich, Richard, 3 cr

5594 **Injury Prevention in the Workplace, Community, and Home** (prereq basic course in epidemiology)
0915-1000 T, 0915-1100 F, East Bank, Gerberich, 3 cr

5597 **Topics: Injury Prevention in the Workplace, Community and Home** (prereq basic course in epidemiology)
Gerberich, 1-3 cr

5611 **Programs in Maternal and Child Health**
0815-1000 Th, East Bank, ten Bensel, 3 cr

R5612 **Human Genetics and Public Health** (prereq #)
0915-1000 MWF, East Bank, Schacht, 3 cr

5614 **Field Experience in Maternal and Child Health** (prereq MCH grad student) (S-N only)
ten Bensel, Splett, ar cr

5618 **Youth and Health: An Introduction** (§YoSt 5133)
0915-1100 T, East Bank, Baizerman, 3 cr

R5620 **Chronic and Handicapping Conditions of Children: Prediction and Intervention with High Risk** (prereq 5613 or #)
1015-1200 Th, East Bank, Leonard, Brady, 3 cr

5621 **Maternal and Child Health Student/Faculty Seminar** (prereq MCH student) (S-N only)
1315-1500 Th, East Bank, ten Bensel, others, 1 cr (MCH Reading Room)

5649 **Topics: Maternal and Child Health** (prereq #)
ten Bensel, others, ar cr

5654 **Topics: Dental Public Health** (prereq student in dental public health or #)
ar cr

5657 **Independent Study: Dental Public Health** (prereq student in dental public health or #)
ar cr

5658 **Ecology of Dental Health** (prereq student in dental public health or #)
1315-1500 TWThF, East Bank, Block, ar cr

5659 **Analysis of Dental Health Education** (prereq student in dental public health or #)
ar cr

5660 **Field Experience: Dental Public Health** (prereq student in dental public health or #)
ar cr

5663 **Administrative Residency in Dental Public Health** (prereq student in dental public health or #)
ar cr

5701 **Public Health Administration II** (prereq student in public health administration, 5700 or #) (S-N only)
1315-1500 Th, Block, 1 cr (MN State Hlth Dept)

5703 **Public Health Administration Clerkship** (prereq student in public health administration or #)
ar cr

5704 **Field Experience: Public Health Administration** (prereq student in public health administration or #)
ar cr

5707 **Independent Study: Public Health Administration** (prereq student in public health administration or #) (S-N only)
1-12 cr

5713 **Principles of Organization and Management of Health Maintenance Organizations II** (prereq student in public health administration, 5712 or #)
1315-1500 W, Rupprecht, 2 cr

5720 **Interpersonal Effectiveness in Health Administration** (prereq student in public health administration or #)
1015-1200 T, East Bank, Veninga, 2 cr

5723 **Administrative Residency** (prereq student in public health administration or #)
ar cr

5739 **Public Health Administration** (prereq student in public health administration or #)
ar cr

R5741 **Organizational Theory** (prereq hospital administration student or #)
0815-0930 TTh, East Bank, Choi, 3 cr

R5743 Management of Departments Within Health Services Organizations (prereq 5742)
0815-1000 M, 1415-1600 F, East Bank, Sweetland, Kasbohm, 2 cr

R5751 Principles of Management in Health Services Organizations (prereq grad level student)
1015-1200 MW, East Bank, Culbertson, 3 cr (Eustis Amph)

R5756 Principles of Financial Management in Health Services Organizations (prereq hospital administration student or #)
1115-1300 MTh, East Bank, Tranter, 4 cr

R5758 Hospital and Other Health Care Organizations Financial Statement Analysis (prereq 5757)
1800-2100 Th, East Bank, Oszustowicz, 4 cr

5760 Operations Research and Control Systems for Hospitals (prereq 5404 or #)
0915-1100 WF, East Bank, Dowd, 3 cr

R5767 Applied Field Research II (prereq 5766) (A-N only)
1315-1515 W, East Bank, Weckwerth, 3 cr

5770 Topics: Hospital and Health Care Administration (prereq hospital administration student or #)
ar cr

R5791 Health and Medical Care Organizations (prereq grad student)
1015-1200 T, 1015-1100 Th, East Bank, Resnick, 3 cr

R5795 Planning Health Services (prereq MHA students or #)
1515-1730 T, East Bank, Rice, 3 cr

5800 Research Project in Health Psychology
1-6 cr

5801 Directed Study in Health Psychology
1-4 cr

5802 Special Topics in Health Psychology (prereq health psych maj or #)
ar cr

5804 Fundamentals of Health Behavior Change (prereq #) (A-N only)
1215-1400 Th, East Bank, Hung, 3 cr

5807 Cross-Cultural Perspectives on Health Behaviors (A-N only)
1630-1830 W, East Bank, Williams, 3 cr

5851 Human Interaction Laboratory (§HSU 5024; prereq #)
1615-1800 W, East Bank, Ayers, 4 cr (lab ar)

5852 Program Evaluation in Health and Mental Health Settings (§HSU 5026; prereq 5414 or basic statistics course)
1515-1700 MW, East Bank, Garrard, 4 cr

5869 Clerkship in Psychological Assessment (prereq grad students in clinical psychology, school psychology or #)
1-4 cr

5870 Clerkship in Neuropsychological Assessment (prereq health psychology maj or #)
Meier, 1-4 cr

5871 Fieldwork Experience in Health Psychology (prereq health psychology maj or #) (S-N only)
1-4 cr

5872 Case Conference in Health Psychology (prereq health psychology maj or #) (S-N only)
1 cr

5873 Case Conference in Neuropsychology (prereq health psychology maj or #) (S-N only)
Meier, 1 cr

5877 Internship in Clinical Psychology (prereq PhD candidate and 400 hrs clerkship experience) (S-N only)
1-4 cr

5878 Health Psychology Clinic Internship (prereq health psychology maj or #) (S-N only)
Petzel, others, 1-4 cr

5879 Medical Consultation for Health Psychology Interns (prereq health psychology maj or #) (S-N only)
Brantner, 1-4 cr

5880 Health Psychology Internship at the Boynton Health Service (prereq health psychology maj or #) (S-N only)
Bugge, Heiberg, 1-4 cr

5881 Health Psychology for the Physically Handicapped Child (prereq health psychology maj or #) (S-N only)
Blackburn, 1-4 cr

5882 Introduction to Neuropsychological Assessment (prereq health psychology maj or #) (S-N only)
Meier, 1-4 cr

5883 Advanced Neuropsychological Assessment (prereq health psychology maj or #) (S-N only)
Meier, 1-4 cr

5884 Rural Community Mental Health Internship for Psychologists (prereq health psychology maj or #) (S-N only)
Kollmorgen, Moorman, others, 1-4 cr

5885 Community Child Guidance Center Psychology Internship (prereq health psychology maj or #) (S-N only)
Hanvik, Reed, others, 1-4 cr

5886 Student Counseling Bureau Psychology Internship (prereq health psychology maj or #) (S-N only)
Loper, others, 1-4 cr

5888 Behavioral Medicine (prereq PhD candidate and 400 hrs clerkship experience or #) (S-N only)
Hung, 1-4 cr

5889 Case Seminar in Health Psychology (prereq health psychology maj or #) (S-N only)
Petzel, Schofield, 2 cr

5890 Supervised Psychological Therapy (prereq health psychology maj or #) (S-N only)
1-4 cr

5891 Health Psychology Laboratory (prereq Psy 8611, 8612, 8613, 8614)
2 cr

5895 Group Supervision of Psychotherapy (prereq health psychology maj or #, psychiatry resident)
Schofield, 2 cr

5900 Field Course I: Public Health Nutrition (prereq public health nutrition student)
Splett, 1-4 cr

5901 Seminar: Public Health Nutrition (prereq public health nutrition maj)
1015-1200 Th, East Bank, Splett, 1-6 cr

5906 Field Course II: Public Health Nutrition (prereq public health nutrition maj)
Splett, 1-8 cr

5909 Topics in Public Health Nutrition (prereq public health nutrition student or #)
Brown, Fleming, 1-12 cr

8003 Research
ar cr

8150 Research: Environmental Health (prereq #)
1-6 cr

8330 Research in Epidemiology (prereq epidemiology maj)
1-8 cr

8331 Field Practice in Epidemiologic Investigations (max 8 cr; prereq epidemiology maj)
1-8 cr

8343 Advanced Epidemetrics (prereq 5330 or 5333, 5340, 5461)
1415-1530 TTh, East Bank, McHugh, 3 cr

8378 Advanced Seminar in Epidemiology (prereq epidemiology maj)
Mandel, 1-2 cr

8379 Seminar in Epidemiology (prereq epidemiology student or #)
1515-1700 M, East Bank, Mandel, ar cr

8385 Seminar: Physiological Hygiene (prereq physiological hygiene maj, #)
1 cr

8386 Readings in Physiological Hygiene (prereq physiological hygiene maj, #)
ar cr

8387 Research in Physiological Hygiene and Related Areas (prereq physiological hygiene maj, #)
ar cr

8389 Seminar: Topics in Health Behavior Science (prereq physiological hygiene maj, #)
3 cr

8400 Seminar: Biometry
ar cr

8421 Advanced Biometric Methods II (prereq 8420)
1315-1400 MWF, East Bank, Johnson, 3 cr

8431 Advanced Biometric Analysis II (prereq 8430)
McHugh, 3 cr

8449 Topics in Biometry (prereq 5450, #)
ar cr

8450 Research in Biometry
ar cr

8597 Research: Injury Prevention in the Workplace, Community and Home (prereq basic courses in epidemiology, statistics, PubH 5594)
Gerberich, others, 3-6 cr

8760 Topics in Hospital and Health Care Administration (prereq PhD student in hospital administration)
Weckwerth, 3 cr

8761 Readings in Theory and Principles of Hospital and Health Care Administration (prereq 8760)
Weckwerth, 3 cr

8762 Contemporary Problems of Hospital and Related Health Services
1315-1500 Th, East Bank, Weckwerth, 3 cr

8780 Advanced Statistical Methods in Health Care Research (prereq one quarter each of applied and theoretical statistics)
1315-1500 T, East Bank, Weckwerth, 3 cr

Spring Quarter

R3001 Personal and Community Health (§3004, GC 3114)
1015-1100 MWF, West Bank, Rothenberger, 3 cr

R3004 Basic Concepts in Personal and Community Health (§3001, 3033, GC 3114)
1015-1100 MTWThF, West Bank, Rothenberger, 5 cr

R3033 Fundamentals of Alcohol and Drug Abuse (§3004)
1015-1100 TTh, West Bank, Rothenberger, 2 cr

3034 Topics in Alcohol and Drug Problems (prereq #)
ar cr

3151 Introduction to Environmental Health
0915-1000 MWF, East Bank, Thompson, 3 cr

3301 Perspectives: Interrelationship of People and Animals in Society Today (§5303, 5304, CVM 3100)
1515-1700 TF, East Bank, Anderson, Quigley, 2-3 cr

R5001 Philosophical and Conceptual Bases of Public Health Practice (prereq public health grad student or #)
1415-1500 M, 1415-1600 W, East Bank, Schwanke, others, 2 cr

5004 Field Instruction in Public Health (prereq #)
ar cr

R5005 Topics in Public Health (prereq advanced proposal, #)
ar cr

5015 Topics in Interdisciplinary Studies (prereq #)
ar cr

5020 Public Health Social Work Integrative Seminar (§SW 5020; prereq beginning level MSW/MPH maj)
1515-1700 T, East Bank, Bracht, McClelland, others, 2 cr

R5023 Human Sexuality for Health and Helping Professionals III (prereq completion of PubH 5022 or HSU 5027 or SW 5023 or FSoS 5240 or #)
1715-1930 Th, East Bank, Maddock, Terrell, others, 3 cr

5043 Fundamentals of Alcohol and Drug Problems
1315-1400 T, 1315-1500 Th, East Bank, Kincannon, 3 cr

5044 Topics in Alcohol and Drug Problems (prereq advance proposal, #)
1-4 cr

R5049 Alcohol and Drug Problems: Assessment and Response (prereq 5043, 5045 or #)
1415-1630 T, East Bank, Kincannon, 3 cr

R5057 **Health Education Issues Arising from Planned and Unplanned Societal Change** (prereq 5055, grad student in health sciences or #)
0915-1200 M, East Bank, Carlaw, others, 3 cr

R5059 **Interpersonal Behavior in Health Organizations**
1515-1700 MW, East Bank, Veninga, 4 cr

R5064 **The Teaching-Learning Process in the Health Care Setting** (§HSU 5011; prereq #)
1515-1800 M, East Bank, Garloff, 3 cr

R5080 **Internship in Patient Education Studies** (prereq health education maj)
Carlaw, others, ar cr

R5081 **Internship in Family and Community Studies** (prereq health education maj)
Carlaw, others, ar cr

R5082 **Internship in Occupational Health Studies** (prereq health education maj)
Carlaw, others, ar cr

R5083 **Internship in Health Policies and Planning** (prereq health education maj)
Carlaw, others, ar cr

5090 **Research Topics in Health Education** (prereq health education maj)
4–8 cr

R5093 **Seminar: Health Education in the Workplace** (prereq 5065 or #)
1015-1200 T, East Bank, Veninga, 2 cr

R5098 **Topics: Selected Readings** (prereq #)
Carlaw, others, ar cr

5150 **Topics: Environmental Health** (prereq #)
Barber, ar cr

5152 **Environmental Health**
0815-0900 TTh, East Bank, Vesley, 2 cr

5159 **Seminar: Environmental Health** (prereq environmental health student)
1315-1500 Th, East Bank, 1 cr

5181 **Introduction to the Air Pollution Problem**
0815-0900 MWF, East Bank, 3 cr

5184 **Air Analysis** (prereq 5211, #) (S–N only)
Thompson, 3 cr

5194 **Occupational Safety**
McJilton, 2 cr

5203 **Radiation Dosimetry** (prereq #)
1115-1200 MWF, East Bank, Barber, 3 cr

5204 **Radiation Dosimetry Laboratory** (prereq ¶5203)
Barber, 1 cr

5209 **Seminar: Health Physics**
Barber, 1 cr

5214 **Agricultural Occupational Health**
McJilton, 3 cr

5215 **Applied Occupational Toxicology** (prereq 5261 or #)
1415-1700 F, East Bank, Stevens, 3 cr

5218 **Field Problems in Occupational Health** (prereq 5211, 5212, #)
1315-1600 T, East Bank, McJilton, 3 cr

5242 **Environmental Health Aspects of Groundwater Systems**
1315-1500 F, East Bank, Singer, 2 cr

5253 **Introduction to Hazardous Waste Management**
1545-1700 MW, East Bank, Thompson, 3 cr

5265 **Applied Environmental Toxicology** (prereq 5261 or #)
0915-1200 Th, East Bank, Stevens, 3 cr

5269 **Seminar: Environmental and Occupational Toxicology** (prereq 5261 or #)
1115-1200 T, East Bank, Stevens, 1 cr

R5300 **Comparative Medicine and Public Health**
0915-1000 TTh, East Bank, Anderson, Quigley, 2 cr

5301 **Perspectives: Interrelationships of People and Animals in Society Today** (§5303, 5304, CVM 5100)
1515-1700 TF, East Bank, Anderson, Quigley, 2–3 cr

R5315 **Problems in Disease Control and Eradication** (prereq VPH maj or #)
1015-1200 TTh, East Bank, Anderson, Pullen, ar cr

5317 **Problems in Veterinary Medical Administration and Supervision** (prereq VPH maj or #)
Anderson, 3 cr

5326 **Research in Animal/Human Health** (prereq VPH maj or #)
ar cr

R5342 **Public Health Bacteriology** (prereq MicB 5216, 5232, 5234, #)
1215-1400 MWF, Stickle, ar cr (MN State Health Dept)

5362 **Epidemiology of Occupational Hazards** (prereq 5330 or 5333, 5450-5451 or 5400, 5404, 5413, 5414)
1115-1200 MWF, East Bank, Mandel, 3 cr

5370 **Applied Epidemiology** (prereq 5330, 5333, basic course in biostatistics or #)
Anderson, 1–5 cr

5379 **Topics in Epidemiology** (prereq epidemiology student or #)
1315-1500 Th, East Bank, Dean, ar cr

R5388 **Exercise Testing, Conditioning and Rehabilitation** (prereq 5387)
1600-1800 MW, Leon, Crow, others, 4 cr

5393 **Evaluation of Communication Health Behavior Interventions** (prereq grad or #...statistical courses covering regression or analysis of variance rec)
3 cr

5400 **Introduction to Quantitative Methods in the Biologic and Health Sciences** (prereq Biol 1009, Chem 1004-1005, Math 1111 or 1201 or #)
1115-1300 TTh, East Bank, Jeffries, 4 cr

5403 **Computer Applications in Health Services Administration** (prereq non-biometry maj, health science regis or #)
1315-1400 MWF, East Bank, Finkelstein, 4 cr

5432 **Biomedical Computing III** (prereq 5431 or #)
0915-1000 MTWTh, East Bank, Ellis, 4 cr

5435 **Computer Methodology in the Delivery of Health Care III: Development of Clincal Information Systems** (§LMed 5198; prereq 5432 or #)
1115-1230 TTh, East Bank, Gatewood, 3 cr

5454 **Biometry III** (prereq 5452, #)
1015-1100 MWF, East Bank, Goldman, 3 cr

5455 **Biometry Laboratory III** (prereq 5452)
1015-1100 TTh, East Bank, Le, 2 cr

R5456 **Biometry Consulting Seminar** (prereq biometry maj)
1315-1430 TTh, East Bank, Boen, ar cr

5461 **Biometric Topics in Epidemiology** (prereq biometry or epidemiology student, #)
0815-0900 MWF, East Bank, Kjelsberg, 3 cr

5470 **Topics in Biometry** (prereq #)
ar cr

5471 **Biometry Literature Seminar** (prereq B-HIS grad student or #) (S–N only)
1415-1600 T, East Bank, McHugh, 2 cr

5509 **Introduction to Public Health Nursing** (prereq public health nursing student) (A–N only)
0915-1100 M, 1015-1100 W, East Bank, White, others, 3 cr

5513 **Topics: Adult Health** (prereq #) (S–N only)
Ostwald, 1–3 cr

5522 **Public Health Nursing: Education II** (prereq 5509, 5521) (A–N only)
1315-1515 W, East Bank, Aroskar, 3 cr

5529 **Public Health Nursing Seminar: Leadership Roles in Public Health Nursing** (prereq PHN grad) (S–N only)
1015-1200 W, East Bank, Ostwald, 1 cr

5530 **Public Health Nursing Practicum** (prereq #) (S–N only)
Aroskar, 1–6 cr

5531 **Public Health Nursing Practicum** (prereq #) (S–N only)
1315-1500 F, East Bank, Aroskar, 1–6 cr

5547 **Topics: Public Health Nursing of Child Populations** (prereq #) (S–N only)
1115-1200 TTh, East Bank, Berkseth, 1–3 cr

5552 **Nursing Administration Seminar III** (prereq 5550, 5551)
Spradley, 3 cr

5575 **Topics: Public Health Nursing** (prereq #)
ar cr

5576 **The Political Process in Public Health** (prereq public health grad or #)
0915-1100 TTh, East Bank, Lentsch, 3 cr

R5582 **Collaborative Health Care Practice in Gerontology**
0915-1100 Th, East Bank, Ostwald, 2–3 cr

R5592 **Planning and Coordinating an Employee Health Service Program** (prereq occupational health nursing student)
1215-1500 Th, East Bank, Gerberich, Richard, 3 cr

5597 **Topics: Injury Prevention in the Workplace, Community and Home** (prereq basic course in epidemiology)
Gerberich, 1–3 cr

5614 **Field Experience in Maternal and Child Health** (prereq MCH grad student) (S–N only)
ten Bensel, Splett, ar cr

R5616 **The Rights of Children and Youth: Abuse and Neglect**
1615-1800 MW, East Bank, ten Bensel, 4 cr

5621 **Maternal and Child Health Student/Faculty Seminar** (prereq MCH student) (S–N only)
1315-1500 Th, East Bank, ten Bensel, others, 1 cr (MCH Reading Room)

R5629 **Psychosocial Aspects of Chronic Illness and Handicapping Conditions in School-Age Children and Adolescents** (prereq 5613, 5620 or #)
1015-1200 Th, East Bank, Leonard, Brady, 3 cr (MCH Reading Room)

5630 **Family Planning Issues in Maternal and Child Health** (prereq #)
1615-1800 T, East Bank, Kapucinski, 3 cr

5649 **Topics: Maternal and Child Health** (prereq #)
ten Bensel, others, ar cr

5653 **Dental Program Development** (prereq dental public health maj, 5659 or #)
1015-1200 TTh, East Bank, ar cr

5654 **Topics: Dental Public Health** (prereq student in dental public health or #)
ar cr

5657 **Independent Study: Dental Public Health** (prereq student in dental public health or #)
ar cr

5660 **Field Experience: Dental Public Health** (prereq student in dental public health or #)
ar cr

5663 **Administrative Residency in Dental Public Health** (prereq student in dental public health or #)
ar cr

5702 **Public Health Administration III** (prereq 5701, student in public health administration or #) (S–N only)
1315-1500 Th, Block, 1 cr (MN State Hlth Dept)

5703 **Public Health Administration Clerkship** (prereq student in public health administration or #)
Block, ar cr

5704 **Field Experience: Public Health Administration** (prereq student in public health administration or #)
ar cr

5707 **Independent Study: Public Health Administration** (prereq student in public health administration or #) (S–N only)
1–12 cr

R5711 **Public Health Law** (prereq student in public health administration or #)
1615-1800 MW, East Bank, McInerney, 4 cr

5715 **Administrative Decision Making in Public Health Agencies** (prereq student in public health administration or #)
2 cr

5723 **Administrative Residency** (prereq student in public health administration or #)
ar cr

5731 **Administrative Aspects of Planning Disease Prevention/Health Promotion Programs** (prereq public health administration student or #)
Gunderson, Miles, 4 cr

5739 **Public Health Administration** (prereq student in public health administration or #)
ar cr

R5744 **Principles of Problem Solving in Health Services Organizations** (A–N only)
–1 0815-1000 MTWTh, 0815-1000 F, East Bank, Dornblaser, 3 cr (MHA students only) (March 30, April 6, May 11)
–2 1415-1600 MWF, East Bank, Dornblaser, 3 cr

5749 **Administration of Services to an Aging Clientele** (prereq MHA student or #)
1015-1200 MW, East Bank, Stryker-Gordon, 4 cr

R5752 **Planning for Health Care Organizations** (prereq MHA student or #)
1015-1200 TTh, East Bank, Bieter, Sweetland, 3 cr

R5757 **Financial Planning in Health Services Organizations** (prereq 5756, MHA student or #)
1415-1600 MW, East Bank, Gray, 4 cr

5761 **Quantitative Methods Applied to Health Administration Problems** (prereq basic statistics)
1315-1500 TTh, East Bank, Weckwerth, 4 cr

R5768 **Applied Field Research III** (prereq 5767) (A-N only)
1315-1500 W, East Bank, Litman, Weckwerth, 3 cr

R5771 **Financial Management in Health Services Organizations** (prereq one prior college level 3 cr accounting course)
1700-1830 TTh, East Bank, Sattler, 4 cr

5790 **Sociology of Medicine and Health Care: An Introduction to Medical Sociology** (§Soc 5855)
1115-1200 MWF, Litman, 4 cr

R5793 **Economic Aspects of Health Care** (prereq #)
1015-1200 T, 1015-1100 Th, East Bank, Feldman, 3 cr

R5796 **Legal Considerations in Health Services Organizations** (prereq MHA student or #)
1615-1800 TTh, East Bank, McInerney, 3 cr

5800 **Research Project in Health Psychology**
1-6 cr

5801 **Directed Study in Health Psychology**
1-4 cr

5802 **Special Topics in Health Psychology** (prereq health psych maj or #)
ar cr

5803 **Mental Health Promotion and Mental Illness Prevention** (prereq grad student in public health, health sciences, social, behavioral sciences)
1515-1700 T, East Bank, Williams, 3 cr

5805 **Topics: Program Evaluation in Public Health** (max 4 cr; prereq 5852, #)
Garrard, ar cr

5806 **Principles of Public Health Research** (prereq grad or enrollment School of PubH, compl of or ¶ in course in stat or vital stat)
1515-1700 M, 1515-1600 W, East Bank, Garrard, 3 cr

5850 **Health Sciences Education in the 20th Century** (§HSU 5022)
1615-1800 W, East Bank, Garrard, others, 3 cr

5851 **Human Interaction Laboratory** (§HSU 5024; prereq #)
1615-1800 W, East Bank, Ayers, 4 cr

5853 **Behavioral Medicine I: Theory, Research and Practice** (prereq psy grad student or public hlth student or professional in hlth related discipline)
1630-1815 M, East Bank, Hung, 3 cr

5854 **Behavioral Medicine II: Selected Topics** (prereq 5853, #)
Hung, 3 cr

5855 **Psychosocial Problems of Human Development: Prevention and Treatment**
1215-1300 MWF, East Bank, 4 cr

5869 **Clerkship in Psychological Assessment** (prereq grad students in clinical psychology, school psychology or #)
1-4 cr

5870 **Clerkship in Neuropsychological Assessment** (prereq health psychology maj or #)
Meier, 1-4 cr

5871 **Fieldwork Experience in Health Psychology** (prereq health psychology maj or #) (S-N only)
1-4 cr

5872 **Case Conference in Health Psychology** (prereq health psychology maj or #) (S-N only)
1 cr

5873 **Case Conference in Neuropsychology** (prereq health psychology maj or #) (S-N only)
Meier, 1 cr

5877 **Internship in Clinical Psychology** (prereq PhD candidate and 400 hrs clerkship experience) (S-N only)
1-4 cr

5878 **Health Psychology Clinic Internship** (prereq health psychology maj or #) (S-N only)
Petzel, others, 1-4 cr

5879 **Medical Consultation for Health Psychology Interns** (prereq health psychology maj or #) (S-N only)
Brantner, 1-4 cr

5880 **Health Psychology Internship at the Boynton Health Service** (prereq health psychology maj or #) (S-N only)
Bugge, Heiberg, 1-4 cr

5881 **Health Psychology for the Physically Handicapped Child** (prereq health psychology maj or #) (S-N only)
Blackburn, 1-4 cr

5882 **Introduction to Neuropsychological Assessment** (prereq health psychology maj or #) (S-N only)
Meier, 1-4 cr

5883 **Advanced Neuropsychological Assessment** (prereq health psychology maj or #) (S-N only)
Meier, 1-4 cr

5884 **Rural Community Mental Health Internship for Psychologists** (prereq health psychology maj or #) (S-N only)
Kollmorgen, Moorman, others, 1-4 cr

5885 **Community Child Guidance Center Psychology Internship** (prereq health psychology maj or #) (S-N only)
Hanvik, Reed, others, 1-4 cr

5886 **Student Counseling Bureau Psychology Internship** (prereq health psychology maj or #) (S-N only)
Loper, others, 1-4 cr

5888 **Behavioral Medicine** (prereq PhD candidate and 400 hrs clerkship experience or #) (S-N only)
Hung, 1-4 cr

5889 **Case Seminar in Health Psychology** (prereq health psychology maj or #) (S-N only)
Petzel, Schofield, 2 cr

5890 **Supervised Psychological Therapy** (prereq health psychology maj or #) (S-N only)
1-4 cr

5891 **Health Psychology Laboratory** (prereq Psy 8611, 8612, 8613, 8614)
2 cr

5892 **Clinical Psychopathology** (prereq #)
1515-1730 Th, East Bank, Sines, 3-4 cr

5893 **Professional Problems in Applied Psychology** (prereq health psychology maj or #)
1 cr

5896 **Group Supervision of Psychotherapy** (prereq health psychology maj or #, psychiatry resident)
Schofield, 2 cr

5900 **Field Course I: Public Health Nutrition** (prereq public health nutrition student)
Splett, 1-4 cr

5901 **Seminar: Public Health Nutrition** (prereq public health nutrition maj)
1115-1200 T, East Bank, Brown, others, 1-6 cr

5904 **Factors Affecting Nutrition Behavior** (prereq Soc 3201 or equiv or #)
0915-1100 T, East Bank, Fleming, 2 cr

5906 **Field Course II: Public Health Nutrition** (prereq public health nutrition maj)
Splett, 1-8 cr

5909 **Topics in Public Health Nutrition** (prereq public health nutrition student or #)
Splett, 1-12 cr

8150 **Research: Environmental Health** (prereq #)
1-6 cr

8211 **Health Survey of Manufacturing Processes** (prereq 5211, #)
McJilton, 2 cr

8330 **Research in Epidemiology** (prereq epidemiology maj)
1-8 cr

8331 **Field Practice in Epidemiologic Investigations** (max 8 cr; prereq epidemiology maj)
1-8 cr

8340 **Chronic Disease Epidemiology** (prereq 5330, basic statistics, #)
1215-1300 MWF, East Bank, Luepker, 3 cr

8378 **Advanced Seminar in Epidemiology** (prereq epidemiology maj)
Mandel, 1-2 cr

8379 **Seminar in Epidemiology** (prereq epidemiology student or #)
–1 1115-1300 T, East Bank, Mandel, ar cr (1st yr students)
–2 1515-1700 M, East Bank, Mandel, ar cr (2nd yr students)

8385 **Seminar: Physiological Hygiene** (prereq physiological hygiene maj, #)
1 cr

8386 **Readings in Physiological Hygiene** (prereq physiological hygiene maj, #)
ar cr

8387 **Research in Physiological Hygiene and Related Areas** (prereq physiological hygiene maj, #)
ar cr

8389 **Seminar: Topics in Health Behavior Science** (prereq physiological hygiene maj, #)
3 cr

8400 **Seminar: Biometry**
ar cr

8422 **Advanced Biometric Methods III** (prereq 5455, 5459, FORTRAN)
1315-1400 MWF, East Bank, 3 cr

8432 **Advanced Biometric Analysis III** (prereq 8431)
McHugh, 3 cr

8449 **Topics in Biometry** (prereq 5450, #)
ar cr

8450 **Research in Biometry**
ar cr

8597 **Research: Injury Prevention in the Workplace, Community and Home** (prereq basic courses in epidemiology, statistics, PubH 5594)
Gerberich, 3-6 cr

8760 **Topics in Hospital and Health Care Administration** (prereq PhD student in hospital administration)
Weckwerth, 3 cr

8761 **Readings in Theory and Principles of Hospital and Health Care Administration** (prereq 8760)
Weckwerth, 3 cr

8770 **Seminar: Health and Human Behavior** (prereq 5795 or Soc 5855)
1115-1300 Th, East Bank, Litman, 3 cr

QUANTITATIVE ANALYSIS (QA)

Management

Winter Quarter

R1050 **Elementary Managerial Statistics** (prereq Math 1111 or 1131) (A-N only)
★LECT 1515-1630 MW, West Bank, Benson
–1 LAB 0815-0930 T, West Bank, 4 cr
–2 LAB 0945-1100 T, West Bank, 4 cr
–3 LAB 1115-1230 T, West Bank, 4 cr
–4 LAB 1245-1400 T, West Bank, 4 cr
–5 LAB 1415-1530 T, West Bank, 4 cr
–6 LAB 1545-1700 T, West Bank, 4 cr
–7 LAB 0815-0930 W, West Bank, 4 cr
–8 LAB 0945-1100 W, West Bank, 4 cr

R3055 **Introduction to Management Sciences** (prereq 1050, Math 1142 or equiv) (A-N only)
★LECT 1430-1545 TTh, West Bank, Hill
–1 LAB 0815-0930 F, West Bank, 4 cr
–2 LAB 0945-1100 F, West Bank, 4 cr
–3 LAB 1115-1230 F, West Bank, 4 cr
–4 LAB 1245-1400 F, West Bank, 4 cr
–5 LAB 1415-1530 F, West Bank, 4 cr

R8110 **Implementation of Management Science** (prereq 5000) (A-N only)
1315-1600 W, West Bank, Adams, 4 cr

R8191 **Statistical Methods I: Regression** (prereq MBA 8020 or equiv) (A-N only)
1730-2050 Th, West Bank, Rothermel, 4 cr

R8236 **Stochastic Processes** (prereq 5000 or #) (A-N only)
1415-1530 TTh, West Bank, Feiring, 4 cr

8990 **Readings in Quantitative Analysis** (prereq #) (A-N only)
ar cr

8995 **Research in Quantitative Analysis** (prereq #) (A-N only)
ar cr

Spring Quarter

R1050 **Elementary Managerial Statistics** (prereq Math 1111 or 1131) (A-N only)
★LECT 1515-1630 MW, West Bank, Benson
–1 LAB 0815-0930 T, West Bank, 4 cr
–2 LAB 0945-1100 T, West Bank, 4 cr
–3 LAB 1115-1230 T, West Bank, 4 cr
–4 LAB 1245-1400 T, West Bank, 4 cr
–5 LAB 1415-1530 T, West Bank, 4 cr
–6 LAB 1545-1700 T, West Bank, 4 cr
–7 LAB 0815-0930 W, West Bank, 4 cr
–8 LAB 0945-1100 W, West Bank, 4 cr

R3053 **Quantitative Methods for Administration** (prereq 1050) (A-N only)
1730-2050 W, West Bank, 4 cr

R3055 **Introduction to Management Sciences** (prereq 1050, Math 1142 or equiv) (A-N only)
★LECT 1115-1230 TTh, West Bank, Feiring
–1 LAB 1315-1430 Th, West Bank, 4 cr
–2 LAB 1445-1600 Th, West Bank, 4 cr
–3 LAB 0915-1030 F, West Bank, 4 cr

R5000 **Basic Methods of Management Science** (prereq 3055) (A-N only)
1730-2050 T, West Bank, Fox, 4 cr

R8219 **Simulation Techniques** (prereq 5000, MIS 3099) (A-N only)
0945-1100 TTh, West Bank, Fox, 4 cr

R8240 **Applying Management Science: Problem Formulation and Implementation** (prereq 5000, MIS 8302 or #) (A-N only)
1730-2050 Th, West Bank, Adams, 4 cr

R8850 **Topics: Quantitative Analysis** (prereq 3055) (A-N only)
1315-1600 W, West Bank, Johnson, ar cr

8990 **Readings in Quantitative Analysis** (prereq #) (A-N only)
ar cr

8995 **Research in Quantitative Analysis** (prereq #) (A-N only)
ar cr

RECREATION, PARK, AND LEISURE STUDIES (Rec)
School of Physical Ed, Rec, School Health Ed
Education
Winter Quarter

R1520 **Orientation to Leisure and Recreation** (A-N only)
0915-1100 MW, 5 cr

R1600 **Leadership in Social Activities** (A-N only)
1315-1430 MW, 3 cr

R3530 **Recreation and Park Areas and Facilities** (prereq 1520, recreation maj or △) (A-N only)
1315-1500 TTh, East Bank, McAvoy, 5 cr

R3550 **Park and Recreation Administration** (prereq 3530, 3540 or #) (A-N only)
0915-1100 TTh, Schultz, 5 cr

3700 **Senior Internship** (prereq sr, recreation maj or minor, △) (S-N only)
1-15 cr

3900 **Directed Study** (max 9 cr; prereq recreation maj only, △) (S-N optional)
3 cr

R5160 **Conservation of Park Resources** (prereq 1520 or 5100 or △) (A-N only)
1115-1230 TTh, McAvoy, 3 cr

R5180 **Employee Recreation Services** (prereq 1520 or 5100 or #) (A-N only)
1615-1830 Th, East Bank, Schultz, 3 cr

R5200 **Recreation in Community Education** (prereq 1520 or 5100 or △) (A-N only)
1615-1830 T, 3 cr

R5220 **Therapeutic Recreation Services** (prereq 5210 or △) (A-N only)
1115-1300 MWF, Weiss, 5 cr

R5230 **Recreation and Mental Retardation** (prereq 5210, 5220 or #) (A-N only)
1115-1230 TTh, East Bank, Schleien, 3 cr

R5255 **Leisure Education for Special Populations** (prereq 5220, PsyS 5110 or #, △) (A-N only)
1430-1700 M, East Bank, Weiss, 3 cr

5630 **Practicum: Therapeutic Recreation** (prereq recreation M.Ed. or grad) (A-N only)
Weiss, Schleien, 3-9 cr

5640 **Practicum: Public Recreation and Parks** (prereq recreation M.Ed. or grad) (A-N only)
McAvoy, Schultz, 3-9 cr

5981 **Problems** (prereq MEd candidate, #) (A-N only)
ar cr

5983 **Readings: Recreation** (prereq MEd, grad or △) (A-N only)
1-3 cr

R8370 **Seminar: Administrative Problems in Therapeutic Recreation** (prereq 5220 or #)
1315-1530 W, East Bank, Schleien, 3 cr

8980 **Research Problems** (prereq 5980, PsyF 5110 or #) (S-N only)
1 cr

8981 **Research Problems** (prereq 8980 or #) (S-N only)
ar cr

Spring Quarter

R1520 **Orientation to Leisure and Recreation** (A-N only)
1315-1500 TTh, East Bank, 5 cr

R1540 **Camp Counseling** (A-N only)
0915-1100 TTh, East Bank, 4 cr

R3150 **Leadership in Outdoor Recreation** (prereq recreation maj, 1520) (A-N only)
1315-1600 F, East Bank, McAvoy, 3 cr

R3540 **Recreation Programming** (prereq 1520, recreation maj or △) (A-N only)
1115-1300 MW, East Bank, 5 cr

3700 **Senior Internship** (prereq sr, recreation maj or minor, △) (S-N only)
1-15 cr

3900 **Directed Study** (max 9 cr; prereq recreation maj only, △) (S-N optional)
3 cr

R5170 **Camp Administration** (prereq 1540 or #) (A-N only)
0915-1000 MWF, 3 cr

R5235 **Leisure and Mental Health** (prereq Psy 3604 or 5604, Rec 5210 or #, △) (A-N only)
1115-1300 TTh, East Bank, Weiss, 4 cr

R5240 **Recreation for the Aging** (prereq 3540 or 5100 or △) (A-N only)
1315-1500 MW, East Bank, Weiss, 3 cr

R5250 **Financing Leisure Services** (prereq 3550 or △) (A-N only)
0800-0900 TTh, Schultz, 3 cr

5630 **Practicum: Therapeutic Recreation** (prereq recreation M.Ed. or grad) (A-N only)
Weiss, Schleien, 3-9 cr

5640 **Practicum: Public Recreation and Parks** (prereq recreation M.Ed. or grad) (A-N only)
McAvoy, Schultz, 3-9 cr

R5900 **Workshop: Contemporary Issues in Leisure Services** (max 12 cr; prereq △) (A-N only)
–1 1315-1430 TTh, East Bank, Schleien, 3 cr
–2 1800-2100 Th, 0830-1700 SSun (April 28, 29), Fondrick, 3 cr (Woodlake Nature Center, 735 W Lake Shore Dr, Richfield) (April 5-May 3)

5981 **Problems** (prereq MEd candidate, #) (A-N only)
ar cr

5983 **Readings: Recreation** (prereq MEd, grad or △) (A-N only)
1-3 cr

R8380 **Seminar: Administrative Problems in Recreation and Parks** (prereq 3550)
1615-1830 M, Schultz, 3 cr

8980 **Research Problems** (prereq 5980, PsyF 5110 or #) (S-N only)
1 cr

8981 **Research Problems** (prereq 8980 or #) (S-N only)
ar cr

RELIGIOUS STUDIES (RelS)
Liberal Arts
Winter Quarter

1031 **Introduction to the Religions of South and Southeast Asia** (§SoAS 1504)
1115-1200 MWF, East Bank, Malandra, 4 cr

3102 **Religions of the American People**
0915-1000 MWF, East Bank, Ross, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
3-5 cr

5111 **Interpretation of Myth** (§Hum 5711; prereq jr or sr or #)
1415-1530 TTh, East Bank, Lincoln, 4 cr

5890 **Senior Seminar** (prereq sr maj or #)
1415-1700 W, East Bank, Tapp, 3-5 cr

5960 **Topics in Religious Studies: Martin Luther, 1483-1983** (prereq #)
1115-1230 TTh, West Bank, Tracy, 4 cr

8970 **Directed Studies** (prereq △)
2-5 cr

Spring Quarter

1032 **Religions of East Asia** (§EAS 1032)
1415-1500 MWF, East Bank, Mather, 4 cr

R1035 **Introduction to Christianity**
1015-1100 MWF, East Bank, Tapp, 4 cr

3103 **Religions of the American People**
0915-1000 MWF, East Bank, Ross, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
3-5 cr

5001 **Approaches to the Study of Religion**
0945-1100 TTh, East Bank, Lincoln, 4 cr

5960 **Topics in Religious Studies** (prereq #)
–1 1215-1400 TTh, East Bank, Grottanelli, 4 cr (Social Dynamics and the Structure of Mythic Narrative)
–2 1415-1530 TTh, East Bank, Grottanelli, 4 cr (Creation, Destruction, Salvation: Themes in the History of Religions)

8970 **Directed Studies** (prereq △)
2-5 cr

RESOURCE AND COMMUNITY DEVELOPMENT (RCD)
Agriculture
Winter Quarter

1010 **Issues in the Environment**
1100-1145 MWF, St. Paul, Adams, 3 cr

5100 **Interdisciplinary Seminar II** (5099-5100†, §AgEc 5100, AgEt 5100, LA 5100, Soil 5100; prereq 5099 or #)
1500-1645 TTh, St. Paul, 4 cr

5110 **Special Problems** (max 12 cr; prereq RCD sr, #)
1-4 cr

5200 **Community Development Simulation** (prereq #)
1300-1445 TTh, St. Paul, Maki, 3-4 cr

Spring Quarter

1010 **Issues in the Environment**
Adams, 3 cr

3010 **The Minnesota Community: Analysis of its Organization, Change, and Development** (prereq one social science course, #)
1000-1145 TTh, St. Paul, Donohue, 4 cr

5110 **Special Problems** (max 12 cr; prereq RCD sr, #)
1-4 cr

RHETORIC (Rhet)
Agriculture
Winter Quarter

R1101 **Writing to Inform and Persuade** (§Comp 1011; prereq ¶1104 required)
–1 0900-0945 MWF, St. Paul, 4 cr
–2 1000-1045 MWF, St. Paul, 4 cr
–3 1100-1145 MWF, St. Paul, 4 cr
–4 0930-1045 TTh, St. Paul, 4 cr
–5 1100-1215 TTh, St. Paul, 4 cr

R1104 **Library Laboratory** (S-N only)
–1 LAB 1000-1045 M, St. Paul, 1 cr
–2 LAB 1230-1315 T, St. Paul, 1 cr
–3 LAB 0900-0945 W, St. Paul, 1 cr
–4 LAB 0930-1015 Th, St. Paul, 1 cr
–5 LAB 1100-1145 Th, St. Paul, 1 cr

R1151 **Writing in Your Major** (prereq completion of Rhet 1101, 1104, soph status)
–1 1100-1145 MWF, St. Paul, Walzer, 4 cr
–2 0930-1045 TTh, St. Paul, Bennett, 4 cr

R1222 **Public Speaking** (prereq completion of 1101, 1104)
–1 0800-0845 MTWTh, St. Paul, Wendt, 4 cr
–2 0900-0945 MTWTh, St. Paul, Eyo, 4 cr
–3 1000-1045 MTWTh, St. Paul, Eyo, 4 cr
–4 1100-1145 MTWTh, St. Paul, 4 cr
–5 1200-1245 MTWTh, St. Paul, McBride, 4 cr
–6 1300-1345 MTWTh, St. Paul, McBride, 4 cr
–7 0800-0915 TTh, St. Paul, Hardesty, 4 cr
–8 0930-1045 TTh, St. Paul, Hardesty, 4 cr
–9 1100-1215 TTh, McDowell, 4 cr
–10 1230-1345 TTh, Bennett, 4 cr

R1301 **Humanities: Modern Thought and the Enlightenment**
1000-1045 MWF, St. Paul, Marchand, 4 cr

R1302 **Humanities: Modern Thought and the Industrial Revolution**
0900-0945 MWF, St. Paul, Walzer, 4 cr

R1303 **Humanities: Modern Thought and the Impact of Evolution**
1100-1145 MWF, St. Paul, Marchand, 4 cr

R1500 **Introduction to Word Processing** (prereq #) (S-N only)
1400-1600 MWF, St. Paul, Winkler, 2 cr

R3166 **Scientific and Technical Graphics** (prereq #)
★LECT 1400-1515 TTh, St. Paul, Connolly, 4 cr
–1 LAB 1300-1345 T, St. Paul, Connolly
–2 LAB 1600-1645 Th, St. Paul, Connolly

R3254 **Advanced Public Speaking** (prereq 1222)
1000-1045 MTWTh, St. Paul, Gore, 4 cr

R3266 **Communication, Discussion, in Small Group Decision Making** (prereq completion of freshman communication requirement)
0900-0945 MTWTh, St. Paul, Gore, 4 cr

3270 **Speech: Special Problems** (prereq #)
Connolly, Gore, others, 1-5 cr

R3370 **American Humanities**
1200-1245 MWF, St. Paul, Horberg, 4 cr

3374 **Special Problems in Humanities** (prereq #)
Horberg, Marchand, others, 1-2 cr

R3375 **Humanities: Agricultural Heritage**
1300-1345 MWF, St. Paul, Cardwell, Scanlan, 4 cr

R3381 **Humanities: 20th-Century Culture**
1100-1215 TTh, St. Paul, Hayes, 4 cr

R3562 **Writing in Your Profession** (prereq 1101, 1104, 1151, jr status)
–1 0900-0945 MWF, St. Paul, Churchill, 4 cr
–2 1000-1045 MWF, St. Paul, 4 cr
–3 1000-1045 MWF, St. Paul, Scanlan, 4 cr
–4 1000-1045 MWF, St. Paul, Kantar, 4 cr
–5 1100-1145 MWF, St. Paul, Scanlan, 4 cr
–6 1100-1145 MWF, St. Paul, Kantar, 4 cr
–7 1200-1245 MWF, St. Paul, Somers, 4 cr
–8 1300-1345 MWF, St. Paul, Somers, 4 cr
–9 0930-1045 TTh, St. Paul, Horberg, 4 cr
–10 1100-1215 TTh, St. Paul, Ferguson, 4 cr
–11 1230-1345 TTh, St. Paul, Schuelke, 4 cr
–12 1400-1515 TTh, St. Paul, 4 cr
–13 1530-1700 T, St. Paul, Pearsall, 2-4 cr (Agronomy students only)
–14 1300-1500 Th, St. Paul, Ferguson, 4 cr (Forestry students only)

3572 **Grammatical Editing for Technical Writers** (prereq #) (S-N only)
Walzer, 2 cr

5000 **Professional Experience Program** (prereq #) (S-N only)
Connolly, McDowell, others, 4 cr

5100 **Technical Communication: Special Problems** (prereq #)
Connolly, McDowell, others, ar cr

R5170 **Managerial Communications** (prereq freshman communication or equiv)
1300-1415 MW, St. Paul, Hayes, 4 cr

5180 **Internship in Technical Communication** (prereq #)
Connolly, McDowell, others, 4-6 cr

R5257 **Scientific and Technical Presentation** (prereq 1222, 3562 or #)
★LECT 0930-1045 TTh, St. Paul, Connolly, 4 cr
–1 LAB 1100-1145 W, St. Paul, Connolly
–2 LAB 1300-1345 W, St. Paul, Connolly

R5258 **Interviewing: Dynamics of Face-to-Face Communication**
1400-1515 TTh, St. Paul, McDowell, 4 cr

R5551 **Report and Thesis Writing** (prereq 3562 or #)
1400-1645 Th, St. Paul, Winkler, 3 cr

R5571 **Writing for Special Purposes** (prereq technical communication maj or minor, freshman commication, 3562 or #)
–1 1600-1745 T, St. Paul, Betsinger, Winkler, 2 cr
–2 1400-1545 Th, St. Paul, Winkler, 2 cr

Spring Quarter

R1101 **Writing to Inform and Persuade** (§Comp 1011; prereq ¶1104 required)
–1 0900-0945 MWF, St. Paul, 4 cr
–2 1000-1045 MWF, St. Paul, 4 cr
–3 1100-1145 MWF, St. Paul, 4 cr

R1104 **Library Laboratory** (S-N only)
–1 LAB 1000-1045 M, St. Paul, 1 cr
–2 LAB 0930-1015 T, St. Paul, 1 cr
–3 LAB 1100-1145 Th, St. Paul, 1 cr

R1147 **Efficient Reading**
0930-1045 TTh, St. Paul, Bennett, 4 cr

R1151 **Writing in Your Major** (prereq completion of Rhet 1101, 1104, soph status)
–1 0900-0945 MWF, St. Paul, Kantar, 4 cr
–2 1000-1045 MWF, St. Paul, Kantar, 4 cr
–3 1230-1345 TTh, St. Paul, Bennett, 4 cr

R1222 **Public Speaking** (prereq completion of 1101, 1104)
–1 0800-0845 MTWTh, St. Paul, Wendt, 4 cr
–2 0900-0945 MTWTh, St. Paul, Wendt, 4 cr
–3 0900-0945 MTWTh, St. Paul, Gore, 4 cr
–4 1000-1045 MTWTh, St. Paul, Eyo, 4 cr
–5 1100-1145 MTWTh, St. Paul, Hayes, 4 cr
–6 1200-1245 MTWTh, Eyo, 4 cr
–7 1200-1245 MTWTh, St. Paul, McBride, 4 cr
–8 1300-1345 MTWTh, St. Paul, McBride, 4 cr
–9 0800-0915 TTh, St. Paul, Hardesty, 4 cr
–10 0930-1045 TTh, St. Paul, Hardesty, 4 cr

R1301 **Humanities: Modern Thought and the Enlightenment**
–1 1000-1045 MWF, St. Paul, Marchand, 4 cr
–2 1100-1145 MWF, St. Paul, Marchand, 4 cr

R1302 **Humanities: Modern Thought and the Industrial Revolution**
1100-1145 MWF, St. Paul, Walzer, 4 cr

R1303 **Humanities: Modern Thought and the Impact of Evolution**
1300-1345 MWF, St. Paul, Marchand, 4 cr

R1310 **Humanities: The Land in American Experience**
1200-1245 MWF, St. Paul, Scanlan, 4 cr

R1500 **Introduction to Word Processing** (prereq #) (S-N only)
1400-1600 MWF, St. Paul, Winkler, 2 cr

R3254 **Advanced Public Speaking** (prereq 1222)
1300-1345 MTWTh, Hayes, 4 cr

R3266 **Communication, Discussion, in Small Group Decision Making** (prereq completion of freshman communication requirement)
1000-1045 MTWTh, St. Paul, Hayes, 4 cr

3270 **Speech: Special Problems** (prereq #)
Connolly, Ferguson, others, 1-5 cr

R3370 **American Humanities**
1200-1245 MWF, St. Paul, Horberg, 4 cr

3374 **Special Problems in Humanities** (prereq #)
Savage, Walzer, others, 1-2 cr

R3562 **Writing in Your Profession** (prereq 1101, 1104, 1151, jr status)
–1 0900-0945 MWF, St. Paul, Somers, 4 cr
–2 0900-0945 MWF, St. Paul, 4 cr
–3 1000-1045 MWF, St. Paul, Winkler, 4 cr
–4 1000-1045 MWF, St. Paul, Horberg, 4 cr
–5 1100-1145 MWF, St. Paul, Somers, 4 cr
–6 1300-1345 MWF, St. Paul, Walzer, 4 cr
–7 0930-1045 TTh, St. Paul, Ferguson, 4 cr
–8 0930-1045 TTh, St. Paul, Churchill, 4 cr
–9 1230-1345 TTh, St. Paul, Schuelke, 4 cr
–10 1530-1700 T, St. Paul, Pearsall, 2-4 cr (Agronomy students only)

3572 **Grammatical Editing for Technical Writers** (prereq #) (S-N only)
Walzer, 2 cr

R3700 **Rhetorical Theory: Persuasion and the Literature of Science** (prereq completion of freshman communication requirement)
1200-1245 MWF, St. Paul, Somers, 4 cr

5000 **Professional Experience Program** (prereq #) (S-N only)
Connolly, McDowell, others, 4 cr

5100 **Technical Communication: Special Problems** (prereq #)
Connolly, McDowell, others, ar cr

R5147 **Efficient Reading**
0930-1045 TTh, St. Paul, Bennett, 4 cr

5180 **Internship in Technical Communication** (prereq #)
Connolly, McDowell, others, 4-6 cr

R5257 **Scientific and Technical Presentation** (prereq 1222, 3562 or #)
★LECT 0930-1045 TTh, St. Paul, Connolly, 4 cr
–1 LAB 1100-1145 W, St. Paul, Connolly
–2 LAB 1300-1345 T, St. Paul, Connolly
★LECT 1500-1745 T, St. Paul, Connolly, 4 cr
–3 LAB 1300-1345 W, St. Paul, Connolly
–4 LAB 1630-1715 W, St. Paul, Connolly

R5258 **Interviewing: Dynamics of Face-to-Face Communication**
1230-1345 TTh, St. Paul, McDowell, 4 cr

R5400 **Dissemination and Utilization of Information** (prereq jr, sr or grad standing)
1600-1845 M, St. Paul, Schuelke, 4 cr

R5500 **Research in Communication Strategies** (§AgJo 5500; prereq #)
1600-1845 Th, St. Paul, McDowell, 4 cr

R5571 **Writing for Special Purposes** (prereq technical communication maj or minor, freshman commication, 3562 or #)
–1 1600-1715 T, St. Paul, Ferguson, 2 cr
–2 1400-1545 Th, St. Paul, Winkler, 2 cr

RUSSIAN (Russ)
Russian And East European Studies
Liberal Arts

Winter Quarter

R1102 **Beginning Russian** (prereq 1101)
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 1015-1100 MTWThF, East Bank, Donchenko, 5 cr
–3 1115-1200 MTWThF, East Bank, Caskey, 5 cr
–4 1315-1400 MTWThF, East Bank, Jahn, 5 cr

R1105 **Intermediate Russian** (prereq 1104)
–1 1315-1400 MTWThF, East Bank, Polakiewicz, 5 cr
–2 1415-1500 MTWThF, East Bank, Jahn, 5 cr

R3102 **Third-Year Russian** (prereq 3101)
0915-1000 MTWThF, East Bank, Corten, 5 cr

3105 **Readings of Russian Poetry and Novel** (prereq 3104)
0915-1000 MTWThF, East Bank, Prokopov, 5 cr

3422 **Literature: Tolstoy to Solzhenitsyn in Translation** (§5422; prereq 1106 or # for Russ lang/lit maj)
–1 1015-1100 MWF, East Bank, Kulesov, Corten, 4 cr
–2 1015-1100 MTWF, East Bank, Kulesov, Corten, 4 cr (Russian maj only)

3511 **Russian Culture to the mid-19th Century** (prereq 1106 for Russ lang/lit maj)
–1 0815-0900 MWF, East Bank, Donchenko, 4 cr
–2 0815-0900 MWThF, East Bank, Donchenko, 4 cr (Russian maj only)

3970 **Directed Readings** (prereq #, △, college approval)
3-5 cr

5401 **Dostoevsky in Translation**
1215-1300 MWF, East Bank, Kulesov, 4 cr

5422 **Literature: Tolstoy to Solzhenitsyn in Translation** (§3422)
1015-1100 MWF, East Bank, Kulesov, Corten, 4 cr

5425 **Pushkin, Lermontov, Gogol**
1215-1300 MWF, East Bank, Prokopov, 4 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
1-4 cr

Spring Quarter

R1103 **Beginning Russian** (prereq 1102 or equiv)
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 1015-1100 MTWThF, East Bank, Kulesov, 5 cr
–3 1315-1400 MTWThF, East Bank, Polakiewicz, 5 cr

R1106 **Intermediate Russian** (prereq 1105)
–1 1215-1300 MTWThF, East Bank, Kulesov, 5 cr
–2 1415-1500 MTWThF, East Bank, Jahn, 5 cr

R3103 **Third-Year Russian** (prereq 3102)
0915-1000 MTWThF, East Bank, Prokopov, 5 cr

3106 **The Current Soviet Scene** (prereq 3105)
0915-1000 MTWThF, East Bank, Corten, 5 cr

3512 **Russian Culture mid-19th Century to the Present** (prereq 1106 for Russ lang/lit maj)
–1 0815-0900 MWF, East Bank, Donchenko, 4 cr
–2 0815-0900 MWThF, East Bank, Donchenko, 4 cr (Russian maj only)

3970 **Directed Readings** (prereq #, △, college approval)
3-5 cr

5211 **Literature Since the Revolution in Translation**
1115-1300 TTh, East Bank, Corten, 4 cr

5404 **Tolstoy in Translation**
1315-1400 MWF, East Bank, Jahn, 4 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
1-4 cr

SANSKRIT (Skt)
South And Southwest Asian Studies
Liberal Arts

Winter Quarter

1202 **Beginning Sanskrit** (prereq 1201)
0915-1000 MTWThF, Malandra, 5 cr

5202 **Beginning Sanskrit** (§1202; prereq 5201)
0915-1000 MTWThF, Malandra, 5 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
ar cr

8990 **Research** (prereq #)
1315-1500 M, ar cr

Spring Quarter

1203 **Beginning Sanskrit** (prereq 1202)
0915-1000 MTWThF, East Bank, Malandra, 5 cr

5133 **Intermediate Sanskrit** (prereq 5132)
1015-1100 MWF, East Bank, Malandra, 5 cr

5203 **Beginning Sanskrit** (§1203; prereq 5202)
0915-1000 MTWThF, East Bank, Malandra, 5 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
ar cr

5990 **Directed Research** (prereq #, △, CLA approval)
ar cr

8990 **Research** (prereq #)
ar cr

SCANDINAVIAN (Scan)
Scandinavian Languages
Liberal Arts

Winter Quarter

3611 **Expressionism in Scandinavian Literature**
0815-0900 MWF, East Bank, Simpson, 4 cr

3613 **Children's Literature in Scandinavia**
0915-1000 MWF, East Bank, Mishler, 4 cr

3614 **Popular Fiction and Culture in Scandinavia**
1215-1300 MWF, East Bank, Windahl, 4 cr

3970 **Directed Studies** (max 15 cr; prereq #, △, college approval)
1-5 cr

5421 **Finnish Folklore: The Kalevala**
1115-1200 MWF, East Bank, Vahamaki, 4 cr

5615 **Ibsen and the Beginnings of Modern Drama**
1015-1100 MWF, East Bank, Stockenstrom, 4 cr

5702 **Old Norse: Language and Literature** (prereq 5701)
1415-1530 TTh, East Bank, Grimstad, 4 cr

5704 **History of the Scandinavian Languages**
1415-1500 MWF, East Bank, Eliasson, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-15 cr

8702 **Philological Proseminar II: Introduction to Philology**
1515-1700 M, East Bank, Liberman, 2-4 cr

8970 **Research: Scandinavian Literature and Language**
1-6 cr

Spring Quarter

3503 **Scandinavian Folklore**
1415-1530 TTh, East Bank, Grimstad, 4 cr

3505 **Scandinavian Fiction from 1890 to Present**
1015-1100 MWF, East Bank, Simpson, 4 cr

3605 **Scandinavian and Finnish Short Stories**
0915-1000 MWF, East Bank, Vahamaki, 4 cr

3606 **The Expressionist Film in Scandinavia**
1115-1200 MF, 1115-1300 W, East Bank, Mishler, 4 cr

3970 **Directed Studies** (max 15 cr; prereq #, △, college approval)
1-5 cr

5511 **Skaldic Poetry: Its Method** (prereq reading knowledge of Old Icelandic)
1515-1700 W, East Bank, Liberman, 4 cr

5711 **Structure of the Scandinavian Languages** (prereq introductory course in linguistics or #)
0945-1100 TTh, East Bank, Eliasson, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-15 cr

8631 **Seminar: Scandinavian Criticism**
1415-1530 TTh, East Bank, Houe, 3-4 cr

8970 **Research: Scandinavian Literature and Language**
1-6 cr

SCHOOL HEALTH EDUCATION (Hlth)
School of Physical Ed, Rec, School Health Ed
Education

Winter Quarter

R1500 **American Red Cross Standard First Aid and Personal Safety** (A-N only)
–1 1015-1100 MWF, 2 cr
–2 1115-1200 MWF, 2 cr
–3 1415-1530 TTh, 2 cr

R1502 **Basic Life Support** (S-N only)
1215-1300 MWF, 1 cr

R3320 **Methods and Materials in School Health Education** (prereq 3100) (A-N only)
1615-1845 T, Cobb, 3 cr

R3330 **Teaching Health in the Elementary School** (prereq elementary education maj) (A-N only)
1315-1400 MWF, 3 cr

3601 **Student Teaching: Elementary School** (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A-N only)
3 cr

3602 **Student Teaching: Junior High School** (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A-N only)
3-6 cr

3603 **Student Teaching: Senior High School** (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A-N only)
3-6 cr

5069 **Community Health Education Practicum for School Health Education Students** (prereq 5072)
Cobb, 6 cr

5120 **Role of the School Health Educator in Health Appraisal** (A-N only)
1800-2030 W, Cobb, 3 cr

R5402 **Death Education in Contemporary Society** (§PubH 5040; prereq educ sr, lic tchr, hlth sci maj, mort sci maj, sch or pubh nurs or #) (A-N only)
1615-1800 M, 1615-1700 W, East Bank, Slater, Rothenberger, 3 cr

5685 **School-Based Projects in School Health Education** (max 12 cr; prereq school health M.Ed.) (A-N only)
Cobb, 1-12 cr

5700 **Workshop: Contemporary Social Health Problems** (max 12 cr; prereq △) (A-N only)
1600-1900 Th, 1-12 cr

5981 **Problems** (prereq #) (A-N only)
Cobb, ar cr

5983 **Readings: Health Education** (prereq sr honor, grad student, #) (A-N only)
Cobb, 1-3 cr

8980 **Research Problems** (prereq PE 5980, PsyF 5110 or #) (S-N only)
1615-1800 Th, 1 cr

8981 **Research Problems** (prereq 8980 or #) (S-N only)
Cobb, ar cr

Spring Quarter

R1500 **American Red Cross Standard First Aid and Personal Safety** (A-N only)
–1 1215-1300 MWF, Vokaty, 2 cr
–2 1415-1500 MWF, Vokaty, 2 cr
–3 1415-1530 TTh, Vokaty, 2 cr

R3330 **Teaching Health in the Elementary School** (prereq elementary education maj) (A-N only)
1315-1445 MW, East Bank, 3 cr

3601 **Student Teaching: Elementary School** (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A-N only)
3 cr

3602 **Student Teaching: Junior High School** (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A-N only)
3-6 cr

3603 **Student Teaching: Senior High School** (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A-N only)
3-6 cr

3999 **Directed Studies: School Health Education** (max 6 cr; prereq upper division maj or min in school health education, #) (S-N only)
Cobb, Needle, 1-6 cr

5069 **Community Health Education Practicum for School Health Education Students** (prereq 5072) (A-N only)
Cobb, 6 cr

5140 **Administration of the School Health Program** (A-N only)
1830-2100 T, Cobb, 3 cr

5300 **Contemporary Problems in School Health Education** (A-N only)
1600-1830 M, East Bank, Cobb, 3 cr

5302 **Planning and Evaluation of Programs for Youth** (prereq school health education maj)
1615-1830 Th, East Bank, Needle, 3 cr

5685 **School-Based Projects in School Health Education** (max 12 cr; prereq school health M.Ed.) (A-N only)
Cobb, Needle, 1-12 cr

5700 **Workshop: Contemporary Social Health Problems** (max 12 cr; prereq △) (A-N only)
–1 1615-1830 T, East Bank, Needle, 3 cr
–2 1600-1900 W, East Bank, 3 cr

5981 **Problems** (prereq #) (A-N only)
Cobb, Needle, ar cr

5983 **Readings: Health Education** (prereq sr honor, grad student, #) (A-N only)
Cobb, Needle, 1-3 cr

8980 **Research Problems** (prereq PE 5980, PsyF 5110 or #) (S-N only)
1600-1800 Th, Alexander, 1 cr

8981 **Research Problems** (prereq 8980 or #) (S-N only)
Cobb, Needle, ar cr

SECONDARY EDUCATION (SeEd)
Curriculum And Instruction
Education

Winter Quarter

R3150 **Introduction to Secondary School Teaching** (prereq educ stu, 5 cr introductory psychology) (A-N only)
–1 0815-1000 MWF, East Bank, Bruning, 5 cr
–2 1015-1200 MWF, East Bank, Bruning, 5 cr
–3 1315-1500 MWF, East Bank, Willie, 5 cr

3151 **Directed Study** (prereq △) (A-N only)
1-9 cr

R3152 **Practicum: Secondary Education** (max 7 cr; prereq educ stu, △) (S-N only)
–1 1515-1600 TTh, 1-7 cr (math maj only)
–2 Gennaro, 4 cr (science maj only)

R3155 **Psychological Foundations of Secondary Education** (prereq educ stu, Psy 1001) (A-N only)
★LECT 1015-1100 MWF, East Bank,
–1 LAB 0815-1000 T, East Bank, 5 cr
–2 LAB 1015-1200 T, East Bank, 5 cr
–3 LAB 1015-1200 Th, East Bank, 5 cr
–4 LAB 1215-1400 Th, East Bank, 5 cr
–5 LAB 1300-1445 T, St. Paul, 5 cr (StP)

3156 The Social Sciences and the Social Studies (max 6 cr; prereq social studies maj, #) (A-N only)
0815-1000 TTh, Glenn, 3 cr

3325 Instructional Practice in English, Speech, and Theatre Arts (A-N only)
1415-1600 MW, Beckman, 4 cr

3327 Teaching of Writing in the Secondary School (prereq 3150, 3155) (A-N only)
1315-1500 TTh, East Bank, Beach, 3 cr

3331 Introduction to Teaching Reading in Content Areas (A-N only)
1215-1400 MW, East Bank, Prenn, 3 cr

3335 Teaching Second Languages (A-N only)
1515-1800 T, Jorstad, 3 cr

3349 Teaching Social Studies in the Secondary School (prereq social studies maj) (A-N only)
0815-1000 TTh, Mackey, 3 cr

R3356 Teaching Secondary School Science (prereq jr, 5 cr introductory psychology, ¶3155) (A-N only)
0815-1000 TTh, Humphreys, 2 cr

3357 Teaching Secondary School Science (prereq science major or minor...for majs, 3356, ¶3152) (A-N only)
1415-1600 MWF, Gennaro, 4 cr

R3368 Teaching Secondary School Mathematics (prereq 3365) (A-N only)
1315-1500 T, 1315-1500 Th, East Bank, House, 3 cr

3600 Student Teaching (prereq △) (S-N only)
E Anderson, ar cr

3606 Student Teaching in Library Science (prereq sr, Lib 5102, 5201, 5202, 5205, 5302, 5303 or #) (A-N only)
2-6 cr

R3621 Directed Experiences in Teaching English, Speech, and Theatre Arts (prereq 3325, #) (S-N only)
–1 1615-1800 M, East Bank, Johnson, Reilly, 9 cr (maj only)
–2 6 cr (minors to maj only)

R3631 Student Teaching in Second Languages (S-N only)
1615-1800 M, Jorstad, 3-12 cr

R3641 Student Teaching in Social Studies (max 15 cr; prereq 3350, sr) (S-N only)
1615-1800 M, Fleener, 3-15 cr

3651 Student Teaching in Science (prereq sr, 3357, 4 cr in 3352...for minors: 3357, #) (S-N only)
1615-1800 M, 1-12 cr

3661 Student Teaching in Mathematics (prereq 3365 during same year) (S-N only)
Bledsoe, 3-12 cr

5151 School-Based Projects in Social Studies Education (max 12 cr) (A-N only)
Glenn, Mackey, 1-12 cr

5153 New Perspectives in the Social Studies (max 12 cr) (A-N only)
1615-1800 T, East Bank, Mackey, 3 cr

5175 Secondary Remedial Reading Instruction (prereq 5344 or Elem 5331 or #) (A-N only)
1615-1800 M, East Bank, Graves, 3 cr

5188 Theory and Research in Intercultural Education (A-N only)
1615-1800 MW, East Bank, Paige, 4 cr

5194 English Language Arts Curricula in the Secondary School (A-N only)
1615-1800 W, East Bank, Piche, 3 cr

5217 Programs and Curricula in Bilingual Education (prereq 5216 or #) (A-N only)
1600-1800 MW, East Bank, Walker, 4 cr

5320 Literature for Adolescents (A-N only)
0900-1230 S, East Bank, Beach, 3 cr (alt S, begins Jan 7)

5351 Directed Study (max 6 cr; prereq educ or grad stu) (S-N optional)
ar cr

5385 Planning and Assessing Second Language Instruction (A-N only)
0830-1200 S, Jorstad, 4 cr

R5394 Workshop: Science Education: Microcomputer Applications in the Science Classroom (max 12 cr) (A-N only)
3 cr

5395 School-Based Projects in Science Education (max 12 cr; prereq MEd student in science education) (A-N only)
Gennaro, 1-12 cr

5404 Language, Culture and Education (§Spch 5404) (A-N only)
1315-1500 TTh, East Bank, Piche, 4 cr

5659 School-Related Projects in Language Arts (max 12 cr; prereq MEd student in English education) (A-N only)
Beach, Graves, others, 1-12 cr

8188 Information Sources and Research in Second Language Learning and Teaching
1600-1830 TTh, East Bank, Lange, 5 cr

8387 Seminar: Second Language Education
1330-1530 F, Jorstad, Walker, 1-3 cr

8801 Problems: Teaching Social Studies (prereq 5150, 5152, 5156, 8104 or #)
Mackey, Glenn, 3-9 cr

8871 Problems: Curriculum Construction (prereq #)
Gennaro, ar cr

8894 Problems: Second Languages and Cultures Education (max 8 cr)
Lange, Paige, others, ar cr

8895 Readings in English Education
Beach, Graves, others, 1-3 cr

8896 Problems: Teaching English
Beach, Graves, others, ar cr

8898 Readings in Second Languages and Cultures Education
Lange, Paige, others, 1-3 cr

Spring Quarter

R3150 Introduction to Secondary School Teaching (prereq educ stu, 5 cr introductory psychology) (A-N only)
–1 0815-1000 MWF, East Bank, Bruning, 5 cr
–2 1015-1200 MWF, East Bank, Bruning, 5 cr

3151 Directed Study (prereq △) (A-N only)
1-9 cr

R3152 Practicum: Secondary Education (max 7 cr; prereq educ stu, △) (S-N only)
–1 1515-1600 TTh, 1-7 cr (math maj only)
–2 0800-1000 F, East Bank, 1-7 cr (social studies maj only)
–3 Gennaro, 1-7 cr (science maj only)

R3155 Psychological Foundations of Secondary Education (prereq educ stu, Psy 1001) (A-N only)
★LECT 0815-0900 MWF, East Bank, Bart
–1 LAB 0815-1000 T, East Bank, 5 cr
–2 LAB 1015-1200 T, East Bank, 5 cr
–3 LAB 1015-1200 Th, East Bank, 5 cr
–4 LAB 1215-1400 Th, 5 cr

R3157 The Social Sciences and the Social Studies (max 6 cr; prereq social studies maj, #) (A-N only)
0815-1000 TTh, Mackey, 3 cr

3325 Instructional Practice in English, Speech, and Theatre Arts (A-N only)
1415-1600 MW, Beckman, 4 cr

R3350 Teaching Social Studies in the Secondary School (prereq social studies maj) (A-N only)
0815-1000 MW, Glenn, 3 cr

R3357 Teaching Secondary School Science (prereq science major or minor...for majs, 3356, ¶3152) (A-N only)
1415-1600 MWF, Gennaro, 4 cr

R3366 Computer Assisted Mathematics Instruction (prereq Math 1231 or one yr of calculus, #) (A-N only)
1300-1500 TTh, House, 4 cr

3600 Student Teaching (prereq △) (S-N only)
Anderson, ar cr

3606 Student Teaching in Library Science (prereq sr, Lib 5102, 5201, 5202, 5205, 5302, 5303 or #) (A-N only)
2-6 cr

R3621 Directed Experiences in Teaching English, Speech, and Theatre Arts (prereq 3325, #) (S-N only)
–1 1615-1800 M, East Bank, Johnson, Reilly, 9 cr (maj only)
–2 Johnson, Reilly, 6 cr (minors to maj only)

3631 Student Teaching in Second Languages (S-N only)
1615-1800 M, Jorstad, 3-12 cr

R3641 Student Teaching in Social Studies (max 15 cr; prereq 3350, sr) (S-N only)
1615-1800 M, Fleener, 3-15 cr

R3651 Student Teaching in Science (prereq sr, 3357, 4 cr in 3352...for minors: 3357, #) (S-N only)
1615-1800 M, 1-12 cr

3661 Student Teaching in Mathematics (prereq 3365 during same year) (S-N only)
3-12 cr

5122 Strategies for Teaching Culture in the Second Language Classroom (A-N only)
1600-1800 TTh, Jorstad, 4 cr

5151 School-Based Projects in Social Studies Education (max 12 cr) (A-N only)
Glenn, Mackey, 1-12 cr

R5152 Techniques of Instruction in Social Studies (A-N only)
1615-1800 T, Mackey, 3 cr

R5167 Economic Education Programs (prereq Econ 1002 or equiv or #) (A-N only)
1615-1800 Th, West Bank, Dalgaard, 3 cr

5185 School and Professional Based Experiences in Second Languages and Cultures (max 12 cr; prereq MEd students) (A-N only)
Paige, Walker, others, 1-12 cr

5218 Evaluation and Assessment in Bilingual Education (prereq 5217 or #) (A-N only)
1600-1800 MW, East Bank, Walker, 4 cr

5321 Teaching Literature in Secondary Schools (A-N only)
0900-1230 S, Beach, 3 cr (alt S, begins March 31)

5322 Teaching Composition and Communication in Junior and Senior High Schools (A-N only)
1615-1800 T, East Bank, Piche, 3 cr

5326 Teaching Film and Television (A-N only)
1615-1800 Th, Beach, 3 cr

5344 Teaching Reading in Content Areas (A-N only)
1615-1800 M, East Bank, Graves, 3 cr

5347 Linguistics and Reading (A-N only)
1615-1800 W, Graves, 3 cr

5351 Directed Study (max 6 cr; prereq educ or grad stu) (S-N optional)
ar cr

5382 Second Language Testing, Assessment, and Evaluation (A-N only)
0900-1200 S, Jorstad, 3 cr

R5395 School-Based Projects in Science Education (max 12 cr; prereq MEd student in science education) (A-N only)
Gennaro, 1-12 cr

5659 School-Related Projects in Language Arts (max 12 cr; prereq MEd student in English education) (A-N only)
Beach, Graves, others, 1-12 cr

8362 Research in Social Studies (§Elem 8362; prereq 5152, 8104)
1615-1800 Th, East Bank, Glenn, Mackey, 3 cr

8387 Seminar: Second Language Education
1330-1530 F, Jorstad, Walker, 1-3 cr

8801 Problems: Teaching Social Studies (prereq 5150, 5152, 5156, 8104 or #)
Glenn, Mackey, others, 3-9 cr

8871 Problems: Curriculum Construction (prereq #)
Gennaro, ar cr

8893 Seminar: Advanced Topics in English-Language Arts Education (max 9 cr; prereq #)
1415-1600 Th, East Bank, Piche, 1-9 cr

8894 Problems: Second Languages and Cultures Education (max 8 cr)
Lange, Paige, others, ar cr

8895 Readings in English Education
Beach, Graves, others, 1-3 cr

8896 Problems: Teaching English
Beach, Graves, others, ar cr

8898 Readings in Second Languages and Cultures Education
Lange, Paige, others, 1-3 cr

SERBO-CROATIAN (Serb)
Russian And East European Studies
Liberal Arts

Winter Quarter

1102 Beginning Serbo-Croatian (prereq 1101)
1415-1500 MTWThF, East Bank, Caskey, 5 cr

Spring Quarter

1103 Beginning Serbo-Croatian (prereq 1102)
1515-1600 MTWThF, East Bank, Caskey, 5 cr

SLAVIC (Slav)
Russian And East European Studies
Liberal Arts

Spring Quarter

5900 **Topics in Russian and East European Studies** (max 12 cr)
–1 1315-1500 TTh, East Bank, Caskey, 4 cr
–2 1330-1500 TTh, East Bank, Wierzewski, 4 cr

SOCIAL AND PHILOSOPHICAL FOUNDATIONS OF EDUC (SPFE)
Educational Policy And Administration
Education

Winter Quarter

R3090 **School and Society** (prereq sr) (A-N only)
1415-1600 T, 1415-1500 Th, East Bank, Bagley, 3 cr

3099 **Directed Study** (prereq #) (A-N only)
Bagley, Beck, others, 1-6 cr

5099 **Directed Study** (max 9 cr, S-N optional; prereq #)
Bagley, Beck, others, ar cr

5102 **Education Imagery in Europe and America** (S-N optional)
1615-1800 M, East Bank, Bagley, 3 cr

5131 **Comparative Education** (A-N only)
1615-1800 W, East Bank, Beck, 3 cr

5171 **Anthropology and Education** (§Anth 5145) (A-N only)
1515-1730 Th, East Bank, Dobbert, 4 cr

5174 **Field Method for the Study of Education** (§Anth 5316, S-N optional; prereq 5171 or 5172 or Anth 5145 or 5144 or 1502)
1515-1730 W, East Bank, Dobbert, 4 cr

R5180 **Introduction to the Economics of Education** (§EdAd 5280) (A-N only)
1615-1900 W, East Bank, Lewis, 4 cr

5192 **Sociology of Higher Education** (§Soc 5958; prereq introductory statistics or #) (A-N only)
1615-1800 Th, East Bank, Clark, 4 cr

5202 **Politics of Education** (§8202, EdAd 5202, 8202) (A-N only)
1615-1800 T, East Bank, Mazzoni, 3 cr

5210 **Social Forecasting and Educational Futures** (A-N only)
1615-1800 T, East Bank, Harkins, 3 cr

8220 **Seminar: Social and Educational Futures** (max 6 cr; prereq 5209 or 5210 or 5211 or #)
1830-2030 M, East Bank, Harkins, 1-6 cr

8241 **Problems: History and Philosophy of Education** (prereq #)
Bagley, Beck, others, ar cr

8260 **Seminar: Social, Philosophic Foundations of Education**
1515-1700 M, East Bank, Clark, 3 cr

Spring Quarter

R3090 **School and Society** (prereq sr) (A-N only)
–1 0815-0930 MW, East Bank, Clark, 3 cr
–2 1415-1600 T, 1415-1500 Th, East Bank, Dobbert, 3 cr

3099 **Directed Study** (prereq #) (A-N only)
Bagley, Beck, others, 1-6 cr

5099 **Directed Study** (max 9 cr, S-N optional; prereq #)
Bagley, Beck, others, ar cr

5125 **Youth in Modern Society** (§Soc 5952) (A-N only)
0815-0930 TTh, East Bank, Clark, 4 cr

5155 **History of Western Educational Thought** (A-N only)
1615-1800 M, East Bank, Bagley, 3 cr

5156 **History of Ideas in American Education** (A-N only)
1615-1800 T, East Bank, Bagley, 3 cr

5182 **Comparative Philosophies of Education** (A-N only)
1615-1800 W, East Bank, Beck, 3 cr

5211 **Social Design and Educational Futures** (A-N only)
1830-2030 M, East Bank, Harkins, 3 cr

8172 **Seminar: Topics in Anthropology, Education** (prereq 5171 or 5172 or grad student in anthropology)
1515-1730 W, East Bank, Dobbert, 3-9 cr

8220 **Seminar: Social and Educational Futures** (max 6 cr; prereq 5209 or 5210 or 5211 or #)
1615-1800 Th, East Bank, Harkins, 1-6 cr

8241 **Problems: History and Philosophy of Education** (prereq #)
ar cr

SOCIAL WORK (SW)
Liberal Arts

Winter Quarter

R1003 **Community Experience in Social Welfare** (prereq 1001, △) (S-N only)
0915-1000 M, East Bank, Quam, 1 cr

R3004 **Social Work Issues and Human Development Through the Life Cycle** (prereq 1001, CPsy 1301)
1015-1200 WF, East Bank, 4 cr

R3005 **Social Work: The Art of Helping People** (§5401; prereq 1001, 3004)
1015-1200 MW, East Bank, A Stewart, 4 cr

R3101 **Current Social Policy Problems and Social Welfare** (§5101; prereq 1001)
1215-1400 MW, East Bank, 4 cr

3970 **Directed Studies** (prereq maj, #, △, college approval)
1-15 cr

3990 **Directed Research** (prereq #, △, college approval)
ar cr

R5022 **Human Sexuality for the Health and Helping Professionals II** (§HSU 5027, PubH 5022, FSoS 5240, Hlth 5700)
1715-1930 Th, East Bank, Maddock, Larson, others, 3 cr

5211 **Advanced Theories of Human Growth and Change** (prereq grad standing or 12 cr in social sciences)
1315-1600 Th, East Bank, Quam, 3-4 cr

R5601 **Ethno-Cultural Concepts in Social Work Practice** (prereq 1001)
1615-1900 T, East Bank, Stewart, 3-4 cr

R8010 **Field Instruction I** (4 cr or ar cr by #) (S-N only)
–1 1100-1300 T, East Bank, Johnston, ar cr
–2 1100-1300 T, East Bank, ar cr
–3 1100-1300 T, East Bank, ar cr
–4 1100-1300 T, East Bank, ar cr
–5 1100-1300 T, East Bank, ar cr

8020 **Field Instruction II** (4 cr or ar cr by #; prereq 8010) (S-N only)
Johnston, ar cr

R8130 **Seminar: History of Social Work** (§Hist 5821; prereq Hist 5349, #)
1900-2100 M, West Bank, Chambers, 4 cr

R8150 **Special Topics in Social Policy: Community Intervention in Health** (prereq #)
0915-1200 Th, East Bank, 3 cr

R8203 **Family Stress**
1300-1600 Th, St. Paul, McCubbin, 3 cr

R8300 **Organizational Behavior**
0915-1200 Th, East Bank, Hollister, 3 cr

R8301 **Organizational Analysis, Management, and Administration**
1615-1900 T, East Bank, 3 cr

R8305 **Community Development**
0915-1200 M, East Bank, Wattenberg, 3 cr

R8307 **Theories of Social Planning and Social Change**
1315-1600 Th, East Bank, 3 cr

R8350 **Speical Topics: Management, Planning, and Development: MPD Concentration Workshop** (prereq MPD concentration or #)
1615-1800 M, East Bank, 1-4 cr (alt M)

R8401 **Social Work Methods with Individual Clients** (prereq 8400)
–1 1315-1600 M, East Bank, Quam, 3 cr
–2 0815-1100 T, East Bank, 3 cr

R8406 **Supervision and Consultation in Social Work Practice** (prereq 8401, #)
0915-1200 Th, East Bank, Johnston, 3 cr

R8407 **Strategies of Family Intervention** (prereq 8401, 2nd yr MSW student, #)
0915-1200 M, East Bank, 3 cr

R8414 **Social Work Methods with Groups** (prereq 8400 or #)
1315-1600 T, East Bank, Cohn, 3 cr

R8421 **Social Work Practice in Mental Health Settings** (prereq 8122, 8400, 8401)
0815-1100 T, East Bank, 3 cr

R8450 **Special Topics: Practice with Individuals, Families and Groups** (prereq 8401 or #)
–1 0815-1100 M, East Bank, 1-4 cr
–2 1315-1600 M, East Bank, Cohn, 3 cr (Group Treatment: Strategies with Families, Children and Adults)
–3 1315-1600 T, East Bank, 3 cr (Direct Work with Adolescents)

R8901 **Scientific Inquiry in Social Work**
0915-1200 M, East Bank, AuClaire, 3 cr

R8903 **Program Evaluation** (prereq 8901)
0915-1200 T, East Bank, Austin, 3 cr

8970 **Directed Study** (prereq #)
ar cr

8990 **Research Projects** (max 6 cr)
ar cr

R8991 **Seminar on Research** (prereq MSW)
0915-1200 Th, East Bank, AuClaire, 2 cr

Spring Quarter

R1001 **Introduction to Social Welfare and Community Services**
1415-1600 MW, West Bank, Battle, 5 cr

R1004 **Community Experience in Social Welfare** (prereq 1001, △) (S-N only)
0915-1000 T, East Bank, Quam, 1 cr

R3005 **Social Work: The Art of Helping People** (§5401; prereq 1001, 3004)
1015-1200 MW, East Bank, Stewart, 4 cr

3020H **Honors Seminar: Special Topics** (prereq 1001, jr, sr honors candidate)
0815-1000 MW, East Bank, 3 cr

3970 **Directed Studies** (prereq maj, #, △, college approval)
1-15 cr

R3984 **Community Organization/Development Practice** (§5984; prereq 1001)
1515-1700 MW, East Bank, Wattenberg, 4 cr

3990 **Directed Research** (prereq #, △, college approval)
ar cr

R5010 **Seminar: Special Topics**
–1 0915-1200 Th, East Bank, 3 cr (Self-Help, Mutual Aid and Network Strategies in Health and Family Work)
–2 1315-1600 Th, East Bank, Cohn, 3 cr
–3 1615-1900 Th, East Bank, 3 cr

R5020 **Public Health Social Work Integrative Seminar** (§PubH 5020; prereq beginning level MSD/MPH maj)
1515-1700 T, East Bank, Bracht, Schwanke, 2 cr

R5023 **Human Sexuality for the Health and Helping Professionals III** (§HSU 5028, PubH 5023, FSoS 5240, Hlth 5700)
1715-1930 Th, East Bank, Terrell, Maddock, 3 cr

R5102 **The Changing Roles of Men and Women** (prereq WoSt 1005 or 1006 or equiv)
0915-1200 Th, East Bank, Wattenberg, 3 cr

R5111 **Contemporary Policy and Programs in Social Welfare** (prereq grad standing or 12 cr in social sciences)
1315-1600 M, East Bank, 3-4 cr

R5414 **Fundamentals of Social Group Work** (§8414; prereq 3005)
1415-1700 T, East Bank, Cohn, 3 cr

R5601 **Ethno-Cultural Concepts in Social Work Practice** (prereq 1001)
1315-1600 Th, East Bank, Stewart, 3-4 cr

R8010 **Field Instruction I** (4 cr or ar cr by #) (S-N only)
–1 1200-1400 Th, East Bank, Johnston, ar cr
–2 1200-1400 Th, East Bank, ar cr
–3 1200-1400 Th, East Bank, ar cr
–4 1600-1800 T, East Bank, ar cr
–5 1200-1400 Th, East Bank, ar cr

8020 **Field Instruction II** (4 cr or ar cr by #; prereq 8010) (S-N only)
Johnston, ar cr

R8102 **Policy Issues in Social Welfare**
0915-1200 T, East Bank, Hollister, Schwartz, 3 cr

R8104 **Child Welfare and the Law**
1415-1700 T, East Bank, Clendenan, 3 cr

R8111 **International Social Welfare** (prereq #)
0915-1200 M, East Bank, 3 cr

R8140 **Seminar in Social Work Education** (max 6 cr; prereq #)
1115-1400 M, East Bank, Bracht, ar cr

R8150 **Special Topics in Social Policy** (prereq #)
–1 0915-1200 Th, East Bank, 3 cr
–2 ar cr

R8180 **Social Policy Formulation and Analysis** (prereq 5101, 8101, doctoral students only)
1415-1700 T, East Bank, 4 cr

R8350 **Speical Topics: Management, Planning, and Development: MPD Concentration Workshop** (prereq MPD concentration or #)
1615-1800 M, East Bank, 1–4 cr (alt M)

R8414 **Social Work Methods with Groups** (prereq 8400 or #)
0915-1200 M, East Bank, Cohn, 3 cr

R8423 **Chronic Illness-Impact on Families** (prereq 8122, 8400, 8401 or #)
0915-1200 Th, East Bank, Battle, 3 cr

R8450 **Special Topics: Practice with Individuals, Families and Groups** (prereq 8401 or #)
–1 1215-1500 M, East Bank, 3 cr (Innovative Models of Intervention with High Risk Families)
–2 0915-1200 T, East Bank, 3 cr
–3 3 cr
–4 3 cr

8970 **Directed Study** (prereq #)
ar cr

8990 **Research Projects** (max 6 cr)
ar cr

R8992 **Seminar on Research** (prereq MSW, 8991)
0915-1200 Th, East Bank, AuClaire, 2 cr

SOCIOLOGY (Soc)
Liberal Arts

Winter Quarter

R1001 **Introduction to Sociology**
–1 0915-1000 MWF, West Bank, Fischer, 4 cr
–2 1015-1100 MWF, West Bank, J Clark, 4 cr
–3 1315-1400 MWF, West Bank, Thornton, 4 cr
–4 1115-1230 TTh, West Bank, Spitzer, 4 cr
–5 1245-1400 TTh, West Bank, Fulton, 4 cr

R1001H **Honors Course: Introduction to Sociology**
1215-1300 MWF, West Bank, T Anderson, 4 cr

R1002 **American Community**
–1 0915-1000 MWF, West Bank, Cooperman, 4 cr
–2 0945-1100 TTh, West Bank, Nelson, 4 cr

R3101 **Introduction to American Criminal Justice** (§CJS 3101)
1115-1230 TTh, West Bank, Inverarity, 4 cr

R3102 **Introduction to Criminal Behavior and Social Control** (§3103; prereq 3101)
0945-1100 TTh, West Bank, Finestone, 4 cr

R3201 **Principles of Social Psychology** (prereq 1001)
★LECT 0815-0930 TTh, West Bank, Fine
–1 LAB 0815-1000 M, West Bank, 5 cr
–2 LAB 1015-1200 T, West Bank, 5 cr
–3 LAB 0915-1100 W, West Bank, 5 cr
–4 LAB 0945-1130 Th, West Bank, 5 cr

R3201H **Honors Course: Principles of Social Psychology** (prereq sociology honors student, 1001 or 1001H or #)
★LECT 0815-0930 TTh, West Bank, Fine
–80 LAB 1015-1200 F, West Bank, 5 cr

R3501 **The Family System** (prereq 1001 or #)
0815-0930 TTh, West Bank, Reiss, 4 cr

R3503 **Sex, Romance, and Relationships** (prereq 1001)
1315-1400 MWF, West Bank, Asher, 4 cr

R3551 **World Population Problems**
1245-1400 TTh, West Bank, Kennedy, 4 cr

3671 **Comparative Rural Societies: Latin America** (prereq 8 cr in sociology, anthropology, economics or political science or #)
0945-1100 TTh, West Bank, Ellenbogen, 4 cr

R3801 **Sociological Methods I: Descriptive Statistics** (prereq basic algebra or Math 0009)
★LECT 0945-1100 TTh, West Bank, McTavish
–1 LAB 0815-0900 MW, West Bank, 5 cr
–2 LAB 1115-1200 MW, West Bank, 5 cr
–3 LAB 1115-1200 TTh, West Bank, 5 cr
–4 LAB 1215-1300 TTh, West Bank, 5 cr
–5 LAB 1315-1400 TTh, West Bank, 5 cr

R3802 **Sociological Methods II: Statistical Inference** (prereq 3801)
★LECT 1115-1200 MWF, West Bank, Leik
–1 LAB 1215-1300 MW, West Bank, 5 cr
–2 LAB 1315-1400 MW, West Bank, 5 cr
–3 LAB 0815-0900 TTh, West Bank, 5 cr
–4 LAB 1015-1100 TTh, West Bank, 5 cr

R3802H **Honors Course: Sociological Methods II: Statistical Inference** (prereq 3801H or #)
★LECT 1115-1200 MWF, West Bank,
–80 LAB 1015-1100 MW, West Bank, 5 cr

R3811 **Computer Usage for Social Statistics** (§3801 rec) (S–N only)
1115-1200 T, West Bank, Felt, 1 cr

R3937 **Social Gerontology: Elders in American Society** (prereq 1001 or #)
0815-0930 TTh, West Bank, McTavish, 4 cr

R3960 **Topics in Sociology** (prereq 1001)
1415-1530 TTh, West Bank, Markusen, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1–15 cr

3990 **Sociology Honors Thesis** (max 8 cr; prereq jr or sr sociology honors student, #, △, college approval)
4–8 cr

R3991 **Junior Honors Seminar** (prereq jr or sr sociology honors student or #)
0945-1130 T, West Bank, Fine, 1–4 cr

R5141 **Juvenile Delinquency** (prereq 3101, 3102 or #...5161, 5162 rec)
1015-1100 MWF, West Bank, Finestone, 4 cr

R5161 **Criminal Law in American Society** (§CJS 5101)
0945-1100 TTh, Samaha, 4 cr

R5201 **Introduction to Social Psychology** (no cr for soc maj; prereq 8 cr in soc, anthropology, psychology, political science or econ)
1415-1500 MWF, West Bank, Mortimer, 4 cr

R5301 **Social Movements in Changing Society** (prereq 3401 or 5401 or #)
0915-1000 MWF, West Bank, Donohue, 4 cr

R5355 **Opinion and Communication: Social Factors** (prereq 16 cr in sociology or #)
0815-0900 MWF, West Bank, Carter, 4 cr

R5401 **Social Organizations** (no cr soc maj; prereq 8 cr in soc, anthropology, psychology, political science or econ)
1115-1200 MWF, West Bank, Galaskiewicz, 4 cr

R5411 **Formal Organizations** (prereq 3401 or 5401 or 8 cr in soc, anthropology, psychology, political sci or econ or #)
1515-1630 MW, West Bank, Reynolds, 4 cr

R5511 **Comparative Family Organization** (prereq 8 cr in sociology or #)
–1 1115-1230 TTh, West Bank, Reiss, 4 cr (undergrad or grad)
–2 1115-1230 TTh, West Bank, Reiss, 3 cr (grad only)

R5601 **Urban Sociology** (prereq 3401 or 3405 or 5401 or #...some statistics rec)
1015-1100 MWF, West Bank, T Anderson, 4 cr

R5703 **Social Life, Cultural Change** (prereq 8 cr in social science or #)
0815-0930 TTh, West Bank, Fulton, 4 cr

R5755 **Social Structure, Political Behavior** (prereq 3401 or 5401 or #)
1315-1400 MWF, West Bank, Bradley, 4 cr

5951 **Minority Group Relations** (prereq 3201, 3401 or 5201 or #)
1245-1400 TTh, East Bank, Sykes, 4 cr

R5958 **Sociology of Higher Education** (§SPFE 5192; prereq 1001 or equiv or #)
1615-1800 Th, East Bank, S Clark, 4 cr

R5960 **Topics in Sociology**
–1 0915-1200 W, West Bank, R Anderson, 4 cr
–2 Laslett, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1–15 cr

R8090 **Topics** (prereq #)
–1 ar cr
–2 Reynolds, ar cr
–3 1415-1600 Th, West Bank, Spitzer, 4 cr

R8102 **Seminar: Research in Social Deviance**
1300-1500 W, West Bank, Kruttschnitt, 3 cr

R8415 **Theories of Social Organization**
1415-1600 Th, West Bank, Galaskiewicz, 3 cr

R8702 **Seminar: Social Theory**
1315-1500 W, West Bank, Inverarity, 3 cr

R8714 **Comparative Sociology: Perspectives in Theory and Research**
1800-2000 W, West Bank, Ellenbogen, 3 cr

R8802 **Seminar: Recent Developments in Sociological Research Techniques**
1900-2200 T, West Bank, Reynolds, 3 cr

R8811 **Methods of Social Research** (prereq 3802, 3803 or #)
★LECT 1515-1600 MW, West Bank, Simmons, 4 cr
–1 LAB 1415-1600 F, West Bank,

R8818 **Fieldwork and Laboratory Training in Social Research** (prereq 8817)
1015-1200 W, R Anderson, 5 cr

Spring Quarter

R1001 **Introduction to Sociology**
–1 0815-0900 MWF, West Bank, Galaskiewicz, 4 cr
–2 0915-1000 MWF, West Bank, J Clark, 4 cr
–3 1115-1230 TTh, West Bank, Fine, 4 cr
–4 1100-1215 TTh, St. Paul, Ellenbogen, 4 cr (StP)

R1001H **Honors Course: Introduction to Sociology**
0945-1100 TTh, West Bank, Bradley, 4 cr

R1002 **American Community**
1245-1400 TTh, West Bank, Nelson, 4 cr

R1651 **Rural Sociology**
0900-0945 MWF, St. Paul, Donohue, 4 cr (StP)

R3102 **Introduction to Criminal Behavior and Social Control** (§3103; prereq 3101)
1115-1230 TTh, West Bank, Kruttschnitt, 4 cr

R3315 **Latin American Societies in Transition** (prereq 8 cr in sociology, economics, anthropology or political science or #)
0815-0900 MWF, West Bank, Fiola, 4 cr

R3401 **Principles of Social Organization** (prereq 1001, 3801)
★LECT 1115-1230 TTh, West Bank, Bradley
–1 LAB 1215-1400 M, West Bank, 5 cr
–2 LAB 1315-1500 T, West Bank, 5 cr
–3 LAB 1215-1400 W, West Bank, 5 cr
–4 LAB 1315-1500 Th, West Bank, 5 cr

R3401H **Honors Course: Principles of Social Organizations** (prereq sociology honors student, 1001 or 1001H or #)
★LECT 1115-1230 TTh, West Bank, Bradley
–80 LAB 1315-1500 Th, West Bank, 5 cr

R3405 **Inequality: Introduction to Stratification** (prereq 1001)
1115-1230 TTh, West Bank, Nelson, 4 cr

R3501 **The Family System** (prereq 1001 or #)
1015-1100 MWF, West Bank, Li, 4 cr

R3503 **Sex, Romance, and Relationships** (prereq 1001)
0945-1100 TTh, West Bank, Fischer, 4 cr

R3601 **Urban Community** (prereq 1001 or 1002)
1115-1200 MWF, West Bank, Galaskiewicz, 4 cr

R3802 **Sociological Methods II: Statistical Inference** (prereq 3801)
★LECT 0815-0930 TTh, West Bank,
–1 LAB 0815-0900 MW, West Bank, 5 cr
–2 LAB 0915-1000 MW, West Bank, 5 cr
–3 LAB 1015-1100 TTh, West Bank, 5 cr
–4 LAB 1215-1300 TTh, West Bank, 5 cr

R3803 **Sociological Methods III: Research Methods** (prereq 3801, 3802 or #)
★LECT 0915-1000 MWF, West Bank, McTavish
–1 LAB 1215-1300 MW, West Bank, 5 cr
–2 LAB 0815-0900 TTh, West Bank, 5 cr
–3 LAB 1115-1200 TTh, West Bank, 5 cr

R3803H **Honors Course: Sociology Research Methods** (prereq 3802H or #)
★LECT 0915-1000 MWF, West Bank, McTavish
–80 LAB 1315-1400 TTh, West Bank, 5 cr

R3937 **Social Gerontology: Elders in American Society** (prereq 1001 or #)
1245-1400 TTh, West Bank, Fischer, 4 cr

R3960 **Topics in Sociology** (prereq 1001)
1315-1400 MWF, West Bank, Cooperman, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-15 cr

3990 **Sociology Honors Thesis** (max 8 cr; prereq jr or sr sociology honors student, #, △, college approval)
4-8 cr

R5101 **Sociology of Law** (prereq 3101, 3102 or #..5705 rec)
1245-1400 TTh, West Bank, Inverarity, 4 cr

R5102 **Criminology** (prereq 3101, 3102 or #)
0815-0930 TTh, West Bank, Kruttschnitt, 4 cr

R5148 **Criminal Psychopathology** (§CJS 5205; prereq sr or grad student)
1515-1700 Th, West Bank, Malmquist, 4 cr

R5162 **Criminal Procedure in American Society** (§CJS 5102)
0945-1100 TTh, West Bank, Samaha, 4 cr

R5205 **Symbolic Interaction** (prereq 3201 or 5201 or #)
1015-1100 MWF, West Bank, Finestone, 4 cr

R5211 **Social Processes in Small Group Settings** (prereq 3201 or 5201 or #)
1115-1200 MWF, West Bank, Spitzer, 4 cr

R5505 **Family Development** (prereq 1001, 3201 or 5201, CPsy 1301 or #)
1115-1230 TTh, West Bank, Leik, 5 cr

R5555 **Population Theory** (prereq 3551 or #)
1115-1230 TTh, West Bank, Kennedy, 4 cr

R5705 **Backgrounds of Modern Social Thought** (prereq 8 cr in social science or #)
0945-1100 TTh, West Bank, Laslett, 4 cr

R5801 **Computer Methods in Social Research**
0945-1100 TTh, West Bank, R Anderson, 4 cr

R5812 **Content Analysis Methods** (prereq 3803 or equiv or #)
1415-1600 MW, West Bank, McTavish, 4 cr

5821 **Evaluation Research** (prereq 3801, 3802, 3803 or #)
1415-1500 MWF, West Bank, Simmons, 4 cr

R5855 **Sociology of Medicine and Health Care: An Introduction to Medical Sociology** (§PubH 5790; prereq jr or sr or grad student)
1115-1200 MWF, Litman, 4 cr

R5938 **Aging and the Life Course** (prereq 3937 or 5937, 3201 or 5201, 3401 or 5401 or equiv or #)
1215-1300 MWF, West Bank, McTavish, 4 cr

R5952 **Youth in Modern Society** (§SPFE 5125; prereq 1001 or equiv or #)
0815-0930 TTh, East Bank, S Clark, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
1-15 cr

8090 **Topics** (prereq #)
-1 ar cr
-2 Reynolds, ar cr

R8215 **Theories of Social Psychology**
1415-1600 Th, West Bank, Fine, 3 cr

R8411 **Seminar: Research in Large-Scale Organization** (prereq 5411)
1400-1600 M, West Bank, T Anderson, 3 cr

R8524 **Seminar: Sociology of Human Sexuality**
1415-1600 W, West Bank, Reiss, 3 cr

R8551 **Seminar: Problems in Population Research**
1415-1600 Th, West Bank, Kennedy, 3 cr

R8813 **Data Analysis** (prereq 8812 or #)
★LECT 1315-1400 TTh, West Bank, Jasso, 4 cr
-1 LAB 1415-1600 F, West Bank,

8855 **Health and Human Behavior** (§PubH 8770; prereq 5855 or #)
1115-1300 Th, East Bank, Litman, 3 cr

R8955 **Seminar: Teaching Sociology on the College Level** (prereq 2nd or 3rd yr sociology grad student or #)
1315-1500 W, West Bank, 3 cr

SOIL SCIENCE (Soil)
Agriculture

Winter Quarter

R1122 **Introductory Soil Science** (prereq Chem 1001 or 1004)
0900-0945 MWF, Cooper, 4 cr (3 hr lab ar)

R3218 **Tillage for Seedbed Preparation and Soil and Water Management** (S-N only)
1500-1645 W, St. Paul, Swan, 1 cr

R3416 **Soil Fertility** (prereq 1122)
★LECT 0900-0945 MWF, St. Paul, Malzer, 5 cr
★REC 1300-1345 M, St. Paul,
-1 LAB 1300-1645 W, St. Paul,
★REC 0800-0845 T, St. Paul,
-2 LAB 0800-1145 Th, St. Paul,
★REC 1300-1345 T, St. Paul,
-3 LAB 1300-1645 Th, St. Paul,

R3418 **Seminar: Removal of Plant Nutrients from Soils by Percolation, Runoff, and Erosion** (S-N only)
1500-1645 W, St. Paul, Adams, 1 cr

5000 **Professional Experience Program** (prereq #) (A-N only)
4 cr

5100 **RCD Interdisciplinary Seminar II** (5099-5100†; prereq 5099)
1500-1645 TTh, St. Paul, Adams, 4 cr

R5102 **Agricultural Systems Analysis and Modeling** (prereq Math 1142 or #)
1000-1045 MWF, St. Paul, Molina, Teng, 4 cr (lab ar)

5114 **Special Problems in Soils** (max 10 cr; prereq 1122 or #)
1-5 cr

5228 **Seminar: Climatology, Meteorology, and Agriculture** (max 3 cr; prereq #)
1500-1600 Th, St. Paul, Baker, 1 cr

R5230 **Soil-Plant Water Relations** (prereq 1122, general botany)
1100-1145 MWF, St. Paul, Gaudreau, 3 cr

5240 **Microclimatology** (prereq Math 1111, 10 cr physics or #)
1400-1445 MTWThF, St. Paul, Baker, 5 cr

R5416 **Soil Fertility** (§3416; prereq 1122)
★LECT 0900-0945 MWF, St. Paul, Malzer, 4 cr
★REC 1300-1545 T, St. Paul, Bloom
-1 LAB 1300-1645 Th, St. Paul,

5550 **Peatlands: Formation, Classification, and Utilization** (prereq 1122 or #)
0800-0915 TTh, St. Paul, Farnham, 3 cr

8111 **Colloquia in Soil Science** (prereq maj or min or #)
1-4 cr

8124 **Research Problems in Soils**
2-5 cr

8128 **Seminar: Soils**
1500-1645 M, St. Paul, 1 cr

Spring Quarter

R3210 **Physical Soil Management and Tillage** (prereq 1122, Math 1111, Phys 1041 or #)
★LECT 0900-0945 MWF, St. Paul, Gaudreau, 4 cr
-1 LAB 1500-1745 M, St. Paul, Gaudreau
-2 LAB 1500-1745 W, St. Paul, Gaudreau

R3220 **Soil, Water Management, and Conservation** (prereq 3210 or #)
0900-1030 TTh, St. Paul, Gaudreau, 3 cr

R3419 **Fertilizer Technology** (prereq 3416 or #)
0800-0845 TTh, St. Paul, Grava, 2 cr

R3520 **Soil Morphology, Classification, and Genesis** (prereq 1122)
★LECT 1300-1430 TTh, St. Paul, Cooper, 4 cr
-1 LAB 1430-1700 Th, St. Paul, Cooper, (Field trip May 17, 18)

R3918 **Senior Seminar** (prereq jr or sr)
1500-1645 T, St. Paul, Cooper, 1 cr

5000 **Professional Experience Program** (prereq #) (A-N only)
4 cr

5114 **Special Problems in Soils** (max 10 cr; prereq 1122 or #)
1-5 cr

5228 **Seminar: Climatology, Meteorology, and Agriculture** (max 3 cr; prereq #)
Baker, 1 cr

5340 **Organic and Pesticidal Residues** (prereq 1122 or #)
1100-1145 MTWThF, St. Paul, Adams, 5 cr

5424 **Applied Climatology** (§Geog 5424; prereq 5240 or Geog 3421 or #)
1400-1515 TTh, St. Paul, Baker, 3 cr

R5510 **Soil Morphology, Classification and Genesis** (§3520; prereq 1122)
★LECT 1300-1430 TTh, St. Paul, Cooper, 4 cr
-1 LAB 1430-1700 Th, St. Paul, Cooper, (Field trip required)

5540 **Soil Resources and Environmental Relationships** (prereq 1122 or #)
1500-1645 T, St. Paul, Hanson, 2 cr (rec ar)

R5560 **Uses and Interpretation of Soil Survey Information** (prereq 3520 or #)
1300-1430 MW, St. Paul, Anderson, 3 cr

R5632 **Soil Microbiology and Plant Growth** (prereq 1122, course in microbiology or #) (A-N only)
★LECT 0900-0945 MWF, St. Paul, Molina
-1 LAB 1400-1545 Th, St. Paul, Molina, 5 cr

5710 **Advanced Forest Soils** (prereq 1122 or FR 3220)
1000-1045 MWF, St. Paul, Grigal, 3-4 cr

8111 **Colloquia in Soil Science** (prereq maj or min or #)
1-4 cr

8124 **Research Problems in Soils**
2-5 cr

SPANISH (Span)
Spanish And Portuguese
Liberal Arts

Winter Quarter

R1101 **Beginning Spanish: Oral Approach**
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 0915-1000 MTWThF, East Bank, 5 cr
-3 1015-1100 MTWThF, East Bank, 5 cr
-4 1115-1200 MTWThF, East Bank, 5 cr
-5 1215-1300 MTWThF, East Bank, 5 cr

R1102 **Beginning Spanish: Oral Approach** (prereq 1101 or 1 yr high school Spanish)
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 0815-0900 MTWThF, East Bank, 5 cr
-3 0915-1000 MTWThF, East Bank, 5 cr
-4 0915-1000 MTWThF, East Bank, 5 cr
-5 1015-1100 MTWThF, East Bank, 5 cr
-6 1115-1200 MTWThF, East Bank, 5 cr
-7 1215-1300 MTWThF, East Bank, 5 cr
-8 1215-1300 MTWThF, East Bank, 5 cr
-9 1315-1400 MTWThF, East Bank, 5 cr
-10 1315-1400 MTWThF, East Bank, 5 cr
-11 1315-1400 MTWThF, East Bank, 5 cr

R1103 **Beginning Spanish: Oral Approach** (prereq 1102 or 2 yrs high school Spanish)
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 1015-1100 MTWThF, East Bank, 5 cr
-3 1115-1200 MTWThF, East Bank, 5 cr

R1104 **Intermediate Spanish, Oral Approach: Interpretation of Modern Problems** (prereq 1103 or 3 yrs high school Spanish)
-1 1015-1100 MTWF, East Bank, 4 cr
-2 1215-1300 MTWF, East Bank, 4 cr

R1105 **Intermediate Spanish, Oral Approach: Discussions of Modern Literature and the Press** (prereq 1104 or 4 yrs high school Spanish)
-1 1115-1200 MTWF, East Bank, 4 cr
-2 1315-1400 MTWF, 4 cr

R1502 **Culture, Civilization of Latin America: Indian, European-Colonial, African Roots**
1215-1300 MWF, East Bank, Jara, 4 cr

R3001 **Spanish Pronunciation: Standard, Colloquial, Dialectal** (prereq 1105 or #)
1015-1100 TTh, East Bank, Mantini, 3 cr

R3002 **Reading for Speed and Comprehension** (prereq 1105)
1115-1200 MW, East Bank, Ramos, 3 cr

R3004 **Written Communication: Formal and Informal** (prereq 1105)
0915-1000 MWF, East Bank, Jones, 4 cr

R3005 **Oral Communication: Speaking and Listening** (prereq 1105)
1015-1100 MWF, East Bank, Jones, 4 cr

3104 **The Art of Reading Literary Texts** (prereq 3002)
1115-1200 MWF, East Bank, Spadaccini, 4 cr

R3213 **Spanish Literature: Aspects of Drama** (prereq 3104)
1015-1100 MWF, East Bank, Ramos, 4 cr

R3601 **Spanish America: Revolution and the New Literary Consciousness**
1315-1400 MWF, East Bank, Vidal, 4 cr

R3920 **Topics in Spanish American Literature** (max 12 cr; prereq 3104 or #)
1215-1300 MWF, East Bank, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-5 cr

5111 **The Literature of Spanish Crisis of the 20th Century** (prereq three or 5xxx literature courses in Span or Port)
1315-1400 MWF, East Bank, Ramos, 4 cr

5711 **The Structure of Modern Spanish: Phonology** (prereq 10 cr from 3001-3005 series or #)
1215-1400 T, 1215-1300 Th, East Bank, Mantini, 4 cr

5970 **Directed Readings** (max 15 cr; prereq #, △, CLA approval)
1-5 cr

5990 **Directed Research** (prereq #, △, CLA approval)
1-5 cr

8300 **Research in the Historigraphy of the Spanish Literature**
1215-1300 MWF, East Bank, Spadaccini, 4 cr

8970 **Directed Readings in Romance Languages** (prereq △)
ar cr

Spring Quarter

R1101 **Beginning Spanish: Oral Approach**
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 0915-1000 MTWThF, East Bank, 5 cr
-3 1015-1100 MTWThF, East Bank, 5 cr
-4 1115-1200 MTWThF, East Bank, 5 cr
-5 1215-1300 MTWThF, East Bank, 5 cr

R1102 **Beginning Spanish: Oral Approach** (prereq 1101 or 1 yr high school Spanish)
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 0915-1000 MTWThF, East Bank, 5 cr
-3 1015-1100 MTWThF, East Bank, 5 cr
-4 1115-1200 MTWThF, East Bank, 5 cr
-5 1215-1300 MTWThF, East Bank, 5 cr

R1103 **Beginning Spanish: Oral Approach** (prereq 1102 or 2 yrs high school Spanish)
-1 0815-0900 MTWThF, East Bank, 5 cr
-2 0815-0900 MTWThF, East Bank, 5 cr
-3 0915-1000 MTWThF, East Bank, 5 cr
-4 0915-1000 MTWThF, East Bank, 5 cr
-5 1015-1100 MTWThF, East Bank, 5 cr
-6 1015-1100 MTWThF, East Bank, 5 cr
-7 1115-1200 MTWThF, East Bank, 5 cr
-8 1215-1300 MTWThF, East Bank, 5 cr
-9 1215-1300 MTWThF, East Bank, 5 cr
-10 1315-1400 MTWThF, East Bank, 5 cr

R1104 **Intermediate Spanish, Oral Approach: Interpretation of Modern Problems** (prereq 1103 or 3 yrs high school Spanish)
-1 1015-1100 MTWF, East Bank, 4 cr
-2 1215-1300 MTWF, East Bank, 4 cr

R1105 **Intermediate Spanish, Oral Approach: Discussions of Modern Literature and the Press** (prereq 1104 or 4 yrs high school Spanish)
-1 1115-1200 MTWF, East Bank, 4 cr
-2 1315-1400 MTWF, East Bank, 4 cr

R1503 **Culture, Civilization of Modern Latin America: Societies in Change**
1215-1300 MWF, East Bank, Vidal, 4 cr

R3002 **Reading for Speed and Comprehension** (prereq 1105)
1015-1100 TTh, East Bank, Jones, 3 cr

R3003 **Advanced Grammar Workshop** (prereq 1105)
0915-1000 TTh, East Bank, 3 cr

R3004 **Written Communication: Formal and Informal** (prereq 1105)
1115-1300 T, 1115-1200 Th, East Bank, Mantini, 4 cr

R3005 **Oral Communication: Speaking and Listening** (prereq 1105)
1015-1100 MWF, East Bank, Ramos, 4 cr

R3021 **Advanced Communication Skills** (prereq 10 cr from 3001-3005 series or #)
1115-1200 MWF, East Bank, 5 cr

R3104 **The Art of Reading Literary Texts** (prereq 3002)
1115-1200 MWF, East Bank, Ramos, 4 cr

R3512 **Spanish-American Civilization: Modern Latin America** (prereq 3002)
1215-1300 MWF, East Bank, Jara, 5 cr

R3602 **The Picaresque Way of Life in Spain and Europe: Literature and the Delinquent**
1215-1300 T, 1215-1400 Th, East Bank, Spadaccini, 4 cr

R3910 **Topics in Spanish Peninsular Literature** (max 12 cr; prereq 3104 or #)
0915-1100 T, 1015-1100 Th, East Bank, Spadaccini, 4 cr

R3910H **Topics in Spanish Peninsular Literature** (max 12 cr; prereq 3104 or #)
0915-1100 T, 1015-1100 Th, East Bank, Spadaccini, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-5 cr

5529 **National Affirmation and Transnationalization** (prereq 3xxx or 5xxx Span or Port lit courses or △)
1315-1400 MWF, East Bank, Jara, 4 cr

5732 **Spanish Dialectology: Regional and Social Dialect of Modern Spanish America** (prereq 5729 or #)
1315-1400 T, 1315-1500 Th, East Bank, Mantini, 4 cr

5970 **Directed Readings** (max 15 cr; prereq #, △, CLA approval)
1-5 cr

5990 **Directed Research** (prereq #, △, CLA approval)
1-5 cr

8300 **Research in the Historigraphy of the Spanish Literature**
1415-1500 W, 1415-1600 F, East Bank, Ramos, 4 cr

8970 **Directed Readings in Romance Languages** (prereq △)
ar cr

SPANISH-PORTUGUESE (SpPt)
Spanish And Portuguese
Liberal Arts

Winter Quarter

3801 **Honors Seminar** (prereq 20 cr toward maj including 3104, departmental honors candidate or #)
4 cr

3980 **Directed Instruction** (max 8 cr; prereq #, △, college approval) (S-N only)
1-4 cr

8005 **Ibero-Romance Bibliographical Research**
1515-1600 MWF, East Bank, Wiemers, 4 cr

Spring Quarter

3980 **Directed Instruction** (max 8 cr; prereq #, △, college approval) (S-N only)
1-4 cr

SPEECH-COMMUNICATION (Spch)
Liberal Arts

Winter Quarter

R1101 **Fundamentals of Speech-Communication: Oral Communication** (§1441)
-1 0815-1000 MW, East Bank, 4 cr
-2 0815-1000 MW, East Bank, 4 cr
-3 1015-1200 M, 1015-1200 F, East Bank, 4 cr
-4 1015-1200 MF, East Bank, 4 cr
-5 1215-1400 MW, East Bank, 4 cr
-6 0815-1000 TTh, East Bank, 4 cr
-7 0815-1000 TTh, East Bank, 4 cr
-8 1015-1200 TTh, East Bank, 4 cr
-9 1015-1200 TTh, East Bank, 4 cr
-10 1215-1400 TTh, East Bank, 4 cr
-11 1215-1400 TTh, East Bank, 4 cr
-12 0815-1000 W, 0815-1000 F, East Bank, 4 cr

R1102 **Fundamentals of Speech-Communication: Communication Process**
1015-1100 MWF, East Bank, Petronio, 4 cr

1110 **Freshman Discussion and Debate** (prereq freshman who qualify for freshman debate squad, #)
1415-1630 WF, East Bank, 2 cr

R1313 **Analysis of Oral Argument**
-1 0815-1000 MF, East Bank, 4 cr
-2 1215-1400 MW, East Bank, 4 cr
-3 1415-1500 MWF, East Bank, 4 cr
-4 1015-1200 TTh, East Bank, 4 cr
-5 1215-1400 TTh, East Bank, 4 cr
-6 1015-1200 WF, East Bank, 4 cr
-7 1215-1400 W, 1215-1400 F, East Bank, 4 cr

R3111 **Leadership Communication** (4 cr with ROTC lab, §Air 3302)
-1 0815-0930 TTh, East Bank, Cashman, 3-4 cr
-2 1415-1530 TTh, East Bank, Cashman, 3-4 cr

3192H **Honors Course: Tutorial Seminar in Speech** (prereq honors candidate in speech-communication, △, #)
1015-1200 Th, East Bank, Shapiro, 4 cr

R3201 **Introduction to Broadcasting Production**
-1 0815-1000 MW, West Bank, 4 cr (spch-comm and jour majs only)
-2 0815-1000 TTh, West Bank, 4 cr (spch-comm and jour majs only)
-3 1515-1700 TTh, West Bank, 4 cr (spch-comm and jour majs only)
-4 1215-1400 WF, West Bank, 4 cr (spch-comm and jour majs only)
-5 1415-1600 WF, West Bank, 4 cr (spch-comm and jour majs only)
-6 0815-1000 MW, West Bank, 4 cr
-7 0815-1000 TTh, West Bank, 4 cr
-8 1515-1700 TTh, West Bank, 4 cr
-9 1215-1400 WF, West Bank, 4 cr
-10 1415-1600 WF, West Bank, 4 cr

R3202 **Producing Videotape in the Field** (prereq 3201)
-1 0815-1200 F, West Bank, 4 cr (spch-comm and jour majs only)
-2 0815-1200 F, West Bank, 4 cr

R3203 **Radio Production** (prereq 3201)
-1 1015-1200 MW, 4 cr (spch-comm and jour majs only)
-2 1015-1200 MW, East Bank, 4 cr

R3204 **Studio Television Production** (prereq 3201)
-1 1015-1200 MW, West Bank, 4 cr (spch-comm and jour majs only)
-2 1015-1200 TTh, West Bank, Bart, 4 cr (spch-comm and jour majs only)
-3 1015-1200 MW, West Bank, 4 cr
-4 1015-1200 TTh, West Bank, 4 cr

R3401 **Theories of Interpersonal Communication** (prereq 1102 or #, Psy 1001)
1315-1400 MWF, East Bank, 4 cr

R3441 **Communicating in Organizations** (prereq 1102 or 1101 or equiv)
-1 1015-1200 MW, East Bank, 4 cr (spch-comm maj only)
-2 1015-1200 MW, East Bank, 4 cr

R3605 **Public Speaking** (prereq 1101)
-1 1015-1200 MW, East Bank, 4 cr (spch-comm maj only)
-2 1215-1400 MF, East Bank, Borgestad, 4 cr (spch-comm maj only)
-3 1415-1600 MW, East Bank, 4 cr (spch-comm maj only)
-4 1015-1200 MW, East Bank, 4 cr
-5 1215-1400 MF, East Bank, Borgestad, 4 cr
-6 1415-1600 MW, East Bank, 4 cr

3620 **Intercollegiate Debate and Oratory** (prereq #)
1415-1630 WF, East Bank, 2 cr

R3641 **Discussion and Conference Methods** (prereq 1101 or 1101H or #)
-1 0815-1000 MW, East Bank, 4 cr (spch-comm maj only)
-2 1015-1200 MW, East Bank, 4 cr (spch-comm maj only)
-3 0815-1000 TTh, East Bank, 4 cr (spch-comm maj only)
-4 1015-1200 TTh, East Bank, 4 cr (spch-comm maj only)
-5 1215-1400 TTh, East Bank, 4 cr (spch-comm maj only)
-6 1215-1400 TTh, East Bank, 4 cr (spch-comm maj only)
-7 0815-1000 MW, East Bank, 4 cr
-8 1015-1200 MW, East Bank, 4 cr
-9 0815-1000 TTh, East Bank, 4 cr
-10 1015-1200 TTh, East Bank, 4 cr
-11 1215-1400 TTh, East Bank, 4 cr
-12 1215-1400 TTh, East Bank, 4 cr

3970 **Directed Studies** (no cr for spch-comm maj; prereq at least one spch-comm course, #, △, college approval)
ar cr

3980 **Directed Instruction** (max 8 cr, no cr for speech-communication maj; prereq #, △, college approval) (S-N only)
1-4 cr

R5110 **Advanced Topics in Speech-Communication Theory** (prereq 3211 or 3401 or 3601)
-1 1015-1200 MW, East Bank, Cohen, 4 cr (spch-comm maj only)
-2 1015-1200 MW, East Bank, Cohen, 4 cr

R5211 **Contemporary Problems in American Broadcasting** (prereq 3211 or equiv, #)
1315-1600 MW, East Bank, Mayerle, 4 cr

R5232 **International Broadcasting**
–1 1015-1200 TTh, East Bank, Browne, 4 cr (spch-comm maj only)
–2 1015-1200 TTh, East Bank, Browne, 4 cr

R5261 **Communicative Processes of Television** (prereq 3211 or #)
–1 1615-1800 MW, East Bank, Cohen, 4 cr (spch-comm maj only)
–2 1615-1800 MW, East Bank, Cohen, 4 cr

R5402 **Problems in Interpersonal Communication** (prereq 3401 or #)
–1 1315-1500 MWF, East Bank, Shapiro, 4 cr (spch-comm maj only)
–2 1315-1500 MWF, East Bank, Shapiro, 4 cr

R5403 **The Theory Construction and Analysis in Communication** (prereq 3401 or #)
–1 1015-1200 TTh, East Bank, Sykes, 4 cr (spch-comm maj only)
–2 1015-1200 TTh, East Bank, Sykes, 4 cr

R5404 **Language, Culture, and Education** (§SeEd 5404; prereq 1102, 3401 or #)
1315-1500 TTh, East Bank, Piche, 4 cr

R5414 **Authority and Power in Task-Oriented Communication** (prereq 3641 or #) (S-N only)
–1 1315-1500 TTh, East Bank, Howell, 4 cr (spch-comm maj only)
–2 1315-1500 TTh, East Bank, Howell, 4 cr

R5431 **The Process of Persuasion** (prereq 1102, Psy 1001)
–1 1615-1800 TTh, East Bank, Howell, 4 cr (spch-comm maj only)
–2 1615-1800 TTh, East Bank, Howell, 4 cr

R5452 **Workshop in Intercultural Communication** (prereq #...5451 rec) (S-N only)
Howell, 4 cr

R5602 **Contemporary Political Persuasion** (prereq 1101 or 1101H, 5431 or #)
–1 1615-1800 MW, East Bank, Cashman, 4 cr (spch-comm maj only)
–2 1615-1800 MW, East Bank, Cashman, 4 cr

R5615 **Introduction to Rhetorical Criticism** (prereq 1101 or 1101H...3601 rec)
0815-0900 MWF, East Bank, Scott, 4 cr

R5616 **Public Address in Britain and the Commonwealth** (prereq 1101 or 1101H or #)
0915-1000 MWF, East Bank, Jensen, 4 cr

5970 **Directed Readings** (prereq nine 3xxx-5xxx speech-communication cr, #, △, CLA approval)
ar cr

8202 **Quantitative Research in Speech-Communication** (prereq 8101 or Jour 8001 or #...Spch 8201 rec)
1530-1700 TTh, East Bank, Sykes, 3 cr

8231 **Seminar: National, International Systems of Broadcasting** (prereq 5231 or 5232 or #)
0830-1000 M, East Bank, Browne, 3 cr

8402 **Seminar: Interpersonal Communication Problems**
1615-1800 W, East Bank, Shapiro, 3 cr

8452 **Seminar: Facilitating Intercultural Communication** (prereq 5451 or #...8451 rec)
1415-1600 M, East Bank, Howell, 3 cr

8621 **Seminar: History and Criticism of Public Address** (prereq 5617, 5618 or △)
1615-1800 W, East Bank, Bormann, 3 cr

8990 **Research** (prereq #, △)
ar cr

Spring Quarter

R1101 **Fundamentals of Speech-Communication: Oral Communication** (§1441)
–1 0815-1000 MW, East Bank, 4 cr
–2 1015-1200 MW, East Bank, 4 cr
–3 1015-1200 MW, East Bank, 4 cr
–4 1215-1400 MW, East Bank, 4 cr
–5 0815-1000 M, 0815-1000 F, East Bank, 4 cr
–6 0815-1000 TTh, East Bank, 4 cr
–7 0815-1000 TTh, East Bank, 4 cr
–8 0815-1000 TTh, East Bank, 4 cr
–9 1015-1200 TTh, East Bank, 4 cr
–10 1215-1400 TTh, East Bank, 4 cr
–11 1215-1400 TTh, East Bank, 4 cr
–12 0815-1000 W, 0815-1000 F, East Bank, 4 cr
–13 1015-1200 W, 1015-1200 F, East Bank, 4 cr

R1102 **Fundamentals of Speech-Communication: Communication Process**
1015-1100 MWF, East Bank, Petronio, 4 cr

R1313 **Analysis of Oral Argument**
–1 1015-1200 M, 1015-1200 F, East Bank, 4 cr
–2 1215-1400 M, 1215-1400 F, East Bank, 4 cr
–3 1315-1400 MWF, East Bank, 4 cr
–4 0815-1000 TTh, East Bank, 4 cr
–5 1015-1200 TTh, East Bank, 4 cr
–6 1215-1400 W, 1215-1400 F, East Bank, 4 cr

3193H **Honors Course: Tutorial Seminar in Speech** (prereq honors candidate in speech-communication, △, #)
4 cr

R3201 **Introduction to Broadcasting Production**
–1 0815-1000 MW, West Bank, 4 cr (spch-comm and jour majs only)
–2 1015-1200 MW, West Bank, 4 cr (spch-comm and jour majs only)
–3 0815-1000 TTh, West Bank, 4 cr (spch-comm and jour majs only)
–4 1015-1200 TTh, West Bank, 4 cr (spch-comm and jour majs only)
–5 1415-1600 TTh, West Bank, 4 cr (spch-comm and jour majs only)
–6 0815-1000 MW, West Bank, 4 cr
–7 1015-1200 MW, West Bank, 4 cr
–8 0815-1000 TTh, West Bank, 4 cr
–9 1015-1200 TTh, West Bank, 4 cr
–10 1415-1600 TTh, West Bank, 4 cr

R3202 **Producing Videotape in the Field** (prereq 3201)
–1 0815-1200 F, West Bank, 4 cr (spch-comm and jour majs only)
–2 0815-1200 F, West Bank, 4 cr

R3203 **Radio Production** (prereq 3201)
–1 1015-1200 TTh, East Bank, 4 cr (spch-comm and jour majs only)
–2 1015-1200 TTh, East Bank, 4 cr

R3204 **Studio Television Production** (prereq 3201)
–1 1215-1400 TTh, West Bank, Bart, 4 cr (spch-comm and jour majs only)
–2 1215-1400 TTh, West Bank, Bart, 4 cr

R3211 **Determinants of Broadcast Programming**
1315-1400 MWF, East Bank, Rarick, 4 cr

R3401 **Theories of Interpersonal Communication** (prereq 1102 or #, Psy 1001)
1115-1200 MWF, East Bank, Sykes, 4 cr

R3431 **The Role of Persuasion in the Modern World** (soph standing rec)
–1 1115-1200 MWF, East Bank, Cashman, 4 cr (spch-comm maj only)
–2 1115-1200 MWF, East Bank, Cashman, 4 cr

R3451 **Intercultural Communication: Theory and Practice** (§UC 3701; prereq planning an intercultural experience)
0915-1100 WF, East Bank, 4 cr

R3452 **Communication and the Intercultural Reentry** (§UC 3703; prereq return from an intercultural experience)
–1 1415-1600 WF, East Bank, Martin, 4 cr (spch-comm maj only)
–2 1415-1600 WF, East Bank, Martin, 4 cr

R3601 **Approaches to Public Discourse** (prereq 1101)
0815-0900 MWF, East Bank, Scott, 4 cr

R3605 **Public Speaking** (prereq 1101)
–1 0815-1000 MW, East Bank, 4 cr (spch-comm maj only)
–2 1215-1400 MF, East Bank, 4 cr (spch-comm maj only)
–3 1015-1200 TTh, East Bank, 4 cr (spch-comm maj only)
–4 0815-1000 MW, East Bank, 4 cr
–5 1215-1400 MF, East Bank, 4 cr
–6 1015-1200 TTh, East Bank, 4 cr

R3615 **Argumentation** (prereq 1101 or 1101H or #)
–1 1115-1200 MWF, East Bank, Jensen, 4 cr (spch-comm maj only)
–2 1115-1200 MWF, East Bank, Jensen, 4 cr

R3641 **Discussion and Conference Methods** (prereq 1101 or 1101H or #)
–1 0815-1000 MW, East Bank, 4 cr (spch-comm maj only)
–2 1215-1400 MW, East Bank, 4 cr (spch-comm maj only)
–3 1415-1600 MW, East Bank, 4 cr (spch-comm maj only)
–4 1015-1200 TTh, East Bank, 4 cr (spch-comm maj only)
–5 1215-1400 TTh, East Bank, 4 cr (spch-comm maj only)
–6 1415-1600 TTh, East Bank, 4 cr (spch-comm maj only)
–7 0815-1000 MW, East Bank, 4 cr
–8 1215-1400 MW, East Bank, 4 cr
–9 1415-1600 MW, East Bank, 4 cr
–10 1015-1200 TTh, East Bank, 4 cr
–11 1215-1400 TTh, East Bank, 4 cr
–12 1415-1600 TTh, East Bank, 4 cr

3970 **Directed Studies** (no cr for spch-comm maj; prereq at least one spch-comm course, #, △, college approval)
ar cr

3980 **Directed Instruction** (max 8 cr, no cr for speech-communication maj; prereq #, △, college approval) (S-N only)
1-4 cr

R5202 **Advanced Television Production** (prereq 3204, #)
1315-1500 MWF, West Bank, Bart, 4 cr

R5222 **Educational Television Programming and Administration** (prereq 3211 or #)
–1 1615-1800 MW, West Bank, Goldstein, 4 cr (spch-comm maj only)
–2 1615-1800 MW, West Bank, Goldstein, 4 cr

R5281 **Broadcasting Audience Analysis and Programming** (prereq 3211)
–1 1015-1100 MWF, East Bank, Rarick, 4 cr (spch-comm maj only)
–2 1015-1100 MWF, East Bank, Rarick, 4 cr

R5401 **Advanced Process of Interpersonal Communication**
1015-1200 MW, East Bank, G Miller, 4 cr

R5402 **Problems in Interpersonal Communication** (prereq 3401 or #)
–1 1315-1500 MWF, East Bank, Shapiro, 4 cr (spch-comm maj only)
–2 1315-1500 MWF, East Bank, Shapiro, 4 cr

R5405 **Nonverbal Communication: Theory and Research**
–1 1615-1800 MW, East Bank, Sykes, 4 cr (spch-comm maj only)
–2 1615-1800 MW, East Bank, Sykes, 4 cr

R5412 **Group and Organizational Communication** (prereq 5411) (S-N only)
–1 1515-1600 MTWTh, East Bank, Bormann, 4 cr (spch-comm maj only)
–2 1515-1600 MTWTh, East Bank, Bormann, 4 cr

R5421 **Quantitative Research in Communication** (prereq 3401 or 5403 or #)
–1 1615-1800 MW, East Bank, Petronio, 4 cr (spch-comm maj only)
–2 1615-1800 MW, East Bank, Petronio, 4 cr

R5422 **Interview and Communication** (prereq 1101, 6 cr in social science or #)
–1 1615-1800 TTh, East Bank, H Miller, 4 cr (spch-comm maj only)
–2 1615-1800 TTh, East Bank, H Miller, 4 cr
–3 1615-1800 TTh, East Bank, H Miller, 4 cr (SMgt stu, pre-bus majs only)

R5452 **Workshop in Intercultural Communication** (prereq #...5451 rec) (S-N only)
Howell, 4 cr

R5613 **Explorations Into Argumentation** (prereq 1101 or 1313 or #)
0915-1000 MWF, East Bank, Jensen, 4 cr

5970 **Directed Readings** (prereq nine 3xxx-5xxx speech-communication cr, #, △, CLA approval)
ar cr

8110 **Seminar: Advanced Speech Problems** (prereq undergrad maj in speech or equiv, #)
–1 1315-1500 M, East Bank, Sykes, 3 cr
–2 1415-1600 T, East Bank, G Miller, 3 cr

8130 **Seminar: Advanced Speech Problems** (prereq 8120)
1315-1500 TTh, East Bank, Martin, 3 cr

8201 **Introduction to Survey Research in Speech-Communication** (prereq 8101 or Jour 8001 or #)
1615-1800 MW, East Bank, Rarick, 3 cr

8411 **Seminar: Small Group Communication** (prereq 1101, 5411)
1615-1800 W, East Bank, Bormann, 3 cr

8441 **Seminar: Organizational Communication** (prereq 5441 or #)
1615-1800 W, East Bank, Shapiro, 3 cr

8990 **Research** (prereq #, △)
ar cr

STATISTICS (Stat)
Liberal Arts

Winter Quarter

R1051 **Introduction to Ideas of Statistics** (prereq high school higher algebra)
★LECT 1000-1045 MWF, St. Paul, Brant, (StP)
–1 REC 1000-1045 T, St. Paul, 4 cr (StP)
–2 REC 1000-1045 Th, St. Paul, 4 cr (StP)
★LECT 1315-1400 MWF, East Bank, C Chen
–3 REC 1315-1400 T, East Bank, 4 cr
–4 REC 1315-1400 Th, East Bank, 4 cr
★LECT 1415-1500 MWF, East Bank, Lindgren
–5 REC 1415-1500 T, East Bank, 4 cr
–6 REC 1415-1500 Th, East Bank, 4 cr

R3091 **Probability and Statistics** (§5121, 5131; prereq differential, integral calculus)
★LECT 0815-0900 MWF, East Bank, K Chen
–1 REC 0815-0900 T, East Bank, 4 cr
–2 REC 0815-0900 Th, East Bank, 4 cr
★LECT 0915-1000 MWF, East Bank, Tierney, (IT majs)
–3 REC 0915-1000 T, East Bank, 4 cr
–4 REC 0915-1000 Th, East Bank, 4 cr
★LECT 1015-1100 MWF, East Bank, Buehler, (IT majs)
–5 REC 1015-1100 T, East Bank, 4 cr
–6 REC 1015-1100 Th, East Bank, 4 cr
★LECT 1115-1200 MWF, East Bank, Eaton, (IT majs)
–7 REC 1115-1200 T, East Bank, 4 cr
–8 REC 1115-1200 Th, East Bank, 4 cr
★LECT 1215-1300 MWF, East Bank,
–9 REC 1215-1300 T, East Bank, 4 cr
–10 REC 1215-1300 Th, East Bank, 4 cr

R5021 **Statistical Analysis I** (prereq college algebra or #)
★LECT 0900-0945 MWF, St. Paul, C Chen, (StP)
–1 LAB 0900-1045 T, St. Paul, 5 cr (StP)
–2 LAB 1100-1245 T, St. Paul, 5 cr (StP)
–3 LAB 0900-1045 Th, St. Paul, 5 cr (StP)
★LECT 1100-1145 MWF, St. Paul, Chaloner, (StP)
–4 LAB 1100-1245 Th, St. Paul, 5 cr (StP)
–5 LAB 1300-1445 Th, St. Paul, 5 cr (StP)

R5022 **Statistical Analysis II** (prereq 5021 or #)
★LECT 0915-1000 MWF, West Bank, Lahiff, (soc sci majs)
–1 LAB 0815-1000 Th, West Bank, 5 cr
–2 LAB 1215-1400 F, West Bank, 5 cr
–3 LAB 1415-1600 F, West Bank, 5 cr
★LECT 1300-1345 MWF, St. Paul, Brant, (StP)
–4 LAB 1100-1245 T, St. Paul, 5 cr (StP)
–5 LAB 0900-1045 Th, St. Paul, 5 cr (StP)
–6 LAB 1300-1445 Th, St. Paul, 5 cr (StP)

R5121 **Theory of Statistics** (§5131; prereq Math 1231 or 1331 or 1621)
★LECT 1315-1400 MWF, East Bank, Tierney
–1 REC 1315-1400 T, East Bank, 4 cr
–2 REC 1315-1400 Th, East Bank, 4 cr

R5122 **Theory of Statistics** (prereq 5121)
★LECT 0915-1000 MWF, East Bank, Cohen
–1 REC 0915-1000 T, East Bank, 4 cr
–2 REC 0915-1000 Th, East Bank, 4 cr

R5132 **Theory of Statistics** (prereq 5131)
–1 1015-1100 MWF, East Bank, Sudderth, 4 cr
–2 1115-1200 MWF, East Bank, K Chen, 4 cr
–3 1315-1400 MWF, East Bank, Berry, 4 cr

R5201 **Sampling Methodology in Finite Populations** (prereq 5021 or 5121 or 3091 or #)
1400-1500 MWF, St. Paul, Martin, 4 cr (StP)

R5421 **Analysis of Categorical Data** (prereq 5022 or 5122 or 5133 or #)
0910-1010 MWF, East Bank, Larntz, 4 cr

5601 **Nonparametric Methods** (prereq 5022 or 5122 or #)
1000-1100 MWF, St. Paul, Bingham, 4 cr (StP)

5900 **Tutorial Course** (prereq #)
–1 Berry, ar cr
–2 Berry, ar cr

8152 **Mathematical Statistics** (prereq 8151)
1115-1215 MWF, East Bank, Lindgren, 4 cr

8163 **Applied Statistical Methods** (prereq 8162)
1300-1400 MWF, St. Paul, Larntz, 4 cr (StP)

8172 **Theory of Inference** (prereq 8171)
1345-1500 TTh, East Bank, Geisser, 3 cr

8312 **Linear Models and Experimental Design** (prereq 8311)
1430-1545 MW, East Bank, Buehler, 3 cr

8331 **Statistical Computing** (prereq 8162 or #)
0900-1000 MW, St. Paul, Weisberg, 3 cr

8411 **Multivariate Analysis** (prereq 8153)
1415-1530 MW, East Bank, Eaton, 3 cr

8801 **Statistical Consulting** (prereq #)
1–3 cr

8900 **Seminar in Statistical Literature** (prereq #)
1–3 cr

8932 **Advanced Topics in Statistics: Entropy and Information** (prereq #)
1230-1345 TTh, East Bank, Sudderth, 3 cr

Spring Quarter

R1051 **Introduction to Ideas of Statistics** (prereq high school higher algebra)
★LECT 0900-0945 MWF, St. Paul, C Chen, (StP)
–1 REC 0900-0945 T, St. Paul, 4 cr (StP)
–2 REC 0900-0945 Th, St. Paul, 4 cr (StP)
★LECT 1015-1100 MWF, East Bank, Cohen
–3 REC 1015-1100 T, East Bank, 4 cr
–4 REC 1015-1100 T, East Bank, 4 cr
–5 REC 1015-1100 Th, East Bank, 4 cr
–6 REC 1115-1200 Th, East Bank, 4 cr
★LECT 1115-1200 MWF, East Bank, Eaton
–7 REC 1115-1200 Th, East Bank, 4 cr
–8 REC 1115-1200 Th, East Bank, 4 cr

R3081 **Experimental Techniques and Statistical Inference** (prereq agri, biological science, forestry or home economics student)
★LECT 1300-1345 MWF, St. Paul, C Chen, (StP)
–1 LAB 1000-1045 TTh, St. Paul, 5 cr (StP)
–2 LAB 1300-1345 TTh, St. Paul, 5 cr (StP)
–3 LAB 1400-1445 TTh, St. Paul, 5 cr

R3091 **Probability and Statistics** (§5121, 5131; prereq differential, integral calculus)
★LECT 0815-0900 MWF, East Bank,
–1 REC 0815-0900 T, East Bank, 4 cr
–2 REC 0815-0900 Th, East Bank, 4 cr
★LECT 0915-1000 MWF, East Bank, Cohen, (IT majs)
–3 REC 0915-1000 T, East Bank, 4 cr
–4 REC 0915-1000 Th, East Bank, 4 cr
★LECT 1015-1100 MWF, East Bank, (IT majs)
–5 REC 1015-1100 T, East Bank, 4 cr
–6 REC 1015-1100 Th, East Bank, 4 cr
★LECT 1115-1200 MWF, East Bank, Das Gupta, (IT majs)
–7 REC 1115-1200 T, East Bank, 4 cr
–8 REC 1115-1200 Th, East Bank, 4 cr
★LECT 1215-1300 MWF, East Bank, Buehler, (IT majs)
–9 REC 1215-1300 T, East Bank, 4 cr
–10 REC 1215-1300 Th, East Bank, 4 cr

R5021 **Statistical Analysis I** (prereq college algebra or #)
★LECT 1400-1445 MWF, St. Paul, Bingham, (StP)
–1 LAB 0900-1045 T, St. Paul, 5 cr (StP)
–2 LAB 1300-1445 T, St. Paul, 5 cr (StP)
–3 LAB 0900-1045 Th, St. Paul, 5 cr (StP)

R5022 **Statistical Analysis II** (prereq 5021 or #)
★LECT 1000-1045 MWF, St. Paul, Martin, (StP)
–1 LAB 1100-1245 T, St. Paul, 5 cr (StP)
–2 LAB 0900-1045 Th, St. Paul, 5 cr (StP)
–3 LAB 1300-1445 Th, St. Paul, 5 cr (StP)

R5122 **Theory of Statistics** (prereq 5121)
★LECT 1315-1400 MWF, East Bank, Tierney
–1 REC 1315-1400 T, East Bank, 4 cr
–2 REC 1315-1400 Th, East Bank, 4 cr

R5133 **Theory of Statistics** (prereq 5132)
–1 1015-1100 MWF, East Bank, Sudderth, 4 cr
–2 1115-1200 MWF, East Bank, K Chen, 4 cr

R5301 **Designing Experiments** (prereq 5022 or 5122 or 5133 or #)
1130-1230 MWF, St. Paul, Brant, 4 cr (StP)

R5302 **Applied Regression Analysis** (prereq 5022 or 5122 or 5133 or #)
1500-1600 MWF, St. Paul, Weisberg, 4 cr (StP)

R5401 **Introduction to Multivariate Methods** (prereq 5022 or 5122 or #)
0900-1000 MWF, East Bank, Lahiff, 4 cr

5900 **Tutorial Course** (prereq #)
Berry, ar cr

5912 **Topics in Statistics: Survival Analysis** (prereq 5301 and either 5122 or 5133, #)
Tierney, 3 cr

8153 **Mathematical Statistics** (prereq 8152)
1115-1215 MWF, East Bank, Lindgren, 4 cr

8161 **Applied Statistical Methods** (prereq 8312 or #)
1300-1400 MWF, St. Paul, Chaloner, 4 cr (StP)

8173 **Theory of Inference** (prereq 8172)
1315-1430 TTh, East Bank, Geisser, 3 cr

8412 **Multivariate Analysis** (prereq 8411)
1515-1630 MW, East Bank, Eaton, 3 cr

8611 **Nonparametric Inference** (prereq 8153 or #)
Das Gupta, 3 cr

8801 **Statistical Consulting** (prereq #)
1–3 cr

8900 **Seminar in Statistical Literature** (prereq #)
1–3 cr

8933 **Advanced Topics in Statistics: Sequential Allocation** (prereq #)
1345-1500 MW, East Bank, Berry, 3 cr

SWEDISH (Swed)
Scandinavian Languages
Liberal Arts

Winter Quarter

R1102 **Beginning Swedish** (prereq 1101)
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 1015-1100 MTWThF, East Bank, 5 cr
–3 1315-1400 MTWThF, East Bank, 5 cr

1105 **Intermediate Swedish** (prereq 1104)
1215-1300 MTWTh, East Bank, Eliasson, 4 cr

3670 **Readings of Swedish Literary Texts** (max 28 cr; prereq 3101)
0915-1000 MWF, East Bank, Stockenstrom, 4 cr

Spring Quarter

R1103 **Beginning Swedish** (prereq 1102)
–1 0815-0900 MTWThF, East Bank, 5 cr
–2 1315-1400 MTWThF, East Bank, 5 cr

3101 **Advanced Swedish** (prereq 1105)
1215-1300 MWF, East Bank, Eliasson, 4 cr

3670 **Readings of Swedish Literary Texts** (max 28 cr; prereq 3101)
1245-1400 TTh, East Bank, Grimstad, 4 cr

TEXTILES AND CLOTHING (TexC)
Home Economics

Winter Quarter

R1601 **Laboratory in Basic Apparel Principles** (1601-1602†)
0900-1130 T, St. Paul, 2 cr

R1602 **Fitting the Human Subject** (prereq △)
★LECT 0900-0945 T, St. Paul, Hethorn, 2 cr
–1 LAB 1000-1145 T, St. Paul, Hethorn
–2 LAB 1000-1145 Th, St. Paul, Fiore

R1603 **Advanced Principles of Apparel Production** (prereq 1602 or ¶)
★LECT 0900-0945 Th, St. Paul, Fiori
–1 LAB 1000-1145 Th, St. Paul, Fiori, 2 cr

R1680 **Opportunities in Textiles and Clothing** (S-N only)
1500-1545 W, St. Paul, Grindereng, 1 cr

3003 **Cooperative Education Program** (prereq soph, HE 1003, #) (S-N only)
1–3 cr

R3603 **Ready-to-Wear Analysis** (prereq 3621)
1000-1145 MW, St. Paul, 3 cr

R3604 **Flat Pattern Design** (prereq soph, 1603, 3662 or Dsgn 1525 or △)
1300-1445 MWF, St. Paul, Hethorn, 3 cr

R3621 **Textiles** (prereq soph, Chem 1002, 1003 or 1005 or #)
★LECT 0900-0945 MWF, St. Paul, Franzen, (1 hr ar)
–1 LAB 0800-0945 TTh, St. Paul, 5 cr
–2 LAB 1000-1145 TTh, St. Paul, 5 cr
–3 LAB 1300-1445 TTh, St. Paul, 5 cr

R3622 **Textiles for Interiors** (prereq 3621, #)
1300-1445 MWF, St. Paul, Brown, 3 cr

R3623 **Performance Evaluation of Textiles** (prereq 3621)
0900-1145 TTh, St. Paul, Franzen, 3 cr

R3643 **Retail Merchandising** (prereq 1641, Mktg 3065)
1000-1145 MWF, St. Paul, 5 cr

R3644 **Retail Experience Seminar I** (prereq 3rd qtr soph, 1641, 1642, 200 hrs or ¶200 hrs approved selling experience) (S-N only)
1300-1445 W, St. Paul, 2 cr

R3645 **Retail Experience Seminar II** (prereq 3643 or ¶, 3644, additional 200 hours or ¶200 hours approved selling experience) (S-N only)
1500-1645 W, St. Paul, 2 cr

R3662 **Aesthetics of Clothing** (prereq Psy 1001, Dsgn 1501 or #)
★LECT 1200-1245 TTh, St. Paul, DeLong
–1 LAB 1300-1445 T, St. Paul, 3 cr (Retail merchandising/textiles and clothing/costume design students)
–2 LAB 1300-1445 Th, St. Paul, 3 cr

5003 **Cooperative Education Program** (5003-5004†; prereq sr, ¶5004, #, minimum GPA of 2.50) (S-N only)
–1 4-8 cr (Retail merchandising students)
–2 4-8 cr (Textiles and clothing students)

5004 **Cooperative Education Integrative Paper** (5003-5004†; prereq sr, ¶5003, #) (A-N only)
–1 4 cr (Retail merchandising students)
–2 4 cr (Textiles and clothing students)

5624 **Textile Coloration and Finishing** (prereq 5621)
1600-1800 TW, St. Paul, R Johnson, 5 cr

R5629 **Characterization of Knitted Fabrics** (prereq 5628 or #)
1000-1130 MW, St. Paul, Brown, 3 cr

R5661 **Clothing and Human Behavior** (prereq sr, Soc 1001, Psy 1001 or #)
1300-1445 TTh, St. Paul, Williams, 4 cr

R5685 **International Developments in Textiles and Clothing** (prereq #)
1300-1445 MW, St. Paul, Grindereng, 4 cr

8621 **Readings in Textiles** (prereq #)
Brown, R Johnson, 1-3 cr

8625 **Problems: Textiles and Clothing** (max 9 cr; prereq #)
Brown, R Johnson, 3-9 cr

8661 **Readings in Clothing** (prereq min 12 cr in textiles and clothing courses, #)
Eicher, DeLong, others, 1-3 cr

8662 **Sociocultural Literature of Dress** (A-N only)
1500-1730 Th, St. Paul, 3 cr

8663 **Problems: Clothing and Textiles** (max 9 cr; prereq #)
Eicher, DeLong, others, 3-9 cr

8681 **Integrative Seminar** (S-N only)
1600-1730 T, St. Paul, Brown, 1 cr

Spring Quarter

R1602 **Fitting the Human Subject** (prereq △)
★LECT 0900-0945 T, St. Paul, Hethorn, 2 cr
–1 LAB 1000-1145 T, St. Paul, Hethorn

R1603 **Advanced Principles of Apparel Production** (prereq 1602 or ¶)
★LECT 0900-0945 Th, St. Paul, Fiori, 2 cr
–1 LAB 1000-1145 Th, St. Paul, Fiori
–2 LAB 1000-1145 Th, St. Paul, Hethorn

R1641 **Introduction to Merchandising** (prereq ¶1642)
1000-1045 MWF, St. Paul, Druy, 3 cr

R1642 **Seminar: Orientation to Retail Merchandising** (prereq ¶1641) (S-N only)
1500-1545 W, St. Paul, 1 cr

R1643 **Apparel Industries** (prereq Econ 1002 or AgEc 1030)
1000-1045 MWThF, St. Paul, 4 cr

3003 **Cooperative Education Program** (prereq soph, HE 1003, #) (S-N only)
1-3 cr

R3601 **Tailoring** (prereq 1603 or #)
0900-1145 MWF, St. Paul, Sieben, 4 cr

R3603 **Ready-to-Wear Analysis** (prereq 3621)
1300-1445 TTh, St. Paul, Sieben, 3 cr

R3605 **Draping Design and Construction** (prereq soph, 1603, 3662 or Dsgn 1525 or △)
1300-1445 MWF, St. Paul, DeLong, 3 cr

R3621 **Textiles** (prereq soph, Chem 1002, 1003 or 1005 or #)
★LECT 0900-0945 MWF, St. Paul, Franzen, (1 hr ar)
–1 LAB 0800-0945 TTh, St. Paul, 5 cr
–2 LAB 1000-1145 TTh, St. Paul, 5 cr
–3 LAB 1300-1445 TTh, St. Paul, 5 cr

R3622 **Textiles for Interiors** (prereq 3621, #)
–1 1000-1145 MWF, St. Paul, Franzen, 3 cr
–2 1300-1445 MWF, St. Paul, Franzen, 3 cr

R3641 **Field Study in Textiles and Clothing** (prereq soph, △) (S-N only)
1 cr

R3643 **Retail Merchandising** (prereq 1641, Mktg 3065)
1300-1445 MWF, St. Paul, Druy, 5 cr

R3645 **Retail Experience Seminar II** (prereq 3643 or ¶, 3644, additional 200 hours or ¶200 hours approved selling experience) (S-N only)
1500-1645 W, St. Paul, Druy, 2 cr

R3662 **Aesthetics of Clothing** (prereq Psy 1001, Dsgn 1501 or #)
★LECT 1200-1245 TTh, St. Paul, DeLong
–1 LAB 1300-1445 T, St. Paul, 3 cr (Retail merchandising/textiles and clothing/costume design students)
–2 LAB 1300-1445 Th, St. Paul, 3 cr

3664 **Fashion Trend Analysis** (prereq jr or sr, Soc 1001, Psy 1001)
1300-1445 MW, St. Paul, Grindereng, 4 cr

5003 **Cooperative Education Program** (5003-5004†; prereq sr, ¶5004, #, minimum GPA of 2.50) (S-N only)
–1 Druy, 4-8 cr (Retail merchandising students)
–2 4-8 cr (Textiles and clothing students)

5004 **Cooperative Education Integrative Paper** (5003-5004†; prereq sr, ¶5003, #) (A-N only)
–1 Druy, 4 cr (Retail merchandising students)
–2 4 cr (Textiles and clothing students)

R5622 **Issues and Trends in Textile Consumer Protection**
1000-1115 TTh, St. Paul, R Johnson, 3 cr

R5630 **Principles of Textile Metrology** (prereq #)
1130-1300 TTh, St. Paul, Brown, 3 cr

R5662 **Clothing Consumption Problems** (prereq 3621, AgEc 1030 or Econ 1002, Soc 1001, Psy 1001 or #)
1300-1415 TTh, St. Paul, Williams, 3 cr

8621 **Readings in Textiles** (prereq #)
Brown, R Johnson, 1-3 cr

8625 **Problems: Textiles and Clothing** (max 9 cr; prereq #)
Brown, R Johnson, 3-9 cr

8661 **Readings in Clothing** (prereq min 12 cr in textiles and clothing courses, #)
DeLong, Eicher, others, 1-3 cr

8663 **Problems: Clothing and Textiles** (max 9 cr; prereq #)
DeLong, Eicher, others, 3-9 cr

THEATRE ARTS (Th)
Liberal Arts

Winter Quarter

R1101 **Introduction to the Theatre**
1015-1200 TTh, West Bank, Ballet, 4 cr

R1102 **Drama and Media**
1015-1200 MW, West Bank, Neely, Nolte, 4 cr

R1301 **Beginning Acting for Non-Theatre Majors** (prereq 1101 or ¶)
–1 0915-1000 MWF, West Bank, 4 cr
–2 0915-1000 TThF, West Bank, 4 cr

R1321 **Beginning Acting: Creative Approach** (prereq 1101, 1504, 3rd qtr freshman or above)
–1 1515-1700 MW, West Bank, 4 cr
–2 0815-1000 TTh, West Bank, 4 cr

R1326 **Beginning Acting: Technique** (prereq 1321)
–1 1015-1100 MTWThF, West Bank, Moulton, 4 cr
–2 1115-1200 MTWThF, West Bank, 4 cr

R1328 **Mime and the Mask I** (prereq 1321)
1315-1500 MW, West Bank, Berry, 2 cr

R1405H **Honors Course: Introduction to the Theatre** (prereq 1101, #)
0915-1000 MW, West Bank, 2 cr

R1502 **Makeup for the Actor** (prereq 1504, clean-shaven face)
0815-1000 TTh, West Bank, 2 cr

R1504 **Elements of Technical Theatre** (prereq 1101 or ¶)
0915-1000 TTh, West Bank, Josal, 4 cr (lab ar)

3172 **History of the Theatre** (prereq 1101, 1504)
1315-1500 TTh, West Bank, Gadberry, 4 cr

R3321 **Advanced Acting: Characterization** (prereq 1326)
1315-1500 TTh, West Bank, McIntyre, 4 cr

3412H **Honors Course: Tutorial Seminar in Theatre Arts** (prereq candidate for honors in theatre arts, △)
0-3 cr

R3515 **Technical Theatre Production II** (prereq 1504)
0915-1000 MW, 0915-1100 F, West Bank, Crellin, Montgomery, 4 cr (lab ar)

R3711 **Stage Direction** (§3708, 5711; prereq 1321, jr or sr)
1315-1500 TTh, West Bank, Hamilton, 4 cr

R3801 **Oral Interpretation of Fiction** (prereq 1504 or 1804 or Spch 1101)
–1 1315-1500 MW, West Bank, Congdon, 4 cr
–2 1015-1200 TTh, West Bank, 4 cr

R3980 **Directed Instruction** (max 8 cr; prereq compl of course in which teaching will be done, #, △, college approval)
1-3 cr

R5100 **Theatre Practicum** (prereq △, #, written permission) (A-N only)
Gadberry, others, 1-6 cr

R5110 **Theatre Performance** (max 9 cr; prereq #, written permission) (S-N only)
Montgomery, 1 cr

R5115 **Playwriting** (§3115; prereq 1321 or #)
0915-1200 Th, West Bank, Nolte, 4 cr

5171 **History of Theatre** (prereq sr or grad student)
1315-1430 TTh, West Bank, Nolte, 4 cr

R5312 **Intermediate Voice Production for the Theatre** (prereq 5311, BFA candidate or theatre arts grad) (A-N only)
1115-1200 MTWTh, West Bank, Nash, 4 cr

R5314 **Stage Combat: Unarmed** (prereq 1326 or grad student, #)
1315-1500 TTh, West Bank, Berry, 2 cr

R5323 **Acting for the Camera** (prereq 3321 or grad student, written permission)
1315-1500 TTh, West Bank, Moore, 4 cr (Studio B)

R5335 **Acting for Music-Theatre** (prereq 5334, written permission)
0815-1000 MW, 0915-1000 F, West Bank, 4 cr

R5514 **Advanced Problems in Scene Design** (prereq 3513 or #)
1315-1500 TTh, West Bank, Josal, 4 cr (lab ar)

R5520 **Costuming Crafts and Techniques** (max 8 cr; prereq 3515, 5512 or #)
1015-1200 TTh, West Bank, Crellin, 4 cr (lab ar)

R5540 **Scene Painting Techniques** (prereq 3513 or #)
1015-1200 MWF, West Bank, Brockman, 4 cr

R5712 **Stage Direction** (prereq 3708 or 3711 or 5711, 3513, 3515, 3801)
1315-1500 MW, West Bank, Adey, 4 cr

R5720 **Plays in Production and Performance** (max 6 cr for undergrads; prereq 5712, written permission)
2-4 cr

R5728 **Theatre Management Problems: Audience and Financial Development** (prereq 5718)
1015-1200 T, West Bank, Neely, 2 cr

R5760 **Advanced Stage Management** (max 6 cr for undergrads; prereq 5716 or ¶, written permission)
Montgomery, 1-3 cr

5803 **Oral Interpretation of Drama** (prereq 1504, 3801 or grad student)
1315-1500 TTh, West Bank, Congdon, 4 cr

R5910 **Topics in Theatre: Acting Workshop: Classical Styles** (prereq written permission of instructor)
–1 1515-1700 MW, West Bank, Ramos, 2 cr (Jan 16-Feb 8)
–2 1515-1700 TTh, West Bank, Ramos, 2 cr (Jan 17-Feb 9)

R5920 **Topics in Theatre: Acting Process**
1015-1200 TTh, West Bank, Berry, 4 cr

R5940 **Topics in Theatre: Stage Dialects**
1515-1700 TTh, West Bank, Hamilton, 4 cr

R5950 **Topics in Theatre: Coaching the Actor** (max 12 cr)
1515-1700 MW, West Bank, Adey, 4 cr

5970 **Directed Readings** (prereq 9 cr in theatre, #, △, CLA approval)
2-6 cr

R8175 **Seminar: European Theatre History** (prereq 5171, 5172, 5173, #)
1015-1200 F, West Bank, Cadberry, 4 cr

R8312 **Advanced Voice Production for the Theatre** (prereq 8311, written permission) (A-N only)
1015-1100 MTWTh, West Bank, Nash, 4 cr

R8322 **Problems in Acting** (prereq 8321, written permission)
1315-1500 MW, West Bank, McIntyre, 4 cr

R8327 **History and Technique of Stage Movement** (prereq 8326, written permission)
0915-1000 MTWThF, West Bank, Moulton, 4 cr

R8712 **Seminar: Stage Direction** (prereq 5712 or equiv)
1515-1700 MW, West Bank, Hamilton, 4 cr

8980 **Directed Instruction** (prereq △)
1-3 cr

8990 **Research** (prereq #, △)
ar cr

Spring Quarter

R1101 **Introduction to the Theatre**
–1 1015-1200 MW, West Bank, Ballet, 4 cr
–2 1015-1200 TTh, West Bank, Ballet, 4 cr

R1301 **Beginning Acting for Non-Theatre Majors** (prereq 1101 or ¶)
–1 0915-1000 MWF, West Bank, 4 cr
–2 0915-1000 TThF, West Bank, 4 cr

R1321 **Beginning Acting: Creative Approach** (prereq 1101, 1504, 3rd qtr freshman or above)
–1 1515-1700 MW, West Bank, 4 cr
–2 1015-1200 TTh, West Bank, Berry, 4 cr
–3 1515-1700 TTh, West Bank, 4 cr

R1326 **Beginning Acting: Technique** (prereq 1321)
1515-1600 MTWThF, West Bank, 4 cr

R1502 **Makeup for the Actor** (prereq 1504, clean-shaven face)
0815-1000 TTh, West Bank, 2 cr

R1504 **Elements of Technical Theatre** (prereq 1101 or ¶)
0915-1000 TTh, West Bank, Brockman, Montgomery, 4 cr (lab ar)

R1804 **Oral Traditions, Myth to Modern**
1015-1200 TTh, West Bank, Congdon, 4 cr

R3101 **Senior Seminar** (prereq sr theatre maj) (A-N only)
0915-1000 TTh, West Bank, Thompson, 4 cr

R3311 **Beginning Voice Production for the Theatre** (prereq 1321 or ¶1321) (A-N only)
0915-1000 MTWTh, West Bank, Nash, 4 cr

R3322 **Advanced Acting, Period Plays and Styles** (prereq 3311, 3321, 3326)
1015-1200 MW, West Bank, McIntyre, 4 cr

R3326 **Theatre Dance** (prereq 1326)
1015-1100 MWF, West Bank, Moulton, 2 cr

R3328 **Mime and the Mask II** (prereq 1321, 1328)
1315-1500 MW, West Bank, Berry, 2 cr

3412H **Honors Course: Tutorial Seminar in Theatre Arts** (prereq candidate for honors in theatre arts, △)
0-3 cr

R3711 **Stage Direction** (§3708, 5711; prereq 1321, jr or sr)
1015-1200 TTh, West Bank, Hamilton, 4 cr

R3801 **Oral Interpretation of Fiction** (prereq 1504 or 1804 or Spch 1101)
–1 1015-1200 MW, West Bank, Congdon, 4 cr
–2 1315-1500 TTh, West Bank, Congdon, 4 cr

R3980 **Directed Instruction** (max 8 cr; prereq compl of course in which teaching will be done, #, △, college approval)
1-3 cr

R5100 **Theatre Practicum** (prereq △, #, written permission) (A-N only)
Gadberry, others, 1-6 cr

R5110 **Theatre Performance** (max 9 cr; prereq #, written permission) (S-N only)
Montgomery, 1 cr

5172 **History of Theatre** (prereq sr or grad student)
1315-1430 TTh, West Bank, Nolte, 4 cr

R5313 **Intermediate Voice Production for the Theatre** (prereq 5312, BFA candidate or theatre arts grad) (A-N only)
1015-1100 MTWTh, West Bank, Nash, 4 cr

R5315 **Stage Combat: Armed** (prereq 5314)
1315-1500 TTh, West Bank, Berry, 2 cr

R5321 **Problems in Professional Acting** (prereq 3321 or grad student)
1315-1500 TTh, West Bank, McIntyre, 4 cr

R5336 **Acting for Music-Theatre** (prereq 5335, written permission)
0815-1000 MW, 0915-1000 F, West Bank, 4 cr

R5510 **Drawing and Rendering for Theatre Designers** (prereq 3513 or 3515 or grad student, #)
1015-1200 TTh, West Bank, Brockman, 2 cr

R5516 **Advanced Problems in Stage Lighting Design** (prereq 3515, 3711 or #)
1315-1500 MW, West Bank, Montgomery, 4 cr (lab ar)

R5519 **Sound for the Theatre** (prereq 1504, #)
1515-1700 MW, West Bank, Montgomery, 2 cr (lab ar)

R5711 **Stage Direction** (§3708, 3711; prereq 1321, sr or grad student)
1315-1500 TTh, West Bank, Adey, 4 cr

R5712 **Stage Direction** (prereq 3708 or 3711 or 5711, 3513, 3515, 3801)
1315-1500 MW, West Bank, Adey, 4 cr

R5718 **Theatre Management and Promotion** (prereq 1504, sr or grad student or #)
1015-1200 MW, West Bank, Neely, 4 cr

R5720 **Plays in Production and Performance** (max 6 cr for undergrads; prereq 5712, written permission)
2-4 cr

R5760 **Advanced Stage Management** (max 6 cr for undergrads; prereq 5716 or ¶, written permission)
Montgomery, 1-3 cr

R5802 **Oral Interpretation of Poetry** (prereq 1504, 3801 or grad student)
1515-1700 MW, West Bank, Fredricks, 4 cr

R5811 **History of Acting and Interpretation** (prereq 3321 or 3322, 3801 or grad student)
1315-1500 TTh, West Bank, Thompson, 4 cr

R5823 **Oral Interpretation of Shakespeare** (prereq 1504, 3801 or grad student)
1315-1500 MW, West Bank, Thompson, 4 cr

R5940 **Topics in Theatre: Advanced Make-Up** (prereq 1504 or grad, clean-shaven face)
1515-1700 TTh, West Bank, Crellin, 2 cr

R5950 **Topics in Theatre: Composition in Design** (max 12 cr)
1015-1200 MW, West Bank, Brockman, 4 cr

5970 **Directed Readings** (prereq 9 cr in theatre, #, △, CLA approval)
2-6 cr

R8101 **Introduction to Research** (prereq theatre maj or #)
1515-1700 TTh, West Bank, Gadberry, 4 cr

R8174 **Seminar: European Theatre History** (prereq 5171, 5172, 5173, #)
1315-1500 F, West Bank, Hamilton, 4 cr

R8313 **Advanced Voice Production for the Theatre** (prereq 8312, written permission) (A-N only)
1115-1200 MTWTh, West Bank, Nash, 4 cr

R8323 **Problems in Acting** (prereq 8322, written permission)
1315-1500 MW, West Bank, McIntyre, 4 cr

R8328 **History and Technique of Stage Movement** (prereq 8327, written permission)
0915-1000 MTWThF, West Bank, Moulton, 4 cr

R8540 **Seminar: Scene Design** (prereq 5514 or #)
0915-1200 F, West Bank, Josal, 4 cr

R8713 **Seminar: Stage Direction** (prereq 5712 or equiv)
0915-1200 F, West Bank, Adey, 4 cr

8980 **Directed Instruction** (prereq △)
1-3 cr

8990 **Research** (prereq #, △)
ar cr

TRANSPORTATION (Tran)
Management

Winter Quarter

R3054 **Fundamentals of Transportation** (§8154; prereq Econ 1002) (A-N only)
★LECT 1115-1200 MWF, West Bank, Beier
–1 LAB 0815-0900 T, West Bank, 4 cr
–2 LAB 0915-1000 T, West Bank, 4 cr
–3 LAB 1015-1100 T, West Bank, 4 cr

R3064 **Business Logistics** (§8264; prereq 3054) (A-N only)
1015-1200 TTh, West Bank, Harper, 5 cr

R8264 **Business Logistics** (§3064; prereq 3054 or 8154) (A-N only)
1015-1200 TTh, West Bank, Harper, 5 cr

R8990 **Readings in Transportation and Business Logistics** (prereq consent of adviser, #) (A-N only)
ar cr

R8995 **Graduate Research in Transportation and Business Logistics** (A-N only)
ar cr

Spring Quarter

R3064 **Business Logistics** (§8264; prereq 3054) (A-N only)
0915-1030 MWF, West Bank, Harper, 5 cr

R3084 **Carrier Management** (§8284; prereq 3054) (A-N only)
1015-1200 TTh, West Bank, Beier, 5 cr

R5134 **Transportation and Business Logistics Topics** (prereq 3054 or 8154, #, SMgt approval) (A-N only)
1315-1500 TTh, West Bank, Beier, 4 cr

R5194 **Government Promotion and Subsidy of Transportation** (prereq 3054 or 8154 or #) (A-N only)
1045-1200 MW, West Bank, Harper, 4 cr

R8284 **Carrier Management** (§3084; prereq 3054 or 8154) (A-N only)
1015-1200 TTh, West Bank, Beier, 5 cr

R8990 **Readings in Transportation and Business Logistics** (prereq consent of adviser, #) (A-N only)
ar cr

R8995 **Graduate Research in Transportation and Business Logistics** (A-N only)
ar cr

UNIVERSITY COLLEGE (UC)

Winter Quarter

R3075 **Independent Study** (prereq △)
ar cr

3200 **Introductory Period** (prereq UWW student, △) (S-N only)
ar cr

3201 **Directed Studies** (prereq UWW student, △) (S-N only)
8 cr

3211 **Degree Planning** (prereq University Without Walls student, △) (S-N only)
7 cr

3212 **Degree Planning** (prereq University Without Walls student, △) (S-N only)
7 cr

3213 **Degree Planning** (prereq University Without Walls student, △)
7 cr

3291 **Graduation Dossier Preparation** (max 21 cr; prereq University Without Walls student, △) (S-N only)
7 cr

3292 **Graduation Dossier Preparation** (max 21 cr; prereq University Without Walls student, △) (S-N only)
7 cr

3293 **Graduation Dossier Preparation** (max 21 cr; prereq University Without Walls student, △)
7 cr

3299 **Graduation Dossier Examination** (prereq University Without Walls student, prior submission of dossier for examination, △) (S-N only)
7 cr

3401 **Directed Studies** (prereq University Scholars student, △)
ar cr

Spring Quarter

R3075 **Independent Study** (prereq △)
ar cr

3200 **Introductory Period** (prereq UWW student, △) (S-N only)
ar cr

3201 **Directed Studies** (prereq UWW student, △) (S-N only)
8 cr

3211 **Degree Planning** (prereq University Without Walls student, △) (S-N only)
7 cr

3212 **Degree Planning** (prereq University Without Walls student, △) (S-N only)
7 cr

3213 **Degree Planning** (prereq University Without Walls student, △)
7 cr

3291 **Graduation Dossier Preparation** (max 21 cr; prereq University Without Walls student, △) (S-N only)
7 cr

3292 **Graduation Dossier Preparation** (max 21 cr; prereq University Without Walls student, △) (S-N only)
7 cr

3293 **Graduation Dossier Preparation** (max 21 cr; prereq University Without Walls student, △)
7 cr

3299 **Graduation Dossier Examination** (prereq University Without Walls student, prior submission of dossier for examination, △) (S-N only)
7 cr

3401 **Directed Studies** (prereq University Scholars student, △)
ar cr

URBAN STUDIES (UrbS)
Liberal Arts

Winter Quarter

R3102 **Urban Studies Colloquia** (prereq #) (S-N only)
–1 1315-1500 T, West Bank, Wiley, 2 cr
–2 1415-1600 W, West Bank, Zaidman, 2 cr

R3500 **Workshops** (prereq jr or sr, #)
–1 1315-1600 M, West Bank, Portmann, 4 cr
–2 1815-2100 Th, West Bank, Cummings, 4 cr

R3900 **Internship** (max 12 cr; prereq jr, sr, △)
1800-2000 M, West Bank, Hickey, 1-6 cr

R3970 **Directed Studies** (prereq #, △, college approval)
ar cr

Spring Quarter

R3103 **Urban Studies Colloquia** (prereq △) (S-N only)
1315-1500 T, West Bank, Karasov, 2 cr

R3104 **Introduction to Urban Studies**
0945-1100 TTh, West Bank, Martin, 3 cr

R3500 **Workshops** (prereq jr or sr, #)
–1 1500-1630 TTh, West Bank, Anding, 4 cr
–2 1615-1900 W, West Bank, Bellus, 4 cr

R3900 **Internship** (max 12 cr; prereq jr, sr, △)
1810-2010 M, West Bank, Hickey, 1-6 cr

R3970 **Directed Studies** (prereq #, △, college approval)
ar cr

URDU (Urdu)
South And Southwest Asian Studies
Liberal Arts

Winter Quarter

1102 **Beginning Urdu** (§Hndi 1102, 5102; prereq 1101)
1315-1400 MTWThF, East Bank, Staneslow, 5 cr

5132 **Intermediate Urdu** (§3032; prereq 5131)
Barker, 5 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
ar cr

5990 **Directed Research** (prereq #, △, CLA approval)
ar cr

8990 **Research** (prereq #)
ar cr

Spring Quarter

1103 **Beginning Urdu** (§Hndi 1103, 5103; prereq 1102)
1315-1400 MTWThF, East Bank, Staneslow, 5 cr

5133 **Intermediate Urdu** (§3033; prereq 5132)
Alvi, 5 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
Barker, ar cr

5990 **Directed Research** (prereq #, △, CLA approval)
Alvi, Barker, ar cr

8990 **Research** (prereq #)
Alvi, Barker, ar cr

VOCATIONAL EDUCATION (VoEd)
Vocational And Technical Education
Education

Winter Quarter

5300 **Philosophy and Practice of Vocational Education** (A-N only)
1600-1830 W, St. Paul, Miletich, 3 cr

5400 **Education for Work** (prereq 5300 or #) (A-N only)
1600-1830 T, St. Paul, G Swanson, 3 cr

5500 **Introduction to Vocational Education Administration** (A-N only)
1600-1830 M, St. Paul, Knaak, 3 cr

R5750 **Training in Industry and Business** (A-N only)
1830-2130 Th, St. Paul, R Swanson, 4 cr

R5760 **Organization Development in Industry and Business** (A-N only)
1830-2130 W, St. Paul, McLean, 3-4 cr

5780 **Internship: Training and Development** (max 15 cr; prereq 5750) (S-N optional)
McLean, R Swanson, ar cr

5800 **Working with Special Needs Students** (A-N only)
1300-1430 TTh, St. Paul, McLean, 3 cr

Spring Quarter

R5760 **Organization Development in Industry and Business** (A-N only)
1800-2100 T, St. Paul, McLean, 4 cr

5780 **Internship: Training and Development** (max 15 cr; prereq 5750) (S-N optional)
McLean, R Swanson, ar cr

5800 **Working with Special Needs Students** (A-N only)
1600-1830 W, St. Paul, Brown, 3 cr

8100 **Vocational Education Tutorial** (prereq #)
0800-1030 T, St. Paul, G Swanson, 3-18 cr

8500 **Seminar: General Education Aspects of the Vocational Fields** (prereq #)
1600-1830 W, St. Paul, Plihal, 3 cr

WOMEN'S STUDIES (WoSt)
Liberal Arts

Winter Quarter

R1006 **Introduction to Women's Studies**
★LECT 0915-1000 MWF, East Bank, Geiger
–1 REC 1015-1100 M, East Bank, 4 cr
–2 REC 1115-1200 M, East Bank, 4 cr
–3 REC 0915-1000 T, East Bank, 4 cr
–4 REC 1115-1200 T, East Bank, 4 cr
–5 REC 1215-1300 T, East Bank, 4 cr
–6 REC 1015-1100 W, East Bank, 4 cr
–7 REC 1115-1200 W, East Bank, 4 cr
–8 REC 1015-1100 Th, East Bank, 4 cr
–9 REC 1115-1200 Th, East Bank, 4 cr
–10 REC 1215-1300 Th, East Bank, 4 cr

R3001 **The Biology of Women** (prereq Biol 1011 or Phsl 1001 or #)
0945-1100 TTh, East Bank, Zita, 4 cr

R3200 **Women and Work: Visions for the Future** (max 12 cr)
1415-1600 TTh, East Bank, Faunce, 4 cr

R3300 **Comparative Study of Women: International Perspectives** (max 8 cr; prereq introductory courses in one or two social sciences)
0815-0930 TTh, West Bank, Knudson, 4 cr

R3900 **Seminar: Feminist Theory** (prereq △)
1315-1500 M, East Bank, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-15 cr

3980 **Directed Instruction** (prereq #, △, college approval)
1-5 cr

3990 **Directed Research** (prereq #, △, college approval)
1-5 cr

R5377 **Feminist Therapies**
1230-1530 W, East Bank, Faunce, 4 cr

R5404 **Feminist Criticism of Concepts of the Self** (prereq 12 cr WoSt courses or substantail work in phil, religious stds, soc sci or psy or #)
1245-1400 TTh, East Bank, Scheman, 4 cr

R5910 **Topics in Women's Studies: Feminism and Abolitionism in America 1830-1860** (max 12 cr)
1015-1100 MWF, East Bank, Yates, 4 cr

5970 **Directed Studies** (max 12 cr; prereq #, △, CLA approval)
1-5 cr

Spring Quarter

R3002 **Biology, Race, and Gender** (prereq 3001)
1245-1400 TTh, East Bank, Zita, 4 cr

R3333 **Women in Liberation Struggles**
1115-1230 TTh, East Bank, Geiger, 4 cr

R3349 **Feminist Approaches to History**
1115-1345 F, East Bank, Maynes, 4 cr

R3501 **Women and Literature** (prereq introductory work in literature)
0945-1100 TTh, East Bank, Yates, 4 cr

R3900 **Seminar: Feminist Research Methodologies in the Social Sciences** (prereq △)
1330-1515 W, East Bank, Faunce, 4 cr

R3910 **Topics in Women's Studies** (max 12 cr)
–1 0945-1100 TTh, East Bank, Zita, 4 cr (Medical Ethics)
–2 1615-1730 TTh, West Bank, 4 cr (Feminist Perspectives in the Visual Arts)

R3960 **Field Learning in Women's Studies** (max 8 cr; prereq 1005, 1006, one 3000 level course, △)
Truax, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
1-15 cr

3980 **Directed Instruction** (prereq #, △, college approval)
1-5 cr

3990 **Directed Research** (prereq #, △, college approval)
1-5 cr

R5311 **Women and the Law**
1215-1330 MW, East Bank, Chalmers, Breen, 4 cr

R5910 **Topics in Women's Studies** (max 12 cr)
–1 1415-1545 M, East Bank, Geiger, 4 cr (Feminist Pedagogy)
–2 1415-1530 TTh, East Bank, Fraser, Evans, 4 cr (Organized Women and Public Policy in America)

5970 **Directed Studies** (max 12 cr; prereq #, △, CLA approval)
1-5 cr

YOUTH DEVELOPMENT AND RESEARCH (YoSt)
Home Economics

Winter Quarter

R5120 **Independent Study in Youth Studies** (max 12 cr; prereq #)
ar cr

R5133 **Youth and Health** (prereq 5331, Soc 1001, CPsy 5303, PubH 3004 or #)
0915-1100 T, East Bank, Baizerman, 3 cr (Mpls)

5200 **Working with Youth Through Adults** (max 9 cr; prereq BA degree, consent of faculty)
1000-1600 F, St. Paul, 1-3 cr

R5202 **Practicum** (prereq 5201)
0900-1100 T, St. Paul, Seltzer, 4 cr

5331 **Youth Agencies, Organizations and Youth Service Systems** (prereq two courses in sociology/anthropology, work exper in a youth agency or organization)
1600-1830 Th, St. Paul, 3 cr

R5402 **Serious Adolescent Sexuality Problems: Sexual Abuse, Rape, Incest, Prostitution, and Unplanned Pregnancy** (prereq 6 cr in social sciences, experience in youthwork or #)
0830-1630 Th, St. Paul, Andre, 3 cr (Feb 2, 9, 16)

5601 **International Development Practicum** (prereq participation in international development collateral)
ar cr

8002 **Advanced Seminar in Youth Studies** (prereq #)
3 cr

Spring Quarter

R5120 **Independent Study in Youth Studies** (max 12 cr; prereq #)
ar cr

5132 **Experiential Learning** (prereq CPsy 5303 or #)
1600-1800 T, St. Paul, Hedin, 3 cr

5200 **Working with Youth Through Adults** (max 9 cr; prereq BA degree, consent of faculty)
1000-1600 F, St. Paul, 1-3 cr

R5203 **Practicum** (prereq 5202)
0900-1100 T, St. Paul, Seltzer, 4 cr

5332 **Understanding and Working with Special Populations of Youth** (prereq 5331 or #)
1600-1830 Th, St. Paul, 3 cr

5501 **Youth and Work** (prereq Soc 1001, Econ 1001, CPsy 3303 or #)
1500-1700 Th, St. Paul, Seltzer, 3 cr

5601 **International Development Practicum** (prereq participation in international development collateral)
ar cr

5711 **Introduction to Consultation in Youthwork** (prereq at least twocourses in soc or anth, maj in human serv prof, exp in human serv org)
1600-1830 M, St. Paul, Baizerman, 3 cr

8003 **Advanced Seminar in Youth Studies** (prereq #)
3 cr

ZOOLOGY (Zool)
Biological Sciences

Winter Quarter

8970 **Seminar**
0 cr

8980 **Special Research**
ar cr

8990 **Research**
ar cr

Spring Quarter

8970 **Seminar**
0 cr

8980 **Special Research**
ar cr

8990 **Research**
ar cr

UNIVERSITY OF MINNESOTA

CLASS SCHEDULE

WINTER QUARTER 1984
TWIN CITIES



PUBLISHED IN FALL 1983

© 1983 UNIVERSITY COMMUNICATIONS, INC.



The all-new 1984 Ford Tempo

Style and technology in total harmony.

Form follows function.

In its creation of Tempo, Ford set out to design a car that would prove that a spacious interior, comfort and performance could be compatible with fuel efficiency. Ford engineers began with a sound design principle: Form follows function. First came completely new functional ideas. And then Tempo's pleasing form followed–naturally.

An acknowledged world leader in aerodynamic design, Ford used this expertise in creating Tempo. And it has a profound effect on the overall performance of the car. For example, aerodynamics helps Tempo hug the road because airflow is directed to reduce lift for improved stability and directional control.

Tempo is equipped with the world's most advanced automotive computer: the EEC-IV (Electronic Engine Control). It monitors and controls seven vital functions of Tempo's new 2300 HSC engine for optimum power response and fuel efficiency.

Fuel economy rates high on Tempo's list of pluses. The standard F.S. (Fuel Saver) powertrain with 4-speed manual transaxle is rated at 43 estimated hwy. and 28 EPA estimated mpg.*



Available in 2-door and 4-door (above).

TEMPO FEATURES

Front-wheel drive: All-weather traction, precise handling.

Four-wheel independent suspension: Responsive handling and a smooth ride.

EEC-IV computer: Instantly monitors and controls seven vital engine functions for optimum power/output and fuel efficiency.

2300 HSC engine: New High Swirl Combustion engine designed for quick power response.

Transaxle: Available with manual 4-speed, 5-speed or automatic transaxle.

Computer refined interior: Seats five passengers. More rear passenger room than a Mercedes 300D.

Quality is Job 1: Body fit tolerances that can be compared with European Sports Sedans.

Pick up the Tempo of your life.

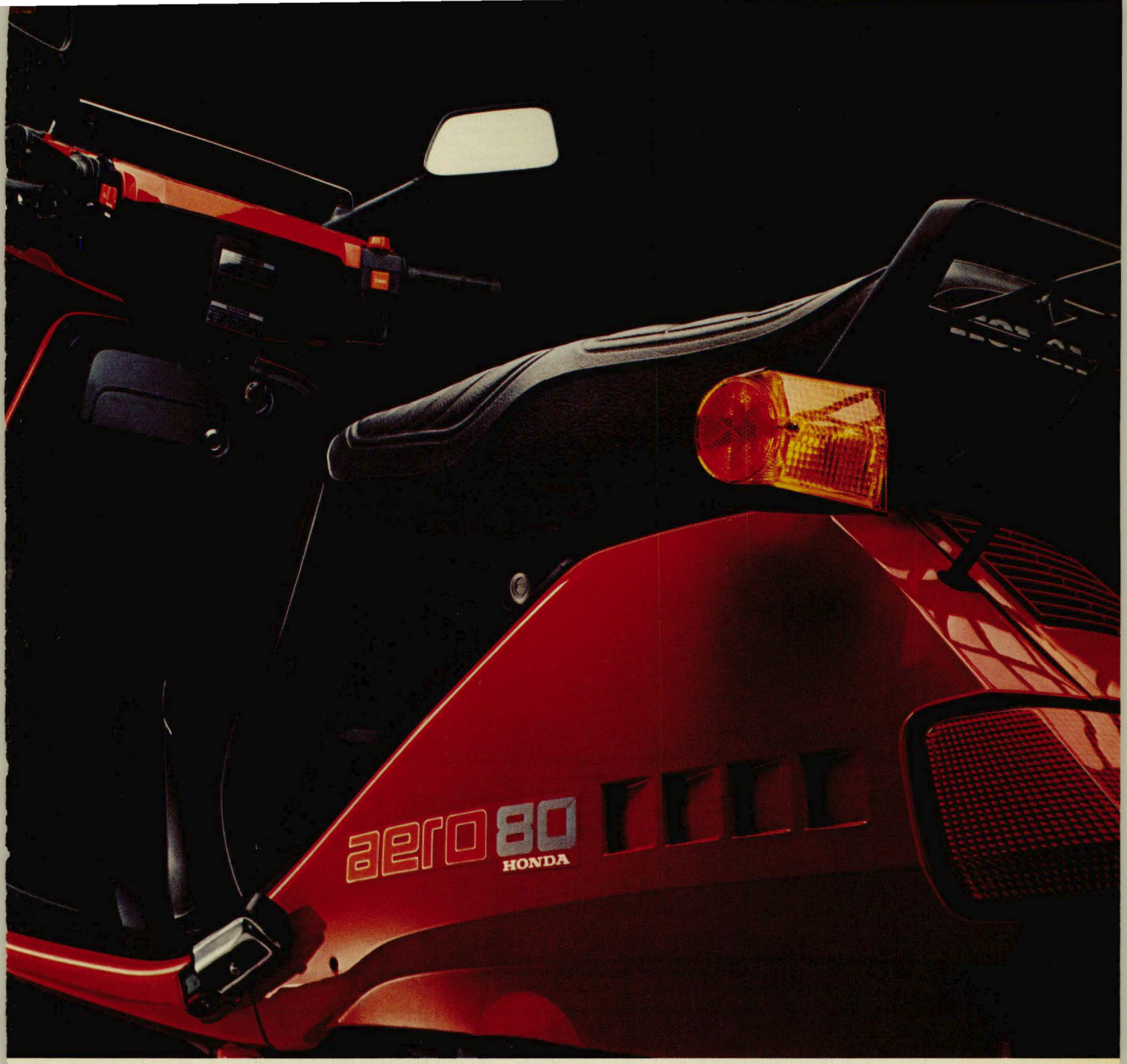
To obtain a brochure with more information on Ford's all-new sedan, see your Ford Dealer or call 1-800-772-2100.

*For comparison and applicable only to sedans without A/C. Your mileage may differ depending on speed, distance and weather. Actual highway mileage and California ratings will probably be lower.

Get it together–Buckle up.

Have you driven a Ford... lately?

Ford



Introducing the Aero.™ It's as smart as it looks.

Introducing the Honda Aero.™ An aerodynamic blend of form and function that's turning heads wherever it goes.

It's a way of arriving that says you've arrived. It's fashionable without being a fad. Fun without being frivolous.

And talk about easy to ride. If you can steer, you're on your way. Both the Aero™ 50 and Aero™ 80* are completely automatic so there's no shifting—and they start with the push of a button.



The Aero is reliable because it's a Honda. Engineered by the people famous for two-wheel innovation.

It's one scooter that really scoots, too. With the Aero 80, you can even carry a friend on the back.† And thanks to its splashguards, you'll both look as good as your Aero when you arrive.

To find out the name of your local Honda Aero dealer, just call 800-447-4700. It just could be the smartest call you've ever made.

The Honda Aero

*Aero 80 not available in California. Aero 50 not available in Maryland. †Maximum load capacity 300 pounds.

ALWAYS WEAR A HELMET AND EYE PROTECTION. Specifications and availability subject to change without notice. ©1983 American Honda Motor Co., Inc.

For a free brochure, see your authorized Honda Aero dealer. Or write: American Honda, Dept. 558, Box 9000, Van Nuys, CA 91409.



Jensen speakers put great sound where it's never been before.

With Jensen,® great sound really goes places. Places, in fact, you never thought it could. Because Jensen speakers offer you Jensen quality sound sized to fit in doors, kick panels, dashboards...almost anywhere.

And we're not talking about just "small" speakers, either. The Jensen 6" x 9" Triax® is our most popular—and the most imitated in the industry. But the Triax ThinMount™ version can be installed in smaller rear-deck spaces than ever. With a mounting depth of just 1¾", it even fits in many doors!

Don't let limited space limit your car audio performance. Get excellent Jensen sound to fit your discriminating taste. Designed to fit your car. Jensen ThinMounts.

JENSEN
CAR AUDIO
When it's the sound that moves you.

© Jensen Sound Laboratories, 1983. "Triaxial®" and "Triax®" are registered trademarks identifying Jensen Sound Laboratories as the producer of the patented 3-way speaker systems.

SCHEDULE WORKSHEET

TIMETABLE

PERIOD OR TIME	MON	TUES	WED	THURS	FRI	SAT

COURSES

COURSE NO.	TITLE	INSTRUCTOR



"New Lee Ultra Cord" is everything we want in corduroy. It's soft, good-looking and available in our favorite colors. Best of all, it stays newer-looking longer. We should know. With all our rehearsing, nobody's harder on corduroy than we are."

Tai Babilonia & Randy Gardner

Champion figure skaters

Lee

The brand that fits.

LEE Company, P.O. Box 2940, Shawnee Mission, Kansas 66201. (913) 384-4000

a VF Company

2 For the first time a music system and the listening environment have been designed together.

Second in a series on how Delco Electronics and Bose technology contribute to your enjoyment of driving.

The performance of even the best home music systems is limited by the acoustics of the environment, the placement of the speakers and the location of the listeners. These important factors are beyond the control of the designer.

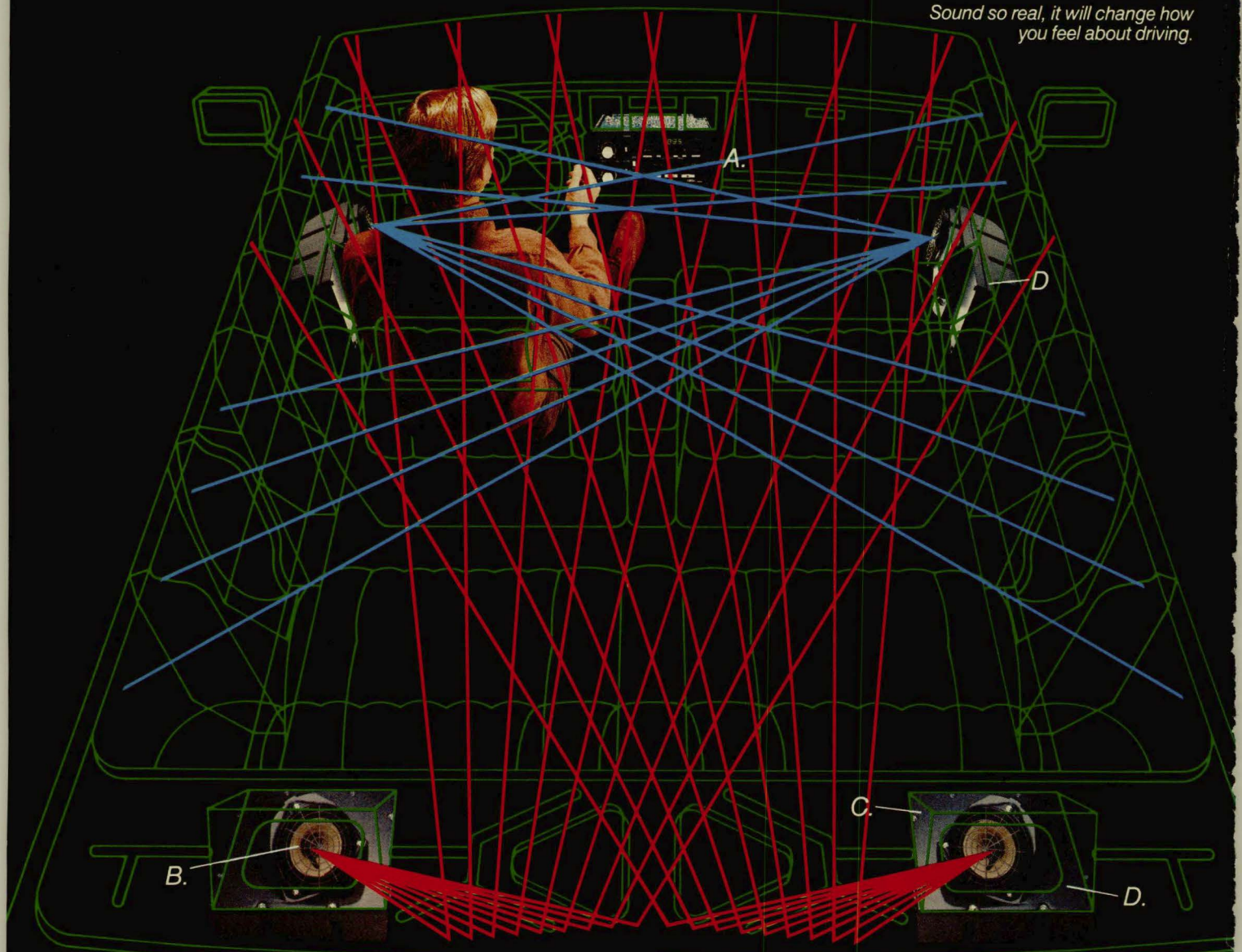
Three years ago Delco Electronics, General Motors Car Divisions and Bose Corporation began research to design a music system with, and for, its environment. The acoustics of the car were measured, the speakers precisely placed, and the known locations of the listeners were considered in the design. The result is a music system designed differently for each automobile body, but with one element in common—the performance!

And how much difference does this new design concept make? We let hundreds of people listen to the Delco-GM/Bose Music System during its development. From musicians to people who had not believed that music was important in their lives, the reaction was the same.

But if we say more we might bias the experience you will have when you visit your GM dealer. Just try not to get excited!*

Delco GM BOSE

Sound so real, it will change how you feel about driving.



A. *(ETR) Electronically tuned receiver.* ***B.*** *Helical voice coil speaker.* ***C.*** *"Digital mode" amplifier built into each enclosure.* ***D.*** *Reflex enclosure.*

**Available as a factory-installed option on Cadillac Seville and Eldorado, Buick Riviera, Oldsmobile Toronado, and Corvette by Chevrolet.*

A totally new class of music systems from Delco-GM.

MGC
C368

TABLE OF CONTENTS

Section 1: REGISTRATION Page

Calendar 2
Course Request Forms 4
Registration Queue 6
Steps in Registration 8
Holds 9
Graduate School Registration Instructions 9
College of Liberal Arts Registration Instructions 10
School of Management Courses, Registration Instructions for 12
Institute of Technology Courses, Registration Instructions for 12
The First Week of Class 12
Change of Registration 14
Withdrawal From the University 14
Graduation 14
Administrative Offices 16

Section 2: COURSES

How to Use This Schedule 17
Schedule of Classes 20
Courses Open Through Extension Classes 106

Section 3: CODES & MAPS

Course Designators 107
Directory for Department Offices 109
Building Accessibility/Campus Maps 110

Section 4: TUITION & FEES

Tuition Schedule 1983-84 115
Student Services Fee 116
Health Service and Hospitalization Charges 116
ID Card Replacement 116
Payment of Fees 117
Veterans Certification 119
Refunds 119
Course Fees 119
Special Fees 120
Transcript Fee 120
Facility Fees 120
Deposit Cards and Rental Cards 122
Tuition Rates for Staff Members 122

Section 5: EXAMS & GRADES

Final Examination Schedule 124
Regulations Regarding Examinations 125
Submission of Final Grades 125
Grading Policies and Practices 126

NOTE: The advertising appearing in this schedule subsidizes the cost of printing. The University receives no profit from such advertising, nor does the University endorse any of the products or advertisers.

DIRECTORY OF CLASSES
Published By
UNIVERSITY
COMMUNICATIONS, INC.
P.O. BOX 1234
RAHWAY, N.J. 07065
(201) 382-6161



TM
A Subsidiary of Ziff-Davis Publishing Company
DIRECTORY OF CLASSES FOR
UNIVERSITY OF MINNESOTA

Publisher: James L. Kopper
Director of National
Advertising: Jerry Koffler
Director of College
Relations: Edward Seyler
President: Andrew C. Citsay

1984

JANUARY

1	(2)	■3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

FEBRUARY

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29			

MARCH

				1	2	3
4	5	6	7	8	■9	10
11	□12	□13	□14	□15	□16	□17
18	(19)	20	21	22	23	24
25	■26	27	28	29	30	31

APRIL

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

MAY

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	(28)	29	30	31		

JUNE

					■1	2
3	□4	□5	□6	□7	□8	□9
10	11	■12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

JULY

1	2	3	(4)	5	6	7
8	9	10	11	12	■13	14
15	■16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

AUGUST

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	■17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

SEPTEMBER

						1
2	(3)	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	■20	21	22
23/30	24	25	26	27	28	29

OCTOBER

	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

■ First and Last Days of Instruction
□ Final Examination Dates
◯ Classes Excused and Holidays

UNIVERSITY CALENDAR
Twin Cities Campus

Winter Quarter 1984

JANUARY

3 *Winter quarter classes begin.*

FEBRUARY

6 Last day for undergraduates and students in professional degree programs to pay graduation fees for winter quarter.

9 Last day for students in the Graduate School to pay graduation fees for winter quarter.

15 Last day application to most undergraduate colleges and programs or for change of college within the University can be assured a winter quarter admission decision.

17 First day of registration for spring quarter.

27 Graduate School application deadline for spring quarter.

MARCH

9 Last day of instruction.

10 Study day.

12-17 Final examinations.

17 *End of winter quarter.*
Commencement. Candidates for baccalaureate degrees should check with college offices for information. No Graduate School commencement ceremony.

19 Winter holiday. University offices closed.

Spring Quarter 1984

MARCH

26 *Spring quarter classes begin.*

APRIL

4 Last day for undergraduates and students in professional degree programs to pay graduation fees for spring quarter.

MAY

3 Last day for students in the Graduate School to pay graduation fees for spring quarter.

15 Graduate School application deadline for first term of summer session.

28 Memorial Day, holiday. Classes excused and University offices closed.

JUNE

1 Last day of instruction.

2 Study day.

4-9 Final examinations.

9 *End of spring quarter.*
Graduate School commencement. Candidates for baccalaureate and professional degrees should check with college offices for commencement information.

Summer Session—First Term 1984

JUNE

5 Last date for payment of graduation fees for first term.

12 *First term classes begin.*

15 Graduate School application deadline for second term of summer session.

JULY

4 Independence Day, holiday.

13 *End of first term.*
Commencement. Candidates for baccalaureate degrees should check with college offices for commencement information.

Summer Session—Second Term 1984

JULY

12 Last day for students in the Graduate School to pay graduation fee for second term.

13 Last date for undergraduates and students in professional degree programs to pay graduation fees for second term.

16 *Second term classes begin.*

AUGUST

15 Graduate School application deadline for fall quarter.

17 *End of second term.*
Candidates for baccalaureate degrees should check with college offices for commencement information.

PREPARE FOR

MCAT • LSAT • GMAT
SAT • ACT • DAT • GRE • CPA

Our 44th Year

- Permanent Centers open days, evenings and weekends.
- Low hourly cost. Dedicated full-time staff.
- Complete TEST-N-TAPE® facilities for review of class lessons and supplementary materials.
- Classes taught by skilled instructors.
- Opportunity to make up missed lessons.
- Voluminous home-study materials constantly updated by researchers expert in their field.
- Opportunity to transfer to and continue study at any of our over 105 centers.

OTHER COURSES AVAILABLE

GRE-PSYCH & BIO • MAT • PCAT • OCAT • VAT
TOEFL • MSKP • NMB • VQE • ECFMG • FLEX • NBD
RN BDS • SSAT • PSAT • SAT ACHIEVEMENTS
SPEED READING



Stanley H. KAPLAN

TEST PREPARATION SPECIALISTS SINCE 1938

EDUCATIONAL CENTER

Call Days, Eves & Weekends

378-9191

328 E. Hennepin
Near U of M

For Information About Other Centers Outside N.Y. State
CALL TOLL FREE 800-223-1782

ID CARD IMPRINT (if no ID card, print name, ID or Social Security Number)

COURSE REQUEST
University of Minnesota

College of Enrollment	Street Address		Telephone Number
Major	City	State	Zip Code

Term and Year: __ Fall __ Winter __ Spring __ Summer Session I __ Summer Session II 19__

☐ Original Registration: Number of credits ____ ☐ Cancel/Add: Number of Credits Remaining ____ ☐ Complete Cancel

NOTE: Fill in VARIABLE CREDITS **only** if credits are listed as "ar cr" in the Class Schedule.
Fill in GRADE OPTION **only** if mandatory grading is not listed in the Class Schedule.

COURSE(S)—First Choice (original registration)				COURSE(S)—Second Choice (or cancel/add additions)				CANCELLATIONS	
CALL NUMBER	GRADE OPTION	VARIABLE CREDITS	DESIGNATOR, COURSE NUMBER, AND SECTION	CALL NUMBER	GRADE OPTION	VARIABLE CREDITS	DESIGNATOR, COURSE NUMBER, AND SECTION	CALL NUMBER	DESIGNATOR, COURSE NUMBER, AND SECTION

MPIRG (OPTIONAL)
Minnesota Public Interest Research Group is described in the Class Schedule. The MPIRG fee is $2 per quarter (or $1 per summer term) for those who pay the student services fee. If you choose NOT to pay the MPIRG fee, initial here ⟶ ____
Payment is refundable through MPIRG.

ADVISER APPROVAL (if needed)

ADDITIONAL APPROVAL (if needed)

(P-724B)

A—22 6/83

ID CARD IMPRINT (if no ID card, print name, ID or Social Security Number)

COURSE REQUEST
University of Minnesota

College of Enrollment | Street Address | Telephone Number
Major | City | State | Zip Code

Term and Year: __ Fall __ Winter __ Spring __ Summer Session I __ Summer Session II 19__

☐ Original Registration: Number of credits ____ ☐ Cancel/Add: Number of Credits Remaining ____ ☐ Complete Cancel

NOTE: Fill in VARIABLE CREDITS **only** if credits are listed as "ar cr" in the Class Schedule.
Fill in GRADE OPTION **only** if mandatory grading is not listed in the Class Schedule.

COURSE(S)—First Choice (original registration) | COURSE(S)—Second Choice (or cancel/add additions) | CANCELLATIONS
CALL NUMBER | GRADE OPTION | VARIABLE CREDITS | DESIGNATOR, COURSE NUMBER, AND SECTION | CALL NUMBER | GRADE OPTION | VARIABLE CREDITS | DESIGNATOR, COURSE NUMBER, AND SECTION | CALL NUMBER | DESIGNATOR, COURSE NUMBER, AND SECTION

MPIRG (OPTIONAL)
Minnesota Public Interest Research Group is described in the Class Schedule. The MPIRG fee is $2 per quarter (or $1 per summer term) for those who pay the student services fee. If you choose NOT to pay the MPIRG fee, initial here ⟶ ____
Payment is refundable through MPIRG.

ADVISER APPROVAL (if needed)

ADDITIONAL APPROVAL (if needed)

(P-724B)

A—22 6/83

COMPLETING YOUR COURSE ENROLLMENT REQUEST FORM

(1) Chris R. Student
1234567
ID CARD IMPRINT (if no ID card, print name, ID or Social Security Number)

COURSE REQUEST
University of Minnesota

College of Enrollment	Street Address		Telephone Number
(2) Agriculture	(4) Bailey Hall		373-4343
Major	**City**	**State**	**Zip Code**
(3) Animal Science	St. Paul	MN	55108

(5) Term and Year: ___ Fall ☒ Winter ___ Spring ___ Summer Session I ___ Summer Session II 19 84

(6) ☒ Original Registration: Number of credits 15 ☐ Cancel/Add: Number of Credits Remaining ___ ☐ Complete Cancel

NOTE: Fill in VARIABLE CREDITS **only** if credits are listed as "ar cr" in the Class Schedule.
Fill in GRADE OPTION **only** if mandatory grading is not listed in the Class Schedule.

COURSE(S)—First Choice (original registration)				COURSE(S)—Second Choice (or cancel/add additions)				CANCELLATIONS	
CALL NUMBER	GRADE OPTION	VARIABLE CREDITS	DESIGNATOR, COURSE NUMBER, AND SECTION	CALL NUMBER	GRADE OPTION	VARIABLE CREDITS	DESIGNATOR, COURSE NUMBER, AND SECTION	CALL NUMBER	DESIGNATOR, COURSE NUMBER, AND SECTION
(7)(A)	(B)	(C)	(D)	(8)				(9)	
724414		4	Rhet 3280	201663			Rhet 3562-4		
416209	S-N		An Sc 1110	318051			An Sc 3402-2		
618282			An Sc 3305-1						
018294			An Sc 5403-1						

MPIRG (OPTIONAL) (10)
Minnesota Public Interest Research Group is described in the Class Schedule. The MPIRG fee is $2 per quarter (or $1 per summer term) for those who pay the student services fee. If you choose NOT to pay the MPIRG fee, initial here → ___
Payment is refundable through MPIRG.

ADVISER APPROVAL (if needed) (11)
A. H. Smith

ADDITIONAL APPROVAL (if needed) (12)

(P-7248)

A—22 6/83

(1) *If you do not have your student ID card,* print your name and student ID number (or Social Security Number).

(2) Print the college in which you are enrolled.

(3) Print your major.

(4) Print your complete address and phone number.

(5) Indicate the term (fall, winter, spring, summer I, or summer II) and year that you are registering for.

(6) Check the box for original registration if this is your first registration for the quarter or term and fill in the number of credits you are registering for. If you are making changes in your original registration (cancel/adding), check the cancel/add box and fill in the number of credits you will have *after* completing those changes. Check the "Complete Cancel" box if you are cancelling *all* courses.

(7) This section is for your first choice course requests:

(A) Print the six digit call number. (The call number is to the left of each course listing or each section of a course.)

(B) Mark the grading system you are requesting, *only if the course is offered for both A-N and S-N.* See example above and read the paragraph on Grading Option in Section 2 of this *Class Schedule* for further information.

(C) Print the number of credits only if you are registering for a variable credit course (i.e., 1-4 cr.) or an arranged credit course (ar cr). See example above.

(D) Print the designator (department abbreviation—e.g., ACCT, ELEM, HIST), course number, and section number for each course.

(8) This section is for your second choice course requests. Plan alternatives in case your first choice course requests are closed or otherwise unavailable. List course additions in this section when cancel/adding.

(9) Provide the call number, designator, course and section numbers for any courses you are cancelling. Remember to indicate your credit total in section 6.

(10) MPIRG—see instructions on form. The Minnesota Public Interest Research Group (MPIRG) is a nonprofit, nonpartisan, student-run organization funded at the Twin Cities campus by an optional quarterly fee of $2.00. A statewide advocacy group, MPIRG gives students the opportunity to speak out on public issues and work for social change. The fee supports a professional staff for lobbying, litigation, organizing, and research. During the last year, MPIRG worked to stop cuts in financial aid, protect student constitutional rights, freeze nuclear weapons production, protect the environment, and promote renewable energy.

(11) College, Department, and/or Adviser approval, as required.

(12) Additional approval, as required.

BULLETIN USE

The contents of this schedule and other University bulletins, publications, or announcements are subject to change without notice. University offices can provide current information about possible changes.

EQUAL OPPORTUNITY

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, creed, color, sex, national origin, or handicap. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972, by Sections 503 and 504 of the Rehabilitation Act of 1973, and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455, (612/373-7969), or to the Director of the Office of Civil Rights, Department of Education, Washington, D.C. 20202, or to the Director of the Office of Federal Contract Compliance Programs, Department of Labor, Washington, D.C. 20210.

ACCESS TO STUDENT EDUCATIONAL RECORDS

In accordance with regents' policy on access to student records, information about a student generally may not be released to a third party without the student's permission. The policy also permits students to review their educational records and to challenge the contents of those records.

Some student information—name, address, telephone number, dates of enrollment and enrollment termination, college and class, major, adviser, and degrees earned—is considered public or directory information. To prevent release of such information outside the University while in attendance at the University, a student must notify the records office on his or her campus.

Students are notified annually of their right to review their educational records. The regents' policy, including a directory of student records, is available for review at the information booth in Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Coordinator of Student Support Services, 260E Williamson Hall, (612/373-2106).

REGISTRATION QUEUE—WINTER QUARTER 1984

The registration queue on this page and the next has two parts—stage 1 for graduate, pharmacy, and public health students and seniors (124 or more completed credits) and stage 2 for juniors, sophomores, freshmen, and adult specials. Within each stage, there are name ranges—listing last names (up to 10 letters) and sometimes partial first names. To find your registration time, locate the name range for your last name. For example, if you are a junior named Chris R. Student, your name falls between Storberg, Q-Stuelke, Ro in stage 2, and you may register *on or after* 11:45 a.m. on December 7.

Stage 1—Graduate, Pharmacy, and Public Health Students and Seniors (124 or more completed credits)

	8:15 a.m.	8:45 a.m.	9:15 a.m.	9:45 a.m.	10:15 a.m.	10:45 a.m.	11:15 a.m.	11:45 a.m.
November 14	A- Anderson, L	Anderson, M- Barber, Ric	Barber, Rid- Bergquist	Bergquisu- Botero, Jor	Botero, Jos- Burke, Kath	Burke, Kati- Cartmill, B	Cartmill, C- Cizek, Will	Cizek, Wilm- Craig, Leea
November 15	Griep, Marl- Halley, Myr	Halley, Mys- Hassebrock	Hassebrocl- Heskin, Bre	Heskin, Brf- Hoof, Linda	Hoof, Lindb- Iacarella	Iacarellb- Jensen, Lau	Jensen, Lav- Johnson, Rh	Johnson, Ri- Kangas, Ray
November 16	Lucas, Nand- Manresa, An	Manresa, Ao- McDonald, S	McDonald, T- Meyer, Jean	Meyer, Jeao- Moore, Dwig	Moore, Dwih- Mutchler, J	Mutchler, K- Nerka, Dona	Nerka, Donb- Nosbush, Ma	Nosbush, Mb- Olson, Joel
November 17	Rosenblun- Sanders, Da	Sanders, Db- Schroeder	Schroedes- Sheehan, Be	Sheehan, Bf- Smith, June	Smith, Junf- Srichantra	Srichantrb- Stolow, Lau	Stolow, Lav- Swanstrom	Swanstron- Thiesse, Ke

Stage 2—Juniors, Sophomores, Freshmen, and Adult Specials

	8:15 a.m.	8:45 a.m.	9:15 a.m.	9:45 a.m.	10:15 a.m.	10:45 a.m.	11:15 a.m.	11:45 a.m.
November 18	A- Adorn, Stev	Adorn, Stew- Allman, Jen	Allman, Jeo- Anderson, C	Anderson, D- Anderson, M	Anderson, N- Anselmo, Da	Anselmo, Db- Ascher, Mic	Ascher, Mid- Bach, Barba	Bach, Barbb- Balistreri
November 21	Bjorklune- Blowers, La	Blowers, Lb- Boone, Chri	Boone, Chrj- Bowman, Phi	Bowman, Phj- Bratlie, Al	Bratlie, Am- Broas, Keit	Broas, Keiu- Brude, Rich	Brude, Rici- Bulmer, Sha	Bulmer, Shb- Butala, Joh
November 22	Connelly, N- Coy, Donna	Coy, Donnb- Cunningham	Cunninghan- Dam, Dinh Q	Dam, Dinh R- Day, Jeffre	Day, Jeffrf- Denenny, Br	Denenny, Bs- DiLoreto, L	DiLoreto, M- Doran, Maur	Doran, Maus- Druy, Samue
November 23	Fendt, Mici- Fish, Tobi	Fish, Tobj- Folden, Dav	Folden, Daw- Frandsen, J	Frandsen, K- Fritze, Joh	Fritze, Joi- Gamelin, Ma	Gamelin, Mb- Geiger, Don	Geiger, Doo- Gilbertson	Gilbertsoo- Goehner, Ma
November 28	Hanson, Les- Harrypaul	Harrypaum- Hawley, Mic	Hawley, Mid- Held, Timot	Held, Timou- Herold, Pat	Herold, Pau- Hill, Theod	Hill, Theoe- Hoffman, St	Hoffman, Su- Hong, Chial	Hong, Chiam Hsiao, Hoyt
November 29	Johnson, Sd- Jordahl, Ei	Jordahl, Ej- Kamara, Mor	Kamara, Mos- Kautzman, E	Kautzman, F- Kemper, Pau	Kemper, Pav- Kieffer, We	Kieffer, Wf- Kirchoff, S	Kirchoff, T- Kluge, Kath	Kluge, Kati- Koenen, Gin
November 30	Lapides, Wf- Larson, Sco	Larson, Scp- Leadens, Lo	Leadens, Lp- Lehnherr, L	Lehnherr, M- Leuty, Cart	Leuty, Caru- Lilja, Crai	Lilja, Craj- Litman, Gre	Litman, Grf- Lorch, Anne	Lorch, Annf- Lund, Jacqu
December 1	Mayfield, K- McDonald, M	McDonald, N- McKenzie, D	McKenzie, E- McVary, Sha	McVary, Shb- Mercier, Le	Mercier, Lf- Michaels, T	Michaels, U- Miller, Joh	Miller, Joi- Misfeldt, G	Misfeldt, H- Moline, Joh
December 2	Neuman, Kus- Nguyen, Tha	Nguyen, Thb- Nilsson, Su	Nilsson, Sv- Norton, Pau	Norton, Pav- OConnor, Ma	OConnor, Mb- Olijnek, An	Olijnek, Ao- Olson, Laur	Olson, Laus- Orcutt, Kat	Orcutt, Kau- Otterson, S
December 5	Pettersoo- Pierce, Joh	Pierce, Joi- Plocker, We	Plocker, Wf- Potami, Gia	Potami, Gib- Pritchett	Pritchetu- Quast, Mart	Quast, Maru- Ramsey, Jam	Ramsey, Jan- Reardon, Da	Reardon, Db- Reiner, Jul
December 6	Ruchie, Jim- Ruttger, Jo	Ruttger, Jp- Sagnes, Mic	Sagnes, Mid- Sandvig, Ed	Sandvig, Ee- Schabel, Ca	Schabel, Cb- Schilz, Mic	Schilz, Mid- Schneider	Schneides- Schroeder	Schroedes- Schwabe, Vi
December 7	Slagle, Kin- Smith, Kent	Smith, Kenu- Soderberg	Soderberh- Soukup, Nan	Soukup, Nao- Spry, Susan	Spry, Susao- Steele, Kar	Steele, Kas- Stevens, Je	Stevens, Jf- Storberg, P	Storberg, Q- Stuelke, Ro
December 8	Thompson, T- Timmons, Jo	Timmons, Jp- Torrey, Dan	Torrey, Dao- Treptau, Vi	Treptau, Vj- Tuckner, Ju	Tuckner, Jv- Ulrich, Sco	Ulrich, Scp- Vanderheyd	Vanderheye- Vaughan, Mi	Vaughan, Mj- Visee, Hube
December 9	Weis, Marl- Werner, Dav	Werner, Daw- Wetterstro	Wetterstrp- Whittier, J	Whittier, K Wiley, Janc	Wiley, Janf- Williams, W	Williams, X- Winker, The	Winker, Thf- Wold, John	Wold, Joho- Woods, Char

Stage 1—Graduate, Pharmacy, and Public Health Students and Seniors (124 or more completed credits)

	12:15 p.m.	12:45 p.m.	1:15 p.m.	1:45 p.m.	2:15 p.m.	2:45 p.m.	3:15 p.m.	3:45 p.m.
November 14	Craig, Leeb- Deboer, Pau	Deboer, Pav- Doran, Mich	Doran, Mici- Eikos, Step	Eikos, Steq- Ewen, Linda	Ewen, Lindb- Fletcher, S	Fletcher, T- Gafni, Abra	Gafni, Abrb- Giorgio, Lu	Giorgio, Lv- Griep, Mark
November 15	Kangas, Raz- Kettlewell	Kettlewelm- Knisely, Sa	Knisely, Sb- Kreuze, Flo	Kreuze, Flp- Langan, Ter	Langan, Tes- Le, Loc Pha	Le, Loc Phb- Lepowsky, K	Lepowsky, L- Lindig, Mic	Lindig, Mid- Lucas, Nanc
November 16	Olson, Joem- Palm, Rory	Palm, Rorz- Pepper, Tim	Pepper, Tin- Phillips, T	Phillips, U- Pribyl, Sus	Pribyl, Sut- Randahl, Gl	Randahl, Gm- Remes, Pete	Remes, Petf- Ritter, Ste	Ritter, Stf- Rosenblum
November 17	Thiesse, Kf- Townswick	Townswicl- Vance, Rebe	Vance, Rebf- Vruno, Dani	Vruno, Danj- Waye, Phyll	Waye, Phylm- Whealdon, D	Whealdon, E- Wingert, Cy	Wingert, Cz- Yeboah, Pri	Yeboah, Prj- Zzzzzzzzzz

Stage 2—Juniors, Sophomores, Freshmen, and Adult Specials

	12:15 p.m.	12:45 p.m.	1:15 p.m.	1:45 p.m.	2:15 p.m.	2:45 p.m.	3:15 p.m.	3:45 p.m.
November 18	Balistrerj- Barsness, K	Barsness, L- Bearth, Luk	Bearth, Lul- Belde, Robe	Belde, Robf- Benson, Ste	Benson, Stf- Bergman, Be	Bergman, Bf- Beseman, Ro	Beseman, Rp- Biles, Leav	Biles, Leaw- Bjorklund
November 21	Butala, Joi- Can, Fuat	Can, Fuau- Carpenter	Carpentes- Cepek, Scot	Cepek, Scou- Childers, C	Childers, D- Chu, Tuong	Chu, Tuonh- Cleary, Mar	Cleary, Mas- Cole, Kenne	Cole, Kennf- Connelly, M
November 22	Druy, Samuf- Duvick, Ric	Duvick, Rid- Egan, Colle	Egan, Collf- Ellis, Davi	Ellis, Davj- Erdall, Ric	Erdall, Rid- Esko, Rober	Esko, Robes- Ewert, Rebe	Ewert, Rebf- Farniok, Ri	Farniok, Rj- Fendt, Mich
November 23	Goehner, Mb- Grady, Keit	Grady, Keiu- Griebel, Je	Griebel, Jf- Gubash, Cha	Gubash, Chb- Ha, Thuy Mi	Ha, Thuy Mj- Hagstrom, E	Hagstrom, F- Halvorson	Halvorsoo- Hanscom, Pa	Hanscom, Pb- Hanson, Ler
November 28	Hsiao, Hoyu- Hustad, Eli	Hustad, Elj- Iverson, Sa	Iverson, Sb- Jahani, Nim	Jahani, Nin- Jensch, Dia	Jensch, Dib- Johnson, An	Johnson, Ao- Johnson, Gr	Johnson, Gs- Johnson, Le	Johnson, Lf- Johnson, Sc
November 29	Koenen, Gio- Kortenkamp	Kortenkamq- Krause, Mic	Krause, Mid- Krueger, De	Krueger, Df- Kulver, Lau	Kulver, Lav- Labatt, Joh	Labatt, Joi- Lalomia, Ka	Lalomia, Kb- Lane, Cynth	Lane, Cynti- Lapides, We
November 30	Lund, Jacqv- Lynn, John	Lynn, Joho- Madson, Gre	Madson, Grf- Malcomson	Malcomsoo- Marcos, And	Marcos, Ane- Martell, Br	Martell, Bs- Mason, Dona	Mason, Donb- Mattson, Be	Mattson, Bf- Mayfield, J
December 1	Moline, Joi- Mork, Danie	Mork, Danif- Mueller, An	Mueller, Ao- Murphy, Lan	Murphy, Lao- Nagle, Virg	Nagle, Virh- Nelson, Amy	Nelson, Amz- Nelson, Kat	Nelson, Kau- Nelson, Sco	Nelson, Scp- Neuman, Kur
December 2	Otterson, T- Palmquist	Palmquisu- Patterson	Pattersoo- Pech, Jenni	Pech, Jennj- Pergament	Pergamenu- Peters, Vic	Peters, Vid- Peterson, H	Peterson, I- Peterson, M	Peterson, N- Petterson
December 5	Reiner, Jum- Rhude, Andr	Rhude, Ands- Riley, Davi	Riley, Davj- Robertson	Robertsoo- Roessel, Ro	Roessel, Rp- Romfoe, Dua	Romfoe, Dub- Ross, Berni	Ross, Bernj- Rotolo, Mic	Rotolo, Mid- Ruchie, Jil
December 6	Schwabe, Vj- Sedlock, Jo	Sedlock, Jp- Serum, Conn	Serum, Cono- Shaw, Dana	Shaw, Danb- Shiflet, Ro	Shiflet, Rp- Siegler, Er	Siegler, Es- Simonson, L	Simonson, M- Skaj, Josep	Skaj, Joseq- Slagle, Kim
December 7	Stuelke, Rp- Sutherland	Sutherlane- Sweiven, St	Sweiven, Su- Tall, Steve	Tall, Stevf- Taylor, Mar	Taylor, Mas- Terwillige	Terwilligf- Thiesse, An	Thiesse, Ao- Thompson, B	Thompson, C- Thompson, S
December 8	Visee, Hubf- Vu, Loc The	Vu, Loc Thf- Waldon, Sar	Waldon, Sas- Wallschlae	Wallschlaf- Ward, Chris	Ward, Chrit- Wasserman	Wassermao- Weber, Laun	Weber, Lauo- Wehlage, Su	Wehlage, Sv- Weis, Mark
December 9	Woods, Chas- Yablonsky	Yablonskz- Yozamp, Ann	Yozamp, Ano- Zak, Andrew	Zak, Andrex- Zaworski, M	Zaworski, N- Zepper, Daw	Zepper, Dax- Zima, Domin	Zima, Domio- Zosel, Mary	Zosel, Marz- Zzzzzzzzzz

section 1 registration

You will be held accountable for all information contained in this *Class Schedule*. Registration is your personal responsibility. You will receive credit only for those courses in which you are properly registered. Likewise, you will be held responsible for every course for which you register unless you officially cancel. To prevent misunderstandings and errors in registration, you should register in person. If you cannot register in person, you may have somebody else register for you *only* with your *written permission and ID card*. There are no provisions for registering by mail.

☞ RECENT CHANGES ☜

If you are a continuing or returning student, the following recent changes in procedures or policy will be of special interest to you:

Registration queue, winter quarter .....p. 6
Grades, fall quarter .....p. 12
Installment Payment chart .....p. 117
Installment Payment plan .....p. 117
Late fees .....p. 118
Payroll deduction for graduate assistants ....p. 118
Retroactive cancellation, refunds for .....p. 119
Transcript fee .....p. 120
Resident tuition for graduate and professional fellows/trainees .....p. 122

Because this Class Schedule is prepared in September, scheduling changes may also occur prior to or during registration. Your registration terminal always contains the most current and accurate information. Hour and day changes are also published in the Official Daily Bulletin, a column printed in the *Minnesota Daily* and posted on campus bulletin boards. Room changes are posted on classroom doors.

STEPS IN REGISTRATION

Step 1—Find out when you will register. Queued registration for winter quarter begins November 14 and ends December 9. The first stage of the queue (November 14-17) is reserved for graduate students and seniors.

- *If you are a continuing student,* your registration time is on your Registration Status Notice and on the queue on pages 6-7. You must have all holds listed on this notice cleared in order to register. (For more information, see Holds, below.)
- *If you were not in attendance fall quarter 1983 or if you did not receive a Registration Status Notice,* check the queue on pages 6-7 to find out when you can register.

You must complete registration by December 29 to avoid a late registration fee. Students who register from January 3 through January 16 will be charged a $10 late registration fee. Students who register on or after January 17 will be charged a $20 late registration fee.

Step 2—If you are a student in the Graduate School, or if you intend to register for courses in the College of Liberal Arts, the School of Management, or the Institute of Technology, read the special instructions (beginning on p. 9) that apply to those units.

Step 3—If you are not a citizen of the United States and if you are registering for the first time at the University, read the paragraphs on initial interview and health clearance under International Students, page 9.

Step 4—Fill out a Course Request form. Several forms are included on page 4 in this schedule. You should cut out and use one of these forms; save the second form for any changes in registration.

- Check the Section Status Report (posted outside of 101 Fraser Hall, 16 Johnston Hall, 4 Mechanical Engineering, 170 Anderson Hall, and 130 Coffey Hall) to see if space is available in your limited enrollment courses (**R** precedes the course number). Remember: the Section Status Report lists only *limited* enrollment courses. If you use it exclusively to plan your program, you may overlook courses that have no limit on enrollment.
- Complete your form using the guide on page 5.

Step 5—Have your program approved by your college office, if required. Obtain any Registration Override Permits necessary for admittance to your courses (see sample below). Only approved Registration Override Permits that have been signed, filled out with your name, ID number, course, term, year, and call number, and checked for override type and authority will be accepted. *No handwritten notes will be accepted.*

ID CARD IMPRINT (If no ID card, print name, ID or Social Security Number)

REGISTRATION OVERRIDE PERMIT
University of Minnesota

This form may be used for one override only. Please check term and year, the college or course override, and the authority. For a course override, indicate the course designator, course number, section number, and call number. Sign or stamp beside the override permitted.

Term and Year: ☐ Fall ☐ Winter ☐ Spring ☐ Summer Session I ☐ Summer Session II 19____					
COLLEGE OVERRIDE	COLLEGE APPROVAL (signature or stamp)				
☐ Registration Time					
☐ College Hold					
☐ Maximum Credit					
COURSE OVERRIDE	Course Designator	Course Number	Section Number	Call Number	APPROVAL (signature or stamp)
☐ Closed Class Authorized by ☐ Department ☐ Instructor					
☐ Course Entry Requirements Authorized by ☐ College ☐ Graduate School ☐ Department ☐ Instructor					

In general, Registration Override Permits must be provided for:

- *registration for any course where # appears in the prerequisite statement;*
- *registration for any course where △ appears in the prerequisite statement* (see Symbols, Section 2, for further information);
- *registration in a limited course that has closed;*
- *registration for any courses or groups of students as described in registration instructions* for the College of Liberal Arts, the School of Management, or the Institute of Technology;
- *other courses which may be restricted by individual units, schools, or colleges.*

Step 6—Bring your Course Request form to your registration center.

- *Students in Minneapolis-based colleges go to 202 Fraser Hall* (150 Williamson Hall for students with mobility impairments).

- *Students in St. Paul-based colleges report to 130 Coffey Hall .*
- Once you turn in your Course Request form and receive a fee statement, *you will be held responsible for tuition and fees for all courses listed on your registration unless you formally cancel, even if you never attend class.*

Step 7—Pay your tuition and fees. For complete information on tuition and payment of fees, see Section 4.

HOLDS

If you have a hold on your record, you may not register or, in many cases, obtain transcripts until that hold is cleared with the office imposing the hold. A hold may be imposed for financial indebtedness to the University (e.g., for unpaid library fines, unpaid tuition or fees, or delinquent health service payments) or for disciplinary or scholastic reasons. You will usually be notified of an existing or impending hold by the department or office authorizing the hold. Notice of any hold, including the name of the department or office where it may be cleared, also appears on your Registration Status Notice. It is possible that a hold may be placed on your record *after* you receive your Registration Status Notice; you will be informed of any recent holds when you attempt to register.

To remove a hold from your record, you must first pay the debt owed, correct the scholastic deficiency, or be cleared by the Special Counseling Office. For most debts, you will receive a billing statement, which you will submit with payment at the Bursar's Office; you may present the receipted billing statement to the department or office that authorized the hold as evidence that the debt has been paid.

When you clear any hold *in advance of registration*, the unit imposing the hold must notify the Records Office (150 Williamson Hall in Minneapolis, 130 Coffey Hall in St. Paul) that the hold may be removed from your record. *If you have not cleared holds in advance*, you may be given a hold release to take with you to the Registration Center. If you are given a *permanent hold release*, you must leave the release form with the operator when you are validated to register. On occasion, units may issue *temporary hold releases*. A temporary release will allow you to register or receive transcripts only during the quarter in progress. Because a hold remains on your record until it is permanently cleared, you must show the temporary release each time you return to the Registration Center or with every request for a transcript. **If you are issued a temporary hold release, be sure it is returned to you after you have registered.**

INTERNATIONAL STUDENTS

Initial Interview—If you hold a non-immigrant visa (designated F, J, or H) and if you are registering for the first time at the University, you should go to the International Student Adviser's Office, 717 East River Road, Minneapolis, for an initial interview and an appraisal of English language requirements. Bring your passport and INS form I-94 to this interview.

Health Clearance—If you are not a citizen of the United States and if you are registering for the first time at the University, you will be required to present proof of health clearance. This health clearance is obtained at Boynton Health Service, 410 Church Street, Minneapolis, and most often requires *two* visits—the first visit for a skin test for tuberculosis and the second, 48 hours later, for evaluation of the test. If your test results are positive, you will be required to have a chest x-ray. To avoid delay, begin your health clearance at least several days before you wish to register. Note: if you have been tested elsewhere during the past year *and can bring proof of test results to Boynton Health Service*, you will not need to repeat the test.

GRADUATE SCHOOL REGISTRATION INSTRUCTIONS

NEW STUDENTS

- If you are registering for the first time in the Graduate School, obtain your registration materials in 307 Johnston Hall.

PREVIOUSLY REGISTERED STUDENTS

- Follow these steps to clear any Graduate School holds:

MAST PGM	Bring signed master's program to 316 Johnston Hall.
DOCT PGM	Bring signed doctoral program to 316 Johnston Hall.
SPEC PGM	Bring signed specialist program to 316 Johnston Hall.
THES TITLE	Bring signed thesis title to 316 Johnston Hall.
TRANSCRIPT	Bring bachelor's transcript, showing degree awarded, to 306 Johnston Hall.
PROJ TITLE	Bring project title to 316 Johnston Hall.
GPA	Bring letter releasing hold from major field director of graduate studies to 316 Johnston Hall.
INCOMPLETE	Bring letter releasing hold from major field director of graduate studies to 316 Johnston Hall.
DEAN'S HLD	Come to 306 Johnston Hall for explanation and instructions for clearing.
DOCT CAND	Come to 316 Johnston Hall for explanation and instructions for clearing.
GRAD ASST	Come to 411 Johnston Hall for explanation and instructions for clearing.

- Read this page and Section 1 of this *Class Schedule*.
- Have your adviser sign your Course Request form.
- If you are a nonresident and hold a graduate assistant appointment that entitles you to resident fee privileges, see Tuition Rates for Staff Members, Section 4, for information on how to obtain a certification of appointment slip. See Payment of Fees, Section 4, for information on how to obtain the graduate assistant payroll deduction privilege.
- Pay your fees. See Payment of Fees, Section 4, for further information.

THESIS CREDITS—Effective fall 1983 new students in the Graduate School will be required to register, *prior to receiving their degree*, for a standard number of thesis credits—16 thesis credits for Plan A Master's and M.Eng. students and 36 thesis credits for Ph.D., Ed.D., and D.M.A. students. Tuition for thesis credits will be the same as the per-credit resident Graduate School rate. Thesis credits will not be counted for the assessment of the student services fee.

STUDENT STATUS—Effective fall quarter 1983, there will be a new special registration category for students who are required to register (e.g., to satisfy requirements of an assistantship or fellowship) but who are not enrolled in courses and are not eligible for continuous registration. This student status category is a no credit, no grade registration. Tuition is equivalent to one credit charged at the resident Graduate School rate. Student status registration replaces the thesis-only and examination-only categories. For student status, register for Grad 0000. See Graduate School (in Section 2 of this *Class Schedule*) for the current call number.

OFFICIAL DOCTORAL CANDIDATES—The Graduate School will mail registration materials to students who have passed the preliminary oral examination.

MAXIMUM CREDITS—The maximum credit load for fall, winter, and spring quarters is 16. Refer questions to an Assistant to the Dean, 306 Johnston Hall.

GRADING OPTION—Two grading systems, A-B-C-D-N and S-N, are used in the Graduate School. You must designate your grading option for each course at registration. However, if either A-N only or S-N only is printed after the prerequisite statement for a course, you *must* register for that grading system.

CHANGE OF REGISTRATION—You must obtain your adviser's signature on a Course Request form for any change in registration. Changes after the sixth week require your instructor's signature as well. Changes after the last day of class will not be permitted except with the approval of the Graduate School.

COMMENCEMENT DEADLINES	*Winter 84*	*Spring 84*
Thesis Registration[1]	Jan. 19	April 5
Final Examination Report[2]	Feb. 9	May 3
Bound thesis or project[3]	Feb. 23	May 17
Degree Award Date	Mar. 17	June 9

For *all* degree candidates: Application for Degree submitted to and diploma fee assessed at the Registration Center (202 Fraser Hall, or 150 Williamson Hall for students with mobility impairments); Commencement Attendance Card filed with the Graduate School Office (316 Johnston Hall).

[1]Plan A Master's, M.Engr., Ed.D., and Ph.D. students *must* register a typed draft of the thesis (or project) with the Graduate School approximately one month before the examination.

[2]All other forms and fees must be submitted. For Ed.D., and Ph.D. students only: Thesis Release Card, Survey of Earned Doctorates, 2 copies of Thesis Abstract, microfilming forms and fee, continuous registration fee, final quarter fee. **Effective July 1, 1983, Plan A Master's and M.Eng. students must also complete the Thesis Release Card.**

[3]2 copies must be submitted to Graduate School (Plan A Master's, M.Engr., Ed.D., and Ph.D.).

If you have questions on the above deadlines, call (612) 373-5129.

DOCTORAL ORAL EXAMINATIONS—You must schedule your preliminary and final oral examinations *at least one week in advance* in 316 Johnston Hall (373-7912). These examinations will not be scheduled from the beginning of second term of summer session to the opening of fall quarter unless members of the assigned committee can be assembled without substitution.

COLLEGE OF LIBERAL ARTS REGISTRATION INSTRUCTIONS for Continuing or Previously Registered Students

BEFORE PROCEEDING WITH REGISTRATION:

- You may not register until all holds have been cleared from your record. To clear CLA holds follow these steps:

ADV APP	Your adviser must sign your Course Request form.
CLA	This usually (but not always) means a scholastic committee action. Contact your college office.
DEPT APP	Your Course Request form must be approved by your major department.
MAJ PROG	You must bring an approved program from your major department to your college office.
ORIENT MTG	Contact the office named.
PM ORIENT	Contact your college office, make an appointment, and attend this orientation.
REASSIGN	Report to 214 Johnston Hall, for a new adviser assignment. Students with 39 or more credits will be asked to declare a major.

- Read official CLA communications—you are responsible for knowing their contents:
  - All CLA students— any material available at your *Class Schedule* distribution point.
  - Honors students— (admitted to the Honors Program)— honors course listings available in 115 Johnston.
- Read the CLA instructions on these pages.
- Check the Section Status Reports in Johnston Hall, ground floor, or in your college office.

PROGRAM APPROVAL

Adviser signature: if needed you should get your adviser's approval *at least 24 hours before you register.*

Scholastic committee approval needed for:

- *registration for more than 19 credits;*
- *freshman registration* in 3000- and 5000-level courses;
- *sophomore registration* in 5000-level courses;
- *registration for courses not listed in the CLA Bulletin;*
- *late registration or late additions to your registration* (scholastic committee approval required after the tenth day of class). For further information about changes in registration, see the *CLA Bulletin* and this *Class Schedule*.
- *cancellation of a course after the sixth week of the quarter.*

  All additions and cancellations are subject to the rules that apply to the original registration.

Apply for scholastic committee approval in your college office.

College approval needed for:

- *registration for independent study, extra credit, directed study, directed research, and directed instruction*—also requires written approval from the department; forms are available in the department. *Before you register,* bring the signed approval form and your completed Course Request form to 214 Johnston Hall for college approval.

Graduate School approval needed for:

- *all registration in 8000-level courses*—must be approved by the instructor, director of graduate studies, and the Graduate School. Approval forms are available in college offices.

FOLLOW THE REGISTRATION STEPS EXPLAINED IN SECTION 1.

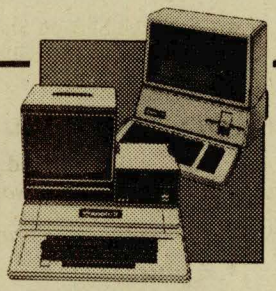
S-N REGISTRATION

- *Changes from or to S-N registration* may be made through the tenth day of the quarter. Students wishing to make such a change should follow the cancel-add procedure outlined in Section 1.
- For *sophomores, juniors, seniors,* and *adult specials,* there is no limit on the number of S-N courses in one quarter; *freshmen* may take no more than *half* of a quarter's credits S-N.
- *The number of S-N credits applying to a CLA degree is limited.* See the *CLA Bulletin* for details.
- *Courses in departmental majors* may be taken S-N only if the department has approved such a policy. Otherwise, S-N registration is allowed in all courses listed in the *CLA Bulletin.*

Continued on page 12

"TEAM'S GOT IT ALL"

COMPUTERS

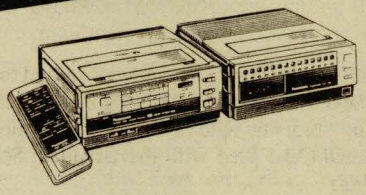


apple computer
Authorized Dealer

...AND ALL YOU NEED TO GO WITH IT!

VIDEO RECORDERS

Panasonic



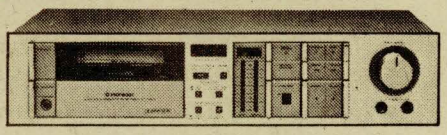
FISHER
SANYO
MAGNAVOX
HITACHI

AUDIO

PIONEER®

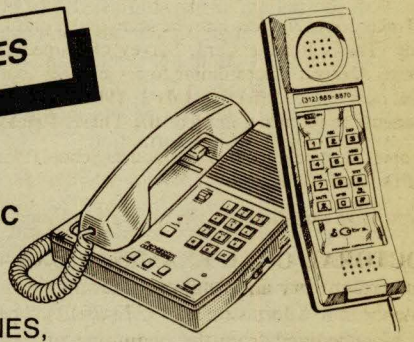
FEATURING

FISHER
AWARD
PIONEER
ATLANTIS
TECHNICS



...AND MANY OTHER BRAND NAMES!

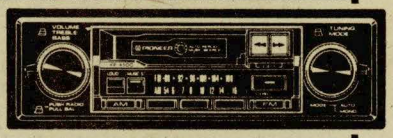
TELEPHONES



PANASONIC
COBRA
MURA

TELEPHONES,
TELEPHONE ANSWERING & ACCESSORIES

CAR STEREO



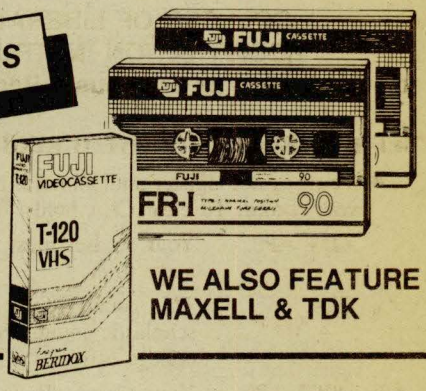
AFS/KRIKET
MITSUBISHI
CONCORD
SANYO

PIONEER®

WHY TEAM CUSTOMERS RETURN AGAIN AND AGAIN!

Simple reasons...Price, Selection, Helpful Service, 14 Day Money-Back Guarantee, 30 Day Price Protection Plan, Financing Available, TEAM Takes Trades and has 10 Convenient Twin City Locations.

ACCESSORIES



FUJI

WE ALSO FEATURE
MAXELL & TDK

TEAM ELECTRONICS

Maplewood Mall	770-5512
Ridgedale Center	544-7412
Rosedale Center	636-5147
Burnsville Center	435-7128
Southdale Center	920-4817
2640 Hennepin, Minneapolis	377-9840
455 Rice, St. Paul	227-7223
1733 S. Robert, West St. Paul	451-1765
1311 4th St. SE, Dinkytown	378-1185

Continued from page 10

- Ask in your college office about restrictions on the use of S-N credits in pre-medicine, pre-dentistry, pre-pharmacy, and all interdepartmental programs (such as American Studies, International Relations, Social Welfare, and Urban Studies). **IF YOU ARE IN A PREPROFESSIONAL PROGRAM, YOU SHOULD FOLLOW THE REQUIREMENTS OF THE COLLEGE THAT YOU PLAN TO ENTER.**

REGISTRATION INSTRUCTIONS FOR SCHOOL OF MANAGEMENT COURSES

UNDERGRADUATE COURSES

- *Undergraduate and adult special students enrolled in the School of Management* may register for 3000- and 5000-level School of Management courses on or after their queue time.
- *School of Management undergraduates* may not register for more than 20 credits without approval from an adviser in the undergraduate studies office, 225 Management/Economics.
- *Degree-seeking students who have completed at least 74 credits prior to registration* may also register during the two-stage alphabetical queue for undergraduate School of Management courses required for their degree *if they are majors in one of these specifically approved units*: College of Agriculture; College of Education, business and distributive education and park, recreation, and leisure studies; College of Forestry; College of Home Economics; College of Liberal Arts journalism, urban studies, BIS (if business prerequisites have been completed and grade point averages met); Institute of Technology computer science and industrial engineering; University College ICP (if officially admitted for a business concentration). These students should consult their advising offices for further information.
- *Other non-School of Management undergraduates and graduates who have earned at least 74 credits* may register for undergraduate School of Management courses on or after December 12. It is possible to petition for permission to register in many non-core (elective) courses that may have closed. You must file a Closed Course Petition form in 225 Management/Economics on or after December 12; *proof of 74 completed credits will also be required.*
- *All accounting courses except Acct 1024, 1025, and 3001 are reserved for accounting majors.* Students who are not accounting majors must file a Closed Course Petition form in 225 Management/Economics to obtain permission to register in accounting courses other than 1024, 1025, and 3001. Petitions from School of Management students will be accepted throughout the two-stage queue period. Petitions from others will be accepted on or after December 12, and *proof of 74 completed credits will be required.* It is not possible to petition into Acct 1024 and 1025. For Acct 1024 or 1025, check the Section Status Report daily to see if places may have opened up as other students cancel.
- *Adult special students not enrolled in the School of Management* may register for undergraduate School of Management courses on or after December 12 and must obtain an authorized Registration Override Permit from 225 Management/Economics in order to register. *Proof of 74 completed credits will be required.*

GRADUATE COURSES

- *Graduate students enrolled in the School of Management or Industrial Relations program* may register for most School of Management courses on or after their queue time. (MBA courses are restricted to students enrolled in the MBA program.)
- *Non-School of Management graduate students* may register for School of Management graduate courses **with approval** after the first stage of the queue. Approval for IR graduate courses must be obtained from the Director of Graduate Study in Industrial Relations, 537 Management/Economics. Approval for all other School of Management courses must be obtained from the Director of Graduate Studies, 334 Management/Economics.
- *Adult special students may generally not register for graduate courses.* Any exceptions must be approved by the Director of Graduate Study in Industrial Relations, 537 Management/Economics for IR courses or by the Director of Graduate Studies, 334 Management/Economics for all other School of Management graduate courses.

REGISTRATION INSTRUCTIONS FOR INSTITUTE OF TECHNOLOGY COURSES

- Registration for more than 19 credits requires college approval. Apply for this approval in 105 Lind Hall *before you register.*
- If you are **not** enrolled in the Institute of Technology you may not register for any engineering course without an approved and signed Registration Override Permit from the department offering the course.

THE FIRST WEEK OF CLASS

- Winter quarter classes begin Tuesday, January 3.
- *You must attend the first class meeting of every course in which you are registered,* unless you have already notified your instructors or the appropriate department offices of your intention to be absent. Registered students who miss the first day without prior instructor approval may forfeit their places in the class to other students. Students who wish to remain enrolled in classes from which they have been absent the first day without permission should contact their instructors as soon as possible; instructors have the right to deny such students admission if their classes are full. Registered students must officially cancel any classes to which they are thus denied admission.
- *If you wish to gain admission to a closed class,* you should first seek permission from the main office in the department offering the course, where you may be put on a waiting list or be referred to the instructor for permission to register for the course. Students who are on a waiting list or who need the instructor's permission to register should attend the first class meeting to see whether the instructor will admit any more students. To obtain space in a closed course, you must have a signed Registration Override Permit from the instructor.
- *If you are 62 or older and are eligible for tuition-free registration through the Senior Citizen Education Program,* you may register on Wednesday, January 4 for classes in which spaces are still available. Call 376-1680 for more information.
- *Fall quarter grades are available January 3* from 8 a.m. to 4 p.m. in the Armory Gymnasium for students registered in the College of Liberal Arts, College of Education, General College, University College, School of Nursing, Graduate School, and Institute of Technology. Grades not picked up on January 3 can be obtained in 202 Fraser Hall for one week beginning January 10. Grades for students in other colleges will be distributed through college offices. **You must show identification to receive grades.**

Continued on page 14

THESIS

COPYING 6¢ PER COPY

75% RAG BOND PAPER 7¢

BINDING $8.75 PER COPY

- MEETS ALL GRAD SCHOOL STANDARDS
- NO ADDITIONAL CHARGE FOR COLLATING
- ALL IN ONE CONVENIENT LOCATION
- FREE PARKING
- INTER-CAMPUS BUS SERVICE
- PAMPHLET BINDING $5.00
- ON CAMPUS DELIVERY

HOURS:

7 a.m.-noon
12:30 p.m.-3:30 p.m.
Call 373-2843
for complete information

University of Minnesota
University Bindery
P & GA Building, Room 180
2818 Como Avenue S.E.
Mpls, Mn. 55414

Explore the history and future of electronic images . . .

Video Theory and Criticism

10 Thursdays 7-10 p.m.
Beginning January 5

This course will explore the variety of video genres – documentary, performance, installation, conceptual and expressive – from a number of critical positions and will examine the relationship of these genres and arts. Fees: Members – $81.

Performance Art

4 Sundays 1-4 p.m.
Beginning February 19

This workshop will give videomakers the opportunity to explore the nature and origins of performance art. Areas to be covered will include actor/director relationships, blocking actors for the camera, exploration of scripts from page to performance, and integration of video with live performers. Prerequisite: Video Primer or Video Production I. (Prerequisite may be waived for qualified students. Inquire at Registration.) Fees: Members – $63.

university community video

425 Ontario Street S.E.
Minneapolis, MN 55414

For more information, call: 376-3333

The Institute for Paralegal Training works. So do its graduates.

Four months of intensive training at The Institute for Paralegal Training can add market value to your college degree.

A sampling of jobs our graduates hold:
LEGISLATIVE RESEARCHER, REAL ESTATE MARKETING DIRECTOR, MUNICIPAL BOND PARALEGAL, ESTATES & TRUSTS LEGAL ASSISTANT, ENERGY SPECIALIST, PUBLIC ADVOCACY ASSISTANT, ANTITRUST SPECIALIST, CORPORATE BENEFITS PLANNER, ENVIRONMENTAL LAW SPECIALIST

- Through our corporate contacts, our national search team and our computerized placement service, we have placed over 5,000 of our graduates in law firms, banks and corporations nationwide.
- You can specialize in one of seven areas of the law.
- All courses include training in computer applications to legal practice.
- If we cannot secure a job for you in the city of your choice, we provide a substantial tuition refund.
- You can study in Philadelphia or in Houston.
- Financial aid and housing are available.

To learn more, **call collect: (215) 567-4811**. Or, return the coupon.

THE INSTITUTE FOR PARALEGAL TRAINING PHILADELPHIA HOUSTON

Save this:
We'll be at your campus on April 10.
Contact your placement director to see our resource book on law-related careers and to arrange for a group presentation or a personal interview.

DUMN
Mail this coupon to:
The Institute for Paralegal Training,
1926 Arch Street, Philadelphia, PA 19103

Please send a free copy of your catalogue.
☐ Philadelphia ☐ Houston

Name_____
Address _____
City _____ State _____ Zip _____
College_____ (yr. of grad.)
Phone _____
(present phone) (home phone)

Continued from page 12

CHANGE OF REGISTRATION

Subject to certain limitations, you may add or cancel classes or may change grading systems. Course cancellations and changes to or from S-N grading are generally allowed without written permission during the first two weeks of the quarter or before. Addition of a course after the first five days, however, generally requires the instructor's signature on your Course Request form. For specific college policies regarding changes of registration, see your college bulletin or check with your college office.

Graduate students must obtain their adviser's signature on a Course Request form for any change in registration. Changes after the sixth week require the instructor's signature as well. Changes after the last day of class will not be permitted except with the approval of the Graduate School.

Note: If you decide to stop attending a class or classes for which you are registered, you must officially cancel by filing an approved Course Request form. *Failure to attend class does not by itself constitute cancellation.* Unless you officially cancel, you will be responsible for full tuition and fees.

If you decide before the quarter begins not to attend, cancel officially before the first day of classes. During the quarter, you should cancel as soon as you stop attending classes. While cancellation after the end of the quarter is allowed, it is not recommended. A complete or partial refund of tuition and course fees through retroactive cancellation is only possible for one calendar year after the end of the quarter. After the calendar year retroactive cancellation is still possible, but you will not receive any refund of paid tuition and fees and you will not be released from your obligation for all unpaid tuition and fees. (For more information on refunds, see Section 4.)

If you fail to cancel any courses for which you have registered but not paid, you will receive billing statements from Student Accounts Receivable for your tuition and fees, including a $10 late payment fee and a $10 installment payment fee. Unless you make full payment by Friday of the fifth week of the quarter, you will be charged an additional $20 late payment fee and a hold will be placed on your record.

To change your program or grading system, you should:

- Fill out a Course Request form. Use the extra form in this schedule or obtain a form from your college office or Registration Center. Check the box indicating cancel/add and note the number of credits you will have after this change. If you are cancelling *all* courses, check the appropriate box.
- Obtain instructor, adviser, and/or college office approval if required.
- Turn in the Course Request form at your Registration Center, where you will get a revised fee statement. In Minneapolis, you must report to your college validation station before reporting to the registration terminal. Remember that each fee statement you receive has its own due date. Later fee statements do not extend the due date(s) on earlier fee statements.

There is no additional tuition charge when any course cancellation is balanced at the same time by a course addition, i.e., an addition of credits equal to the number of credits being cancelled *or* a cancellation and course addition that keeps the total number of credits within the 14-18 credit plateau (*where applicable*). For example, if you are registered for 12 credits and cancel a 5-credit course *while at the same time* adding a 5-credit course, you will not be charged additional tuition. Likewise, if you are registered for 15 credits and later cancel a 4-credit course *while at the same time* adding a 5-credit course, your tuition and fees (excluding course fees) will remain the same, *if you qualify for the plateau,* because your total number of credits after cancel/adding will remain within the 14-18 credit plateau.

Additional tuition is charged on a per-credit basis for all changes in registration that increase your credit load, *except for those credits that fall within the 14-18 credit plateau (where applicable).* For example, if you add a 4-credit course, increasing your credit load from 12 to 16 credits, you will be charged for your 13th and 14th credit, but will not be charged for your 15th and 16th credit, *if you qualify for the plateau,* because they fall within the plateau.

Refunds are issued on a per-credit basis for all changes in registration that decrease your credit load, *except for those credits that fall within the 14-18 credit plateau (where applicable).* For example, if you are registered for 14 credits and cancel a 3-credit course, lowering your credit load to 11, you will receive a refund for 3 credits. However, if you are registered for 18 credits and cancel 3 credits, lowering your credit total to 15, you will *not* be issued a refund, *if you qualify for the plateau,* because your total number of credits remains within the plateau.

All refunds are based on the refund rate that applies to the effective date of the cancellation. For additional information on the 14-18 credit tuition plateau and refunds, see Section 4.

WITHDRAWAL FROM THE UNIVERSITY

If you intend to withdraw from the University, you must officially cancel all courses in which you are registered. Before leaving, you must turn in all University property such as library books; military, athletic, or band equipment; laboratory materials; locker keys or locks, and athletic tickets. Veterans must also notify the Certification Service, 155 Williamson Hall. A 100% refund of tuition and course fees after the first day of class requires a Final Attendance Verification form for each course (signed by the instructor) or a signed statement from the instructor for each course certifying that you have never attended class (note: these statements *must* be written on official University stationery).

GRADUATION

For March graduation you must file a form called "Application for Degree" at the Registration Center in 202 Fraser Hall in Minneapolis (150 Williamson Hall for students with mobility impairments, or 130 Coffey Hall for St. Paul students). Most colleges expect their students to apply at least two quarters before they intend to graduate. You should check with your college office regarding the last date for applications. For winter quarter graduation, a graduation fee is due February 6 if you are an undergraduate or if you are enrolled in a professional program (e.g., M.Ed.), and February 9 if you are registered in the Graduate School. Failure to pay the fee by the due date listed on the graduation fee statement will make it impossible for you to graduate before the next succeeding quarter.

If you expect to graduate anytime within the year (through August 1984), file your formal Application for Degree now. If you are a graduate student, you should file as soon as your application is available; the Graduate School distributes the form to Ph.D. and Plan A master's students at the time of thesis registration and to Plan B master's students when they pick up their final examination form. For further information on Graduate School commencement deadlines, see the Graduate School registration instructions in this *Class Schedule.*

Continued on page 16



Could You use up to $4,000.00 for TUITION ASSISTANCE ??

The Minnesota Army National Guard has such a program available on a limited basis — first come, first serve. The Guard can also repay Student Loans — up to $10,000!

Find out more — call 1-800-652-9032 in Minnesota.

Continued from page 14

ADMINISTRATIVE OFFICES

Registration services are available at the following locations:

- **Registration Center**
  202 Fraser Hall, Minneapolis
  Monday-Friday 8:15-4:15 (during registration)
  Monday-Friday 8:30-3:30 (after 2nd week of quarter)

  For turning in scholarships, registration materials, cancel-add materials, and Application for Degree forms and obtaining fee statements

- **Registration, Student Records, and Scheduling**
  150/155 Williamson Hall

  Student Relations (150)
  Monday-Friday 8-4:15
  376-1680 (9-12, 1-1:30 only)

  For assistance with individual student record problems, questions; registration services for students with mobility impairments; name and address changes; student loan deferments

  Certification Service (155)
  Monday-Friday 9-3:30

  For certification letters and Veterans certification

  Transcript Quick-Service (155)
  Monday-Friday 9-2:30

  For mailed copies of official transcripts ($2 charge) and quick-service for unofficial copy of student records (limit one copy per day)

- **St. Paul Admissions and Records**
  130 Coffey Hall
  Monday-Friday 8:15-4:15 (during registration)
  Monday-Friday 9-3:30 (after 2nd week of quarter)

  Registration Service

  For turning in registration materials and cancel-add materials, and obtaining fee statements

  Student Contact Area

  For registration services for students with disabilities
  For assistance with individual student record problems and questions; for certifications; for turning in Application for Degree forms and name and address changes
  For mailed copies of official transcripts—$2 charge (quick-service for unofficial copy of student records available in 190 Coffey Hall from 9-2:30)

- **Student Accounts Receivable**
  B1 Fraser Hall
  Monday-Friday 8:30-3:30
  130 Coffey Hall
  Monday-Friday 10:30-12, 1-3:15

  For obtaining refund vouchers, processing payroll deductions, obtaining fee payment verifications, receiving assistance with student billing problems, questions (concerning only quarters from spring 1982 on)

- **Bursar's Office**
  145 Williamson Hall, East Bank
  Blegen Hall ground level, West Bank
  107 Coffey Hall, St. Paul
  Monday-Friday 8:15-3:30 (West Bank closed 12-12:45)

  For paying tuition and fees, cashing refund vouchers and checks (ID card and paid fee statement necessary for check cashing), purchasing deposit cards and ID card authorizations

- **ID Card Office**
  248 Williamson Hall
  Monday-Friday 8-12, 1-4:15

  For obtaining new ID cards (open through the noon hour during registration)

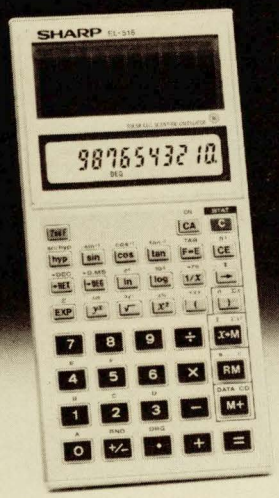
- **Information Booth**
  first floor concourse,
  Williamson Hall

  For obtaining college bulletins, maps, campus bus information (route 13 and MTC routes 52 only), and miscellaneous publications and information; lost student ID cards turned in; no *Class Schedules* issued

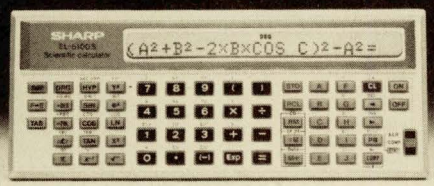
Continued on page 17

ANOTHER TECHNOLOGICAL ADVANCE FROM SHARP.

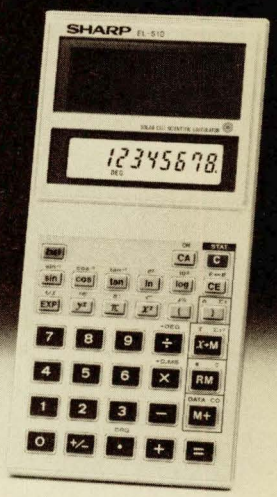
EVERY STUDENT BODY WANTS A SHARP MIND.



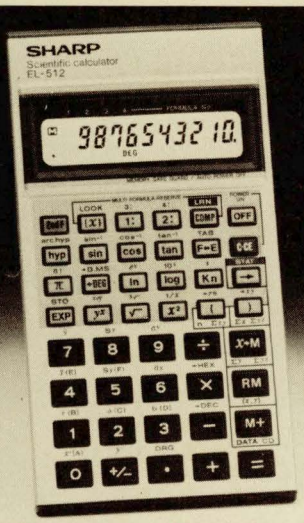
EL-515 T. Solar powered. Never needs batteries. With 50 scientific and statistical functions. 10-digit display. With wallet.



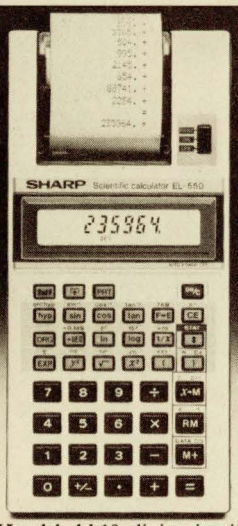
EL-5100 ST. Full-formula display. Stores up to 80 program steps. 10 data memories with memory retention. And 24-digit dot matrix alphanumeric display. With wallet.



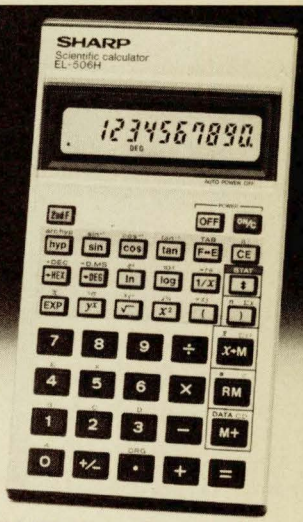
EL-510 T. Solar powered. Batteries never required. With 35 scientific and statistical functions. 8-digit display. Wallet included.



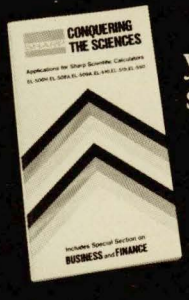
EL-512 T. Programmable calculator with 61 scientific functions. Stores up to 128 program steps. With wallet.



EL-550. Hand-held 10-digit scientific calculator/printer. 46 scientific functions. Complete with wallet and paper rolls.



EL-506 HT. Highly featured calculator with 48 scientific and statistical functions. 10-digit LCD readout. With wallet.



It's no wonder today's student body is Sharp-minded. Because Sharp offers you a wide range of scientific calculators that fit every student need. And every student budget.

There are economical Sharp scientifics with 25 functions. And others with as many as 61. There are Sharp solar-powered calculators that never need batteries. And Sharp pocket-printers that keep records. Plus a Sharp scientific with full-formula display.

This year, Sharp adds still another unique feature to its line of scientific calculators: The Sharp "Applications Textbook." It's an easy-to-understand instruction manual that keeps student and calculator in top form. Student body. Sharp mind. Look out world.

SHARP

FROM SHARP MINDS COME SHARP PRODUCTS

Sharp Electronics Corp., 10 Sharp Plaza, Paramus, NJ 07652

MAYBELLINE INTRODUCES THE

SHINE



FREE™

LOOK



Now you can free yourself from the shiny look of oily skin. Maybelline's new Shine Free™ cosmetics contain special oil control ingredients to keep you looking shine free for hours and hours. Every Shine Free cosmetic ... powder blush, cover stick, translucent pressed powder, and makeup — stays on without streaking or caking to leave you looking beautifully natural. After all, you were meant to be Shine Free!

New Shine Free™ Oil Control Cosmetics from Maybelline®

©1983 Maybelline Co.

41100 104524

STORE COUPON

50¢

SHINE FREE™ 50¢ OFF

Translucent Pressed Powder

Makeup

Powder Blush



Cover Stick

50¢

DEALER: To receive reimbursement of 50¢ plus 7¢ for handling on a consumer's purchase of any full size Shine-Free™ Cosmetic Product by Maybelline, mail this coupon to Maybelline Co., P.O. Box 1510, Clinton, Iowa 52734. Invoices evidencing purchase of sufficient stock to cover coupons presented for redemption must be shown on request. Failure to do so will void applicable coupons. Coupons transferable only to Maybelline. Use of this coupon not in compliance with the terms hereof will void applicable coupons. Sales tax must be paid by consumer. Void where prohibited, taxed or restricted. Cash value is 1/20th cent. Facsimiles or copies are void. Good only in U.S.A. Limit one coupon per purchase.

COUPON EXPIRES: December 31, 1984

Maybelline®

Frequently Called Numbers

name	area code	number	name	area code	number
ABC			**MNO**		
DEF			**PQR**		
GHI			**STUV**		
JKL			**WXYZ**		



FEED YOUR CURIOSITY

Satisfy your yen for information, news and entertainment. Get the latest on Sports. Business. Personalities. Science. Personal finance. World events.

Whatever your taste, we've got the fare you're looking for—in top quality magazines from Time Incorporated. At the LOWEST PRICES AVAILABLE ON CAMPUS!

Use the 75% Savings Card in this issue. Or call 1-800-621-8200 (in Illinois 1-800-972-8302) and save up to 75% OFF the cover price!

SAVE 74%! TIME

Colorful, credible, captivating review of the world's week from the #1 newsmagazine. Just 45¢ an issue (instead of the 87¢ regular subscribers pay or the $1.75 cover price). T79976

SAVE 75%! FORTUNE

Fascinating way to get a head start in developing business savvy. Just 75¢ an issue (instead of the $1.38 regular subscribers pay or the $3.00 cover price). F79730

SAVE 40%! MONEY

Plan on making money? Learn the secrets of investing, spending, saving and enjoying it. Just $1.50 an issue (instead of the $2.00 cover price). M3EBC8

SAVE 74%! SPORTS ILLUSTRATED

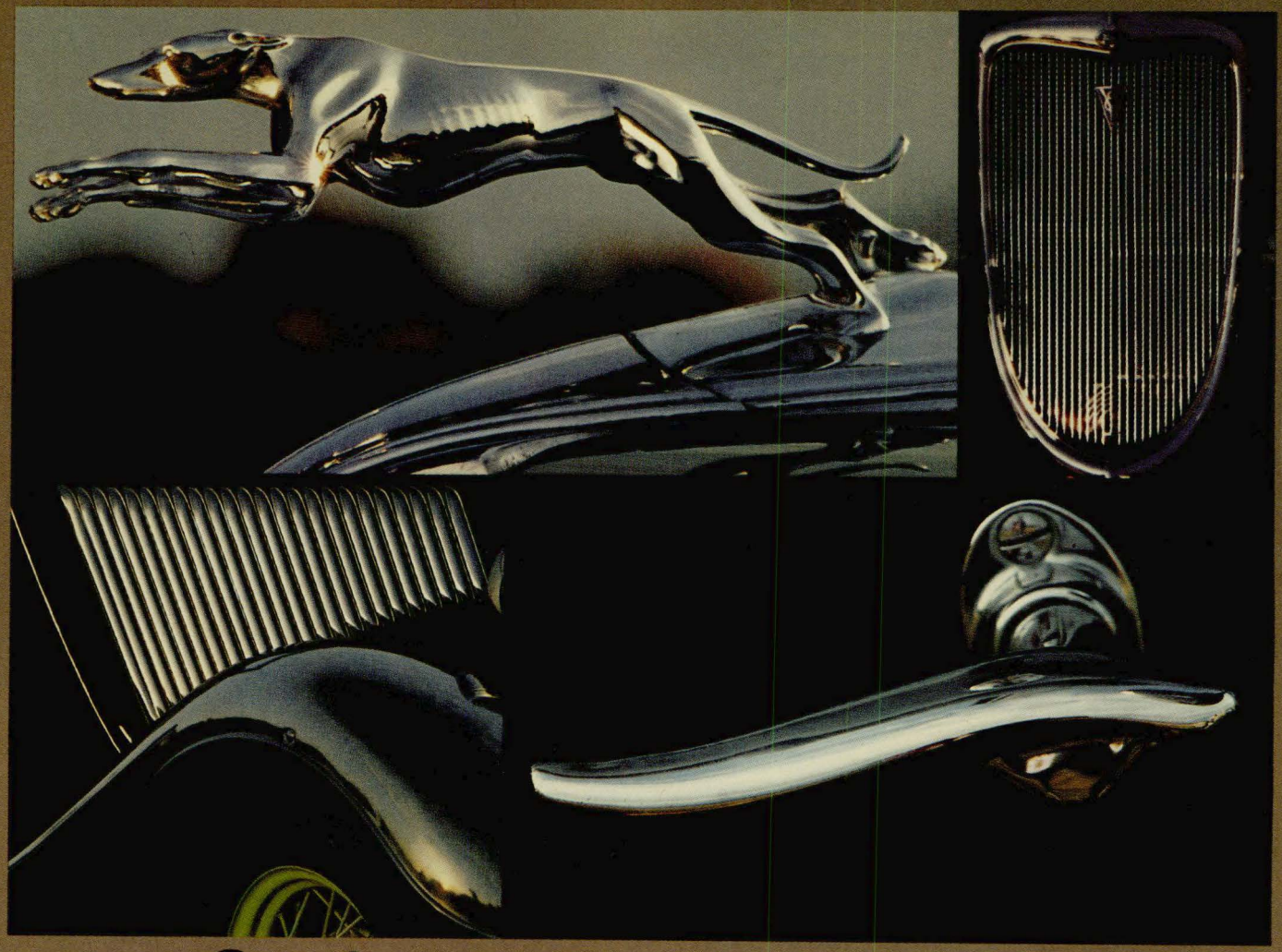
Packed with color-action photos and thrilling sports coverage. Just 45¢ an issue (instead of the 87¢ regular subscribers pay or the $1.75 cover price). S79998

SAVE 48%! PEOPLE

Star-studded entertainment and habit-forming fun every week. Just 69¢ an issue (instead of the 87¢ regular subscribers pay or the $1.25 cover price). P49521

SAVE 37%! DISCOVER

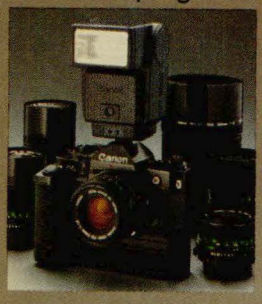
A readable and exciting exploration of science's most intriguing new discoveries and inventions. Just $1.50 an issue (instead of the $2.00 cover price). D38274



See beyond the ordinary.

The Canon A-1 is no ordinary camera. It is a creative tool. Conceived as the ultimate in automatic SLR's, the A-1 is unsurpassed in providing exposure control options. There are six, to be precise, allowing you to select the one best suited to your subject. Choose a shutter speed to control and interpret action. Select a lens opening and blur away a background.

In the programmed mode, the A-1 makes both of these decisions for you so you can really concentrate on your subject. You just focus, compose and shoot.





And create. A bright digital display in the viewfinder shows the speed and aperture being selected in any automatic mode.

The A-1 provides the versatility to match your imagination. Add any of over fifty Canon FD lenses. A Canon Speedlite for automatic flash. You can shoot at up to five frames-per-second with the optional Motor Drive MA. But most important, the A-1 does everything automatically. Freeing you to shoot a special subject in your own special way, and make a picture that nobody else saw.

The Canon A-1. It's half of what you need to turn photography into fine art.



The Official 35mm Camera of the 1984 Olympic Games

Canon® A-1

Canon USA, Inc., One Canon Plaza, Lake Success, New York 11042
140 Industrial Drive, Elmhurst, Illinois 60126 / 6380 Peachtree Industrial Blvd., Norcross Georgia 30071
123 Paularino Avenue East, Costa Mesa, California 92626 / 2035 Royal Lane, Suite 290, Dallas, Texas 75229
Bldg. B-2, 1050 Ala Moana Blvd., Honolulu, Hawaii 96814 / Canon Canada, Inc., Ontario

© 1983 Canon USA, Inc.

Continued from page 16

section 2 courses

HOW TO USE THIS SCHEDULE

CALL NUMBER—This six-digit number appears to the left of each course or each section of a course. You must use the course numbers and these *specific call numbers* when you fill out your Course Request form.

PREREQUISITES—In order to enroll in some courses, you must either complete or concurrently enroll in certain other courses or possess some particular qualifications or class standing. These requirements, known as prerequisites, are listed inside the parentheses after the course titles. If no prerequisites are listed, there are usually none, except for the class standing requirement indicated by the course number.

- Class standing requirements, unless otherwise noted, are indicated by course numbers as follows:

0000 to 0998	noncredit courses
1000 to 1998	introductory courses—primarily for freshmen and sophomores
3000 to 3998	intermediate courses—primarily for juniors and seniors, but sometimes open to others with a C average overall and in prerequisites
5000 to 5998	advanced courses—open to juniors, seniors, and graduate students
8000 to 8998	graduate courses—open to graduate students only

- When courses that must be taken in sequence are prerequisites, only the last course of the sequence is listed.
- When no course designator precedes the course number listed as a prerequisite (e.g., 'prereq 3221'), that course is in the same department as the course being offered. Likewise, a prerequisite reading "6 cr" means 6 credits in courses offered by the same department.
- Work equivalent to a prerequisite course (having either the same content or requiring the same competence) is ordinarily accepted in lieu of that prerequisite. An instructor may, in some instances, waive prerequisites at his or her discretion. See your college bulletin for further information.
- A comma always means "and."

In addition to the prerequisites listed above and expressed in the symbols listed below, departments and colleges may use the registration system to help place certain categories of qualified students into courses or sections on a priority basis (seniors, majors, etc.). **If you meet all stated prerequisites for the course, including class standing, you may also need to meet other qualifications established at the time of registration.** For this reason, it is helpful to list both first *and* second course choices on your Course Request form.

SYMBOLS—The following symbols are used throughout this schedule:

- † All courses preceding the dagger must be completed before credit will be granted for any quarter of the sequence.
- § Credit will not be granted if the equivalent course listed after the section mark has been taken for credit.
- ¶ Concurrent registration is allowed (or required) in the course listed after the paragraph mark.
- # Registration Override Permit, completed and signed by the instructor, is required for registration.
- △ Registration Override Permit, completed and signed by the department, division, or school offering the course, is required for registration.
- **E** Courses open to Evening Master of Business Administration students *only*.
- **H** Honors course.
- **R** The letter **R** preceding the course number indicates limited enrollment.
- ★ This symbol designates a part of a course (e.g., lecture) for which a student is automatically registered when registering for a corresponding part of the same course (e.g., lab).
- ♦ This symbol will precede the call number of a course with multiple section types (e.g., LECT, LAB, REC) without automatic registration. The student must select and register for one of each of the parts of the course.

NUMBER OF CREDITS—The number of credits approved for a particular course or section of a course appears at the end of the time and room information for each course or course section: e.g., 1015-1100 MWF, BlegH 450, Brown, *4 cr.* You must register for the number of credits indicated; you may not, for example, take a 4-credit course for either more or fewer than the approved 4 credits. A few courses are offered for a variable number of credits, as indicated by the notation "ar cr" (credits arranged) or by an optional-credit notation (e.g., "3-4 cr"). In such cases, you may register for the number of credits agreed upon by you and the instructor.

REGISTERING FOR TOPICS COURSES—A number of departments offer "topics" courses. A "topics" course usually is assigned a single course number (e.g., 3910), but subjects, course titles, and number of credits may change from quarter to quarter. Besides the usual prerequisites, there sometimes are limitations on registration for these courses. A student usually may not register for the same topics course (number) more than a certain number of times over a series of quarters. In the course listing, this restriction appears as part of the prerequisite information inside the parenthesis: "(max 12 cr; prereq . . .)," for example, means a student's total registrations in the course may not exceed a maximum total of 12 credits.

X AND Y REGISTRATION—Most colleges permit X and Y registration (directed or independent study) in their regular courses. Through X registration, you can earn extra credits (with a limit of 3) in a course by arranging with the instructor to complete additional work or explore a subject in more depth. Through Y registration, you can complete a course by studying independently under the instructor's guidance without attending class. Regular fees, deadlines, and grading policies apply, and you must register only for the number of credits approved for the course. Requirements for completing the course must be agreed upon by you and your instructor.

Both types of registration require instructor and department approval. **When you receive this approval you must also obtain a call number with which to register for the course** (call numbers for X and Y registrations are not available at the Registration Centers). For further information, check with your college or department office.

AUDITING COURSES—Most colleges permit auditing in their courses. As an auditor, you enroll in, pay tuition and fees for, and attend classes, but do not complete assignments or take examinations. You receive no credit for the course, but it will be placed on your transcript with the symbol V (Visitor) to indicate your special registration status. Although you do not receive credit, the credit value for the course counts in determining the credit total for the student services fee.

Colleges may have additional requirements for you to meet before you register as an auditor. It may be necessary to have approval from your adviser, instructor, and/or special scholastic committees. Many colleges do not permit registration as an auditor in required courses. Nor do colleges generally allow you to repeat an audited course for credit. For further information, check with your college office.

To register as an auditor once you have received any necessary approval, list the course on your Course Request form and place a V in the grading option column for that course.

GRADING OPTION—If either A-N only or S-N only is printed after the prerequisite statement for a course, you must register for that grading system. If no grading system is listed, you may often register for either A-N or S-N grading. For information on courses offered for S-N grading and any degree or quarter limits on credits taken under this system, consult both your own college office and the college offering the course. **You may not change your grading option after the second week of classes.**

HOURS AND DAYS—This schedule lists both a starting time and an ending time for all classes, using a 24-hour clock. Refer to the table below for help in interpreting these times. To convert any time between 1:00 p.m. and 12:00 midnight from standard time to the 24-hour clock, add 1200 (for example, 3:45 p.m. + 1200 = 1545). To convert from the 24-hour clock to standard time, subtract 1200 (for example, 1615 – 1200 = 4:15 p.m.).

24-hour clock	0800	0900	1000	1100	1200	1300
Standard Time	8:00 a.m.	9:00 a.m.	10:00 a.m.	11:00 a.m.	12:00 noon	1:00 p.m.
24-hour clock	1400	1500	1600	1700	1800	1900
Standard Time	2:00 p.m.	3:00 p.m.	4:00 p.m.	5:00 p.m.	6:00 p.m.	7:00 p.m.

Classes in Minneapolis usually start 15 minutes after the hour. In St. Paul they usually start on the hour. In both Minneapolis and St. Paul, classes continue for 45 minutes after the start time.

The University Senate approved the above 45-minute class periods with the understanding that classes may continue for 50 minutes after the starting time whenever students' schedules permit.

There are also standard approved 75-minute periods, usually meeting on Tuesday and Thursday. In Minneapolis, times for these classes are 0815-0930; 0945-1100; 1115-1230; 1245-1400; 1415-1530; 1545-1700. Corresponding St. Paul times are 0800-0915; 0930-1045; 1100-1215; 1230-1345; 1400-1515; 1530-1645.

Days of the week are abbreviated M, T, W, Th, F, and S.

NO TIME OR PLACE—When hours and days or the place of meeting are missing, consult the instructor or department offering the course.

BUILDING ABBREVIATIONS AND CAMPUS MAPS—Refer to Section 3 for complete building names, locations, and accessibility information.

CHOICE OF CLASSES—When section numbers precede the hours and days listed, you may choose the section in which you wish to enroll (see the first example below). Many courses have a choice of laboratory or recitation periods, but only a single lecture period, in which all students taking the course are automatically registered (see the second example below). If laboratory or recitation sections are distributed under different lecture hour headings (as in the third example below), then your choice of laboratory or recitation hours determines which lecture you are automatically registered in. Occasionally there will be a choice of both lecture and laboratory or recitation periods. If the sections are listed after two or more lecture hour headings (as in the fourth example below), then you must register for and attend any one lecture and any one lab or recitation section.

Example 1

315330—1 0815-0900 TThS
115331—2 0915-1000 MWF
015332—3 1115-1200 TThS

Example 2

★LECT 1015-1100 MWF
815333—1 LAB 1215-1400 M
615334—2 LAB 1215-1400 W

Example 3

★LECT 0915-1000 T
415335—1 LAB 1015-1200 T
215336—2 LAB 1015-1200 Th
★LECT 0915-1000 Th
115337—3 LAB 1315-1500 T
645742—4 LAB 1315-1500 Th

Example 4

◆837302—1 LECT 0815-0900 T
◆637303—2 LECT 0915-1000 Th
437304—1 REC 1015-1200 T
237305—2 REC 1315-1500 T
137306—3 REC 1015-1200 Th
937307—4 REC 1315-1500 Th

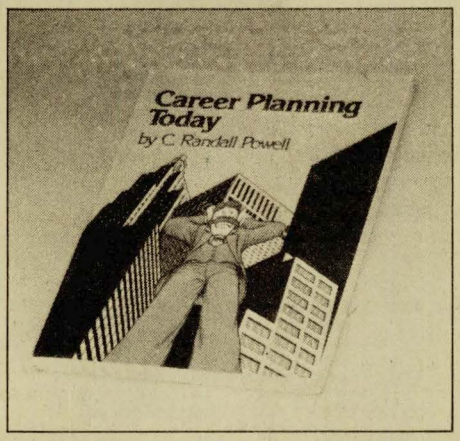
COLLEGE BULLETINS—Courses are listed in this *Class Schedule* with a minimum of information—title, prerequisites, day and time, location, and sometimes instructor. For more information about a course, you should consult your college bulletin, where course listings include descriptions of course content. You should not choose your classes on the basis of title alone.

Most college bulletins are available from the information booth in Williamson Hall; some are available only in college offices. You may also consult bulletins outside the Williamson Hall information booth, outside the Student Ombudsman Service on the first floor of Johnston Hall, in the libraries, and in college and department offices, but these copies may not be removed.

COURSE CHANGES—Your registration terminal always contains the most current and accurate information. Hour and day changes are also published in the Official Daily Bulletin, a column printed in the *Minnesota Daily* and posted on campus bulletin boards. Room changes are posted on classroom doors.

SECTION STATUS NOTICE—The Section Status Report (closed course list) provides information on the number of spaces available in limited courses and sections (**R** precedes the course number). These reports are posted on a daily basis throughout the registration period outside the following locations: 101 Fraser Hall, 16 Johnston Hall, 4 Mechanical Engineering, 170 Anderson Hall, and 130 Coffey Hall. Check these reports before you fill out your Course Request form.

HELP WANTED?



YOU'VE GOT IT.

The career that truly satisfies and fulfills you is more than a job that earns you a living–it comes from enjoying the work you have chosen. Career Planning Today is designed to set you on course, and keep you moving ahead on a career path that will be both rewarding and satisfying.

Not just another job hunting book.
Career Planning Today is addressed to everyone who seeks a managerial, technical or professional position. It is built upon the sound career planning concepts of assessment, exploration and job search. It shows you how to take a meaningful look at yourself and your range of job options.

You'll find Career Planning Today is a practical guide, logically organized, and written in an easy reading style with useful graphics. Here are proven concepts, strategies and techniques to dispel job search confusion, remove chance luck and make the employment system work to your advantage.

The usefulness of Career Planning Today extends far beyond the one-shot job hunt in the scope and depth of its coverage.

Be in charge of your career.
The right start is just the beginning. It is never too early or too late to plan your career. Remember, career planning is a continuous activity that periodically interfaces with serious job search activity. That's why freshman to graduate student to experienced professional can all benefit from Career Planning Today.

Here is an outline of the invaluable guidance and practical step-by-step advice you'll find in its pages.

- **Part I: Planning Your Career.** The search for employment–goal setting–self assessment–exploring options–work environments–management careers–career decision making.

- **Part II: Organizing Your Career.** Finding and getting the job–search systems and strategies–marketing and creative searches–resume preparation–cover letters–interviewing techniques and presentations–employment correspondence–continuing education.

- **Part III: Controlling Your Career.** Career management–planning and organizing toward long-term career goals.

As you'll see, the book is action-oriented–filled with exercises, projects, examples, tools, strategies and techniques–all explained in detail. What's more, Career Planning Today is market-oriented to the realities of today's employment climate, and shows you how to maximize your educational investment into a positive return.

Your authoritative resource.
Career Planning Today is used in hundreds of college career planning courses and job search seminars and workshops. The author, Dr. C. Randall Powell, is a nationally recognized expert and Director of Placement at Indiana University, one of the largest college placement programs in the nation.

The book totals 308 pages, measures 8½ x 11 and comes in a useful paperback format. The cost: only $11.95 including postage. Send the coupon or write: Career Communications, P.O. Box 1481, Bloomington, IN 47402.

Career Communications, Inc.
P.O. Box 1481
Bloomington, IN 47402

Please send _____ copy (copies) of Career Planning Today at $11.95 per copy, including postage. Enclosed is $ _____. (UMN-F)

Name _____
Street _____
City _____
State _____ Zip _____

ACCOUNTING (Acct)
Management

R1024 Principles of Financial Accounting I
(§1050; prereq 3rd qtr freshman) (A-N only)
031577 –1 0815-0900 MWF, BlegH 110, 3 cr
631579 –2 0815-0900 MWF, BlegH 125, 3 cr
831581 –3 0815-0900 MWF, BlegH 220, 3 cr
431583 –4 0915-1000 MWF, BlegH 125, 3 cr
131585 –5 0915-1000 MWF, BlegH 440, 3 cr
731587 –6 1015-1100 MWF, BlegH 125, 3 cr
531588 –7 1015-1100 MWF, BlegH 110, 3 cr
331589 –8 1115-1200 MWF, BlegH 125, 3 cr
731590 –9 1115-1200 MWF, BlegH 110, 3 cr
531591 –10 1215-1300 MWF, BlegH 125, 3 cr
331592 –11 1215-1300 MWF, BlegH 110, 3 cr
131593 –12 1315-1400 MWF, BlegH 125, 3 cr
605709 –13 1315-1400 MWF, BlegH 110, 3 cr
005710 –14 1415-1500 MWF, BlegH 125, 3 cr
433687 –15 1415-1500 MWF, BlegH 110, 3 cr

R1025 Principles of Financial Accounting II
(§1050; prereq 1024) (A-N only)
031594 –1 0815-0900 MWF, BlegH 145, 3 cr
831595 –2 0915-1000 MWF, BlegH 145, 3 cr
631596 –3 0915-1000 MWF, BlegH 220, 3 cr
431597 –4 1015-1100 MWF, BlegH 145, 3 cr
231598 –5 1015-1100 MWF, BlegH 220, 3 cr
131599 –6 1115-1200 MWF, BlegH 145, 3 cr
831600 –7 1215-1300 MWF, BlegH 145, 3 cr
631601 –8 1315-1400 MWF, BlegH 145, 3 cr
431602 –9 1315-1400 MWF, BlegH 220, 3 cr
231603 –10 1415-1500 MWF, BlegH 145, 3 cr

R3102 Accounting Theory and Practice II (§8102; prereq 3101) (A-N only)
407963 –1 0815-0915 MWF, BlegH 230, 4 cr
107965 –2 0930-1030 MWF, BlegH 230, 4 cr
707967 –3 1200-1300 MWF, BlegH 230, 4 cr
707970 –4 1430-1530 MWF, BlegH 230, 4 cr

R3201 Cost Accounting (prereq 3001, MIS 3099, QA 3055) (A-N only)
107973 –1 0930-1030 MWF, BlegH 240, 4 cr
607976 –2 1430-1600 MW, BlegH 225, 4 cr

R5125 Auditing Principles and Procedures
(prereq 3102, 3201) (A-N only)
931605 1315-1445 MW, BlegH 240, 4 cr

R5126 Internal Auditing (prereq 5125) (A-N only)
805711 –1 1730-1900 TTh, BlegH 105, 4 cr
137015 –2 1730-1900 TTh, BlegH 105, 4 cr
(MBA only)

R5135 Income Tax Accounting (prereq 1051)
(A-N only)
804249 –1 1315-1415 MWF, BlegH 230, 4 cr
004251 –2 1545-1645 MWF, BlegH 230, 4 cr

R5180 Advanced Accounting (prereq 3102) (A-N only)
907983 –1 0930-1100 MW, BlegH 155, 4 cr
107987 –2 1430-1600 MW, BlegH 155, 4 cr

R5290 Perspectives of Top Financial Executives
(prereq 3201 or MBA 8035) (A-N only)
205714 –1 1430-1600 MW, BlegH 105, 4 cr
233688 –2 1430-1600 MW, BlegH 105, 4 cr
(MBA only)

R5310 Current Topics in Financial Accounting
(prereq 3102) (A-N only)
905716 –1 1430-1600 MW, BlegH 205, 4 cr
433690 –2 1430-1600 MW, BlegH 205, 4 cr
(MBA only)

R8102 Accounting Theory and Practice II (§3102; prereq 8101, grad mgmt/IR student or grad SMgt approval) (A-N only)
505718 1800-1945 MW, BlegH 115, 4 cr

R8128 Analytic Review and Audit Sampling
(prereq #, grad SMgt approval) (A-N only)
305719 1800-1945 MW, BlegH 105, 4 cr

R8201 Managerial Accounting (§3201; prereq 8051, MIS 5101, grad mgmt/IR student or grad SMgt approval) (A-N only)
516489 2000-2145 MW, BlegH 105, 4 cr

R8820 Seminar: Managerial Cost Accounting
(prereq #, PhD student, grad SMgt approval) (A-N only)
233691 1300-1600 F, BlegH 205, 4 cr

R8825 Auditing: Seminar (prereq grad mgmt/IR student, #, grad SMgt approval) (A-N only)
133692 0915-1100 TTh, BlegH 125, 4 cr

R8990 Readings in Accounting (prereq #, grad SMgt approval) (A-N only)
716491 –1 1515-1700 TTh, BlegH 105, ar cr
937016 –2 ar cr

ADULT AND TEACHER EDUCATION (Educ)
Curriculum And Instruction
Education

5103 Adult Education Workshop (max 12 cr; prereq practicing adult educator or #) (A-N only)
432880 –1 1615-1815 M, PeikH 315, Williams, 3 cr (Issues in Adult Education)
232881 –2 1800-2100 T, Bruning, 3 cr (Rochester) (Volunteerism)
132882 –3 1615-1845 W, PeikH 315, Copeland, 3 cr (Older Adult Education)

5104 Survey of Adult Education (prereq sr) (A-N only)
936884 1545-1800 Th, PeikH 225, Copeland, 3 cr

5202 Adult Literacy: Diagnosis and Prescription (prereq 5201 or #) (A-N only)
204496 1615-1815 T, PeikH 225, Park, 3 cr

5204 Reading in Work Settings (§VoEd 5204) (A-N only)
705362 1800-2100 Th, Park, 3 cr (Ramsey HS 252)

5205 Field Experience in Adult Education (max 8 cr; prereq #) (A-N only)
916635 –1 Bruning, 4-8 cr
305364 –2 Copeland, 4-8 cr
005366 –3 Park, 4-8 cr
605368 –4 Williams, 4-8 cr
308815 –5 Willie, 4-8 cr

5401 Adult Learning and Development Through Life Span (A-N only)
204501 1415-1600 T, PeikH 46, Williams, 3 cr

5605 Research Topics: International Development Education (A-N only)
932883 1615-1800 T, PeikH 315, Cogan, 3 cr

8284 Problems: Teacher Education (prereq #)
316638 Howey, Willie, 3-9 cr

8302 Problems: Adult Education (prereq #)
316641 –1 Bruning, 1-9 cr
805370 –2 Copeland, 1-9 cr
405372 –3 Park, 1-9 cr
105374 –4 Williams, 1-9 cr
705376 –5 Willie, 1-9 cr

ADULT PSYCHIATRY (AdPy)
Medical School

5104 Adult Outpatient Psychiatry for Health Care Psychology Interns (prereq #)
704860 Sines, ar cr

5105 Adult Inpatient Psychiatry for Health Care Psychology Interns (prereq #)
504861 Sines, ar cr

5109 Externship in Clinical Psychiatry: Duluth Hospital (prereq regis med)
104863 Olson, 9 cr

5110 Contemporary Hospital Psychiatry: St. Luke's Hospital, Duluth (prereq regis med)
804865 Cowan, 9 cr

5120 Clinical Experience in Interviewing and Diagnostic Skills: Veterans Administration Hospital (prereq regis med)
604866 Magraw, 9 cr

5121 Descriptive Psychiatry (prereq regis OT or PT)
619402 1415-1600 T, Mayo C231, Rowe, 2 cr (Todd Amph)

5222 Preceptorships in Psychiatry (prereq regis med)
204868 Erickson, Tuason, ar cr

5500 Combined Inpatient and Crisis Intervention Center: Hennepin County Medical Center (prereq regis med)
404870 Dean, 9 cr

5501 Clinical Psychiatry: St. Paul Ramsey Hospital (prereq regis med)
104872 Tuason, 9 cr

5507 Clinical Research in Psychiatry: University Hospitals (prereq regis med)
304876 Heston, 9 cr

R5508 Adult General Psychiatry: University Hospitals (prereq regis med)
004878 Heston, 9 cr

5511 Psychiatry in Medicine: Consultation-Liaison: University Hospitals (prereq regis med)
104880 Popkin, 9 cr

R5514 Substance Abuse and Associated Psychiatric Disorders (max 18 cr; prereq Phase D medical student)
413293 Westermeyer, Van Walkenberg, 9 cr

5515 Neuropsychology: University Hospitals (prereq regis med)
419403 Meier, 9 cr

5516 St. Mary's Extended Care Center, Alcoholic Treatment Unit (prereq regis med)
404884 Mann, 4.5-9 cr

5518 Community Psychiatry: Braham, MN (prereq regis med)
104886 Kollmorgen, 9 cr

5519 Clinical Psychiatry: Abbott-Northwestern Hospital (prereq regis med)
704888 Mayberg, 9 cr

5521 Community Psychiatry: Dakota County Mental Health Center (prereq regis med)
504889 Nagobads, 9 cr

5530 Independent Study (prereq regis med)
219404 Heston, ar cr

5602 Clinical Psychopharmacology Seminar (prereq regis med)
119405 Abuzzahab, 1 cr

5604 Biological Bases of Behavior: University Hospitals (prereq regis med)
919406 Heston, ar cr

5800 Case Conference: Psychiatry in Medicine (prereq MD or #)
719407 Popkin, 1 cr

5801 Consultation-Liaison Psychiatry (prereq MD)
704857 Popkin, ar cr

5810 Alcohol and Drug Abuse (prereq #)
519408 Pickens, 3 cr

8201 Clinical Psychiatry (prereq MD)
504858 Miner, ar cr

8203 Advanced Clinical Psychiatry (prereq MD, 8201)
304859 Miner, ar cr

8205 Special Assignments (prereq MD, 8201, 8203)
319409 Miner, 1 cr

8206 Research (prereq #)
719410 Heston, ar cr

8226 Biological Psychiatry (prereq MD or #)
904856 Mitchell, 3 cr

8239 Continuous Case Seminar: Psychoanalytically Oriented Psychotherapy (max 3 cr; prereq #)
519411 London, 1 cr

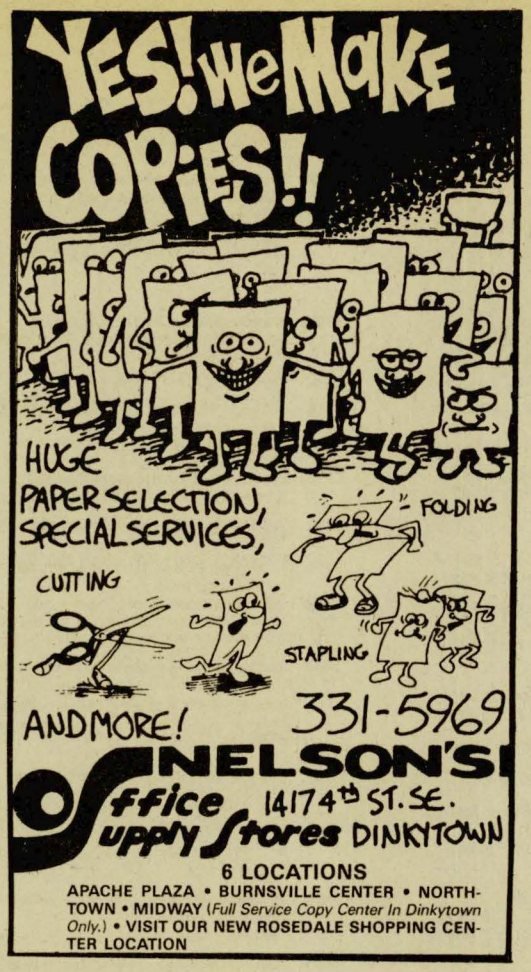
8243 Seminar: Introduction to Clinical Theory of Psychoanalytic Psychotherapy (prereq #)
319412 Horton, 3 cr

8249 Neuropsychopharmacology (prereq resident)
119413 Abuzzahab, 2 cr

8264 Presentations on Current, Appropriate Literature Pertaining to all Phases of Medical Health Care (prereq #)
019414 Magraw, 1 cr

8265 Readings in Psychosomatic Medicine, Consultation-Liaison Psychiatry (max 3 cr; prereq MD, #)
819415 Popkin, ar cr

8970 Directed Studies (max 9 cr)
619416 Miner, ar cr


YES! We Make COPIES!!
HUGE
PAPER SELECTION,
SPECIAL SERVICES,
FOLDING
CUTTING
STAPLING
AND MORE!
331-5969
NELSON'S
Office Supply Stores
1417 4TH ST. SE.
DINKYTOWN
6 LOCATIONS
APACHE PLAZA • BURNSVILLE CENTER • NORTHTOWN • MIDWAY (Full Service Copy Center In Dinkytown Only.) • VISIT OUR NEW ROSEDALE SHOPPING CENTER LOCATION


AIR FORCE ROTC —
HERE ARE THE FACTS
When you're discussing something as important as your future, it's urgent that you get the straight facts . . . and that you understand them. Air Force ROTC can be an important part of your future. We would like to outline some of the facts and invite you to look into gathering more.
It's a fact: the Air Force needs highly-qualified, dedicated officers . . . men and women. It's a fact: we need people in all kinds of educational disciplines. It's a fact: we're prepared to offer financial help to those who can qualify for an Air Force ROTC scholarship.
Get together with an AFROTC representative and discuss the program. We'll give you all the facts. It could be one of the most important talks you've ever had with anyone about your educational plans.
For more information, contact:
Major Richard Holden, Room 3
Armory, (612) 373-2205
AIR FORCE
ROTC
Gateway to a great way of life.


Show your current U of M student I.D. for $1 off on any medium or large pizza, flat or deep pan.
OFFER GOOD THRU 3-16-84
We make the #1 Pizza easier to come by...
GREEN MILL
St. Paul
Hamline & Grand
698-0353
Uptown
2626 Hennepin
374-2131
Downtown
6th & Hennepin
333-7305
Brooklyn Center
5400 Brooklyn Blvd.
560-2500
Offer good thru winter qtr. '84

AEROSPACE ENGINEERING AND MECHANICS (AEM)
Institute of Technology

R1005 Aerospace Survey and Laboratory (prereq lower division AEM maj)
519702 1415-1500 T, Arch 5, 1 cr

R1015 Statics (prereq Phys 1271, Math 1231, IT stu) (A-N only)
333701 1315-1400 MWF, SciCB 175, 1315-1400 TTh, OwreH 2230, 4 cr

R3016 Deformable Body Mechanics (prereq 1015, ¶Math 3221, IT stu) (A-N only)
★LECT 1015-1100 MWF, OwreH 2230
108095 –1 REC 1015-1100 TTh, AkerH 21, 4 cr
708097 –2 REC 1015-1100 TTh, AkerH 211, 4 cr
908101 –3 REC 1015-1100 TTh, AkerH 215, 4 cr
108105 –4 REC 1015-1100 TTh, AkerH 225, 4 cr
408109 –5 REC 1015-1100 TTh, AkerH 309, 4 cr
208113 –6 REC 1015-1100 TTh, AkerH 313, 4 cr
508117 –7 REC 1015-1100 TTh, AkerH 317, 4 cr
233707 –8 REC 1015-1100 TTh, ExpE 193, 4 cr

R3036 Dynamics (prereq 1015, ¶Math 3221, IT stu) (A-N only)
★LECT 1215-1300 MWF, SciCB 175
705393 –1 REC 1215-1300 TTh, AkerH 211, 4 cr
305395 –2 REC 1215-1300 TTh, AkerH 215, 4 cr
005397 –3 REC 1215-1300 TTh, AkerH 309, 4 cr
605399 –4 REC 1215-1300 TTh, AkerH 313, 4 cr
105401 –5 REC 1215-1300 TTh, AkerH 317, 4 cr

R3092 Statics and Mechanics of Materials I (prereq Math 1221, Phys 1042 or 1281, architecture maj or adult special)
★LECT 0815-0900 MWF, Arch 35
933709 –1 REC 0815-0900 TTh, AkerH 21, 4 cr
233710 –2 REC 0815-0900 TTh, AkerH 211, 4 cr
133711 –3 REC 0815-0900 TTh, AkerH 215, 4 cr
933712 –4 REC 0815-0900 TTh, AkerH 317, 4 cr

R3200 Introduction to Engineering Fluid Mechanics (§CE 3400; prereq 1015, Math 3221, Phys 1271, IT stu)
★LECT 0915-1000 MWF, AkerH 209
806504 –1 LAB 1015-1200 M, AkerH 30, 4 cr
106508 –2 LAB 1515-1700 M, AkerH 30, 4 cr
906512 –3 LAB 1015-1200 W, AkerH 30, 4 cr
506514 –4 LAB 1515-1700 W, AkerH 30, 4 cr
006517 –5 LAB 1015-1200 F, AkerH 30, 4 cr
806521 –6 LAB 1515-1700 F, AkerH 30, 4 cr

R5202 Incompressible Boundary Layer Theory (prereq 5200, upper div IT stu)
019705 1015-1100 MTWThF, AkerH 209, 4 cr

R5206 Aerodynamics of Lifting Surfaces (prereq 5200)
619707 1115-1200 MTWThF, Arch 5, 4 cr

R5321 Automatic Flight Control Systems (prereq 3401, ¶5300 or #)
915081 1215-1300 MWThF, AkerH 209, 4 cr

R5330 Design of Aerospace Elements and Systems (prereq 4th yr engineering maj, #)
733713 1515-1700 TTh, AkerH 225, 4 cr

R5410 Introduction to Astrodynamics (prereq 5438)
533714 1415-1500 MTWTh, AkerH 211, 4 cr

R5440 Intermediate Dynamical Systems (prereq 3401, ME 3201 or #)
515083 0915-1000 MWThF, AkerH 225, 4 cr

R5515 Aerospace Structures I (prereq 3016, upper div IT stu)
219709 1315-1400 MTWThF, SmithH 225, 4 cr

R5581 Mechanics of Solids II (prereq 5580 or #)
333715 0915-1000 MWThF, AkerH 227, 4 cr

R5646 Aeromechanics Laboratory II (prereq 3016, 5200, aerospace engineering maj)
★LECT 0815-0900 M, AkerH 209
108153 –1 LAB 0815-1200 T, AkerH 30A, 30B, 30, 2 cr
608156 –2 LAB 1315-1700 T, AkerH 30A, 30B, 30, 2 cr
108159 –3 LAB 0815-1200 Th, AkerH 30A, 30B, 30, 2 cr
606522 –4 LAB 1315-1700 Th, AkerH 30A, 30B, 30, 2 cr

R5650 Aeroelasticity I (prereq 5206)
619710 1115-1200 MTWF, AkerH 225, 4 cr

5801 Problems in Mechanics and Materials (prereq △)
419711 1-4 cr

5811 Problems in Fluid Mechanics (prereq △)
919745 1-4 cr

5840 Industrial Assignment (prereq regis in engineering intern program, △)
205406 2 cr

5841 Industrial Assignment (prereq regis in engineering intern program, △)
519747 2 cr

5842 Industrial Assignment (prereq regis in engineering intern program, △)
119749 2 cr

8002 Seminar: Aerospace Engineering and Mechanics (prereq consent of director of graduate studies)
519750 1415-1600 F, AkerH 225, 1 cr

R8202 Fluid Mechanics II (prereq 8201)
119752 1415-1500 MTWTh, AkerH 225, 4 cr

8221 Rheological Fluid Mechanics II (prereq 8220 or #)
133716 1515-1700 TTh, AkerH 227, Joseph, 3 cr

8411 Linear Systems (prereq 5438 or #)
619755 1115-1200 MTWF, AkerH 227, 4 cr

8511 Continuum Mechanics II (prereq 8510 or #)
419756 1515-1700 MW, AkerH 227, 4 cr

8522 Theory of Plasticity (prereq 8510 or 5580 or #)
033717 0915-1100 TTh, AkerH 301, Hodge, 4 cr

8585 Advanced Topics in Continuum Mechanics (prereq 8510, 8511, 8512, #)
833718 1015-1100 MWF, AkerH 227, Ericksen, 3 cr

8801 Selected Topics in Mechanics and Materials (prereq △)
119758 1-4 cr

8811 Selected Topics in Fluid Mechanics (prereq △)
919759 1-4 cr

8880 Plan B Project (max 4 cr; prereq grad aerospace engineering or mechanics maj, △)
337859 1-4 cr

AEROSPACE STUDIES (Air)

R1105 Air Force Combat Commands
531543 –1 0915-1000 TTh, Armory 205, Beachem, 1 cr
331544 –2 1015-1100 TTh, Armory 205, Beachem, 1 cr
131545 –3 1315-1400 TTh, Armory 12, Beachem, 1 cr

R1205 Allied Airpower in World War II and the Berlin Airlift
031546 –1 0815-0930 TTh, Armory 12, Holden, 2 cr
831547 –2 1115-1230 TTh, Armory 12, Holden, 2 cr

R3302 Air Force Leadership Communication
008185 –1 0815-0930 TTh, FolH 308, McNally, 3-4 cr
208189 –2 1415-1530 TTh, Armory 116, McNally, 3-4 cr

R3402 Seminar: Formulation and Implementation of U.S. Defense Policy (§Pol 5323)
338073 –1 1015-1130 TTh, Armory 105, Patrick, 1 cr
138074 –2 1215-1330 TTh, Armory 105, Patrick, 1 cr

AFRO-AMERICAN STUDIES (Afro)
Liberal Arts

1015 Black Protest from Colonial Times to the Present
817860 1115-1230 TTh, BlegH 225, Ward, 5 cr

1025 Black Americans: Socialization, Personality, and Behavior
117864 0945-1130 TTh, BlegH 105, Taborn, 4 cr

3002 Introduction to West African History: 1800 to Present
133652 1000-1100 MWF, BlegH 360, Coifman, 4 cr

3061 The Black Family
515682 0815-0930 TTh, BlegH 105, 4 cr

3072 Racism: Social Psychological Consequences for Black Americans (§5072)
817874 1145-1300 TTh, BlegH 105, Taborn, 4 cr

3101 Afro-American Literature
606214 1415-1500 MW, BlegH 135, Wright, 4 cr

3108 Black Music: A History of Jazz
717883 0915-1000 MWF, BlegH 150, Buckner, 4 cr

3301 The Caribbean: African Musical Retentions (§Mus 3709)
106211 0945-1100 TTh, BlegH 260, Southall, 4 cr

3501 African Societies and Civilizations (§Anth 3241)
738412 0915-1000 MWF, BlegH 360, Dean, 4 cr

3864 Afro-American History, from 1619 through Reconstruction (§Hist 3864, 3865)
437691 0945-1100 TTh, Law 1, 4 cr

3910 Topics in Afro-American/African Studies
933659 –1 1300-1400 MWF, BlegH 360, Coifman, 4 cr (Methods in African Research)
833654 –2 1515-1600 MW, BlegH 145, Wright, 4 cr (Autobiography in Afro-American/African Literature)
538413 –3 1245-1400 TTh, BlegH 205, Southall, 4 cr (Black Women: Jazz Contributions)
338414 –4 1315-1430 TTh, BlegH 440, King, 4 cr (Main Problems in Afro-American History)

3970 Directed Studies (prereq #, △, college approval)
017890 1-15 cr

5001 Law and Society: A Minority Point of View (prereq Pol 1001 or #)
211674 0945-1100 TTh, Mgmt/Econ 130, Ward, 5 cr

5970 Directed Studies (prereq #, △, CLA approval)
828986 1-6 cr

AGRICULTURAL AND APPLIED ECONOMICS (AgEc)
Agriculture

R1020 Principles of Macroeconomics (§Econ 1001)
008218 –1 1000-1045 MTWThF, ClaOff B45, Rodgers, 5 cr
008221 –2 1100-1145 MTWThF, ClaOff B45, Larson, 5 cr

R1030 Principles of Microeconomics (§Econ 1002; prereq 1020)
408224 –1 0845-0945 MWF, ClaOff B35, Waelti, 4 cr
908227 –2 1400-1500 MWF, ClaOff B35, Waelti, 4 cr

3070 Agriculture and Economic Growth in Developing Countries (prereq 1020, 1030)
915906 1400-1530 TTh, ClaOff B36, Purvis, 4 cr

3101 Microeconomic Theory (§Econ 3101; prereq 1030 or Econ 1002, Math 1111 or #)
515908 1300-1345 MTWTh, ClaOff B45, Larson, 4 cr

3430 Dairy Marketing Economics (prereq 1400)
715910 1200-1245 MWF, ClaOff B36, Hammond, 3 cr

3640 Public Finance: Concepts and Practices (prereq 1020, 1030 or Econ 1001, 1002)
908079 1300-1430 TTh, ClaOff 31, Helmberger, 4 cr

3820 Farm Management Economics (prereq 1030)
015914 1400-1530 TTh, ClaOff B35, Eidman, 4 cr

3850 Farm Business and Enterprise Analysis (prereq 1030, 3820 or #)
615916 0745-0845 MTWTh, ClaOff B25, Welsch, 4 cr

5000 Professional Experience Program (prereq #) (S-N only)
115919 4 cr

5100 RCD Interdisciplinary Seminar II (5099-5100†, §RCD 5100, AgEt 5100, LA 5100, Soil 5100; prereq 5099 or #)
832892 1500-1645 TTh, ClaOff B42, 4 cr

R5104 Agricultural Systems Analysis and Modeling (prereq Math 1142 or #)
412306 1000-1045 MWF, PalmC 12, Cornelius, 4 cr (2 hr lab ar)

5180 Agri-Marketing Communications (no ag econ grads; prereq 1020, 1030, basic comm, spch courses, basic AgJo course or △ or #)
613390 1400-1530 TTh, CentLib 6, Wells, Swanson, others, 4 cr

5271 Bayesian Decision Making (§Econ 5271; prereq ¶Stat 5122 or equiv, Econ 1002 or equiv)
632893 0945-1100 MW, BlegH 335, Hildreth, 4 cr (Mpls)

5400 Intermediate Market and Price Analysis (prereq 1400 or 3101 or Econ 3101 or 5151)
115922 0900-0945 MTWTh, ClaOff B25, Hammond, 3-4 cr

R5480 Futures Markets and Prices (prereq 1400 or #)
715924 1000-1045 MTWTh, ClaOff B35, R Dahl, 3-4 cr

R5500 Advanced Agricultural Finance (prereq 3500)
315926 1400-1545 TTh, ClaOff B30, Thompson, 3-4 cr

5600 Land Economics (prereq 3101, 3102 or Econ 3101, 3102 or #)
015928 1400-1445 MWF, ClaOff B25, Raup, 3-4 cr

5630 Regional Development Systems (prereq 1030 or Econ 1002)
115930 0830-0945 TTh, ClaOff B42, Maki, 3-4 cr

5660 Economics of Public Services (prereq 3101 or Econ 3101 or 5151 or #)
815932 1600-1700 MWF, ClaOff B30, Nelson, 3-4 cr

5890 Independent Study: Advanced Topics in Farm Management (prereq #)
615933 1-6 cr

5990 Special Topics and Independent Study in Agricultural and Applied Economics (prereq #)
108081 ar cr

8200 Advanced Topics in Agricultural and Appied Economics
612272 1-9 cr

8245 Agricultural Marketing Economics (prereq Econ 5151, 5152 or #)
115936 0830-0945 MW, ClaOff B42, Roe, 3 cr

8266 Applied Regional Economics (prereq Econ 5151, 5152 or #)
715938 1530-1645 TTh, ClaOff 27, Maki, 3 cr

8288 Dynamic Production Economics (prereq 5860, Econ 8101)
915940 1000-1130 MW, ClaOff B30, Eidman, 3 cr

8346 Seminar: Law and Agricultural Economics (prereq prereq law or grad student)
409549 1515-1705 T, Law 475, D Dahl, 3 cr (Mpls) (Jan 10-May 14)

8356 Seminar: Consumption Economics
515942 Kinsey, Senauer, 3 cr

8364 Seminar: Resource Economics and Policy
115944 Easter, Graham-Tomasi, 3 cr

8378 Seminar: Agricultural Development
815946 Ruttan, 1-3 cr

AGRICULTURAL EDUCATION (AgEd)
Vocational And Technical Education Education

1001 Introduction to Agricultural Education (A-N only)
217457 1200-1245 W, VoTech R385, Marvin, 1 cr

3029 Directed Experience in Agricultural Education (prereq △) (A-N only)
917459 1200-1245 M, VoTech R385, Persons, 1-3 cr

3031 Student Teaching in Agriculture (prereq jr, 5028, SeEd 3155, #) (A-N only)
117461 1200-1345 Th, VoTech R385, Peterson, 8 cr

R3041 Practicum: Agricultural Education Technology (max 5 cr; prereq △) (A-N only)
808267 –1 1300-1445 T, VoTech R385, Leske, 1-3 cr
608271 –2 1-3 cr

5023 Extension Methods for Agricultural Production in Developing Countries (§HEEd 5023) (A-N only)
717463 1500-1730 M, VoTech R385, Marvin, Persons, 3 cr

5025 Extension Program Development (§HEEd 5025) (A-N only)
017467 1000-1100 T, 1000-1200 Th, VoTech 320A, Anderson, 3 cr

5027 Practicum: Placement for Extension Experiences (max 9 cr, §HEEd 3605, 5027) (S-N optional)
617469 Norenberg, 2-9 cr

5049 Agricultural Education for Adults (A-N only)
★LECT 0900-0945 MTWThF, VoTech R385, Persons, 5 cr
125552 –1 LAB 0800-0845 F, VoTech R385, Persons

5061 Program Planning and Evaluation (prereq sr) (A-N only)
417473 1400-1445 MWF, VoTech R385, Marvin, 3 cr

5071 Supervised Occupational Experiences in Agriculture (A-N only)
117475 1000-1145 MTThF, VoTech R385, Leske, 3 cr

5090 Independent Study (prereq sr) (A-N only)
717477 1-3 cr

5095 Independent Study (prereq MEd student in agricultural education) (A-N only)
317479 3 cr

5200 Seminar: Working with Youth Through Adults (max 9 cr including HEEd 5200 and YoSt 5200; prereq △) (S-N optional)
514046 Leske, 1-3 cr

8001 Research in Agricultural Education (prereq 15 cr educ)
017484 ar cr

8091 Field Problems
417487 3 cr

AGRICULTURAL ENGINEERING (AgEn)
Institute of Technology

R3052 Physio Engineering in Agriculture (prereq AEM 3016 or ¶, IT stu)
★LECT 1330-1445 TTh, AgEng 108, Flikke, 4 cr
425542 –1 LAB 1500-1700 T, AgEng 108
304893 –2 LAB 1500-1700 Th, AgEng 108

3970 Directed Studies in Agricultural Engineering (prereq #)
719763 2-5 cr

5050 Intern Reports (prereq IT stu)
519764 Flikke, 2 cr

5081 Design: Power and Machinery (prereq completion of appropriate AgEn senior level courses or #, IT upper div)
119766 1300-1545 TTh, AgEng 307, Schertz, 4 cr

5083 Design: Structures and Environment (prereq completion of appropriate AgEn senior level courses or #, IT upper div)
619769 1000-1145 MWF, AgEng 307, Jordan, 4 cr

5140 Thermal Processes for Food (prereq heat transfer, 5060 or #, IT upper div or grad IT)
★LECT 0800-0845 MWF, AgEng 105, Thompson, 4 cr
125544 –1 LAB 1400-1645 W, AgEng 16B

5191 Special Problems (prereq #)
019770 2-5 cr

5192 Special Problems (prereq 5191, #)
819771 2-5 cr

5340 Agricultural Tractors (prereq ME 3303, IT upper div or grad IT)
★LECT 0800-0845 MWF, AgEng 108, Chaplin, 4 cr
932902 –1 LAB 1400-1645 M, AgEng 33

R5550 Drainage and Irrigation Engineering (prereq 3052 or CE 3300, CE 5401 or #, IT upper div or grad IT)
★LECT 1215-1345 TTh, AgEng 16B, Allred, 4 cr
232900 –1 LAB 1400-1645 Th, AgEng 16B

5740 Environmental Control for Agricultural Production (prereq ME 5603, IT upper div or grad IT)
719777 0800-0945 MWF, AgEng 307, Jordan, 4 cr

5910 Agricultural Waste Management Engineering I (prereq 3052 or #, Chem 1005 or 1014, IT upper div or grad IT)
★LECT 1015-1145 TTh, AgEng 303, Clanton, 4 cr
125549 –1 LAB 1400-1645 T, AgEng 303

8190 Advanced Problems and Research (prereq 5191, 5192, △)
519778 2-6 cr

8191 Advanced Problems and Research (prereq 5191, 5192, △)
719780 2-6 cr

8192 Advanced Problems and Research (prereq 5191, 5192, △)
519781 2-6 cr

8700 Moisture and Heat Transfer (prereq knowledge of differential equations, #, grad IT maj)
119783 0900-0945 TTh, AgEng 16B, Slack, 3 cr

AGRICULTURAL ENGINEERING TECHNOLOGY (AgET)
Agriculture

1090 Directed Studies (prereq #)
215949 ar cr

R3030 Introduction to Problem Solving with Computers (prereq Math 1111 or equiv) (A-N only)
★LECT 1400-1445 MWF, FScN 15, Morey, 4 cr
837705 –1 REC 1500-1545 M, AgEng 102
537701 –2 REC 1300-1345 T, AgEng 102
137703 –3 REC 1500-1545 T, AgEng 102
637706 –4 REC 1500-1545 W, AgEng 102
337702 –5 REC 1300-1345 Th, AgEng 102
037704 –6 REC 1500-1545 Th, AgEng 102

3091 Special Problems in Agricultural Engineering (prereq #)
415951 2-5 cr

R3205 Power and Power Use (prereq Math 1111, Phys 1041)
★LECT 1300-1345 MWF, AgEng 108, Schertz
031563 –1 LAB 1400-1645 W, AgEng 33, 4 cr
631565 –2 LAB 1400-1645 F, AgEng 33, 4 cr

R3410 Hydrology, Water Control (prereq Math 1111, Phys 1041, Soil 1122)
★LECT 1000-1045 MWF, AgEng 108, Larson
931569 –1 REC 0945-1100 Th, AgEng 42, 4 cr
231570 –2 REC 1245-1400 Th, AgEng 42, 4 cr

3606 Farm Building Design, Layout, Systems (prereq Math 1111, Phys 1041)
004900 1100-1145 MTWTh, AgEng 108, Flikke, 4 cr

5000 Professional Experience Program (prereq #) (S-N only)
115953 Flikke, 4 cr

5020 Program Planning and Instructional Methods in Agricultural Mechanics (prereq 10 cr in agri eng tech, AgEd 3031 or ¶)
★LECT 0800-0945 MTTh, AgEng 42, Bear
325596 –1 LAB 0800-1145 W, 0800-0945 F, AgEng 20, 4 cr

5022 Energy Systems in Agriculture (prereq Math 1142, Phys 1042)
715955 0800-0845 MWThF, AgEng 16B, Gustafson, 4 cr

5030 Agricultural Tractor and Engine Power (prereq 5020 or #)
332905 Bear, 1-3 cr

5091 Special Problems in Agricultural Engineering (prereq #)
315957 2-5 cr

5092 Special Problems in Agricultural Engineering (prereq 5091)
015959 2-5 cr

5100 RCD Interdisciplinary Seminar II (5099-5100†; prereq 5099 or #)
132906 1500-1645 TTh, ClaOff B42, Clanton, 4 cr

AGRICULTURAL JOURNALISM (AgJo)
Agriculture

R3111 **Journalistic Techniques** (prereq completion of Rhet 1101 and 1102 or equiv, C average, typing ability required)
404867 1000-1145 TTh, HckrH 329, Wells, 5 cr

R3122 **Agricultural and Rural Affairs Reporting** (§Jour 3121; prereq Jour 1101, Rhet 3551 or 3562 or Comp 1027 or #)
832908 1300-1345 TTh, HckrH 329, Sperbeck, 4 cr

3530 Publicity (prereq compl of rhetoric communication requirement)
015962 0800-0845 MWF, CentLib 4, Swanson, 4 cr

3936 Special Problems (prereq 3530 or #)
615964 ar cr

5000 Professional Experience Program (no grad cr; prereq #) (S-N only)
215966 Swanson, 4 cr

5180 Agri-Marketing Communications (§AgEc 5180, no ag econ grads; prereq AgEc 1020, 1030, basic comm, spch courses, basic AgJo
112308 1400-1530 TTh, CentLib 6, Swanson, Wells, 4 cr

R5561 **Writing for Publication** (§Jour 3173; prereq 3111 or Jour 3101 or equiv or #, △)
915968 1400-1445 MWF, HckrH 209, Dueber, 4 cr

5936 Special Problems in Agricultural Communications (prereq #)
115970 Breneman, Swanson, others, ar cr

AGRICULTURE (Agri)
Agriculture

R1000 **Academic Enrichment and Honors Program: Special Projects** (prereq acceptance for Special Opportunity Grant, agriculture maj only, #) (S-N only)
316249 Wharton, 1-15 cr

R1001 **Leadership Development: Project LEAD** (max 6 cr; prereq agriculture maj, #) (S-N only)
516251 Wharton, 2 cr

3000 Seminar in International Agriculture (prereq major in international agriculture, #)
038478 1530-1700 T, Agr 408, Smith, 1 cr

AGRONOMY AND PLANT GENETICS (Agro)
Agriculture

R1010 **Principles of Agronomy** (§3010, 3020, 3030)
715972 1100-1145 MTWF, FScN 15, Smith, 4 cr

R1011 **Principles of Agronomy-Discussion** (prereq ¶1010) (S-N only)
108341 –1 1400-1445 M, Agr 202, Smith, 1 cr
708343 –2 1500-1545 M, Agr 202, Smith, 1 cr
008347 –3 1300-1345 T, Agr 202, Smith, 1 cr
608349 –4 1400-1445 T, Agr 202, Smith, 1 cr

1020 Special Problems (prereq 5 cr agronomy, #)
315974 Cardwell, 1-3 cr

R1110 **Seed Analysis and Grain Grading** (prereq 1100 or #)
408353 –1 0900-1145 TTh, Agr 104, Goodding, 3 cr
108355 –2 1300-1545 TTh, Agr 104, Goodding, 3 cr

R3010 **Adaptation, Distribution, and Production of Field Crops** (prereq Biol 1011)
★LECT 1000-1045 MWF, PalmC 10, Simmons
806597 –1 REC 0800-0845 T, Agr 202, Simmons, 4 cr
006601 –2 REC 0900-0945 T, Agr 202, Simmons, 4 cr
006615 –3 REC 1000-1045 T, Agr 202, Simmons, 4 cr
606617 –4 REC 1000-1045 Th, Agr 202, Simmons, 4 cr

R3200 **Seminar** (prereq jr or sr, #)
815977 1530-1700 Th, Agr 408, Cardwell, 1 cr

5000 Professional Experience Program (prereq #) (S-N only)
815980 Smith, 4 cr

5001 Problems in Agronomy for Advanced Students (prereq 20 cr agronomy, #)
415982 Cardwell, 1-5 cr

R5010 **Forage Production and Utilization** (prereq 1010 or #)
★LECT 1100-1145 MWF, Agr 202, Sheaffer, 4 cr
032910 –1 LAB 1400-1645 T, Agr 105, 106, Sheaffer
832911 –2 LAB 1200-1445 W, Agr 105, 106, Sheaffer
632912 –3 LAB 1400-1645 Th, Agr 105, 106, Sheaffer

R5020 **Introduction to Plant Breeding** (prereq GCB 3022)
115984 1400-1445 MWThF, HodsonH 495, Orf, 4 cr

R5030 **Weed Control** (prereq 1010 or #)
★LECT 1300-1345 MTWTh, HodsonH 495, Wyse
206619 –1 REC 0900-0945 F, Agr 104, Wyse, 5 cr
606620 –2 REC 1000-1045 F, Agr 104, Wyse, 5 cr
406621 –3 REC 1100-1145 F, Agr 104, Wyse, 5 cr
906624 –4 REC 1300-1345 F, Agr 104, Wyse, 5 cr

R5110 **Adaptation, Distribution, and Production of Field Crops** (§3010; prereq Biol 1011)
★LECT 1000-1045 MWF, PalmC 10, Simmons
106587 –1 REC 0800-0845 F, Agr 408, Simmons, 3 cr

8010 Research in Agronomy (prereq #)
715986 ar cr

8020 Seminar: Agronomy
315988 1600-1700 W, Agr 408, Simmons, 1 cr

8200 Principles of Plant Breeding I (prereq 5020, Stat 5301 or equiv)
515990 0900-0945 MWF, Agr 202, Rasmusson, 3 cr

R8220 **Application of Quantitative Genetics to Plant Breeding** (prereq 8210, GCB 5042)
632909 1000-1045 MWF, Agr 401, Stucker, 3 cr

8270 Seminar: Plant Breeding
115992 1600-1700 M, Agr 408, Orf, 1 cr

8330 Research in Plant Genetics
815994 ar cr

AKKADIAN (Akka)
Near And Middle Eastern Studies
Liberal Arts

R5012 **Elementary Akkadian** (prereq 5011)
604902 0815-0900 MWF, FolH 52, Reisman, 4 cr

ALBANIAN (Alb)
French And Italian
Liberal Arts

R5510 **Albanian Language and Culture** (no knowledge of Albanian req)
532918 1515-1700 TTh, FolH 103, Pipa, 5 cr

AMERICAN INDIAN STUDIES (AmIn)
Liberal Arts

1021 Beginning Ojibwe
406473 1415-1500 MTWThF, KoltH S135, Oakgrove, 5 cr

1022 Beginning Ojibwe (prereq 1021)
520140 1315-1400 MTWThF, KoltH S133, Northbird, 5 cr

1032 Beginning Dakota (prereq 1031)
717902 1115-1200 MTWThF, ChDev 216, Schommer, 5 cr

3024 Intermediate Ojibwe (prereq 1023)
104281 1015-1100 MTWThF, KoltH S133, Oakgrove, 5 cr

3025 Intermediate Ojibwe (prereq 3024)
617908 1115-1200 MTWThF, LindH 216, Northbird, 5 cr

3035 Intermediate Dakota (prereq 3034)
117914 1315-1400 MTWThF, FordH 40, Schommer, 5 cr

3111 American Indian History from Mid-15th Century to 1850 (§Hist 3871)
133661 1015-1100 MWF, BlegH 205, Anfinson, 4 cr

3121 History: American Indian Education (prereq 3111, 3112 or #)
613230 1245-1400 TTh, MurH 311, 4 cr

5411 Urban Indian Communities
233660 0945-1100 TTh, Mgmt/Econ 136, 4 cr

AMERICAN STUDIES (AmSt)
Liberal Arts

R1002 **American Culture: Mid-19th Century to 1920s**
636927 –1 1115-1200 MWF, MechE 302, 4 cr
436928 –2 1315-1400 MWF, MechE 302, 4 cr

R1003 **American Culture: 1920s to the Present**
636930 1215-1300 MWF, MechE 302, 4 cr

R3112 **American Everyday Life**
408434 –1 1015-1100 MWF, LindH 303, Yates, 4 cr
214090 –2 0945-1100 TTh, LindH 215, Delattre, 4 cr

3252 American Popular Culture: 1900-1945
636703 1115-1230 TTh, LindH 215, L May, 4 cr

R3302 **Proseminar: American Studies** (prereq 3301)
417926 1415-1645 T, LindH 303, L May, 4 cr

3970 Directed Studies (prereq #, △, college approval)
217930 1-15 cr

R5102 **Religion and American Culture**
906574 1015-1100 MWF, LindH 305, Delattre, 4 cr

R8202 **Introduction to American Studies** (prereq MA candidate in AmSt, 8201) (A-N only)
017937 1415-1530 TTh, LindH 215, Martin, 4 cr

R8802 **Dissertation Seminar** (prereq 8801)
405551 1315-1500 W, LindH 225, Yates, 2 cr

8920 Topics: The Myth and Symbol Approach to Methodology in American Studies (prereq #)
436704 0815-1000 Th, LindH 216, Gearity, 4 cr

8970 Readings in American Civilization (prereq △)
517934 ar cr

ANATOMY (Anat)
Medical School

3970 Special Problems (prereq #)
119243 2 cr

5108 Gross Human Anatomy for Dental Students (prereq freshman dental student or #)
★LECT 0815-0900 MWF, MoosT 2620, Bauer, 7 cr
225526 –1 LAB 0915-1200 MWF, JacH 5147

5111 Human Neuroanatomy (prereq regis med fr, anat grad or grad with #)
★LECT 0915-1000 TTh, MoosT 2650, Smithberg
508456 –1 LAB 1415-1600 T, OwreH 2112, 3-4 cr
008459 –2 LAB 1415-1600 Th, OwreH 2112, 3-4 cr

5190 Advanced Anatomy (prereq regis med, 5103, #)
919244 2 cr

5501 The Extremities (prereq Phase D)
217782 Robertson, 3-4.5 cr

5502 Head and Neck (prereq Phase D)
917784 Robertson, 3-4.5 cr

5504 The Endocrine System (prereq Phase D)
332919 Hamilton, 3-4.5 cr

5508 The Thorax (prereq Phase D)
517786 Robertson, 3-4.5 cr

5509 The Abdomen (prereq Phase D)
117788 Robertson, 3-4.5 cr

5510 Perineum, Genital-Urinary System and Pelvis (prereq Phase D)
317790 Robertson, 3-4.5 cr

5766 Hematology (prereq 5765)
★LECT 1315-1400 TTh, MoosT 2580, Sundberg, 4 cr
125527 –1 LAB 1415-1600 TTh, MoosT 3317

8135 Biological Electron Microscopy: Technics (prereq #)
732920 Erlandsen, 1-5 cr

8154 Advanced Anatomy (prereq #)
519246 1-6 cr

8166 Cytological Aspects in Protein Synthesis and Secretion (prereq 5100 or #)
532921 Bauer, 3 cr

8202 Research in Anatomy (prereq #)
019249 1-10 cr

8206 Seminar: Anatomy (prereq #)
119251 1215-1300 W, JOAd 5137, Hamilton, 1 cr

ANCIENT NEAR EASTERN AND JEWISH STUDIES (ANEJ)
Near And Middle Eastern Studies
Liberal Arts

R**3502 Ancient Israel** (§5502, no knowledge of Hebr req)
432927 1015-1100 MWF, CivMinE 212, Paradise, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
704289 1-4 cr

ANCIENT STUDIES (AnSt)
Liberal Arts

5100 Topics in Ancient Studies (prereq enrollment in AnSt or #)
033037 –1 1245-1400 TTh, Mgmt/Econ 136, Jones, 4 cr (Ancient Near East)
512507 –2 1515-1700 T, FolH 52, Gibbon, 3 cr (Methods and Theory in Archaeology)
612627 –3 1515-1700 W, NMA 232, Coulson, 3 cr (Exhibition of the Sarazyn Collection of Ancient Artifacts)

8002 Basic Seminar: Methods and Theory in Archaeology (prereq grad maj or #)
205468 1515-1700 T, FolH 52, Gibbon, 3 cr

8110 Interdisciplinary Seminar: An Archaeological Perspective on Cultural Evolution (prereq 8100)
133036 1515-1800 Th, FordH 50, Hastorf, 3 cr

8200 Directed Readings (prereq #)
817969 ar cr

8300 Directed Research (prereq #)
017971 ar cr

8400 Colloquium (prereq enrollment in AnSt)
805465 1515-1700 M, FolH 303, Gibbon, 2 cr

ANESTHESIOLOGY (Anes)
Medical School

R**3105 Respiratory Therapy Procedures** (prereq #)
219256 1015-1200 TTh, 1115-1200 W, Mayo C565, Larsen, 5 cr

R**3107 Individual Study in Respiratory Therapy** (prereq #)
205728 1415-1500 W, Mayo C559, Larsen, ar cr

5015 Directed Study, Anesthesia Topics/Project Course Development (prereq CRNA, regis B.S. in nurs anes, #)
119257 Bell, ar cr

5086 Clinical Curriculum Development and Evaluation for Nurse Anesthesia (prereq CRNA, regis B.S. in nurs anes, #)
119260 1615-1845 W, MoosT 2520, Bell, 3 cr

5181 Externship in Clinical Practice of Anesthesiology (prereq regis med)
919261 Anderson, 4.5-9 cr

5186 Clinical Practice in Anesthesia (prereq CRNA, regis B.S. in nurs anes, 5086, #)
719262 Buckley, 15 cr

5268 Seminar in Anesthesia (prereq CRNA, regis B.S. in anes)
319264 1500-1700 F, Mayo B580, Buckley, 2 cr

5286 Directed Study, Anesthesia Topics/Project: Clinical (prereq CRNA, regis B.S. in nurs anes, #)
119265 Bell, ar cr

5386 Education in Nurse Anesthesia (prereq CRNA, regis B.S. in nurs anes, #)
019266 Bell, 1 cr

8265 General Anesthesia
619268 Buckley, 12 cr

8266 Regional Anesthesia
419269 Buckley, 4 cr

8267 Pre-Postanesthetic Evaluation
819270 1530-1800 MTWTh, Mayo B580, Buckley, 2 cr

8268 Seminar: Anesthesia
619271 1500-1700 F, Mayo B580, Buckley, 2 cr

8269 Research in Anesthesia
704907 Buckley, ar cr

ANIMAL SCIENCE (AnSc)
Agriculture

1100 Introductory Animal Science
415996 0900-0945 MTWThF, PetH 110, Goodrich, Otterby, others, 5 cr

R**1107 Swine Practicum** (prereq #) (S-N only)
115998 1400-1445 T, PetH 108, Moser, 1 cr

R**1500 Meat Science** (§FScN 1500; prereq Biol 1011)
★LECT 1200-1245 MTWTh, FScN 15, C Allen
108498 –1 LAB 1300-1445 T, ABLMS 26, 4 cr
208502 –2 LAB 1500-1645 W, ABLMS 26, 4 cr
908504 –3 LAB 1300-1445 Th, ABLMS 26, 4 cr
108508 –4 LAB 1500-1645 Th, ABLMS 26, 4 cr

1520 Milk Production (prereq 1100 or #)
816000 0800-0845 MWF, ABLMS 125, Hansen, 3 cr

5000 Professional Experience Program (prereq #) (S-N only)
416002 Moser, 4 cr

5104 Agricultural Systems Analysis and Modeling (prereq Math 1142 or #)
412483 1000-1045 MWF, PalmC 12, Cornelius, others, 4 cr

5231 Dairy Cattle Breeding (prereq 3220 or #)
116004 1300-1345 MTWF, ClaOff B30, Young, 4 cr

5327 General Endocrine Physiology (prereq 3301 or #)
716006 1400-1445 MWF, HckrH 210, Wheaton, 3 cr

5328 General Endocrine Physiology Laboratory (prereq 5327 or #)
316008 0900-1145 TTh, AnScVM 169, Wheaton, 2 cr

5331 Fertility and Incubation of Avian Eggs (prereq 10 cr Biol or #)
132932 0800-0945 MW, PetH 108, Hamre, 3 cr

R**5403 Ruminant Nutrition** (§5413; prereq 1401 or 3401)
★LECT 1000-1045 MWF, PetH 110, Goodrich, Otterby, others
237739 –1 LAB 1000-1145 T, HckrH 70, 4 cr
437741 –2 LAB 1100-1245 W, HckrH 70, 4 cr
637740 –3 LAB 1000-1145 Th, HckrH 70, 4 cr

5405 Poultry Nutrition (prereq 1401 or 3401)
516010 1000-1045 MWF, PetH 108, Waibel, 3 cr

5601 Swine Production (prereq 1401 or 3401...3220 rec)
120151 1100-1145 MTWTh, ABLMS 125, Moser, 4 cr

5609 Principles of Farm Animal Environment (prereq jr, 3301 or #)
117704 0900-0945 MWF, HckrH 210, El Halawani, 3 cr

R**5703 Literature and Seminar** (prereq jr)
008526 –1 1400-1445 MW, PetH 108, Donker, 2-3 cr
408529 –2 1500-1545 MW, PetH 108, Donker, 2-3 cr

5710 Special Problems (prereq #)
316011 ar cr

5715 Tutorial (prereq #)
116012 ar cr

8081 Neuroethology (§EBB 8081; prereq EBB 5312, Psy 5061 or #)
306501 1400-1700 Th, Zoology 10, Phillips, 3 cr

8221 Quantitative Inheritance (prereq GCB 5042)
816014 1100-1145 MWF, PetH 108, Boylan, 3 cr

8603 Graduate Seminar (prereq #)
505556 1600-1645 M, PetH 108, Hunter, 1 cr

8740 Concepts and Developments in Ruminant Nutrition (prereq #)
416016 Stern, 2 cr

8750 Concepts and Developments in Meat Science and Technology (prereq #)
116018 1 cr

8810 Research in Animal Science (prereq #)
216020 ar cr

8820 Research in Animal Genetics (prereq #)
916022 ar cr

8830 Research in Animal Physiology (prereq #)
006503 ar cr

8840 Research in Animal Nutrition (prereq #)
606505 ar cr

8850 Research in Muscle Chemistry and Physiology (prereq #)
705555 ar cr

ANTHROPOLOGY (Anth)
Liberal Arts

R**1101 Human Origins**
★LECT 0945-1100 TTh, SciCB 175, Johnson
908549 –1 REC 0815-0900 T, FordH 15, 5 cr
908552 –2 REC 1115-1200 T, FordH 15, 5 cr
106791 –3 REC 1115-1200 T, FordH 15, 5 cr
108556 –4 REC 1215-1300 T, FordH 15, 5 cr
608559 –5 REC 0815-0900 Th, FordH 15, 5 cr
408563 –6 REC 1115-1200 Th, FordH 15, 5 cr
734635 –7 REC 1115-1200 Th, FordH 15, 5 cr
534636 –8 REC 1215-1300 Th, FordH 15, 5 cr

R**1101H Honors Course: Human Origins** (prereq B avg or #)
★LECT 0945-1100 TTh, SciCB 175, Johnson
711632 –80 REC 1015-1100 T, FordH 20, Johnson, 5 cr

R**1102 Introduction to Social and Cultural Anthropology** (§1115)
★LECT 0915-1000 MWF, WilleyH 175, Ogan
808575 –1 REC 0815-0900 T, FordH 20, 5 cr
208578 –2 REC 0915-1000 T, MinMet 120, 5 cr
208581 –3 REC 0915-1000 T, MinMet 124, 5 cr
508585 –4 REC 1015-1100 T, FordH 447, 5 cr
008588 –5 REC 1015-1100 T, FordH 40, 5 cr
008591 –6 REC 1115-1200 T, FordH 20, 5 cr
900001 –7 REC 1115-1200 T, VinH 206, 5 cr
500003 –8 REC 0815-0900 Th, FordH 20, 5 cr
100005 –9 REC 0915-1000 Th, FordH 20, 5 cr
418221 –10 REC 0915-1000 Th, MinMet 120, 5 cr
118223 –11 REC 1015-1100 Th, FordH 20, 5 cr
334637 –12 REC 1015-1100 Th, FordH 40, 5 cr
134638 –13 REC 1115-1200 Th, FordH 20, 5 cr
034639 –14 REC 1115-1200 Th, VinH 206, 5 cr

R**1102H Introduction to Social and Cultural Anthropology** (prereq GPA 3.0 or #)
★LECT 0915-1000 MWF, WilleyH 175, Ogan
011636 –80 REC 0915-1000 T, FordH 20, Ogan, 5 cr

R**3001 Human Biology** (prereq 1101 or intro biol course or #)
617973 1015-1100 MWF, FordH 155, Etkin, 4 cr

3101 History of Anthropology (prereq 1102, 15 cr in 3-5 level courses)
206491 1115-1200 MWF, FordH 349, Spencer, 4 cr

3211 Indians of North America (prereq 1102 or #)
217975 0915-1000 MWF, FordH 40, Spencer, 4 cr

R**3301 Methods and Theory in Archaeology** (prereq 1101 or #)
934620 1115-1230 TTh, FordH 115, Hastorf, 5 cr

R**3302 Methods and Theory in Human Biology** (prereq 3001, #)
734621 1215-1430 M, FordH 50, Etkin, 5 cr

R**3366 Methods and Theory in Anthropological Linguistics** (prereq 1102 or 5102 or #)
706785 1115-1230 TTh, FordH 175, Dunnigan, 5 cr

R3386 **Comparative Primate Osteology** (prereq 1101 or #)
926064 1315-1500 TTh, FordH 20, Murrill, 5 cr

3511 **Prehistoric Archaeology of North America** (prereq 1101 or #)
534622 1415-1500 MWF, FordH 285, Whelan, 4 cr

3533 **Prehistoric Archaeology of South Asia** (prereq 1101 or #)
334623 1015-1100 MWF, FordH 40, Johnson, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
917977 ar cr

R5145 **Anthropology and Education** (§SPFE 5171; prereq 1102 or 5102 or #)
634627 1515-1730 Th, PtH 215, Dobbert, 4 cr

5151 **Cultural Change and Development** (prereq 1102 or 5102 or #)
717981 0945-1100 TTh, FordH 285, Miller, 4 cr

5153 **Urban Anthropology** (prereq 1102 or 5102 or #)
006789 0945-1100 TTh, FordH 175, Rowe, 4 cr

5154 **Anthropology of Colonialism** (prereq 1102 or 5102 or #)
706544 1245-1400 TTh, FordH 50, Rowe, 4 cr

5165 **Perspectives in Human Behavior** (prereq #)
306790 1415-1530 TTh, SocSci 307, Sarles, 4 cr

5331 **Culture Theory: An Introduction** (prereq jr, sr, grad or #)
834626 0915-1000 MWF, FordH 175, Penn, 4 cr

5910 **Topics in Anthropology: Food and Culture in North-South Relations**
414802 1315-1400 MWF, BlegH 245, Miller, 4 cr

R5960 **Senior Seminar** (prereq sr maj)
638452 1315-1530 Th, FordH 120, Spector, 4 cr

5970 **Directed Readings** (prereq #, △, CLA approval) (A–N only)
906784 2–4 cr

8004 **Core Seminar: Archaeology**
334640 1415-1630 W, FordH 235, Gibbon, 3 cr

8360 **Seminar: Religion**
316123 1415-1700 Th, FordH 235, Penn, 3 cr

8710 **Seminar: Linguistic Anthropology**
412323 1415-1630 W, FordH 256, Sarles, 3 cr

8950 **Directed Studies** (prereq #)
717995 ar cr

ARABIC (Arab)
South And Southwest Asian Studies
Liberal Arts

1102 **Beginning Arabic** (prereq 1101)
618492 1215-1300 MTWThF, FolH 50, Abdallah, 5 cr

3012 **Intermediate Arabic** (prereq 3011)
218494 1015-1200 TTh, FolH 50, Abdallah, 4 cr

5112 **Advanced Literary Arabic and Composition** (prereq 5111)
237742 Abdallah, 5 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
718497 ar cr

ARCHITECTURE (Arch)
Architecture & Landscape Architecture
Institute of Technology

R1022 **History of Environmental Development: Architecture and Landscape Architecture** (§LA 1022)
619786 1115-1300 TTh, NichH 45, 4 cr

R1042 **Architectural Graphics** (prereq 1041)
106993 1820-2050 Th, Arch 25, Grebner, 2 cr

R3002 **Environmental Design: Tools and Processes** (§LA 3002; prereq 3001)
105438 1315-1500 TTh, Arch 35, LaVine, 4 cr

R3062 **Building Systems** (prereq 3061)
419787 1015-1200 TTh, Arch 25, Graffunder, 4 cr

R3065 **Environmental Management and Control** (prereq 3064)
119789 1015-1200 TTh, Arch 50, Diedrich, 4 cr

R3082 **Architectural Design** (prereq 3081)
★LECT 1315-1700 MWF, Arch 55, Lockhart, others, 6 cr
825554 –1 LAB 1315-1700 MWF, Arch 210

R3092 **Architectural Design** (prereq 3091)
★LECT 1315-1700 MWF, Arch 5, Stageberg, others, 6 cr
425556 –1 LAB 1315-1700 MWF, Arch 220

R3093 **Architectural Design** (prereq 3092)
★LECT 1315-1700 MWF, Arch 5, Stageberg, others, 6 cr
125558 –1 LAB 1315-1700 MWF, Arch 220

R3970 **Directed Study** (prereq 3081 or △)
419790 ar cr

R5052 **Early Medieval Architecture** (prereq 1021)
433754 1015-1200 MW, Arch 25, Parker, 4 cr

R5111 **Architectural Design** (prereq 3093, 3064-3065 or ¶, CE 3600-3601-3602 or ¶, IT arch maj or adult special)
★LECT 1315-1700 MWF, Arch 25, Weeks, others, 6 cr
225560 –1 LAB 1315-1700 MWF, Arch 230

R5112 **Architectural Design** (prereq 5111)
★LECT 1315-1700 MWF, Arch 25, Weeks, others, 6 cr
925562 –1 LAB 1315-1700 MWF, Arch 230

R5113 **Architectural Design** (prereq 5112)
★LECT 1315-1700 MWF, Arch 25, Weeks, others, 6 cr
525564 –1 LAB 1315-1700 MWF, Arch 230

R5116 **Structure and Form in Architecture** (prereq 5115)
319796 1315-1700 T, Arch 25, Michelson, 4 cr

R5121 **Architectural Design** (prereq 5133, CE 3602, arch maj) (A–N only)
★LECT 1315-1700 MWF, Arch 35, Grebner, others, 6 cr
325565 –1 LAB 1315-1700 MWF, Arch 240

R5122 **Architectural Design** (prereq 5121, arch maj)
★LECT 1315-1700 MWF, Arch 35, Grebner, others, 6 cr
125566 –1 LAB 1315-1700 MWF, Arch 240

R5123 **Architectural Thesis** (prereq 5122, submit thesis plan qtr prior to writing, 800 hrs practical exp, arch maj)
119797 1315-1700 MTWThF, Arch 135, Rapson, 12 cr

R5128 **Law for Architects** (prereq 3093 or △)
019798 1715-1900 T, Arch 40, Heins, 4 cr

R5138 **Planning: Theory and Methodology** (prereq 5137 or #)
819799 1015-1200 TTh, MechE 18, Cummins, 4 cr

R5142 **Historic Building Research and Documentation** (prereq 5141 or #)
519800 1715-1845 TTh, Arch 55, Dunwiddie, 4 cr

R5850 **Topics in Theory** (prereq arch maj or adult special)
206989 2 cr

R5852 **Architecture: Theory and Philosophy** (prereq 3093 or #, arch maj or adult special)
536791 1515-1700 Th, Arch 25, Dittmar, 3 cr

R5855 **Typology and Architecture: Theories of Analysis and Synthesis** (prereq 3083 or #, arch maj or adult special)
106984 1515-1700 Th, Arch 60, Rockcastle, 3 cr

R5950 **Topics in Architecture** (prereq 3093, 3067 or #)
136115 –1 1015-1200 MW, Arch 60, 4 cr
817700 –2 ar cr
717849 –3 2 cr

R5952 **Programming for Architectural Design** (prereq 3093 or #, arch maj or adult special)
606987 1015-1100 W, Arch 15, 1015-1200 F, Arch 25, Robinson, 3 cr

R5962 **Computer Aided Architectural Design** (prereq 5961 or #, arch maj)
118478 1315-1500 T, Arch 40, Anderson, 4 cr

R5970 **Directed Study** (prereq #)
319801 ar cr

R8202 **Special Research: Architectural History** (prereq 5056 or #)
119802 ar cr

R8251 **Architectural Design** (prereq grad status in architecture) (A–N only)
407283 1315-1700 MWF, Arch 210, Rauma, others, 6 cr

R8252 **Architectural Design** (prereq grad status in architecture) (A–N only)
907286 1315-1700 MWF, Arch 210, Rauma, others, 6 cr

R8253 **Architectural Design** (prereq grad status in architecture) (A–N only)
707290 1315-1700 MWF, Arch 210, Rauma, others, 6 cr

R8254 **Architectural Design** (prereq grad status in architecture) (A–N only)
★LECT 1315-1700 MWF, Arch 40, Michelson, others, 6 cr
025567 –1 LAB 1315-1700 MWF, Arch 210

R8255 **Architectural Design** (prereq grad status in architecture) (A–N only)
★LECT 1315-1700 MWF, Arch 40, Michelson, others, 6 cr
825568 –1 LAB 1315-1700 MWF, Arch 210

R8256 **Architectural Design** (prereq grad status in architecture) (A–N only)
★LECT 1315-1700 MWF, Arch 40, Michelson, others, 6 cr
625569 –1 LAB 1315-1700 MWF, Arch 210

R8261 **Selected Problems in Architecture** (prereq grad status in architecture)
707323 1315-1700 MWF, Arch 210, Thompson, others, 1–9 cr

R8262 **Selected Problems in Architecture** (prereq grad status in architecture)
407333 1315-1700 MWF, Arch 210, Thompson, others, 1–9 cr

R8263 **Selected Problems in Architecture** (prereq grad status in architecture)
507341 1315-1700 MWF, Arch 210, Thompson, others, 1–9 cr

R8271 **Problems in City and Community Design**
007344 1315-1700 MWF, Arch 210, Martin, others, 9 cr

R8272 **Problems in City and Community Design**
207351 1315-1700 MWF, Arch 210, Martin, others, 9 cr

R8273 **Problems in City and Community Design**
907353 1315-1700 MWF, Arch 210, Martin, others, 9 cr

R8274 **Problems in City and Community Design**
307356 1315-1700 MWF, Arch 210, Martin, others, 9 cr

R8275 **Problems in City and Community Design**
807359 1315-1700 MWF, Arch 210, Martin, others, 9 cr

R8276 **Problems in City and Community Design**
807362 1315-1700 MWF, Arch 210, Martin, others, 9 cr

ART EDUCATION (ArEd)
Curriculum And Instruction
Education

R3000 **Art of Children** (A–N only)
016643 1415-1600 MW, WullH 240, DiBlasio, 3 cr

R3001 **Survey of Art Activities** (prereq non art education maj) (A–N only)
931636 –1 0915-1100 MWF, WullH 220, Park, 4 cr
731637 –2 1415-1600 MWF, WullH 210, 220, Russell, 4 cr
331639 –3 1315-1600 TTh, WullH 220, 4 cr

R3009 **Weaving Without A Loom** (A–N only)
816644 1515-1700 MWF, WullH 340, Smits, 4 cr

R3010 **Introduction to Weaving** (A–N only)
416646 1315-1500 MWF, WullH 340, Smits, 4 cr

R3020 **Contemporary Crafts** (A–N only)
132929 1315-1600 TTh, WullH 110, 120, Park, 4 cr

R3120 **Newer Media in Art Curriculum** (prereq 3110) (A–N only)
116648 1315-1500 TTh, WullH 210, Russell, 3 cr

3309 **Independent Study** (max 4 cr; prereq #) (A–N only)
916652 1–4 cr

R3800 Current Trends in Art Education (prereq 3120, 3130) (A-N only)
516654 1015-1200 MW, WullH 240, 3 cr

R5020 Advanced Contemporary Crafts (prereq 3020) (A-N only)
432930 1315-1600 TTh, WullH 110, 120, Park, 4 cr

5303 Art Programs for Exceptional Learners (A-N only)
232928 1615-1900 W, WullH 110, 4 cr

5600 Internship (prereq #) (A-N only)
116656 Slettehaugh, 3-9 cr

5605 Practicum (prereq #) (A-N only)
816658 DiBlasio, Slettehaugh, 3-9 cr

5900 Professional Problems (prereq MEd student, #) (A-N only)
016660 DiBlasio, Slettehaugh, 3 cr

R8300 Research in Art Education
416663 1615-1830 Th, WullH 110, DiBlasio, 3 cr

R8306 Seminar: Art Education
516668 1615-1800 T, WullH 110, Slettehaugh, 1 cr

8900 Problems: Art Education (prereq #)
716670 DiBlasio, Slettehaugh, ar cr

ART HISTORY (ArtH)
Liberal Arts

R1002 Introduction to the History of Art
807586 1015-1100 MWF, WilleyH 125, Marling, Steyaert, Stoughton, 4 cr

R1016 Introduction to Asian Art (§3013)
734814 1015-1100 MWF, FraserH 102, Asher, 4 cr

R3012 History of 19th, 20th Century Art
534815 0945-1100 TTh, FraserH 102, Nelson, 4 cr

R3895 Methods of Writing and Research in Art History (prereq art history maj) (A-N only)
034818 1415-1600 W, JonesH 1, Sheppard, 4 cr

R3921 Art of the Film
834819 1315-1400 MW, 1315-1530 F, FraserH 102, Silberman, 4 cr

3970 Directed Studies (prereq #, △, college approval)
107665 1-5 cr

3971 Major Project (prereq art history maj, 3895, #)
112339 1 cr

3975 Directed Museum Experience (prereq # Director of Undergrad Studies, Director of Museology or a faculty supervisor) (S-N only)
729645 1-3 cr

R5112 Greek Sculpture: Archaic, Classical, and Hellenistic (§Clas 5112; prereq jr or #)
037251 1415-1500 MWF, JonesH 207B, Coulson, 5 cr

R5313 Italian High Renaissance Architecture, Sculpture, and Painting (prereq 3011 or grad student or #)
034821 1015-1100 MWF, JonesH 207A, Canedy, 4 cr

R5324 15th-Century Painting in Northern Europe (prereq 3009 or 3011 or grad student or #)
834822 1215-1300 MWF, JonesH 207B, Steyaert, 5 cr

R5358 18th-Century Art in Italy, Germany, Austria (prereq 3011 or grad student or #)
634823 1215-1300 MWF, JonesH 207A, Stoughton, 4 cr

R5442 The Advent of Modernism: Later 19th Century French Painting (prereq one 3xxx level art history course or grad student or #)
038075 1115-1230 TTh, JonesH 207B, Waldfogel, 5 cr

R5464 Later 20th Century Painting (prereq one American or modern art course or #)
234825 0945-1100 TTh, JonesH 207B, Simon, 5 cr

R5535 Art in United States (prereq 3 cr art hist or #)
134826 1315-1400 MWF, JonesH 207B, Marling, 5 cr

R5644 Medieval Art of Scandinavia (prereq one art hist course or #)
934827 1245-1400 TTh, JonesH 207B, Nelson, 4 cr

R5766 Chinese Painting
734828 1115-1200 MWF, JonesH 207B, Poor, 5 cr

R5940 Topics: Art of the Film: Renoir and Realism in the Film (prereq 3921-3922 or #)
534829 1115-1200 MW, 1115-1300 F, FraserH 102, Silberman, 4 cr

5970 Directed Readings (prereq sr, #, △, CLA approval)
912343 1-5 cr

5990 Directed Research (prereq sr, #, △, CLA approval)
307714 1-5 cr

R8993 Museology I: Museum Principles and Practices (8992-8993†; prereq 8992)
605578 1415-1630 T, JonesH 1, 4 cr

8995 Museology II (prereq △)
718225 Smith, 5 cr

8996 Museology III (prereq 8995)
707757 5 cr

8997 Museology IV (prereq 8996)
029487 5 cr

ART STUDIO (ArtS)
Liberal Arts

Note:
Materials Fees are assessed at the time of registration for many Studio Arts courses. For course numbers and fee amounts, see Section 4, Course Fees.

R1101 Drawing I
408742 –1 0815-1000 MWF, ArtB 160, 4 cr (ArtS, ArEd, Dsgn majs only)
708746 –2 1015-1200 MWF, ArtB 160, 4 cr (ArtS, ArEd, Dsgn majs only)
108749 –3 1215-1400 MWF, ArtB 160, 4 cr (ArtS, ArEd, Dsgn majs only)
429493 –4 0915-1200 TTh, ArtB 161, Hendler, 4 cr (ArtS, ArEd, Dsgn majs only)
229494 –5 1315-1600 TTh, ArtB 160, Caglioti, 4 cr (ArtS, ArEd, Dsgn majs only)
604964 –6 0815-1000 MWF, ArtB 160, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
904968 –7 1015-1200 MWF, ArtB 160, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
704969 –8 1215-1400 MWF, ArtB 160, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
633283 –9 0915-1200 TTh, ArtB 161, Hendler, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
433284 –10 1315-1600 TTh, ArtB 160, Caglioti, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
233285 –11 0815-1000 MWF, ArtB 160, 4 cr
133286 –12 1015-1200 MWF, ArtB 160, 4 cr
933287 –13 1215-1400 MWF, ArtB 160, 4 cr
533289 –14 0915-1200 TTh, ArtB 161, Hendler, 4 cr
933290 –15 1315-1600 TTh, ArtB 160, Caglioti, 4 cr

R1102 Drawing II (prereq 1101)
908759 –1 1015-1200 MWF, ArtB 141, Roode, 4 cr (ArtS, ArEd, Dsgn majs only)
708763 –2 1015-1200 MWF, ArtB 141, Roode, 4 cr
104975 –3 0915-1200 TTh, ArtB 140, 4 cr (ArtS, ArEd, Dsgn majs only)
304974 –4 0915-1200 TTh, ArtB 140, 4 cr
404982 –5 1315-1600 TTh, ArtB 150, 4 cr (ArtS, ArEd, Dsgn majs only)
404979 –6 1315-1600 TTh, ArtB 150, 4 cr

R1105 Beginning Painting
408773 –1 0915-1200 MW, ArtB 161, Feinberg, 4 cr (ArtS, ArEd, Dsgn majs only)
908776 –2 0915-1200 MW, ArtB 161, Feinberg, 4 cr
504990 –3 1315-1600 TTh, ArtB 161, Hendler, 4 cr (ArtS, ArEd, Dsgn majs only)
104989 –4 1315-1600 TTh, ArtB 161, Hendler, 4 cr

R1301 Sculpture
108792 –1 0915-1200 MW, ArtB 65, Baldwin, 4 cr (ArtS, ArEd, Dsgn majs only)
304991 –2 0915-1200 MW, ArtB 65, Baldwin, 4 cr
804994 –3 1315-1600 TTh, ArtB 65, Lucey, 4 cr (ArtS, ArEd, Dsgn majs only)
004993 –4 1315-1600 TTh, ArtB 65, Lucey, 4 cr

R1302 Sculpture
108797 –1 0915-1200 MW, ArtB 50, Potratz, 4 cr (ArtS, ArEd, Dsgn majs only)
308801 –2 0915-1200 MW, ArtB 50, Potratz, 4 cr
805000 –3 0915-1200 TTh, ArtB 50, Lucey, 4 cr (ArtS, ArEd, Dsgn majs only)
904999 –4 0915-1200 TTh, ArtB 50, Lucey, 4 cr
205003 –5 1315-1600 TTh, ArtB 50, Rose, 4 cr (ArtS, ArEd, Dsgn majs only)
405002 –6 1315-1600 TTh, ArtB 50, Rose, 4 cr

R1401 Introduction to Studio Arts
905117 1415-1600 TTh, WilleyH 125, Lyon, 4 cr

R1404 Color (§1104; prereq 1101)
736496 –1 1315-1600 MW, ArtB 140, Feinberg, 4 cr (ArtS, ArEd, Dsgn majs only)
536497 –2 1315-1600 MW, ArtB 140, Feinberg, 4 cr

R1510 Printmaking: Intaglio (max 8 cr)
518002 –1 0915-1200 TTh, ArtB 170, Bethke, 4 cr (ArtS, ArEd, Dsgn majs only)
705006 –2 0915-1200 TTh, ArtB 170, Bethke, 4 cr

R1520 Printmaking: Lithography (max 8 cr)
118004 –1 0915-1200 MW, ArtB 176, Krepps, 4 cr (ArtS, ArEd, Dsgn majs only)
905005 –2 0915-1200 MW, ArtB 176, Krepps, 4 cr

R1530 Printmaking: Relief (max 8 cr)
818006 –1 0915-1200 TTh, ArtB 175, Krepps, 4 cr (ArtS, ArEd, Dsgn majs only)
305008 –2 0915-1200 TTh, ArtB 175, Krepps, 4 cr

R1701 Photo Medium
108811 –1 0915-1200 MW, ArtB 120, Hallman, 4 cr (ArtS, ArEd, Dsgn majs only)
508814 –2 0915-1200 MW, ArtB 120, Hallman, 4 cr (CLA students only)
808818 –3 0915-1200 TTh, ArtB 120, Henkel, 4 cr (ArtS, ArEd, Dsgn majs only)
105009 –4 0915-1200 TTh, ArtB 120, Henkel, 4 cr (CLA students only)

R1811 Ceramics: Handbuilding
506108 –1 0915-1200 TTh, ArtB 10, Hoard, 4 cr (ArtS, ArEd, Dsgn majs only)
005013 –2 0915-1200 TTh, ArtB 10, Hoard, 4 cr

R1812 Ceramics: Wheel Throwing
406103 –1 1315-1600 TTh, ArtB 10, Hoard, 4 cr (ArtS, ArEd, Dsgn majs only)
305011 –2 1315-1600 TTh, ArtB 10, Hoard, 4 cr

R3110 Drawing (max 12 cr; prereq 1102, 1401)
108825 –1 1315-1600 TTh, ArtB 141, Rowan, 4 cr (ArtS, ArEd, Dsgn majs only)
508828 –2 1315-1600 TTh, ArtB 141, Rowan, 4 cr
129495 –3 0915-1200 TTh, ArtB 160, Cowette, 4 cr (ArtS, ArEd, Dsgn majs only)
805014 –4 0915-1200 TTh, ArtB 160, Cowette, 4 cr

R3120 Painting (max 12 cr; prereq 1104, 1105, 1401, 4 cr of 3110 or #)
508831 –1 0815-1000 MWF, ArtB 151, Roode, 4 cr (ArtS, ArEd, Dsgn majs only)
108833 –2 0815-1000 MWF, ArtB 151, Roode, 4 cr

R3140 Drawing and Painting (max 6 cr; prereq 1101 or 1109 or #, arch student)
808835 1700-1900 MW, ArtB 150, 2 cr

R3160 Watercolor (max 12 cr; prereq 1101, 1104, 1401 or #)
418008 0915-1200 TTh, ArtB 141, Caglioti, 4 cr (ArtS, ArEd, Dsgn majs only)

R3301 Sculpture: Direct Metal (prereq 1301, 1302, 1401)
705622 –1 1315-1600 MW, ArtB 65, Baldwin, 4 cr (ArtS, ArEd, Dsgn majs only)
205017 –2 1315-1600 MW, ArtB 65, Baldwin, 4 cr

R3302 Sculpture: Plastics Media (prereq 1301, 1302, 1401)
233321 –1 0915-1200 TTh, ArtB 50, Rose, 4 cr (ArtS, ArEd, Dsgn majs only)
133322 –2 0915-1200 TTh, ArtB 50, Rose, 4 cr

R3303 Sculpture: Cast Metal (prereq 1301, 1302, 1401)
105018 –1 1315-1600 MW, ArtB 185, Potratz, 4 cr (ArtS, ArEd, Dsgn majs only)
205020 –2 1315-1600 MW, ArtB 185, Potratz, 4 cr

R3305 Sculpture: Kinetics (prereq 1301, 1302, 1401)
105625 –1 1315-1600 MW, ArtB 65, Baldwin, 4 cr (ArtS, ArEd, Dsgn majs only)
105021 –2 1315-1600 MW, ArtB 65, Baldwin, 4 cr

3403H Honors Workshop (prereq jr or sr honors candidate, 1401, #, △)
711646 2-4 cr

3404H Honors Workshop (prereq jr or sr honors candidate, 1401, #, △)
511647 2-4 cr

3405H Honors Thesis (prereq 1401, #)
111649 2-4 cr

3406H Honors Thesis (prereq 1401, #)
311651 2-4 cr

3420 Studio Arts Workshop: Chemistry in Art (§NSci 3011; prereq maj in studio arts, art history, design, art education or #)
★LECT 1415-1500 MWF, SciCB 175, Schwabacher
438243 –1 LAB 0815-1000 F, SmithH 249, Schwabacher, 4 cr
238244 –2 LAB 1015-1200 F, SmithH 249, Schwabacher, 4 cr

R3510 Printmaking: Intaglio (max 12 cr; prereq 1401, 4 cr of 1510 or #)
718015 –1 1315-1600 TTh, ArtB 170, Myers, 4 cr (ArtS, ArEd, Dsgn majs only)
705023 –2 1315-1600 TTh, ArtB 170, Myers, 4 cr

R3520 Printmaking: Lithography (max 12 cr; prereq 1401, 4 cr of 1520 or #)
318017 –1 1315-1600 MW, ArtB 176, Krepps, 4 cr (ArtS, ArEd, Dsgn majs only)
505024 –2 1315-1600 MW, ArtB 176, Krepps, 4 cr

R3710 Photography (max 12 cr; prereq 1401, 1701 or Jour 1301 or #)
118021 –1 1315-1600 MW, ArtB 120, Hallman, 4 cr (ArtS, ArEd, Dsgn majs only)
005027 –2 1315-1600 MW, ArtB 120, Hallman, 4 cr (CLA students only)

R3810 Intermediate Ceramics (max 12 cr; prereq 1401, 1811, 1812 or #)
208855 –1 0915-1200 MW, ArtB 10, Lane, 4 cr (ArtS, ArEd, Dsgn majs only)
508859 –2 0915-1200 MW, ArtB 10, Lane, 4 cr

R3820 Glassworking (max 12 cr; prereq 1401, 1811 or 1301 or 1302)
233335 1315-1600 MW, ArtB 186, Lane, 4 cr

3970 Directed Study (max 8 cr; prereq 24 cr studio arts, #, △, college approval)
818023 –1 Baldwin, 1-5 cr
636197 –2 Bethke, 1-5 cr
436198 –3 Caglioti, 1-5 cr
236199 –4 Cowette, 1-5 cr
036200 –5 Feinberg, 1-5 cr
836201 –6 Gray, 1-5 cr
636202 –7 Hallman, 1-5 cr
436203 –8 Hendler, 1-5 cr
236204 –9 Henkel, 1-5 cr
136205 –10 Hoard, 1-5 cr
936206 –11 Krepps, 1-5 cr
736207 –12 Lane, 1-5 cr
536208 –13 Lucey, 1-5 cr
336209 –14 MacKenzie, 1-5 cr
736210 –15 Myers, 1-5 cr
536211 –16 Potratz, 1-5 cr
336212 –17 Roode, 1-5 cr
136213 –18 Rose, 1-5 cr
036214 –19 Rowan, 1-5 cr
836215 –20 Somberg, 1-5 cr
636216 –21 Brooks, 1-5 cr
038061 –22 Lyon, 1-5 cr

3980 Directed Instruction (max 8 cr; prereq #, △, college approval)
418025 –1 Baldwin, 1-5 cr
236221 –2 Bethke, 1-5 cr
136222 –3 Caglioti, 1-5 cr
936223 –4 Cowette, 1-5 cr
736224 –5 Feinberg, 1-5 cr
536225 –6 Gray, 1-5 cr
336226 –7 Hallman, 1-5 cr
136227 –8 Hendler, 1-5 cr
036228 –9 Henkel, 1-5 cr
836229 –10 Hoard, 1-5 cr
136230 –11 Krepps, 1-5 cr
036231 –12 Lane, 1-5 cr
836232 –13 Lucey, 1-5 cr
636233 –14 MacKenzie, 1-5 cr
436234 –15 Myers, 1-5 cr
236235 –16 Potratz, 1-5 cr
136236 –17 Roode, 1-5 cr
936237 –18 Rose, 1-5 cr
736238 –19 Rowan, 1-5 cr
536239 –20 Somberg, 1-5 cr
936240 –21 Brooks, 1-5 cr
838062 –22 Lyon, 1-5 cr

R5110 Drawing (max 16 cr; prereq 12 cr of 3110)
608867 –1 0915-1200 TTh, ArtB 150, Rowan, 4 cr
208869 –2 4 cr (sr, grad only)

R5120 Painting (max 16 cr; prereq 12 cr of 3120 or #)
408871 –1 1315-1600 TTh, ArtB 151, Cowette, 4 cr
708875 –2 4 cr (sr, grad only)

R5160 Watercolor (max 16 cr; prereq 12 cr of 3160 or #)
305641 –1 0915-1200 TTh, ArtB 141, Caglioti, 4 cr (ArtS, ArEd, Dsgn majs only)
714806 –2 4 cr (sr, grad only)

5190 Drawing and Painting (max 16 cr; prereq #, non maj)
118027 3-4 cr

R5310 Sculpture: Direct Metal (max 16 cr; prereq 3301)
805627 1315-1600 MW, ArtB 65, Baldwin, 4 cr

R5320 Sculpture: Plastics Media (max 16 cr; prereq 3302)
933323 0915-1200 TTh, ArtB 50, Rose, 4 cr

R5330 Sculpture: Cast Metal (max 16 cr; prereq 3303)
805031 1315-1600 MW, ArtB 185, Potratz, 4 cr

R5350 Sculpture: Kinetics (max 16 cr; prereq 3305)
405629 1315-1600 MW, ArtB 65, Baldwin, 4 cr

5390 Sculpture (max 16 cr; prereq #, non maj)
718029 3-4 cr

R5510 Printmaking: Intaglio (max 16 cr; prereq 12 cr of 3510 or #)
918031 1315-1600 TTh, ArtB 170, Myers, 4 cr

R5520 Printmaking: Lithography (max 16 cr; prereq 12 cr of 3520 or #)
718032 1315-1600 MW, ArtB 176, Krepps, 4 cr

5590 Printmaking (max 16 cr; prereq #, non maj)
618038 3-4 cr

R5700 Seminar: Photography (prereq studio arts maj or #)
433334 1615-1800 MW, ArtB 120, Hallman, 2 cr

R5710 Photography (max 16 cr; prereq 12 cr of 3710 or #)
418042 1315-1600 TTh, ArtB 120, Henkel, 4 cr

5790 Photography (max 16 cr; prereq #, non maj)
718046 3-4 cr

R5810 Advanced Ceramics (max 16 cr; prereq 12 cr of 3810 or #)
318048 0915-1200 MW, ArtB 10, MacKenzie, 4 cr

R5820 Glass Working (max 16 cr; prereq 3823 or 12 cr of 3820 or #)
418056 1315-1600 MW, ArtB 186, Lane, 4 cr

5890 Ceramics and Glass Working (max 16 cr; prereq #)
818054 3-4 cr

5970 Directed Studies (max 12 cr; prereq 24 cr studio arts, #, △, CLA approval)
518050 –1 Baldwin, 1-5 cr
036245 –2 Bethke, 1-5 cr
836246 –3 Caglioti, 1-5 cr
636247 –4 Cowette, 1-5 cr
436248 –5 Feinberg, 1-5 cr
236249 –6 Gray, 1-5 cr
636250 –7 Hallman, 1-5 cr
436251 –8 Hendler, 1-5 cr
236252 –9 Henkel, 1-5 cr
136253 –10 Hoard, 1-5 cr
936254 –11 Krepps, 1-5 cr
736255 –12 Lane, 1-5 cr
536256 –13 Lucey, 1-5 cr
336257 –14 MacKenzie, 1-5 cr
136258 –15 Myers, 1-5 cr
036259 –16 Potratz, 1-5 cr
336260 –17 Roode, 1-5 cr
136261 –18 Rose, 1-5 cr
036262 –19 Rowan, 1-5 cr
836263 –20 Somberg, 1-5 cr
636264 –21 Brooks, 1-5 cr

R8110 Drawing (max 12 cr; prereq #)
108906 –1 0915-1200 TTh, ArtB 150, Rowan, 4 cr
508909 –2 4 cr (grad only)

8120 Painting (max 24 cr; prereq #)
118058 4 cr

R8300 20th Century Art Theories in Sculpture (max 6 cr; prereq #)
218060 1615-1700 T, ArtB 75, Rose, 1 cr

8310 Sculpture: Direct Metal (max 12 cr; prereq #)
905635 1315-1600 MW, ArtB 65, Baldwin, 4 cr

R8320 Sculpture: Plastics Media (max 12 cr; prereq #)
333326 0915-1200 TTh, ArtB 50, Rose, 4 cr

R8330 Sculpture: Cast Metal (max 12 cr; prereq #)
405033 1315-1600 MW, ArtB 185, Potratz, 4 cr

8350 Sculpture: Kinetics (max 12 cr; prereq #)
105639 1315-1600 MW, ArtB 65, Baldwin, 4 cr

R8400 Concepts in Contemporary Art (prereq art studio grad or #)
212386 1615-1800 TTh, BlegH 360, Myers, 4 cr

8510 Printmaking (max 32 cr; prereq #)
718063 4 cr

R8511 Photomechanical Printmaking (prereq MFA candidate, print concentration or #)
105035 1315-1600 TTh, ArtB 176A, Bethke, 4 cr

8512 Problems in Photomechanical Printmaking (prereq 8511 or #)
936674 1315-1600 TTh, ArtB 176A, Bethke, 4 cr

8710 Photography (max 24 cr; prereq #)
318065 4 cr

8810 Ceramics (max 24 cr; prereq #)
018067 4 cr

8820 Glassworking (max 24 cr; prereq #)
618069 4 cr

ASTRONOMY (Ast)
Institute of Technology

R1011 Descriptive Astronomy (§1021)
420034 –1 0915-1000 MTWTh, Phys 150, Humphreys, 4 cr
120036 –2 1015-1100 MTWTh, Phys 166, Humphreys, 4 cr
208936 –3 1115-1200 MTWTh, Phys 166, Rudnick, 4 cr
708939 –4 1215-1300 MTWTh, Phys 150, Sitko, 4 cr
708942 –5 1830-2015 MW, Phys 166, TJ Jones, 4 cr

R1015 Descriptive Astronomy Laboratories (§1025H; prereq high school algebra...high school trigonometry rec)
204871 Rudnick, 1 cr (Lab time assigned first 2 days of quarter, Phys 450)

R1025H Introduction to Astronomy Laboratory (§1015, 1015H; prereq high school algebra, trigonometry, physics or chemistry)
911659 1830-2030 Th, Phys 157, Rudnick, 1 cr

R1201 Topics in Modern Astrophysics (prereq 1011 or 1021, #)
420048 1315-1400 MWF, Phys 157, Kennicutt, 4 cr

3970 Directed Studies (prereq #, △)
905442 1-5 cr

5161 Astrophysics of Diffuse Matter (prereq 3051, Phys 5024 or #)
233271 1415-1500 MWF, Phys 210, Davidson, 4 cr

5421 High Energy Astrophysics (prereq 5161, 5162, 5321 or #)
133272 1015-1130 MW, Phys 236A, TW Jones, 4 cr

5970 Directed Studies (prereq #, △)
320060 1-5 cr

5990 Directed Research (prereq #, △)
020062 ar cr

8200 Seminar
220066 1530-1630 Th, Phys 210, Humphreys, 1-3 cr

8482 Topics in Astrophysics: Stellar Accretion Disks: Observations and Theory (prereq #)
120067 1015-1130 TTh, Phys 236A, Slovak, 3 cr

8990 Research in Astronomy and Astrophysics (prereq #)
920068 ar cr

BIOCHEMISTRY (BioC)
Biological Sciences

R1301 Elementary Biochemistry I (§Chem 1002, 3301; prereq Chem 1001 or 1005)
616306 0900-0945 MTWThF, ClaOff B45, Glass, 5 cr

1302 Elementary Biochemistry II (prereq 1301 or Chem 1002)
916313 0900-0945 MWF, PalmC 10, Jenness, 3 cr

R1303 Elementary Biochemistry Laboratory (prereq 1301 or ¶)
★LECT 1200-1245 Th, PalmC 10, Jenness
308992 –1 LAB 0900-1145 Th, SnH 122, 128, 2 cr
808995 –2 LAB 1300-1545 Th, SnH 122, 128, 2 cr

3960 Research Topics in Biochemistry (S–N only)
516315 1600-1645 Th, GorL 239, Nelsestuen, 1 cr

5002 Biochemistry Topics (prereq Biol 5001)
016318 0800-0845 MWF, McNH 33, Dagley, 3 cr

5003 Plant Biochemistry (prereq Biol 5001 or equiv...BioC 5002 rec)
814165 1100-1145 MWF, BioSci 58, Gander, 3 cr

R5025 Laboratory in Biochemistry (prereq Biol 5001 or ¶)
★LECT 1200-1245 T, PalmC 10, Woodward
109005 –1 LAB 0800-1145 T, SnH 122, 128, 2 cr
509008 –2 LAB 1300-1645 T, SnH 122, 128, 2 cr

5523 Physical Biochemistry: Spectroscopic Methods (§Chem 5523, MdBc 5523; prereq 2 qtrs physical chemistry...Biol 5001 desirable)
116320 1215-1300 MTWF, SmithH 325, Thomas, Bryant, 4 cr (Mpls)

R5744 Biochemistry Laboratory: Theory and Practice (prereq previous lab work in analytical, organic chemistry, #)
★LECT 1200-1245 MW, BioSci 12, Lovrien, 4 cr
115054 –1 LAB 1300-1545 MW, SnH 28, Lovrien

5752 General Biochemistry (§MdBc 5752; prereq 5751)
416324 0745-0845 MWF, ClaOff B45, Nelsestuen, Anderson, 4 cr

5970 Directed Studies (prereq #, △)
716328 ar cr

5990 Directed Research (prereq #, △)
707080 ar cr

8094 Research and Literature Reports
916330 Lovrien, 1 cr

8194 Graduate Seminar (prereq △)
516332 1600-1715 W, PalmC 10, Warner, 1 cr

8232 Advanced Topics in Protein Biochemistry (§MdBc 8232; prereq 5751 or #) (A–N only)
137653 1500-1700 M, 1600-1700 T, GorL 342, Woodward, 3 cr

8290 Current Research Techniques (prereq grad maj in biochem, △)
416338 1–3 cr

8990 Graduate Research (prereq #)
216342 2–5 cr

BIOCHEMISTRY, MEDICAL (MdBc)
Medical School

5053 Problems in Biochemistry (prereq 5100 or 5751)
419272 1–10 cr

5101 Medical Biochemistry (prereq 5100)
★LECT 1315-1400 MT, 1015-1100 Th, 1515-1600 F, PWB 2470, Carr, Koerner, others, 5 cr
★REC 1515-1600 T, MoosT 2520
532935 –1 LAB 1415-1700 T, MoosT 2164, Van Pilsum, Roon
★REC 1515-1600 Th, MoosT 2620
332936 –2 LAB 1415-1700 Th, MoosT 2164, Van Pilsum, Roon
★REC 1015-1100 F, MMA 125
132937 –3 LAB 0915-1200 F, MoosT 2164, Van Pilsum, Roon

5301 Biochemistry (prereq 5300, med tech)
519277 0815-0900 MTWTh, MoosT 2580, Dempsey, Bodley, 4 cr

5523 Physical Biochemistry: Spectroscopic Methods (§BioC 5523, Chem 5523; prereq 2 qtrs physical chemistry...Biol 5001 desirable)
319278 1215-1300 MTWF, SmithH 325, Thomas, Bryant, 4 cr

5752 General Biochemistry (§BioC 5752; prereq 5751)
119279 0745-0845 MWF, ClaOff B45, Nelsestuen, Anderson, 4 cr (StP)

8150 Seminar: Biochemistry (S–N only)
331687 1215-1300 Th, OwreH 4218, Ungar, 1 cr

8232 Advanced Topics in Protein Biochemistry (§BioC 8232; prereq 5751 or #)
736823 1500-1700 M, 1600-1700 T, GorL 342, Howard, Woodward, 3 cr (StP)

8240 Biochemistry of Neuronal Signalling (prereq 5753 or 5101)
536824 1015-1130 MW, MoosT 2580, Koerner, 3 cr

8290 Current Research Techniques (prereq grad maj in biochem, #) (S–N only)
519280 1–3 cr

8300 Research
019283 ar cr

BIOLOGY (Biol)
Biological Sciences

R1008 Introductory Biology: An Evolutionary Approach
★LECT 1215-1300 MWF, MoosT 2650, Birney
134986 –1 REC 0915-1000 M, AmundH 162, 4 cr
934987 –2 REC 1015-1100 M, AmundH 162, 4 cr
734988 –3 REC 1115-1200 M, AmundH 162, 4 cr
534989 –4 REC 1315-1400 M, AmundH 162, 4 cr
934990 –5 REC 0815-0900 W, FordH 349, 4 cr
734991 –6 REC 0915-1000 W, AmundH 162, 4 cr
534992 –7 REC 1015-1100 W, AmundH 162, 4 cr
334993 –8 REC 1115-1200 W, AmundH 162, 4 cr
134994 –9 REC 1315-1400 W, AmundH 162, 4 cr
034995 –10 REC 0915-1000 F, AmundH 162, 4 cr
834996 –11 REC 1015-1100 F, AmundH 162, 4 cr
634997 –12 REC 1115-1200 F, AmundH 162, 4 cr
434998 –13 REC 1315-1400 F, AmundH 162, 4 cr

R1008H Introductory Biology: An Evolutionary Approach
★LECT 1015-1100 MWF, Zoology 102
113586 –81 REC 1115-1200 M, FordH 160, 4 cr
115085 –82 REC 1115-1200 W, FordH 160, 4 cr

R1009 General Biology (§1011)
★LECT 0815-0900 MWF, WilleyH 175, Kirkwood
108086 –1 LAB 0815-1000 TTh, KoltH S167, 5 cr
008087 –2 LAB 0815-1000 TTh, KoltH S170, 5 cr
608089 –3 LAB 1015-1200 TTh, KoltH S167, 5 cr
808091 –4 LAB 1015-1200 TTh, KoltH S170, 5 cr
408093 –5 LAB 1015-1200 TTh, KoltH S177, 5 cr
208094 –6 LAB 1015-1200 TTh, KoltH S179, 5 cr
908096 –7 LAB 1315-1500 TTh, KoltH S160, 5 cr
508098 –8 LAB 1315-1500 TTh, KoltH S167, 5 cr
108100 –9 LAB 1515-1700 TTh, KoltH S160, 5 cr
708102 –10 LAB 1515-1700 TTh, KoltH S167, 5 cr
308104 –11 LAB 1015-1200 WF, KoltH S160, 5 cr
008106 –12 LAB 1015-1200 WF, KoltH S167, 5 cr
608108 –13 LAB 1015-1200 WF, KoltH S170, 5 cr
808110 –14 LAB 1315-1500 WF, KoltH S160, 5 cr
408112 –15 LAB 1315-1500 WF, KoltH S167, 5 cr
108114 –16 LAB 1315-1500 WF, KoltH S170, 5 cr
708116 –17 LAB 1315-1500 WF, KoltH S177, 5 cr
308118 –18 LAB 1515-1700 WF, KoltH S160, 5 cr
508120 –19 LAB 1515-1700 WF, KoltH S167, 5 cr
★LECT 1215-1300 MWF, AndH 310, Soulen
108122 –20 LAB 0815-1000 TTh, KoltH S177, 5 cr
808124 –21 LAB 0815-1000 TTh, KoltH S179, 5 cr
408126 –22 LAB 1015-1200 TTh, KoltH S183, 5 cr
108128 –23 LAB 1015-1200 TTh, KoltH S187, 5 cr
208130 –24 LAB 1315-1500 TTh, KoltH S170, 5 cr
108131 –25 LAB 1315-1500 TTh, KoltH S177, 5 cr
708133 –26 LAB 1515-1700 TTh, KoltH S170, 5 cr
508134 –27 LAB 0815-1000 WF, KoltH S160, 5 cr
108136 –28 LAB 0815-1000 WF, KoltH S167, 5 cr
008137 –29 LAB 1015-1200 WF, KoltH S177, 5 cr
808138 –30 LAB 1015-1200 WF, KoltH S179, 5 cr
608139 –31 LAB 1315-1500 WF, KoltH S179, 5 cr
808141 –32 LAB 1515-1700 WF, KoltH S170, 5 cr

R1009H General Biology (§1011H; prereq honors division or 3-4 yrs high school math, high school chem or △)
★LECT 0815-0900 MWF, WilleyH 175, Kirkwood
513608 –81 LAB 0815-1000 TTh, KoltH S160, 5 cr
313609 –82 LAB 1015-1200 TTh, KoltH S160, 5 cr

R1101 Heredity and Human Society (§GCB 3002, no cr if taken after 5003 or GCB 3022)
508005 1215-1300 MTWTh, WilleyH 175, V Woodward, 4 cr

R1103 General Botany (§3012; prereq 1009)
★LECT 1300-1345 MWF, PalmC 10, Wetmore, (StP)
009126 –1 LAB 1000-1245 W, BioSci 182, 5 cr (StP)
409129 –2 LAB 1100-1345 T, BioSci 182, 5 cr (StP)
809130 –3 LAB 1400-1645 T, BioSci 182, 5 cr (StP)
209133 –4 LAB 1400-1645 W, BioSci 182, 5 cr (StP)
709136 –5 LAB 1100-1345 Th, BioSci 182, 5 cr (StP)
509140 –6 LAB 1400-1645 Th, BioSci 182, 5 cr (StP)
009143 –7 LAB 1000-1245 F, BioSci 182, 5 cr (StP)

R1106 General Zoology (prereq 1009)
★LECT 0815-0900 MWF, Botany B6, Schmid
909152 –1 LAB 0915-1200 T, KoltH P168, P170, 5 cr
309155 –2 LAB 1215-1500 T, KoltH P168, P170, 5 cr
809158 –3 LAB 0915-1200 W, KoltH P168, P170, 5 cr
809161 –4 LAB 1215-1500 W, KoltH P168, P170, 5 cr
209164 –5 LAB 0815-1100 Th, KoltH P168, P170, 5 cr
909166 –6 LAB 1215-1500 Th, KoltH P168, P170, 5 cr

R1952 Biology Colloquium (prereq 1009 or ¶, #) (S–N only)
516346 1415-1600 M, Zoology 313, 1–2 cr

R3011 Animal Biology (§1106; prereq 1009, Chem 1005)
★LECT 0950-1050 MWF, McNH 33, Rosenberg, (StP)
309172 –1 LAB 0900-1045 TTh, SnH 13, 5 cr (StP)
009174 –2 LAB 1200-1345 TTh, SnH 13, 5 cr (StP)
409177 –3 LAB 1400-1545 TTh, SnH 13, 5 cr (StP)
409180 –4 LAB 1200-1345 WF, SnH 13, 5 cr (StP)

R3012 Plant Biology (§1103; prereq 1009, Chem 1005)
★LECT 1200-1245 MWF, PalmC 10, Charvat, (StP)
109190 –1 LAB 0900-1045 MW, BioSci 163, 5 cr (StP)

609193 –2 LAB 1300-1445 MW, BioSci 151, 5 cr (StP)
109196 –3 LAB 1300-1445 MW, BioSci 163, 5 cr (StP)
709198 –4 LAB 1500-1645 MW, BioSci 151, 5 cr (StP)

3111 Animal Biology (§3011; prereq 1009, 1106, Chem 1005)
114227 0950-1050 MWF, McNH 33, Rosenberg, 4 cr

R3950H Undergraduate Seminar (prereq # or △) (S-N only)
611672 –81 1500-1645 Th, BioSci 818, Wetmore, 2 cr (Symbiosis) (Bot)
911676 –82 2 cr (EBB)

3980 Directed Instruction (prereq #)
316350 1-5 cr

R5001 Biochemistry (§3021, BioC 5001; prereq 1009, 12 cr organic chem or #)
616354 0800-0900 MWF, Phys 131, Chapman, 4 cr

5003 Genetics (§GCB 3022, 5022; prereq 5001)
916358 1100-1200 MWF, HodsonH 495, Snustad, 4 cr (StP)

5004 Cell Biology (prereq 5001)
716362 –1 1000-1045 MWF, HodsonH 495, Cunningham, 3 cr (StP)
617505 –2 1700-1930 M, BioSci 12, Cunningham, 3 cr (StP)

R5013 Microbiology (§MicB 3103, 5105, VPB 3103; prereq 5001)
★LECT 1215-1330 TTh, FordH 55, Schottel, 5 cr
125737 –1 LAB 0915-1100 TTh, MoosT 2252

R5041 Ecology (§3041; prereq Math 1142 or 1211, Biol 1103, 1106 or 3011 or 3012) (A-N only)
★LECT 1015-1100 MTWF, Zoology 313, Abrams, McNaught
237773 –1 REC 0915-1000 T, LindH 315, 4 cr
137774 –2 REC 0815-0900 Th, FordH 170, 4 cr
937775 –3 REC 1215-1300 Th, SmithH 111, 4 cr
737776 –4 REC 1315-1400 F, FordH 170, 4 cr

R5125 Recombinant DNA Laboratory (prereq #)
637771 1300-1700 TTh, BioSci 245, Hackett, 4 cr

R8710 Tutorial in Developmental Biology (prereq #, △)
616368 3 cr

R8950 Graduate Seminar (prereq #, △)
416372 1-2 cr

R8970 Special Topics (prereq #, △)
716376 1-3 cr

BIOPHYSICAL SCIENCES (BPhy)
Institute of Technology

5138 Seminar: Biophysical Sciences
819964 1530-1630 Th, MlrdH 5276, Ackerman, ar cr

5156 Biophysics (prereq 28 cr between physics, biology, #...physical chemistry, physiology rec)
719973 1315-1500 TTh, TNCE 220, Schmitt, 3 cr

5171 Physics of Nuclear Medicine (§Rad 5171, TRad 5171; prereq 5170, #)
019980 1600-1700 W, 1500-1600 Th, OwreH 2230, Morin, 3 cr

5173 Physics of Radiation Therapy (§Rad 5173, TRad 5173; prereq 5170 or #)
219984 1630-1730 W, 1600-1730 F, OwreH 2210, Khan, 3 cr

8222 Research
019994 ar cr

8297 Seminar
619996 1415-1600 F, TNCE 220, Schmitt, ar cr

BOTANY (Bot)
Biological Sciences

3131 Survey of Plant Physiology (§5131, PlPh 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 5001)
316378 1200-1245 MTWF, ClaOff B25, Guilfoyle, 4 cr

R3201 Introductory Taxonomy (prereq Biol 1103 or 3012)
★LECT 1300-1345 TTh, McNH 33, Morley
609243 –1 LAB 1100-1245 TTh, BioSci 176, 4 cr
109246 –2 LAB 1400-1545 TTh, BioSci 176, 4 cr
431566 –3 LAB 1600-1745 TTh, BioSci 176, 4 cr

3950 Undergraduate Proseminar (prereq #)
116382 1 cr

R5111 Developmental Plant Anatomy (prereq Biol 1103 or Biol 3012)
★LECT 1200-1315 TTh, BioSci 12, Biesboer, 5 cr
125602 –1 LAB 1330-1615 TTh, BioSci 151

5131 Survey of Plant Physiology (§3131, PlPh 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 5001)
916389 1200-1245 MTWF, ClaOff B25, 1200-1245 Th, BioSci 115, Guilfoyle, Frenkel, 4 cr

5183 Water, Minerals, and Translocation (§PlPh 5183; prereq 5131)
916392 1450-1550 MWF, AlderH 415, Markhart, Stadelmann, 4 cr

5960 Special Topics (prereq #, △)
516394 ar cr

5970 Directed Studies (prereq #, △)
116396 ar cr

5990 Directed Research (prereq #, △)
305722 ar cr

8301 Pollen Morphology and Quaternary Palynology (prereq plant taxonomy or #)
032941 Cushing, 3-5 cr

8950 Seminar: Plant Tumors (prereq #)
816398 1700-1800 T, BioSci 756, Biesboer, 1 cr

8990 Research Problems (prereq #)
316400 ar cr

BUSINESS ADMINISTRATION (BA)
Management

R3998 Independent Study (prereq #)
316493 ar cr

R3998H Honors Course: Independent Study (prereq consent of supervising faculty member, SMgt honors student or # and SMgt approval)
938117 ar cr

R8200 Library Access for Business Research (prereq SMgt PhD student or #, grad SMgt approval) (S-N only)
620517 0800-1000 Th, OMWL 201, Wells, 1 cr (Business Reference Lib)

BUSINESS AND MARKETING EDUCATION (BME)
Vocational And Technical Education Education

R1501 Basic Keyboarding/Typewriting (§BDE 1501, S-N optional for non majors)
936738 –1 1000-1045 MWF, VoTech 240, Sormunen, 3 cr
736739 –2 1300-1345 MWF, VoTech 230, 240, Bertelson, 3 cr
136740 –3 1400-1445 MWF, VoTech 240, Bertelson, 3 cr
936741 –4 1700-1845 TTh, VoTech 240, Davison, 3 cr

R1502 Intermediate Typewriting (§BDE 1502; prereq 1501 or proficiency exam) (A-N only)
736742 1300-1345 MWF, VoTech 230, 240, Bertelson, 3 cr

R1503 Advanced Typewriting (§BDE 1503; prereq 1502 or proficiency exam) (A-N only)
536743 1300-1345 MWF, VoTech 230, 240, Bertelson, 3 cr

3303 Teaching Accounting and Data Processing (§BDE 3303) (A-N only)
336744 1500-1645 TTh, VoTech R285, Hopkins, 3 cr

R3603 Student Teaching in Business or Marketing Education (prereq SeEd 3155, △) (S-N optional)
036746 1700-1845 T, VoTech R285, Ashmun, Hopkins, 4 cr

R3604 Student Teaching in Business or Marketing Education (prereq SeEd 3155, △) (S-N optional)
836747 1700-1845 T, VoTech R285, Ashmun, Hopkins, 4 cr

R3605 Student Teaching in Business or Marketing Education (prereq SeEd 3155, △) (S-N optional)
636748 1700-1845 T, VoTech R285, Ashmun, Hopkins, 4 cr

R5159 Word Processing Concepts and Teaching Methods (§BDE 5159) (A-N only)
436749 0800-1045 S, VoTech 230, Lambrecht, 4 cr

R5160 Word Processing Practicum (§BDE 5160) (A-N only)
836750 –1 1100-1230 MW, VoTech 230, Sormunen, 2 cr
636751 –2 1100-1245 S, VoTech 230, Lambrecht, 2 cr

5252 Teaching Merchandise Display (§BDE 5252) (A-N only)
436752 1600-1745 Th, VoTech 220, 3 cr

5304 Methods: Marketing Education (§BDE 3304) (A-N only)
937632 1300-1445 MWF, VoTech 220, Klaurens, 4 cr

R5350 Business Data Processing: Content and Teaching Methods (§BDE 5350) (A-N only)
236753 1600-1830 T, VoTech 230, Lambrecht, 4 cr

5352 Coordination Techniques in Business and Marketing Education (§BDE 5352) (A-N only)
136754 1600-1830 W, VoTech R285, Abeln, 4 cr

R5359 Occupational Experience (prereq #) (S-N optional)
936755 1900-2100 T, VoTech 220, Ashmun, 1-18 cr (addnl hrs ar)

R5360 Program Developments in Business and Marketing Education: Management Assistance to Small Business (A-N only)
736756 1730-1930 M, VoTech 220, Ashmun, 3 cr

5600 School-Based Projects in Business and Marketing Education (max 12 cr; prereq #) (A-N only)
536757 1-12 cr

R5900 Directed Study in Business and Marketing Education (max 6 cr; prereq △) (S-N optional)
336758 –1 1800-1930 Th, VoTech 220, Klaurens, 1-6 cr
136759 –2 1-6 cr

8300 Seminar: Research in Business, Marketing, and Economic Education (prereq #)
536760 1 cr

8900 Problems: Business and Marketing Education (max 9 cr; prereq #)
336761 1-9 cr

BUSINESS LAW (BLaw)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for BLaw courses.

R3058 Introduction to Law, and the Law of Contracts and Agency (§8158; prereq Econ 1002) (A-N only)
★LECT 1115-1200 T, AndH 370, Andrews
109321 –1 LAB 0815-0900 TTh, BlegH 415, Andrews, 4 cr
609324 –2 LAB 0915-1000 TTh, BlegH 415, Andrews, 4 cr
109327 –3 LAB 1015-1100 TTh, BlegH 110, Eastlund, 4 cr

R3078 Law of Partnerships, Corporations, and Real Property (§8278; prereq 3058)
809225 0815-0930 TTh, BlegH 145, Eastlund, 4 cr

R8158 Introduction to Law, and the Law of Contracts and Agency (§3058; prereq Econ 1002, grad mgmt/IR student or grad SMgt approval) (A-N only)
★LECT 1115-1200 T, AndH 370, Andrews
307132 –1 LAB 0915-1000 TTh, BlegH 415, Andrews, 4 cr

R8278 Law of Partnerships, Corporations, and Real Property (§3078; prereq 8158, grad mgmt/IR student or grad SMgt approval)
609226 0815-0930 TTh, BlegH 145, Eastlund, 4 cr

BUSINESS, GOVERNMENT AND SOCIETY (BGS)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for BGS courses.

R3001H Honors Course: Managerial Economics (§3001, Econ 3101, 3105; prereq Econ 1002, SMgt honors student or # and SMgt approval) (A-N only)
338137 0830-1000 TTh, BlegH 245, 4 cr

R3002 Business and Society (prereq jr, sr) (A-N only)
★LECT 1415-1530 MW, AndH 210, Maitland
406232 –1 LAB 1315-1400 W, BlegH 205, 4 cr
106234 –2 LAB 0815-0900 F, BlegH 115, 4 cr
706236 –3 LAB 1315-1400 F, BlegH 115, 4 cr
506237 –4 LAB 1415-1500 F, BlegH 115, 4 cr
106239 –5 LAB 1415-1500 F, BlegH 105, 4 cr

R3002H Honors Course: Business and Society (§3002; prereq jr or sr, SMgt honors student or # and SMgt approval) (A-N only)
★LECT 1415-1530 MW, AndH 210, Maitland
538136 –80 LAB 0915-1000 F, Law 15, 4 cr

R3004 International Business
306241 –1 1015-1145 TTh, BlegH 130, Holloway, 4 cr
105723 –2 1330-1500 TTh, BlegH 130, Holloway, 4 cr

R8009 Business and Government I: Government Economics Regulation of Business (prereq MBA 8055, grad mgmt/IR student or #, grad SMgt approval)
216504 1730-2015 M, BlegH 435, Erickson, 4 cr

R8017 Organizational Politics and Management (prereq grad mgmt/IR student or grad SMgt approval)
716815 1730-2015 T, BlegH 415, Erickson, Roberts, 4 cr

CHEMICAL ENGINEERING (ChEn)
Chemical Engineering & Materials Science
Institute of Technology

R3091 Industrial Employment
619819 1-2 cr

R5102 Principles of Chemical Engineering II (prereq 5101, upper division chem engr or mat sci maj)
★LECT 0915-1000 MWF, AmundH 240, Evans
509350 –1 REC 0815-0900 TTh, AmundH 162, 4 cr
109352 –2 REC 0915-1000 TTh, AmundH 162, 4 cr
032969 –3 REC 1215-1300 TTh, AmundH 162, 4 cr
109358 –4 REC 1415-1500 TTh, AmundH 162, 4 cr
109361 –5 REC 1415-1500 TTh, AmundH 154, 4 cr
509364 –6 REC 1515-1600 TTh, AmundH 154, 4 cr

R5201 Thermodynamics and Material State (prereq 5101, Chem 5534 or #, upper division chem engr or mat sci maj)
★LECT 1215-1300 MWF, Botany B6, Cussler
809371 –1 REC 0815-0900 TTh, AmundH 158, 4 cr
209374 –2 REC 1115-1200 TTh, AmundH 158, 4 cr
709377 –3 REC 1215-1300 TTh, AmundH 158, 4 cr
509381 –4 REC 1215-1300 TTh, AmundH 154, 4 cr
809385 –5 REC 1415-1500 TTh, AmundH 158, 4 cr
209388 –6 REC 1515-1600 TTh, AmundH 158, 4 cr

R5302 Applied Reactor Analysis (prereq 5301)
437111 1515-1700 TTh, AmundH 162, Griffin, 4 cr

R5403 Chemical Engineering Laboratory (prereq 5103, upper division chem engr or mat sci maj)
★LECT 1115-1200 M, AmundH 240, Carr
313139 –1 LAB 1315-1700 M, AmundH 356, 2 cr
131688 –2 LAB 1315-1700 T, AmundH 356, 2 cr
031689 –3 LAB 1315-1700 W, AmundH 356, 2 cr
331690 –4 LAB 0815-1200 Th, AmundH 356, 2 cr
131691 –5 LAB 1315-1700 F, AmundH 356, 2 cr

R5501 Process Evaluation and Design (prereq 4th yr or #, upper division chem engr or mat sci)
★LECT 1015-1100 MWF, AmundH 240, Ranz
509400 –1 REC 1415-1600 T, MinMet 124, Ranz, 4 cr
809404 –2 REC 1415-1600 Th, MinMet 124, Johnson, 4 cr
209407 –3 REC 1415-1600 Th, MinMet 120, Ranz, 4 cr

R5601 Process Control (prereq 4th yr or # upper division chem engr or mat sci maj)
★LECT 0815-0900 MWF, AmundH 240, Jensen
509414 –1 REC 0815-0900 TTh, AmundH 154, 4 cr
009417 –2 REC 0815-0900 TTh, AmundH 54, 4 cr
809421 –3 REC 1015-1100 TTh, AmundH 158, 4 cr
209424 –4 REC 1215-1300 TTh, AmundH 54, 4 cr
909426 –5 REC 1215-1300 TTh, MinMet 104, 4 cr

R5620 Polymer Processing (prereq engineering transport phenomena or #)
420518 1215-1300 MWF, MinMet 116, Macosko, 4 cr (lab ar)

R5754 Food Processing Techology (prereq 5103 or #)
125714 1515-1700 MW, AmundH 158, Valentas, 4 cr

R5902 Special Topics
237112 1115-1300 TTh, MinMet 124, Jensen, Hess, 3 cr

5903 Special Topics
019820 ar cr

R8004 Physical Rate Processes (prereq 5103, #)
819821 1015-1100 MWF, AmundH 158, Dahler, 3 cr

R8104 Interfaces and Interfacial Phenomena (prereq 8101)
937114 0815-0900 MWF, AmundH 158, Scriven, 3 cr

R8202 Advanced Mathematics for Chemical Engineers (prereq 8201)
619822 0815-1000 TTh, AmundH 240, Aris, 3 cr

R8302 Physical and Chemical Thermodynamics (prereq 8301 or #)
220519 1015-1200 TTh, AmundH 162, Fredrickson, 3 cr

R8402 Chemical Reaction Kinetics-Surface Chemistry (prereq #)
419823 0815-0900 MWF, AmundH 162, Schmidt, 3 cr

R8702 Advanced Topics in Chemical Engineering
219824 1315-1500 Th, MinMet 116, Scriven, 1-3 cr

8802 Seminar
119825 1315-1500 TTh, AmundH 240, 1 cr

8901 Research in Chemical Engineering
919826 ar cr

8902 Research in Chemical Engineering
719827 1415-1700 MF, AmundH 162, ar cr

R8903 Research in Chemical Engineering
838420 1115-1300 TTh, MinMet 124, Jensen, Hess, ar cr

CHEMISTRY (Chem)
Institute of Technology

Note:
For 1000-level recitation sections, rooms will be posted outside SmithH 211 (PalmC 10 for St. Paul sections) two days before the first day of classes.
Each student registering for a laboratory course must purchase a blue Chemistry Deposit Card from the bursar and present that card to the instructor in order to be admitted to a lab section. Students without cards will not be permitted to check into lab and will forfeit their desk assignments. A student with a deposit card used in a previous chemistry lab must have at least a $10 balance remaining on that card to use it again; if the balance is less than $10, the student must purchase a second card.
SEE SECTION 4, DEPOSIT CARDS.
Every student who checks into a lab must check out of the lab before the end of the quarter, even if he or she drops the course, or be charged a $10.00 check-out fee.

R1002 Chemical Principles and Covalent Systems (1001-1002†, §1005, 1014, 1032, no IT students; prereq 1001)
★LECT 1415-1500 TWThF, SciCB 325, Brasted, 5 cr
401015 –1 REC 1315-1400 M,
★LAB 1415-1700 M, SmithH 210
701019 –2 REC 0815-0900 T,
★LAB 0915-1200 T, SmithH 210

R1004 General Principles of Chemistry (1004-1005†, §1001-1002, 1014, 1031-1032; prereq hs chem or equiv, placement Index of Y or predicted Math GPA 1.90 on ACT or Math 0009 or college course in algebra...high school physics, 4 yrs high school math rec)
♦209455 –1 LECT 1015-1100 MTWF, SciCB 375, Truhlar, 5 cr (Registration for one of the rec/lab sections is also required)
♦909457 –2 LECT 1215-1300 MWThF, SciCB 375, Dixon, 5 cr (Registration for one of the rec/lab sections is also required)
♦909460 –3 LECT 1315-1400 MTWTh, SciCB 375, Hexter, 5 cr (Registration for one of the rec/lab sections is also required)
♦109464 –4 LECT 1500-1545 MTThF, PalmC 10, Wilson, 5 cr (StP) (Registration for one of the rec/lab sections is also required)
801030 –1 REC 1215-1300 M,
201033 –2 REC 1315-1400 M,
★LAB 1415-1700 M, SmithH 110
501037 –3 REC 0815-0900 T,
★LAB 0915-1200 T, SmithH 110
301041 –4 REC 1215-1300 T,
601045 –5 REC 1315-1400 T,
★LAB 1415-1700 T, SmithH 110
901049 –6 REC 1215-1300 W,
901052 –7 REC 1315-1400 W,
★LAB 1415-1700 W, SmithH 110
301055 –8 REC 0815-0900 Th,
★LAB 0915-1200 Th, SmithH 110
001057 –9 REC 1215-1300 Th,
001060 –10 REC 1315-1400 Th,
★LAB 1415-1700 Th, SmithH 110
601062 –11 REC 1215-1300 F,
901066 –12 REC 1315-1400 F,
★LAB 1415-1700 F, SmithH 110
701070 –13 REC 1200-1245 W, (StP)
301072 –14 REC 1300-1345 W, (StP)
★LAB 1400-1645 W, SnH 222, (StP)

R1005 General Principles of Chemistry (1004-1005†, §1001-1002, 1014, 1031-1032; prereq 1004)
♦009496 –1 LECT 0815-0900 MTWF, SciCB 325, Mead, 5 cr (Registration for one of the rec/lab sections is also required)
♦409499 –2 LECT 0915-1000 MTWF, SciCB 375, Conroy, 5 cr (Registration for one of the rec/lab sections is also required)
♦609503 –3 LECT 1215-1300 MWThF, SciCB 325, W Miller, 5 cr (Registration for one of the rec/lab sections is also required)
♦109506 –4 LECT 1315-1400 MTWTh, SciCB 325, Overend, 5 cr (Registration for one of the rec/lab sections is also required)
♦509509 –5 LECT 0800-0845 MTThF, PalmC 10, Wilson, 5 cr (StP) (Registration for one of the rec/lab sections is also required)
005433 –1 REC 1215-1300 M,
205437 –2 REC 1315-1400 M,
★LAB 1415-1700 M, SmithH 210
205440 –3 REC 0815-0900 T,
★LAB 0915-1200 T, SmithH 210
705443 –4 REC 1215-1300 T,
305445 –5 REC 1315-1400 T,
★LAB 1415-1700 T, SmithH 210
005447 –6 REC 1215-1300 W,
005450 –7 REC 1315-1400 W,
★LAB 1415-1700 W, SmithH 210
205454 –8 REC 0815-0900 Th,
★LAB 0915-1200 Th, SmithH 210
505458 –9 REC 1215-1300 Th,
705460 –10 REC 1315-1400 Th,
★LAB 1415-1700 Th, SmithH 210
305462 –11 REC 1215-1300 F,
005464 –12 REC 1315-1400 F,
★LAB 1415-1700 F, SmithH 210
405467 –13 REC 1300-1345 M, (StP)
★LAB 1400-1645 M, SnH 222, (StP)
205471 –14 REC 1300-1345 T, (StP)
★LAB 1400-1645 T, SnH 222, (StP)
705474 –15 REC 1300-1345 Th, (StP)
★LAB 1400-1645 Th, SnH 222, (StP)

R1032 Chemical Principles II (1031-1032†, §1002, 1005, 1014; prereq 1031)
★LECT 0815-0900 MWThF, SciCB 375, Britton, 5 cr
★REC 0815-0900 T,
836344 –1 LAB 1415-1700 T, SmithH 310
636345 –2 LAB 0915-1200 W, SmithH 310
436346 –3 LAB 1415-1700 W, SmithH 310
236347 –4 LAB 0915-1200 Th, SmithH 310
136348 –5 LAB 1415-1700 Th, SmithH 310

R3301 Elementary Organic Chemistry I (§3331; prereq 1005 or 1032)
109545 –1 0915-1000 TWThF, SciCB 325, Ellis, 4 cr
009546 –2 1115-1200 TWThF, SciCB 325, Leete, 4 cr

R3302 Elementary Organic Chemistry II (prereq 3301, 3305 or ¶)
609548 –1 0815-0900 TWThF, SciCB 175, E Miller, 4 cr
409552 –2 1015-1100 TWThF, SciCB 325, E Miller, 4 cr
909555 –3 1100-1145 MWThF, PalmC 10, Barbara, 4 cr (StP)

R3305 Elementary Organic Chemistry Laboratory I (prereq 3301 or ¶)
♦109559 –1 LECT 0915-1000 M, SciCB 325, Fisher, 2 cr
♦009563 –2 LECT 1115-1200 M, SciCB 325, Fisher, 2 cr
209567 –1 LAB 1315-1700 M, SmithH 349
209570 –2 LAB 1315-1700 M, SmithH 349
909572 –3 LAB 1315-1700 M, SmithH 349
509574 –4 LAB 1315-1700 T, SmithH 349
109576 –5 LAB 1315-1700 T, SmithH 349
609579 –6 LAB 1315-1700 T, SmithH 349
009580 –7 LAB 1315-1700 W, SmithH 349
409583 –8 LAB 1315-1700 W, SmithH 349
909586 –9 LAB 1315-1700 W, SmithH 349
709590 –10 LAB 1315-1700 Th, SmithH 349
109593 –11 LAB 1315-1700 Th, SmithH 349
609596 –12 LAB 1315-1700 Th, SmithH 349
818555 –13 LAB 1315-1700 F, SmithH 349

R3306 Elementary Organic Chemistry Laboratory II (prereq 3302 or ¶)
♦109599 –1 LECT 0815-0900 M, SciCB 175, Livinghouse, 2 cr
♦209603 –2 LECT 1015-1100 M, SciCB 325, Livinghouse, 2 cr
♦509607 –3 LECT 1100-1145 T, PalmC 10, Livinghouse, 2 cr (StP)
109609 –1 LAB 1315-1700 M, SmithH 349
109612 –2 LAB 1315-1700 M, SmithH 349
609615 –3 LAB 1315-1700 M, SmithH 349
909619 –4 LAB 1315-1700 T, SmithH 349
909622 –5 LAB 1315-1700 T, SmithH 349
109626 –6 LAB 1315-1700 W, SmithH 349
609629 –7 LAB 1315-1700 W, SmithH 349
409633 –8 LAB 1315-1700 W, SmithH 349
709637 –9 LAB 1315-1700 Th, SmithH 349
509641 –10 LAB 1315-1700 Th, SmithH 349
809645 –11 LAB 1315-1700 Th, SmithH 349
109649 –12 LAB 1315-1700 F, SmithH 349
109652 –13 LAB 1315-1700 F, SmithH 349
709654 –14 LAB 1300-1645 T, SnH 328, (StP)
509655 –15 LAB 1300-1645 T, SnH 322, (StP)
309656 –16 LAB 1300-1645 Th, SnH 328, (StP)
900869 –17 LAB 1300-1645 Th, SnH 322, (StP)

R3332 Introductory Organic Chemistry II (3332-3335†; prereq 3331)
119833 0815-0900 MWF, SmithH 100, Fristad, 3 cr

R3335 Introductory Organic Chemistry II Laboratory (3332-3335†; prereq 3332 or ¶...¶3332 rec)
★LECT 0815-0900 T, SmithH 100, Fenton
009658 –1 LAB 1315-1700 MW, KoltH 398, 2 cr
809659 –2 LAB 1315-1700 MW, KoltH 398, 2 cr
009661 –3 LAB 1315-1700 MW, KoltH 365, 2 cr
609663 –4 LAB 0915-1300 TTh, KoltH 398, 2 cr
109666 –5 LAB 1315-1700 TTh, KoltH 398, 2 cr
909667 –6 LAB 1315-1700 TTh, KoltH 398, 2 cr
509669 –7 LAB 1315-1700 TTh, KoltH 365, 2 cr

R3335H Honors Introductory Organic Chemistry II Laboratory (prereq 3332 or ¶, #) (A-N only)
213697 0815-0900 T, KoltH S132, Gassman, 2 cr (lab ar)

R3336H Honors Introductory Organic Chemistry II Laboratory (prereq 3335H) (A-N only)
113698 0815-0900 T, KoltH S132, Gassman, 2 cr (lab ar)

3499 Senior Thesis (prereq #, 4th yr)
019834 ar cr

3970 Directed Studies (prereq #)
819835 ar cr

3992 Special Topics in Chemistry (prereq #)
620520 ar cr

R5127 Analog Instrumentation (prereq Phys 1291, Math 1231 or equiv or #, chem maj or grad) (A-N only)
833766 1715-1845 MWF, KoltH S132, Carr, 5 cr

R5134 Chemical Instrumentation and Analysis Laboratory (prereq 5133) (A-N only)
706530 0815-1200 TTh or WF, Swofford, 2 cr

R5302 Organic Synthesis (prereq 3303 or 3333 or equiv, #)
619836 0815-0900 T, KoltH S132, Gassman, 4 cr

5344 Heterocyclic Compounds (prereq 3303 or 3333)
433768 0915-1000 TThS, SmithH 325, Noland, 3 cr

R5521 Elementary Physical Chemistry (prereq 5520)
419837 0915-1000 MWF, SmithH 225, Crawford, 3 cr

5523 Physical Biochemistry: Structure and Intermolecular Forces (§BioC 5523; prereq 2 qtrs physical chem...BioC 5001 or Biol 3021 desirable)
219838 1215-1300 MTWF, SmithH 325, Bryant, 4 cr (rec ar)

R5534 Chemical Thermodynamics (prereq 1 yr college chem, Math 3211, Phys 1291 or ¶ or 1106 with #)
★LECT 1015-1100 MTWF, SmithH 225, Wertz, 4 cr
225879 –1 REC 1015-1100 Th, SmithH 225

R5535 Statistical Mechanics and Reaction Kinetics (prereq 5534)
119839 1115-1200 MTWF, SciCB 375, Lipsky, 4 cr

R5538 Physical Chemistry Laboratory (prereq 5535 or ¶)
705541 –1 LAB 1315-1600 M, KoltH 284, Lumry, 1 cr
505542 –2 LAB 1315-1600 T, KoltH 284, Lumry, 1 cr
105544 –3 LAB 1315-1600 W, KoltH 284, Lumry, 1 cr
805546 –4 LAB 1315-1600 Th, KoltH 284, Lumry, 1 cr
405548 –5 LAB 1315-1600 F, KoltH 284, Lumry, 1 cr

R5732 Inorganic Chemistry II (prereq 5731)
★LECT 1015-1100 TWF, SmithH 325, Mann, 3 cr
625880 –1 REC 1015-1100 Th, SmithH 325

R5735 Inorganic Chemistry Laboratory II (prereq 5734, 5732 or ¶ or #)
★LECT 1015-1100 M, SmithH 325, Gladfelter
009692 –1 LAB 1415-1600 M, 1415-1500 W, KoltH 250, 2 cr
209696 –2 LAB 1415-1600 M, 1415-1500 F, KoltH 250, 2 cr
709699 –3 LAB 1415-1600 T, 1415-1500 Th, KoltH 250, 2 cr
500874 –4 LAB 1415-1600 W, 1415-1500 F, KoltH 250, 2 cr

5752 Physical Inorganic Chemistry II (prereq 5751 or equiv or #)
419840 1115-1200 MTWF, SmithH 111, Reynolds, 4 cr

5762 Survey of the Chemistry of the Transition Metals (prereq 5732 or #)
219841 1215-1300 MTWF, SmithH 111, Gladfelter, 4 cr

5992 Selected Topics (prereq △, sr)
119842 0815-0900 MWF, SmithH 111, Stankovich, ar cr

8100 Survey of Analytical Chemistry
919843 1 cr

8129 Survey of Modern Instrumental Analysis (prereq 5127, 8104 or #)
633767 0915-1045 TTh, SmithH 111, Evans, 4 cr

8190 Seminar: Modern Problems in Chemical Instrumentation and Analysis (prereq 8129)
519845 Lodge, 1 cr

8300 General Survey of Organic Chemistry
319846 1 cr

8304 Advanced Organic Chemistry II (prereq 8301 or #)
119847 0915-1000 MWF, SmithH 111, Farneth, 4 cr

8390 Seminar: Organic Chemistry
019848 1930-2300 W, SmithH 325, 1 cr

8402 Bioorganic Chemistry II (prereq 3303 or 3333 or equiv)
606536 1015-1100 MWF, SmithH 111, Gray, 4 cr

8500 General Survey of Physical Chemistry
819849 1 cr

8532 Introductory Quantum Mechanics and Spectroscopy (prereq 8531)
★LECT 1115-1200 MWF, SmithH 315, Moscowitz, 4 cr
420521 –1 REC 1115-1200 T, SmithH 315

8542 Thermodynamics, Statistical Mechanics, and Kinetics (prereq 8541)
★LECT 1015-1100 MWF, SmithH 315, Prager, 4 cr
425881 –1 REC 1015-1100 Th, SmithH 315

8560 Seminar: Biological Systems
019851 1515-1700 Th, SmithH 225, ar cr

8590 Seminar: Physical Chemistry
819852 1615-1800 M, SmithH 225, Barbara, 1 cr

8700 General Survey of Inorganic Chemistry
619853 1 cr

8790 Seminar: Modern Problems in Inorganic Chemistry (prereq △)
419854 1630-1830 Th, SmithH 325, 1 cr

8990 Research in Chemistry (prereq △)
219855 ar cr

8992 Special Topics in Chemistry (prereq △)
119856 0815-0900 MWF, KoltH S132, Hoye, 3 cr

CHICANO STUDIES (Chic)
Liberal Arts

1106 Introduction to Chicano Studies: The Mexican-American Experience, 1821-1960
133683 0915-1000 MWThF, FordH 150, 4 cr

3118 The Bilingual Child (prereq 3112, Psy 1001)
917249 0945-1100 TTh, LindH 303, 4 cr

3427 History of Cuba and Puerto Rico (§Hist 3427)
738359 1115-1200 MWF, BlegH 255, Valdes, 4 cr

3442 Survey of Chicano History, 1900 to Present (§Hist 3442)
733680 0915-1000 MWF, BlegH 205, Valdes, 4 cr

3508 Introduction to Chicano Literature: Text, Context
218074 1215-1300 MWF, FordH 150, Rojas, 4 cr

3970 Directed Studies (prereq #, △, college approval)
518078 ar cr

5970 Directed Studies (prereq #, △, CLA approval)
318082 ar cr

CHILD AND ADOLESCENT PSYCHIATRY (CAPy)
Medical School

5201 Diagnostic Practicum in Child and Adolescent Psychiatry (prereq #)
514225 Erbaugh, 1-5 cr

5203 Child and Adolescent Psychiatry for Psychology Interns (prereq #)
419417 Erbaugh, 1-5 cr

5204 Diagnostic Methods in Child and Adolescent Psychiatry (prereq med student, #)
219418 Lawton, Greenberg, 1 cr

5500 Pediatric Psychiatry Liaison (prereq regis med student)
119419 Pearson, 9 cr

5501 Pediatric, Pediatric Neurology: Psychiatric Liaison (prereq med student, #)
017792 9-18 cr

5520 Outpatient Clinical Child and Adolescent Psychiatry for Primary Care Trainees (prereq med student, #)
419420 Jensen, ar cr

5602 Introductory Readings in Child and Adolescent Psychopathology (prereq med student or MD, #)
119422 3 cr

5603 Inpatient Clinical Child Psychiatry for Primary Care Physicians (prereq med student, #)
919423 Realmuto, ar cr

5608 Introduction to Family Therapy: Theory and Practice (prereq MD and/or #, basic psychopath course, cur supervised involvement treatment of cases)
719424 Miner, 3 cr

WE KNOW WHAT YOU NEED

and we've got it...everything for drawing, design, painting, printmaking, ceramics, and sculpture: all of your class needs.... we're here to help you.

the Artery

413 Cedar Ave Mpls Mn 333-2558

THE EARLY BIRD...



MCAT

- Permanent Centers open days, evenings and weekends.
- Low hourly cost. Dedicated full-time staff.
- Complete TEST-n-TAPE℠ facilities for review of class lessons and supplementary materials.
- Small classes taught by skilled instructors.
- Opportunity to make up missed lessons.
- Voluminous home-study materials constantly updated by researchers expert in their field.
- Opportunity to transfer to and continue study at any of our over 85 centers.

Stanley H. KAPLAN Educational Center
TEST PREPARATION SPECIALISTS SINCE 1938

Call Days Evenings & Weekends
378-9191
328 East Hennepin Ave.
Near U of M

PEKING GARDEN RESTAURANT

★ GOURMET WEEKDAY LUNCH SPECIALS AT FAST FOOD PRICES ★

- EXCELLENT REVIEWS AND REMARKS FROM THE MPLS. STAR & TRIBUNE, ST. PAUL PIONEER PRESS, MPLS./ST. PAUL MAGAZINE AND TWIN CITIES TODAY.



北京園

- TRY OUT HOT & SPICY HUNAN & SZECHUAN DISHES OR SMOOTH PEKING & CANTONESE DISHES.
- EXCELLENT DECOR & SECLUDED ATMOSPHERE
- AMPLE FREE PARKING

HOURS: SUNDAY-THURSDAY 11:00 to 10:00
FRIDAY-SATURDAY 11:00 to 11:00

2324 UNIVERSITY AVE. S.E.
623-3989/623-3992

master charge VISA AMERICAN EXPRESS

8100 Readings in Child, Adolescent, and Family Psychiatry (prereq MD, #)
519425 Miner, 1 cr

8110 Diagnostic Methods in Child, Adolescent, and Family Psychiatry (prereq MD, #)
319426 1 cr

8120 Therapeutic Methods in Child and Adolescent Psychiatry (prereq MD, #)
119427 Greenberg, 1 cr

8200 Outpatient Clinical Child and Adolescent Psychiatry (prereq MD, #)
019428 Jensen, 3 cr

8212 Clinical Inpatient Child Psychiatry (prereq MD, #)
819429 Realmuto, 3 cr

8216 Pediatric Psychiatry Liaison (prereq MD, #)
019431 Pearson, 3 cr

8223 Family Therapy (prereq MD, #)
304294 Miner, 1 cr

8228 Research in Child and Adolescent Psychiatry (prereq MD, #)
819432 Yellin, 1 cr

8233 Mental Health Administration, Training Seminar (prereq MD, #)
005061 Miner, 1 cr

8248 Residential Child and Adolescent Treatment (prereq MD, #)
404299 Miner, 3 cr

8253 Child and Adolescent Community Psychiatry (prereq MD, #)
004301 Miner, 2 cr

8301 Seminar in Child, Adolescent, and Family Psychiatry (prereq MD, #)
619433 1 cr

CHILD PSYCHOLOGY (CPsy)
Education

R1301 Introductory Child Psychology (§5301; prereq 5 cr introductory psychology)
809760 –1 1015-1100 MWF, SmithH 100, Morgan, 4 cr
109764 –2 1315-1400 MWF, Botany B6, Haake, 4 cr
133358 –3 1820-2050 T, ElthH N119, Reisman, 4 cr

R1970 Directed Study (prereq #)
017095 ar cr

3303 Adolescent Psychology (§5303; prereq 5 cr introductory psychology)
217118 0915-1000 MWF, SciCB 175, Brady, 4 cr

R3308 Research Methods in Child Psychology (S-N optional; prereq 1301, Psy 1004)
936576 1415-1530 TTh, ChDev 218, Dolgin, 4 cr

3311 Behavioral and Emotional Problems (§5311; prereq 1301 or equiv)
033359 1820-2050 M, ChDev 216, Reed, 4 cr

3313 Psychology of Atypical Children (§5313; prereq 1301 or equiv)
417120 1015-1100 MWF, Botany B6, Charlesworth, 4 cr

R3330 Directed Experiences (prereq 1301 or equiv) (S-N optional)
033362 1515-1645 T, ChDev 105, Adolf, 4 cr (addnl hrs ar) (Observation, Participation in Early Childhood)

3331 Processes of Socialization of Children (§5331; prereq 1301 or equiv)
933340 1820-2050 Th, NichH 211, Chalkley, 4 cr

3343 Introduction to Cognitive Development (prereq 1301) (S-N optional)
033345 1820-2050 W, ChDev 105, Maratsos, 4 cr

3360H Honors Seminar I: Current Research in Developmental Psychology (prereq 1301 or equiv, #)
511678 1115-1230 MW, ChDev 105, H Pick, 4 cr

R3980 Directed Instruction (max 4 cr; prereq #) (S-N only)
117122 1-4 cr

5303 Adolescent Psychology (§3303; prereq 5 cr introductory psychology)
717124 1215-1330 MW, ChDev 216, Collins, 4 cr

5311 Behavioral and Emotional Problems (§3311; prereq 1301 or equiv)
133361 1820-2050 M, ChDev 216, Reed, 4 cr

5313 Psychology of Atypical Children (§3313; prereq 1301 or equiv)
117136 1015-1100 MWF, Botany B6, Charlesworth, 4 cr

R5315 Introduction to Mental Retardation (§SpEd 5120 or PsyS 5120; prereq 1301 or equiv)
117144 0915-1030 TTh, PtH 215, Turnure, 4 cr

5319 Clinical Procedures with Children and Youth (prereq 12 cr psychology, educational psychology, sociology or child psychology)
617150 0900-1130 S, BuH 123, Gross, 4 cr

5331 Processes of Socialization of Children (§3331; prereq 1301 or equiv)
533342 1820-2050 Th, NichH 211, Chalkley, 4 cr

5335 Peer Relations (prereq 3331 or 5331)
633347 0930-1100 TTh, ChDev 216, Moore, 4 cr

R5970 Directed Study (prereq #)
717155 ar cr

R5990 Directed Research (prereq #)
217166 ar cr

8304 Research Methods in Child Psychology (prereq #)
233349 1315-1430 MW, ChDev 105, A Pick, 3 cr

8310 Seminar: History of Child Development (prereq #)
733355 2000-2200 M, ChDev 105, Hartup, H Pick, 1 cr

8336 Advanced Social Development II (prereq #)
807376 1445-1600 MW, ChDev 105, Hartup, Sroufe, 3 cr

8343 Advanced Cognitive Development I (prereq 12 cr in child psy or psychology)
607377 1415-1530 TTh, ChDev 216, Perlmutter, 3 cr

8360 Seminar: Developmental Psychology (prereq #)
417179 Breslow, others, ar cr

8970 Independent Study (prereq #)
217183 ar cr

8990 Research Problems (prereq #)
917185 ar cr

CHINESE (Chn)
East Asian Studies
Liberal Arts

R1012 Beginning Modern Chinese (prereq 1011)
121047 –1 LECT 0915-1000 TTh, FolH 104, Cass
021048 –2 LECT 1115-1200 TTh, FolH 107, Cass
♦405601 –1 REC 0815-0900 MTWThF, FolH 107, 5 cr
♦205602 –2 REC 1215-1300 MTWThF, FolH 110, 5 cr
♦815185 –3 REC 1015-1100 MTWThF, PtH 214, 5 cr

R3002 Chinese-Japanese Calligraphy (prereq Chn/Jpn 3001)
738085 1315-1400 W, JonesH 10, Matsumoto, 2 cr

3022 Intermediate Modern Chinese (prereq 3021)
918160 1115-1200 MTWThF, FolH 203, Huters, 5 cr

3032 Introductory Classical Chinese (prereq 3031)
518162 0915-1000 MWF, FolH 52, Wang, 4 cr

3042 Third Year Modern Chinese (prereq 3041)
618167 1115-1200 MWF, FolH 304, Liu, 4 cr

3090H Honors Tutorial (prereq △)
111689 1-4 cr

3202 Heritage of China: Medieval to Modern
332967 1015-1100 MTWTh, FolH 209, Huters, 5 cr

3970 Directed Studies (prereq #, △, college approval)
018165 1-4 cr

5042 Third Year Modern Chinese (prereq 3031)
418171 1115-1200 MWF, FolH 304, Liu, 4 cr

5052 Advanced Chinese Conversation and Composition (§3052; prereq 3023 or #, grad)
132968 1415-1500 MWF, FolH 204, Liu, 4 cr

5251 Structure of Standard Chinese (prereq 1013, #)
532966 1415-1530 TTh, FolH 108, Wang, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
118173 –1 1-4 cr
618296 –2 1-4 cr

8960 Seminar in Chinese Literature (prereq 2 qtrs from 51xx courses)
718175 1515-1700 W, FolH 203, Mather, 4 cr

CIVIL ENGINEERING (CE)
Civil And Mineral Engineering
Institute of Technology

R3100 Introduction to Surveying and Mapping (prereq Math 1211, IT stu) (A-N only)
★LECT 0915-1000 MWF, MechE 18, Johnson
732982 –1 LAB 1315-1600 T, CivMinE 194, 4 cr
532983 –2 LAB 1415-1700 W, CivMinE 194, 4 cr
332984 –3 LAB 0915-1200 Th, CivMinE 194, 4 cr
132985 –4 LAB 1315-1600 Th, CivMinE 194, 4 cr
032986 –5 LAB 1415-1700 F, CivMinE 194, 4 cr

R3300 Elements of Soil Mechanics (prereq AEM 1015, IT stu) (A-N only)
919714 0915-1100 TTh, CivMinE 212, Drescher, 4 cr

R3301 Soil Mechanics Laboratory (prereq 3300, IT stu) (A-N only)
132994 –1 LAB 0915-1200 M, CivMinE 350, Haitjema, 1 cr
932995 –2 LAB 1315-1600 M, CivMinE 350, Haitjema, 1 cr
732996 –3 LAB 0915-1200 T, CivMinE 350, Haitjema, 1 cr
532997 –4 LAB 1315-1600 T, CivMinE 350, Haitjema, 1 cr

R3400 Fluid Mechanics (§AEM 5200; prereq Math 3221, AEM 1015 or 3016, IT stu or forest products maj) (A-N only)
★LECT 1215-1300 MWF, Arch 35, Stefan
609808 –1 LAB 1415-1700 M, CivMinE 277, Song, 4 cr
409812 –2 LAB 1415-1700 T, CivMinE 277, Song, 4 cr
909815 –3 LAB 1415-1700 W, CivMinE 277, Song, 4 cr
109822 –4 LAB 1415-1700 Th, CivMinE 277, Song, 4 cr
609825 –5 LAB 1415-1700 F, CivMinE 277, Song, 4 cr

3601 Structural Design for Architects (prereq architecture maj or adult special, AEM 3092, 3093, CE 3600) (A-N only)
719715 0915-1000 MTWThF, Arch 55, Cerny, 4 cr

5098 Advanced Design, Analysis, Research or Tutorial in Civil Engineering (prereq approval of faculty adviser) (A-N only)
519716 ar cr

R5104 Photogrammetry (prereq Math 1211, IT or grad stu) (A-N only)
132980 1615-1800 TTh, CivMinE 194, Johnson, 4 cr

R5200 Geometric Design of Highways (prereq 3200, 5102 or #, IT or grad stu) (A-N only)
832987 0915-1000 MTWF, CivMinE 213, Huber, 4 cr

5202 Airport Design (prereq 3200, 3300 or #, IT stu or grad) (A-N only)
905666 1315-1400 MTWF, CivMinE 213, Huber, 4 cr

R5212 Transportation Productivity and Energy Conservation (prereq #) (A-N only)
014083 1315-1500 TTh, CivMinE 214, Stephanedes, 4 cr

5300 Theory of Geomechanics (prereq 3300, IT or grad stu) (A-N only)
208077 1615-1800 MW, FordH 55, Vardoulakis, 4 cr

R5401 Water Resources Engineering (prereq 3400 or #, IT or grad stu) (A-N only)
★LECT 1315-1400 MWF, CivMinE 212, Gulliver
809869 –1 LAB 1415-1700 M, CivMinE 202, 4 cr
109870 –2 LAB 1415-1700 W, CivMinE 202, 4 cr

R5405 Hydrology and Hydrologic Design (prereq 5401 or #, IT stu or grad) (A-N only)
★LECT 1215-1300 MWF, CivMinE 212, Bowers
109876 –1 LAB 1415-1700 T, CivMinE 202, 4 cr
709878 –2 LAB 1415-1700 Th, CivMinE 202, 4 cr
509879 –3 LAB 1415-1700 F, CivMinE 202, 4 cr

5425 Groundwater Mechanics (prereq 3400 or #, IT or grad stu) (A-N only)
208080 1415-1600 MW, CivMinE 205, Strack, 4 cr

5505 Water Quality Engineering (prereq 3500 or #) (A-N only)
319717 0915-1100 TTh, CivMinE 205, Eisenreich, 4 cr

R5510 Solid Waste Management
009062 1615-1800 TTh, CivMinE 205, Chiesa, 4 cr

R5600 Linear Structural Systems (prereq AEM 1015, 3016, IT stu or grad) (A-N only)
119718 –1 1115-1200 MTWF, CivMinE 212, Goodman, 4 cr
632988 –2 1115-1200 MTWF, CivMinE 205, 4 cr

R5613 Intermediate Reinforced Concrete Design (prereq 5611, IT or grad stu) (A-N only)
505668 1615-1800 TTh, CivMinE 212, Cerny, 4 cr

5701 Cemented Materials Properties: Evaluation and Mixture Design (prereq 3700, IT or grad stu) (A-N only)
019719 1615-1800 MW, CivMinE 212, 4 cr

8098 Civil Engineering Research (prereq #) (A-N only)
319720 1-5 cr

8201 Urban Traffic Operations (prereq #)
808088 1515-1700 MW, CivMinE 214, Michalopoulos, 4 cr

R8210 Modeling Consumer Choices in Transportation (prereq Stat 3091 or #)
432989 1515-1700 TTh, CivMinE 214, Stephanedes, 4 cr

8412 Mechanics of Similitude and Dimensional Analysis (prereq 5401)
832990 1315-1400 MWF, CivMinE 205, Farell, 3 cr

8417 Hydraulic Pumps and Turbines (prereq 5435 or #)
938103 1615-1800 MW, CivMinE 296, Arndt, 3 cr

8422 Incompressible Boundary Layer Flow (prereq 5435 or #)
008090 0915-1100 TTh, CivMinE 214, Parker, 3 cr

8436 Topics: Hydrodynamics Theory (prereq #)
119721 3 cr

8498 Advanced Hydraulic Laboratory (prereq #)
019722 Bowers, 2 cr

8501 Biological and Chemical Processes for Wastewater Treatment (prereq 5501 or #)
305672 0915-1000 MWF, CivMinE 214, Maier, 3 cr

8505 Aquatic Chemistry for Environmental Engineers (prereq 5506)
105673 1015-1200 MW, CivMinE 213, Brezonik, 4 cr

8550 Analysis and Modeling of Aquatic Environments (prereq #) (A-N only)
819723 1515-1700 MW, CivMinE 213, Stefan, 4 cr

8605 Finite Element Method (prereq 5601 or #)
632991 1415-1600 MW, CivMinE 212, Krauthammer, 4 cr

8611 Plate Structures (prereq #)
432992 1315-1500 TTh, CivMinE 205, 4 cr

8616 Non-Linear Structural Systems (prereq 5610 or #)
232993 1615-1800 TTh, CivMinE 213, Galambos, 4 cr

8620 Structural Dynamics I (prereq AEM 3036 or #)
508084 1315-1500 MW, CivMinE 214, Goodman, 4 cr

CLASSICAL CIVILIZATION (ClCv)
Liberal Arts

3970 Directed Studies (prereq #, △, college approval)
818300 1-15 cr

3990 Directed Research (prereq #, △, college approval)
132963 1-15 cr

CLASSICS (Clas)
Classics
Liberal Arts

R1005 Age of Augustus
833363 1015-1100 MWF, FolH 308, Miller, 4 cr

1043 Introduction to Greek and Roman Archaeology
633364 1215-1300 MWF, FolH 308, Gunter, 4 cr

1045 Greek and Latin Elements in English: Introduction (prereq ¶1048, 3046)
306742 3 cr (Orientation 0815-0900 T, Jan 3 or 0815-0900 M, Jan 9, Arch 25 or 0915-1000 W, Jan 4, Armory 116. Independent study ar)

1048 Greek and Latin Terminology in the Medical and Biological Sciences (§1141; prereq 1045 or ¶)
031403 2 cr (Orientation 0815-0900 T, Jan 3 or 0815-0900 M, Jan 9, Arch 25 or 0915-1000 W, Jan 4, Armory 116. Independent study ar)

1141 Greek and Latin Terminology for Nursing (§1048)
831404 3 cr (Orientation 0815-0900 T, Jan 3 or 0815-0900 M, Jan 9, Arch 25 or 0915-1000 W, Jan 4, Armory 116. Independent study ar)

3046 Advanced Etymology: Vocabulary of the Sciences and Humanities (prereq 1045 or ¶)
431406 2 cr (Orientation 0815-0900 T, Jan 3 or 0815-0900 M, Jan 9, Arch 25 or 0915-1000 W, Jan 4, Armory 116. Independent study ar)

R3145 Greek and Roman Mythology II-Analysis and Tradition (§5145; prereq 1042 or #)
618086 1115-1200 MWF, FolH 308, Billigmeier, 4 cr

3970 Directed Studies (prereq #, △, college approval)
705698 1-5 cr

5112 Greek Sculpture: Archaic, Classical, and Hellenistic (§ArtH 5112; prereq jr or #)
637690 1415-1500 MWF, JonesH 207B, Coulson, 5 cr

R5145 Greek and Roman Mythology II (§3145; prereq 1042 or #) (A-N only)
218088 1115-1200 MWF, FolH 308, Billigmeier, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
205700 1-5 cr

5980 Directed Instruction (prereq #, △, CLA approval)
105701 4 cr

5990 Directed Research (prereq #, △, CLA approval)
905702 4 cr

8910 Seminar: Problems in Ancient Art (prereq #)
233366 1515-1700 M, JonesH 1, Gunter, 4 cr

COLLEGE HONORS SEMINAR (CHS)
Honors Program
Liberal Arts

R3769 Analyzing Medical Literature (prereq jr, sr, reg honors div)
235960 1415-1600 M, Mayo B507, Stephen Haines, 4 cr

R3771 Russian Publishers and Readers, 1800-1914 (prereq jr, sr, reg honors div)
135961 1315-1500 T, OMWL 453, Miranda Beaven, 4 cr

R3772 Housing Research-A Woman's Perspective (prereq jr, sr, reg honors div)
935962 1315-1500 Th, BlegH 350, Christine Cook, 4 cr

R3773 Karl Marx, Marxism, and Classical Antiquity: The Development of Marxist Analysis of Ancient Greek and Roman Societies (prereq jr, sr, reg honors div)
735963 1115-1300 F, JohH 125, Gerald Erickson, 4 cr

R3774 Future of the World's Food Supply (prereq jr, sr, reg honors div)
535964 1415-1600 M, Zoology 108, Albert Frenkel, 4 cr

R3782 Confessions of Sinners and Criminals: The Historical Function of Picaresque Literature
237692 1315-1500 Th, JohH 125, Anthony Zahareas, 4 cr

R3784 Religion and Revolution in the Third World, 1945-1975 (prereq jr, sr, reg honors div)
236686 1015-1200 W, BlegH 350, Lansine Kaba, 4 cr

R3786 Writing and Cinema (prereq jr, sr, reg honors div)
538086 1415-1600 W, FolH 38, Tom Conley, 4 cr

COMMUNICATION DISORDERS (CDis)
Liberal Arts

R3100 Clinical and Research Observation (prereq department written permission) (S-N only)
118125 2 cr

5102 Communication Problems of Adults
918126 1515-1700 W, FolH 303, Haroldson, others, 3 cr

5304 Speech Science (prereq 5301, 5302, 5303 or #)
718127 0815-1000 MW, FolH 303, Van Tasell, 4 cr

5504 Articulation Disorders (prereq 5301, 5302)
318129 0915-1100 TTh, FolH 303, McDermott, 4 cr

5508 Voice Disorders
905733 1415-1500 T, 1415-1600 Th, FolH 303, Starr, Haroldson, 4 cr

5513 Language Delay (prereq 5305 or #)
518131 1015-1200 MW, FolH 303, Reichle, 4 cr

R5701 Hearing Loss and Audiometry (prereq 5301, 5302 or #)
★LECT 1115-1200 T, 1115-1300 Th, FolH 303, Yanz
105729 –1 LAB 0915-1000 W, ShevH 119, Yanz, 4 cr
405730 –2 LAB 1015-1100 W, ShevH 119, Yanz, 4 cr
105732 –3 LAB 1115-1200 W, ShevH 119, Yanz, 4 cr
518288 –4 LAB 1215-1300 W, ShevH 119, Yanz, 4 cr

5703 Communication Problems of the Hearing-Impaired (prereq 5701 or #)
118133 1315-1500 MW, 1315-1400 F, FolH 303, Van Tasell, Carlstrom, 5 cr

5704 Noise and Man (prereq 5301 or #)
505735 1515-1700 MW, FordH 160, Ward, 4 cr

R5900 Topics in Communication Disorders: Conversational Signed English
033183 1630-1930 T, FolH 303, Carlstrom, Reichle, 2 cr

5970 Directed Studies (prereq #, △, CLA approval)
818135 ar cr

8511 Seminar: Current Issues in Speech Pathology (prereq grad maj or #)
833184 1415-1700 T, Siegel, 3 cr

R8512 Seminar: Language Retardation (prereq 5305 or #)
418140 0915-1200 F, FolH 303, Broen, 3 cr

8520 Clinical Education in Speech/Language Pathology (prereq #)
118142 2-6 cr

8521 Clinical Education in Speech/Language Pathology (prereq #)
118268 2-6 cr

8716 Seminar: Hearing (prereq #)
805725 1615-1800 Th, HSUnitF 2165, Lassman, 3 cr

8720 Clinical Education in Audiology (prereq #)
318146 2-6 cr

8721 Clinical Education in Audiology (prereq #)
218270 2-6 cr

8990 Research (prereq #)
005738 ar cr

COMPARATIVE LITERATURE (CLit)
Liberal Arts

5181 The Psychoanalytic Study of Literature (prereq knowledge of Fren, Ger or Scan)
438534 1215-1400 MWF, PtH 215, 4 cr

5243 Art and Ideology: Living Cinema (§Hum 5243)
933760 1415-1600 WF, MurH 105, Bensmaia, 4 cr

5970 Directed Readings (prereq #, △, CLA approval)
533759 1-4 cr

8920 Advanced Comparative Literature Seminar: Literary Historiography (prereq 8910)
818152 1415-1530 TTh, FolH 205, Houe, 4 cr

8952 Seminar in Comparative Literature (8951-8952-8955†; prereq 8951)
418154 1415-1700 M, FolH 301, Sousa, 4 cr

8970 Directed Reading (prereq grad student in comparative lit, △)
118156 1-4 cr

COMPOSITION AND COMMUNICATION (Comp)
Liberal Arts

R0011 Preparation for Writing Practice (prereq assignment to category 4; # after first day of class) (S-N only) (course fee)
707452 –1 0815-0900 MWF, FordH 50, 0 cr
134686 –2 0915-1000 MWF, AkerH 317, 0 cr
934696 –3 1315-1400 MWF, AkerH 317, 0 cr (ESL/MLK only)

R1011 Writing Practice I (prereq assignment to category 2 or 3)
007456 –1 LECT 0815-0900 MWF, LindH 217, 5 cr
807457 –2 LECT 0915-1000 MWF, LindH 305, 5 cr
607458 –3 LECT 1015-1100 MWF, AkerH 225, 5 cr
407459 –4 LECT 1115-1200 MWF, LindH 215, 5 cr
607461 –5 LECT 1215-1300 MWF, LindH 305, 5 cr
407462 –6 LECT 1315-1400 MWF, LindH 215, 5 cr
★LAB 0815-0930 TTh, FordH 155
107464 –7 LECT 0815-0900 MWF, LindH 229, 5 cr
707466 –8 LECT 0915-1000 MWF, LindH 229, 5 cr
507467 –9 LECT 1015-1100 MWF, AkerH 21, 5 cr
734697 –10 LECT 1115-1200 MWF, JonesH 11, 5 cr
534698 –11 LECT 1115-1200 MWF, LindH 229, 5 cr
107469 –12 LECT 1215-1300 MWF, LindH 320, 5 cr
307471 –13 LECT 1315-1400 MWF, LindH 217, 5 cr
★LAB 0815-0930 TTh, Botany B6
107472 –14 LECT 0815-0900 MWF, LindH 303, 5 cr
007473 –15 LECT 0915-1000 MWF, MinMet 116, 5 cr
607475 –16 LECT 1015-1100 MWF, BuH 120, 5 cr
407476 –17 LECT 1115-1200 MWF, MinMet 116, 5 cr
107478 –18 LECT 1215-1300 MWF, LindH 325, 5 cr
907479 –19 LECT 1315-1400 MWF, MinMet 124, 5 cr
107481 –20 LECT 1415-1500 MWF, LindH 203, 5 cr
★LAB 0945-1100 TTh, Botany B6
907482 –21 LECT 0815-0900 MWF, LindH 315, 5 cr
334699 –22 LECT 0915-1000 MWF, MinMet 120, 5 cr (MLK only)
134700 –23 LECT 1015-1100 MWF, VinH 6, 5 cr
507484 –24 LECT 1115-1200 MWF, LindH 315, 5 cr
307485 –25 LECT 1215-1300 MWF, LindH 315, 5 cr
807488 –26 LECT 1315-1400 MWF, LindH 315, 5 cr
★LAB 0945-1100 TTh, JacH 2135
607489 –27 LECT 0815-0900 MWF, LindH 340, 5 cr
907496 –28 LECT 0915-1000 MWF, AkerH 215, 5 cr
307499 –29 LECT 1015-1100 MWF, AkerH 215, 5 cr (MLK only)
307504 –30 LECT 1115-1200 MWF, LindH 340, 5 cr
007506 –31 LECT 1215-1300 MWF, LindH 340, 5 cr
807507 –32 LECT 1315-1400 MWF, LindH 340, 5 cr
607508 –33 LECT 1415-1500 MWF, AkerH 317, 5 cr
★LAB 1115-1230 TTh, Botany B6
407509 –34 LECT 0815-0900 MWF, MinMet 116, 5 cr
807510 –35 LECT 0915-1000 MWF, AkerH 21, 5 cr
307518 –36 LECT 1015-1100 MWF, ChDev 216, 5 cr
607511 –37 LECT 1115-1200 MWF, VinH 20, 5 cr
407512 –38 LECT 1215-1300 MWF, MinMet 120, 5 cr
907501 –39 LECT 1315-1400 MWF, MinMet 120, 5 cr
507503 –40 LECT 1415-1500 MWF, MinMet 120, 5 cr
★LAB 1115-1230 TTh, SciCB 175
107514 –41 LECT 1115-1200 MWF, EltH N119, 5 cr (ESL only)
707516 –42 LECT 1315-1400 MWF, AkerH 215, 5 cr (ESL only)
★LAB 1115-1230 TTh, FordH 155
107519 –43 LECT 0815-0900 MWF, AkerH 215, 5 cr
307521 –44 LECT 0915-1000 MWF, AkerH 211, 5 cr
034687 –45 LECT 0915-1000 MWF, VinH 20, 5 cr
934701 –46 LECT 1115-1200 MWF, MechE 202, 5 cr
807524 –47 LECT 1215-1300 MWF, AkerH 215, 5 cr
607525 –48 LECT 1415-1500 MWF, AkerH 215, 5 cr
★LAB 1245-1400 TTh, SciCB 175
407526 –49 LECT 0815-0900 MWF, AkerH 313, 5 cr
207527 –50 LECT 0915-1000 MWF, AkerH 313, 5 cr
107528 –51 LECT 0915-1000 MWF, VinH 6, 5 cr
207530 –52 LECT 1115-1200 MWF, ExpE 193, 5 cr
107531 –53 LECT 1215-1300 MWF, AkerH 313, 5 cr
834688 –54 LECT 1415-1500 MWF, LindH 305, 5 cr
707533 –55 LECT 1415-1500 MWF, AkerH 309, 5 cr
★LAB 1245-1400 TTh, Botany B6
507534 –56 LECT 0815-0900 MWF, MinMet 124, 5 cr
634689 –57 LECT 0915-1000 MWF, MinMet 124, 5 cr
107536 –58 LECT 1015-1100 MWF, AkerH 211, 5 cr
607539 –59 LECT 1115-1200 MWF, MinMet 124, 5 cr
007540 –60 LECT 1215-1300 MWF, MinMet 124, 5 cr
007537 –61 LECT 1215-1300 MWF, LindH 303, 5 cr
607542 –62 LECT 1315-1400 MWF, LindH 303, 5 cr
★LAB 1415-1530 TTh, Botany B6

R1012 Writing Practice and Literature (prereq assignment to category 2)
107559 –1 0915-1000 MWF, ElectE 115, 4 cr
207561 –2 1015-1100 MWF, ElectE 115, 4 cr
734702 –3 1115-1230 TTh, PillsH 110, 4 cr

R1013 Writing Practice II (prereq grade of X in 1011 or 1012, △) (S-N only)
337876 –1 4 cr
534703 –2 4 cr (ESL only)

R1027 Intermediate Expository Writing (prereq compl Writing Practice requirement; pre-Fall 1982 students:1001 or Comm 1001 or eqv)
311309 –1 0815-0900 MWF, VinH 213, 4 cr
111313 –2 0815-0900 MWF, VinH 206, 4 cr
411317 –3 0915-1000 MWF, FordH 50, 4 cr
211321 –4 0915-1000 MWF, VinH 113, 4 cr
511325 –5 1015-1100 MWF, AkerH 317, 4 cr
811329 –6 1015-1100 MWF, Phys 210, 4 cr
007585 –7 1115-1200 MWF, Phys 157, 4 cr
407588 –8 1215-1300 MWF, Phys 157, 4 cr
207589 –9 1215-1300 MWF, FordH 447, 4 cr
607590 –10 1215-1300 MWF, AkerH 21, 4 cr
407591 –11 1315-1400 MWF, AmundH 154, 4 cr (MLK/pre-business only)
207592 –12 1315-1400 MWF, KoltH S132, 4 cr
107593 –13 1415-1500 MWF, KoltH S134, 4 cr
907594 –14 1415-1500 MWF, KoltH S136, 4 cr
507596 –15 0815-0930 TTh, LindH 229, 4 cr
307597 –16 0815-0930 TTh, VinH 206, 4 cr
007599 –17 0945-1100 TTh, VinH 206, 4 cr
707600 –18 0945-1100 TTh, Armory 116, 4 cr
307602 –19 1115-1230 TTh, FordH 40, 4 cr
107603 –20 1115-1230 TTh, FordH 160, 4 cr
615267 –21 1115-1230 TTh, LindH 229, 4 cr
138388 –22 1245-1400 TTh, LindH 229, 4 cr
938389 –23 1245-1400 TTh, LindH 215, 4 cr
238390 –24 1245-1400 TTh, LindH 303, 4 cr
138391 –25 1415-1530 TTh, KoltH S134, 4 cr
938392 –26 1415-1530 TTh, KoltH S132, 4 cr

R3011 Writing About Literature (prereq fulfillment of writing practice req, jr, written permission of major advisor)
007604 –1 1015-1100 MWF, MinMet 120, 4 cr
807605 –2 1115-1200 MWF, AmundH 54, 4 cr
434709 –3 1315-1400 MWF, AmundH 54, 4 cr

R3012 Writing About Non-Fiction Texts (prereq fulfillment of writing practice req, jr, written permission of major advisor)
634692 –1 0915-1000 MWF, MechE 302, 4 cr
607606 –2 1215-1300 MWF, FordH 60, 4 cr

R3013 Writing for Arts other than Literature (prereq fulfillment of writing practice req, jr, written permission of major advisor)
407607 –1 0945-1100 TTh, Zoology 102, 4 cr
207608 –2 1115-1230 TTh, Armory 116, 4 cr
034706 –3 1415-1530 TTh, KoltH S133, 4 cr

R3014 Writing for the Quantitative Social Sciences (prereq fulfillment of writing practice req, jr, written permission of major advisor)
107609 –1 0945-1100 TTh, FolH 203, 4 cr
407610 –2 1115-1230 TTh, FolH 103, 4 cr
834707 –3 1245-1400 TTh, LindH 315, 4 cr

R3015 Writing about Science (prereq fulfillment of writing practice req, jr, written permission of major advisor)
207611 –1 0815-0900 MWF, FolH 103, 4 cr
907613 –2 1115-1200 MWF, FordH 40, 4 cr
707614 –3 0815-0930 TTh, FolH 203, 4 cr

R3027 Advanced Expository Writing (prereq fulfillment of writing practice req, jr, written permission of major advisor)
307616 –1 0815-0900 MWF, Law 3, 4 cr
007618 –2 0915-1000 MWF, Law 3, 4 cr
807619 –3 1015-1100 MWF, Law 3, 4 cr (honors student or △)
007621 –4 1115-1200 MWF, BlegH 360, 4 cr
807622 –5 1315-1400 MWF, BlegH 225, 4 cr
607623 –6 1415-1500 MWF, BlegH 210, 4 cr
407624 –7 0945-1100 TTh, Law 3, 4 cr
107626 –8 1115-1230 TTh, BlegH 260, 4 cr
634708 –9 1415-1530 TTh, RarigC 616, 4 cr
018330 –10 1415-1530 TTh, BlegH 210, 4 cr

R3031 Technical Writing for Engineers (prereq fulfillment of Writing Practice req, jr, written permission of major advisor)
507629 –1 0815-0900 MWF, FordH 60, 4 cr
907627 –2 0915-1000 MWF, MinMet 104, 4 cr (ESL only)
907630 –3 1015-1100 MWF, ExpE 193, 4 cr
707631 –4 1115-1200 MWF, MRRC 211, 4 cr
507632 –5 1115-1200 MWF, AmundH 158, 4 cr (ESL only)
307633 –6 1215-1300 MWF, AmundH 158, 4 cr
107634 –7 1315-1400 MWF, AkerH 21, 4 cr
916084 –8 0815-0930 TTh, FordH 175, 4 cr
434693 –9 0945-1100 TTh, ElectE 115, 4 cr
738393 –10 1115-1230 TTh, ChDev 105, 4 cr
538394 –11 1115-1230 TTh, MRRC 211, 4 cr

R3032 Pre-Professional Writing for Business (prereq fulfillment of Writing Practice req, jr, written permission of major advisor)
007635 –1 0815-0900 MWF, Law 1, 4 cr
807636 –2 1015-1100 MWF, BlegH 210, 4 cr
407638 –3 1215-1300 MWF, Law 3, 4 cr
207639 –4 1215-1300 MWF, BlegH 260, 4 cr
407641 –5 1315-1400 MWF, Law 3, 4 cr
207642 –6 1415-1500 MWF, Law 3, 4 cr
107643 –7 0815-0930 TTh, Law 3, 4 cr
907644 –8 0945-1100 TTh, BlegH 210, 4 cr
713638 –9 0945-1100 TTh, BlegH 205, 4 cr
234694 –10 1115-1230 TTh, BlegH 205, 4 cr
338395 –11 1245-1400 TTh, BlegH 210, 4 cr
138396 –12 1245-1400 TTh, BlegH 225, 4 cr

R3080 Special Projects in Advanced Composition (max 6 cr; prereq fulfillment of writing practice req, jr, written perm of major advisor, △)
507646 2 cr (CLA maj/honors only)

R3085 Conference Course in Advanced Composition (prereq fulfillment of Writing Practice req, jr, written permission of major advisor, △)
818250 –1 1-4 cr (CLA maj only)
107648 –2 1-4 cr (ESL only)

COMPUTER SCIENCE (CSci)
Institute of Technology

R3002 Creative and Analytical Applications of Computers in the Arts and Literature
215286 1415-1500 MWF, Arch 10, Ryan, 4 cr

R3101 A FORTRAN Introduction to Computer Programming (prereq non-computer science maj, Math 1111 or 1201 or equiv or #)
413360 –1 0815-0900 MWF, LindH 203, Dovolis, 4 cr
113362 –2 0915-1000 MWF, LindH 203, Afshari, 4 cr
713364 –3 1015-1100 MWF, AkerH 309, Boley, 4 cr
313366 –4 1115-1200 MWF, AkerH 309, Rosen, 4 cr
013368 –5 1215-1300 MWF, LindH 203, Du, 4 cr
438226 –6 1315-1400 MWF, AkerH 225, 4 cr

R3102 **Introduction to Pascal Programming** (prereq non-computer science maj, Math 1111 or 1201 or equiv or #)
137029 –1 0815-0900 MWF, MechE 221, Dovolis, 4 cr
437030 –2 1015-1100 MWF, MechE 221, Thompson, 4 cr
237031 –3 1215-1300 MWF, Arch 60, Borgwardt, 4 cr

R3104 **Introduction to Programming and Problem Solving** (prereq Math 1211 or equiv or #)
★LECT 1415-1530 MW, SmithH 100, Dovolis
913377 –1 LAB 1115-1200 Th, MechE 302, 5 cr (CSci maj only)
513379 –2 LAB 1215-1300 Th, MechE 302, 5 cr (CSci maj only)
713381 –3 LAB 1315-1400 Th, Arch 40, 5 cr (CSci maj only)
313383 –4 LAB 1415-1500 Th, Arch 5, 5 cr
013385 –5 LAB 0915-1000 F, ExpE 193, 5 cr
238227 –6 LAB 1015-1100 F, Arch 15, 5 cr

R3105 **Fundamentals of Algorithms and Languages I** (prereq 3101 or 3102 or 3104 or #)
619867 –1 1115-1230 TTh, VinH 16, Maly, 4 cr (CSci maj only)
138228 –2 1115-1230 TTh, VinH 16, Maly, 4 cr (non-maj only)

R3106 **Fundamentals of Algorithms and Languages II** (prereq computer science maj, 3104, 3105 or #)
419868 1615-1730 TTh, Arch 10, Gini, 4 cr

R3107 **Introduction to the Structure and Programming of Computer Systems** (§5101; prereq computer science maj, 3104 or #)
921043 0945-1100 TTh, VinH 16, Boley, 4 cr

R3400 **Discrete Structures of Computer Science** (prereq computer science maj, Math 1231 or 1331 or #)
137032 1115-1230 TTh, Arch 35, Stein, 4 cr

R5101 **Structure and Programming of Software Systems I** (§3107; prereq non computer science maj, 3101 or 3102 or 3104 or #)
938229 0945-1100 TTh, VinH 16, Boley, 4 cr

R5117 **Computer Graphics II** (prereq 5107 or #)
721044 0815-0930 TTh, LindH 203, Miller, 4 cr

R5122 **Advanced Data Structures** (prereq 5121 or #)
619870 1245-1400 TTh, MechE 108, 202, Du, 4 cr

R5181 **Software Engineering** (prereq 5180)
★LECT 1545-1730 Th, MechE 102, 202, Berzins, Gray
538234 –1 LAB 1015-1130 F, Arch 60, 5 cr

R5199 **Problems in Languages and Systems** (prereq #)
115290 1315-1430 TTh, AkerH 309, Bruell, 1-4 cr

R5280 **Computer Aided Design** (prereq 5122, 5201)
913394 0915-1000 W, 0815-1000 F, MechE 102, 202, Berzins, Singley, 4 cr

R5301 **Numerical Analysis** (prereq Math 3142 or equiv or #...a knowledge of Pascal or FORTRAN is assumed)
609064 –1 1115-1230 TTh, MechE 108, 202, Rosen, 4 cr (CSci maj only)
238230 –2 1115-1230 TTh, MechE 108, 202, Rosen, 4 cr (non-maj only)

R5302 **Numerical Analysis** (prereq 5301 or #)
419871 1245-1400 TTh, LindH 203, Munro, 4 cr

R5304 **Computational Aspects of Matrix Theory** (prereq 5302 or #)
737034 1115-1230 TTh, Arch 60, Boley, 4 cr

R5401 **Introduction to Formal Languages** (prereq 5400)
219872 0945-1100 TTh, LindH 203, Ibarra, 4 cr

R5501 **Artificial Intelligence** (prereq 5121 or #)
537035 –1 1115-1230 TTh, Arch 40, Gini, 4 cr (CSci maj only)
138231 –2 1115-1230 TTh, Arch 40, Gini, 4 cr (non-maj only)

R5502 **Introduction to Operating Systems** (prereq 5102, 5121 or #)
119873 –1 0815-0930 TTh, MechE 108, 202, Afshari, 4 cr (CSci maj only)
938232 –2 0815-0930 TTh, MechE 108, 202, Afshari, 4 cr (non-maj only)

R5503 **Introduction to Compilers** (prereq CLA or upper division IT computer science maj, 5106, 5504 or #)
610425 1615-1730 TTh, MechE 108, 212, Borgwardt, 4 cr

R5703 **Database System Design** (prereq 5702 or #)
719875 –1 0945-1100 TTh, MechE 108, 202, Carlis, 4 cr (CSci maj only)
738233 –2 0945-1100 TTh, MechE 108, 202, Carlis, 4 cr (non-maj only)

R8102 **Computer Operating Systems: Modeling and Analysis** (prereq 8101)
113398 1615-1830 W, MechE 102, Franta, 3 cr

R8199 **Seminar: Languages and Systems** (prereq #)
337036 1315-1430 MW, MinMet 116, Berzins, 1-3 cr

R8299 **Seminar: Machine Design** (prereq #)
519876 1415-1530 TTh, LindH 229, Stein, 1-3 cr

R8401 **Algorithms-Techniques and Theory** (prereq 5121, 5400 or #)
137037 1415-1530 MW, MinMet 124, Sahni, 4 cr

R8403 **Theory of Computation** (prereq 5400 or equiv or #)
615124 1415-1530 TTh, LindH 302, Ibarra, 4 cr

R8499 **Seminar: Computational Theory and Logic** (prereq #)
637687 1015-1130 MW, MinMet 104, Venkatesan, 1-3 cr

R8799 **Seminar: Information Sciences** (prereq #)
437688 1015-1130 TTh, MinMet 104, Du, 1-3 cr

R8899 **Computer Science Colloquium** (prereq grad) (S-N only)
713400 1530-1700 M, MechE 108, 1 cr

CURRICULUM AND INSTRUCTIONAL SYSTEMS (CISy)
Curriculum And Instruction Education

5000 **Educational Technology: Instructional Systems** (§SeEd 5000 or 5102) (A-N only)
316672 1615-1800 M, EdHAn 64, Carrier, 1 cr

R5003 **Educational Technology: Computers in the Classroom** (§SeEd 5003 or 5102) (A-N only)
132977 –1 1015-1215 S, PeikH 355, Christensen, 1 cr (Jan 14, 21, 28)
932978 –2 1615-1800 M, PeikH 355, Trollip, 1 cr

5004 **Educational Technology: Classroom Video** (§SeEd 5102 or 5004) (A-N only)
016674 1615-1700 M, PeikH 335, Philipson, 1 cr

R5006 **Educational Technology: Instructional Computer Programming** (A-N only)
604351 1615-1800 W, PeikH 355, Trollip, 1 cr

R5201 **Systems Approach to Design of Instruction** (§SeEd 5201; prereq SeEd 5000 or CISy 5000 or #) (A-N only)
616676 1615-1815 W, PeikH 33, Carrier, 3 cr

R5205 **Applications of Computers in Education** (§SeEd 5205; prereq 5003 or SeEd 5003) (A-N only)
732979 1615-1815 T, PeikH 355, Tennyson, 3 cr

5207 **Applications of Video in Education** (A-N only)
216678 1715-1915 M, PeikH 335, 4 cr

R5216 **Instructional Simulations and Learning Games: Development and Classroom Use** (§SeEd 5131) (A-N only)
116682 1015-1200 W, PeikH 355, 3 cr

5507 **Seminar: Practical Research in Curriculum and Instruction** (§SeEd 5174; prereq #) (A-N only)
404349 Ahlgren, 1-4 cr

5509 **Directed Individual Study** (max 6 cr; prereq △) (A-N only)
316686 Carrier, Kimpston, others, 1-6 cr

5605 **Principles and Procedures in Designing Curriculum** (§SeEd 5114) (A-N only)
805739 1615-1800 T, EdHAn 64, Kimpston, 3 cr

5800 **Supervision of Secondary Instruction** (§SeEd 5172; prereq 5600 or SeEd 5113) (A-N only)
616693 1900-2100 T, EdHAn 64, E Anderson, 3 cr

8102 **Curriculum and Instruction Core: Teaching** (prereq PhD student and △)
104345 1615-1815 Th, PeikH 165, Mackey, 2 cr

8307 **Designing Instructional Materials: Research and Theory** (prereq 5209)
216695 1615-1815 Th, EdHAn 64, Carrier, 3 cr

8416 **Curriculum and Instructional Systems Seminar** (prereq △)
516699 1015-1115 T, PeikH 225, Kimpston, Tennyson, 1-4 cr

8501 **Problems: Instructional Systems** (prereq △)
716703 Carrier, Kimpston, Ahlgren, Tennyson, ar cr

8600 **Seminar: Curriculum Implementation and Change** (max 4 cr; prereq 5605 or SeEd 5114 or △)
105740 1615-1800 W, PeikH 325, Kimpston, 2 cr

8700 **Curriculum and Instructional Systems Field Experience** (max 6 cr; prereq #)
316705 Kimpston, 3-6 cr

8800 **Problems: Secondary School Supervision** (prereq △)
616709 E Anderson, ar cr

DANCE (Dnce)
School of Physical Ed, Rec, School Health Ed Education

R1022 **Ballroom Dance**
000135 –1 1415-1510 TTh, NorrisH M153A, M153, Lampe, 1 cr (men only)
400141 –2 1415-1510 TTh, NorrisH M153A, M153, Lampe, 1 cr (women only)

R1023 **Folk and Square Dance**
600154 –1 1315-1410 TTh, NorrisH M153A, M153, Stern, 1 cr (men only)
900158 –2 1315-1410 TTh, NorrisH M153A, M153, Stern, 1 cr (women only)

R1024 **Modern Dance**
436119 –1 1215-1310 TTh, PeikG G65, Jasmin, 1 cr
700162 –2 1315-1410 TTh, NorrisH M151, Jette, 1 cr
138441 –3 1415-1510 TTh, NorrisH 67, Jette, 1 cr

R1025 **Ballet**
300164 –1 0815-0910 TTh, NorrisH 67, Atwood, 1 cr
738443 –2 1515-1610 TTh, PeikG G65, Atwood, 1 cr

R1122 **Ballroom Dance** (prereq 1022)
229012 –1 1115-1210 TTh, NorrisH M151, Lampe, 1 cr (men only)
129013 –2 1115-1210 TTh, NorrisH M151, Lampe, 1 cr (women only)

R1124 **Modern Dance** (prereq 1024)
500177 0815-0910 MW, NorrisH M153A, M153, Delattre, 1 cr

R1125 **Ballet** (prereq 1025 or #)
217085 0915-1010 TTh, NorrisH M153A, M153, Atwood, 1 cr

R1224 **Modern Dance** (prereq 1124)
917087 1315-1410 TTh, NorrisH 67, Cheng, 1 cr

R1517 **Ethnic Dance Heritage I** (max 8 cr) (A-N only)
538444 –1 1315-1500 MW, NorrisH 67, 2 cr
338445 –2 1415-1600 TTh, NorrisH M151, 2 cr

R1615 **Modern Dance Technique and Improvisation II** (prereq 1515 or #) (A-N only)
717091 0915-1100 TThF, NorrisH M151, Cheng, 2 cr

R1618 **Ballet II** (prereq 1518, △) (A-N only)
617097 1115-1300 MW, NorrisH 67, Savino, 2 cr

R3282 **Modern Dance Technique and Improvisation V** (prereq 3281 or #) (A-N only)
615527 0915-1100 MTWTh, NorrisH 67, Bonsignore, 3 cr

R3285 **Ballet V** (prereq 3284 or #) (A-N only)
215529 1115-1300 F, PeikG G65, Savino, 1 cr

R3326 **Teaching of Modern Dance** (prereq 1024, 1124, 1224 or 1515, 1615, △) (A-N only)
036665 1315-1500 TTh, PeikG G65, Shapiro, 4 cr

R3382 **Modern Dance Technique and Improvisation** (prereq 3381, dance maj, △) (A-N only)
217099 0915-1100 MTWThF, PeikG G65, Voss, 5 cr

R3391 **Dance Composition** (prereq 3390, △) (A-N only)
117105 1115-1300 MW, NorrisH M151, Jasmin, 2 cr

R3396 **Dance Repertory Theatre** (max 9 cr; prereq audition, △) (A–N only)
517108 1315-1600 MW, NorrisH M151, Hauser, 3 cr

R3399 **Dance Composition** (prereq 3398, △) (A–N only)
215532 1115-1300 TTh, NorrisH 67, Cheng, 2 cr

3608 **Student Teaching: College Modern Dance** (prereq 1715, △, ¶3326) (A–N only)
915534 0815-0910 T, NorrisH 3, Jette, 1 cr

3610 **Student Teaching in Dance: Elementary** (prereq 3394, △) (A–N only)
733016 1615-1800 T, NorrisH 4, Jette, 6 cr

3611 **Student Teaching in Dance: Secondary** (prereq 3326, △) (A–N only)
533017 1615-1800 T, NorrisH 4, Jette, 6 cr

3612 **Field Experiences in Teaching Dance** (prereq 3326, 3608, △) (A–N only)
333018 1615-1800 T, NorrisH 4, Jette, 6 cr

DANISH (Dan)
Scandinavian Languages
Liberal Arts

R1102 **Beginning Danish** (prereq 1101)
519201 1115-1200 MTWThF, KoltH S133, 5 cr

1105 **Intermediate Danish** (prereq 1104)
819205 1245-1400 TTh, FolH 205, Houe, 4 cr

3670 **Readings in Danish Literary Texts** (max 28 cr; prereq 3101)
119209 1245-1400 TTh, FolH 205, Houe, 4 cr

DENTAL HYGIENE (DH)
Dentistry

1010 **Principles of Communication and Education in Dentistry** (A–N only)
905876 1415-1600 M, PWB 5224, Bryan, 2 cr

1092 **Dental Hygiene Core II** (prereq 1091) (A–N only)
★LECT 0845-0930 T, MoosT 5181, Grayden, 2 cr
205888 –1 LAB 1000-1200 T, MoosT 5140, Grayden

1191 **Dental Hygiene Clinic I** (prereq 1091) (S–N only)
436993 1315-1600 TTh, 0945-1215 Th, Stoltenberg, 3 cr

1310 **Critiquing Dental Literature** (A–N only)
712652 0845-0930 Th, MoosT 5125, Onomiya, 1 cr

3061 **Community Outreach** (prereq 1301) (A–N only)
705880 0845-1200 WF, Newell, 2 cr

3095 **Dental Hygiene Core V** (prereq 1093, 3094, 1202 or equiv or #) (A–N only)
412659 –1 LAB 1315-1500 T, MoosT 5130, Fellows, 2 cr
812660 –2 LAB 1315-1500 Th, MoosT 5130, Fellows, 2 cr
★CLN 0930-1200 T, Fellows

3171 **Patient Assessment for the Dental Hygienist** (prereq 1091) (A–N only)
412662 0815-0900 WTh, 1315-1400 WF, MoosT 2690, Little, 3 cr (Jan 4-Feb 2)

3193 **Dental Hygiene Clinic III** (prereq 3192) (A–N only)
★LECT 0745-0830 M, MoosT 5125, Stoltenberg, 6 cr
833038 –1 CLN 0945-1215 MWThF, Stoltenberg
633039 –2 CLN 1315-1600 MTWThF, Stoltenberg

3278 **Radiographic Analysis** (A–N only)
205518 0845-0930 M, MoosT 5125, Kuba, 1 cr

3399 **Independent Study**
108167 ar cr

DENTISTRY (Dent)
Dentistry

5002 **Fixed Prosthodontic Technic** (prereq 5001)
★LECT 1315-1400 M, MoosT 2690, Keck, 3 cr
925531 –1 LAB 1415-1700 MW, MoosT 4210A

5005 **Fixed Prosthodontics: Independent Study**
116567 Colman, ar cr

5006 **Fixed Prosthodontics I**
716569 0745-0830 T, MoosT 2530, Colman, 1 cr

5011 **Fixed Prosthodontics Clinic** (prereq 5010)
115460 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 9139, Colman, 3 cr

5016 **Fixed Prosthodontics Clinic**
916571 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 9139, Colman, ar cr

5026 **Introduction to Health Ecology**
716572 1315-1400 TWF, 1315-1500 Th, MoosT 2620, Born, 5 cr

5043 **Organization and Management of Dental Practice II** (prereq 5042)
816577 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 8223, Loupe, 0 cr

5053 **Dental Auxiliary Utilization Clinic (DAU I)** (prereq 5052)
616578 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 8223, DiAngelis, 0 cr

5055 **Health Ecology: Independent Study**
416582 Martens, ar cr

5060 **General Dentistry Clinic (Team II)**
716586 Martens, 2 cr

5070 **Health Ecology Elective**
316588 Martens, ar cr

5075 **Rural Dental Preceptorship Program**
516590 Martens, 2 cr

5080 **Dental Auxiliary Utilization Clinic**
116592 DiAngelis, 1 cr

5093 **Professional Problem Solving** (prereq 5092)
114096 Bebeau, 0 cr

5096 **Professional Problem Solving** (prereq 5095)
014097 Bebeau, 0 cr

5100 **Genetics**
016576 0815-0900 WTh, MoosT 2690, Shapiro, 1 cr (Feb 8-March 8)

5102 **Human and Oral Genetics: Independent Study**
816594 Witkop, ar cr

5152 **Operative Dentistry I** (prereq 5151)
416596 0815-0900 T, MoosT 2690, Hill, 1 cr

5155 **Operative Dentistry Laboratory** (prereq 5154)
805904 1015-1230 TTh, MoosT 4210A, Hill, 2 cr

5158 **Operative Dentistry: Independent Study**
116598 Geistfeld, ar cr

5162 **Operative Clinic** (prereq 5161)
616600 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 8127, Geistfeld, 3 cr

5166 **Clinical Operative Dentistry**
116608 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 8127, Geistfeld, ar cr

5168 **Seminar: Restorative Dentistry**
516606 Geistfeld, ar cr

5170 **Seminar: Operative Denistry**
916604 Geistfeld, 1 cr

5171 **Class III Direct Gold Restorations** (prereq 5160, 5163)
014262 Larson, 1 cr

5172 **Esthetic Direct Anterior Restoratives** (prereq 5160)
814263 0800-0900 W, JacH 2135, Larson, 1 cr

5173 **Clerkship in Operative Dentistry** (prereq 5160, 5165)
414265 Larson, 2 cr

5174 **Dental Caries: Etiology, Pathology and Prevention**
214266 Jensen, 1 cr

5175 **Esthetic Dentistry Clinic** (prereq 5172)
815090 Larson, 1 cr

5250 **Oral Pathology: Independent Study**
216602 Gorlin, ar cr

5251 **Oral Pathology**
605600 0745-0830 WF, MoosT 2530, Sedano, ar cr (2 hr lab ar)

5256 **Medicine for the Dentist**
205843 0800-0845 MF, PWB 2470, King, 1 cr

5260 **Introduction to Oral Pathology**
129018 0815-0900 WTh, 1315-1400 WF, MoosT 2690, Sauk, 2 cr (Jan 4-Feb 2)

5311 **Oral Surgery II**
613308 0745-0830 M, MoosT 2530, Jaspers, 1 cr

5315 **Oral Surgery III**
633025 0800-0845 W, PWB 2470, Waite, 1 cr

5318 **Oral Surgery Clinic**
816613 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 7407, Waite, 1 cr

5320 **Oral Surgery: Independent Study**
416615 Waite, ar cr

5326 **Office Emergencies** (prereq 5325)
614815 0800-0845 MF, PWB 2470, Gatto, 1 cr

5376 **Orthodontic Laboratory**
615091 Speidel, ar cr

5380 **Orthodontics**
415092 Speidel, 2 cr

5381 **Head and Neck Anatomy Review**
115094 Speidel, 1 cr

5385 **Orthodontics: Independent Study**
716619 Speidel, ar cr

R5387 **Orthodontics for the Dental Auxiliary**
417540 0845-0930 W, MoosT 5125, Speidel, 1 cr

5405 **Pediatric Hospital Dentistry**
715096 Till, 1 cr

5406 **Advanced Pediatric Dentistry Clinic** (prereq 5404)
114267 Till, ar cr

5407 **Minor Tooth Movement**
916621 Walker, 1 cr

5408 **Pediatric Dentistry Elective**
516623 Walker, 1 cr

5410 **Clinical Pediatric Dentistry** (prereq 5409)
325534 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 6125, Till, 1 cr

5414 **Clinical Pediatric Dentistry** (prereq 5413)
025536 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 6125, Till, 1 cr

5420 **Pediatric Dentistry: Independent Study**
116625 Till, ar cr

5451 **Periodontology I**
816627 0815-0900 M, 0815-1000 F, MoosT 2690, Bakdash, ar cr

5460 **Periodontology: Independent Study**
416629 Bakdash, ar cr

5464 **Periodontology Technique I**
405906 1000-1230 M, MoosT 4210A, Carlson, 1 cr

5467 **Clinical Periodontology IV**
616631 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 7336, Bandt, ar cr

5470 **Clinical Periodontology IV** (prereq 5469)
825537 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 7336, Bandt, 1 cr

5550 **Removable Prosthodontics I**
★LECT 1315-1400 T, MoosT 2690, Petersen
725532 –1 LAB 1415-1700 T, 1015-1230 WF, MoosT 4210A, ar cr

5553 **Removable Prosthodontics: Independent Study**
916666 Morstad, ar cr

5563 **Removable Prosthodontics Clinic** (prereq 5562)
416680 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 9160, Morstad, 3 cr

5566 **Removable Prosthodontics Clinic**
416713 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 9160, Morstad, ar cr

5568 **Review: Partial Removable Prosthetics**
515097 Baker, 1 cr

5569 **Removable Prosthetics**
315098 Morstad, ar cr

5575 **Maxillofacial Prosthodontics and Implantology**
915100 Petersen, 1 cr

5577 **Review of Complete Denture Prosthetics**
515102 Petersen, 1 cr

5600 **Introduction to Biomaterials I**
716717 1415-1500 M, MoosT 2620, Douglas, 1 cr

5603 **Biomaterials Update** (prereq completion of first three years of undergrad prog)
914268 Douglas, 1 cr

5624 **Endodontic Technique**
705846 1415-1700 F, MoosT 4210A, Quan, ar cr

5627 **Endodontics Clinic**
616726 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 8127, Jensen, Quan, 1 cr

5629 **Endodontics Clinic**
529646 Jensen, 1 cr

5630 Endodontics: Independent Study
716734 Jensen, ar cr

5631 Surgical Endodontics Elective
115104 Jensen, ar cr

5632 Advanced Molar Endodontics
714269 Jensen, ar cr

5633 Update in Endodontics
114270 Jensen, ar cr

5643 Hospital Dentistry (prereq 5642)
425539 Gatto, 0 cr

5650 Porcelain Fused to Metal Restorations
316736 Noble, 1 cr

5654 Oral Anatomy: Independent Study
016738 Noble, ar cr

5675 Oral Biology: Fundamental and Applied
813310 0800-0845 TTh, OwreH 2230, Germaine, 2 cr

5677 Dental Research Training
015105 Legler, 3 cr

5680 Oral Biology: Independent Study
116746 Shapiro, ar cr

5750 Occlusion I
★LECT 0800-0845 T, MoosT 2620, Noble, 3 cr
105908 –1 LAB 0900-1200 T, 0930-1100 Th, 0800-0930 Th, MoosT 4144A, Noble

5755 Occlusion: Independent Study
516752 Schulte, 2 cr

5760 Public Communication
416758 1215-1300 M, MoosT 5125, Smith, 1 cr

5775 Oral Radiology I
116763 1315-1400 M, 1415-1500 T, MoosT 2620, Kuba, 3 cr

5777 Oral Radiology III
316767 0845-0930 F, MoosT 2530, Kuba, 1 cr

5779 Clinical Roentgenology
115452 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 7221, Kuba, 1 cr

5781 Advanced Clinical Roentgenology
116771 Kuba, ar cr

5784 TMJ Pathology and Facial Pain
615107 Kuba, 1 cr

5785 Oral Radiology: Independent Study
116777 Kuba, ar cr

5801 Treatment Planning Clinic I (prereq 5800)
815462 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 7555, Little, 1 cr

5805 Treatment Planning Clinic II (prereq 5804)
825540 0945-1215 MTWThF, 1330-1600 MTWThF, MoosT 7555, Little, 1 cr

5807 Treatment Planning: Independent Study
516783 Little, ar cr

5808 Patient Management I
706124 0815-0900 WTh, 1315-1400 WF, MoosT 2690, Little, 2 cr (Jan 4-Feb 2)

5972 General Practice Seminar III
413312 Simmons, ar cr

5976 General Practice Clinical Administration III
215109 Simmons, ar cr

5982 General Practice Clinic III
113314 Simmons, ar cr

5986 General Practice Clinic VII
415111 Simmons, ar cr

5989 Advanced Clinical Geriatric Dentistry (prereq #)
929014 ar cr

5990 Field Experience: Administration in a Multidisciplinary Health Center (prereq #)
729015 ar cr

5993 Oral Health Services for Older Adults (prereq 5992)
025990 ar cr

5995 Advanced Clinical Restorative Dentistry
116785 Geistfeld, ar cr

5999 Dental Clinic
816787 Jensen, ar cr

8126 Teaching Evaluation: Dentistry I (prereq #)
616791 3 cr

8129 Topics and Problems in Dental Education (prereq #)
316798 ar cr

8140 Topics: Restorative Dentistry
916800 Geistfeld, ar cr

8150 Research: Restorative Dentistry
316803 Geistfeld, ar cr

R8400 Occlusion
117878 1 cr

DERMATOLOGY (Derm)
Medical School

5181 Clinical Problems in Dermatology (prereq regis med)
419286 1515-1630 WF, MoosT 2580, Gentry, 4.5 cr (addnl hrs ar, Manick)

5182 Preceptorship in Dermatology (prereq regis med)
119288 Gentry, Manick, 4.5 cr

5183 Advanced Dermatology (prereq regis med)
919289 Manick, ar cr

5184 Special Course in Dermatology
119291 Manick, ar cr

5185 Research in Dermatology (prereq 5181)
719293 Dahl, 9 cr

8225 Clinical Dermatology
519294 Gentry, Goltz, others, ar cr

8226 Clinical Seminar
319295 1315-1700 WF, PWB 4272, Goltz, ar cr (Eustis Amph)

8227 Histology of the Skin
119296 1500-1700 M, PWB 4272, Orkin, ar cr (Eustis Amph)

8228 Research
019297 Zelickson, ar cr

8229 Electron Microscopy in Dermatology
619299 Zelickson, ar cr

8230 Functional Biology of the Skin
319300 Dahl, ar cr

8231 Clinics in Dermatology for Non-Dermatologists
119301 Goltz, ar cr

8232 Seminar: Dermatologic Histopathology and Mycology
019302 Goltz, ar cr

DESIGN (Dsgn)
Home Economics

R1501 Introduction to Design
817678 0900-0945 MWF, McNH 33, Miller, 3 cr

R1521 Design Process: Color (prereq △)
125642 –1 LAB 0900-1045 MWF, McNH 262, Ginthner, 4 cr
725644 –2 LAB 1100-1245 MWF, McNH 262, Fargo, 4 cr
525645 –3 LAB 1300-1445 MWF, McNH 262, Joplin, 4 cr

R1523 Design Process: Visual Presentations (prereq △)
125647 –1 LAB 0900-1045 MWF, McNH 258, Anderson, 4 cr
825649 –2 LAB 1100-1245 MWF, McNH 258, Boehlke, 4 cr
125650 –3 LAB 1300-1545 TTh, McNH 258, Jankus, 4 cr

R1525 Design Process: Two Dimensional Design (prereq △)
025651 1300-1445 MWF, McNH B3, Blade, 4 cr

R1533 Metalsmithing: Introduction to Techniques (prereq 1521, 1523, 1525 or #, △)
625653 1000-1145 MWF, McNH 10, Ordos, 4 cr

R1544 Costume Design: Special Techniques (prereq 1531, 1541, △)
425654 0900-1045 MWF, McNH 205, Amir-Fazli, 4 cr

R1551 Consumer Aspects of Housing (prereq 1501)
108842 1400-1445 MWF, McNH 198, 4 cr

R1554 Interior Design I: Spatial Design Experiences (prereq 1501, 1521, 1523, 1552, Ind 1600, △)
225655 0900-1145 TTh, McNH 316, Scudder, 3 cr

R1555 Interior Design I: Interior Design Problems (prereq 1554, △)
125656 1300-1445 MWF, McNH 316, Ginthner, 3 cr

R3517 History of Costume: Primative Through 18th Century (prereq a general art history course, △)
017680 1100-1145 MWF, McNH 212, Shenoi, 3 cr

R3521 Design Process: Color II (prereq 1521, 1523 or #, △)
036679 0900-1145 TTh, McNH 197, Bagley, 4 cr

R3525 Design Process: Two Dimensional Design II (prereq 1525 or equiv, △)
105897 1300-1445 MWF, McNH 258, Larkin, 4 cr

R3527 Design Process: Three Dimensional Design (prereq 1525, 1521, 1523 or #, △)
525659 0900-1045 MWF, McNH B3, Larkin, 4 cr

R3531 Surface-Fabric Design II (prereq 1531 or #, △)
934021 1300-1545 MW, McNH B9, Abell, 4 cr

R3535 Design Process: Materials (prereq 1521, 1523, 1525 or #, △)
734022 0900-1145 MW, McNH B9, Abell, 4 cr

R3536 Metalsmithing: Enameling (prereq 1533 or #, some metals experience, △)
725661 1300-1445 MWF, McNH 10, Ordos, 4 cr

R3541 Costume Design II (prereq 1543, 1544, △)
525662 0900-1145 TTh, McNH 205, Amir-Fazli, 4 cr

R3550 Interior Design Presentation (prereq 1555, pass portfolio review, △)
505895 1300-1545 TTh, McNH 316, Birkeland, 3 cr

R3553 Interior Design II (prereq 3550 or #, △)
325663 0900-1045 MWF, McNH 316, Nagle, 4 cr

3562 Real Estate Practice (prereq 1551, 1552 or #)
318664 1810-2110 M, AndH 330, Musil, 3 cr (Mpls)

R3580 Internship in Housing (max 15 cr; prereq completion one-half professional sequence, #) (S-N only)
417683 1200-1245 M, McNH 212, Franklin, 5-15 cr

R3583 Field Experience in Costume Design (prereq completion of at least one-half of professional sequence or #) (S-N only)
117685 Amir-Fazli, 4 cr

R3584 Field Experience in Design (max 15 cr; prereq #, plan to be submitted, approved in advance by adviser, employer) (S-N only)
717687 ar cr

3586 Design Problems
617732 1-3 cr

R5507 History of Decorative Arts: Textiles (prereq 5505)
317689 1300-1345 MWF, McNH 33, Erickson, 4 cr

R5514 History of American Furniture and Interiors (prereq 5505 or equiv, 5512)
517691 1100-1145 MWF, McNH 33, Blade, 4 cr

R5552 Interior Design III: Residential Design (prereq 3553, 3557, TexC 3621, FSoS 1401 or #, △...ForP 3310, TexC 3622 rec)
125664 0900-1045 MWF, McNH 305, Erickson, 4 cr

R5555 Honors Thesis: Interior Design (prereq completion of all other professional courses, # program committee approval)
117693 15 cr

R5567 Housing Alternatives for the Family (prereq 1551 or 1552, 3563 or #)
817695 1400-1545 MW, McNH 216, Nagle, 4 cr

R5568 Housing Problems of the Family (prereq 1551 or 1555, 3563 or #)
417697 1200-1445 TTh, McNH 216, Franklin, 5 cr

R5581 Designed Environment and Aging (prereq 1551, 3563 or #)
534023 1800-2045 Th, McNH 197, Franklin, 4 cr

R5584 Readings in Design (no srs; prereq #)
117699 1-3 cr

R5585 Problems in Design: General (max 12 cr; prereq #, △)
617701 2-4 cr

R5586 Problems in Design: Housing and/or Interiors (max 12 cr; prereq #, △)
217703 2-4 cr

R5587 Problems in Design: Jewelry (max 12 cr; prereq #, △, passed portfolio review)
917705 3-4 cr

R5588 **Problems in Design: Textiles** (max 12 cr; prereq #, △, passed portfolio review)
517707 3-4 cr

R5589 **Problems in Design: Costume** (max 12 cr; prereq 5518 or equiv, #, passed portfolio review)
117709 3-4 cr

R8521 **Design Process: Color** (prereq 1501, 1521, 1523, 1525, 3527, 5505 or equiv, △)
025665 1300-1545 TTh, McNH 262, Bagley, 4 cr

R8576 **Seminar: Design Instruction** (max 6 cr)
017713 1200-1245 W, McNH 240K, Bagley, Larkin, 1 cr

R8584 **Readings in Design** (prereq #)
617715 1-3 cr

R8585 **Problems in Design** (prereq #)
217717 1-5 cr

R8586 **Problems in Interior Design** (prereq #)
917719 1-5 cr

R8587 **Problems in Design** (prereq #)
117721 1-5 cr

R8588 **Directed Study in Design** (prereq #) (A-N only)
937694 –1 LAB Abell, Alexander, others, 1-5 cr
737695 –2 LAB 1500-1545 W, McNH 262, Bagley, 1-5 cr
537696 –3 LAB 1500-1545 W, McNH 258, Larkin, 1-5 cr

DUTCH (Dtch)
German
Liberal Arts

R1102 **Beginning and Intermediate Dutch: Classroom Reading, Listening, Writing, Speaking** (§1110; prereq 1101)
837185 1215-1300 MTWThF, FolH 208, Van Kampen, 5 cr

R1110 **Beginning Dutch: Individualized Reading, Listening, Writing** (first 3 cr must be completed as a unit, max 15 cr, §1101-1102-1103)
118352 1115-1200 T, WaLib 111, Wakefield, 1-15 cr (1st meeting) (addnl hrs ar)

3310 **Studies in Dutch Authors** (prereq 1103 or 15 cr of 1110 or #)
233013 1615-1800 T, 1715-1800 Th, FolH 203, van Kerkwijk, 4 cr

3610 **Dutch Authors in Translation** (no knowledge of Dutch req)
418350 1615-1800 M, 1615-1700 Th, FolH 203, van Kerkwijk, 4 cr

EAST ASIAN STUDIES (EAS)
East Asian Studies
Liberal Arts

1063 **China: The Middle Kingdom**
933046 0915-1000 MWF, PeikH 225, Cass, 4 cr

1462 **Introduction to East Asia: The Imperial Age** (§Hist 1462, 3462)
133045 1315-1400 MWF, BlegH 105, Marshall, Farmer, 4 cr

3467 **The Nationalist Revolution in China 1900 to Present** (§Hist 3467, 5467)
733047 0945-1100 TTh, BlegH 255, Farmer, 4 cr

3471 **20th Century Japan** (§Hist 3471, 5471)
233044 1115-1200 MWF, BlegH 205, Marshall, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
114205 1-15 cr

ECOLOGY AND BEHAVIORAL BIOLOGY (EBB)
Biological Sciences

R3001 **Introduction to Ecology** (open to jrs and above but not to biol majs)
806812 1215-1300 MTWThF, OwreH 2230, Corbin, 4 cr

R3101 **Ecology for Engineers and Physical Scientists** (§3001, not open to biology majs; prereq Math 1231)
616404 1115-1200 MWF, Zoology 313, Bright, 4 cr

R5051 **Analysis of Populations** (prereq 3004 or Biol 3041 or #)
933192 1015-1200 MW, Zoology 108, Siniff, 4 cr

R5052 **Theoretical Population Ecology** (prereq Biol 3041 or #)
206801 0815-1000 MWF, Zoology 108, Tilman, 4 cr

R5134 **Introduction to Ornithology** (prereq Biol 1106 or 3011) (course fee)
★LECT 1315-1500 TTh, BellMus 311, Tordoff, 5 cr (Field trips F, plus one F-Sun ar Spring quarter)
325677 –1 LAB 1515-1700 Th, BellMus 311

R5136 **Ichthyology** (prereq 15 cr incl Biol 1106 or 3011)
★LECT 0800-0930 TTh, Zoology 102, Underhill
016075 –1 LAB 1315-1615 T, Zoology S3, 4 cr

R5322 **Comparative Ethology** (prereq 5321 or ¶, #)
716412 1015-1215 TTh, BellMus 311, McKinney, 4 cr

R5601 **Limnology** (§Geo 5601; prereq Chem 1005 or #)
816420 0915-1000 MWF, Zoology 102, Megard, 4 cr

R5613 **Assessing the Ecological Effects of Pollution** (prereq Biol 3041 or equiv, Chem 3301, 3302)
016416 1115-1200 MWF, Zoology 102, Gorham, 4 cr

5970 **Directed Studies** (prereq #, △)
116424 ar cr

5990 **Directed Research** (prereq #, △)
306806 ar cr

8004 **Topics in Ecological Genetics** (prereq #)
516427 1515-1700 T, Zoology 108, Merrell, Underhill, 2 cr

R8061 **Social Systems** (prereq 5322, #)
133196 McKinney, 5 cr

R8091 **Hormones and Behavior** (§AnSc 8091; prereq AnSc 5327 or GCB 5134, EBB 3111 or #)
033197 1400-1700 T, AnScVM 111, Phillips, 3 cr

R8162 **Winter Ecology** (prereq #)
833198 1415-1600 TTh, Zoology 10, Schmid, 4 cr (lab ar)

8390 **Graduate Seminar** (prereq #)
516430 ar cr

8391 **Advanced Work in Ecology and Behavioral Biology** (prereq #)
816434 ar cr

8990 **Graduate Research** (prereq #)
416436 ar cr

ECONOMICS (Econ)
Liberal Arts

R1001 **Principles of Macroeconomics** (§1004; prereq 3rd qtr fr or CDS student, knowledge of elem algebra at level of Math 0006)
★LECT 1115-1200 T, WilleyH 125, 175, Heller
033071 –1 REC 0815-0900 MWF, BlegH 135, 4 cr
310208 –2 REC 0915-1000 MWF, BlegH 135, 4 cr
510210 –3 REC 1015-1100 MWF, BlegH 135, 4 cr
110212 –4 REC 1115-1200 MWF, BlegH 135, 4 cr
810214 –5 REC 1215-1300 MWF, BlegH 220, 4 cr
110218 –6 REC 1315-1400 MWF, BlegH 155, 4 cr
★LECT 0815-0930 TTh, 1115-1200 T, WilleyH 175, Domain, Heller
210220 –7 REC 0815-0900 M, BlegH 235, 5 cr
510224 –8 REC 1215-1300 M, BlegH 130, 5 cr
833072 –9 REC 0815-0900 W, BlegH 235, 5 cr
110226 –10 REC 0915-1000 W, Law 15, 5 cr
810228 –11 REC 1215-1300 W, BlegH 130, 5 cr
610232 –12 REC 0815-0900 F, BlegH 120, 5 cr
910236 –13 REC 0915-1000 F, BlegH 155, 5 cr
633073 –14 REC 1015-1100 F, BlegH 250, 5 cr
110243 –15 REC 1115-1200 F, Law 20, 5 cr
610246 –16 REC 1215-1300 F, BlegH 415, 5 cr

R1001H **Honors Course: Principles of Macroeconomics** (§1004, 1014; prereq 3rd qtr fr, knowl of elem algebra at level Math 0006...B average rec)
★LECT 1115-1200 T, WilleyH 175, Heller
511695 –80 REC 1215-1300 MWF, BlegH 245, 5 cr

R1002 **Principles of Microeconomics** (§1015, 1005, 3001, 3002; prereq 3rd qtr freshman, knowl of elem algebra at level Math 0006)
010261 –1 0815-0900 MWF, WilleyH 125, 1115-1200 M, BlegH 425, 4 cr
410264 –2 0815-0900 MWF, WilleyH 125, 1215-1300 M, BlegH 425, 4 cr
910267 –3 0815-0900 MWF, WilleyH 125, 1315-1400 M, RarigC 616, 4 cr
910270 –4 0815-0900 MWF, WilleyH 125, 1015-1100 W, BlegH 250, 4 cr
510272 –5 0815-0900 MWF, WilleyH 125, 1115-1200 W, BlegH 130, 4 cr
010275 –6 0815-0900 MWF, WilleyH 125, 1215-1300 W, BlegH 105, 4 cr
210279 –7 0815-0900 MWF, WilleyH 125, 0915-1000 F, RarigC 616, 4 cr
200335 –8 0815-0900 MWF, WilleyH 125, 1015-1100 F, RarigC 616, 4 cr
210282 –9 0815-0900 MWF, BlegH 215, 4 cr
710285 –10 0915-1000 MWF, BlegH 215, 4 cr
110288 –11 1015-1100 MWF, BlegH 215, 4 cr
110291 –12 1115-1200 MWF, BlegH 215, 4 cr
610294 –13 1215-1300 MWF, BlegH 215, 4 cr
110297 –14 1315-1400 MWF, BlegH 420, 4 cr

R1002H **Honors Course: Principles of Microeconomics** (§1005, 1015; prereq 3rd qtr fr, knowl of elem alegebra at level of Math 0006...B avg rec)
111697 1115-1200 MWF, BlegH 245, 5 cr

R1004 **Principles of Macroeconomics** (§1001; prereq 1 qtr calculus)
718192 1315-1400 MWF, VinH 1, 4 cr

R1005 **Principles of Microeconomics** (§1002; prereq 1 qtr calculus)
018196 1415-1500 MWF, VinH 1, 4 cr

R3002 **Ecoomic Problems of American Economy** (§1001, 1002, 1004, 1005, 1014, 1015; prereq 3001)
118200 1315-1400 MWF, BlegH 440, Smith, 4 cr

R3101 **Microeconomic Theory** (§3105, 5151, no cr SMgt student; prereq 1001, 1002, Math 1111 or 1131 or equiv)
308359 –1 0815-0900 MWF, Law 15, 4 cr
308362 –2 1015-1100 MWF, BlegH 420, 4 cr
408367 –3 1115-1200 MWF, BlegH 420, 4 cr
108372 –4 1215-1300 MWF, BlegH 420, 4 cr
709119 –5 1300-1345 MTWTh, ClaOff B45, Larsen, 4 cr (StP)

R3102 **Macroeconomic Theory** (prereq 1001, 1002, Math 1111 or 1131 or equiv...3101 rec)
610330 –1 0915-1000 MWF, BlegH 130, 4 cr
910334 –2 1215-1300 MWF, BlegH 155, 4 cr
900337 –3 1315-1400 MWF, Law 20, 4 cr

R3103 **Welfare Economics** (prereq 3101 or 3101H)
500339 1115-1200 MWF, AndH 330, Coen, 4 cr

R3105 **Managerial Economics** (§3101, BGS 3001; prereq pre-Mgmt or SMgt student, 1001, 1002, 1 qtr calculus)
★LECT 0945-1100 TTh, AndH 310, Meurer
308619 –1 REC 0815-0900 M, BlegH 115, 4 cr
308622 –2 REC 1315-1400 M, BlegH 205, 4 cr
008624 –3 REC 0815-0900 W, BlegH 205, 4 cr
208628 –4 REC 1215-1300 W, BlegH 205, 4 cr
508635 –5 REC 1315-1400 W, RarigC 616, 4 cr
008638 –6 REC 0815-0900 F, BlegH 205, 4 cr
909068 –7 REC 1215-1300 F, Law 20, 4 cr

R3701 **Money and Banking** (§5721, 5701; prereq 1001, 1002, non maj)
★LECT 0815-0930 TTh, WilleyH 125
105486 –1 REC 0815-0900 W, BlegH 115, 4 cr
905487 –2 REC 0815-0900 F, BlegH 150, 4 cr
505489 –3 REC 0915-1000 F, BlegH 415, 4 cr
905490 –4 REC 1115-1200 F, BlegH 150, 4 cr
505492 –5 REC 1215-1300 F, BlegH 150, 4 cr
305493 –6 REC 1315-1400 F, RarigC 616, 4 cr
005495 –7 REC 1415-1500 F, BlegH 240, 4 cr

HOW MUCH IS TOO MUCH TO DRINK IF YOU'RE DRIVING?

USING THIS CHART MAY HELP YOU KNOW YOUR LIMIT.

First, you should understand that drinking any amount of alcohol can impair your ability to drive.

The generally accepted way to measure intoxication is by your Blood Alcohol Concentration (BAC). In most areas, the legal definition of intoxication is .10 percent BAC and above. However, long before you reach .10 BAC, your judgment and motor skills deteriorate rapidly. In fact, some states include the definition of impaired driving ability, which usually begins at .05 percent.

Important factors to keep in mind are how much you've drunk in a given period of time, how much you weigh and whether you've been eating. Your age, individual metabolism and experience with drinking are also factors. However, it simply is not true that beer or wine is less likely to make you drunk than so-called "hard" drinks. A 6-ounce glass of wine, a 12-ounce can of beer or 1½ ounces of 86-proof whiskey have about the same amount of alcohol and will have about the same effect on you.

How to estimate your Blood Alcohol Concentration. Although the effects of alcohol vary a great deal, the average effects are shown in the accompanying chart prepared by the National Highway Traffic Safety Administration. Find your weight in the left-hand column and then refer to the number of drinks you have had or intend to have over a two-hour period. For example, if you weigh 160 pounds and have had four beers over the first two hours you're drinking, your Blood Alcohol Concentration would be dangerously beyond .05 percent, and your driving ability would be seriously impaired—a dangerous driving situation. Six beers in the same period would give you a BAC of over .10 percent—the level generally accepted as proof of intoxication.

It is easier to get drunk than it is to get sober. The effects of drinking do taper off as the alcohol passes through your body, but the drop is slow. In the example above, the person who had six beers would still have significant traces of alcohol in his blood six hours later.

Even if you're not drinking, other drivers may be. Your best protection is still the seat belts in your car. Accidents do happen, and wearing lap and shoulder belts doubles your chances of coming through one alive.

DRINKS (TWO-HOUR PERIOD)

Weight	1½ ozs. 86° Liquor or 12 ozs. Beer											
100	1	2	3	4	5	6	7	8	9	10	11	12
120	1	2	3	4	5	6	7	8	9	10	11	12
140	1	2	3	4	5	6	7	8	9	10	11	12
160	1	2	3	4	5	6	7	8	9	10	11	12
180	1	2	3	4	5	6	7	8	9	10	11	12
200	1	2	3	4	5	6	7	8	9	10	11	12
220	1	2	3	4	5	6	7	8	9	10	11	12
240	1	2	3	4	5	6	7	8	9	10	11	12

BE CAREFUL DRIVING BAC TO .05% | **DRIVING IMPAIRED .05-.09%** | **DO NOT DRIVE .10% & UP**

Source: NHTSA

The chart shows average responses. Younger people generally become impaired sooner, while older people have more vision problems at night. Tests show a wide range of responses even for people of the same age and weight. For some people, one drink may be too many.

Having a full stomach will postpone somewhat the effects of alcohol, but it will not keep you from becoming drunk.

Black coffee, cold showers, or walking around outdoors will do nothing to make you sober. Of course, someone who claims, "I'll be okay as soon as I get behind the wheel," may be making a fatal misjudgment.

At General Motors, we have developed a device which tests a driver's reflexes and motor responses before it allows the car to start. The Department of Transportation is now testing it in California as a deterrent to repeat offenders. Today, you, the driver, have to know your limits and when you've gone beyond them. If you have any doubts, don't drive.

This advertisement is part of our continuing effort to give customers useful information about their cars and trucks and the company that builds them.

GM
MARK OF EXCELLENCE

Chevrolet • Pontiac
Oldsmobile • Buick
Cadillac • GMC Truck

BOOKSTORE CHECKLIST

COURSE	TEXTBOOK TITLE	AUTHOR
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

SUPPLIES

☐	☐	☐
☐	☐	☐
☐	☐	☐

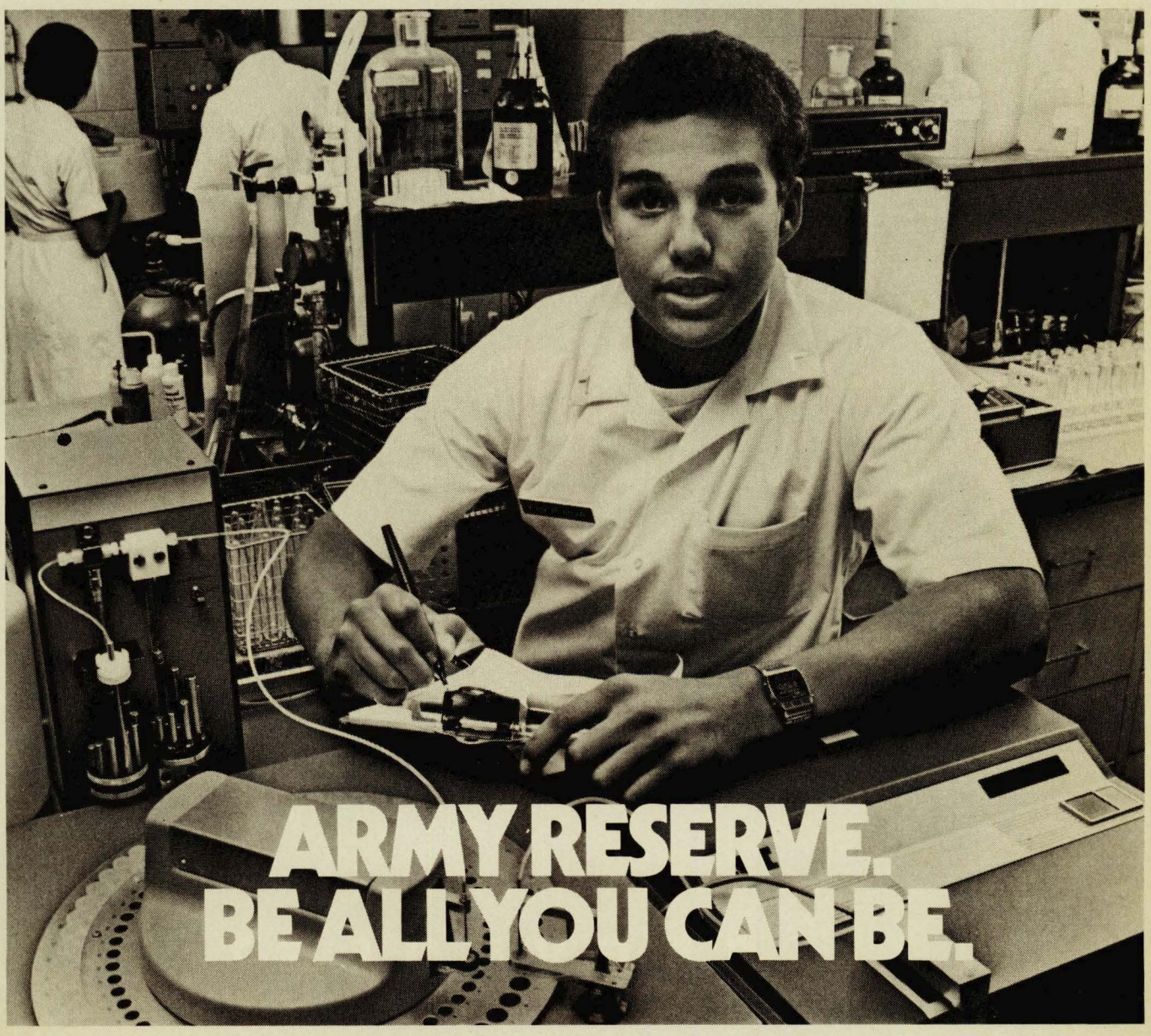
MAKE $12,200 FOR COLLEGE WHILE YOU'RE GOING TO COLLEGE.

Want a part-time job that doesn't hurt your grades? Or campus life? Give your local Army Reserve unit a weekend a month and a couple of summers during college, and they'll give you over $12,200 for college.

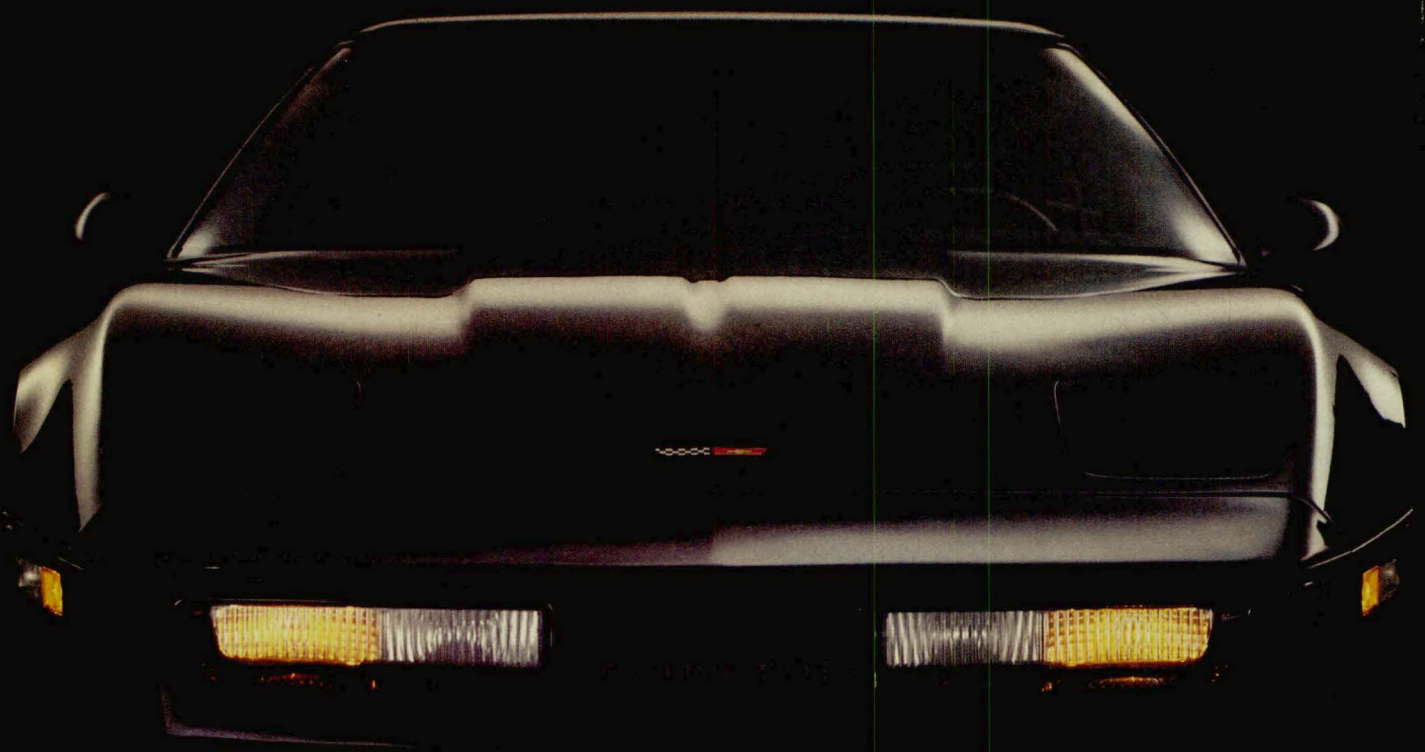
Up to $4,000 in college aid is yours just for joining most units. Another $6,000 for four years of monthly weekends and two-week summer stints. Plus over $2,200 that you'll earn during two summer training periods. All while you're getting the most out of college. And doing the most you can part-time for your country.

You don't have to wait for college to join the Army Reserve. If you're 17 or older and a junior or senior in high school, join us now! There's no better part-time job in town.

Interested? Call your local Army Reserve recruiter. For the number, call toll free 800-421-4422. In California, 800-252-0011. In Alaska or Hawaii, 800-423-2244.



The Rewards of a Higher Education.



GM

CHEVROLET

taking charge.

R3701H Honors Course: Money and Banking (§5721, 5701; prereq 1001, 1002, non maj...3.0 GPA rec)
112817 0945-1100 TTh, BlegH 145, Dalgaard, 5 cr

R3801 Elements of Public Finance (§5821; prereq 1001, 1002, non maj)
418204 0915-1000 MWF, BlegH 115, 4 cr

3970 Directed Studies (prereq #, △, college approval)
118206 ar cr

5161 Microeconomic Theory (no grad cr; prereq 3103, Math 3211, #...1 qtr linear algebra rec)
★LECT 1245-1400 TTh, BlegH 240, Richter, 5 cr
812819 –1 REC 0800-0915 T, BlegH 225

5162 Microeconomic Theory (no grad cr; prereq 5161)
★LECT 0945-1100 TTh, BlegH 150, Jordan, 5 cr
514676 –1 REC 1545-1700 W, Law 35

5165 Macroeconomic Theory (no grad cr; prereq 5164)
★LECT 1415-1530 TTh, BlegH 155, Sims, 5 cr
412824 –1 REC 1700-1800 W, BlegH 250

5262 Applied Econometrics (no grad cr; prereq 5261)
★LECT 1415-1530 MW, BlegH 420, Lee, 5 cr
225722 –1 REC 1415-1530 F, BlegH 420

5271 Bayesian Decision Making (§AgEc 5271; prereq ¶Stat 5122 or equiv, Econ 1002 or equiv)
935850 0945-1100 MW, BlegH 335, Hildreth, 4 cr

R5331 Economic Development (§5301; prereq 3101, 3102 or equiv or #)
137488 1245-1400 TTh, BlegH 145, Pitt, 4 cr

R5401 International Economics (§5431; prereq 1001, 1002, non maj)
214221 1115-1230 TTh, BlegH 145, 4 cr

R5431 International Economics (§5401; prereq 3102, 3103 or equiv or #)
220522 0815-0930 TTh, BlegH 135, 4 cr

5462 International Trade and Payments Theory (no grad cr; prereq 5461)
733078 1115-1230 TTh, BlegH 135, Chipman, 5 cr

R5534 Economic Security (§Ins 3210)
118214 0915-1000 MWF, Law 20, Williams, 4 cr

5562 Wages and Employment (no grad cr; prereq 5561)
138410 1415-1530 TTh, BlegH 125, Feldman, 5 cr

5621 Economics of Urban Problems (prereq 1001, 1002)
735851 1115-1200 MWF, BlegH 240, Mohring, 4 cr

R5631 Industrial Organization and Antitrust Policy (§3601; prereq 3101...3131 rec)
137250 0915-1000 MWF, BlegH 255, Porter, 4 cr

5672 Industrial Organization and Government Regulation (no grad cr; prereq 5671)
818216 1115-1200 MWF, BlegH 260, Porter, 5 cr

R5721H Honors Course: Money and Banking (prereq 3102...B average rec)
538105 1315-1400 MWF, BlegH 435, 5 cr

R5731 Macroeconomic Policy (§3711; prereq 3102)
338106 1115-1230 TTh, Law 35, 4 cr

R5821 Elements of Public Finance (§3801; prereq 3101...3103 rec)
408658 1015-1100 MWF, BlegH 415, 4 cr

R5831 Cost-Benefit Analysis (prereq 3101...3103 rec)
335853 1315-1400 MWF, BlegH 425, 4 cr

5862 Public Finance (no grad cr; prereq 5861)
618220 1545-1700 TTh, BlegH 420, Brownlee, 5 cr

5970 Directed Studies (prereq #, △, CLA approval)
218222 ar cr

8101 Microeconomic Theory (prereq 3101 or 5151, Math 3211...1 qtr linear algebra rec)
★LECT 1245-1400 TTh, BlegH 240, Richter, 4 cr
800783 –1 REC 0800-0915 T, BlegH 225

8102 Microeconomic Theory (prereq 8101)
★LECT 0945-1100 TTh, BlegH 150, Jordan, 4 cr
400785 –1 REC 1545-1700 W, Law 35

8105 Macroeconomic Theory (prereq 8104)
★LECT 1415-1530 TTh, BlegH 155, Sims, 4 cr
600963 –1 REC 1700-1800 W, BlegH 250

8112 Introduction to Mathematical Economics (prereq 8111)
414220 0945-1100 TTh, BlegH 220, 3 cr

8161 Mathematical Economics (prereq 5163 or 8113, Math 3142, 3211, ¶5162...5243 rec)
237076 1115-1230 TTh, BlegH 115, Hurwicz, 3 cr

8184 Advanced Topics in Macroeconomics (prereq #)
137077 0915-1030 TTh, SocSci 1383, Prescott, 3 cr

8192 Workshop in Mathematical Economics (prereq 8191)
318227 1515-1700 M, BlegH 360, Richter, ar cr

8202 Applied Econometrics (prereq 8201)
★LECT 1415-1530 MW, BlegH 420, Lee, 4 cr
125723 –1 REC 1415-1530 F, BlegH 420

8212 Econometrics (prereq 8211)
018229 0915-1030 MW, Law 1, Lee, 3 cr

8292 Workshop in Econometrics (prereq #)
933080 Sims, ar cr

8311 Economic Growth and Development Theory (prereq 8103, 8105 plus a course in this section)
738247 0945-1100 TTh, BlegH 250, Pitt, 3 cr

8312 Technology and Development (prereq 8103, 8105, plus a course in this section)
205499 1415-1530 TTh, Mgmt/Econ 128, Ruttan, 3 cr

8402 International Trade and Payments Theory (prereq 8401)
533079 1115-1230 TTh, BlegH 135, Chipman, 3 cr

8492 Workshop in Trade and Development (prereq 8491)
018232 1530-1700 T, BlegH 260, Pitt, ar cr

8502 Wages and Employment (prereq 8501)
938411 1415-1530 TTh, BlegH 125, Feldman, 3 cr

8602 Industrial Organization and Government Regulation (prereq 8601)
618234 1115-1200 MWF, BlegH 260, Porter, 3 cr

8692 Workshop in Applied Microeconomics (prereq 8691)
918238 1530-1700 W, BlegH 335, ar cr

8702 Monetary Economics (prereq 8701)
918241 1245-1400 TTh, BlegH 135, Sargent, 3 cr

8782 Advanced Topics in Monetary Economics (prereq #)
707998 1115-1230 TTh, BlegH 435, Prescott, 3 cr

8792 Workshop in Macroeconomics (prereq 8791)
518243 1415-1600 F, BlegH 135, ar cr

8802 Public Finance (prereq 8801)
118245 1545-1700 TTh, BlegH 420, Brownlee, 3 cr

8990 Individual Research
818247 ar cr

EDUCATIONAL ADMINISTRATION (EdAd)
Educational Policy And Administration
Education

5101 Public School Administration (prereq sr, 9 cr in education, non educ admin maj) (A-N only)
016996 1615-1800 Th, PeikH 315, Morgan, 3 cr

5128 Workshop: Educational Administration: Issues Confronting Secondary School Principals (S-N optional)
636636 0800-1000 S, PtH 102, Nickerson, 1–6 cr

5180 Seminar: Administration of Special Education (§SpEd 8560, 8561 or PsyS 8560, 8561; prereq 5103 or SpEd 5160 or PsyS 5160 or #) (A-N only)
317000 1615-1800 M, PtH 111, Weatherman, 3 cr

5202 Politics of Education (§8202, SPFE 8202, 5202) (A-N only)
534040 1615-1800 T, ChDev 216, Mazzoni, 3 cr

5275 Two-Year College Administration (§8274; prereq 5274 or VoEd 5274) (A-N only)
334041 1830-2030 M, PeikH 315, Morgan, 3 cr

5280 Introduction to the Economics of Education (§SPFE 5180) (A-N only)
104970 1615-1900 W, EdHAn 64, Lewis, 4 cr

8213 Financial Resource Management (prereq 8212 or #)
834044 1830-2030 T, PeikH 225, Sederberg, 3 cr

8221 Quantitative Models for Program Analysis and Research (prereq 8220)
917008 1615-1800 W, ChDev 105, Hendrix, 3 cr

8225 Educational Policy and the Law
434046 1830-2030 Th, BlegH 260, Hooker, 3 cr

8228 Problems: Higher Education (§HiEd 8228; prereq #)
212498 ar cr

8234 Seminar: Educational Finance (prereq 8210 or #)
717012 1830-2030 Th, PeikH 225, Mueller, 3 cr

8237 Seminar: Theory and Research in Educational Law (prereq 5224 or 5292 or 8225)
134048 1830-2030 M, BlegH 205, Hooker, 1–3 cr

8238 Seminar: Theory and Research (prereq 8218, 8235, educ admin maj or #)
705748 1615-1800 M, BuH 240, Mazzoni, 3 cr

8241 Seminar: Internship
417070 1315-1500 Th, BuH 123, Alkire, Nickerson, 0–9 cr

8242 Seminar: Public School Personnel Programs (prereq 5227 or #)
934049 1830-2030 W, PeikH 225, Alkire, 3 cr

8265 Administering the High School Program
505749 1615-1800 T, PtH 214, Nickerson, 3 cr

8270 Problems: Elementary School Administration (prereq #)
117072 ar cr

8271 Problems: Secondary School Administration (prereq #)
317076 ar cr

8272 Problems: Educational Administration
017078 1–3 cr

8273 Field Study (prereq #)
117080 0–10 cr

8278 Recent Research in Two-Year College Administration (max 3 cr; prereq #)
234050 1615-1800 T, PtH 215, Hendrix, Morgan, 1–3 cr

8340 Policy Systems in Education (prereq 8220)
134051 1830-2030 T, PeikH 355, Ammentorp, 3 cr

ELECTRICAL ENGINEERING (EE)
Institute of Technology

R1000 Introduction to Electrical Engineering (prereq IT lower division or △) (S-N only)
112932 1415-1600 T, SciCB 175, 1 cr

R1400 Circuits Laboratory (prereq 3009 or ¶, IT maj)
812934 –1 LAB 1515-1700 M, ElectE 121, 1 cr
412936 –2 LAB 0815-1000 T, ElectE 121, 1 cr
112938 –3 LAB 1015-1200 T, ElectE 121, 1 cr
212940 –4 LAB 1515-1700 T, ElectE 121, 1 cr
112941 –5 LAB 1515-1700 W, ElectE 121, 1 cr
712943 –6 LAB 0815-1000 Th, ElectE 121, 1 cr
312945 –7 LAB 1315-1500 Th, ElectE 121, 1 cr
012947 –8 LAB 1415-1600 F, ElectE 121, 1 cr

R3003 Circuits and Electronics (no EE majs; prereq IT student, Phys 1291, Math 3221 or ¶)
812951 1215-1300 MTWF, SmithH 100, 4 cr

R3004 **Circuits and Electronics Laboratory** (no EE majs; prereq IT student, 3003 or ¶)
412953 –1 LAB 1315-1500 M, ElectE 118, 1 cr
212954 –2 LAB 1515-1700 M, ElectE 118, 1 cr
912956 –3 LAB 0815-1000 T, ElectE 118, 1 cr
512958 –4 LAB 1015-1200 T, ElectE 118, 1 cr
312959 –5 LAB 1315-1500 T, ElectE 118, 1 cr
512961 –6 LAB 1515-1700 T, ElectE 118, 1 cr
312962 –7 LAB 1515-1700 W, ElectE 118, 1 cr
112963 –8 LAB 0815-1000 Th, ElectE 118, 1 cr
812965 –9 LAB 1015-1200 Th, ElectE 118, 1 cr
412967 –10 LAB 1415-1600 Th, ElectE 118, 1 cr

R3009 **Linear Circuits I** (prereq IT maj, at least C grades in Math 3212 or ¶ or 3221 or ¶, Phys 1281 or ¶) (A-N only)
★LECT 1115-1200 MWThF, OwreH 2230, 4 cr
412984 –1 REC 1315-1400 M, AkerH 313
112986 –2 REC 1415-1500 M, AkerH 313
712988 –3 REC 1515-1600 M, AkerH 225
912990 –4 REC 1615-1700 M, AkerH 225
512992 –5 REC 1415-1500 T, Arch 55
112994 –6 REC 1515-1600 T, Arch 55

R3011 **Signal Analysis** (prereq 3010, upper division elec engr maj)
★LECT 0915-1000 MTWF, Arch 40, 4 cr
210461 –1 REC 1415-1500 W, Arch 20
510465 –2 REC 1515-1600 W, Arch 20
810469 –3 REC 1615-1700 W, Arch 20

R3012 **System Design** (prereq 3011, upper division elec engr maj)
534068 0915-1000 MWF, Botany B6, 0915-1000 Th, NichH 211, 4 cr

R3060 **Semiconductor Devices** (prereq 3010 or ¶, Phys 1291, upper division elec engr or mech engr maj)
★LECT 1315-1400 MTWF, OwreH 2210, 4 cr
734070 –1 REC 1415-1500 T, MechE 202
134082 –2 REC 1515-1600 T, Arch 40
934083 –3 REC 1615-1700 T, Arch 40

R3061 **Analog Electronics** (prereq 3010, 3060, upper division elec engr or mech engr maj)
★LECT 1115-1200 MWThF, PWB 2470, 4 cr
334086 –1 REC 1315-1400 W, Arch 15
834089 –2 REC 1415-1500 W, Arch 15
034091 –3 REC 1515-1600 W, Arch 15
834092 –4 REC 1615-1700 W, Arch 15
634093 –5 REC 1315-1400 Th, AkerH 313
934097 –6 REC 1415-1500 Th, AkerH 313

R3110 **Electric and Magnetic Fields** (prereq upper div elec or mech engr maj, at least C grades in Phys 1291, Math 3212 or 3231) (A-N only)
★LECT 0815-0900 MWThF, NichH 211, 4 cr
534099 –1 REC 1315-1400 M, Arch 15
234100 –2 REC 1415-1500 M, Arch 15
734103 –3 REC 1515-1600 M, Arch 15
534104 –4 REC 1615-1700 M, Arch 15
334105 –5 REC 1315-1400 T, AkerH 215
134106 –6 REC 1415-1500 T, AkerH 215

R3351 **Introduction to Logic Design and Microprocessors** (§5051; prereq soph standing in IT)
★LECT 1015-1100 MWF, SciCB 175, 4 cr
612997 –1 REC 1315-1400 W, AkerH 313
412998 –2 REC 1415-1500 W, AkerH 313
212999 –3 REC 1515-1600 W, AkerH 225
113000 –4 REC 1615-1700 W, AkerH 225
013001 –5 REC 1315-1400 Th, AkerH 215
813002 –6 REC 1415-1500 Th, AkerH 215
♦413004 –1 LAB 0815-1000 T, ElectE 216
♦213005 –2 LAB 0815-1000 T, ElectE 216
♦913007 –3 LAB 1315-1500 T, ElectE 216
♦713008 –4 LAB 1315-1500 T, ElectE 216
♦913010 –5 LAB 1515-1700 T, ElectE 216
♦513012 –6 LAB 1515-1700 T, ElectE 216
♦113014 –7 LAB 1515-1700 W, ElectE 216
♦813016 –8 LAB 1515-1700 W, ElectE 216
♦413018 –9 LAB 0815-1000 Th, ElectE 216
♦613020 –10 LAB 0815-1000 Th, ElectE 216
♦734120 –11 LAB 1315-1500 Th, ElectE 216
♦534121 –12 LAB 1315-1500 Th, ElectE 216
♦334122 –13 LAB 1515-1700 Th, ElectE 216
♦134123 –14 LAB 0815-1000 F, ElectE 216
♦034124 –15 LAB 1415-1600 F, ElectE 216
♦834125 –16 LAB 1415-1600 F, ElectE 216

R3400 **Junior Electrical Engineering Laboratory** (prereq IT stu, 1400, 3060 or ¶3060) (A-N only)
★LECT 1215-1300 W, MechE 212
410569 –1 LAB 0815-1100 Th, ElectE 21, 2 cr
210573 –2 LAB 0815-1100 Th, ElectE 21, 2 cr
510577 –3 LAB 1115-1400 Th, ElectE 21, 2 cr
310581 –4 LAB 1115-1400 Th, ElectE 21, 2 cr
610585 –5 LAB 1415-1700 Th, ElectE 21, 2 cr
910589 –6 LAB 1415-1700 F, ElectE 21, 2 cr

R3401 **Junior Electrical Engineering Laboratory** (prereq 3400, 3011 or ¶, 3061 or ¶) (A-N only)
★LECT 1215-1300 M, PWB 2470
110596 –1 LAB 1415-1700 M, ElectE 21, 2 cr
310600 –2 LAB 1415-1700 M, ElectE 21, 2 cr
610604 –3 LAB 0815-1100 T, ElectE 21, 2 cr
110607 –4 LAB 0815-1100 T, ElectE 21, 2 cr
110610 –5 LAB 1115-1400 T, ElectE 21, 2 cr
510613 –6 LAB 1115-1400 T, ElectE 21, 2 cr
010616 –7 LAB 1415-1700 T, ElectE 21, 2 cr
410619 –8 LAB 1415-1700 T, ElectE 21, 2 cr
410622 –9 LAB 1415-1700 W, ElectE 21, 2 cr
910625 –10 LAB 1415-1700 W, ElectE 21, 2 cr
310628 –11 LAB 1415-1700 Th, ElectE 21, 2 cr
310631 –12 LAB 1415-1700 F, ElectE 21, 2 cr

R3476 **Industrial Assignment I** (prereq regis in intern program)
319877 2 cr

R5002 **Digital Signal Processing** (prereq 3012, IT stu or grad IT maj)
019879 1215-1300 TWThF, PWB 2470, 4 cr

R5055 **Instrumentation and Control Electronics** (prereq 3012 or ¶, 3052 or #, IT stu or grad IT maj)
319880 1115-1200 MTWF, Arch 10, 4 cr

R5056 **Electronic Circuits Laboratory** (prereq 3401, ¶5055, IT stu or grad IT maj)
025956 –1 LAB 1315-1700 T, ElectE 240, 1 cr (alt T)
625958 –2 LAB 0815-1200 Th, ElectE 240, 1 cr (alt Th)
425959 –3 LAB 1315-1700 Th, ElectE 240, 1 cr (alt Th)

R5202 **Analog Communication** (prereq upper division elec engr maj or grad IT, 3012, Stat 3091 or #)
800704 1315-1400 MWF, Arch 50, 3 cr

R5240 **Analog Communications Laboratory** (prereq ¶5202)
137743 1 cr (lab ar)

R5253 **Linear Control Systems** (prereq upper division elec engr maj or grad IT, 3012 or #) (A-N only)
200707 0915-1000 MWF, Arch 5, 3 cr

R5291 **Linear Control Systems Laboratory** (prereq ¶5253)
337750 1 cr (lab ar)

R5310 **Electric Power Systems** (prereq 5300 or #, IT stu or grad IT maj)
100711 LECT 0815-0930 TTh, ElectE 115, 4 cr (lab ar)

R5332 **Energy Conversion Methods** (prereq 3060, 3111, Phys 3501 or ME 3301 or #) (A-N only)
119881 1515-1600 MWF, 1515-1700 T, Arch 60, 4 cr

R5352 **Microprocessor Based Design** (prereq IT student, grad IT maj, 5051, 5052)
★LECT 1415-1500 MWF, SciCB 375, 4 cr
925951 –1 LAB 1115-1300 M, ElectE 15
725935 –2 LAB 1515-1700 M, ElectE 15
325937 –3 LAB 0815-1000 T, ElectE 15
025939 –4 LAB 1315-1500 T, ElectE 15
125941 –5 LAB 1515-1700 T, ElectE 15
825943 –6 LAB 1515-1700 W, ElectE 15
425945 –7 LAB 0815-1000 Th, ElectE 15
725949 –8 LAB 1015-1200 Th, ElectE 15
725952 –9 LAB 1315-1500 Th, ElectE 15
525953 –10 LAB 1515-1700 Th, ElectE 15
615138 –11 LAB 1115-1300 F, ElectE 15
415139 –12 LAB 1515-1700 F, ElectE 15

R5470 **Directed Study** (prereq △)
019882 ar cr

R5478 **Industrial Assignment III** (5478-5479†; prereq 3477, regis in intern program) (A-N only)
819883 2 cr

R5479 **Industrial Assignment IV** (5478-5479†; prereq 5478)
619884 2 cr

R5491H **Honors Project** (prereq 5490H)
111764 1315-1600 Th, CivMinE 213, 3 cr

R5501 **Synthesis of Active and Passive Networks** (prereq 5500)
034107 0945-1100 TTh, MechE 102, 3 cr

R5512 **Digital Filters and Signal Processing** (prereq 5511)
419885 1415-1500 MWF, MechE 102, 3 cr

R5572 **VLSI Circuit Design** (prereq 5571 and/or 5574)
213022 1015-1100 MWF, MechE 102, 202, 3 cr

R5575 **VLSI Design Laboratory** (prereq ¶5572)
913024 3 cr

R5605 **Microwave Circuits** (prereq 3111, 3062 or #)
136866 0815-0930 TTh, LindH 217, 3 cr

R5630 **Contemporary Optics** (prereq 5100 or Phys 3012 or #)
219886 1515-1600 MTWF, MechE 102, 4 cr

R5655 **High-Speed, Compound Semiconductor Devices II** (prereq 5654)
437089 0815-0900 MWF, ElectE 115, 3 cr

R5661 **Semiconductor Properties and Devices** (prereq 5660)
119887 1115-1200 MWF, MechE 102, 3 cr

5667 **Magnetic Properties of Materials and Applications** (prereq 5666)
814229 1115-1230 TTh, ElectE 115, 3 cr

R5700 **Information Theory and Coding** (prereq Stat 3091 or #, IT sr, grad or adult special)
834111 0915-1000 MWF, MechE 108, 3 cr

R5751 **Optimization Techniques** (prereq grad standing or #)
919888 1215-1300 MWF, ElectE 115, 3 cr

R5820 **Electromechanical System Dynamics** (prereq #)
434113 0815-0900 MWF, MinMet 120, 3 cr

R5853 **Digital Computer Systems** (prereq 5852)
036861 1015-1100 MWF, MechE 108, 3 cr

8206 **Digital Image Processing** (prereq #)
138374 1315-1400 MWF, MechE 108, 3 cr

8251 **Advanced Control Topics** (prereq 8250)
936867 1245-1400 TTh, ElectE 115, 3 cr

8290 **Seminar: Control Theory** (prereq #)
119895 1415-1500 Th, MechE 102, ar cr

8340 **Seminar: Electric Power** (prereq #)
019896 Albertson, ar cr

R8355 **Computer Architecture I** (prereq 5853, CSci 5101 or #)
313030 1215-1300 MWF, MechE 108, 3 cr

8460 **Plan B Project** (prereq #)
019901 4 cr

ELEMENTARY EDUCATION (Elem)

Curriculum And Instruction Education

R3100 **Psychological Foundation of Elementary Education** (prereq 5 cr introductory psychology) (A-N only)
★LECT 1115-1200 MWF, BuH 120, Samuels
410717 –1 LAB 1215-1300 W, PtH 214, 4 cr
210721 –2 LAB 1215-1300 W, PtH 215, 4 cr

R3101 **Introduction to Elementary School Teaching** (prereq ¶3100, elementary education maj) (A-N only)
★LECT 1315-1400 MWF, PeikH 26, Ellis
133062 –1 LAB 1215-1300 F, PeikH 46, 3 cr
433057 –2 LAB 1215-1300 F, PeikH 48, 3 cr

R3300 **Children's Literature** (A-N only)
510739 1315-1400 TTh, BuH 120, Odland, 3 cr

R3316 **Teaching English in the Elementary School** (prereq 3100, 3101, Engl 3851) (A-N only)
610747 –1 1015-1100 MWF, PeikH 225, Monson, 3 cr (Blk W) (¶sec 1, 3331)
410751 –2 1015-1100 MWF, PeikH 48, 3 cr (Blk X) (¶sec 2, 3331)

R3331 **Teaching Reading in the Elementary School** (prereq 3100, 3101) (A-N only)
831614 –1 1115-1200 MWF, PeikH 225, Manning, 3 cr (Blk W) (¶sec 1, 3316)
110753 –2 1115-1200 MWF, PeikH 155, Taylor, 3 cr (Blk X) (¶sec 2, 3316)

The Most Sophisticated Training Ground For Nuclear Engineering Isn't On The Ground.



It's on a Navy ship.

The Navy has more than 1,900 reactor-years of nuclear power experience—more than anyone else in America. The Navy has the most sophisticated nuclear equipment in the world. And the Navy operates over half of the nuclear reactors in America.

With a nuclear program like that, you know the Navy also offers the most comprehensive and sophisticated nuclear training.

Every officer in the Nuclear Navy completes a full year of graduate level technical training. Outside the Navy, this kind of program would cost you thousands. In the Navy, you're paid while you learn.

Then, as a nuclear-trained officer, you supervise highly trained personnel in the operation of the most advanced nuclear propulsion plants ever developed. You get a level of technical and management experience unequalled anywhere else.

You get important responsibilities and you get them fast. Because in the Navy, as your knowledge grows, so do your responsibilities.

Today's Nuclear Navy is one of the most challenging and rewarding career choices a man can make. And that choice can pay off while you're still in school. Qualified juniors and seniors earn approximately $1,000/month while they finish school.

As a nuclear-trained officer, after 4 years with regular promotions and pay increases, you can be earning as much as $40,500. That's on top of a full benefits package that includes medical and dental care, and 30 days' vacation earned each year.

As a nuclear-trained officer, you also earn a place among this nation's most qualified and respected professionals. So, if you're majoring in math, engineering or the physical sciences, send in the coupon. Find out more about the most sophisticated training ground for nuclear engineering. Today's Nuclear Navy.

NAVY OPPORTUNITY INFORMATION CENTER
P.O. Box 5000, Clifton, NJ 07015

W225

☐ Please send me more information about becoming an officer in the Nuclear Navy. (ØN)

Name_____
First (Please Print) Last

Address_____ Apt. #_____

City_____ State_____ Zip_____

Age_____ †College/University_____

‡Year in College_____ ♦GPA_____

▲Major/Minor_____

Phone Number_____
(Area Code) Best Time to Call

This is for general recruitment information. You do not have to furnish any of the information requested. Of course, the more we know, the more we can help to determine the kinds of Navy positions for which you qualify.

DC 83/84

Navy Officers Get Responsibility Fast.

R3346 **Teaching Science in the Elementary School** (prereq 3100, 3101, 10 cr in natural science) (A-N only)
310757 –1 1015-1200 MWF, PeikH 385, Humphreys, 3 cr (Blk Y) (¶sec 1, 3361, sec 1, 3391)
110761 –2 1015-1200 MWF, PeikH 315, Johnson, 3 cr (Blk Z) (¶sec 2, 3361, sec 2, 3391)
410765 –3 1015-1200 MWF, PeikH 375, 3 cr (IIIA)

R3361 **Teaching Social Studies in the Elementary School** (prereq 3100, 3101) (A-N only)
710769 –1 0915-1000 MWF, PeikH 385, Ellis, 3 cr (Blk Y) (¶sec 1, 3346, sec 1, 3391)
710772 –2 0915-1000 MWF, PeikH 315, 3 cr (Blk Z) (¶sec 2, 3346, sec 2, 3391)
010776 –3 0915-1000 MWF, PeikH 375, 3 cr (IIIA)

R3376 **Nursery School-Kindergarten Curriculum I** (prereq 3100) (A-N only)
116715 1315-1600 T, PeikH 155, Hansen, 3 cr

R3377 **Nursery School-Kindergarten Curriculum II** (prereq 3376) (A-N only)
131635 1315-1600 Th, PeikH 155, 3 cr

R3378 **Social Learning in Early Childhood Education** (prereq CPsy 3301) (A-N only)
233058 1630-1745 TTh, MRRC 211, Adolf, 3 cr

R3391 **Teaching Mathematics in the Elementary School** (prereq 3100, 3101, Math 1005, 1006) (A-N only)
410782 –1 0815-0900 MWF, PeikH 375, Stochl, 3 cr (Blk Y) (¶sec 1, 3346, sec 1, 3361)
710786 –2 0815-0900 MWF, PeikH 385, Post, 3 cr (Blk Z) (¶sec 2, 3346, sec 2, 3361)
110789 –3 0815-0900 MWF, PeikH 315, Jackson, 3 cr (IIIA)

3600 Student Teaching in the Elementary School, Half Days (prereq 12 cr methods, △) (S-N only)
316719 6 cr

3603 Student Teaching in the Kindergarten (prereq 6 cr elem student tchg, △) (S-N only)
316722 6 cr

3604 Student Teaching in the Nursery School (prereq approval of major adviser, director student teaching) (S-N only)
016724 3-6 cr

3605 Student Teaching in Elementary School: Half Days, Full Days (prereq 15 cr methods, △) (S-N only)
216728 9 cr

3607 Student Teaching in Elementary School: Full Days (prereq 18 cr methods, △) (S-N only)
416730 12 cr

3621 Junior Practicum in Elementary Education (max 6 cr; prereq elementary education maj) (S-N only)
116732 1-2 cr

3630 Student Teaching in Elementary School Literature (prereq 10 cr in elem student tchg, △) (S-N only)
116740 3 cr

3631 Student Teaching in Elementary School English (prereq 10 cr in elem student tchg, △) (S-N only)
016741 3 cr

3633 Student Teaching in Elementary School Reading (prereq 10 cr in elem student tchg, △) (S-N only)
816742 3 cr

3634 Student Teaching in Elementary School Science (prereq 10 cr in elem student tchg, △) (S-N only)
416744 3 cr

3636 Student Teaching in Elementary School Social Studies (prereq 10 cr in elem student tchg, △) (S-N only)
716748 3 cr

3639 Student Teaching in Elementary School Mathematics (prereq 10 cr in elem student tchg, △) (S-N only)
916750 3 cr

3900 Directed Study (max 6 cr; prereq elementary maj, △) (A-N only)
116754 1-3 cr

5100 Elementary School Curriculum (prereq 3101) (A-N only)
133059 Ellis, 3 cr (Rochester)

R5316 **Teaching and Supervision of English in the Elementary Schools** (prereq 3316 or elementary school teaching experience) (A-N only)
705751 1615-1800 Th, PeikH 46, Monson, 3 cr

5320 Practicum: Teaching Second Languages and Cultures in Elementary Schools (prereq 5319 or ¶, #) (S-N only)
638418 Jorstad, 3 cr

5333 Instructional Leadership in Elementary Reading (prereq 5331 or #) (A-N only)
433060 1615-1800 M, PeikH 48, Manning, 3 cr

5334 Reading Difficulties (prereq 5331 or SeEd 5344) (A-N only)
016769 1615-1800 T, PeikH 40, Schreiner, 3 cr

5338 Teaching Reading in the Intermediate Grades (prereq 3331, #) (A-N only)
233061 1615-1800 W, PeikH 31, Taylor, 3 cr

R5348 **Workshop: Outdoor Science Education** (prereq elementary teaching experience) (A-N only)
708276 Johnson, 3 cr (1800-2100 Jan 27, 0830-1630 Jan 28, 29, Mar 5, Woodlake Nature Center, Richfield, MN; 0830-1700 Feb 11, 0830-1300 Feb 12, Long Lake Conservation Center, Aitkin, MN)

R5378 **Contemporary Programs for Young Children** (max 3 cr; prereq MEd student in early childhood education) (A-N only)
416775 1900-2100 M, ChDev 172, Moore, 2 cr

R5602 **Practicum: Improvement of Teaching** (prereq MEd student in elementary education, #) (S-N only)
110834 3 cr

R8916 **Problems: Teaching English** (prereq #)
810861 Dykstra, ar cr

R8931 **Problems: Teaching Reading** (prereq 5331 or SeEd 5344, #)
710867 ar cr

R8961 **Problems: Teaching Social Studies** (prereq 5361 or SeEd 5155 or 8104, #)
410877 ar cr

R8976 **Problems: Teaching Kindergarten** (prereq #)
716779 Hansen, 3 cr

R8991 **Problems: Improvement of Instruction** (prereq #)
110882 ar cr

ENDODONTICS (Endo)
Dentistry

5301 Advanced Clinical Endodontics
416811 Eldeeb, ar cr

5305 Advanced Clinical Endodontics
116813 Eldeeb, ar cr

5311 Endodontic Emergency Problems
316817 Jensen, 1 cr

5315 Endodontic Emergency Problems
116827 Jensen, 1 cr

5321 Treatment Planning
916831 Jensen, 1 cr

5325 Treatment Planning
516833 Jensen, 1 cr

5331 Review of Cases
016836 Jensen, 1 cr

5335 Review of Cases
816840 Jensen, 1 cr

8002 Research in Endodontics
316848 Messer, ar cr

8006 Research in Endodontics
116852 Messer, ar cr

8311 Seminar: Endodontics
416856 Eldeeb, Jensen, others, 2 cr

8315 Seminar: Endodontics
116858 Eldeeb, Jensen, others, 2 cr

8321 Advanced Endodontic Lectures
116861 Jensen, 1 cr

8330 Diagnosis and Treatment Planning
016867 Jensen, ar cr

ENGLISH AS A SECOND LANGUAGE (ESL)
Linguistics
Liberal Arts

R0100 **English as a Second Language** (prereq △)
633770 –1 0915-1000 MTWThF, AmundH 40, 0 cr
433771 –2 0915-1000 MTWThF, AmundH 54, 0 cr
610943 –3 0915-1000 MTWThF, KoltH S140, 0 cr
910947 –4 0915-1000 MTWThF, KoltH S139, 0 cr
104328 –5 1015-1100 MTWThF, KoltH S139, 0 cr
510952 –6 1015-1100 MTWThF, KoltH S140, 0 cr
810956 –7 1115-1200 MTWThF, KoltH S140, 0 cr
610960 –8 1115-1200 MTWThF, KoltH S139, 0 cr
625975 –9 1115-1200 MTWThF, LindH 320, 0 cr

R0110 **English as a Second Language** (prereq △)
304330 –1 0915-1000 MTWThF, LindH 325, 0 cr
211996 –2 1015-1100 MTWThF, LindH 325, 0 cr
310970 –3 1115-1200 MTWThF, LindH 325, 0 cr
610974 –4 1115-1200 MTWThF, AmundH 40, 0 cr
133773 –5 1315-1400 MTWThF, AmundH 40, 0 cr
910981 –6 1315-1400 MTWThF, KoltH S140, 0 cr
110985 –7 1315-1400 MTWThF, KoltH S139, 0 cr
410989 –8 1315-1400 MTWThF, LindH 325, 0 cr
933774 –9 1415-1500 MTWThF, LindH 325, 0 cr
710996 –10 1415-1500 MTWThF, LindH 320, 0 cr
925979 –11 1415-1500 MTWThF, KoltH S140, 0 cr

R0120 **English as a Second Language** (prereq △)
311004 –1 0815-0900 MTWThF, LindH 320, 0 cr
004332 –2 0815-0900 MTWThF, LindH 325, 0 cr
604334 –3 0915-1000 MTWThF, AmundH 154, 0 cr
811010 –4 0915-1000 MTWThF, LindH 320, 0 cr
111014 –5 1015-1100 MTWThF, LindH 320, 0 cr
311018 –6 1015-1100 MTWThF, AmundH 40, 0 cr
911998 –7 1315-1400 MTWThF, LindH 320, 0 cr
612000 –8 1415-1500 MTWThF, KoltH S138, 0 cr
318700 –9 1415-1500 MTWThF, KoltH S139, 0 cr

R0130 **English as a Second Language** (prereq △)
733775 –1 1015-1100 MTWThF, AmundH 54, 0 cr
100370 –2 1115-1200 MTWThF, AmundH 154, 0 cr
533776 –3 1415-1500 MTWThF, KoltH S137, 0 cr

ENGLISH LANGUAGE AND LITERATURE (Engl)
Liberal Arts

R1009 **Introduction to the Study of Literature**
300438 –1 0815-0900 MWF, LindH 302, Taylor, 4 cr
500440 –2 0915-1000 MWF, LindH 302, Stave, 4 cr
100442 –3 1215-1300 MWF, LindH 302, Johnson, 4 cr
712442 –4 0945-1100 TTh, LindH 302, Martin, 4 cr

R1016 **Introduction to American Literature**
400446 0815-0900 MWF, LindH 215, Pankake, 4 cr

R1018 **Introduction to Modern Fiction**
011376 1015-1100 MWF, LindH 215, Westrum, 4 cr

R1019 **Introduction to Modern Literature: Drama**
333469 0815-0930 TTh, LindH 302, Luke, 4 cr

R1020 **Introduction to Literature: Topics: Masterpieces of World Literature**
733470 1315-1400 MWF, BuH 120, L Durham, 4 cr

ARTISTS, DRAFTING ENGINEERING & ARCHITECTS SUPPLIES

ART MATERIALS
INCORPORATED

315 14th Ave. S.E. 331-6864

3018 Lyndale Ave. S.E. 827-5301

Invest in your professional development . . .

Video Primer

- 3 short workshops – 3 consecutive weekends
- basic production skills – black & white camera, color camera, editing
- lecture, demonstration and hands-on experience
- a copy of "Portable Video Handbook"

Video Production I

- 10 weeks of lecture, demonstration and hands-on experience
- how to use cameras, microphones, and video recorders
- techniques of lighting, audio, and editing
- theory and technique

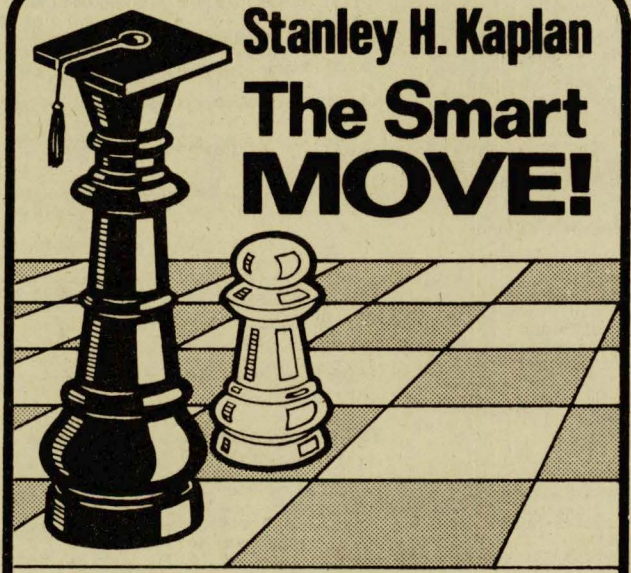
Video Production II

- 10 weeks to plan and prepare a videotape
- expand basic knowledge – extension of Production I
- color cameras, processing and monitoring equipment
- conceptual skills in storyboarding, scripting, budgeting, and pre-production

university community video

425 Ontario Street S.E.
Minneapolis, MN 55414

For more information, call: **376-3333**



Stanley H. Kaplan
The Smart MOVE!

PREPARATION FOR:

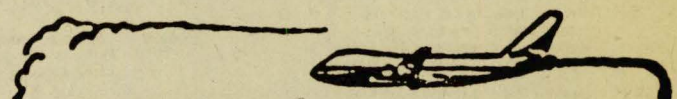
GMAT • LSAT • GRE

Stanley H. KAPLAN EDUCATIONAL CENTER

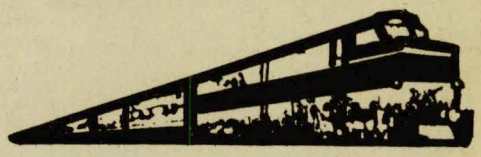
Call Days Evenings & Weekends

378-9191

328 East Hennepin Ave.
Near U of M



WORLD TRAVEL . . .



begins right here . . .
ON CAMPUS!

Lowest cost international airfares; railpasses; passport photos; FREE library/advising services; Stop by our office for all this and more!

ISTC *center*
44 Cottman Union
373-0180

ISTA *gency*
42 Coffman Union
376-9495

"DON'T GO ABROAD WITHOUT US"

R1241 **Introduction to Shakespeare**
104393 1215-1300 MWF, MechE 18, Clayton, 4 cr

R1671 **The Short Story**
805756 1245-1400 TTh, MechE 18, Savage, 4 cr

R3112 **Survey of English Literature**
518260 1015-1100 MWF, LindH 203, Rosendahl, 4 cr

R3119 **The Victorian Age**
205759 0815-0930 TTh, LindH 215, M Durham, 4 cr

R3218 **Medieval Literature in Translation**
436668 1215-1300 MWF, LindH 215, Kendall, 4 cr

R3241 **Shakespeare** (§3243)
504410 –1 0915-1000 MWF, LindH 215, Haley, 4 cr
104412 –2 1215-1300 MWF, LindH 217, Haley, 4 cr
405761 –3 0945-1100 TTh, LindH 229, McNaron, 4 cr
837767 –4 1245-1400 TTh, LindH 217, Solotaroff, 4 cr

R3242 **Shakespeare** (§3243)
411396 –1 1015-1100 MWF, LindH 302, E Anderson, 4 cr
111398 –2 1015-1100 MWF, LindH 217, L Durham, 4 cr
411401 –3 1115-1200 MWF, LindH 217, Unger, 4 cr
911404 –4 1415-1500 MWF, LindH 217, Rosendahl, 4 cr
111408 –5 1115-1230 TTh, LindH 217, Reed, 4 cr

R3243 **Shakespeare: Major and Representative Plays** (§3241, 3242)
205762 1315-1500 MWF, LindH 302, Sugnet, 8 cr

R3356 **Modern British Literature 1914-1939**
818264 1115-1230 TTh, LindH 203, Firchow, 4 cr

R3412 **Survey of American Literature, 1850-1900**
038531 1315-1400 MWF, FordH 155, Przybylowicz, 4 cr

R3718 **Practical Criticism** (prereq 1009 or equiv, two courses in literature or △)
511423 1115-1230 TTh, LindH 303, M Durham, 4 cr

R3852 **Aspects of the English Language**
705765 1115-1200 MWF, LindH 203, MacLeish, 4 cr

R3910 **Topics in English and American Literature: Shakespeare's Sonnets**
333472 1415-1500 MWF, LindH 215, Haley, 4 cr

R3920 **Topics in English and American Literature**
133473 –1 1015-1100 MWF, LindH 229, Sugnet, 4 cr (American Nature Writing)
133490 –2 1545-1700 TTh, LindH 305, Beyer, Wilbers, 4 cr (American Authors in Person)

R3960 **Junior-Senior Seminar** (prereq consent of director of undergrad studies, △)
604415 –1 1415-1530 MW, LindH 315, Przybylowicz, 4 cr (The Rural Novel)
804400 –2 1115-1230 TTh, LindH 315, Hancher, 4 cr (Robert Browning and Elizabeth Barrett Browning)

R3960H **Junior-Senior Seminar: Blake and Byron** (prereq consent of director of undergrad studies, Engl honors advisor, △)
314100 1115-1230 TTh, LindH 340, Luke, 4 cr

3963H **Honors Thesis** (prereq honors candidacy in Engl, consent of Engl honors adviser)
011796 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
918269 1-15 cr

3980 **Directed Instruction** (prereq #, △, college approval)
118271 ar cr

R5100 **Advanced Nonfiction Writing: Computers and Writing** (prereq △)
636670 1245-1400 TTh, LindH 216, Bridwell, 4 cr

R5102 **Advanced Fiction Writing** (prereq # or △)
033474 1415-1700 Th, LindH 216, Hampl, 4 cr

R5105 **Advanced Poetry Writing** (prereq # or △)
833475 1415-1700 T, LindH 216, Browne, 4 cr

R5151 **18th Century English Novel**
633476 1245-1400 TTh, LindH 305, Hirsch, 4 cr

R5174 **Modern Drama, 1880-1920**
433477 1415-1530 TTh, LindH 305, Hurrell, 4 cr

R5212 **Readings in Old English Prose and Verse** (prereq 5211)
312444 0915-1000 MWF, LindH 217, Kendall, 4 cr

R5221 **Chaucer I: The Canterbury Tales**
233478 1315-1430 MWF, LindH 229, MacLeish, 5 cr

R5261 **Milton**
505766 1115-1200 MWF, LindH 305, O'Brien, 4 cr

R5364 **James Joyce**
133479 0815-0900 MWF, LindH 305, Anderson, 4 cr

R5365 **T. S. Eliot**
433480 0945-1100 TTh, LindH 217, Wright, 4 cr

R5431 **American Poetry**
233481 1315-1400 MWF, LindH 305, Geffen, 4 cr

R5452 **American Novel**
133482 0815-0930 TTh, LindH 305, Bales, 4 cr

R5610 **20th Century Writers: Recent American Novel**
305770 0945-1100 TTh, LindH 305, Solotaroff, 4 cr

R5620 **British and American Women Writers: American Women Poets: Emily Dickinson, H.D., Adrienne Rich** (max 16 cr)
933483 1415-1530 TTh, LindH 217, McNaron, 4 cr

R5671 **Theory of the Novel**
112445 1215-1300 MWF, LindH 229, Przybylowicz, 4 cr

R5711 **Classics of Literary Criticism**
733484 1315-1400 MWF, LindH 203, Clayton, 4 cr

R5860 **Studies in the English Language: Old Irish II** (prereq 5851 or #)
533485 1115-1200 MWF, LindH 303, Ward, 4 cr

5970 **Directed Study in Writing** (prereq #, △, CLA approval)
333486 1-4 cr

R8050 **Studies in Special Subjects** (prereq #)
705779 1415-1615 T, LindH 315, Brown, 4 cr

R8230 **Renaissance Studies: Studies in Spenser**
133487 1415-1615 W, LindH 340, O'Brien, 4 cr

R8310 **Seminar: Studies in the English Romantic Movement: Wordsworth's Prelude**
033488 1415-1615 M, LindH 340, Fruman, 4 cr

R8330 **Victorian Studies: Space and Time in the Victorian Novel**
833489 1415-1615 T, LindH 340, Madden, 4 cr

R8410 **Studies in Writing: Writing for Special Purposes and Audiences: Readers' Response to 'Ordinary' Texts** (prereq #)
436671 1415-1615 W, LindH 303, Ross, 4 cr

8430 **Writing of Poetry** (prereq #)
138088 1415-1615 Th, LindH 340, Browne, 4 cr

R8610 **Studies in 20th-Century British and American Literature: Ezra Pound**
105785 1415-1615 M, LindH 216, Furia, 4 cr

R8650 **Studies in Poetry: Changes in English Poetic Styles, 1560-1960**
005786 1415-1615 W, LindH 216, Wright, 4 cr

8970 **Independent Readings** (prereq #)
818281 1-15 cr

ENTOMOLOGY (Ent)
Agriculture

3100 **Entomological Techniques** (prereq 3175 or equiv or #)
516024 ar cr

5000 **Professional Experience Program** (prereq #) (S-N only)
205051 4 cr

5001 **Basic Entomology** (prereq #)
116026 ar cr

5027 **Insect Physiology** (prereq #...BioC 5001, 5002 or MdBc 5100 rec)
016030 1300-1345 MTWThF, HodsonH 542, Brooks-Wallace, Jones, 5 cr

R5050 **Forest Entomology** (prereq any two courses among the forestry, zoological, botanical, biol and/or agri scieces)
★LECT 0900-0945 MWF, HodsonH 495, Kulman
211481 –1 LAB 1300-1445 Th, HodsonH 480, 4 cr
711484 –2 LAB 1300-1445 Th, HodsonH 485, 4 cr
111487 –3 LAB 1500-1645 Th, HodsonH 480, 4 cr
111490 –4 LAB 1500-1645 Th, HodsonH 485, 4 cr

5150 **Lepidopterology** (prereq one course in entomology or #...one course each in ecology and genetics rec)
133053 1500-1545 TTh, HodsonH 542, Miller, 2 cr

5200 **Apiculture** (prereq 9 cr entomology or biology)
★LECT 0800-0845 MWF, HodsonH 485, Furgala, 4 cr
025603 –1 LAB 0900-1045 F, HodsonH 485

5210 **Integrated Pest Management** (prereq 1005 or #, ¶5212)
416033 1100-1145 MTWThF, HodsonH 490, Radcliffe, 5 cr

R5212 **Entomophagous Insects** (prereq 1005 or 3175 or 5050)
033054 0800-1045 MW, HodsonH 480, Cook, 2 cr

5215 **Insects in Relation to Plant Diseases** (§PlPa 5215; prereq 5 cr plant pathology, entomology or equiv or #)
435763 0800-0945 TTh, HodsonH 490, Ragsdale, Wilcoxson, 4 cr (lab ar)

5280 **Livestock Entomology** (prereq 3175 or #...AnSc 1100 or equiv, Ent 5275 helpful but not required)
612398 0800-0930 TTh, HodsonH 480, Moon, 3 cr

5425 **Special Lectures in Entomology**
716040 ar cr

5901 **Special Problems in Entomology** (prereq #)
016044 ar cr

8200 **Seminar** (prereq #)
616046 ar cr

8210 **Current Topics: Forest Entomology**
205065 1500-1645 M, HodsonH 490, Kulman, 1-3 cr

8250 **Topics in Apiculture** (prereq 3175, 5200 or #)
905070 1200-1345 W, HodsonH 485, Furgala, 1-3 cr

8323 **Topics in Insect Physiology** (prereq #)
216048 Jones, ar cr

8400 **Insecticides and Their Action** (prereq 15 cr including 1005 or #, inorganic, organic chemistry)
833055 1100-1145 MWF, HodsonH 485, Cutkomp, 3 cr

8405 **Insecticides Laboratory** (prereq 8400 or ¶)
633056 0800-1045 MW, HodsonH 440, Cutkomp, 2 cr

8500 **Research in Entomology** (prereq #)
416050 ar cr

FAMILY PLANNING ADMINISTRATION (FPAd)
Medical School

5243 **Topics in Family Planning** (prereq #)
819303 Foreman, 3-12 cr

5248 **Developments in Contraceptive Technology** (prereq #)
619304 Foreman, 3 cr

FAMILY PRACTICE AND COMMUNITY HEALTH (FPCH)
Medical School

5500 **Preceptorship in Clinical Practice** (prereq regis med)
920913 McConnell, 9 cr

5501 **Rural Physician Associate Program** (prereq completion of Phase A and B U/MN Med School curriculum)
020918 Verby, 0-18 cr

5502 Physician as Counselor in Marriage and Family Problems (prereq regis 5501)
820922 Schaffer, 2 cr

5503 RPAP Research Paper (prereq ¶5501 or Med 5592) (S-N only)
320933 Verby, 1 cr

5514 Introduction to Family Practice (prereq previous clinical rotations)
105091 Seim, 4.5 cr

5515 Preceptorship in Gerontology Community Health (prereq regis med)
220939 Connolly, 9 cr

5516 Research in Human Sexuality (prereq #)
420941 Satterfield, ar cr

5520 Rural Health Care Model-Onamia, MN (prereq regis med)
120943 McConnell, 9 cr

5525 Management of Patients with Cardiovascular Problems by the Family Physician (prereq regis med)
220956 Nesvacil, Sharkey, 9 cr

5530 Clinical Problems in Family Practice (prereq regis med)
920961 Daly, 9 cr

5535 Community Health in Family Practice (prereq regis med or #)
820967 Thorson, 9 cr

5560 Alcohol and Drug Addiction Treatment Center (prereq regis med)
120974 Nesvacil, Briggs, 4.5 cr

5562 Interviewing, Physical Examination and Patient Counseling (prereq regis med)
120979 Verby, others, ar cr

5563 Clinical Neuropsychopharmacology (prereq FPCH resident or #)
920992 1200-1330 W, PWB 6246, Abuzzahab, 2 cr

5570 Practicum in Counseling Techniques (prereq compl of 1st yr residency)
121016 1 cr

5582 Practice Management Workshop (prereq 2nd or 3rd yr of residency)
414086 0800-1700 ThF, PWB 6248, D Nelson, 2 cr

5585 Sexual Problems in Clinical Practice (prereq med student, #)
521028 Satterfield, ar cr

5590 Emergency Medicine for Family Physicians
925612 Lilja, 9 cr

5595 Research in Family Practice: Independent Study
112641 Holloway, 4 cr

5599 Undergraduate Independent Study
121039 Ciriacy, ar cr

5903 Community Health Rotation (prereq #)
721237 Ciriacy, ar cr

5951 Research in Human Sexuality (prereq #)
005089 ar cr

5955 Directed Study (prereq #)
321239 Satterfield, 1-15 cr

5956 Advanced Topics in Human Sexuality (prereq #, college level introductory course in human sexuality)
105088 Satterfield, others, 3 cr

5960 Basic Research Methods Seminar and Practicum
305090 –1 Holloway, others, 4 cr
214087 –2 4 cr

5962 Special Topics in Psychological Medicine
017100 –1 Ciriacy, ar cr
517996 –2 Ciriacy, ar cr

5963 Introduction to Preventive Medicine (prereq 1st yr of family practice residency)
037640 –1 Krogh, ar cr
837641 –2 Krogh, ar cr

5965 Seminar on Psychological Medicine: Principles of Human Development Through Life Cycles (prereq 1st yr family practice residency)
217104 –1 Houge, Cole, ar cr
637639 –2 Houge, Cole, ar cr

5967 Introduction to Health Data Systems (prereq completion of first yr residency in family practice and community health or #)
133028 1300-1500 T, O'Leary, ar cr

5969 Independent Study
637642 Nelson, ar cr

8201 Clinical Family Medicine
321242 Ciriacy, ar cr

8204 Seminar: Quantitative Strategies in Health Care Practice and Research
821052 1530-1700 W, Weckwerth, 2 cr

8205 Medical Records Systems
221248 Asp, 2 cr

8207 Seminar: Common Diseases Seen in Family Practice
121249 Connolly, 1 cr

8208 Family Medicine Conferences
221251 Connolly, 1 cr

8209 Family Medicine X-Ray Conference
121252 Ciriacy, 1 cr

8210 Family Medicine Grand Rounds
921253 1630-1800 W, McConnell, 0-1 cr (2nd W per month, Campus Club)

8212 Clincial Psychiatry Rounds (prereq 1st yr resident in family practice)
721254 Kelly, 1 cr

8225 Medical Sociology
521255 Kelly, 3 cr

8226 Seminar: Medical Sociology
321256 Kelly, 2 cr

8228 Seminar: Interdisciplinary Health (prereq #)
121257 Kelly, 2 cr

8240 Community Resources
021258 Kelly, 2 cr

8243 Family Medicine in Rural Area
821259 Hunt, ar cr

8245 Analysis of Instruction, Educational Evaluation
121260 Houge, ar cr

8250 Quantitative Strategies in Health Care Practice and Research II (prereq 8204)
021244 Weckwerth, 2 cr

8253 Research Problems
621246 O'Leary, ar cr

FAMILY SOCIAL SCIENCE (FSoS)
Home Economics

R1001 Dynamics of Family Relationships (§1002)
411608 –1 1300-1415 TTh, McNH 197, Thibault, 3 cr
211612 –2 0845-1000 MW, VinH 1, Turnblom, 3 cr (Mpls)
511616 –3 1015-1130 TTh, BlegH 415, Thibault, 3 cr (Mpls)

R1002 Dynamics of Dating, Courtship, Marriage (§1001; prereq upper division, married or engaged student)
233173 1500-1700 TTh, McNH 197, Olson, 3 cr

R1025 Parenthood
204983 1245-1400 TTh, BlegH 125, Kwiecien, 4 cr (Mpls)

R1401 Household Equipment (prereq soph or #...GC 1163 or Phys 1001 or 1041 rec)
717723 1300-1430 TTh, McNH 180, Yust, 4 cr (lab ar)

R3001 Communications Skills, Interviewing Techniques: An Introduction (prereq 1001)
704986 1400-1630 T, McNH 69, Berry, 3 cr

R3240 Special Topics (max 9 cr; prereq soph or above)
317725 3 cr

R3260 Home Management Principles (prereq AgEc 1030)
707239 1000-1045 MWF, McNH 198, 3 cr

R5001 Human Sexual Behavior (prereq 15 cr psychology or sociology)
507243 1000-1115 TTh, McNH 33, Neubeck, 4 cr

R5200 Family Relationships (prereq Psy 1001, Soc 1001)
017727 1400-1530 MW, McNH 69, Hey, 5 cr

R5210 Family in World Perspective (prereq 5200, Anth 1102 or #)
133174 1000-1130 MW, ClaOff B25, Rosenblatt, 5 cr

R5219 Problems in Family Financial Management (prereq 3260 or 5260, 3001 or #)
304988 1500-1700 T, McNH 198, Gage, 3-4 cr

5230 Independent Study in Family Social Science (max 16 cr; prereq #)
617729 1-5 cr

5231 Internship: Planning (prereq #)
817731 Yust, 1 cr

5232 Internship: Work Experience (prereq 5231)
217734 Yust, 5 cr

5233 Internship: Evaluation (prereq 5232)
917736 Yust, 1 cr

R5240 Special Topics in Family Social Science (max 16 cr)
133179 –1 1500-1700 Th, McNH 198, Gage, Zimmerman, 3 cr (Mpls) (Public Policy and Consumer)
533180 –2 1715-1930 Th, MoosT 2530, Terrell, Maddock, others, 3 cr (Mpls)

R5249 Field Work: Directed Community Work Experience (max 15 cr; prereq 5200, #)
911645 –1 0900-1030 T, McNH 198, Berry, 3-5 cr
311648 –2 1530-1700 W, McNH 197, Berry, 3-5 cr

R5301 The Family and Energy Issues (prereq 5 cr in FSoS or #)
517738 1000-1130 TTh, McNH 180, Yust, 3 cr

R8203 Family Stress, Coping, Adaptation (§SW 8203, PubH 5620)
933175 1300-1600 Th, McNH 69, Patterson, 3 cr

R8214 Marriage and Family Counseling I (§Psy 8214; prereq #) (A-N only)
908082 1000-1215 T, McNH 69, Boss, 3 cr

R8217 Family-of-Origin Seminar I (prereq family counseling intern, #) (A-N only)
733176 1230-1345 T, Berry, Boss, 2 cr

8222 Internship in Teaching College Level Family Courses II (prereq 12 cr in FSoS, #)
533177 1400-1530 W, St. Paul, Neubeck, 3-6 cr

8230 Directed Study (prereq #)
317742 1-5 cr

R8251 Problems: Family Social Science (prereq #)
417750 1-5 cr

8252 Problems: Family Social Science (prereq #)
017744 4 cr

8262 Process Seminar for Family II (prereq #)
617746 1600-1800 M, Berry 103, Hey, 2 cr

8266 Family Research Methology I (prereq 8255 or #) (A-N only)
015086 0915-1100 MF, McNH 197, McCubbin, 4 cr

8270 Practicum: Family Research (prereq #)
217748 1-5 cr

8552 Marriage and Family Counseling Internship II (prereq 8214, 8215, 8216, #)
217751 1500-1630 M, Berry 103, ar cr

8666 Dissertation Research (max 15 cr; prereq #) (S-N only)
333178 1-5 cr

FINANCE (BFin)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for BFin courses.

R3000 Finance Fundamentals (§MBA 8040; prereq Acct 3001 or Acct 1051) (A-N only)
★LECT 1045-1145 TThF, AndH 210, Rosko
808009 –1 LAB 1215-1300 Th, BlegH 120, 4 cr
808012 –2 LAB 1315-1400 Th, BlegH 120, 4 cr
108016 –3 LAB 0815-0900 F, BlegH 225, 4 cr
708018 –4 LAB 0915-1000 F, BlegH 225, 4 cr
908020 –5 LAB 1215-1300 F, BlegH 105, 4 cr
508022 –6 LAB 1315-1400 F, BlegH 240, 4 cr
★LECT 1200-1300 TThF, AndH 210, Rosko
608030 –7 LAB 1315-1400 Th, BlegH 110, 4 cr
208032 –8 LAB 1415-1500 Th, BlegH 110, 4 cr
108024 –9 LAB 0915-1000 F, BlegH 120, 4 cr
008025 –10 LAB 1015-1100 F, BlegH 225, 4 cr
608027 –11 LAB 1315-1400 F, BlegH 415, 4 cr
208029 –12 LAB 1415-1500 F, BlegH 415, 4 cr

★LECT 1315-1415 TThF, AndH 210, Rosko
108038 –13 LAB 1430-1515 Th, BlegH 220, 4 cr
108041 –14 LAB 1515-1600 Th, BlegH 230, 4 cr
908034 –15 LAB 1015-1100 F, BlegH 155, 4 cr
115281 –16 LAB 1115-1200 F, BlegH 225, 4 cr
815283 –17 LAB 1215-1300 F, BlegH 130, 4 cr
415285 –18 LAB 1430-1515 F, BlegH 225, 4 cr

R3100 **Financial Management** (prereq 3000) (A–N only)
108050 1415-1530 MW, Law 35, Cirillo, 4 cr

R3300 **Investment Management and Financial Markets** (§8300; prereq 3000)
731606 –1 0815-0930 MW, BlegH 120, Reik, 4 cr
805787 –2 1415-1530 TTh, BlegH 120, Reik, 4 cr

R8100 **Cases in Fincancial Management** (prereq MBA 8040, grad mgmt/IR student or grad SMgt approval) (A–N only)
137023 0815-0930 MW, BlegH 335, Schreiner, 4 cr

R8300 **Investment Analysis and Management** (prereq 3000 or MBA 8040, grad mgmt/IR student or grad SMgt approval)
434368 1415-1530 MW, BlegH 255, Resnick, 4 cr

R8400 **Bank Management** (prereq 3000 or MBA 8040, grad mgmt/IR student or grad SMgt approval)
834366 1415-1700 T, BlegH 330, Boyd, 4 cr

R8701 **Seminar in Working Capital Management** (prereq 8150, grad mgmt/IR student, #, grad SMgt approval) (A–N only)
037024 1415-1700 M, BlegH 425, Gahlon, 4 cr

8990 **Readings and Research in Finance** (prereq consent of advisor, #, grad SMgt approval)
234369 –1 1415-1700 F, BlegH 360, Ulman, ar cr (PhD seminar II)
634370 –2 1415-1700 T, BlegH 115, Dothan, ar cr (PhD seminar V)

FINNISH (Fin)
Scandinavian Languages
Liberal Arts

R1102 **Beginning Finnish** (prereq 1101)
419210 1415-1500 MTWThF, FolH 209, 5 cr

1105 **Intermediate Finnish** (prereq 1104)
119212 1015-1100 MTWTh, FolH 52, Vahamaki, 4 cr

3670 **Readings: Finnish Texts** (max 28 cr; prereq 3101)
919213 1115-1230 TTh, FolH 52, Vahamaki, 4 cr

FISHERIES AND WILDLIFE (FW)
Forestry

5000 **Professional Experience Program** (prereq #) (S–N only)
504908 4 cr

5103 **Basic Fishery Biology** (prereq #)
116052 ar cr

5106 **Basic Wildlife Biology** (prereq #)
716054 ar cr

5278 **Special Lectures in Wildlife**
316056 ar cr

5279 **Special Lectures in Fisheries**
016058 ar cr

5281 **Senior Seminar: Wildlife**
816059 1500-1645 Th, HodsonH 490, 1 cr

5393 **Special Problems in Fishery Biology** (prereq #)
016061 ar cr

5398 **Special Problems in Wildlife Biology** (prereq #)
616063 ar cr

5454 **Fishery Ecology of Polluted Waters** (prereq 5451 or #)
216065 0800-0945 MW, 0900-0945 F, HodsonH 490, Adelman, 5 cr

R5455 **Aquaculture** (prereq Biol 1011, 1103, 1106 or equiv, Chem 1001-1002 or 1004-1005 or equiv or #)
312394 1200-1245 MTWTh, HodsonH 490, Tave, 4 cr

R5562 **Wildlife Ecology, Management II: Populations** (prereq 5561 or #)
★LECT 1000-1045 MWF, HodsonH 490, Cooper
911709 –1 LAB 1400-1545 M, HodsonH 480, 4 cr
911712 –2 LAB 1400-1545 T, HodsonH 480, 4 cr

5563 **Wildlife Ecology, Management III: Habitats** (prereq wildlife sr or #)
716068 1300-1445 MW, HodsonH 490, Jordan, 3 cr (Field trips ar)

8200 **Seminar** (prereq #)
116066 ar cr

8364 **Research in Fishery Biology** (prereq #)
916070 ar cr

8377 **Research in Wildlife Biology** (prereq #)
516072 ar cr

8448 **Fishery Science** (prereq 5451, Stat 5021, 5022, AgEn 1030 or #)
133093 0900-1045 TTh, HodsonH 485, Spangler, 4 cr

8576 **Wildlife Management: Large Mammals** (prereq #)
733095 1000-1145 TTh, 1300-1545 F, HodsonH 480, Jordan, 4 cr

FOOD SCIENCE AND NUTRITION (FScN)
Agriculture & Home Econ

1102 **Technology of Food Processing** (prereq high school chemistry, biology)
116074 0900-1045 TTh, ABLMS 125, Labuza, 4 cr

R1212 **Scientific Principles of Food Preparation** (prereq Chem 1002 or 1005)
★LECT 1200-1245 MWF, McNH 198, Vickers, 5 cr
125695 –1 LAB 1300-1445 MW, McNH 126
107366 –2 LAB 1300-1445 TTh, McNH 146

R1500 **Meat Science** (§AnSc 1500; prereq Biol 1009)
★LECT 1200-1245 MTWTh, FScN 15, Allen
211738 –1 LAB 1300-1445 T, ABLMS 26, 4 cr
211741 –2 LAB 1500-1645 W, ABLMS 26, 4 cr
911743 –3 LAB 1300-1445 Th, ABLMS 26, 4 cr
111747 –4 LAB 1500-1645 Th, ABLMS 26, 4 cr

R3272 **Introduction to Food Decision Making** (prereq 3600)
814540 1300-1345 MW, McNH 69, Asp, 2 cr

R3403 **Experimental Foods** (prereq 3110)
★LECT 1400-1445 MWF, McNH 33, Warthesen
911757 –1 LAB 1000-1245 M, McNH 126, 4 cr
511759 –2 LAB 0900-1145 W, McNH 126, 4 cr

R3472 **Principles of Food Purchasing** (prereq 5 cr in food sci, nutrition)
816076 1200-1245 MTWTh, McNH 33, Asp, 4 cr

R3600 **Principles of Nutrition** (prereq Biol 1009, Chem 1004 or equiv)
★LECT 1300-1345 MWF, ABLMS 125, Swan
509753 –1 REC 1400-1445 M, ABLMS 222, 4 cr
109755 –2 REC 1400-1445 M, HckrH 312, 4 cr
309236 –3 REC 1500-1545 M, HckrH 312, 4 cr

3622 **Nutrition in the Life Cycle** (prereq 3272, 3472, 3600, physiology or human biology or #)
936688 1500-1645 MW, FScN 15, Swan, 4 cr

3623 **Nutrition in the Life Cycle** (prereq 3272, 3472, 3600, physiology or human biol, regis coord undergrad prog in dietetics)
736689 1500-1645 MW, FScN 15, Swan, 4 cr

3702 **Principles of Foodservice Organization and Management** (prereq sr, Mgmt 3001, regis in coordinated undergrad program in dietetics)
216082 1500-1645 T, 1400-1545 F, DinC 152, Mullan, 4 cr

3703 **Field Experience in Foodservice Management** (prereq sr, Mgmt 3001, ¶3702, regis in coordinated undergrad program in dietetics)
116083 1300-1345 F, DinC 152, 3 cr

R3730 **Quantity Food Production Management** (prereq 1212 or 3403, 3472)
★LECT 1200-1245 TTh, DinC 152, Mullan
411771 –1 LAB 0800-1145 TTh, DinC 152, 5 cr

R5100 **General Seminar** (prereq sr or #) (S–N only)
011782 –1 1200-1245 T, ABLMS 146, 1 cr
411785 –2 1200-1245 W, ABLMS 222, 1 cr
711789 –3 1200-1245 Th, HckrH 210, 1 cr
911791 –4 1200-1245 F, ABLMS 222, 1 cr

5111 **Independent Study in Food Science and Nutrition** (prereq △)
316090 1–5 cr

R5120 **Food Microbiology** (prereq MicB 3103)
★LECT 1300-1345 MWF, FScN 15, Busta
011801 –1 LAB 1100-1245 MW, 1100-1145 F, FScN 218, 5 cr (1 hr ar)
211805 –2 LAB 1400-1545 MW, 1400-1445 F, FScN 218, 5 cr (1 hr ar)

5136 **Food Process Engineering II** (prereq 5135)
★LECT 1000-1045 MW, FScN 15, Bakshi
809757 –1 LAB 1400-1645 T, FScN 15, 150, 4 cr
038447 –2 LAB 1400-1645 Th, FScN 15, 150, 4 cr

R5321 **Independent Study in Food Microbiology** (prereq sr, △)
016092 1200-1245 T, FScN 218, McKay, others, 1–5 cr (1st meeting)

R5403 **Experimental Study of Foods** (prereq 5360 or #)
★LECT 1100-1145 MW, McNH 146, Davis, 5 cr
025696 –1 LAB 1200-1445 MW, McNH 134

R5406 **Current Literature in Foods** (max 6 cr; prereq 5413, △)
216096 1100-1145 M, ABLMS 222, Gordon, 2–4 cr (1st meeting)

5413 **Structural-Functional Relations in Food Systems** (prereq 3110)
616094 1500-1545 MWF, ABLMS 125, Gordon, 3 cr

5512 **Meat and Protein Technology** (§AnSc 5512; prereq 1500 or AnSc 1500 or #, BioC 1302 or Biol 5001)
★LECT 0800-1045 T, FScN 15, Addis, 4 cr
825697 –1 LAB 0800-1045 Th, ABLMS 135

R5522 **Technology of Fluid and Concentrated Milk Products** (prereq 3110, 5135, 5120 or #)
★LECT 0800-0845 MWF, FScN 15, Smith, 4 cr
329017 –1 LAB 1300-1545 Th, FScN 157

5622 **Human Nutrition** (prereq 3600, Biol 5001, Phsl 3051 or #)
916098 1300-1450 TTh, ABLMS 125, Clarke, 5 cr

R5642 **Field Experience in Community Nutrition** (prereq course in human nutrition, #)
909751 –1 1300-1445 Th, ABLMS 222, Hanson, 3–18 cr (CUP only)
709766 –2 Gormican, 3–18 cr

R5664 **Field Experience in Clinical Nutrition** (prereq course in human nutrition, #)
711825 –1 1100-1230 Th, ABLMS 222, Hanson, 3–18 cr (CUP only)
011829 –2 Gormican, 3–18 cr

5666 **Applied Clinical Nutrition II** (prereq 5665, 5622 or ¶ or demonstrated equiv)
334329 1600-1745 Th, ABLMS 125, Gormican, 2 cr

R5676 **Clinical Nutrition Laboratory II** (prereq 5666 or ¶) (S–N only)
734330 –1 1600-1645 M, ABLMS 222, Gormican, 1 cr
534331 –2 1600-1645 W, ABLMS 222, Gormican, 1 cr

R8101 **Research Seminar** (prereq #) (S–N only)
916103 Swan, 1 cr

8205 **General Seminar** (prereq #) (S–N only)
516105 1600-1645 M, FScN 23, Csallany, 1 cr

R8312 **Reaction Kinetics of Food Deterioration** (prereq Chem 5520 or #)
334332 1400-1645 Th, FScN 23, Labuza, 3 cr

R8322 **Microbiology and Engineering of Food Sterilization Processes** (prereq 5120, 5122, Stat 3081 or 5021)
★LECT 0815-0900 MWF, AkerH 211, Pflug, 5 cr (Mpls)
034334 –1 LAB 1315-1600 F, ShepLab 506, (Mpls)

R8323 **Microbial Starter Cultures** (prereq 5123, BioC 5001 or #)
834335 0900-0945 MWF, ClaOff B30, McKay, 3 cr

R8401 **Independent Study: Food Science** (prereq △)
316106 1100-1400 T, FScN 218, McKay, 1-5 cr

8403 **Advanced Topics in Food Science** (prereq #)
116107 4 cr

R8621 **Independent Study: Nutrition** (prereq #)
016108 1-9 cr

8624 **Advanced Human Nutrition III** (prereq 8623 or #)
434337 0900-1030 MWF, ABLMS 222, Phinney, 5 cr

FOREIGN STUDY (FoSt)
Liberal Arts

0900 **Study Abroad** (prereq permission of study abroad advisor) (S-N only)
418283 Peterson, 0 cr

0910 **Study Abroad** (prereq permission of study abroad advisor) (S-N only)
118285 Peterson, 0 cr

3130 **HECUA Literature, Ideology, Society: Latin America** (prereq #)
737650 1-24 cr

3210 **Kansas Program in Costa Rica** (prereq #)
711243 1-54 cr

3220 **Kansas Program in Erlangen, Germany** (prereq #)
311245 1-54 cr

3230 **Kansas Program in Great Britain** (prereq #)
011247 1-54 cr

3240 **Kansas Program in Korea** (prereq #)
611249 1-54 cr

3250 **Kansas Program at Tsukuba University, Japan** (prereq #)
013709 1-54 cr

3410 **IES Program in Durham, England** (prereq #)
811251 1-45 cr

3420 **IES Program in London** (prereq #)
411253 1-54 cr

3430 **IES Program in Nantes, France** (prereq #)
111255 1-54 cr

3440 **IES Program in Paris** (prereq #)
711257 1-54 cr

3450 **IES Program in Madrid** (prereq #)
311259 1-54 cr

3460 **IES Program in Vienna** (prereq #)
511261 1-54 cr

3470 **IES Program in Freiburg, Germany** (prereq #)
111263 1-54 cr

3480 **IES European Community Program in Germany** (prereq #)
811265 1-27 cr

3490 **IES Comparative European Literature Program** (prereq #)
411267 1-54 cr

3610 **Exchange Study at University of Essex, England** (prereq #)
505136 1-54 cr

3810 **Bologna Cooperative Studies Program, Italy** (prereq #)
537651 1-54 cr

FOREST PRODUCTS (ForP)
Forestry

1100 **Wood in American Life**
012270 1415-1500 MWF, FolH 308, Bowyer, 3 cr

R1303 **Wood Structure and Identification** (prereq 1301 or #)
★LECT 1300-1345 T, KaufL 125, Bowyer, 2 cr
225705 –1 LAB 1400-1645 T, KaufL 125

3303 **Forest Products Marketing** (prereq Mktg 3000)
417618 1200-1245 MWF, KaufL 125, Petersen, 3 cr

3325 **Directed Study Experience** (prereq #)
617620 1-5 cr

5301 **Mechanical Properties** (prereq 1301 or #)
117628 1300-1345 MWF, KaufL 302, Quarles, 3 cr

5302 **Wood Chemistry I** (prereq Chem 3302)
305753 1000-1110 TTh, KaufL 125, Sarkanen, 3 cr

5305 **Pulp and Paper Technology** (prereq 5300, 5302 or #)
★LECT 1400-1445 MWF, KaufL 125, Gertjejansen, 4 cr
125706 –1 LAB 1500-1645 W, KaufL 60

5307 **Wood Base Panel Technology** (prereq 5300, 5301 or #)
005755 0835-0945 TTh, KaufL 125, Gertjejansen, 4 cr (lab ar)

5312 **Pulp and Paper Process Calculations** (prereq ME 3301 or #)
★LECT 1300-1345 MWF, KaufL 125, Neuman, 4 cr
925707 –1 REC 1300-1445 T, KaufL 302

5313 **Pulp and Paper Process Operations** (prereq CE 3400 or #)
★LECT 1500-1545 MWF, KaufL 125, Neuman, 5 cr
725708 –1 REC 1500-1645 TTh, KaufL 302

5401 **Senior Topics** (prereq sr)
817633 ar cr

8300 **Research Problems**
217636 ar cr

8301 **Research Problems**
917638 ar cr

8302 **Research Problems**
525709 ar cr

FOREST RESOURCES (FR)
Forestry

R1201 **Conservation of Natural Resources**
917753 1100-1145 MWF, GrnH 211, Splett, 3 cr

3220 **Beginning Forest Soils** (prereq Geo 1001, Itasca session)
517755 0800-0845 TTh, KaufL 302, Grigal, 2 cr

3225 **Directed Study Experience** (prereq #)
117757 1-5 cr

5100 **Silviculture** (prereq Itasca session, 1100)
817759 1230-1350 TW, GrnH 120, Alm, 3 cr

5103 **Advanced Forest Tree Biology** (prereq #)
014987 Sucoff, 3 cr

5105 **Intensive Silviculture** (prereq upper division or grad in forestry or #)
017761 1400-1445 MWF, KaufL 302, Mohn, 3 cr

R5106 **Senior Silviculture Seminar** (prereq sr, 5100 or #) (A-N only)
616208 1415-1600 T, GrnH 14, Alm, 2-3 cr

5114 **Forest Hydrology** (prereq Itasca session, Geo 1001, FR 3103 or #)
617763 0800-0845 MWF, GrnH 120, Gullett, 3 cr

5152 **Forest Genetics** (prereq #)
217765 1200-1245 MWF, KaufL 302, Mohn, 3 cr

R5200 **Aerial Photo Interpretation**
★LECT 1000-1045 MW, KaufL 302, Meyer
329020 –1 LAB 1300-1545 M, GrnH 206, Meyer, 3 cr
129021 –2 LAB 1400-1645 W, GrnH 206, Meyer, 3 cr

5212 **Natural Resources Inventory** (prereq Itasca session, AgET 3030 or equiv, computer programming course with FORTRAN or BASIC, Math 1142 or 1211, Stat 3081 or 5021, ¶Rhet 3562X)
★LECT 1100-1145 MW, GrnH 120, Ek, 3 cr
925710 –1 LAB 1100-1245 F, GrnH 120

5222 **Forest Policy and Economics** (§5265; prereq AgEc 1030 or #, ¶Rhet 3562X)
206541 –1 1000-1045 MTWThF, GrnH 120, Ellefson, Gregersen, 5 cr (forestry majs only)
906543 –2 1000-1045 MTWThF, GrnH 120, Ellefson, Gregersen, ar cr (non-majs)

5257 **Recreational Land Policy** (prereq 5232 or #)
917767 0900-1015 TTh, KaufL 302, Merriam, 3 cr

5260 **Administration Processes for Natural Resources Managers** (prereq uppper division or grad in forestry or #)
517769 0800-0845 MWF, GrnH 14, Irving, 3 cr

5262 **Remote Sensing of Natural Resources**
717771 1100-1145 MWF, 1400-1545 Th, GrnH 206, Meisner, Johnson, 4 cr

5270 **Interdisciplinary Seminar II**
233089 1500-1545 TTh, AlderH 115, Knopp, Merriam, 4 cr

5401 **Senior Topics** (prereq sr in forestry or #)
317773 1-5 cr

5500 **Urban Forest Management** (prereq 5100 or #)
715051 1500-1630 M, 0830-1000 T, GrnH 211, Carson, 3 cr

8100 **Research Problems: Silviculture**
017775 Alm, B Brown, others, ar cr

8101 **Research Problems: Forest Tree Physiology**
617777 Sucoff, ar cr

8102 **Problems: Forest Tree Genetics**
217779 Mohn, ar cr

8103 **Research Problems: Forest Hydrology**
417781 ar cr

8106 **Topics in Silviculture-Forest Soils** (prereq 5100, 5 cr of soils or #)
433088 1300-1600 Th, Grigal, 3 cr

8107 **Seminar: Forest Resources**
117783 1500-1545 M, KaufL 302, 1 cr

8200 **Research Problems: Forest Management**
717785 B Brown, Hallgren, others, ar cr

8201 **Research Problems: Forest Economics**
317787 Gregersen, Ellefson, Rose, ar cr

8202 **Research Problems: Forest Biometry**
017789 Ek, ar cr

8203 **Research Problems: Forest Recreation**
117791 Knopp, Merriam, ar cr

8204 **Research Problems: Forest Policy**
817793 Ellefson, Irving, others, ar cr

8205 **Research Problems: Remote Sensing**
417795 Meyer, ar cr

FRENCH (Fren)
French And Italian
Liberal Arts

R1101 **Beginning French**
111904 –1 0815-0900 MTWThF, Arch 45, 5 cr
134204 –2 1015-1100 MTWThF, KoltH S137, 5 cr
034205 –3 1015-1100 MTWThF, FolH 207, 5 cr
834206 –4 1115-1200 MTWThF, JonesH 1, 5 cr
611915 –5 1215-1300 MTWThF, KoltH S133, 5 cr

R1102 **Beginning French** (prereq 1101 or one year high school Fren)
411933 –1 0815-0900 MTWThF, KoltH S139, 5 cr
711937 –2 0815-0900 MTWThF, KoltH S140, 5 cr
511941 –3 0915-1000 MTWThF, PtH 111, 5 cr
811945 –4 0915-1000 MTWThF, ChDev 218, 5 cr
211948 –5 0915-1000 MTWThF, Arch 45, 5 cr
211951 –6 1015-1100 MTWThF, Arch 45, 5 cr
711954 –7 1015-1100 MTWThF, FolH 104, 5 cr
111957 –8 1115-1200 MTWThF, AkerH 21, 5 cr
111960 –9 1115-1200 MTWThF, AkerH 317, 5 cr
009238 –10 1215-1300 MTWThF, KoltH S140, 5 cr
118312 –11 1215-1300 MTWThF, KoltH S137, 5 cr (concurrent registration 1103, sec 3 required)
818314 –12 1215-1300 MTWThF, KoltH S134, 5 cr
734201 –13 1315-1400 MTWThF, KoltH S134, 5 cr
534202 –14 1315-1400 MTWThF, KoltH S137, 5 cr

R1103 **Beginning French** (prereq 1102, 1122 or two yrs high school Fren)
634207 –1 0815-0900 MTWThF, KoltH S137, 5 cr
511972 –2 0915-1000 MTWThF, KoltH S137, 5 cr
811976 –3 1115-1200 MTWThF, KoltH S137, 5 cr (concurrent registration 1102, sec 11 required)

R1104 **Intermediate French** (prereq 1103 or three yrs high school Fren)
911984 –1 0815-0900 MTWThF, KoltH S136, 5 cr
434208 –2 0915-1000 MTWThF, KoltH S136, 5 cr
111991 –3 1215-1300 MTWThF, Arch 45, 5 cr

R1105 Intermediate French (prereq 1104)
234209 –1 1115-1200 MTWThF, Arch 45, 5 cr
111997 –2 1315-1400 MTWThF, Arch 45, 5 cr

R1112 Decelerated Beginning French (§1102; prereq completion of 1101 with C or D, approval of Coordinator)
621053 1115-1200 MTWThF, PtH 214, 3 cr

R3015 French Composition and Conversation (prereq 1105)
912004 –1 1215-1300 MTWTh, BlegH 335, Akehurst, 5 cr
312007 –2 1015-1200 TTh, FolH 108, Reeve, 5 cr
112011 –3 1315-1500 TTh, FolH 302, Sivert, 5 cr

R3016 Advanced French Composition and Conversation (prereq 3015 or #)
612014 –1 0915-1100 MW, FolH 108, Robinson, 5 cr
912018 –2 1315-1500 MW, FolH 108, Robinson, 5 cr

R3017 Stylistics Through Translation (prereq 3016 or superior achievement in 3015, #)
318289 0915-1100 TTh, FolH 304, Waldauer, 5 cr

R3101 Introduction to French Literary Texts (prereq 3015)
318292 1315-1500 MW, FolH 302, Waldauer, 5 cr

R3102 French Literary Texts: Theatre (prereq 3101)
018294 0915-1100 MW, FolH 304, 5 cr

R3103 French Literary Texts: Novel (prereq 3101)
537777 1315-1500 TTh, FolH 208, 5 cr

R3107 French Literary Texts: Cinema (prereq 3101)
529405 1415-1600 TTh, FolH 50, Bensmaia, 5 cr

R3259 Topics in 18th Century French Literature (prereq 3102, 3103)
036956 1115-1300 TTh, FolH 304, Caplan, 5 cr

R3289 Topics in 20th Century French Literature (prereq 3102, 3103)
734196 0915-1100 TTh, FolH 208, Brewer, 5 cr

R3602 Literature in English Translation (no cr maj, knowledge of French helpful but not necessary)
836957 1415-1600 TTh, FolH 308, Reeve, 5 cr

3970 Directed Readings (prereq undergrad student, #, △, college approval)
118299 –1 1-5 cr
118593 –2 1-5 cr

3980 Directed Instruction (prereq 3015, #, △, college approval)
418302 3-5 cr

R5017 Composition et Stylistique (prereq 3017 or #)
334198 1415-1600 M, 1515-1600 W, FolH 205, Paganini, 5 cr

R5207 Old French (prereq 3209 or above or #)
736952 1615-1700 MTW, FolH 302, Akehurst, 5 cr

R5702 Structure of Modern French: Phonology, Morphology, Syntax (prereq 5701)
337778 1315-1500 MW, FolH 208, Barnes, 5 cr

R5900 Topics of French Literature (max 15 cr; prereq 3209 or above)
134199 –1 1315-1400 M, 1315-1500 W, FolH 205, Brewer, 5 cr (Autobiography in France: Twentieth Century Representation)
934200 –2 1515-1600 T, 1415-1600 Th, FolH 305, Caplan, 5 cr (The Philosophes from Montesquieu to Kant)

8970 Directed Readings
918305 1-5 cr

8980 Directed Teaching (prereq #, △)
518307 1-5 cr

FRENCH AND ITALIAN (FrIt)
French And Italian
Liberal Arts

R3604 Cinemas of the Real
118309 1315-1600 TTh, NichH 211, 4 cr

FRESHMAN-SOPHOMORE COLLOQUIA (HCol)
Honors Program
Liberal Arts

R1010 Honors Colloquium (prereq fr, soph, reg honors div)
418123 2-4 cr

R1020 Honors Colloquium (prereq fr, soph, reg honors div)
106936 2-4 cr

R1030 Honors Colloquium (prereq fr, soph, reg honors div)
806938 2-4 cr

R1040 Honors Colloquium (prereq fr, soph, reg honors div)
606939 2-4 cr

R1050 Honors Colloquium (prereq fr, soph, reg honors div)
806941 2-4 cr

R1060 Honors Colloquium (prereq fr, soph, reg honors div)
606942 2-4 cr

R1070 Honors Colloquium (prereq fr, soph, reg honors div)
206944 2-4 cr

R1080 Honors Colloquium (prereq fr, soph, reg honors div)
706947 2-4 cr

R1970 Honors Colloquium: Directed Studies (prereq fr or soph, reg honors div)
436959 1-4 cr

GENERAL COLLEGE (GC)

General College restricts some sections to certain groups of students. Check at NichH 20 for these restrictions before attempting to register.

R1131 Biological Science: Principles
306014 –1 1015-1100 MTWTh, SciCB 125, Dearden, 5 cr (lab ar)
134129 –2 1515-1600 MTWTh, SciCB 125, Hatch, 5 cr (lab ar)

R1132 Biological Science, Human Body
012060 –1 0815-0900 MTWThF, SciCB 125, Dearden, 5 cr
412063 –2 1415-1500 MTWThF, SciCB 125, 5 cr

R1137 Biological Science: Laboratory (prereq 1131 or 1132)
434130 –1 LAB 1015-1200 MW, ApH 206, 2 cr
134101 –2 LAB 1215-1400 MW, ApH 206, 2 cr
934102 –3 LAB 1415-1600 MW, ApH 206, 2 cr

R1163 Principles of Physics
434483 1115-1200 MTWThF, Phys 131, Policoff, 5 cr

R1166 Physical Science: Principles of Chemistry
017579 1315-1400 MTWThF, SciCB 125, Uthe, 5 cr

R1171 Earth Science: Physical Geology
131626 1215-1300 MTWThF, SciCB 125, Uthe, 5 cr (lab ar)

R1211 People and Problems
817583 1215-1300 MTWThF, NichH 211, Smith, 5 cr

R1212 Urban Problems
212081 –1 1015-1100 MTWThF, NichH 207, Smith, 5 cr
712084 –2 1415-1500 MTWThF, JonesH 4, Jones, 5 cr

R1221 Minnesota History (§1223, 1224)
605905 0915-1000 MTWThF, NichH 207, Moen, 5 cr

R1230 United States: Recent History
105947 1115-1200 MTWThF, NichH 213, Moen, 5 cr

R1235 United States: Law in Society
612093 –1 0915-1100 MW, 1015-1100 F, JonesH 11, Hower, 5 cr
112096 –2 1215-1400 MW, 1215-1300 F, JonesH 4, 5 cr

R1236 United States: The Crime Problem
117590 1215-1300 MTWTh, NichH 207, F Johnson, 4 cr

R1237 United States: Juvenile Delinquency
717592 1115-1200 MTWTh, NichH 207, Harris, 4 cr

R1243 Historical Biography: World War II and Cold War Personalities
905909 0915-1000 MTWF, Arch 30, Buckley, 4 cr

R1251 World History
134132 1215-1300 MTWThF, Arch 10, Jones, 5 cr

R1264 Current History: Present Problems and Future Projections
507422 1115-1200 MTWTh, SciCB 125, Hathaway, 4 cr

R1281 Psychology in Modern Society
★LECT 0915-1000 MWF, NichH 211, Brothen
105911 –1 LAB 0915-1000 TTh, NichH 254, Brothen, 5 cr
705913 –2 LAB 1015-1100 TTh, NichH 254, Brothen, 5 cr
305915 –3 LAB 1015-1100 TTh, NichH 304, Brothen, 5 cr
005917 –4 LAB 1115-1200 TTh, NichH 254, Brothen, 5 cr
805918 –5 LAB 1115-1200 TTh, NichH 304, Brothen, 5 cr
934360 –6 LAB 1215-1300 TTh, NichH 254, Brothen, 5 cr
734361 –7 LAB 1215-1300 TTh, NichH 304, Brothen, 5 cr
534362 –8 LAB 1315-1400 TTh, NichH 254, Brothen, 5 cr
334363 –9 LAB 1415-1500 TTh, NichH 254, Brothen, 5 cr

R1282 Psychology Applied to Human Affairs (prereq 1281)
117595 1515-1600 MTWThF, NichH 213, Wambach, 5 cr

R1284 Behavior Problems of Children (§1723)
134137 1315-1500 MW, NichH 211, Skovholt, 4 cr

R1291 The World Today: Geography at Home and Abroad
717608 1015-1100 MTWThF, NichH 213, Steinhauser, 5 cr

R1292 Natural Resources: Utilization and Management (§1112, 1113)
137779 1415-1500 MTWThF, NichH 213, Flynn, 5 cr

R1295 Economic Perspectives: Micro Principles and History
917610 1115-1200 MTWThF, NichH 211, Killen, 5 cr

R1311 Art: General Arts (§3311)
712117 –1 0815-0900 MWThF, NichH 111, Byrne, 4 cr
712120 –2 0915-1000 MWThF, NichH 111, Gates, 4 cr
012124 –3 1315-1400 MWThF, NichH 111, Byrne, 4 cr
605919 –4 1115-1300 TTh, NichH 111, MacInnes, 4 cr
629346 –5 1415-1600 TTh, NichH 111, 4 cr

R1313 Art Today II (S-N only)
034138 1415-1500 MWF, NichH 111, Gates, 3 cr

R1333 Vocal Music and Its Traditions
317613 1015-1100 MWThF, NichH 111, Byrne, 4 cr

R1351 Philosophy: Functions and Problems (§1861)
★LECT 0915-1000 MTW, NichH 213, Kurak
831628 –1 REC 0915-1000 Th, NichH 213, Kurak, 4 cr
631629 –2 REC 0915-1000 F, NichH 213, Kurak, 4 cr

R1361 World Literature: Personal Experience
805949 1215-1300 MTWThF, NichH 213, Rathburn, 5 cr

R1367 Contemporary Books and Periodicals
834139 1315-1400 MTWThF, NichH 213, C Miller, 5 cr

R1371 Literature: Reading Short Stories
031630 0815-0900 MWF, NichH 213, Flake, 3 cr

R1376 Humanities: Modern Living II
134140 1415-1600 TTh, NichH 109, Koch, 4 cr

R1384 Living Myths of Greece and Rome
805952 1015-1100 MWF, Armory 116, 3 cr

R1399 Humanities: Individual Study (prereq △)
638189 ar cr

R1401 Improving Study Skills, Reading Comprehension, and Vocabulary (§1406 prior to Fall, 1981)
112140 –1 1-3 cr (Individual instruction ar, NichH 1)
405954 –2 1-3 cr (Individual instruction ar, NichH 1)

R1402 Vocabulary Development (§1401 prior to Fall, 1981)
612143 –1 0815-0900 MWF, NichH 209A, Stockdale, 3 cr
112146 –2 1115-1200 MWF, NichH 209A, Kurak, 3 cr
334282 –3 1215-1300 MWF, NichH 209A, Stockdale, 3 cr
831631 –4 1515-1600 MWF, NichH 109, 3 cr

R1403 Reading, Comprehension, and Study Skills (§1402 prior to Fall, 1981)
★LECT 0915-1000 MW, NichH 209A, Gidmark
315196 –1 REC 0915-1000 Th, NichH 201, Gidmark, 3 cr
115197 –2 REC 0915-1000 F, NichH 201, Gidmark, 3 cr
★LECT 1015-1100 MW, NichH 209A, Gidmark
015198 –3 REC 1015-1100 Th, NichH 201, Gidmark, 3 cr
815199 –4 REC 1015-1100 F, NichH 201, Gidmark, 3 cr
★LECT 1315-1400 MW, NichH 209A
315201 –5 REC 1315-1400 Th, NichH 201, 3 cr
115202 –6 REC 1315-1400 F, NichH 201, 3 cr

R1405 Technical Reading: Tables and Graphs
231634 1-2 cr (Individual instruction ar, NichH 1)

R1406 Improving Study Skills, Reading Comprehension, and Vocabulary
038190 1-3 cr (Individual instruction ar, NichH 1)

R1411 Fundamentals of Usage and Style (§1405 prior to Fall, 1981)
705958 –1 3 cr (Individual instruction ar, NichH 1)
334427 –2 3 cr (Individual instruction ar, NichH 1)

R1412 Writing Grammatical Sentences and Developing Organized Paragraphs (§1404 prior to Fall, 1981)
205969 –1 0815-1000 TTh, NichH 209A, 1-2 cr
334430 –2 0815-1000 TTh, NichH 209, 1-2 cr
405971 –3 1-2 cr (Individual instruction ar, NichH 1)
934424 –4 1-2 cr (Individual instruction ar, NichH 1)

R1417 Improving Spelling and Punctuation (§1403 prior to Fall, 1981)
115564 –1 0815-1000 TTh, NichH 209A, 1-2 cr
634434 –2 0815-1000 TTh, NichH 209, 1-2 cr
715566 –3 1-2 cr (Individual instruction ar, NichH 1)
634420 –4 1-2 cr (Individual instruction ar, NichH 1)

R1421 Writing Laboratory: Personal Writing (§1412 prior to Fall 1981)
812156 –1 0815-1000 MW, JonesH 10, 4 cr
212159 –2 0815-1000 M, 0815-0900 WF, NichH 216, 4 cr
505959 –3 0815-1000 M, 0815-0900 WF, NichH 209, 4 cr
712165 –4 0915-1100 MW, PtH 102, 4 cr
312167 –5 1015-1200 MW, JonesH 10, 4 cr
905960 –6 1015-1200 M, 1115-1200 WF, NichH 209, 4 cr
505962 –7 1215-1400 MW, PtH 111, 4 cr
234419 –8 1215-1400 M, 1215-1300 WF, NichH 209, 4 cr
434418 –9 1415-1600 M, 1515-1600 WF, NichH 209, 4 cr
112171 –10 0815-1000 TTh, NichH 122, 4 cr
634417 –11 0815-1000 TTh, NichH 209A, 4 cr
112177 –12 0815-1000 TTh, NichH 209, 4 cr
534412 –13 0815-1000 TTh, JonesH 10, 4 cr
531638 –14 0815-1000 TTh, PeikH 225, 4 cr
731640 –15 0915-1100 TTh, JonesH 2, 4 cr
305963 –16 1015-1200 TTh, NichH 209A, 4 cr
034401 –17 1015-1200 TTh, NichH 209, 4 cr
805966 –18 1015-1200 TTh, JonesH 10, 4 cr
531641 –19 1115-1300 TTh, JonesH 2, 4 cr
331642 –20 1215-1400 TTh, PtH 111, 4 cr
634403 –21 1415-1600 TTh, NichH 122, 4 cr

R1422 Writing Laboratory: Communicating in Society (§1423; prereq 1421)
912181 –1 0815-1000 MW, NichH 122, 4 cr
312184 –2 1015-1200 M, NichH 216, 1015-1200 W, FolH 406, 4 cr
612188 –3 1015-1200 MW, PtH 111, 4 cr
412192 –4 1215-1400 MW, JonesH 1, 4 cr
434404 –5 1215-1400 MW, PeikH 315, 4 cr
031644 –6 1415-1600 MW, JonesH 2, 4 cr
934410 –7 1415-1600 MW, NichH 209A, 4 cr
334458 –8 0815-1000 TTh, PeikH 225, 4 cr
334461 –9 0815-1000 TTh, NichH 122, 4 cr
134459 –10 0915-1100 TTh, JonesH 2, 4 cr
431647 –11 1015-1200 TTh, NichH 209, 4 cr
534460 –12 1015-1200 TTh, NichH 209A, 4 cr
231648 –13 1215-1400 TTh, NichH 209A, 4 cr
705975 –14 1215-1400 TTh, NichH 209, 4 cr
305977 –15 1415-1600 TTh, NichH 209, 4 cr
534457 –16 1415-1600 TTh, NichH 216, 4 cr
429347 –17 0915-1100 WF, NichH 209, 4 cr
029490 –18 1315-1500 WF, NichH 209, 4 cr

R1431 Basic Mathematics I (§1434; prereq GCPP math level A)
137782 –1 1315-1500 TTh, FolH 101, 2 cr
037783 –2 1315-1500 TTh, FolH 101, 2 cr

R1432 Basic Mathematics II (§1434; prereq 1431)
734456 –1 1015-1200 MW, FolH 101, 2 cr
934455 –2 1315-1500 TTh, FolH 102, 2 cr
837784 –3 1315-1500 TTh, FolH 102, 2 cr

R1433 Basic Mathematics: Programmed Study (max 10 cr; prereq GCPP math level A, B or C or 1431 or 1432 or 1434, # or △ for 4+ cr/qtr)
234453 1015-1200 TTh, FolH 101, 1-10 cr

R1434 Mathematics Skills Review (§1431, 1432; prereq GCPP math level B)
131649 –1 0915-1000 MTWThF, FolH 101, 4 cr
431650 –2 0915-1000 MTWThF, FolH 102, 4 cr
305980 –3 1215-1300 MTWThF, FolH 101, 4 cr
231651 –4 1215-1300 MTWThF, FolH 102, 4 cr
317756 –5 1315-1500 MWF, FolH 101, 4 cr
017758 –6 1315-1500 MWF, FolH 101, 4 cr

R1435 Elementary Algebra (prereq GCPP math level C or 1432 or 1434)
131652 –1 0815-0900 MTWThF, FolH 102, 5 cr
931653 –2 1015-1100 MTWThF, FolH 102, 5 cr
331656 –3 1115-1200 MTWThF, FolH 102, 5 cr
131657 –4 1315-1500 MWF, FolH 102, 5 cr
829491 –5 1315-1500 MWF, FolH 102, 5 cr
412564 –6 1515-1600 MTWThF, FolH 102, 5 cr

R1442 Functions and Problems of Logic
★LECT 1015-1100 MWF, Arch 30, Zanoni
109523 –1 REC 1015-1100 T, Arch 30, 4 cr
709525 –2 REC 1015-1100 Th, Arch 30, 4 cr

R1445 Intermediate Algebra (§1443, 1444; prereq GCPP math level D or 1435)
112230 –1 0815-0900 MTWThF, FolH 101, 5 cr
712232 –2 0915-1100 MTWThF, ApH 150, 5 cr
312234 –3 1315-1500 MTWThF, ApH 150, 5 cr
612238 –4 1315-1500 MTWThF, ApH 150, 5 cr
838191 –5 1515-1600 MTWThF, FolH 101, 5 cr

R1454 Statistics (prereq GCPP math level D or elementary algebra)
912245 1315-1400 MTWThF, NichH 207, Garfield, 5 cr

R1461 Oral Communication: Basic Principles
834450 –1 0815-0900 MTWThF, NichH 107, 5 cr
112252 –2 0915-1000 MTWThF, NichH 107, 5 cr
812254 –3 1015-1200 MW, 1015-1100 F, NichH 107, 5 cr
831662 –4 1215-1300 MTWThF, NichH 122, 5 cr

R1464 Oral Communication: Group Process and Discussion
631663 –1 1215-1400 MW, NichH 107, Hansen, 4 cr
605970 –2 1015-1200 TTh, NichH 107, 4 cr
005982 –3 1215-1400 TTh, NichH 107, Hansen, 4 cr

R1465 Oral Communication: Interpersonal Communication
212257 –1 1015-1200 M, 1115-1200 WF, NichH 122, 4 cr
212260 –2 1315-1500 M, 1315-1400 WF, NichH 122, 4 cr
712263 –3 1015-1200 TTh, NichH 122, 4 cr
634448 –4 1015-1200 TTh, PeikH 315, 4 cr

R1469 Oral Communication: Individual Study (prereq △)
431664 ar cr (Individual instruction ar, NichH 1)

R1471 Creativity: Creative Problem Solving-Innovation Techniques
034446 1215-1300 MWThF, JonesH 11, Amram, 4 cr

R1473 Intermediate American Sign Language-Level 2 (§1474 Winter, Spring 1983; prereq 1472 or 1473 Fall 1982 or 1468 Spring 1982 or #)
134445 1415-1600 WF, NichH 122, 4 cr

R1481 Creativity: Art Laboratory: Experiences in the Media (max 9 cr)
205972 –1 0815-1000 MW, NichH 102, 3 cr
812271 –2 1015-1200 MW, NichH 102, 3 cr
112275 –3 1015-1200 TTh, NichH 102, 3 cr
605984 –4 1315-1500 TTh, NichH 102, 3 cr

R1483 Creativity: Music Laboratory-How to Read and Write Music (max 6 cr)
312279 –1 1115-1200 MWF, NichH 111, 3 cr
312282 –2 1215-1300 MWF, NichH 111, 3 cr

R1484 Creativity: Writing Laboratory-Individual Writing (max 8 cr; prereq 1421, recommendation of previous writing lab instructor, #, △)
231665 1415-1600 TTh, NichH 209A, Balfour, 4 cr

R1502 Career Planning
612286 –1 1015-1200 M, NichH 35, 2 cr
412290 –2 1015-1200 T, NichH 35, 2 cr
131666 –3 1015-1200 W, NichH 35, 2 cr
931667 –4 1015-1200 Th, NichH 35, 2 cr

R1511 Introduction to Modern Business
112297 –1 0815-1000 MW, 0815-0900 F, PtH 215, Nelson, 5 cr
812299 –2 1315-1400 M, 1215-1400 TTh, NichH 109, Kroll, 5 cr

R1513 Principles of Small Business Operation
100191 –1 0915-1100 TTh, EltH N119, Ludlow, 5 cr (1 hr ar)
800198 –2 1215-1400 TTh, JonesH 10, Ludlow, 5 cr (1 hr ar)

R1517 Business Internship in Cooperative Education (prereq #, △)
936349 1700-1930 W, NichH 107, Nelson, 6 cr

R1533 Financial Mathematics: Procedures and Applications (prereq GCPP math level C or 1432 or 1434 or elementary algebra)
521370 0815-0900 MTWThF, NichH 207, Long, 5 cr

R1534 Practical Law
912312 –1 1415-1500 MTWThF, PtH 214, Kahn, 5 cr
312315 –2 1015-1200 TTh, 1115-1200 F, NichH 109, O'Hare, 5 cr

R1535 Introduction to Data Processing (prereq GCPP math level D or 1435 or algebra)
317630 1115-1300 TTh, ApH 150, Giese, 4 cr

R1536 Introduction to Commercial Art (max 9 cr; prereq previous art experience or #)
612319 –1 1415-1600 MW, NichH 102, MacInnes, 3 cr
612322 –2 0815-1000 TTh, NichH 102, MacInnes, 3 cr

R1537 Salesmanship
334444 1015-1200 MW, NichH 109, Nelson, 3 cr

R1540 Accounting Fundamentals I
912326 –1 1015-1200 TTh, PtH 102, 4 cr
312329 –2 1415-1600 TTh, NichH 207, 4 cr

R1542 Accounting Fundamentals II (prereq 1540)
238387 1215-1400 TTh, JonesH 4, Larson, 4 cr

R1551 Marketing: Introduction
634465 –1 1115-1300 MW, 1115-1200 F, ApH 150, Peterson, 5 cr
934469 –2 1115-1300 MW, 1215-1300 F, ApH 150, Peterson, 5 cr

R1552 Marketing: Sales Promotion (prereq 1551 or #)
934486 1415-1600 MW, 1415-1500 F, NichH 207, 5 cr

R1701 Psychology of Personal Effectiveness
117640 –1 0915-1100 WF, NichH 254, Lundy, 4 cr
337148 –2 1115-1300 WF, PtH 102, Read, 4 cr

R1702 Survival Seminar I: Introduction to Higher Education (prereq #, △) (S-N only)
234470 0915-1100 M, NichH 201, 2 cr

R1705 Psychology and the Management of Stress: Theory and Application (prereq 1281 or #)
134471 0915-1100 TTh, Arch 60, Romano, 4 cr

R1721 Marriage, Family, and Personal Fulfillment
934472 1215-1300 M, 1215-1400 TTh, WullH 230, Thoen, 5 cr

R1731 Consumer Problems and Personal Finance
117645 0915-1000 MTWThF, NichH 109, Killen, 5 cr

R1812 American Indian Literature (prereq △)
229348 1215-1300 MWF, JonesH 10, 3 cr

R1832 **Contemporary Issues in American Indian Education** (prereq #, △)
129349 1315-1400 MWF, Arch 60, Lundy, 3 cr

R1837 **Asian American Women** (prereq #, △) (A-N only)
629024 1415-1600 TTh, WullH 230, Tsuchida, 4 cr

R1894 **Planning a General College Baccalaureate Program** (prereq 75 cr) (S-N only)
712358 1415-1600 W, PtH 215, Brothen, 1 cr (first 5 weeks)

R3115 **Evolution and the Modern Species** (prereq 1131)
734473 0915-1000 MTWThF, ApH 206, Hatch, 5 cr

R3161 **Basic D. C. Electronics** (prereq high school intermediate algebra or 1445, high school physics or 1163, #)
315568 0915-1100 MWF, ApH 104, 5 cr

R3212 **Criminal Procedure**
121386 1315-1500 TTh, Arch 15, Dwyer, 4 cr

R3217 **Community Service Internship** (prereq #, △)
200206 –1 1415-1600 T, NichH 302, Harris, 6-12 cr
534474 –2 1415-1600 Th, NichH 152, F Harris, 6-12 cr
634482 –3 1730-2000 W, NichH 304, Foat, 6-12 cr

R3243 **Biography: World War II, Cold War Personalities** (§1243)
105973 0915-1000 MWThF, Arch 30, Buckley, 4 cr

R3285 **Anthropology of the City**
117654 0915-1000 MTWThF, NichH 304, F Johnson, 5 cr

R3286 **Topical Seminar in Psychology** (prereq 1281, #, △)
137149 Brothen, 4 cr

R3292 **Urban Decision Making in the Twin Cities** (prereq #, △)
334475 1215-1400 MW, NichH 254, Detzner, 5 cr (1 hr ar)

R3294 **Social and Political Impact of Economic Policy** (prereq soph, introductory economics course)
537780 1415-1600 WF, NichH 254, Killen, 4 cr

R3311 **Art: General Arts** (§1311)
212372 –1 0815-0900 MWThF, NichH 111, Byrne, 4 cr
712375 –2 0915-1000 MWThF, NichH 111, Gates, 4 cr
112378 –3 1315-1400 MWThF, NichH 111, Byrne, 4 cr
905974 –4 1115-1300 TTh, NichH 111, MacInnes, 4 cr
429350 –5 1415-1600 TTh, NichH 111, 4 cr

R3342 **Moral Issues in Business**
505976 1215-1400 TTh, NichH 216, 4 cr

R3354 **Philosophy, Science, and Religion** (§1354)
134476 0915-1100 WF, NichH 216, 4 cr

R3374 **Film and Society**
017355 1015-1200 TTh, NichH 216, Yahnke, 4 cr

R3423 **Writing the Research or Survey Report** (prereq 1421...1422 rec)
117662 1115-1300 TTh, NichH 201, Kurak, 4 cr

R3454 **Understanding Quantitative Research Methods** (prereq elementary statistics or #)
005979 1700-1930 T, NichH 209, Giese, 4 cr

R3462 **Public Speaking for Business and the Professions** (prereq 1461)
337781 1415-1600 TTh, NichH 107, Hansen, 4 cr

R3464 **Communication in Organizations** (prereq 1461 or 1465, 5 cr in psychology)
317658 1415-1600 MW, NichH 107, Amram, 4 cr

R3514 **Research for Starting a Small Business** (prereq 1513, 1540, 1551, #, △)
537150 1700-2030 W, NichH 209A, Ludlow, 5 cr

R3517 **Advanced Business Internship in Cooperative Education** (prereq #, △)
505993 1700-1930 Th, NichH 107, Nelson, 6 cr

R3531 **Writing for Business and the Professions** (prereq 1422)
112387 –1 1315-1500 MW, NichH 216, Gidmark, 4 cr
112390 –2 0815-1000 TTh, NichH 216, 4 cr
105981 –3 1115-1300 WF, NichH 216, Kurak, 4 cr

R3533 **Functional Communication** (prereq #, △, 1421, either 1422 or 1461)
034477 1215-1400 M, 1215-1500 W, NichH 302, Adamson, 5 cr

R3560 **Personnel Administration**
834478 0815-1000 TTh, PtH 102, Kroll, 4 cr

R3581 **Legal Studies: Business Organizations** (prereq 1235, 1534, 1540, paralegal student, #, △)
417666 1730-2000 T, BlegH 220, 4 cr

R3582 **Legal Studies: Real Estate** (prereq 1235, 1534, 1540, paralegal student or #)
905988 1730-2000 Th, Law 35, 4 cr

R3587 **Legal Studies: Internship** (prereq paralegal student, △) (S-N only)
117668 Templeton, ar cr

R3592 **Legal Studies: Domestic Relations** (prereq 1235, 1534, 1540, paralegal student or #)
217670 1730-2000 W, Law 35, Marron, 4 cr

R3605 **Interviewing** (prereq #, △)
917672 1415-1500 M, 1415-1600 TTh, NichH 304, Skovholt, 5 cr

R3614 **Psychological Intervention Techniques** (prereq #, △)
634479 1215-1400 WF, NichH 109, Wambach, 4 cr

R3616 **Creativity: Crafts** (prereq soph or above, enrolled in RSG or HSG or pre-OT or #)
034480 1215-1400 MW, NichH 102, Gates, 4 cr

R3643 **Seminar: Individual Helping Skills** (prereq HSG student, #, △)
412404 1730-2000 M, NichH 304, Foat, 4 cr

R3721 **The Family and Society** (1721, 1211, 1212 rec)
405985 1415-1500 MTWTh, Arch 30, Latts, 4 cr

R3722 **Principles of Marriage and Family Interventions** (A-N only)
429025 0915-1100 TTh, VinH 1, Thoen, 4 cr

R3726 **Dynamics of Family Interaction**
834481 0815-1000 MW, PtH 214, Latts, 4 cr

R3732 **Consumer Transactions and the Law** (prereq 1534...1731 rec)
414685 1115-1200 MTWTh, VinH 1, Kahn, 4 cr

R3826 **Toward a Good Life: Humanities** (prereq 3823, 3824, 3825 or #, ¶3827, ¶3828)
515570 1730-2100 TTh, NichH 111, MacInnes, 3 cr

R3827 **Toward a Good Life: Social Science** (prereq 3823, 3824, 3825 or #, ¶3826, ¶3828)
115572 1730-2100 TTh, NichH 111, Hathaway, 3 cr

R3828 **Toward a Good Life: Natural Science** (prereq 3823, 3824, 3825 or #, ¶3826, ¶3827)
415576 1730-2100 TTh, NichH 111, 3 cr

R3894 **Planning Your GC Baccalaureate Senior Report** (prereq 135 credits, #, △...3423 rec) (S-N only)
335061 1415-1600 Th, NichH 302, Giese, 1 cr

R3921 **Energy and Environment: Humanities** (prereq ¶3922, ¶3923)
634126 0915-1200 TTh, JonesH 11, 3 cr

R3922 **Enery and Environment: Social Science** (prereq ¶3921, ¶3923)
434127 0915-1200 TTh, JonesH 11, Detzner, 3 cr

R3923 **Energy and Environment: Natural Science** (prereq ¶3921, ¶3922)
234128 0915-1200 TTh, JonesH 11, A Johnson, 3 cr

GENETICS AND CELL BIOLOGY (GCB)
Biological Sciences

R3022 **Genetics** (§Biol 5003; prereq Biol 1009, non-biology maj)
934052 –2 LECT 1800-1930 TTh, Zoology 102, Snyder, 4 cr (Mpls)
★LECT 0930-1045 TTh, PalmC 10, Enfield
312427 –1 REC 1200-1245 T, BioSci 18, 4 cr
312430 –2 REC 1300-1345 T, BioSci 18, 4 cr
012432 –3 REC 1100-1145 W, BioSci 12, 4 cr
212436 –4 REC 1300-1345 W, BioSci 12, 4 cr

3960 **Research Topics** (prereq Biol 5001) (S-N only)
406831 1500-1545 M, BioSci 260, V Woodward, 1 cr

R5011 **General and Comparative Embryology** (prereq Biol 1106 or 3011)
★LECT 1115-1230 MW, BioSci 18, McKinnell
804980 –1 LAB 1245-1500 M, BioSci 107, 4 cr
131576 –2 LAB 1245-1500 W, BioSci 107, 4 cr

R5022 **Genetics** (§3022, Biol 5003, not open to grad students in genetics)
734053 –2 LECT 1800-1930 TTh, Zoology 102, Snyder, 3 cr (Mpls)
★LECT 0930-1045 TTh, PalmC 10, Enfield
512457 –1 REC 1200-1245 T, BioSci 18, 3 cr
512460 –2 REC 1300-1345 T, BioSci 18, 3 cr
812464 –3 REC 1100-1145 W, BioSci 12, 3 cr
112468 –4 REC 1300-1345 W, BioSci 12, 3 cr

5024 **The Genetics of Development** (prereq Biol 5003 or #)
206832 1045-1145 MWF, BioSci 6, R Herman, 4 cr

5031 **Advanced Genetics I** (prereq 3022 or Biol 5003 and 5001 or BioC 5751 or #)
116446 1400-1500 MWF, AlderH 310, Lefebvre, Snyder, 4 cr

5044 **Human Population Genetics** (prereq 5043, biostatistics such as PubH 5452 or equiv or #)
016450 1415-1530 TTh, Botany 3, Anderson, 4 cr (Mpls)

5049 **Advanced Cell Biology II** (prereq 5048, Biol 5001, 5003)
616452 0815-0945 TTh, BioSci 12, Silflow, 4 cr

5062 **Genetics and Speciation** (prereq 15 cr biology including genetics)
516458 1315-1400 MWF, Zoology 102, Merrell, 4 cr (Mpls)

5134 **Endocrinology** (prereq Biol 3011, 5001 or #)
906834 0945-1045 MWF, AlderH 310, W Herman, 4 cr

5970 **Directed Studies** (prereq #, △)
506836 ar cr

5990 **Directed Research** (prereq #, △)
106838 ar cr

8060 **Current Topics**
316462 1400-1530 M, BioSci 438, Sauerbier, 2 cr

8900 **Seminar** (S-N only)
616466 1530-1700 Th, BioSci 70, 1 cr

8910 **Journal Clubs** (prereq △) (S-N only)
416470 1 cr

8970 **Directed Studies** (prereq #, △)
016478 ar cr

8990 **Research** (prereq #)
016481 ar cr

GEO-ENGINEERING (GeoE)
Civil And Mineral Engineering
Institute of Technology

3300 **Geo-Engineering Materials** (prereq AEM 1015, 3016, IT stu) (A-N only)
005240 1115-1200 MTWF, CivMinE 202, Fairhurst, 4 cr

5300 **Theory of Geomechanics** (prereq CE 3300, IT stu or grad IT) (A-N only)
104418 1615-1800 MW, CivMinE 205, Vardoulakis, 4 cr

5660 **Special Geo-Engineering Problems** (prereq IT sr or #) (A-N only)
519859 ar cr

5661 **Special Geo-Engineering Problems** (prereq IT sr or #) (A-N only)
919860 ar cr

8336 **Analytical Methods in Rock Mechanics** (prereq #)
719861 1115-1200 MTWF, CivMinE 214, Crouch, 4 cr

8602 **Seminar: Geo-Engineering** (prereq #) (S-N only)
519862 ar cr

GEOGRAPHY (Geog)
Liberal Arts

R1301 Human Geography
★LECT 1115-1200 MWF, WilleyH 125, Hart
912505 –1 REC 0815-0900 M, BlegH 430, 5 cr
312508 –2 REC 0915-1000 M, BlegH 430, 5 cr
312511 –3 REC 0915-1000 M, BlegH 445, 5 cr
812514 –4 REC 1015-1100 M, BlegH 430, 5 cr
412516 –5 REC 1015-1100 M, BlegH 445, 5 cr
212520 –6 REC 1215-1300 M, BlegH 430, 5 cr
512524 –7 REC 1215-1300 M, BlegH 445, 5 cr
812528 –8 REC 1115-1200 T, BlegH 430, 5 cr
612532 –9 REC 1115-1200 T, BlegH 445, 5 cr
912536 –10 REC 1015-1100 W, BlegH 430, 5 cr
712540 –11 REC 1015-1100 W, BlegH 445, 5 cr
012544 –12 REC 1215-1300 W, BlegH 430, 5 cr
412547 –13 REC 1215-1300 W, BlegH 445, 5 cr
212551 –14 REC 1115-1200 Th, BlegH 430, 5 cr
512555 –15 REC 1115-1200 Th, BlegH 445, 5 cr

R1401 Physical Geography (§NSci 1501)
★LECT 1015-1100 MWF, AndH 310, Barrett
812562 –1 REC 0815-0900 TTh, BlegH 430, 5 cr
212565 –2 REC 0815-0900 TTh, BlegH 460, 5 cr
512569 –3 REC 0915-1000 TTh, BlegH 460, 5 cr
312573 –4 REC 1015-1100 TTh, BlegH 430, 5 cr
812576 –5 REC 1015-1100 TTh, BlegH 445, 5 cr
212579 –6 REC 1015-1100 TTh, BlegH 460, 5 cr
212582 –7 REC 0815-0900 WF, BlegH 430, 5 cr
712585 –8 REC 0815-0900 WF, BlegH 460, 5 cr
312587 –9 REC 0915-1000 WF, BlegH 430, 5 cr
312590 –10 REC 0915-1000 WF, BlegH 445, 5 cr
612594 –11 REC 0915-1000 WF, BlegH 460, 5 cr
912598 –12 REC 1115-1200 WF, BlegH 430, 5 cr
112602 –13 REC 1115-1200 WF, BlegH 445, 5 cr
912603 –14 REC 1115-1200 WF, BlegH 460, 5 cr
312606 –15 REC 1215-1300 WF, BlegH 460, 5 cr

R1501 The Language of Maps (§3311)
★LECT 0915-1000 MWF, AndH 270, Gersmehl
215238 –1 REC 0815-0900 T, BlegH 445, 5 cr
115242 –2 REC 0915-1000 T, BlegH 430, 5 cr
315246 –3 REC 0815-0900 W, BlegH 445, 5 cr
106265 –4 REC 0815-0900 Th, BlegH 445, 5 cr
706267 –5 REC 0915-1000 Th, BlegH 430, 5 cr
506268 –6 REC 0815-0900 F, BlegH 445, 5 cr
133442 –7 REC 1015-1100 F, BlegH 430, 5 cr
636121 –8 REC 1215-1300 F, BlegH 430, 5 cr

3101 Geography of United States and Canada
218317 1115-1200 MWF, AndH 350, Gersmehl, 4 cr

3121 Latin America
237126 0945-1100 TTh, BlegH 10, Weil, 4 cr

3141 Africa
833444 0915-1000 MWF, BlegH 435, Porter, 4 cr

3161 Europe
706270 1015-1100 MWF, Law 20, Rice, 4 cr

3331 Introduction to Economic Geography
718323 1015-1100 MWF, BlegH 435, Sheppard, 4 cr

3344 The Land Ethic in the United States
206281 1215-1300 MWF, BlegH 435, Squires, 4 cr

3371 Introduction to Urban Geography
137127 1115-1200 MWF, BlegH 435, 4 cr

3378 Modernization and the Third World
937128 0915-1000 MWF, BlegH 250, Scott, 4 cr

3381 Population Geography
433446 1315-1400 MWF, BlegH 250, Rice, 4 cr

3421 Climatology (prereq 1401 or #)
913301 1415-1530 TTh, BlegH 135, Skaggs, 4 cr

3531 Quantitative Methods
018327 0945-1100 TTh, BlegH 135, Skaggs, 4 cr

3801 Development of Geographic Thought (§5801; prereq 3 courses in geog)
133448 1215-1300 MWF, BlegH 240, 4 cr

3940 Directed Field Study (prereq #) (A-N only)
933449 2-4 cr

3970 Directed Readings (prereq #, △, college approval)
618329 1-15 cr

5001 Geographical Analysis I
737129 1215-1300 MWF, BlegH 120, Sheppard, 4 cr

5111 Selected Regions: Eastern United States
233450 1315-1400 MWF, BlegH 150, Hart, 4 cr

5131 Colonial Mexico and the Caribbean
706284 1415-1500 MWF, BlegH 215, Barrett, 4 cr

5191 Agricultural Marketing in Africa
137130 1115-1200 MWF, BlegH 415, Scott, 4 cr

5372 Metropolitan Analysis I
933452 0815-1000 TTh, BlegH 110, J Adams, 4 cr

5411 Medical Geography
937131 1245-1400 TTh, BlegH 115, Weil, 4 cr

R5511 Cartographic Analysis (prereq 3511 or 3531)
906302 1015-1130 TTh, BlegH 455, Andrews, 4 cr

R5522 Computer Cartography (prereq basic knowledge of FORTRAN, 3511 or #)
★LECT 0915-1000 MWF, BlegH 455, Hsu
533454 –1 REC 1315-1500 W, BlegH 455, 4 cr

R5900 Topics in Geography: Geographic Information Systems (prereq sr or grad, △)
737132 1315-1500 F, BlegH 430, Brown, 1-4 cr

8020 Seminar: Economic Geography (prereq #)
306305 1515-1700 W, BlegH 350, Sheppard, 1-3 cr

8126 Seminar: Historical Geography of Public Lands (prereq 8125)
936609 Squires, 1-3 cr

8400 Seminar: Physical Geography (prereq #)
408594 1315-1500 M, SocSci 307, Brown, 1-3 cr

8970 Directed Readings
618346 1-5 cr

8980 Topics in Geography (prereq △)
333455 –1 1315-1500 W, Mgmt/Econ 160, Porter, 1-3 cr
033457 –2 1415-1600 Th, BlegH 445, Squires, 1-3 cr

8990 Research Problems
218348 ar cr

GEOLOGY AND GEOPHYSICS (Geo)
Institute of Technology

R1001 Physical Geology
◆612658 –1 LECT 0915-1000 MTWF, SmithH 100, Weiblen, 5 cr
◆612661 –2 LECT 1115-1200 MTWF, SmithH 100, Pfannkuch, 5 cr
212663 –1 LAB 0915-1100 M, FordH 180
912665 –2 LAB 1315-1500 M, FordH 185
112669 –3 LAB 1315-1500 M, FordH 180
312671 –4 LAB 0815-1000 T, FordH 185
012673 –5 LAB 0915-1100 T, FordH 180
612675 –6 LAB 1315-1500 T, FordH 185
912679 –7 LAB 1315-1500 T, FordH 180
712683 –8 LAB 1315-1500 W, FordH 185
112686 –9 LAB 1315-1500 W, FordH 180
612689 –10 LAB 1515-1700 W, FordH 185
612692 –11 LAB 0815-1000 Th, FordH 180
112695 –12 LAB 1015-1200 Th, FordH 180
312699 –13 LAB 1015-1200 Th, FordH 185
712702 –14 LAB 1215-1400 Th, FordH 180
133540 –15 LAB 1315-1500 Th, FordH 185
612708 –16 LAB 1515-1700 Th, FordH 180

R1002 Historical Geology (prereq 1001)
★LECT 1215-1300 MWF, PillsH 110, Hartman
212730 –1 LAB 1315-1500 M, FordH 85, 4 cr
912732 –2 LAB 0815-1000 T, FordH 85, 4 cr
312735 –3 LAB 1215-1400 T, FordH 85, 4 cr
612739 –4 LAB 1115-1300 Th, FordH 85, 4 cr

R1005 Geologic Perspectives on Energy
612787 0915-1000 MTWF, Arch 50, Alexander, Shaw, 4 cr

3099 Problems in Geology and Geophysics (prereq #, △)
219905 1-6 cr

R3401 Introductory Mineralogy (prereq 1001 or 1111 or #, 1 qtr college chemistry, Math 1221)
★LECT 1015-1100 MWF, PillsH 110, Zoltai
012768 –1 LAB 0815-1000 MWF, PillsH 100, 5 cr
012771 –2 LAB 1115-1300 MWF, PillsH 100, 5 cr
412774 –3 LAB 1315-1500 MWF, PillsH 100, 5 cr
712778 –4 LAB 1515-1700 MWF, PillsH 100, 5 cr
512782 –5 LAB 1215-1500 TTh, PillsH 100, 5 cr
718404 –6 LAB 0915-1200 TTh, PillsH 100, 5 cr

R5004 Mineralogy (§3401, no geo, geophys, geo-eng, min eng majs; prereq Math 1221, one term college chem, #)
★LECT 1015-1100 MWF, PillsH 110, Zoltai
812786 –1 LAB 1115-1300 MWF, PillsH 100, 4 cr
612790 –2 LAB 1215-1500 TTh, PillsH 100, 4 cr

5099 Senior Thesis (prereq geology or geophysics maj with 4th yr standing, #)
708259 2 cr

R5108 Advanced Environmental Geology (prereq geology core curriculum 1111 through 3103 for maj or #)
519909 0815-1000 TTh, PillsH 121, Pfannkuch, 4 cr

5202 Tectonic Styles (prereq 3103 or #)
933533 1315-1400 MWF, PillsH 121, Hudleston, 3 cr

R5255 Glaciology (prereq Math 3221 or #)
608254 Hooke, 4-5 cr

R5312 General Geochemistry II (prereq 5311, 5452 or #)
112826 1115-1300 TTh, PillsH 207C, Ito, 4 cr

R5315 Stable Isotope Geochemistry (prereq 5312 or #...Chem 5521 rec)
733534 1315-1500 MW, PillsH 207C, Ito, 4 cr

R5501 Geophysical Methods in Geology (prereq 3102, Phys 1291, upper division stu or #)
921267 1115-1200 MWF, PillsH 110, Shaw, 4 cr

R5506 Physics and Chemistry of the Earth II (prereq 1111, Phys 1291...Geo 5505 is not required)
219922 0915-1000 MWF, PillsH 207C, Banerjee, 4 cr

R5512 Principles of Seismic Exploration (§5522; prereq Phys 1291)
412807 1015-1100 TTh, PillsH 110, 1015-1100 F or 1315-1400 F, PillsH 207C, Mooney, 3 cr

R5601 Limnology (§EBB 5601; prereq Chem 1005 or equiv)
533535 0915-1000 MWF, Zoology 102, Megard, 4 cr

R5615 Petroleum Reservoir Geology (prereq 1001 or #)
816563 0815-1000 M, PillsH 110, Pfannkuch, 2 cr

8098 Seminar: Current Topics in Geology and Geophysics (prereq #)
119923 –1 1-6 cr
637656 –2 Hooke, 1-6 cr
438372 –3 Wright, 1-6 cr

8099 Research in Geology and Geophysics (prereq #)
919924 1-6 cr

8262 Quaternary Paleoecology and Climate (prereq 5261 or #)
133537 Wright, 4 cr

8404 X-Ray Crystallography (prereq 8402 or #)
033538 Zoltai, 4 cr

R8453 Phase Equilibrium in Mineral Systems (prereq 5452, Chem 5520, Math 3221)
915923 Stout, 3 cr

R8532 Theory of Elastic Wave Propagation II (prereq 8531)
206779 0815-0900 MWF, PillsH 207C, Mooney, 3 cr

8602 Advanced Limnology (prereq 5601, #)
519926 Shapiro, 3 cr

R8612 Analytical Geohydrology (4 cr with term paper; prereq Math 3221, CE 3400 or #)
019929 0815-1000 WF, PillsH 121, Pfannkuch, 3-4 cr

GERMAN (Ger)
German
Liberal Arts

R1010 Beginning German: Individualized Reading, Listening (first 3 cr must be completed as a unit, max 15 cr, §1101-1102-1103, 1110, 1201-1203, 1210)
205924 –1 1215-1300 W, Arch 25, Baker, 1-15 cr (1st meeting) (addnl hrs ar)
334248 –2 1215-1300 Th, Arch 25, Mueller, 1-15 cr (1st meeting) (addnl hrs ar)

R1101 Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking (§1010, 1110, 1201-1202-1203-1204-1205, 1210)
905926 0815-0900 MTWThF, FolH 304, Brewster, 5 cr

R1102 Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1101)
312833 –1 0915-1000 MTWThF, FolH 50, Steckel, 5 cr
812836 –2 1015-1100 MTWThF, KoltH S136, Peterson, 5 cr
612840 –3 1115-1200 MTWThF, KoltH S136, Stephens, 5 cr
705927 –4 1215-1300 MTWThF, KoltH S132, Wakefield, 5 cr

R1104 Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1103, 15 cr of 1110 or #)
109237 –1 0815-0900 MTWThF, FolH 208, Rauch, 5 cr
809239 –2 1015-1100 MTWThF, KoltH S134, Oberle, 5 cr

R1105 Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1104)
209245 –1 0915-1000 MTWTh, Arch 20, Hennings, 4 cr
709248 –2 1115-1200 MTWTh, KoltH S132, Bryant-Bertail, 4 cr

R1110 Beginning German: Individualized Reading, Listening, Writing (first 3 cr must be completed as one unit, max 15 cr, §1010, 1101-1103, 1201-1203, 1210)
009319 –1 1215-1300 M, Arch 25, Rusch, 1-15 cr (1st meeting) (addnl hrs ar)
109335 –2 1215-1300 T, Arch 25, Nelson, 1-15 cr (1st meeting) (addnl hrs ar)

R1202 Beginning and Intermediate German: Classroom Reading, Listening, Writing (§1010, 1101-1102-1103-1104-1105, 1110, 1210; prereq 1201)
134249 1115-1200 MTWThF, Arch 30, Guidry, 5 cr

R1205 Beginning and Intermediate German: Classroom Reading, Listening, Writing (§1010, 1101-1102-1103-1104-1105, 1110, 1210; prereq 1204)
534250 1015-1100 MTWTh, ChDev 218, 4 cr

1210 Reading and Listening: Independent Study (§1010, 1102-1103-1104, 1110, 1202-1203-1204; prereq 1201)
718354 1215-1300 T, Arch 30, Metcalf, 1-15 cr (1st meeting) (addnl hrs ar)

R3011 Conversation and Composition (prereq 1105 or placement)
318356 1215-1300 MTWF, FolH 107, Achberger, 4 cr

R3012 Conversation and Composition (prereq 3011)
112874 –1 0915-1000 TWThF, FolH 107, Michel, 4 cr
312878 –2 1215-1300 TWThF, FolH 104, Taraba, 4 cr

R3013 Conversation and Composition (prereq 3012)
334251 1315-1400 MTWTh, FolH 104, Brewster, 4 cr

R3015 Conversation and Composition (prereq 3013 or #)
118360 1115-1200 MWF, FolH 108, Weiss, 4 cr

R3021 Business German (prereq 1105 or equiv)
418364 1820-2050 W, FolH 305, Michel, 4 cr

R3104 Reading and Analysis of Prose (prereq 1105 or #)
718368 1115-1200 MWF, FolH 107, Duroche, 4 cr

R3105 Reading and Analysis of Drama and Poetry (prereq 1105 or #)
518372 1015-1100 MWF, FolH 107, Plummer, 4 cr

R3106 Introduction to German Literary Criticism and Theory (prereq 3104 or 3105 or #)
134252 1015-1100 MWF, FolH 204, Brewster, 4 cr

3342 Senior Project in German (prereq #) (A-N only)
713476 2 cr

3342H Senior Project in German (prereq #) (A-N only)
611798 2 cr

R3431 Romanticism (prereq 3104, 3105)
034253 1315-1400 MWF, FolH 204, Schulte-Sasse, 4 cr

R3501 Contemporary Germany (prereq 1 yr of college German or 3 yrs high school German)
834254 0915-1000 TWThF, FolH 209, Hirschbach, 4 cr

R3512 German Civilization and Culture: Reformation to 1800 (prereq 3104, 3105, one additional 3xxx German lit course)
818376 1415-1500 MW, 1415-1600 F, FolH 203, Weiss, 4 cr

3590 Directed Studies: German-Speaking Countries (prereq 3501, #)
105942 5 cr

R3602 German Literature in Translation: Age of Goethe (no knowledge of German req; prereq non maj or minor)
618380 1415-1500 MWF, Phys 131, Achberger, 4 cr

R3604 German Literature in Translation and the Film (no knowledge of German req)
634255 1415-1600 TTh, SciCB 375, Plummer, 4 cr

3970 Directed Studies (prereq 3104 or 3105, #, △, college approval)
305946 1-5 cr

5970 Directed Studies (prereq 3104, 3105, 3 addnl German literature courses, #, △, CLA approval)
005948 1-5 cr

8221 Romanticism
234257 1515-1700 F, FolH 208, Schulte-Sasse, 4 cr

8262 German Literature Since World War II
134258 1515-1700 T, FolH 208, Taraba, 4 cr

8701 Philological Proseminar: Bibliography
934259 1515-1730 W, FolH 208, Firchow, 4 cr

8722 Middle High German Language (prereq 8721)
234260 1245-1400 MW, FolH 304, Firchow, 4 cr

8732 Old High German (prereq 8731)
134261 1515-1700 Th, FolH 208, Liberman, 4 cr

8990 Reading and Research (prereq #)
905957 3-6 cr

GRADUATE SCHOOL (Grad)

0000 Student Status (prereq graduate student)
238311 0 cr

8777 Thesis Credits: Masters (open to graduate students admitted for Fall, 1983 or later)
138312 1-16 cr

8888 Thesis Credits: Doctoral (open to graduate students admitted for Fall, 1983 or later)
938313 1-16 cr

GREEK (Grk)
Classics
Liberal Arts

R1102 Beginning Classical Greek (1101-1102†; prereq 1101)
312900 1215-1300 MTWThF, BuH 125, 5 cr

1120 Individualized Introduction to Biblical Greek (max 15 cr, 2-10 cr in any one qtr, §1101-1102-1103, 1110; prereq #)
106743 1-15 cr

1122H Honors Course: Beginning Classical Greek (prereq 1111H)
811802 0915-1000 MTWThF, FolH 103, Sheets, 5 cr

3052 Beginning Ancient Greek: Accelerated (3051-3052†; prereq 3051)
118097 0915-1000 MTWThF, FolH 103, Sheets, 5 cr

3105 Greek Drama (prereq 1104 or △)
018103 1215-1300 MWF, FolH 52, Hershbell, 5 cr

3456 Advanced Undergraduate Greek: Plato (prereq 3106 or 5 cr of 3120 or 3 yrs high school Greek or △)
533096 1115-1200 MWF, FolH 207, Belfiore, 5 cr

3960H Honors Tutorial (prereq △)
012043 5 cr

3970 Directed Studies (prereq #, △, college approval)
006744 1-5 cr

5390 Greek Literature: Romance (max 12 cr)
333097 1415-1530 TTh, FolH 203, Keuls, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
806745 1-5 cr

5980 Directed Teaching (prereq #, △, CLA approval)
606746 ar cr

5990 Directed Research (prereq #, △, CLA approval)
406747 ar cr

8120 Greek Text Course (prereq 3052 or △)
812920 –1 1115-1200 MWF, FolH 207, Belfiore, 4 cr
436122 –2 1215-1300 MWF, FolH 52, Hershbell, 4 cr

8264 Survey of Greek Literature: Archaic (prereq 5012)
133098 1515-1700 W, FolH 207, Belfiore, 4 cr

8910 Seminar
638225 1515-1700 Th, FolH 204, 4 cr

HEALTH SCIENCE UNITS (HSU)
Health Sciences

R5008 Social and Psychological Aspects of Physical Disability
819611 1615-1800 TTh, MoosT 2580, Athelstan, Crewe, 4 cr

R5013 Systems Approach to Design of Instruction (§CISy 5201)
219614 1615-1815 W, PeikH 33, Tennyson, 3 cr

R5017 Written Communication Skills for Health Professionals (prereq knowledge of medical terminology, upper div students, students in prof degree prog)
719617 1815-2100 W, MoosT 2571, Maneval, Garloff, 4 cr

R5018 Computer Applications for Health Care Providers (§LMed 5346; prereq health exper or current enrollment in health studies; # for others)
006016 1615-1900 T, MoosT 2530, Gatewood, 3-4 cr

R5024 Human Interaction Laboratory for Health Professionals (§PubH 5851)
406022 1615-1800 W, PWB 5224, Ayers, 4 cr (lab ar)

R5026 Program Evaluation in Health and Mental Health Settings (prereq PubH 5414 or equiv basic statistics course)
619626 1515-1700 MW, HSUnitF 2120, 2130, Garrard, 4 cr

R5027 Human Sexuality for the Health and Helping Professionals II (prereq completion of human sexuality for health and helping professional I or #)
419630 1715-1930 Th, MoosT 2530, Maddock, Larson, others, 3 cr

R5029 Humanistic Case Studies in Health Care
606018 1830-2100 W, HSUnitF 2110, 2140, Galle, 3 cr

R5035 Contriubutors to Alcohol and Drug Problems (§PubH 5035)
806020 1415-1630 T, Mayo 1210, Kincannon, 3 cr

R5039 Alcohol and Drug Problems: Assessment and Response (§PubH 5039; prereq PubH 5035 or #)
119632 1415-1630 W, Mayo 1210, Kincannon, 3 cr

R5040 Dying and Death in Contemporary Society (§Hlth 5402; prereq educ sr, lic tchr, hlth sci maj, mort sci maj, sch or pubh nurs or #)
519635 1615-1800 M, 1615-1700 W, JacH 2135, Slater, Rothenberger, 3 cr

5210 Terminology of the Health Sciences (§Phar 5210)
919633 Bast, 2 cr

HEBREW (Hebr)
Near And Middle Eastern Studies
Liberal Arts

R1013 Beginning Hebrew for Students with Prior Exposure (prereq 1012)
817941 1315-1400 MTWThF, Arch 30, 5 cr

R1102 Beginning Hebrew (prereq 1101)
112955 1215-1300 MTWThF, FolH 207, 5 cr

R1105 Introduction to Biblical Hebrew (prereq 1104)
117945 1615-1800 TTh, FolH 104, 5 cr

R3012 Intermediate Hebrew (prereq 3011)
317949 1115-1200 MTWThF, FolH 104, 5 cr

R3016 Advanced Modern Hebrew (prereq 3015)
117953 1315-1400 MWF, FolH 103, 4 cr

R3112 Rabbinical Texts (prereq 3111)
133182 1415-1530 TTh, FolH 104, Zahavy, 4 cr

R3202 Readings in Biblical Hebrew (prereq 1103 or 1104 or #)
004654 1615-1800 MW, FolH 107, 4 cr

R3205 A Book of the Bible (prereq 3013 or #)
206670 0915-1000 MWF, FolH 104, Paradise, 4 cr

3205H A Book of the Bible (prereq 3013 or #)
017632 0915-1000 MWF, FolH 104, Paradise, 4 cr

3301 Modern Hebrew Essay (prereq 3017 or #)
333181 0915-1000 MWF, FolH 203, Reisman, 4 cr

3980 Directed Instruction (prereq #, △, college approval)
417957 1-5 cr

5970 Directed Readings (prereq 3013, #, △, CLA approval)
217961 ar cr

R5990H Honors Course: Research (prereq 5970, #, △, CLA approval)
411804 ar cr

HIGHER EDUCATION (HiEd)
Educational Policy And Administration
Education

5540 Seminar: The College Student (§CSPP 5540, PsyS 5540; prereq 6 cr in psychology or educational psychology) (A-N only)
136625 1815-2030 M, BuH 123, Rest, 3 cr

8228 Problems: Higher Education (§EdAd 8228; prereq #)
308197 ar cr

8230 Seminar: Dissertation Research in Higher Education (prereq #)
708200 1615-1800 M, BuH 240, Kellogg, Hearn, 1 cr

8250 The Higher Education Institution: Organization and Environment (§Educ 8250; prereq 5250 or EdAd 5250)
805269 1515-1700 T, BuH 125, Hearn, 3 cr

8251 Development and Evaluation of Academic Programs (§Educ 8251; prereq 5250 or EdAd 5250)
133165 1615-1800 Th, BuH 240, Kellogg, 3 cr

HINDI (Hndi)
South And Southwest Asian Studies
Liberal Arts

1102 Beginning Hindi (prereq 1101)
118827 –1 1315-1400 MTWThF, FolH 52, Staneslow, 5 cr
236574 –2 1615-1800 MTh, 1615-1700 W, FolH 52, Staneslow, 5 cr

5132 Intermediate Hindi (§3032; prereq 5131)
318843 1415-1500 MTWThF, FolH 52, 5 cr

5162 Advanced Hindi (prereq 5161)
018845 Munda, 4 cr

5970 Directed Readings (prereq #, △, CLA approval)
218852 Staneslow, ar cr

5990 Directed Research (prereq #, △, CLA approval)
518856 Staneslow, ar cr

8990 Directed Research (prereq #)
118858 1015-1100 MF, KlaCt 186, Staneslow, ar cr

HISTORY (Hist)
Liberal Arts

R1002 Introduction to Modern European History Since the Middle Ages (§1002H, 3002, not open to jrs, srs)
★LECT 0945-1030 TTh, WilleyH 125, Kieft
513009 –1 REC 0915-1000 M, Law 15, 4 cr
713011 –2 REC 0915-1000 M, Law 35, 4 cr
013015 –3 REC 1215-1300 M, BlegH 415, 4 cr
213019 –4 REC 0815-0900 T, BlegH 125, 4 cr
113023 –5 REC 1115-1200 T, BlegH 120, 4 cr
513026 –6 REC 1115-1200 T, RarigC 610, 4 cr
013029 –7 REC 1215-1300 T, BlegH 230, 4 cr
013032 –8 REC 0815-0900 W, BlegH 260, 4 cr
413035 –9 REC 0915-1000 W, BlegH 350, 4 cr
713039 –10 REC 0915-1000 W, RarigC 616, 4 cr
513043 –11 REC 0815-0900 Th, BlegH 125, 4 cr
113045 –12 REC 1315-1400 Th, RarigC 616, 4 cr
600882 –13 REC 0815-0900 F, BlegH 260, 4 cr

R1002H Honors Course: Introduction to Modern European History Since the Middle Ages (§1002, 3002, not open to jrs, srs; prereq #)
★LECT 0945-1030 TTh, WilleyH 125, Kieft
511809 –80 REC 1315-1400 Th, Mgmt/Econ 160, Kieft, 4 cr

R1052 Ancient Civilization (§3052)
★LECT 1215-1300 MWF, BlegH 10, Kelly
413052 –1 REC 1015-1100 Th, BlegH 330, 4 cr
113054 –2 REC 1215-1300 Th, BlegH 350, 4 cr
313058 –3 REC 0915-1000 F, AndH 230, 4 cr
113062 –4 REC 1115-1200 F, BlegH 130, 4 cr

R1101 Introduction to Medieval History
★LECT 1015-1100 MWF, BlegH 10, Bachrach
509588 –1 REC 1215-1300 M, BlegH 105, 4 cr
009594 –2 REC 1115-1200 T, BlegH 255, 4 cr
609601 –3 REC 1315-1400 T, BlegH 330, 4 cr
010406 –4 REC 1115-1200 Th, BlegH 210, 4 cr
810410 –5 REC 1315-1400 Th, BlegH 105, 4 cr
610408 –6 REC 1215-1300 F, BlegH 225, 4 cr

R1152 English History from the 17th Century to the Present (§3152)
★LECT 1115-1200 MWF, AndH 250, Lehmberg
333598 –1 REC 1115-1200 T, Law 3, 4 cr
133599 –2 REC 0815-0900 F, SocSci 628, 4 cr
933600 –3 REC 1215-1300 F, SocSci 628, 4 cr

R1301 American History (§1301H)
★LECT 1115-1200 MWF, WilleyH 175, Menard
413083 –1 REC 0815-0900 M, BlegH 205, 4 cr
713087 –2 REC 1215-1300 M, BlegH 205, 4 cr
313089 –3 REC 1215-1300 M, BlegH 115, 4 cr
113093 –4 REC 0815-0900 T, BlegH 115, 4 cr
413097 –5 REC 1115-1200 T, BlegH 210, 4 cr
613101 –6 REC 1215-1300 T, BlegH 360, 4 cr
913105 –7 REC 0815-0900 W, BlegH 360, 4 cr
513107 –8 REC 1015-1100 W, RarigC 610, 4 cr
313111 –9 REC 1215-1300 W, BlegH 425, 4 cr
613115 –10 REC 1215-1300 W, BlegH 330, 4 cr
213117 –11 REC 1315-1400 T, BlegH 255, 4 cr
913119 –12 REC 0815-0900 Th, BlegH 260, 4 cr
913122 –13 REC 1115-1200 Th, BlegH 120, 4 cr
331673 –14 REC 1215-1300 Th, BlegH 340, 4 cr
131674 –15 REC 0815-0900 F, BlegH 350, 4 cr
831676 –16 REC 1215-1300 F, SocSci 307, 4 cr

R1301H Honors Course: American History (§1301; prereq #)
★LECT 1115-1200 MWF, WilleyH 175, Menard
311813 –80 REC 1315-1500 T, BlegH 110, Menard, 4 cr

R1302 American History (§1302H)
★LECT 0915-1000 MWF, WilleyH 125
509526 –1 REC 0815-0900 M, BlegH 360, 4 cr
913136 –2 REC 1015-1100 M, BlegH 350, 4 cr
713140 –3 REC 1215-1300 M, BlegH 330, 4 cr
013144 –4 REC 0815-0900 T, BlegH 255, 4 cr
613146 –5 REC 1015-1100 T, BlegH 330, 4 cr
413150 –6 REC 1215-1300 T, BlegH 350, 4 cr
913153 –7 REC 0815-0900 W, BlegH 340, 4 cr
513155 –8 REC 1215-1300 W, BlegH 415, 4 cr
113157 –9 REC 0815-0900 Th, BlegH 360, 4 cr
813159 –10 REC 1015-1100 Th, Law 35, 4 cr
013161 –11 REC 1215-1300 Th, BlegH 360, 4 cr
613163 –12 REC 0815-0900 F, BlegH 360, 4 cr
213165 –13 REC 1015-1100 F, Mgmt/Econ 128, 4 cr
913167 –14 REC 1215-1300 F, RarigC 616, 4 cr

R1302H Honors Course: American History (§1302; prereq #)
★LECT 0915-1000 MWF, WilleyH 125
611817 –80 REC 1315-1500 M, BlegH 350, 4 cr

R1402 Survey of Latin American History: 1800-1929 (§3402)
★LECT 1115-1230 TTh, AndH 270
313173 –1 REC 1115-1200 M, BlegH 350, 4 cr
613177 –2 REC 1245-1330 T, RarigC 616, 4 cr

1432 History of Africa: 1800 to Present (§3432)
318521 1115-1230 TTh, BlegH 420, Isaacman, 4 cr

1462 Introduction to East Asia: The Imperial Age (§3462, EAS 1462)
133604 1315-1400 MWF, BlegH 105, Farmer, Marshall, 4 cr

R1952 World Military History: A Survey (§Mil 1012)
618525 0815-0900 TTh, Armory 116, Westhaus, 2 cr

1958 Allied Airpower in World War II and the Berlin Airlift (§Air 1205; prereq #)
409647 –1 0815-0945 TTh, Armory 12, Holden, 2 cr
209651 –2 1115-1245 TTh, Armory 12, Holden, 2 cr

R3002 Introduction to Modern European History Since the Middle Ages (§1002, 1002H)
★LECT 0945-1030 TTh, WilleyH 125, Kieft
113202 –1 REC 0915-1000 M, Mgmt/Econ 130, 4 cr
513205 –2 REC 0815-0900 T, BlegH 260, 4 cr
113207 –3 REC 0815-0900 T, BlegH 360, 4 cr
900886 –4 REC 1215-1300 T, BlegH 340, 4 cr
700887 –5 REC 1115-1200 Th, BlegH 255, 4 cr
633641 –6 REC 1315-1400 Th, BlegH 340, 4 cr

3032 Medicine, Disease in History (§HMed 3002)
218527 0915-1000 MWF, OwreH 2210, Eyler, 4 cr

R3052 Ancient Civilization (§1052)
★LECT 1215-1300 MWF, BlegH 10, Kelly
813212 –1 REC 1315-1400 Th, BlegH 330, 4 cr
113216 –2 REC 1115-1200 F, Law 3, 4 cr

R3152 English History from the 17th Century to the Present (§1152)
★LECT 1115-1200 MWF, AndH 250, Lehmberg
733601 –1 REC 0815-0900 W, BlegH 350, 4 cr
533602 –2 REC 1215-1300 W, BlegH 210, 4 cr
333603 –3 REC 1115-1200 Th, SocSci 628, 4 cr

3200 Selected Contemporary Problems in Historical Perspectives: Revolution in the Third World: China, Cuba, Southern Africa
506979 0945-1100 TTh, BlegH 350, Isaacman, 4 cr

3245 History of Eastern Europe: 19th and 20th Centuries
033605 1115-1230 TTh, BlegH 245, Rudolph, 4 cr

3271 The Vikings at Home and Away
833606 0815-0900 MWF, BlegH 130, Metcalf, 4 cr

3282 Intellectual and Cultural History of Modern Europe
137001 1215-1300 MWF, BlegH 255, Thayer, 4 cr

3348 Women in Modern America: 1890-1980
633607 0945-1100 TTh, AndH 330, S Evans, 4 cr

R3402 Survey of Latin American History: 1800-1929 (§1402)
★LECT 1115-1230 TTh, AndH 270
613244 –1 REC 0815-0900 T, BlegH 340, 4 cr
913248 –2 REC 1115-1200 W, BlegH 335, 4 cr
713252 –3 REC 1245-1330 Th, Law 35, 4 cr
013256 –4 REC 1115-1200 F, RarigC 616, 4 cr

3424 History of Mexico: Pre-Columbian Period Through Independence
433608 1015-1100 MWF, BlegH 150, Schwartz, 4 cr

3427 History of Cuba and Puerto Rico (§Chic 3427)
233609 1115-1200 MWF, BlegH 255, Valdes, 4 cr

3432 History of Africa: 1800 to Present (§1432)
918532 1115-1230 TTh, BlegH 420, Isaacman, 4 cr

3442 Survey of Chicano History, 1900 to Present (§Chic 3442)
937002 0915-1000 MWF, BlegH 205, Valdes, 4 cr

3462 Introduction to East Asia: The Imperial Age (§1462, EAS 1462)
433611 1315-1400 MWF, BlegH 105, Farmer, Marshall, 4 cr

3467 The Nationalist Revolution in China, 1900 to Present (§5467)
233612 0945-1100 TTh, BlegH 255, Farmer, 4 cr

3471 Twentieth Century Japan (§5471)
133613 1115-1200 MWF, BlegH 205, Marshall, 4 cr

3505 Survey of the Middle East (§MESA 3505, 5505)
737003 1015-1100 MWF, BlegH 245, Farah, 4 cr

3509 Military History: Ancient World
733615 1115-1200 MWF, BlegH 115, Kelly, 4 cr

3542 History of the Arabs (§MESA 3542)
533616 0915-1000 MWF, BlegH 110, Farah, 4 cr

3621 Renaissance Italy, 1200-1530
333617 0815-0930 TTh, BlegH 205, Tracy, 4 cr

3632 History of Germany: Absolutism and Revolution, 1648-1848
106998 0945-1100 TTh, BlegH 155, Maynes, 4 cr

3636 Russian History from the Origins to the Present: Part I
335691 1115-1200 MWF, BlegH 105, Noonan, 4 cr

3652 England in the Age of Elizabeth I
118536 0945-1100 TTh, BlegH 235, Lehmberg, 4 cr

3708 Social and Economic History of Modern Europe
133618 0945-1100 TTh, BlegH 225, Rudolph, 4 cr

3722 Europe in the Era of World War II (§3224)
618539 0915-1000 MWF, AndH 350, Munholland, 4 cr

3748 The Austrian Republic From World War I to Present
818541 1315-1430 TTh, BlegH 215, Wright, 4 cr

3755 History of Italy: the Period of Spanish Dominion, 1559-1713
418543 0915-1000 MWF, BlegH 105, Thayer, 4 cr

3822 United States in the 20th Century: 1917-1945
033619 1015-1100 MWF, AndH 270, Spear, 4 cr

3837 Minnesota History
537004 1115-1200 MWF, BlegH 120, Spear, 4 cr

3844 American Economic History, Colonial to Civil War
333620 0815-0900 MWF, BlegH 105, Green, 4 cr

3851 American Labor History in the 19th Century
133621 1015-1100 MWF, BlegH 260, Berman, 4 cr

3864 Afro-American History (§Afro 3864)
637012 0945-1100 TTh, Law 1, Lewis, 4 cr

3867 American Jewish History
337005 0915-1000 MWF, BlegH 420, Berman, 4 cr

3871 American Indian History from Mid-15th Century to 1850 (§AmIn 3111)
437013 1015-1100 MWF, BlegH 205, Anfinson, 4 cr

3882 History of American Foreign Relations
033622 1115-1200 MWF, AndH 370, Brauer, 4 cr

3910 Topics in American History: The University in American Intellectual Life, 1865 to the Present
137006 0915-1000 MWF, BlegH 260, Grossman, 4 cr

3951H Honors Course: History (3951H-3952H†; prereq honors candidacy in history, #)
211819 1315-1500 M, Mgmt/Econ 128, Menard, 4 cr

R3955 Introduction to Writing History (prereq △)
613292 –1 1315-1500 M, Mgmt/Econ 130, Metcalf, 4 cr
413245 –2 1315-1500 T, BlegH 105, 4 cr

3960 Internship (prereq #, △, college approval)
636359 4-5 cr

3961 Major Paper (prereq △)
618556 1215-1300 MW, SocSci 710, Vecoli, 5 cr

3970 Directed Study (prereq #, △, college approval)
418560 1-15 cr

3990 Directed Research (prereq #, △, college approval)
718564 1-15 cr

5051 Ancient Near East
138138 1245-1400 TTh, Mgmt/Econ 136, Jones, 4 cr

5071 History of Rome
833623 0945-1100 TTh, BlegH 120, J Evans, 4 cr

5231 Modern France from 1848 to DeGaulle
633624 1215-1300 MWF, BlegH 250, Munholland, 4 cr

5265 Modern Russia: 19th Century
713249 1015-1100 MWF, BlegH 120, Stavrou, 4 cr

5285 Diplomatic History of Europe, 1871-1918
918577 1115-1230 TTh, AndH 330, Kieft, 4 cr

5332 American Constitutional History
433625 1015-1100 MWF, BlegH 115, Murphy, 4 cr

5337 Criminal Justice in American History (prereq jr, sr or grad)
109716 0815-0930 TTh, BlegH 240, Samaha, 4 cr

5467 The Nationalist Revolution in China, 1900 to Present (§3467)
233626 0945-1100 TTh, BlegH 255, Farmer, 4 cr

5471 Twentieth Century Japan (§3471)
133627 1115-1200 MWF, BlegH 205, Marshall, 5 cr

5550 Topics in South Asian History
737809 1315-1500 T, BlegH 340, Lelyveld, 4 cr

5572 Proseminar: Roman History (5571-5572-5573†; prereq 5571)
933628 J Evans, 3 cr

5625 Proseminar: The German Reformation (prereq #)
037007 1315-1500 T, BlegH 350, Tracy, 3 cr

5745 Proseminar: Topics in Modern German History (prereq 5744)
733629 1315-1500 Th, SocSci 628, Maynes, 3 cr

5778 Proseminar: History of the Habsburg Monarchy (5777-5778†, §8245; prereq 5777)
807037 1515-1700 Th, SocSci 628, Rath, Wright, 4 cr

5806 Proseminar: Jacksonian America (prereq #)
933631 1315-1500 W, SocSci 628, Howe, 4 cr

R5821 Proseminar: American History in 20th Century (5821-5822†; prereq #)
733632 1315-1500 T, SocSci 1383, Chambers, 4 cr

5832 Proseminar: American Political and Constitutional History (5831-5832†; prereq 5831)
207043 1515-1700 W, Law 3, Murphy, 4 cr

5858 Proseminar: Social History of American Women (5857-5858†; prereq 5857, #)
533633 1315-1600 T, SocSci 628, S Evans, 4 cr

5861 Proseminar: History of American Immigration (5861-5862†; prereq #)
333634 1515-1700 Th, Mgmt/Econ 136, Vecoli, 4 cr

5882 Proseminar: American Foreign Relations (prereq #)
133635 1315-1500 F, SocSci 628, Brauer, 4 cr

5902 Proseminar: Latin American History (prereq reading knowledge of Span, #)
033636 1415-1600 Th, BlegH 115, Schwartz, 4 cr

5939 Proseminar: Methodology for the Study of African History (prereq #)
833637 1315-1500 W, BlegH 330, Isaacman, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
718600 1-15 cr

5990 Directed Research (prereq #, △, CLA approval)
018604 1-15 cr

8142 Medieval French History (8141-8142-8143†; prereq 8141)
633638 1315-1530 W, SocSci 680, Bachrach, 3 cr

8150 Seminar: English History (prereq #)
838529 1315-1500 M, Mgmt/Econ 160, 3 cr

8245 History of Habsburg Monarchy (8244-8245†, §5778; prereq 8244)
218608 1515-1700 Th, SocSci 628, Rath, Wright, 3 cr

8501 Archives Practicum (prereq #)
229026 Klaasen, 4 cr

8970 Directed Studies (prereq #)
418610 1-15 cr

8990 Directed Research (prereq #)
118612 1-15 cr

HISTORY OF MEDICINE (HMed)
Medical School

3002 Doctors and Disease in History (§Hist 3032, primarily for CLA students)
919325 0915-1000 MWF, OwreH 2210, Eyler, 4 cr

5411 Seminar: Emergence of Modern Medicine 1750-1900 (prereq 3001, 3002, 3003, Hist 3031, 3032, 3033 or 5400, 5401, 5402)
419319 Wilson, 3 cr

8231 Readings: History of Science
119315 Wilson, 3 cr

8631 Directed Study (prereq #)
519313 Wilson, 3-15 cr

HISTORY OF SCIENCE AND TECHNOLOGY (HSci)
Liberal Arts

R1712 Technology and Western Civilization: Renaissance to Industrial Revolution (§3712)
★LECT 1315-1400 MWF, Phys 131, Layton
813372 –1 REC 1315-1400 T, FordH 160, 4 cr
413374 –2 REC 1015-1100 W, NichH 122, 4 cr
713378 –3 REC 1215-1300 W, FordH 160, 4 cr
513382 –4 REC 1215-1300 Th, Phys 157, 4 cr
534281 –5 REC 1415-1500 Th, LindH 315, 4 cr
134283 –6 REC 1115-1200 F, Phys 236A, 4 cr

R1812 Introduction to History of Science: The Scientific Revolution (§3812)
★LECT 0915-1000 MWF, Arch 25, Shapiro
413388 –1 REC 1015-1100 M, Arch 15, 4 cr
413391 –2 REC 0915-1000 T, LindH 340, 4 cr
713395 –3 REC 1315-1400 W, FordH 160, 4 cr
013399 –4 REC 0915-1000 Th, MinMet 124, 4 cr
834285 –5 REC 1115-1200 Th, SmithH 111, 4 cr
634286 –6 REC 1215-1300 F, FordH 160, 4 cr

R3712 Technology and Western Civilization: Renaissance to Industrial Revolution (§1712)
★LECT 1315-1400 MWF, Phys 131, Layton
413407 –1 REC 1315-1400 T, FordH 160, 4 cr
413410 –2 REC 1015-1100 W, NichH 122, 4 cr
713414 –3 REC 1215-1300 W, FordH 160, 4 cr
013418 –4 REC 1215-1300 Th, Phys 157, 4 cr
434287 –5 REC 1415-1500 Th, LindH 315, 4 cr
234288 –6 REC 1115-1200 F, Phys 236A, 4 cr

R3812 Introduction to History of Science: The Scientific Revolution (§1812)
★LECT 0915-1000 MWF, Arch 25, Shapiro
413424 –1 REC 1015-1100 M, Arch 15, 4 cr
713428 –2 REC 0915-1000 T, LindH 340, 4 cr
513432 –3 REC 1315-1400 W, FordH 160, 4 cr
013435 –4 REC 0915-1000 Th, MinMet 124, 4 cr
134289 –5 REC 1115-1200 Th, SmithH 111, 4 cr
434290 –6 REC 1215-1300 F, FordH 160, 4 cr

5242 Evolution Before and After Darwin (prereq Biol 1009 or 1101 or #)
234291 1245-1400 TTh, Arch 60, Kottler, 4 cr

5321 History of Computing
135692 1415-1530 TTh, VinH 206, Norberg, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
719228 1-15 cr

5990 Directed Research (prereq #, △, CLA approval)
706561 1-15 cr

8970 Directed Study (max 15 cr; prereq #)
306563 1-5 cr

8990 Directed Research (max 15 cr; prereq #)
006565 1-5 cr

HOME ECONOMICS (HE)
Home Economics

3010 International Topics Seminar (S-N only)
837686 1500-1630 T, McNH 274, Grindereng, others, 1 cr

HOME ECONOMICS EDUCATION (HEEd)
Vocational And Technical Education Education

1500 Introduction to Home Economics Education (prereq soph) (A-N only)
117413 1200-1330 T, VoTech R380, McClelland, 2 cr

1510 Knowledge and Values in Teaching (prereq 1500 or #) (A-N only)
117421 1345-1430 T, 1200-1430 Th, VoTech R370, R380, Plihal, 4 cr

3601 Clinical Experience (prereq 3620, ¶3611, △) (S-N only)
206023 0900-1200 MTWThF, 1300-1600 MTWThF, VoTech 325A, Plihal, others, 3-18 cr

3611 Field Work (prereq 3620, ¶3601, △) (S-N only)
906025 0900-1200 MTWThF, 1300-1600 MTWThF, VoTech 325A, Plihal, others, 3 cr

3910 Educational Methods for Home Economists (S-N optional; prereq jr, non HEEd maj)
825814 0900-1030 TTh, VoTech R380, Olson, 3 cr

R5023 Extension Methods for Developing Countries (§AgEd 5023) (A-N only)
317465 1500-1730 M, VoTech 320A, Marvin, 3 cr

R5025 Extension Program Development (§AgEd 5025) (A-N only)
517481 1000-1100 T, 1000-1200 Th, VoTech 320A, Anderson, 3 cr

R5027 Practicum: Placement for Extension Experiences (max 9 cr, S-N optional, §HEEd 3605 or AgEd 5027)
117489 Norenberg, 2-9 cr

5102 Service Occupations Work Experience (max 12 cr, §5336; prereq #) (S-N optional)
506027 McClelland, 3-6 cr

5106 Coordination Techniques for Service Occupations (A-N only)
134034 1600-1830 W, VoTech R285, Ashmun, 3 cr

5200 Seminar: Working with Youth Through Adults (max 9 cr including AgEd 5200 and YoSt 5200; prereq △) (S-N optional)
521398 Olson, 1-3 cr

5300 Home Economics Curriculum (A-N only)
506030 1600-1830 M, VoTech R380, Thomas, 3 cr

5315 Evaluation: Theoretical and Technical Aspects (A-N only)
436797 1600-1830 T, VoTech R380, Rossmann, 3 cr

5440 Computer Applications in Home Economics (A-N only)
236798 1600-1830 W, VoTech 230, McClelland, 3 cr

5600 Practicum: Adult Education (prereq #) (A-N only)
117492 1600-1745 Th, VoTech R370, Cooke, 3 cr

8530 Seminar: Home Economics Education (max 3 cr)
136799 1900-2100 M, VoTech R370, 1 cr

HORTICULTURAL SCIENCE (Hort)
Agriculture

R1015 Applying Microcomputers to Horticulture (prereq #) (A-N only)
138091 0900-0945 MW, AlderH 415, Markhart, 3 cr

R1036 Plant Propagation (prereq 1100 or ¶)
★LECT 1100-1145 TTh, AlderH 310, Read
413472 –1 LAB 1200-1430 Th, HrG 172, Read, 4 cr
913475 –2 LAB 1430-1700 Th, HrG 172, Read, 4 cr

R1100 Biology of Horticultural Production (prereq Biol 1103)
★LECT 1300-1445 MF, HrG 172, Mullin, 4 cr
625815 –1 REC 1300-1345 W, AlderH 310

R3026 Residential Landscape Design (prereq 1021, LA 1025 or Ind 1600)
116110 1400-1645 MW, AlderH 423, Hard, 4 cr

R3053 Ornamentals for Interior Design
816112 0800-1045 TTh, HrG 172, Brown, 4 cr

3097 Horticulture Practicum (prereq upper division horticulture maj)
416114 4 cr

3098 Undergraduate Research Project (prereq 8 cr upper division horticulture courses)
116116 2-6 cr

3099 Seminar (max 2 cr; prereq jr)
716118 1100-1145 TTh, AlderH 415, Desborough, 1 cr

5000 Professional Experience Program (prereq #) (S-N only)
916120 4 cr

5034 Commercial Vegetable Production: Tuber, Bulb, Root Crops (prereq 1016, 1036, Soil 1122 or #)
909930 0900-1045 MW, HrG 172, Davis, 3 cr

5036 Topics: Optimizing Horticultural Food Production (prereq 3031 or 5034 or 5035)
509932 1200-1245 Th, AlderH 394, Davis, 1 cr

5038 Research Methods in Plant Propagation (prereq 1036 or #)
516122 1400-1645 T, HrG 172, Read, 3 cr

5040 Plant Growth Regulators (prereq 15 cr plant sciences including 3 cr plant physiology)
116124 1300-1345 MWF, AlderH 415, Brenner, 3 cr

5053 Commercial Floriculture, Winter Crops (prereq Biol 1103, PlPh 3091 or #)
216129 1100-1145 MWF, 1400-1645 Th, AlderH 423, Wilkins, 4 cr

5091 Special Problems (prereq #)
116133 1-4 cr

8007 Extension Horticulture Practicum (max 6 cr; prereq 12 grad cr)
316137 Hertz, 1-5 cr

8041 Discussions in Administration Organization
106041 Bartz, 2 cr

8042 Horticultural Seminar (prereq 9 cr in horticulture)
816143 1600-1645 W, AlderH 415, Hackett, 1 cr

8045 Plant Hardiness (prereq 15 cr plant sciences including 6 cr in plant physiology plus 6 cr in biochemistry)
234243 1000-1045 MWF, St. Paul, Carter, 3 cr

8051 Advanced Problems in Horticultural Crop Breeding (prereq #)
916148 3-9 cr

8052 Advanced Problems in Physiology of Horticultural Crops (prereq #)
716152 3-9 cr

8060 Discussions in Potato Research
016156 Lauer, 1 cr

8061 Discussions in Incompatibility (prereq #)
816160 Ascher, 1 cr

8062 Discussions in Plant Hardiness (prereq #)
116164 Li, 1 cr

8063 Discussions in Plant Breeding (prereq #)
316168 Davis, 1 cr

8064 Discussions in Floricultural Science (prereq #)
116172 Widmer, 1 cr

8065 Discussions in Postharvest Physiology (prereq #)
416176 Wilkins, 1 cr

8066 Discussions in Horticulture Research (prereq #)
216180 Stadelmann, 1 cr

HUMANITIES (Hum)
Liberal Arts

R1001 Humanities in the Modern World I (§3001, Rhet 1301)
613535 –1 1015-1100 MTWTh, FordH 55, Mowitt, 5 cr
113538 –2 1115-1200 MTWTh, FordH 55, Powell, 5 cr
506044 –3 1415-1600 TTh, MurH 105, Leppert, 5 cr
414234 –4 1015-1100 MTWTh, FordH 55, Mowitt, 5 cr (business and pre-business majs only)
214235 –5 1115-1200 MTWTh, FordH 55, Powell, 5 cr (business and pre-business majs only)
134308 –6 1415-1600 TTh, MurH 105, Leppert, 5 cr (business and pre-business majs only)

R1002 Humanities in the Modern World II (§3002, Rhet 1302)
918384 –1 1415-1500 MTWTh, FordH 55, Powell, 5 cr
914237 –2 1415-1500 MTWTh, FordH 55, Powell, 5 cr (business and pre-business majs only)

R1003 Humanities in the Modern World III (§3003, Rhet 1303)
306045 –1 1415-1500 MTWTh, FordH 155, Tapp, 5 cr
714238 –2 1415-1500 MTWTh, FordH 155, Tapp, 5 cr (business and pre-business majs only)

1301 Life of the Mind: Introduction to Methods in the Humanities
106046 –1 0915-1000 MTWTh, FordH 160, Cromwell, 5 cr
006047 –2 1115-1200 MTWTh, FordH 150, Cromwell, 5 cr
806048 –3 1415-1500 MTWTh, FordH 150, Mowitt, 5 cr
606049 –4 0915-1100 TTh, FordH 115, Brown, 5 cr
934309 –5 1315-1500 TTh, FordH 170, Thomas, 5 cr

3004 Humanities in the Modern World (§1004, Rhet 3381)
234310 1315-1500 TTh, FordH 115, Kliger, 5 cr

3113 European Heritage: Rome (prereq jr or sr)
406053 1015-1100 MTWTh, FordH 160, Erickson, 5 cr

3119 European Heritage: The Age of the Baroque
134311 0915-1100 TTh, FordH 120, Thomas, 5 cr

3202 The Heritage of China II: Medieval to Modern (§Chn 3202)
934312 1015-1100 MTWTh, FolH 209, Huters, 5 cr

3211 The Heritage of India (§Indc 3501)
734313 1215-1400 TTh, FordH 150, Lincoln, 5 cr

3625 Science and the Humanities (prereq jr or sr or #)
534314 1115-1300 TTh, FordH 349, D'Andrea, 5 cr

3910 Topics in the Humanities: Isaac Bashevis Singer and the Shtetl: A Way of Life and Its Literature (prereq jr, sr or #)
436699 1015-1200 MW, FordH 50, Michel, 4 cr

3944H Honors Thesis (prereq sr, candidate for magna or summa honors in humanities, △)
517853 4 cr

3970 Directed Studies (prereq #, △, college approval)
418400 ar cr

R5243 Art and Ideology: Living Cinema (§CLit 5243)
834318 1415-1600 WF, MurH 105, Bensmaia, 4 cr

5711 Interpretation of Myth (§RelS 5111; prereq jr or sr or #)
334315 1415-1530 TTh, FordH 285, Lincoln, 4 cr

R5910 Topics in the Humanities (prereq jr, sr or grad)
134316 –1 1015-1200 MW, FordH 50, Michel, 4 cr (Isaac Bashevis Singer and the Shtetl: A Way of Life and Its Literature)
136700 –2 1415-1600 M, FordH 70, Schulte-Sasse, 4 cr (Modernism, Avant-garde, Post Modernism)

R5930 Humanities Proseminar (prereq sr)
006064 –1 1415-1600 T, FordH 50, D'Andrea, 3 cr (Moral Vision in Contemporary American Theatre)
806065 –2 1315-1500 W, FordH 50, Kliger, 3 cr (The Aesthetics and Art of Symbolism)

INDUSTRIAL EDUCATION (Ind)
Vocational And Technical Education
Education

1400 Industrial Technology in Society (A–N only)
106130 1400-1545 Th, VoTech R280, Cote, 3 cr (1 hr ar)

R1600 Drafting (A–N only)
504634 1200-1345 MWF, VoTech 110, 3 cr

R1602 Drawing and Design (prereq 1600 or #) (A–N only)
717494 1400-1545 MWF, VoTech 110, Quistad, 3 cr

R1610 Construction Technology I (prereq 1600, 1604, 1606) (A–N only)
317496 0800-0945 MWF, VoTech 120, Donnerberg, 3 cr

R1620 Graphic Communications I (prereq 1600, Math 1111) (A–N only)
517500 1300-1545 TTh, VoTech 110, Weber, 3 cr

R1622 Graphic Communications II (prereq 1620) (A–N only)
117502 0800-0945 MWF, VoTech 110, Weber, 3 cr

R1632 Manufacturing II, Production (prereq 1602, 1630) (A–N only)
736627 1300-1545 TTh, VoTech 130, Summers, 3 cr

R1640 Introduction to Power and Energy (prereq 1604, Phys 1014, 1015 or GC 1163, 1451, Math 1111 or 1131) (A–N only)
006131 1000-1145 MWF, VoTech 139, Druker, 3 cr

R1652 Transportation II (prereq 1650) (A–N only)
217507 0900-1145 TTh, VoTech 140, 3 cr

1800 Career Planning Practicum I (prereq △) (A–N only)
917509 1200-1245 Th, VoTech R280, Schoonmaker, 1 cr

1801 Career Planning Practicum II (prereq 1800, △) (A–N only)
117511 1200-1245 Th, VoTech R280, Schoonmaker, 1 cr

1802 Career Planning Practicum III (prereq 1801, △) (A–N only)
717513 1200-1245 Th, VoTech R280, Schoonmaker, 1 cr

3110 Construction: Intermediate (prereq 1612, #) (A–N only)
317515 Miletich, 3–9 cr

3111 Construction: Advanced (prereq 3110, #) (A–N only)
017520 Miletich, 3–9 cr

R3120 Graphic Communication: Intermediate (prereq 1622, #) (A–N only)
617522 –1 Miletich, 3–9 cr
034365 –2 0900-1145 TTh, VoTech 110, Quistad, 3 cr

3121 Graphic Communication: Advanced (prereq 3120, #) (A–N only)
217524 Miletich, 3–9 cr

3130 Manufacturing: Intermediate (prereq 1632, #) (A–N only)
917526 Miletich, 3–9 cr

3131 Manufacturing: Advanced (prereq 3130, #) (A–N only)
517528 Miletich, 3–9 cr

3140 Power and Energy: Intermediate (prereq 1642, #) (A–N only)
004640 Miletich, 3–9 cr

3141 Power and Energy: Advanced (prereq 3140, #) (A–N only)
717530 Miletich, 3–9 cr

3150 Transportation: Intermediate (prereq 1652, #) (A–N only)
317532 Miletich, 3–9 cr

3151 Transportation: Advanced (prereq 3150, #) (A–N only)
017534 Miletich, 3–9 cr

3900 Independent Study (prereq #) (A–N only)
017551 3 cr

3901 Independent Study (prereq #) (A–N only)
617553 3 cr

3902 Independent Study (prereq #) (A–N only)
217555 3 cr

R5100 Communications Occupational Experience (max 15 cr; prereq #) (A–N only)
917557 Miletich, 1–5 cr

R5101 Production/Manufacturing Occupational Experience (max 15 cr; prereq #) (A–N only)
517559 Miletich, 1–5 cr

R5102 Power/Energy Occupational Experience (max 15 cr; prereq #) (A–N only)
717561 Miletich, 1–5 cr

R5103 Construction Occupational Experience (max 15 cr; prereq #) (A–N only)
317563 Miletich, 1–5 cr

5112 Construction: Specialization (prereq △) (A–N only)
617567 Miletich, 1–9 cr

5122 Graphic Communications: Specialization (prereq △) (A–N only)
617570 Miletich, 1–9 cr

5132 Manufacturing: Specialization (prereq △) (A–N only)
917574 Miletich, 1–9 cr

5142 Power and Energy: Specialization (prereq △) (A–N only)
117578 Miletich, 1–9 cr

5152 Transportation: Specialization (prereq △) (A–N only)
117581 Miletich, 1–9 cr

5301 Tests in Industrial Subjects (A–N only)
217586 1600-1845 T, VoTech R280, Pucel, 3 cr

5320 Vocational Guidance (A–N only)
904646 1600-1845 M, VoTech R280, Bjorkquist, 3 cr

5325 Foundations of Industrial Education (A–N only)
504648 1600-1845 Th, VoTech R280, Kavanaugh, 3 cr

5360 Industrial Instruction (A–N only)
917588 1600-1845 W, VoTech R280, Schoonmaker, 3 cr

5900 School-Based Project in Industrial Education (max 12 cr; prereq 5305, 5325, MEd student) (S–N optional)
817597 1–6 cr

8700 Seminar: Industrial Education
417599 1200-1245 T, VoTech R280, Schoonmaker, 0 cr

8900 Research Problems (prereq approval of candidacy)
117600 3–9 cr

8901 Research Problems (prereq approval of candidacy)
817602 3–9 cr

INDUSTRIAL ENGINEERING/OPERATIONS RESEARCH (IEOR)
Mechanical Engineering
Institute of Technology

R5000 Introduction to Industrial Engineering Analysis (prereq Math 1231, IT stu...ME 3900 rec)
519960 0915-1000 MWThF, Arch 10, 4 cr

R5010 Introduction to Work Analysis (prereq 5000, IT or grad)
★LECT 1515-1630 TTh, MechE 302, 4 cr
425816 –1 LAB 1515-1700 W, MechE 221

R5020 Engineering Cost Accounting, Analysis and Control (prereq 5000, IT or grad...ME 3900 rec)
319961 1115-1200 MWThF, MechE 221, 4 cr

R5030 Quality Control and Reliability (prereq Math 1231, ME 3900, IT or grad...IEOR 5000 rec)
119962 1115-1200 MWThF, MechE 212, 4 cr

R5040 Introduction to Operations Research (prereq Math 1231, IT or grad...IEOR 5000 rec)
019963 1015-1100 MWThF, MechE 212, 4 cr

R5180 Applied Industrial Engineering (prereq 5000, 5010, 5020, 5030, 5040)
419966 3–5 cr

R5254 Design Morphology with Applications (prereq completion of sequences ME 3201/3 or 5, ME 3303 or 5342, upper div mech engr maj)
★LECT 1315-1400 TTh, Arch 5, 4 cr
713607 –1 LAB 1415-1700 TTh, MechE 327

R5361 Inventory and Production Control (prereq 5000, 5040, ME 3900, IT stu or grad)
134087 1015-1100 MWThF, LindH 340, 4 cr

R5441 Operations Research II (prereq 5040, IT stu or grad)
019977 –1 0915-1000 MWThF, LindH 340, 4 cr
534085 –2 0915-1000 MWThF, LindH 315, 4 cr

R5480 Man-Machine Systems (prereq 5070 or #, IT or grad stu)
134090 1315-1500 TTh, ExpE 193, 4 cr

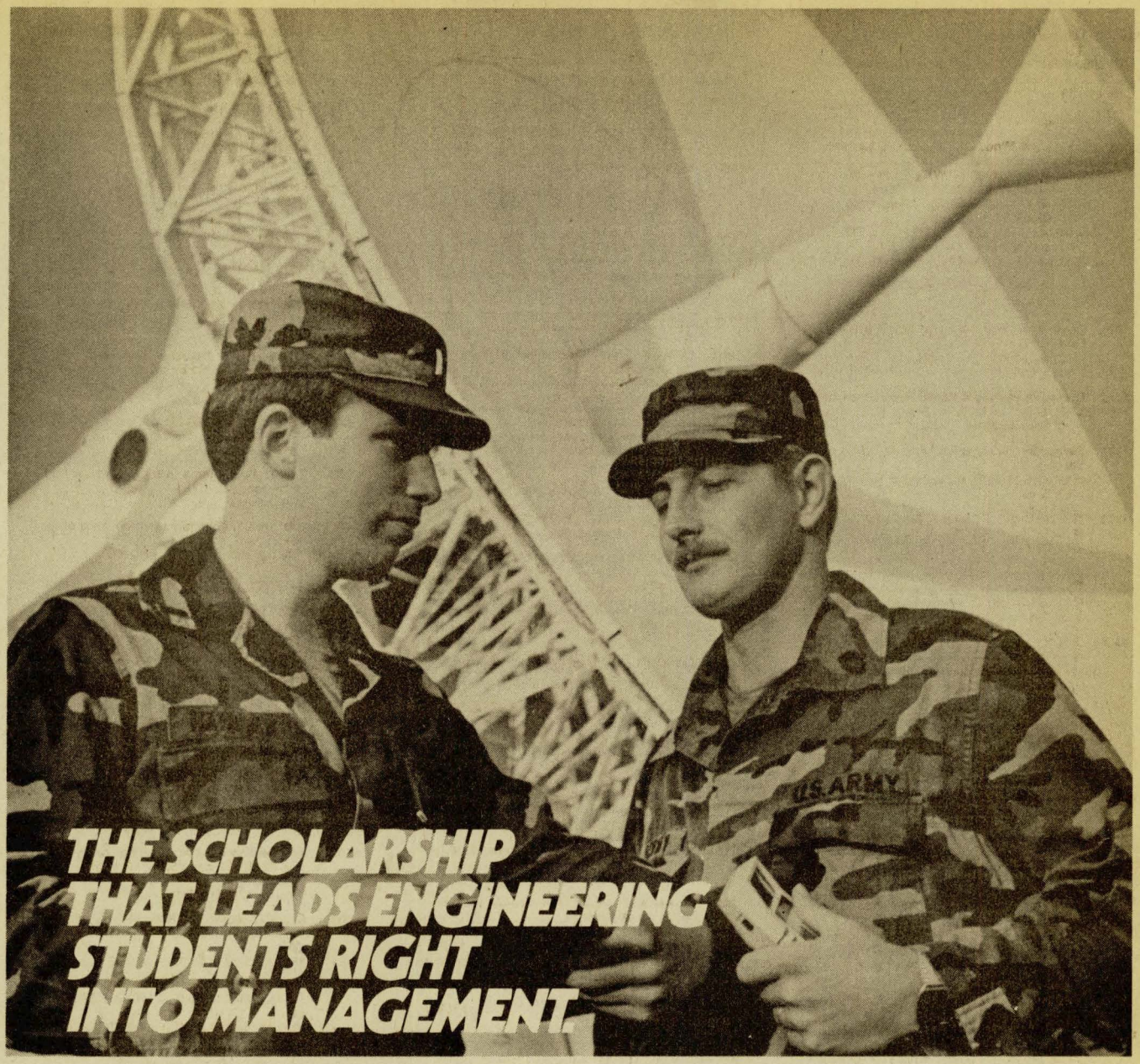
8411 Industrial Engineering Research (prereq 8410)
129027 3–5 cr

8412 Industrial Engineering Research (prereq 8411)
918580 3–5 cr

8773 Graduate Seminar (S–N only)
619982 1515-1700 W, MechE 108, 202, 1 cr

8774 Graduate Seminar (S–N only)
919986 1515-1700 W, MechE 108, 202, 1 cr

8775 Graduate Seminar (S–N only)
419997 1515-1700 W, MechE 108, 202, 1 cr



THE SCHOLARSHIP THAT LEADS ENGINEERING STUDENTS RIGHT INTO MANAGEMENT.

There's a lot more to an Army ROTC scholarship than tuition, books, lab fees, supplies and up to $1,000 per school year for living expenses.

There's leadership. You start sharpening your ability to lead while you're still in engineering school. So when you graduate as a second lieutenant, you're ready to take charge.

You're trim, fit. You know how to motivate people. And you're capable of managing the thousands of dollars worth of equipment you're in charge of.

And as you progress, you'll discover increasing opportunities to advance your engineering skills, to attend graduate school, while you serve your country.

All the while, you'll be acquiring the management skills that industry leaders look for.

So look into an Army ROTC scholarship. Talk it over with the Professor of Military Science on your campus. Or write: Army ROTC, Dept. JC, P.O. Box 9000, Clifton, N.J. 07015.

And start your move into engineering and management.

ARMY ROTC. BE ALL YOU CAN BE.

INDUSTRIAL RELATIONS (IR)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for IR courses.

R3000 **Topics in Industrial Relations**
116821 Zaidi, ar cr

R3002 **Industrial Relations Systems: Labor Markets and the Management of Human Resources** (§8002; prereq Econ 1001, 1002, Psy 1001)
★LECT 0815-0900 MWF, BlegH 5, Schumann
313643 –1 REC 0915-1000 M, BlegH 340, 4 cr
813646 –2 REC 1115-1200 M, BlegH 210, 4 cr
213649 –3 REC 1215-1300 M, BlegH 340, 4 cr
413651 –4 REC 0915-1000 W, BlegH 340, 4 cr
713655 –5 REC 1115-1200 W, BlegH 210, 4 cr
113658 –6 REC 1215-1300 W, BlegH 340, 4 cr
113661 –7 REC 0915-1000 F, BlegH 350, 4 cr
613664 –8 REC 1115-1200 F, BlegH 210, 4 cr
213666 –9 REC 1215-1300 F, BlegH 210, 4 cr

R3007 **Collective Bargaining Negotiations and Modern Labor Relations**
113670 –1 1315-1415 MWF, BlegH 120, Schumann, 4 cr
513673 –2 1415-1545 TTh, BlegH 245, Duffy, 4 cr

R3010 **Human Relations and Applied Organization Theory**
613678 –1 1430-1530 MWF, BlegH 245, Smythe, 4 cr
613681 –2 0915-1045 TTh, BlegH 115, Rosse, 4 cr

R8001 **Quantitative Methods in Industrial Relations** (prereq 8002, Stat 5021, computer access course or # and IR grad student or △)
★LECT 1015-1200 MW, Law 15, Ahlburg, 4 cr
133790 –1 LAB 1015-1200 F, BlegH 440

R8003 **Staffing, Training and Development** (prereq 8002 or # and IR grad student or △)
533793 1015-1200 TTh, BlegH 335, Arvey, 4 cr

R8005 **Employee Compensation and Reward** (prereq 8002 or # and IR grad student or △)
133795 1315-1500 MWF, BlegH 130, Fossum, 4 cr

R8006 **Labor Market Analysis** (prereq 8002 or # and IR grad student or △)
212467 1515-1700 TTh, BlegH 335, Ahlburg, 4 cr

R8007 **Collective Bargaining in the Public and Private Sectors** (prereq 8002 or # and IR grad student or △)
033796 1315-1500 TTh, BlegH 335, Bognanno, 4 cr

R8012 **Industrial Relations Systems** (prereq completion of the core sequence in IR or # and IR grad student or △)
833797 1515-1700 MW, BlegH 260, Seltzer, 4 cr

R8015 **Compensation, Reward, Motivation and Performance** (prereq 8005 or # and IR grad student or △)
608173 0815-1000 MWF, BlegH 210, Fossum, 4 cr

R8032 **Comparative and International Labor Movements** (prereq 8002 or # and IR grad student or △)
633798 1515-1700 MWF, BlegH 210, Scoville, 4 cr

R8035 **Motivation and Work Behavior** (prereq 8005 or 8004 or # and IR grad student or △)
906090 0815-1000 TTh, BlegH 335, Miller, 4 cr

R8036 **Human Resource Planning** (prereq 8006 or # and IR grad student or △)
433799 1515-1700 TTh, BlegH 340, Azevedo, 4 cr

R8990 **Independent Study in Industrial Relations** (prereq #)
125818 Zaidi, ar cr

INSTITUTE OF TECHNOLOGY (IofT)
Institute of Technology

R1222 **Introduction to Careers in Science and Industry** (prereq IT student or △) (S–N only)
119999 1415-1600 Th, Arch 40, Lent, 2 cr

R1821H **Science and Technology in Society** (prereq 1811H, college approval) (A–N only)
717737 1415-1545 Th, Arch 55, Holt, Johnson, 2 cr

INSURANCE (Ins)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for Ins courses.

R3100 **Risk Management and Insurance** (§8100) (A–N only)
113692 –1 0915-1015 MWF, BlegH 235, Cho, 4 cr
413696 –2 1030-1130 MWF, BlegH 235, Cho, 4 cr
531610 –3 1145-1245 MWF, BlegH 235, Whitman, 4 cr

R3200 **Life and Health Insurance** (§8200; prereq 3100)
233917 1315-1400 MWF, BlegH 235, Whitman, 4 cr

R3210 **Economic and Social Security** (§8210, Econ 5534)
133918 0915-1000 MWF, Law 20, Williams, 4 cr

R5230 **Life Contingencies I** (§Math 5056; prereq Math 1211, 1221, plus Math 1231 or 1131 or #)
913296 0815-1000 TTh, BlegH 230, Staub, 4 cr

R8100 **Risk Management and Insurance I** (§3100; prereq grad mgmt/IR student or grad SMgt approval)
105852 –1 0915-1015 MWF, BlegH 235, Cho, 4 cr
408241 –2 1030-1130 MWF, BlegH 235, Cho, 4 cr
908244 –3 1145-1245 MWF, BlegH 235, Whitman, 4 cr
508246 –4 1700-1930 M, BlegH 215, Whitman, 4 cr

R8200 **Life and Health Insurance** (§3200; prereq 3100 or 8100, grad mgmt/IR student or grad SMgt approval)
133921 1315-1400 MWF, BlegH 235, Whitman, 4 cr

R8210 **Economic and Social Security** (§3210, Econ 5534; prereq grad mgmt/IR student or grad SMgt approval)
933922 0915-1000 MWF, Law 20, Williams, 4 cr

8990 **Readings in Risk Management and Insurance** (prereq consent of advisor, #, grad SMgt approval)
933919 ar cr

8995 **Graduate Research in Risk Management and Insurance** (prereq grad SMgt approval)
233920 ar cr

INTERDEPARTMENTAL STUDY (ID)
Liberal Arts

R1002 **Social Science Colloquium** (prereq ¶Anth 1101 or 1102 or Geog 1301 or 1401 or any 1xxx level hist course or Soc 1001) (S–N only)
137510 1515-1700 T, WullH 130, 1–3 cr

3101 **An Introduction to Marxism**
736692 1015-1100 MWF, MinMet 116, Marquit, 4 cr

R3251 **Metro Intern Seminar** (prereq #)
137788 0815-1000 MWF, SmithH 315, Shapiro, 3 cr

3970 **Directed Studies** (prereq consult with Office for Special Learning Opportunities, JohH 220, college approval)
519229 1–15 cr

R5403 **Ecology, Technology and Society** (prereq 5402)
536693 1115-1200 MWF, WullH 230, Anderson, 4 cr

INTERDISCIPLINARY MEDICINE (InMd)
Medical School

5202 **Pathophysiology II** (prereq regis med) (S–N only)
937064 0815-1000 M, 0815-0900 TTh, 1315-1500 TThF, 0815-1200 WF, MoosT 2650, 0915-1000 T, 1115-1200 T, 0915-1300 Th, MoosT 2690, Soltis, 11 cr

5203 **Pathophysiology III** (prereq regis med) (S–N only)
737065 0815-1000 M, 0815-0900 TTh, 1315-1500 TThF, 0815-1200 WF, MoosT 2650, 0915-1000 T, 1115-1200 T, 0915-1300 Th, MoosT 2690, Soltis, 11 cr

5230 **Nervous System and Muscle Disorders** (prereq regis med)
338025 5 cr

INTERNATIONAL RELATIONS (IntR)
Liberal Arts

R3091H **Honors Course: Supervised Research Paper** (prereq sr honors candidate in international relations, △)
111837 Job, 3 cr

3970 **Directed Studies** (prereq #, △, college approval)
518405 1–15 cr

R5900 **Topics in International Relations: Russia and the West in the Brezhnev Era** (prereq international relations maj or #)
705636 0815-0930 TTh, BlegH 210, Hayes, 4 cr

R5910 **Topics in International Policy Analysis: The Practice of Public Diplomacy** (prereq international relations maj or #)
916067 1030-1200 MW, FolH 302, Browne, 4 cr

R5920 **Topics in International Decision Making: Strategic Arms Negotiation** (prereq △)
★LECT 1115-1300 T, Law 1, Hopmann
636362 –1 REC 1115-1300 Th, Law 1, 4 cr
436363 –2 REC 1115-1300 Th, Law 3, 4 cr

R5930 **Topics in International Development: Theories of Cultural Transfer**
236364 0945-1100 TTh, Phys 157, Vidal, 4 cr

ITALIAN (Ital)
French And Italian
Liberal Arts

R1101 **Beginning Italian**
904713 –1 0915-1000 MTWThF, KoltH S138, 5 cr
104717 –2 1015-1100 MTWThF, KoltH S138, 5 cr

R1102 **Beginning Italian**
313710 –1 1115-1200 MTWThF, BuH 123, Martinez, 5 cr
813713 –2 1215-1300 MTWThF, Arch 20, 5 cr

R1104 **Intermediate Italian** (prereq 1103)
318311 1115-1200 M, 1015-1200 TTh, FolH 110, Pipa, 5 cr

R1105 **Intermediate Italian** (prereq 1104)
018313 1115-1200 M, 1015-1200 TTh, FolH 110, Pipa, 5 cr

R3201 **Italian Literary Tradition** (prereq 3015 or #)
433916 1315-1500 TTh, FolH 107, Martinez, 5 cr

3970 **Directed Readings** (prereq undergrad, #, △, college approval)
618315 1–5 cr

8970 **Directed Readings**
118576 1–5 cr

JAPANESE (Jpn)
East Asian Studies
Liberal Arts

R1012 **Beginning Japanese** (prereq 1011)
405940 –1 LECT 0915-1000 TTh, FolH 305, Jacobsen
205552 –2 LECT 1115-1200 TTh, FolH 207, Jacobsen
◆513723 –1 REC 0815-0900 MTWThF, FolH 207, 5 cr
◆013726 –2 REC 1215-1300 MTWThF, FolH 105, 5 cr
◆415187 –3 REC 1015-1100 MTWThF, Arch 20, 5 cr

R3002 **Chinese-Japanese Calligraphy** (prereq Chn/Jpn 3001)
038092 1315-1400 W, JonesH 10, Matsumoto, 2 cr

3022 **Intermediate Japanese** (prereq 3021)
318177 0915-1000 MTWThF, FolH 110, 5 cr

3032 **Third Year Japanese** (prereq 3031)
018179 0915-1000 MWF, FolH 105, 5 cr

3052 **Advanced Japanese Conversation and Composition** (§5052; prereq 3033 or #)
406635 1215-1300 MWF, FolH 103, Matsumoto, 4 cr

3090H **Honors Course: Tutorial** (prereq △)
911841 1-4 cr

3164 **Modern Japanese Literature in English Translation**
513690 1115-1200 MWF, FolH 103, Copeland, 4 cr

3970 **Directed Study** (prereq 3032, #, △, college approval)
818183 –1 1-4 cr
418462 –2 1-4 cr

5042 **Classical Japanese** (prereq 5041)
418185 1415-1500 MWF, FolH 113C, Shohara, 5 cr

5052 **Advanced Japanese Conversation and Composition** (§3052; prereq 3033 or #)
215322 1215-1300 MWF, FolH 103, Matsumoto, 4 cr

5970 **Directed Studies in Japanese** (prereq #, △, CLA approval)
118190 1-4 cr

JEWISH STUDIES (JwSt)
Near And Middle Eastern Studies
Liberal Arts

3126 **Modern Judaism**
333102 1315-1400 MWF, FolH 107, Zahavy, 4 cr

R3402 **Art and Architecture of Jewish People**
106640 0915-1000 MWF, JonesH 207A, Chiat, 4 cr

R3521 **Holocaust**
612269 1215-1300 MWF, Arch 50, Ross, 4 cr

R5900 **Topics in Jewish Studies**
715132 1115-1200 MWF, JonesH 207A, Chiat, 4 cr

5970 **Directed Readings** (max 12 cr; prereq #, △, CLA approval)
504424 1-12 cr

JOURNALISM AND MASS COMMUNICATION (Jour)
Liberal Arts

R1001 **Introduction to Mass Communication** (completion of freshman composition rec) (A-N only)
634563 –1 1215-1300 TTh, MurH 105, Brovald, 2 cr (pre-jour maj only)
838093 –2 1215-1300 TTh, MurH 105, Brovald, 2 cr

R1003 **Producting Mass Media Messages** (prereq freshman composition or exemption, △) (A-N only)
★LECT 1315-1400 TTh, MurH 105, Roberts, 4 cr
406148 –1 LAB 1215-1300 W, MurH 435
206149 –2 LAB 1315-1400 W, MurH 435
606150 –3 LAB 1415-1500 W, MurH 435
406151 –4 LAB 1515-1600 W, MurH 435
206152 –5 LAB 1215-1300 F, MurH 435
106153 –6 LAB 1315-1400 F, MurH 435
706155 –7 LAB 1415-1500 F, MurH 435
306157 –8 LAB 1515-1600 F, MurH 435

R1004 **Information for Mass Communication** (prereq freshman composition or exemption, △) (A-N only)
806163 1315-1400 MWF, MurH 105, Ward, K Hansen, 4 cr

R3007 **The Media in American History and Law: Case Studies** (prereq △) (A-N only)
606164 1215-1300 MWF, MurH 105, Gillmor, Dicken-Garcia, 4 cr

R3008 **Mass Communication Processes and Structure** (prereq △) (A-N only)
406165 1115-1200 MWF, MurH 105, Tichenor, 4 cr

R3101 **Reporting** (prereq prof jour maj status, type 25 wpm, △) (A-N only)
206166 –1 0915-1200 M, 0915-1300 W, MurH 212, Ward, 4 cr
234565 –2 0915-1200 T, 0915-1300 Th, MurH 212, Glasser, 4 cr
134566 –3 1315-1600 T, 1315-1700 Th, MurH 212, 4 cr

R3121 **Public Affairs Reporting** (prereq 3101, type 40 wpm, △) (A-N only)
213747 1315-1500 MW, MurH 311, Ismach, 4 cr

R3155 **Publications Editing** (prereq 3101, △) (A-N only)
313755 1315-1600 TTh, MurH 206, 4 cr (1 hr ar)

R3241 **Advertising Copywriting** (prereq prof jour maj status, 3201 or #, △) (A-N only)
★LECT 1015-1100 MW, MurH 210, 4 cr
925819 –1 LAB 1215-1400 TTh, MurH 210
★LECT 1115-1230 MW, MurH 30, 4 cr
338400 –2 LAB 1315-1400 M, MurH 210

R3301 **Basic Photographic Communication** (prereq professional jour maj status, △) (A-N only)
409857 1315-1600 MW, MurH 20, 4 cr

R3970 **Directed Studies** (prereq maj status for prof jour, mass comm students, #, △, college approval) (A-N only)
218415 1-4 cr

R5141 **Opinion Writing in America** (prereq 3xxx level writing course, maj or grad status for prof jour students with #, △) (A-N only)
918417 1015-1200 TTh, MurH 105, Emery, 4 cr

R5174 **Magazine Editing and Production** (prereq 3173 or 5376 or 5221, #, △) (A-N only)
518419 0915-1100 MW, MurH 315, 320, Wilson, 4 cr

5251 **Psychology of Advertising** (§Psy 5751; prereq Psy 1001) (A-N only)
318423 0915-1000 TThF, MurH 105, Jones, 4 cr

R5261 **Advertising: Media Analysis** (prereq prof jour maj status, 3201 or #, △) (A-N only)
718421 1415-1600 TTh, MurH 308, Jones, 4 cr

R5272 **Advertising Copy-Graphics** (prereq 3231, 3241, #, △) (A-N only)
★LECT 0915-1000 TTh, MurH 311, Wilson, 4 cr
409874 –1 LAB 1015-1200 TTh, MurH 210, 320, Wilson

R5274 **Current Advertising Developments and Problems** (prereq 5263 or 5272 or #, △) (A-N only)
734568 0915-1000 MWF, MurH 311, J Busterna, 4 cr

R5302 **Advanced Photographic Communication** (§5376; prereq 3301, △) (A-N only)
537469 0915-1200 TThF, MurH 20, Schwartz, 4 cr

R5441 **Electronic Newsgathering** (prereq 3451 or 5376, △) (A-N only)
137659 1315-1500 MWF, MurH 207, Ettema, 4 cr

R5442 **Advanced Television News** (prereq 3451, △) (A-N only)
613793 0915-1100 TTh, MurH 207, Fang, 4 cr (lab ar)

5531 **Communication and Public Opinion II** (prereq 5501 or Soc 5355) (A-N only)
018425 1015-1130 MW, MurH 308, Lee, 4 cr

5611 **Development of American Broadcasting** (A-N only)
734571 0915-1000 MWF, MurH 308, Fang, 4 cr

5615 **History of Visual Communication in the Mass Media** (A-N only)
106170 0915-1100 MW, MurH 105, Schwartz, 4 cr

5725 **The Management of Media Organizations** (prereq 16 cr in social science depts)
137233 1115-1200 MWF, MurH 311, Wackman, 4 cr

5777 **Contemporary Problems in Freedom of Speech and Press** (prereq 16 cr in social science depts) (A-N only)
706172 1015-1200 TTh, MurH 308, Gillmor, 4 cr

5825 **World Communication Systems** (prereq 16 crs in social science depts) (A-N only)
918434 1015-1100 MWF, MurH 311, Lindsay, 4 cr

R5970 **Advanced Projects in Journalism** (max 8 cr; prereq maj status for prof jour, mass comm students, B avg, #, △, CLA approval) (A-N only)
118438 1-4 cr

R5970H **Honors Course: Advanced Projects in Journalism** (max 8 cr; prereq maj status for prof jour, mass comm students, B avg, #, △, CLA approval) (A-N only)
511843 1-4 cr

R8001 **Seminar: Mass Communication Research** (prereq introductory course in statistics or ¶, #, △) (A-N only)
506173 1515-1700 MF, MurH 311, Wackman, 4 cr

8102 **Mass Communication Research in Action** (A-N only)
818443 1515-1700 TTh, MurH 311, Ismach, Glasser, 4 cr

R8514 **Seminar: Mass Communication Theory** (prereq 5531, #, △) (A-N only)
334573 1315-1600 M, MurH 435, Lee, 4 cr

R8601 **Seminar: History of Mass Communication** (prereq 5601, #, △) (A-N only)
134574 1215-1400 T, MurH 30, Dicken-Garcia, 4 cr

R8602 **Seminar: History of Mass Communication** (prereq 5601, #, △) (A-N only)
809886 1315-1500 Th, MurH 30, Emery, 4 cr

R8970 **Advanced Projects in Mass Communication** (max 8 cr; prereq grad maj or min in mass comm, #, △) (A-N only)
412354 1-4 cr

R8990 **Special Problems in Mass Communication** (prereq #, △) (A-N only)
921284 4 cr

LABORATORY MEDICINE (LMed)
Laboratory Medicine And Pathology
Medical School

5138 **Clinical Microbiology Seminar** (prereq #)
319331 1115-1200 W, Mayo D230, Bean, 1 cr (Eustis Amph)

5139 **Advanced Microbiology** (prereq #)
119332 Balfour, ar cr

5140 **Clinical Virology Seminar**
937789 Bean, 1 cr

5169 **Research in Human Genetics** (prereq #)
305896 Eaton, ar cr

5170 **Advanced Problems in Medical Genetics** (prereq #)
819334 Eaton, ar cr

5179 **Chemistry Seminar** (prereq #)
619335 Steffes, 1 cr

5180 **Advanced Chemistry** (prereq #)
419336 Benson, ar cr

5197 **Computer Methodology in the Delivery of Health Care II: Introduction to Medical Decision-Making Techniques** (§PubH 5434; prereq PubH 5432, PubH 5452 or #)
806101 1115-1230 TTh, MoosT 2130, Connelly, 3 cr

5273 **Advanced Immunology** (prereq #)
119338 Azar, ar cr

5346 **Computer Applications for Health Providers** (§HSU 5018; prereq health professional or student in a health care discipline)
219340 1615-1900 T, MoosT 2530, Gatewood, 3-4 cr

5766 **Hematology** (§Anat 5765, 5766; prereq #)
★LECT 1415-1600 TTh, MoosT 2580, Sundberg, 4 cr
100045 –1 LAB 1515-1700 TTh, MoosT 3317

5768 **Advanced Hematology** (prereq #)
119341 Brunning, ar cr

5864 **Research Seminar** (prereq #)
819348 1200-1300 M, Mayo C231, White, 1 cr

5865 **Departmental Seminar** (prereq #)
019347 0800-0900 W, Mayo D230, Steffes, 1 cr (Eustis Amph)

8176 **Advanced Topics in Clinical Chemistry** (§MedT 8176; prereq 5101 or MdBc 5100, 5101 or MedT 5108 or #)
919342 0815-1000 MWF, PWB 15194, Bowers, 3 cr

8235 **Advanced Clinical Laboratory Medicine**
719343 ar cr

8236 **Research on Clinical Laboratory Problems**
519344 ar cr

LABORATORY MEDICINE AND PATHOLOGY (LaMP)
Laboratory Medicine And Pathology
Medical School

5102 **Organ System Pathology** (prereq registered 2nd yr med student)
★LECT 0815-0900 M, 1315-1400 T, MoosT 2650
737521 –1 LAB 1415-1600 T, 2-7 cr
537522 –2 LAB 1415-1600 Th, 2-7 cr

5113 Surgical Pathology: University Hospitals (prereq Phase B)
619349 Rosai, ar cr

5114 Surgical Pathology: Hennepin County General Hospital (prereq Phase B)
019350 Anderson, ar cr

5115 Surgical Pathology: Veterans Administration Hospital (prereq Phase B)
619352 Limas, ar cr

5118 Endocrine Pathology: St. Paul Ramsey Hospital (prereq Phase B)
419353 Lakatua, ar cr

5119 Forensic Pathology: Medical Examiner's Office, Hennepin County Medical Center (prereq Phase D)
219354 Coe, ar cr

5125 Chronobiology (prereq Phase B, #)
119355 Halberg, ar cr

5141 Problems in Experimental Pathology (prereq Phase B, #)
919356 ar cr

5150 Anatomic Pathology in a Hospital Setting: University Hospitals (prereq Phase B)
719357 Burke, ar cr

5151 Anatomic Pathology in a Hospital Setting: Hennepin County General Hospital (prereq Phase B)
519358 Anderson, Strom, ar cr

5152 Anatomic Pathology in a Hospital Setting: Veterans Administration Hospital (prereq Phase B)
319359 Posalaky, ar cr

5153 Anatomic Pathology in a Hospital Setting: St. Paul Ramsey Hospital (prereq Phase B)
719360 Posalaky, ar cr

5158 Cardiac Pathology: Miller Hospital (prereq Phase B, #)
519361 Edwards, ar cr

5171 Pathophysiology of Disease II (prereq 5170)
319362 1215-1300 TWTh, MoosT 2620, Bradley, ar cr

5180 Anatomic and Clinical Pathology in a Hospital Setting (prereq 3rd or 4th yr medical student) (S-N only)
138200 Kostich, 4-9 cr

5181 Laboratory and Clinical Hematology (prereq #)
119363 Brunning, ar cr

5182 Laboratory Studies of Genetic Disorders (prereq #)
019364 Eaton, ar cr

5184 Immunohematology in Blood Banking (prereq #)
819365 McCullough, ar cr

5185 Laboratory Problems in Blood Coagulation (prereq #)
619366 Edson, ar cr

5186 Laboratory Medicine in a Community Hospital (prereq regis Phase D med student)
419367 Bandt, ar cr

5187 Clinical Pathology Externship: Mt. Sinai Hospital (prereq #)
219368 Ward, ar cr

5188 Clinical Pathology Externship: Methodist Hospital (prereq #)
119369 Segal, ar cr

5189 Applied Clinical Pathology: St. Paul Ramsey Hospital (prereq Phase D)
617794 Haus, Lakatua, ar cr

5190 Laboratory Medicine in a Community Hospital: Duluth (prereq Phase D, #)
419370 Larson, ar cr

5192 Laboratory Medicine for Primary Care: Virginia (prereq Phase D)
219371 Knabe, ar cr

5193 Clinical Pathology Externship: Hibbing General Hospital (prereq #)
119372 Nollet, ar cr

5194 Computer Applications in Medicine (prereq #)
919373 Ellis, ar cr

5195 Computer Applications in Medical Research (prereq #)
719374 Ellis, ar cr

LANDSCAPE ARCHITECTURE (LA)
Architecture & Landscape Architecture
Institute of Technology

R1022 History of Environmental Development (§Arch 1022; prereq 1021)
019803 1115-1300 TTh, NichH 45, 4 cr (Mpls)

R1024 Landscape Theory
819804 1015-1200 MWF, Arch 55, 125, Hard, 4 cr (Mpls)

R1026 Basic Visualization II (prereq 1025) (A-N only)
619805 1000-1200 MWF, NorH 315, Pitz, 4 cr

1031 Introduction to Landscape Architecture
638192 0915-1100 TTh, Arch 5, Cline, 4 cr (Mpls)

R3002 Environmental Design: Tools and Processes (prereq 3001)
218267 1315-1500 TTh, Arch 35, Lavine, 4 cr (Mpls)

3075 Landscape Techniques: Materials and Construction Design (prereq 3072, 3092) (A-N only)
804946 1000-1200 MWF, AlderH 405, 415, Bradley, 4 cr

3082 Basic Design (prereq 3081) (A-N only)
419806 1330-1730 MWF, NorH 315, Close, Solieh, 6 cr

3092 Intermiate Design (prereq 3091) (A-N only)
219807 1330-1730 MWF, AlderH 405, Sand, Cline, 6 cr

3094 Independent Study in Graphics (prereq landscape architecture student, #) (A-N only)
733081 1-4 cr

3095 Independent Study in Planting Design (prereq landscape architecture student, #) (A-N only)
533082 1-4 cr

3096 Independent Study in History or Theory (prereq landscape architecture student, #) (A-N only)
119808 1-4 cr

3097 Independent Study in Computer Aided Design (prereq landscape architecture, #) (A-N only)
919809 1-4 cr

3098 Independent Study in Design (prereq landscape architecture student, #) (A-N only)
219810 1-4 cr

3099 Independent Study in Technology (prereq landscape architecture student, #) (A-N only)
119811 1-4 cr

3101 Communicating Landscape Quality (prereq 1025, 3082) (A-N only)
204949 0800-1000 MWF, AlderH 405, Pitz, 4 cr

3200 Landscape Architecture Practicum (prereq landscape architecture student, #) (S-N only)
333083 1-6 cr

5100 Resource and Community Development Interdisciplinary Seminar II (§RCD 5100; prereq RCD sr or #) (A-N only)
133084 1500-1645 TTh, ClaOff B42, 4 cr

5103 Urban Landscape Design I (prereq 3093) (A-N only)
919812 1330-1730 MWF, NorH 305, Sykes, 6 cr

5105 Recreational Planning and Design I (prereq 5010) (A-N only)
719813 1330-1730 MWF, NorH 305, Varda, 6 cr

5109 Special Problems: Thesis Proposal (A-N only)
519814 2 cr

5131 Directed Studies in Landscape Architecture History and Theory (prereq third yr landscape architecture student, △) (A-N only)
319815 1-6 cr

5132 Directed Studies in Landscape Architecture Design (prereq third yr landscape architecture student, △) (A-N only)
119816 1-6 cr

5133 Directed Studies in Landscape Architecture Technology (prereq third yr landscape architecture student, △) (A-N only)
019817 1-6 cr

5134 Directed Studies in Emerging Areas for Landscape Architecture (prereq third yr landscape architecture student, △) (A-N only)
033085 1-6 cr

5226 Professional Practice (prereq terminal yr of study) (A-N only)
204952 1000-1200 MW, ClaOff B42, Tietz, 4 cr

5261 History of Landscape Architecture: The European, Oriental and American Tradition (prereq first yr LA student) (A-N only)
819818 0800-0945 MF, NorH 315, Martin, 4 cr

LARGE ANIMAL CLINICAL SCIENCES (LACS)
Veterinary Medicine

5151 Diagnostic and Therapeutic Techniques I (prereq CVM 5150 or #)
305848 –1 LAB 1400-1650 T, VetHos C238, Larson, Sherman, 1 cr
620033 –2 LAB 1400-1650 Th, VetHos C238, V Larson, 1 cr

5162 Large Animal Medicine (prereq 5161 or #) (A-N only)
220035 0800-0850 MTWThF, 1100-1150 M, VetHos A325, V Larson, Leman, 6 cr

5181 Beef Herd Health Management (prereq regis vet med, 3rd or 4th yr or grad or #)
920037 1300-1450 M, PetH 110, Ames, Haggard, 2 cr

5182 Sheep and Goat Herd Health Management (prereq regis vet med, 3rd or 4th yr or grad or #)
936805 1300-1450 M, ClaOff B36, Robinson, Sherman, 1 cr (2nd 5 weeks)

5183 Equine Herd Health Management (prereq regis vet med, 3rd or 4th yr or grad or #)
129030 1300-1350 M, ClaOff B42, D Peterson, 1 cr

5187 Swine Herd Health Management II (prereq 5185, regis vet med, 3rd or 4th yr or grad or #)
520039 1500-1550 M, VetS 145, Leman, 1 cr

5275 Diseases of Zoo Animals and Exotic Pets (prereq regis vet med, 3rd or 4th yr or grad or #)
320043 1300-1350 M, VetHos A325, Farnsworth, 1 cr

5570 Reproductive Diseases of Domestic Animals (prereq 5550 or #)
220052 1000-1050 MTWThF, AnScVM 135, Zemjanis, Seguin, others, 5 cr (1 hr ar)

5660 Epidemiology of Zoonoses I (prereq regis vet med, 3rd or 4th yr or grad or #)
120058 1500-1650 M, AnScVM 111, Diesch, Robinson, 1 cr (1st 5 weeks)

5661 Epidemiology of Zoonoses II (prereq regis vet med, 3rd or 4th yr or grad student or #)
620064 1500-1650 M, AnScVM 111, Diesch, Robinson, 1 cr (2nd 5 weeks)

5665 Monitoring and Surveillance of Disease (prereq #)
305851 Robinson, ar cr

5670 Comparative Medicine and Public Health (prereq PubH 5002, #)
420079 Diesch, Robinson, 2 cr

5671 Biohazards in Veterinary Medicine (prereq #)
518310 Robinson, ar cr

5680 Problems in Veterinary Epidemiology and Public Health (prereq 5650 or equiv or #)
420096 Diesch, Pullen, others, ar cr

5681 Veterinary Science (prereq pharmacy sr or Phsl 3070, Phcl 5102 or #)
420101 1215-1330 MW, HSUnitF 2165, Diesch, Stowe, 3 cr (Mpls)

5951 Directed Studies (prereq #, △)
020109 Larson, 1-5 cr

8193 Advances in Clinical Immunobiology (prereq grad or #)
020112 Ames, ar cr

8194 Problems in Diagnostic Virology, Serology and Immunology (prereq grad or #)
620114 Ames, ar cr

8195 Preventive Veterinary Medicine
420115 J Anderson, Sorensen, ar cr

8197 Metabolic and Nutritionally Induced Diseases of Cattle (prereq grad student, #)
017548 Olson, 2 cr

8199 Problems in Economics of Animal Health
220116 1-3 cr

8290 Advanced Veterinary Medicine (prereq 5162, SACS 5172, #)
720461 V Larson, ar cr

8291 Advanced Diagnosis and Therapeutics of Animal Diseases (prereq 5162, SACS 5172, #)
320463 V Larson, ar cr

8292 Seminar: Veterinary Medicine (prereq #)
020465 Morris, ar cr

8293 Medical Conference (prereq 5162, SACS 5172, #)
620467 V Larson, ar cr

8294 Advanced Comparative Immunochemistry and Immunobiology (prereq MicB 5216, grad, #)
220469 Markham, 3 cr

8299 Research in Veterinary Medicine
420471 V Larson, ar cr

8390 Seminar: Veterinary Surgery (prereq 5365, SACS 5360, #)
920474 Wallace, ar cr

8392 Advanced Large Animal Surgery (prereq 5365, #)
720475 Usenik, ar cr

8393 Problems in Large Animal Orthopedics (prereq 5365, #)
520476 Usenik, 3 cr

8395 Surgical Diseases of Mammary Gland of Domestic Animals (prereq 5365, #)
320477 Usenik, 3 cr

8397 Large Animal Anesthesia (prereq SACS 5380, #)
120478 Raffe, ar cr

8592 Advanced Endocrinology of Reproduction (prereq MdBc 5100, 5101, VB 5310)
818412 1 cr

8594 Special Problems in Animal Reproduction (prereq 5570, #)
020479 Williamson, others, ar cr

8595 Seminar: Veterinary Obstetrics
320480 Seguin, 1 cr

8792 Seminar in Veterinary Toxicology (prereq grad or #)
417733 Stowe, 2 cr

LATIN (Lat)
Classics
Liberal Arts

R1102 Beginning Latin (1101-1102†; prereq 1101)
313948 –1 0815-0900 MTWThF, FolH 205, 5 cr
113952 –2 0915-1000 MTWThF, KoltH S133, 5 cr
413956 –3 1115-1200 MTWThF, LindH 302, 5 cr
606763 –4 1215-1300 MTWThF, ChDev 218, 5 cr

R1122H Honors Course: Beginning Latin (prereq 1111)
411849 1315-1400 MTWThF, FolH 207, Erickson, 5 cr

R3052 Accelerated Beginning Latin (3051-3052†; prereq 3051)
918109 1315-1400 MTWThF, FolH 207, Erickson, 5 cr

3105 Latin Poetry (prereq 1103 or 1104 or △)
618119 0815-0900 MWF, FolH 203, Sonkowsky, 5 cr

3456 Advanced Undergraduate Latin (prereq 3106 or 4 yrs high school Latin or △)
333777 1115-1230 TTh, FolH 204, Keuls, 5 cr

3960H Honors Tutorial (prereq △)
212047 5 cr

3970 Directed Studies (prereq #, △, college approval)
106766 1-5 cr

5733 Vulgar Latin (prereq 3 yrs Lain or #)
133778 1315-1430 TTh, FolH 304, Sheets, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
906767 1-5 cr

5980 Directed Instruction (prereq #, △, CLA approval)
506769 ar cr

5990 Directed Research (prereq #, △, CLA approval)
906770 ar cr

R8120 Latin Text Course (prereq 3052 or △, non-maj)
313965 –1 0815-0900 MWF, FolH 203, Sonkowsky, 4 cr
333780 –2 1115-1230 TTh, FolH 204, Keuls, 4 cr

8265 Graduate Survey: Literature of the Augustan Age (prereq 5012)
033779 1415-1500 MWF, FolH 104, Miller, 4 cr

LATIN AMERICAN STUDIES (LAS)
Liberal Arts

R5101 Methods and Sources for Latin American Studies (prereq jr or sr or grad student, reading knowledge of Span or Port or #)
004427 1415-1645 T, FolH 204, Wiemers, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
919230 ar cr

LAW SCHOOL (Law)

R5001 Contracts (prereq △)
125821 –1 0815-0905 MWTh, Law 30, Dunham, 3 cr
925822 –2 1415-1505 WThF, Law 40, Matheson, 3 cr
725823 –3 1415-1505 WThF, Law 65, Farber, 3 cr

R5003 Legal Research (prereq △)
325825 1800-2200 MTWTh, Law 7, ar cr

R5004 Property I (prereq △)
025827 –1 1415-1505 MT, 1115-1205 ThF, Law 65, Burkhart, 4 cr
825828 –2 1415-1505 MT, 1115-1205 ThF, Law 40, Torres, 4 cr

R5005 Torts (prereq △)
437674 1415-1505 MT, Law 50, 1115-1205 ThF, Law 30, Frickey, 4 cr

R5006 Procedure (prereq △)
025830 –1 0915-1005 WThF, Law 50, Block, 3 cr
625832 –2 0915-1005 WThF, Law 40, Kramer, 3 cr
225834 –3 0915-1005 WThF, Law 65, Park, 3 cr

R5007 Constitutional Law (prereq △)
925836 –1 0915-1005 MT, Law 40, Sherry, 3 cr
525838 –2 0915-1005 MT, Law 50, Morrison, 3 cr
725840 –3 0915-1005 MT, Law 65, Bryden, 3 cr

R5050 Commercial Paper (prereq △)
325842 0815-0905 MTW, Law 40, Nickles, 3 cr

R5051 Business Associations (prereq △)
037668 1515-1605 MWThF, Law 30, Block, 4 cr

R5054 Corporation II (Corporate Finance) (prereq △)
125843 1415-1505 WTh, Law 55, Kilbourn, 2 cr

R5055 Appellate Advocacy (prereq △)
825845 1800-2200 MTWTh, Law 55, Jackson, ar cr

R5056 Seminar: Legal Aid I (prereq △) (A-N only)
625846 1615-1805 M, Law 55, Befort, Sedo, others, 4 cr

R5058 Misdemeanor Prosecution (prereq △)
425847 1615-1805 M, Law 5, Simon, 2 cr

R5059 Seminar: Appellate Brief Writing (Criminal Appeals Clinic) (prereq △)
612711 1615-1815 T, Law 40, Frase, Jones, 2 cr

R5060 Legal Aid to Minnesota Prisoners (prereq △) (A-N only)
225848 1615-1805 M, Law 45, Peterson, Marron, 4 cr

5066 Moot Court (National) Team (prereq △)
417215 ar cr

5067 National Moot Court Directors (prereq △)
117217 1615-1705 MW, Law 55, 2 cr

5068 International Moot Court Team (prereq △)
717219 ar cr

5069 International Moot Court Director (prereq △)
917221 ar cr

5070 Legal Aid I (Civil Clinic) Directors (prereq △) (S-N only)
517223 ar cr

5071 Misdemeanor Prosecution/Defense (Legal Aid II) Clinical Directors (prereq △) (S-N only)
117225 ar cr

5072 Legal Assistance to Minnesota Prisoners (LAMP) (Legal Aid IV) Clinical Directors (prereq △) (S-N only)
817227 ar cr

5073 Tax Clinic Directors (prereq △) (S-N only)
417229 ar cr

5075 Frederick Douglas Moot Court (prereq △)
217233 ar cr

5077 Law and Inequality Journal Staff (prereq △) (S-N only)
817499 1-2 cr

5100 Taxation I (prereq △)
434791 1315-1405 WThF, Law 30, Raskind, 3 cr

R5101 Taxation II (prereq 5100, △)
125849 –1 1015-1105 MTW, Law 65, Raskind, 3 cr
734795 –2 1615-1705 WTh, Law 40, Kilbourn, 2 cr

R5104 Business Planning (prereq △)
225851 1515-1705 M, Law 65, Kilbourn, 2 cr

R5106 Federal Tax Procedure (prereq △)
137670 1815-2005 T, Law 65, Raskind, 2 cr

R5107 Bankruptcy (prereq △) (A-N only)
937663 1115-1205 MTW, Law 55, Nickles, 3 cr

R5108 Secured Transactions (prereq △)
925853 1315-1405 WTh, Law 40, McClure, 2 cr

R5109 Creditor's Remedies (prereq △) (A-N only)
725854 1315-1405 MT, Law 40, McClure, 2 cr

R5110 Securities Regulation II (prereq △)
525855 0915-1005 MTW, Law 55, Koeppen, 3 cr

R5150 Trust and Estates (prereq △)
106590 –1 0915-1005 MTWTh, Law 30, Waterbury, 4 cr
734893 –2 1215-1405 MTh, Law 50, Ohman, 4 cr

R5151 Estate Planning (prereq △)
212713 1515-1605 MWThF, Law 65, Waterbury, 4 cr

R5152 Antitrust II (prereq △) (A-N only)
817115 1015-1105 ThF, Law 45, Gifford, 2 cr

R5201 Land Use Planning (prereq △)
234873 1015-1105 MTW, Law 45, Burkhart, 2 cr

R5203 Labor Law (prereq △)
125857 1415-1505 MTW, Law 45, Cound, 3 cr

R5205 Criminal Law (prereq △)
825859 –1 1115-1205 MTW, Law 45, Levy, 3 cr
125860 –2 1115-1205 MTW, Law 40, Bryden, 3 cr
334900 –3 1115-1205 MTW, Law 50, Feld, 3 cr

R5207 Legislation (prereq △)
838238 1015-1105 MT, Law 30, Frickey, 2 cr

R5208 State and Local Government (prereq △)
534880 1115-1205 MTW, Law 65, Morrison, 3 cr

R5209 Labor Law III (Public) (prereq △) (A-N only)
234887 1215-1305 MTW, Law 45, Befort, 3 cr

R5210 Antitrust (prereq △)
025861 1315-1405 MTW, Law 65, Kramer, 3 cr

R5212 Federal Jurisdiction (prereq △)
906591 0915-1005 WThF, Law 45, Cound, Farber, 3 cr

R5213 Modern Real Estate (prereq △)
825862 1315-1405 MTW, Law 55, Scallen, 3 cr

R5214 Insurance (prereq △) (A-N only)
837669 1515-1605 MWF, Law 40, Marshall, 2 cr

R5218 Criminal Procedures (prereq △)
006596 1515-1605 MWTh, Law 50, Goldberg, 3 cr

☆ SPORTS SCHEDULE ☆

1983-84 UNIVERSITY OF MINNESOTA WOMEN'S BASKETBALL SCHEDULE BROUGHT TO YOU BY

Panasonic.
just slightly ahead of our time.

Dial Classic	Nov. 25-26
IOWA STATE	Nov. 30
at Tennessee	Dec. 4
at Western Kentucky	Dec. 6
SOUTH DAKOTA STATE	Dec. 16
at Central Michigan	Dec. 18
at LaSalle Invitational Tournament	Dec. 28-30
ILLINOIS	Jan. 6
PURDUE	Jan. 8
at Michigan	Jan. 13
at Michigan State	Jan. 15
IOWA	Jan. 20
NORTHWESTERN	Jan. 22
at Wisconsin	Jan. 27
at Indiana	Feb. 3
at Ohio State	Feb. 5
OHIO STATE	Feb. 10
INDIANA	Feb. 12
WISCONSIN	Feb. 17
at Northwestern	Feb. 24
at Iowa	Feb. 26
MICHIGAN STATE	Mar. 2
MICHIGAN	Mar. 4
at Purdue	Mar. 8
at Illinois	Mar. 10

SPORTSPORTSPORTS

R5219 Evidence (prereq △)
625863 1215-1305 MT, 1015-1105 ThF, Law 40, Marshall, 4 cr

R5223 Consumer Protection (prereq △)
634899 1215-1305 MT, Law 65, Matheson, 2 cr

R5227 Product Liability (prereq △)
606598 0815-0905 MT, Law 50, Thorsen, 2 cr

R5228 English Legal History (prereq △)
537665 1115-1205 ThF, Law 55, Volling, 2 cr

R5232 Criminal Justice Systems (prereq △)
137667 1215-1305 TWTh, Law 55, Frase, 3 cr

R5606 Administrative Law (prereq △)
125866 –1 1015-1105 MTW, Law 50, Gifford, 3 cr
134907 –2 1415-1505 MTW, Law 30, Weissbrodt, 3 cr

R5608 Independent Research (prereq △)
425864 ar cr

R5609 Law Review (prereq △) (S-N only)
617231 ar cr

R5618 Trial Practice (prereq △)
725868 –1 1800-2100 M, Law 170, Abramson, 3 cr
525869 –2 1800-2100 T, Law 170, O'Rourke, 3 cr
925870 –3 1800-2100 M, Law 180, Roberta Levy, 3 cr
606603 –4 1800-2100 Th, Law 170, Summers, 3 cr
406604 –5 1800-2100 Th, Law 180, Park, 3 cr
106606 –6 1800-2100 W, Law 180, Taylor, 3 cr

R5621 Civil Rights (prereq △)
737664 1115-1205 MTW, Law 30, Sherry, 3 cr

5622 Soviet Law (prereq △)
237823 1415-1505 MTW, Law 50, 55, Fogeklou, 2 cr

R5627 International Tax (prereq △)
534927 1315-1405 Th, 1315-1505 F, Law 55, Scallen, 3 cr

R5807 Seminar: Law of Cooperatives (prereq △) (A-N only)
114146 1615-1805 Th, Law 473, Sedo, 1-2 cr

R5809 Seminar: Law and the Agricultural Marketing (prereq law or grad, △)
037671 1615-1805 T, Law 473, Dahl, 2 cr

R5811 Seminar: Clinical United States Attorney (prereq △) (A-N only)
534930 1615-1805 Th, Law 475, Frase, 2 cr

R5816 Seminar: The Corporation (prereq △) (A-N only)
837672 1615-1805 T, Law 7, Hanold, 2 cr

R5817 Seminar: Estate Planning (prereq △)
725871 1615-1900 M, Law 471, Stein, Daly, Helland, 2 cr

5821 Seminar: Land Use Planning (prereq △)
334931 1615-1805 W, Law 475, Bryden, 2 cr

R5829 Seminar: Regulation of Medical Profession (prereq △)
525872 1615-1805 T, Law 471, Eustis, 2 cr

R5830 Seminar: Government Regulation of Banking (prereq △)
325873 1615-1805 W, Law 471, Koeppen, 2 cr

R5832 Computer Applications (prereq △) (A-N only)
637673 1615-1805 W, Law 5, Burris, 2 cr

R5841 Seminar: Dissolution (prereq △) (A-N only)
134932 1615-1805 M, Law 473, Levy, 2 cr

R5847 Seminar: Youth, Law and Society (prereq △) (A-N only)
034933 1615-1805 W, Law 473, Feld, 2 cr

R5851 Advanced Legal Research Seminar (prereq △) (A-N only)
837820 1615-1805 T, Law 475, Woxland, 2 cr

R5880 Media Law Seminar (prereq △) (A-N only)
637821 1615-1805 W, Law 7, Rieger, 2 cr

R5881 Seminar: Advanced Trial Practice/Evidence (prereq △) (A-N only)
437822 1615-1805 M, Law 180, Rieger, 2 cr

R5883 Seminar: Advanced Environmental Law (prereq △) (A-N only)
834934 1615-1805 M, Law 7, Torres, 2 cr

R5886 Seminar: International Human Rights (prereq △)
634935 1615-1805 M, Law 475, Weisbrodt, 2 cr

LIBRARY (Lib)
Liberal Arts

8970 Independent Study in Library Science (prereq #)
518467 ar cr

8990 Library Research (prereq #)
118469 ar cr

LINGUISTICS (Ling)
Linguistics
Liberal Arts

R1001 The Nature of Human Language
135952 1415-1500 MWF, NichH 45, Gundel, 4 cr

3052H Honors Course: Linguistics (prereq 3051H)
611851 4 cr

3970 Directed Studies (prereq linguistics maj, #, △, college approval)
118472 1-5 cr

5002 Linguistic Analysis (§5201, 5302; prereq 3001 or 5001 or #)
818474 1015-1100 MWF, FolH 105, Gundel, 4 cr

5012 Mathematical Linguistics (prereq 5011)
134227 1015-1100 MWF, FolH 103, Hutchinson, 4 cr

5201 Introduction to Syntax (prereq 3001 or 5001 or #)
218477 1115-1200 MWF, FolH 105, Kac, 4 cr

5211 Semantics (prereq 5011, 5202 or #)
918479 1515-1600 MWF, FolH 108, Yule, 4 cr

5302 Introduction to Phonology (prereq 3301 or 5301 or #)
118481 0945-1100 TTh, FolH 204, Pinkerton, 4 cr

5304 Advanced Phonology (prereq 5201, 5303 or #)
304862 1415-1500 MWF, FolH 105, Hammond, 4 cr

5603 Language Change and Linguistic Reconstruction (prereq 3601 or 5601, 5201, 5302 or #)
634238 1115-1200 MWF, Arch 20, Sanders, 4 cr

5606 Indo-European Linguistics (prereq 5605)
634241 1415-1530 TTh, FolH 105, Miranda, 4 cr

5702 Second-Language Acquisition (prereq 3001 or 5001, 5002 or 5201, 5302, 5701 or #)
004864 1245-1400 TTh, ChDev 216, Tarone, 4 cr

5711 Field Methods in Linguistics (prereq 5202, 5303 or #)
734229 1115-1230 TTh, 1315-1400 F, KlaCt 101, Stenson, 4 cr

5721 English as a Second Language: Methods (prereq 3001 or 5001 or #)
734232 1415-1530 TTh, JonesH 2, Pinkerton, 4 cr

5723 English as a Second Language: Materials (prereq 5721, 5722, #)
718483 1545-1700 TTh, FolH 205, Tarone, 3 cr

5732 A Contrastive Approach to Modern English (prereq 5731)
237224 1630-1745 MW, FolH 205, Downing, 4 cr

5741 Linguistic Description of Modern English (prereq 3001 or 5001 or #)
318485 1415-1500 MWF, FolH 304, Yule, 4 cr

5805 Psycholinguistics (prereq 5002 or 5201, 5302 or #)
534233 1545-1700 TTh, FolH 108, Sheldon, 4 cr

5970 Directed Studies (prereq linguistics or ESL maj, #, △, CLA approval)
018487 1-5 cr

8200 Topics in Syntax and Semantics (prereq 5206 or #)
634224 0815-0945 TTh, FolH 52, Downing, 4 cr

8841 Philosophy of Linguistics (prereq 5011, 5202, 5303, Phil 5601 or #)
234226 0915-1000 MWF, FolH 302, Kac, 4 cr

8900 Independent Study (prereq maj, #)
929031 1-5 cr

MANAGEMENT (Mgmt)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for Mgmt courses.

R3002 Psychology in Management (§8006) (A-N only)
206216 1315-1500 MW, BlegH 260, Buckeye, 4 cr

R3004 Business Policy: Strategy Formulation and Implementation (prereq sr, completion of business core or ¶final core course) (A-N only)
414119 –1 0815-1000 MWF, BlegH 330, 5 cr
414122 –2 1015-1200 MWF, BlegH 330, Grambsch, 5 cr
133823 –3 1415-1600 MWF, BlegH 435, 5 cr

R3008 Entrepreneurship and the Smaller Enterprise (prereq completion of the business core courses or #)
507694 –1 1015-1200 MW, BlegH 340, Wickesberg, 4 cr
707709 –2 1015-1200 TTh, BlegH 340, Wickesberg, 4 cr

R8008 Entrepreneurship and the Smaller Enterprise (prereq completion of business core courses, grad mgmt/IR student or #, grad SMgt approval)
307681 –1 1015-1200 MW, BlegH 340, Wickesberg, 4 cr
307728 –2 1015-1200 TTh, BlegH 340, Wickesberg, 4 cr

R8022 Career Management (prereq grad mgmt/IR student or grad SMgt approval)
707659 1730-2015 T, BlegH 330, Angle, 4 cr

R8101 Seminar in Strategic Management (prereq PhD student, or # and Mgmt Grad School approval)
933824 1415-1700 W, BlegH 360, Freeman, 4 cr

R8201 Foundations of Business-Government-Society (prereq Ph.D. student or # and management grad school approval)
936951 1015-1200 TTh, BlegH 360, Maitland, 4 cr

R8301 Seminar in Organization Behavior (prereq PhD student, or # and Mgmt Grad School approval)
733825 1315-1600 Th, BlegH 360, Angle, 4 cr

R8303 Organizational Research Seminar (prereq PhD student, or # and Mgmt Grad School approval)
533826 1315-1600 T, BlegH 360, Manz, 4 cr

8990 Readings in Theory and Administration (prereq 2nd yr grad stu, requisite intro courses, consent of adviser, #, gradSMgt approval)
216258 ar cr

8995 Research in Management Theory and Administration (prereq 2nd yr grad stu, requisite intro courses, consent of adviser, #, grad SMgt approval)
016268 ar cr

MANAGEMENT INFORMATION SYSTEMS (MIS)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for MIS courses.

R3098 Elementary COBOL (prereq 3040 or ¶ or 3100 or ¶ or 3300 or ¶) (S-N only)
914139 0915-1000 W, AndH 230, Naumann, 1 cr

R3099 Elementary FORTRAN (prereq 3040 or ¶ or 3100 or ¶ or 3300 or ¶) (S-N only)
714143 –1 1015-1100 W, AndH 230, Naumann, 1 cr
729032 –2 1115-1200 W, AndH 230, 1 cr

R3300 Introduction to Computers and Management Information Systems (§3100, 5100, 5300) (A-N only)
★LECT 1245-1400 MW, AndH 210, Dickson
221296 –1 LAB 1415-1500 W, BlegH 425, 4 cr
121297 –2 LAB 1515-1600 W, BlegH 425, 4 cr

921298 –3 LAB 1615-1700 W, BlegH 425, 4 cr
721299 –4 LAB 0815-0900 Th, BlegH 425, 4 cr
421300 –5 LAB 0915-1000 Th, BlegH 425, 4 cr
121302 –6 LAB 1015-1100 Th, BlegH 425, 4 cr
★LECT 1515-1630 MW, WilleyH 175, DeSanctis
921303 –7 LAB 1115-1200 Th, BlegH 425, 4 cr
721304 –8 LAB 1215-1300 Th, BlegH 425, 4 cr
521305 –9 LAB 1315-1400 Th, BlegH 425, 4 cr
321306 –10 LAB 1415-1500 Th, BlegH 425, 4 cr
021308 –11 LAB 1515-1600 Th, BlegH 425, 4 cr
821309 –12 LAB 1615-1700 Th, BlegH 425, 4 cr
021311 –13 LAB 0815-0900 F, BlegH 425, 4 cr
621313 –14 LAB 0915-1000 F, BlegH 425, 4 cr
221315 –15 LAB 1015-1100 F, BlegH 425, 4 cr
833833 –16 LAB 1115-1200 F, BlegH 425, 4 cr
633834 –17 LAB 1415-1500 F, BlegH 425, 4 cr
433835 –18 LAB 1515-1600 F, BlegH 425, 4 cr

R5098 **Intermediate COBOL** (prereq 3098) (S–N only)
816322 1215-1300 W, AndH 230, Naumann, 2 cr

R5102 **Introduction to Information Systems Analysis** (prereq 3098, 3100, 3101) (A–N only)
406229 1015-1200 TTh, BlegH 230, 4 cr

R8301 **Program Design and Programming** (prereq grad mgmt/IR student, MBA 8005, MIS 8300 or ¶, grad SMgt approval) (A–N only)
821407 1730-2050 Th, BlegH 330, Lehman, 4 cr

R8302 **Systems Analysis and Design** (prereq 8301, grad mgmt/IR student or grad SMgt approval) (A–N only)
016500 –1 0915-1100 MW, BlegH 425, Naumann, 4 cr
233836 –2 1215-1400 MW, Law 35, Naumann, 4 cr

R8303 **Data Structures, File Processing, and Retrieval Languages** (§5103; prereq 8301, grad/IR student or grad SMgt approval) (A–N only)
916506 1515-1700 MW, BlegH 220, Everest, 4 cr

R8985 **MIS Research Seminar** (prereq PhD candidate in MIS or #, grad SMgt approval)
038139 1215-1500 T, Mgmt/Econ 130, Wetherbe, 4 cr

8990 **Readings in Management Information Systems** (prereq consent of adviser, #, 2nd yr grad, requisite intro courses, grad SMgt approval) (A–N only)
316509 ar cr

8995 **Graduate Research** (prereq consent of adviser, #, 2nd yr grad, requisite intro courses, grad SMgt approval) (A–N only)
516511 ar cr

MARATHI (Mar)
South And Southwest Asian Studies
Liberal Arts

5970 **Directed Readings** (prereq #, △, CLA approval)
318888 Junghare, ar cr

MARKETING (Mktg)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for Mktg courses.

R3000 **Principles of Marketing** (§8000; prereq Econ 1002) (A–N only)
614166 –1 0900-1030 MWF, AndH 210, Berkowitz, 4 cr
114169 –2 0815-0945 TTh, BlegH 420, 4 cr

R3010 **Buyer Behavior and Marketing Analysis** (prereq 3000, QA 1050)
206250 –1 0915-1045 MW, BlegH 225, 4 cr
106251 –2 1115-1245 MW, BlegH 225, 4 cr
906252 –3 1415-1545 TTh, BlegH 225, Gardner, 4 cr

R3020 **Marketing Operations Management** (prereq 3010)
708312 –1 0815-0945 MW, BlegH 415, 4 cr
201131 –2 1315-1445 MW, BlegH 340, 4 cr

R8078 **Marketing Communications** (prereq either MBA core courses or MBA 8045, grad mgmt/IR student or grad SMgt approval)
708309 1730-2000 M, BlegH 250, 4 cr

R8086 **Product Policy** (prereq either MBA core courses, or MBA 8045, △, grad mgmt/IR student or grad SMgt approval)
433723 –1 1315-1445 MWF, Law 15, Cardozo, 4 cr

R8090 **Marketing Topics** (prereq either MBA core courses, or MBA 8045, △, grad mgmt/IR student or grad SMgt approval)
233724 1315-1530 M, Mgmt/Econ 521, Childers, 4 cr

R8096 **Marketing Research: Advanced Analysis and Field Work** (prereq 8095, grad mgmt/IR student or grad SMgt approval)
133725 1730-2000 W, BlegH 260, Gardner, 4 cr

8990 **Readings in Marketing** (prereq either MBA core courses, or MBA 8045, △, consent of advisor, #, grad SMgt approval)
116513 ar cr

8995 **Graduate Research in Marketing** (prereq either MBA core courses, or MBA 8045, △, consent of advisor, #, grad SMgt approval)
416517 ar cr

MASTER OF BUSINESS ADMINISTRATION (MBA)
Management

R8015 **Human Resources Management** (prereq MBA students only)
131621 –1 1015-1200 MW, BlegH 440, Scoville, 4 cr
931622 –2 1015-1200 TTh, BlegH 440, Azevedo, 4 cr

R8025 **Decision Sciences and Information Systems** (prereq MBA students only)
731623 –1 0915-1100 TTh, BlegH 435, March, 4 cr
531624 –2 1315-1500 MW, BlegH 415, Fox, 4 cr

R8035 **Managerial Economics and Accounting** (prereq MBA students only)
331625 –1 1315-1500 MW, BlegH 115, Kanodia, 4 cr
904727 –2 1515-1700 MW, BlegH 115, Kanodia, 4 cr

R8065 **Field Project** (prereq MBA students only)
116522 1315-1500 F, AndH 270, Naumann, 5 cr

MATERIALS SCIENCE (MatS)
Chemical Engineering & Materials Science
Institute of Technology

3091 **Industrial Employment**
519828 1–2 cr

R3400 **Mechanical Properties of Materials** (prereq 2nd yr IT student)
★LECT 1315-1400 MWF, AmundH 240, Wellinghoff
315103 –1 LAB 1415-1700 M, MinMet 410, 4 cr
815106 –2 LAB 1415-1700 W, MinMet 410, 4 cr
615110 –3 LAB 1415-1700 F, MinMet 410, 4 cr

R5012 **Introduction to Dislocations and Physical Metallurgy** (prereq upper division IT standing, 5011 or #)
609940 1115-1200 MTWThF, MinMet 120, Gerberich, 4 cr

R5101 **Thermodynamics of Solids** (prereq Chem 5534 or #)
821276 1015-1100 MTWF, MinMet 124, Oriani, 4 cr

R5112 **Ceramics** (prereq 5102 or #)
034382 1115-1300 TTh, MinMet 116, Koepke, 4 cr

R5411 **Materials Design** (prereq sr mat sci maj)
334380 0915-1000 MTWF, AmundH 158, Sivertsen, 4 cr

R5460 **Oxidation of Metals** (prereq upper division IT, 5102)
237479 0815-0900 MWThF, MinMet 104, Shores, 4 cr

R5482 **Special Problems in Physical Metallurgy and Materials Science** (prereq sr)
437884 1415-1500 MWF, AmundH 154, Staehle, 3 cr

5483 **Special Problems in Physical Metallurgy and Materials Science** (prereq sr)
237885 ar cr

R5500 **Senior Design Project** (prereq sr mat sci maj)
834383 2 cr

R5620 **Polymer Processing** (prereq engineering transport phenomena or #)
319829 1215-1300 MWF, MinMet 116, Macosko, 3-4 cr

R8213 **Structure, Cohesion of Metals, Semiconductors** (prereq 8212)
437481 1315-1400 MWF, MinMet 104, Weaver, 3 cr

R8311 **Theories of Mechanical Behavior of Solids** (prereq 8310)
237482 1515-1600 MWF, AmundH 154, Gerberich, 3 cr

8471 **Seminar: Materials Science and Engineering** (prereq 8470)
719830 1315-1500 TTh, AmundH 240, ar cr

8481 **Selected Topics in Materials Science and Engineering** (prereq 8480)
519831 ar cr

8520 **Electron Diffraction, Electron Microscopy**
137121 1515-1700 TTh, MinMet 104, Wellinghoff, 3 cr

MATHEMATICS (Math)
Institute of Technology

R0009 **Intermediate Algebra** (prereq 1 yr high school algebra or grade of C or better in 0006) (course fee)
014200 –1 0815-0900 MTWThF, Arch 50, 0 cr
414203 –2 0915-1000 MTWThF, MechE 212, 0 cr
033684 –3 1315-1400 MTWThF, PillsH 110, 0 cr

R1005 **Foundations of Arithmetic** (prereq plane geometry, 2 yrs hs algebra, or plane geometry, grade of C or better in 0009)
009983 –1 0915-1000 MWF, Arch 60, 4 cr
409986 –2 1215-1300 MWF, MurH 311, 4 cr

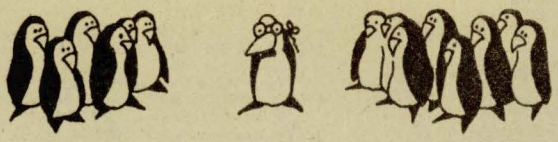
R1006 **Foundations of Arithmetic** (prereq 1005)
114219 –1 1015-1100 MWF, VinH 1, 4 cr
114222 –2 1315-1400 MWF, VinH 2, 4 cr

R1008 **Trigonometry** (§1111, 1201; prereq plane geometry, 2 yrs hs algebra or grade of C or better in 0009)
314226 –1 0815-0900 MWF, Arch 40, 4 cr
114230 –2 0915-1000 MWF, SmithH 325, 4 cr
833685 –3 1315-1400 MWF, FolH 308, 4 cr

R1111 **College Algebra and Analytic Geometry** (§1201; prereq plane geometry, 2 yrs hs alg or plane geometry, grade of C or better in 0009)
207737 –1 0900-0945 MWF, FScN 15, 0900-0945 TTh, McNH 33, 5 cr (StP)
207740 –2 0815-0900 MTWThF, Arch 5, 5 cr
907742 –3 1115-1200 MTWThF, SmithH 225, 5 cr
007747 –4 1215-1300 MTWThF, SmithH 225, 5 cr
607749 –5 1215-1300 MTWThF, Arch 5, 5 cr
407719 –6 1315-1400 MTWThF, Zoology 313, 5 cr
633686 –7 1415-1500 MTWThF, Arch 50, 5 cr

R1131 **Finite Mathematics** (prereq 3 1/2 yrs high school math or grade of C or better in 1111)
★LECT 1115-1200 MWF, AndH 270
407753 –1 REC 1115-1200 TTh, BlegH 110, 5 cr
107755 –2 REC 1115-1200 TTh, BlegH 125, 5 cr
907756 –3 REC 1115-1200 TTh, BlegH 155, 5 cr
507758 –4 REC 1115-1200 TTh, BlegH 215, 5 cr
507761 –5 REC 1115-1200 TTh, BlegH 220, 5 cr
★LECT 1215-1300 MWF, JacH 2135
107763 –6 REC 1215-1300 TTh, VinH 311, 5 cr
207768 –7 REC 1215-1300 TTh, VinH 203, 5 cr
207771 –8 REC 1215-1300 TTh, VinH 207, 5 cr

WE STAND OUT FROM THE CROWD



MSA Store is Non-Profit. That means great savings for you on your school, entertainment and personal needs. Compare our prices on items like clothes, records, backpacks, calculators, school supplies, film processing, gifts and health & beauty supplies. You'll see why MSA Store is the Minnesota Students' Alternative!

Students Helping Students.

Open M-F, 8-7
Saturday 11-5
Sunday 1-5
Ground Floor Coffman

NON-PROFIT · MSA STORE · STUDENT-OWNED & OPERATED



JOIN REC SPORTS FOR WINTER '84

INTRAMURALS
The U of M has one of the largest I-M programs in the country. Male, female and co-rec (men and women combined) teams. Sign-up for winter quarter: **Ice hockey, broomball, basketball, bowling, racquetball, volleyball** and the **Annual Free Throw Contest.**

CLUBS
Nearly 50 clubs exist in the Rec Sports program and chances are — whatever your interests — you'll find a club just for you. All clubs are open to fees-paid students and some clubs have provisions for non-University members . . . and clubs are always looking for beginners. Offices are: Peik Gym 25, 376-9263 or 106-107 Norris, 376-9250.

FITNESS AND OPEN RECREATION
Choose from aerobic dance, aerobic exercise, or aerobic workout; or from self-motivated programs in swimming and running. Or use gyms, pools, weight rooms and other activity areas during "open" times.

JOBS, TOO
Rec Sports annually hires 500 students — and you could be one of them. Check out the several types of student employment at 107 Cooke Hall. Good money, flexible scheduling and good work experience. Call Rec Sports Student Personnel at 373-4200.

UM REC SPORTS

GENERAL	373-4200
107 Cooke	373-4200
101A Bierman	373-1917
104 St. Paul Gym	373-0956

THE EARLY BIRD...



GMAT

- Permanent Centers open days, evenings and weekends.
- Low hourly cost. Dedicated full-time staff.
- Complete TEST-n-TAPE[sm] facilities for review of class lessons and supplementary materials.
- Small classes taught by skilled instructors.
- Opportunity to make up missed lessons.
- Voluminous home-study materials constantly updated by researchers expert in their field.
- Opportunity to transfer to and continue study at any of our over 85 centers.

Stanley H. KAPLAN
Educational Center
TEST PREPARATION SPECIALISTS SINCE 1938

Call Days Evenings & Weekends
378-9191
328 East Hennepin Ave.
Near U of M

379-4026

THERE IS A JEWISH STUDENT CENTER AT HILLEL HOUSE

***Good Hot Food Served M-F, 11:15-1:30*

***Ping-Pong, Pool, Color TV*

***Free Use of Electric Typewriters*

***Israel Action Committee*

***Campus Jewish Appeal*

***Rainbow Sign: A National Jewish Project to Prevent Nuclear War*

1521 UNIVERSITY AVE. SE, MPLS

707774 –9 REC 1215-1300 TTh, VinH 209, 5 cr
807796 –10 REC 1215-1300 TTh, VinH 301, 5 cr
★LECT 1315-1400 MWF, SmithH 100
007800 –11 REC 1315-1400 TTh, Arch 55, 5 cr
607802 –12 REC 1315-1400 TTh, Arch 50, 5 cr
033801 –13 REC 1315-1400 TTh, AkerH 21, 5 cr
833802 –14 REC 1315-1400 TTh, AkerH 225, 5 cr
633803 –15 REC 1315-1400 TTh, AkerH 317, 5 cr
433804 –16 REC 1315-1400 TTh, Arch 10, 5 cr

R1142 **Short Calculus** (§1211, 1511H, 1611; prereq 3 1/2 yrs hs math or grade of C or better in 1111 or 1201)
★LECT 0800-0845 MWF, PalmC 12, (StP)
412015 –1 REC 0800-0845 TTh, PalmC 12, 5 cr (StP)
★LECT 0915-1000 MWF, VinH 16
712019 –2 REC 0915-1000 TTh, AkerH 21, 5 cr
912021 –3 REC 0915-1000 TTh, ExpE 193, 5 cr
512023 –4 REC 0915-1000 TTh, FolH 105, 5 cr
112025 –5 REC 0915-1000 TTh, FolH 205, 5 cr
★LECT 1115-1200 MWF, AkerH 209
412029 –6 REC 1115-1200 TTh, PtH 111, 5 cr
812030 –7 REC 1115-1200 TTh, Phys 157, 5 cr
412032 –8 REC 1115-1200 TTh, AmundH 54, 5 cr
212033 –9 REC 1115-1200 TTh, FolH 308, 5 cr
★LECT 1315-1400 MWF, WullH 230
712036 –10 REC 1315-1400 TTh, Zoology 102, 5 cr
312038 –11 REC 1315-1400 TTh, FolH 308, 5 cr
512040 –12 REC 1315-1400 TTh, NichH 122, 5 cr

R1201 **Pre-Calculus** (§1008, 1111; prereq 4 yrs high school math including trigonometry)
707788 –1 0915-1000 MTWThF, BuH 120, 5 cr
907790 –2 1115-1200 MTWThF, SmithH 325, 5 cr

R1211 **Calculus I** (§1142, 1511H; prereq 4 yrs hs math incl trig or grade of C or better in 1201 or 1008, 1111)
★LECT 0815-0900 MWF, SmithH 225
114379 –1 REC 0815-0900 TTh, MurH 311, 5 cr
214381 –2 REC 0815-0900 TTh, VinH 2, 5 cr
514385 –3 REC 0815-0900 TTh, Phys 157, 5 cr
014388 –4 REC 0815-0900 TTh, Phys 236A, 5 cr
★LECT 0915-1000 MWF, SciCB 125
814392 –5 REC 0915-1000 TTh, VinH 203, 5 cr
714398 –6 REC 0915-1000 TTh, VinH 207, 5 cr
114401 –7 REC 0915-1000 TTh, VinH 209, 5 cr
714403 –8 REC 0915-1000 TTh, VinH 301, 5 cr
114406 –9 REC 0915-1000 TTh, SmithH 315, 5 cr
★LECT 0915-1000 MWF, Zoology 313
614409 –10 REC 0915-1000 TTh, AkerH 211, 5 cr
114415 –11 REC 0915-1000 TTh, AkerH 215, 5 cr
514418 –12 REC 0915-1000 TTh, AkerH 313, 5 cr
514421 –13 REC 0915-1000 TTh, AkerH 317, 5 cr
★LECT 1015-1100 MWF, AndH 250
014424 –14 REC 1015-1100 TTh, BlegH 420, 5 cr
214431 –15 REC 1015-1100 TTh, RarigC 610, 5 cr
514435 –16 REC 1015-1100 TTh, MinMet 116, 5 cr
814439 –17 REC 1015-1100 TTh, MinMet 120, 5 cr
614443 –18 REC 1015-1100 TTh, Arch 55, 5 cr
★LECT 1115-1200 MWF, FordH 155
514449 –19 REC 1115-1200 TTh, EltH N119, 5 cr
514452 –20 REC 1115-1200 TTh, AmundH 240, 5 cr
014455 –21 REC 1115-1200 TTh, PtH 215, 5 cr
614457 –22 REC 1115-1200 TTh, Zoology 102, 5 cr
400964 –23 REC 1115-1200 TTh, AkerH 209, 5 cr
★LECT 1215-1300 MWF, Zoology 313
200965 –24 REC 1215-1300 TTh, AmundH 40, 5 cr
900967 –25 REC 1215-1300 TTh, MinMet 120, 5 cr
721402 –26 REC 1215-1300 TTh, AkerH 21, 5 cr
217040 –27 REC 1215-1300 TTh, LindH 302, 5 cr
★LECT 1315-1400 MWF, SmithH 325
617925 –28 REC 1315-1400 TTh, PtH 215, 5 cr
517920 –29 REC 1315-1400 TTh, FolH 50, 5 cr
133806 –30 REC 1315-1400 TTh, FolH 303, 5 cr
933807 –31 REC 1315-1400 TTh, JonesH 2, 5 cr
★LECT 1415-1500 MWF, SmithH 325
733808 –32 REC 1415-1500 TTh, AkerH 317, 5 cr
733811 –33 REC 1415-1500 TTh, Arch 20, 5 cr
333813 –34 REC 1415-1500 TTh, Arch 45, 5 cr
033815 –35 REC 1415-1500 TTh, Arch 60, 5 cr
★LECT 0815-0900 MWF, MechE 108
633817 –36 REC 0815-0900 TTh, MechE 102, 5 cr
136891 –37 REC 0815-0900 TTh, VinH 6, 5 cr
036892 –38 REC 0815-0900 TTh, VinH 20, 5 cr

R1221 **Calculus II** (§1321, 1521H, 1621; prereq grade of C or better in 1211)
★LECT 0815-0900 MWF, VinH 16
021423 –1 REC 0815-0900 TTh, VinH 311, 5 cr
821424 –2 REC 0815-0900 TTh, VinH 313, 5 cr
621425 –3 REC 0815-0900 TTh, VinH 314, 5 cr
914464 –4 REC 0815-0900 TTh, VinH 364, 5 cr
★LECT 0915-1000 MWF, AndH 310
014469 –5 REC 0915-1000 TTh, VinH 311, 5 cr
814473 –6 REC 0915-1000 TTh, VinH 313, 5 cr
114477 –7 REC 0915-1000 TTh, VinH 314, 5 cr
914481 –8 REC 0915-1000 TTh, VinH 364, 5 cr
814487 –9 REC 0915-1000 TTh, Phys 236A, 5 cr
★LECT 1015-1100 MWF, Arch 5
614491 –10 REC 1015-1100 TTh, MoosT 2580, 5 cr
914495 –11 REC 1015-1100 TTh, FolH 308, 5 cr
114499 –12 REC 1015-1100 TTh, BuH 125, 5 cr
014505 –13 REC 1015-1100 TTh, Phys 210, 5 cr
★LECT 1115-1200 MWF, VinH 16
214509 –14 REC 1115-1200 TTh, ExpE 193, 5 cr
114513 –15 REC 1115-1200 TTh, BuH 125, 5 cr
514516 –16 REC 1115-1200 TTh, FolH 105, 5 cr
314520 –17 REC 1115-1200 TTh, FolH 209, 5 cr
★LECT 1115-1200 MWF, MoosT 2530
814523 –18 REC 1115-1200 TTh, VinH 2, 5 cr
114527 –19 REC 1115-1200 TTh, VinH 6, 5 cr
714529 –20 REC 1115-1200 TTh, Arch 20, 5 cr
014536 –21 REC 1115-1200 TTh, AkerH 309, 5 cr
414539 –22 REC 1115-1200 TTh, FordH 285, 5 cr
★LECT 1215-1300 MWF, VinH 16
614541 –23 REC 1215-1300 TTh, VinH 2, 5 cr
114544 –24 REC 1215-1300 TTh, VinH 6, 5 cr
114552 –25 REC 1215-1300 TTh, VinH 20, 5 cr
414556 –26 REC 1215-1300 TTh, VinH 113, 5 cr
★LECT 1215-1300 MWF, Phys 133
214560 –27 REC 1215-1300 TTh, BuH 123, 5 cr
514564 –28 REC 1215-1300 TTh, Phys 143, 5 cr
614572 –29 REC 1215-1300 TTh, LindH 320, 5 cr
114575 –30 REC 1215-1300 TTh, LindH 325, 5 cr
★LECT 1315-1400 MWF, Phys 133
514578 –31 REC 1315-1400 TTh, MinMet 120, 5 cr
314582 –32 REC 1315-1400 TTh, MinMet 124, 5 cr
414587 –33 REC 1315-1400 TTh, AmundH 154, 5 cr
114589 –34 REC 1315-1400 TTh, AmundH 158, 5 cr
★LECT 1315-1400 MWF, AndH 250
114592 –35 REC 1315-1400 TTh, BlegH 150, 5 cr
714594 –36 REC 1315-1400 TTh, BlegH 155, 5 cr
514600 –37 REC 1315-1400 TTh, BlegH 220, 5 cr
014603 –38 REC 1315-1400 TTh, BlegH 415, 5 cr
★LECT 1415-1500 MWF, SmithH 225
614605 –39 REC 1415-1500 TTh, SmithH 315, 5 cr
214607 –40 REC 1415-1500 TTh, LindH 203, 5 cr
700968 –41 REC 1415-1500 TTh, AmundH 40, 5 cr
500969 –42 REC 1415-1500 TTh, MechE 302, 5 cr

R1231 **Calculus III** (§1331, 1531H, 1621; prereq grade of C or better in 1221)
★LECT 1115-1200 MWF, Phys 170
514614 –1 REC 1115-1200 TTh, VinH 20, 5 cr
814618 –2 REC 1115-1200 TTh, MurH 311, 5 cr
814621 –3 REC 1115-1200 TTh, Phys 143, 5 cr
114625 –4 REC 1115-1200 TTh, Arch 55, 5 cr
114633 –5 REC 1115-1200 TTh, LindH 305, 5 cr
★LECT 1215-1300 MWF, AndH 350
414637 –6 REC 1215-1300 TTh, BlegH 110, 5 cr
214641 –7 REC 1215-1300 TTh, BlegH 215, 5 cr
914643 –8 REC 1215-1300 TTh, BlegH 220, 5 cr
814649 –9 REC 1215-1300 TTh, BlegH 415, 5 cr
814652 –10 REC 1215-1300 TTh, BlegH 255, 5 cr
★LECT 1415-1500 MWF, JacH 2135
114656 –11 REC 1415-1500 TTh, VinH 2, 5 cr
714658 –12 REC 1415-1500 TTh, VinH 6, 5 cr
000880 –13 REC 1415-1500 TTh, VinH 20, 5 cr
933841 –14 REC 1415-1500 TTh, MurH 311, 5 cr
733842 –15 REC 1415-1500 TTh, SmithH 111, 5 cr

R1321 **Calculus II Computer Option** (§1221, 1521H, 1621; prereq C grade or better in 1211 or 1511H or 1611, knowl of prog lang)
★LECT 0915-1000 MWF, Arch 35
236896 –1 REC 0915-1000 TTh, VinH 2, 5 cr
136897 –2 REC 0915-1000 TTh, VinH 6, 5 cr
936898 –3 REC 1015-1100 TTh, FolH 105, 5 cr
736899 –4 REC 1015-1100 TTh, FolH 107, 5 cr
★LECT 1015-1100 MWF, Arch 35
436900 –5 REC 0915-1000 TTh, VinH 20, 5 cr
236901 –6 REC 0915-1000 TTh, VinH 113, 5 cr
136902 –7 REC 1015-1100 TTh, BuH 120, 5 cr
936903 –8 REC 1015-1100 TTh, Arch 35, 5 cr

R1521H **Honors Calculus II** (§1221, 1321, 1621; prereq 1511H)
★LECT 0915-1000 MWF, VinH 213
311861 –80 REC 0915-1000 TTh, VinH 213, 5 cr

R1621 **Accelerated Calculus II** (§1231, 1331, 1531H; prereq 1611)
★LECT 1215-1300 MWF, Phys 210
614670 –1 REC 1215-1300 TTh, VinH 313, 5 cr
114673 –2 REC 1215-1300 TTh, VinH 314, 5 cr

R3066 **Elementary Differential Equations** (§3213, 3221, 3521; prereq grade of C or better in 1231 or equiv)
720122 1115-1200 MWF, VinH 301, 4 cr

R3142 **Introduction to Linear Algebra** (§3213, 3221, 3511; prereq grade of C or better in 1231 or equiv)
314694 –1 0815-0900 MWF, VinH 313, 4 cr
614698 –2 0915-1000 MWF, VinH 313, 4 cr
400981 –3 0915-1000 MWF, VinH 211, 4 cr
417554 –4 1015-1100 MWF, VinH 211, 4 cr
118464 –5 1315-1400 MWF, VinH 20, 4 cr

R3211 Multivariable Calculus (§3521; prereq grade of C or better in 1231 or equiv)
★LECT 0815-0900 MWF, Phys 170
914707 –1 REC 0815-0900 TTh, VinH 113, 5 cr
714711 –2 REC 0815-0900 TTh, VinH 203, 5 cr
314713 –3 REC 0815-0900 TTh, VinH 207, 5 cr
614717 –4 REC 0815-0900 TTh, VinH 209, 5 cr
614720 –5 REC 0815-0900 TTh, VinH 301, 5 cr
★LECT 1015-1100 MWF, Arch 50
514726 –6 REC 1015-1100 TTh, VinH 2, 5 cr
014729 –7 REC 1015-1100 TTh, VinH 6, 5 cr
814733 –8 REC 1015-1100 TTh, VinH 20, 5 cr
214736 –9 REC 1015-1100 TTh, CivMinE 213, 5 cr
★LECT 1315-1400 MWF, OwreH 2230
714739 –10 REC 1315-1400 TTh, LindH 302, 5 cr
507808 –11 REC 1315-1400 TTh, LindH 340, 5 cr
707810 –12 REC 1315-1400 TTh, PtH 214, 5 cr
129643 –13 REC 1315-1400 TTh, VinH 2, 5 cr
617830 –14 REC 1315-1400 TTh, VinH 6, 5 cr
★LECT 1415-1500 MWF, VinH 16
533843 –15 REC 1415-1500 TTh, VinH 113, 5 cr
333844 –16 REC 1415-1500 TTh, VinH 203, 5 cr
133845 –17 REC 1415-1500 TTh, VinH 207, 5 cr
734182 –18 REC 1415-1500 TTh, VinH 209, 5 cr
★LECT 1315-1400 MWF, MechE 102
137796 –19 REC 1315-1400 TTh, MechE 102, 5 cr

R3212 Vector and Linear Analysis I (§3231; prereq grade of C or better in 3211 or equiv)
★LECT 1115-1200 MWF, Arch 50
633848 –1 REC 1115-1200 TTh, VinH 113, 5 cr
433849 –2 REC 1115-1200 TTh, VinH 203, 5 cr
833850 –3 REC 1115-1200 TTh, VinH 207, 5 cr
633851 –4 REC 1115-1200 TTh, VinH 209, 5 cr
★LECT 1315-1400 MWF, JacH 2135
233853 –5 REC 1315-1400 TTh, VinH 20, 5 cr
133854 –6 REC 1315-1400 TTh, VinH 113, 5 cr
933855 –7 REC 1315-1400 TTh, VinH 203, 5 cr
733856 –8 REC 1315-1400 TTh, VinH 207, 5 cr

R3213 Vector and Linear Analysis II (§3066, 3142, 3221, 3511; prereq grade of C or better in 3212 or equiv)
★LECT 1015-1100 MWF, VinH 16
333858 –1 REC 1015-1100 TTh, VinH 113, 4 cr
133859 –2 REC 1015-1100 TTh, VinH 203, 4 cr
533860 –3 REC 1015-1100 TTh, VinH 207, 4 cr
333861 –4 REC 1015-1100 TTh, VinH 209, 4 cr
★LECT 1315-1400 MWF, VinH 16
033863 –5 REC 1315-1400 TTh, VinH 311, 4 cr
833864 –6 REC 1315-1400 TTh, VinH 313, 4 cr
633865 –7 REC 1315-1400 TTh, VinH 314, 4 cr
233867 –8 REC 1315-1400 TTh, VinH 364, 4 cr

R3221 Introduction to Linear Algebra and Linear Differential Equations (§3066, 3142, 3212, 3511; prereq grade of C or better in 1231 or equiv)
★LECT 1015-1100 MWF, NichH 211
029067 –1 REC 1015-1100 TTh, VinH 301, 5 cr
629069 –2 REC 1015-1100 TTh, VinH 311, 5 cr
029070 –3 REC 1015-1100 TTh, VinH 313, 5 cr
229074 –4 REC 1015-1100 TTh, VinH 314, 5 cr
133868 –5 REC 1015-1100 TTh, VinH 364, 5 cr
★LECT 1115-1200 MWF, SciCB 175
929076 –6 REC 1115-1200 TTh, VinH 301, 5 cr
329079 –7 REC 1115-1200 TTh, VinH 311, 5 cr
529081 –8 REC 1115-1200 TTh, VinH 313, 5 cr
129083 –9 REC 1115-1200 TTh, VinH 314, 5 cr
129352 –10 REC 1115-1200 TTh, VinH 364, 5 cr
★LECT 1415-1500 MWF, Phys 133
529355 –11 REC 1415-1500 TTh, VinH 301, 5 cr
329356 –12 REC 1415-1500 TTh, VinH 311, 5 cr
629640 –13 REC 1415-1500 TTh, VinH 314, 5 cr
429641 –14 REC 1415-1500 TTh, VinH 313, 5 cr
307812 –15 REC 1415-1500 TTh, VinH 364, 5 cr

R3231 Vector Analysis (§3212, 3531; prereq grade of C or better in 3211 or equiv)
614765 –1 1115-1200 MWF, VinH 6, 4 cr
914769 –2 1215-1300 MWF, VinH 311, 4 cr

R3521 Linear Analysis II (§3066, 3211; prereq grade of C or better in 3511)
★LECT 1315-1400 MWF, VinH 113
014777 –1 REC 1315-1400 TTh, VinH 206, 5 cr
933869 –2 REC 1315-1400 TTh, VinH 209, 5 cr

R3531 Linear Analysis III (prereq grade of C or better in 3521)
★LECT 1215-1300 MWF, VinH 364
109960 –1 REC 1215-1300 TTh, VinH 364, 5 cr

R5057 Actuarial Science Principles - Life Contingencies I (prereq 1231, 5056 or 1131, 1221, 5056) (A–N only)
007828 0815-1000 TTh, BlegH 230, 4 cr

R5082 Fundamentals of Algebra (prereq 3511 or 3142 or 3221 or equiv) (A–N only)
314257 1610-1725 MW, VinH 207, 4 cr

R5151 Elementary Set Theory (prereq 3211 or #)
820130 0915-1000 MWF, VinH 314, 4 cr

R5163 Mathematical Logic (prereq 5162)
420132 1415-1500 MWF, VinH 211, 4 cr

R5200 Topics in Algebra (prereq #)
233870 0915-1000 MWF, VinH 311, 4 cr

R5232 Computer Oriented Linear Algebra (§5242-5243, 5262, 5282, 5264, 5284; prereq 3142 or 3221 or #)
120134 1415-1500 MWF, VinH 311, 4 cr

R5242 Linear Algebra with Applications (§5232-5233, 5262, 5282, 5264, 5284; prereq 3142 or 3221)
300990 –1 1015-1100 MWF, VinH 311, 4 cr
000992 –2 1015-1100 MWF, VinH 301, 4 cr

R5243 Linear Algebra with Applications (§5232-5233, 5262, 5282, 5264, 5284; prereq 5242)
920135 –1 1215-1300 MWF, VinH 314, 4 cr
117556 –2 1315-1400 MWF, VinH 314, 4 cr

R5283 Fundamental Structures of Algebra (prereq 5282)
520137 1115-1200 MWF, VinH 313, 4 cr

R5341 Introduction to Topology (prereq one sophomore sequence or #...some previous abstract mathematics rec)
120142 1115-1200 MWF, VinH 311, 4 cr

R5342 Introduction to Topology (prereq 5341)
820144 1415-1500 MWF, VinH 314, 4 cr

R5376 Differential Geometry (prereq 5375, 1 qtr linear algebra)
133871 0915-1000 MWF, VinH 364, 4 cr

R5458 Methods of Applied Mathematics (prereq 5457)
109965 –1 1015-1100 MWF, VinH 113, 4 cr
717558 –2 1015-1100 MWF, VinH 203, 4 cr

R5474 Analysis of Numerical Methods (prereq 3211, 3142 or equiv) (A–N only)
620145 0915-1000 MWF, VinH 207, 4 cr

R5477 Applied Numerical Analysis of Partial Differential Equations (prereq 5567 or 5571 or equiv)
637091 1015-1100 MWF, VinH 313, 4 cr

R5512 Differential Equations with Applications I (prereq 3211 or 3521 or 3611, 3221 or 3066 or 3531 or 3621)
600994 –1 1315-1400 MWF, VinH 311, 4 cr
717916 –2 1315-1400 MWF, VinH 209, 4 cr

R5513 Differential Equations with Applications II (prereq 5512)
220147 1415-1500 MWF, VinH 301, 4 cr

R5522 Introduction to Ordinary Differential Equations (prereq 5521) (A–N only)
120148 1315-1400 MWF, VinH 301, 4 cr

R5567 Fourier Series and Boundary Values Problems (§5571; prereq 3211, 3066 or 3211, 3221 or equiv or #)
200996 1415-1500 MWF, VinH 20, 4 cr

R5568 Elementary Theory of Complex Variables (§5572; prereq 3231 or 5602 or equiv vector analysis course)
920149 1315-1400 MWF, VinH 207, 4 cr

R5572 Elementary Partial Differential Equations (prereq 5571)
220150 0915-1000 MWF, VinH 203, 4 cr

R5601 Advanced Calculus (prereq 3211 or #)
414797 –1 1115-1200 MWF, VinH 203, 4 cr
907837 –2 1115-1200 MWF, VinH 209, 4 cr

R5602 Advanced Calculus (prereq 5601)
814800 –1 1015-1100 MWF, VinH 314, 4 cr
638094 –2 1115-1200 MWF, VinH 2, 4 cr

R5613 Introduction to Analysis (prereq 5612)
514810 –1 1115-1200 MWF, VinH 113, 4 cr
014813 –2 1315-1400 MWF, VinH 313, 4 cr

R5682 Introduction to Probability (prereq 5681)
820175 1415-1500 MWF, VinH 313, 4 cr

R5702 Graph Theory and Optimization (prereq 3211 or equiv, 3rd yr standing...soph level linear algebra is helpful)
420177 1315-1400 MWF, VinH 203, 4 cr

R8141 Applied Logic: Set Theory (prereq 8140)
933872 0915-1000 MWF, VinH 206, 3 cr

R8151 Axiomatic Set Theory (prereq 8150)
733873 1415-1500 MWF, VinH 364, 3 cr

R8201 General Algebra (prereq 8200)
220178 1115-1200 MWF, VinH 364, 3 cr

R8260 Topics in Number Theory and Algebraic Geometry (prereq 5572, 8201 or #)
533874 1015-1100 MWF, VinH 364, 1–3 cr

R8271 Lie Groups, Algebras (prereq 8270)
333875 1415-1500 MWF, VinH 203, 3 cr

R8291 Topics in Algebra (prereq 8290)
133876 1315-1400 MWF, VinH 213, 1–3 cr

R8307 Algebraic Topology (prereq 8306)
220181 1015-1100 MWF, VinH 213, 3 cr

R8366 Riemannian Geometry (prereq 8365)
707855 1115-1200 MWF, VinH 206, 3 cr

R8375 Topics in Algebraic Geometry (prereq 8374)
107858 1015-1100 MWF, VinH 20, 3 cr

R8407 Advanced Methods of Applied Mathematics (prereq 8406)
736904 1415-1500 MWF, VinH 207, 3 cr

R8446 Numerical Analysis of Ordinary and Partial Differential Equations (prereq 8445) (A–N only)
007862 1215-1300 MWF, VinH 207, 1–3 cr

R8471 Topics in the Mathematical Theory of Continuum Mechanics (prereq 8470)
038402 1–3 cr

R8501 Theory of Ordinary Differential Equations (prereq 8500)
520185 1315-1400 MWF, VinH 206, 3 cr

R8541 Topics: Differential, Difference Equations (prereq 8540)
033877 0915-1000 MWF, VinH 209, 1–3 cr

R8551 Theory of Partial Differential Equations (prereq 8550)
820189 1015-1100 MWF, VinH 206, 3 cr

R8601 Real Analysis (prereq 8600)
620193 1215-1300 MWF, VinH 209, 3 cr

R8641 Topics in Real Analysis (prereq 8640)
833878 1115-1200 MWF, VinH 314, 1–3 cr

R8651 Theory of Probability (prereq 8650)
633879 1015-1100 MWF, VinH 207, 3 cr

R8657 Measure Theory and Probability (prereq 8656)
720198 1015-1100 MWF, VinH 209, 3 cr

R8673 Topics in Combinatorial Theory (prereq #)
536905 1415-1500 MWF, VinH 113, 3 cr

R8691 Topics in the Theory of Probability (prereq 8690)
107870 1415-1500 MWF, VinH 209, 1–3 cr

R8701 Complex Analysis (prereq 8700)
220200 1315-1400 MWF, VinH 364, 3 cr

R8790 Topics in the Theory of Analytic Functions (prereq 8702 or #)
033880 1115-1200 MWF, VinH 207, 1–3 cr

R8801 Functional Analysis (prereq 8800)
720203 0915-1000 MWF, MurH 230, 3 cr

MATHEMATICS EDUCATION (MthE)
Curriculum And Instruction Education

5101 Workshop: Elementary School Mathematics (max 12 cr; prereq #, non math educ majs) (A-N only)
534183 0900-1200 S, PeikH 375, Stochl, 3 cr

R5102 Workshop: Mathematics Education (max 12 cr) (A-N only)
904467 –1 1500-1600 MW, PeikH 375, House, 2 cr (Algebra)
334184 –2 Post, 3 cr (off campus)

5311 Teaching and Supervision of Mathematics in the Elementary School (prereq Elem 3391 or #) (A-N only)
134185 1615-1900 M, PeikH 375, Jackson, 3 cr

5312 Teaching and Supervision of Mathematics in the Secondary School (prereq mathematics teaching experience or #) (A-N only)
034186 1615-1900 M, PeikH 375, Jackson, 3 cr

R5366 Computer Assisted Mathematics Instruction (prereq 5311 or 5312 or SeEd 3365 or #) (A-N only)
634188 1615-1900 Th, PeikH 355, 3 cr

5680 Practicum in Mathematics Education (max 9 cr; prereq #) (A-N only)
016805 3-9 cr

5980 Directed Studies (max 9 cr; prereq #) (A-N only)
616807 3-9 cr

R8590 Seminar: Mathematics Education (max 8 cr; prereq #)
834187 1615-1800 T, PeikH 375, House, 2 cr

8680 Internship: Mathematics Education
216809 ar cr

8980 Problems: Mathematics Education (prereq 8500 or 8570)
306661 ar cr

MECHANICAL ENGINEERING (ME)
Mechanical Engineering Institute of Technology

R1001 Introduction to Mechanical Engineering (S-N only)
520008 1315-1400 T, SmithH 100, 1 cr

R1025 Engineering Graphics (prereq ¶Math 1211 or equiv, IT stu)
431695 –1 LECT 1015-1100 MTWThF, Arch 10, 4 cr
231696 –2 LECT 1315-1400 MTWThF, MechE 212, 4 cr
★LAB open hrs, MechE 314

R3201 Mechanical Engineering Systems Analysis (§AEM 3401; prereq AEM 3036, mech engr or aerospace engr maj)
★LECT 1315-1400 MWF, MechE 18
114874 –1 REC 1415-1600 M, MechE 202, 4 cr
414878 –2 REC 1215-1400 T, Phys 236A, 4 cr
010003 –3 REC 1415-1600 W, MechE 321, 4 cr

R3203 Analysis of Mechanism Systems (prereq AEM 3036 or equiv, upper division mech engr maj)
★LECT 1115-1200 MWF, Arch 35
914884 –1 REC 1415-1600 M, MechE 321, 4 cr
314887 –2 REC 1115-1300 T, MechE 302, 4 cr
314890 –3 REC 1215-1400 Th, Phys 236A, 4 cr
614894 –4 REC 1415-1600 Th, MechE 221, 4 cr
113630 –5 REC 1415-1600 F, MechE 321, 4 cr

R3301 Thermodynamics (prereq Chem 1014 or Phys 1281, Math 3221 or equiv, IT stu)
114897 –1 0915-1000 MTWThF, AkerH 309, 4 cr
214901 –2 1015-1100 MTWThF, Arch 40, 4 cr

R3303 Applied Thermodynamics (§3305; prereq 3301 or equiv, upper division mech engr or aerospace engr maj)
514905 –1 0815-0900 MTWThF, Arch 55, 4 cr
814909 –2 1415-1500 MTWThF, MechE 212, 4 cr

R3305 Propulsion Thermodynamics (§3303; prereq 3301, AEM 5200 or equiv, mech engr or aerospace engr maj)
220018 1215-1300 MTWThF, MechE 221, 4 cr

R3701 Basic Measurements Laboratory I (prereq 3301 or ¶, upper division mech engr maj)
106872 1215-1300 T, Arch 55, 2 cr (Open lab ar, MechE 370-388)

R3702 Basic Measurements Laboratory II (prereq 3701, upper division mech engr maj)
006873 1215-1300 Th, Arch 55, 2 cr (Open lab ar, MechE 370-388)

R3741 Industrial Assignment (prereq regis in intern program)
110008 2 cr

R3742 Industrial Assignment (prereq 3741)
910009 2 cr

R3743 Industrial Assignment (prereq 3742)
813629 2 cr

R3900 Introduction to Engineering Statistics (prereq Math 1231 or equiv, IT stu)
920040 1315-1400 MWThF, MechE 221, 4 cr

R5190 Advanced Engineering Problems (prereq submission of approved departmental permission form)
720041 2-4 cr

R5207 Experimental Stress Analysis (prereq AEM 3016, IT upper division or grad)
806874 1015-1100 MWF, AkerH 313, 4 cr (lab ar)

R5220 Computer Aided Design (prereq 3203, 3205, FORTRAN programming, IT stu or grad)
529047 –1 LECT 0915-1000 MWF, MechE 221, 4 cr
★LAB 1115-1200 Th, Arch 10

R5221 Computer Graphics in Design (prereq 5220 or #, IT stu or grad)
731699 –1 LECT 0815-0900 MWF, MechE 302, 4 cr
★LAB 0815-0900 Th, MechE 221

R5225 Finite Elements in Mechanical Design (prereq 3205, 5342, programming, IT stu or grad) (A-N only)
621280 1515-1800 M, MechE 221, 4 cr

R5244 Vibration Engineering (prereq 3201 or equiv, IT stu or grad)
334217 1015-1100 MWThF, LindH 315, 4 cr

R5254 Design Morphology with Applications (prereq completion of sequences 3201/3203/3205, 3303/5342 or #, upper div mech engr maj)
★LECT 1315-1400 TTh, Arch 5
114947 –1 LAB 1415-1700 TTh, MechE 314, 4 cr
914951 –2 LAB 1415-1700 TTh, MechE 321, 4 cr
114955 –3 LAB 1415-1700 TTh, MechE 352, 4 cr
529050 –4 LAB 1415-1700 TTh, MechE 358, 4 cr

R5255 Engineering Design Project (prereq 5254, upper division mech engr maj)
★LECT 1315-1400 TTh, MechE 302, 4 cr
225882 –1 LAB 1415-1700 TTh, MechE 359

R5260 Engineering Materials and Processing (prereq Phys 1291, Chem 1004, 1st yr calculus, upper division mech engr maj)
★LECT 1315-1400 MWF, AkerH 209
714966 –1 REC 1415-1700 M, MechE 50, 4 cr
114969 –2 REC 0815-1100 T, MechE 50, 4 cr
514970 –3 REC 1415-1700 T, MechE 50, 4 cr
231701 –4 REC 1415-1700 W, MechE 50, 4 cr
913671 –5 REC 1415-1700 Th, MechE 50, 4 cr

R5264 Material Consolidation Processes (prereq 5260, IT stu or grad)
506870 0915-1100 TTh, Arch 15, 4 cr

R5271 Computer Aided Manufacturing: Robotics (prereq 5260, 5283 or equiv)
306868 1215-1300 MWThF, Arch 30, 4 cr

R5275 Computer Controlled Experimentation (prereq 5283 or equiv)
113667 1315-1400 MF, 1315-1500 W, MechE 202, 4 cr

R5284 Control Systems (prereq 5283 or equiv, IT stu or grad)
620050 0915-1045 TTh, MechE 221, 4 cr

R5285 Control Systems Laboratory (prereq 5283 or equiv, IT or grad IT maj)
215191 1015-1130 TTh, MechE 379, 2 cr

R5342 Heat Transfer (prereq 3301, CE 3400 or AEM 3200, IT upper division or grad)
720069 –1 1015-1100 MTWThF, MechE 302, 4 cr
529372 –2 1515-1700 MW, MechE 302, 4 cr

R5446 An Introduction to Combustion (prereq 5342 or equiv, IT stu or grad)
120070 1115-1200 MWThF, MechE 321, 4 cr

R5460 Internal Combustion Engines (prereq 3301, IT stu or grad)
120075 1015-1100 MTWThF, MechE 321, 4 cr

R5462 Gas Turbines (prereq 3301, IT stu or grad)
820077 0915-1000 MTWThF, MechE 321, 4 cr

R5603 Thermal Environmental Engineering (prereq 3303, 5342 or equiv, IT stu or grad)
129402 1315-1400 MWThF, MechE 321, 4 cr

R5605 Refrigeration (prereq 3303, IT stu or grad)
134218 1215-1300 MWThF, Arch 15, 4 cr

R5607 Industrial Ventilation and Contaminant Control (prereq 3303, CE 3400, IT stu or grad)
620081 1115-1200 MWThF, Arch 15, 4 cr

R5614 Principles of Particle Technology (prereq 5613, IT stu or grad)
920085 0815-1000 TTh, MechE 302, 4 cr

R5703 Advanced Mechanical Engineering Laboratory (prereq 3702, sr)
406893 1415-1700 M or W or F, 2 cr (Obtain experiment cards from MechE 121 prior to registering)

R5704 Advanced Mechanical Engineering Laboratory (prereq 5703)
508375 1415-1700 M or W or F, 2 cr (Obtain experiment cards from MechE 121 prior to registering)

R5705 Advanced Mechanical Engineering Laboratory (prereq 5704)
308376 1415-1700 M or W or F, 2 cr (Obtain experiment cards from MechE 121 prior to registering)

R5712 Solar Energy Utilization (prereq 5342 or #, IT stu or grad)
120089 0815-0900 MWThF, MechE 212, 4 cr

R5741 Industrial Assignment and Design Project (5741-5742†; prereq 3742)
106869 4 cr

R5742 Industrial Assignment and Design Project (5741-5742†; prereq 5741)
413665 4 cr

8331 Convection (prereq 8330)
820094 0915-1000 MWF, LindH 303, 3 cr

8361 Introduction to Plasma Technology (prereq 8360 or #)
034219 0915-1000 MWF, MechE 351, 3 cr

8444 Thermodynamics and Chemical Kinetics of Combustion (prereq 5446 or ¶)
334220 3 cr

8453 Advanced Gas Turbines, Jet Propulsion (prereq 5462)
218429 3 cr

8485 Biomedical-Engineering Seminar (§Surg 8785)
220097 1515-1630 T, MechE 202, 1-3 cr

8486 Biomedical-Engineering Seminar (§Surg 8785; prereq 8485)
920099 1515-1630 T, MechE 202, 1-3 cr

8487 Biomedical-Engineering Seminar (§Surg 8785; prereq 8486)
920104 1515-1630 T, MechE 202, 1-3 cr

8771 Mechanical Engineering Research (prereq 8770, △)
320107 ar cr

8772 Mechanical Engineering Research (prereq 8771, △)
920118 ar cr

8773 Graduate Seminar (S-N only)
120120 1515-1700 W, MechE 108, 202, 1 cr

8774 Graduate Seminar (prereq 8773) (S-N only)
920121 1515-1700 W, MechE 108, 202, 1 cr

8775 Graduate Seminar (prereq 8774) (S-N only)
820127 1515-1700 W, MechE 108, 202, 1 cr

MEDICAL TECHNOLOGY (MedT)
Medical School

1031 Introduction to Clinical Medicine (prereq soph) (S-N only)
119436 1215-1300 T, MoosT 2520, Rausch, 1 cr

5075 Principles of Clinical Hematology I (prereq △)
★LECT 1215-1300 TTh, MoosT 2530, Lofsness, 3 cr
925884 –1 LAB 1315-1600 MF, MoosT 3331

5082 Applied Clinical Chemistry (prereq 5111) (S-N only)
919437 4 cr

5085 Applied Clinical Hematology (prereq 5067, 5076) (S-N only)
519439 4 cr

5086 Applied Clinical Immunohematology (prereq 5066) (S-N only)
719441 4 cr

5088 Applied Diagnostic Microbiology (prereq 5102) (S-N only)
319443 4 cr

5090 Special Laboratory Methods (prereq #)
119444 2 cr

5092 Honors Program: Laboratory Methods (prereq #)
819446 5 cr

5102 Principles of Diagnostic Microbiology (prereq MicB 5233) (A-N only)
★LECT 1015-1100 TTh, MoosT 2650, 1015-1100 F, JacH 2135, Wells, 5 cr
015007 –1 LAB 1315-1500 TWTh, MoosT 3343
015010 –2 LAB 1515-1700 TWTh, MoosT 3343

5110 Introduction to Clinical Chemistry (prereq Chem 3100-3101, MdBc 5300, △)
★LECT 0915-1000 TTh, MoosT 2620, 0915-1000 F, JacH 2135, Bowers, 4 cr
800105 –1 LAB 0915-1200 MW, MoosT 2191

5120 Seminar
219449 1-3 cr

5125 Practicum: Teaching (max 3 cr)
419451 ar cr

5138 Seminar: Clinical Microbiology
519456 1115-1200 W, Mayo D230, 1 cr (Eustis Amph)

5141 Techniques for Teaching (prereq 5140)
129052 1015-1100 MWF, PWB 15194, Rausch, 3 cr

5145 Development of Medical Technology
319457 3 cr

5155 Advanced Clinical Hematology (prereq #)
019459 5 cr

5165 Advanced Clinical Immunohematology (prereq #)
319460 5 cr

5175 Advanced Clinical Chemistry (prereq #)
119461 5 cr

5179 Chemistry Seminar (prereq #)
019462 1 cr

8176 Advanced Topics in Clinical Chemistry
419465 0815-1000 MWF, PWB 15194, Bowers, 3 cr

MEDICINAL CHEMISTRY (MedC)
Pharmacy

8100 Medicinal Chemistry Seminar
619724 1615-1800 T, MoosT 2520, Hanna, ar cr

8500 Design of Chemotherapeutic Agents (prereq 5600 or #) (A-N only)
334055 Vince, 3 cr

8800 Laboratory Techniques (prereq Chem 3303 or #)
219726 ar cr

8900 Research in Medicinal Chemistry (prereq Chem 3303 or #)
815770 ar cr

MEDICINE (Med)
Medical School

5500 Advanced Internal Medicine (prereq 5502)
819480 Ferris, 9 cr

5501 Medical Oncology Externship in Medicine
619481 Kennedy, 9 cr

5502 Medicine Externship I
419482 Ferris, 9 cr

5504 Medicine Externship
219483 Wang, 9 cr

5505 Infectious Disease Research at the University Hospital
119484 Sabath, 9 cr

5506 Medicine Subinternship
904436 Moldow, ar cr

5507 Medicine Subinternship in Hematology (prereq 5502, regis med student)
606133 Ferris, 9 cr

5508 Research/Special Problems in Medicine (prereq regis med) (S-N only)
737633 Hostetter, ar cr

5509 Research in Rheumatology
919485 Messner, 9 cr

5511 Research in Gastroenterology
719486 Levitt, 9 cr

5512 Research in Hematology
519487 Jacob, 9 cr

5518 Research in Endocrinology (prereq regis med student)
119489 Oppenheimer, ar cr

5521 Infectious Diseases, Clinical Aspects at the University Hospitals
519490 Sabath, 9 cr

5522 Medical Gastroenterology
319491 Olson, 9 cr

5523 Endocrinology, Metabolism, Clinical Pharmacology
119492 1515-1700 Th, MoosT 2520, Barbosa, 9 cr

5525 Cardiovascular Medicine
019493 Bache, 9 cr

5527 Contemporary Problems in Investigative Cardiology
819494 Bache, 9 cr

5528 Clinical Hematology
619495 Howe, 9 cr

5531 Clinical Rheumatology
419496 Hathaway, 4.5-9 cr

5532 Pulmonary Disease
119498 Kronenberg, 9 cr

5533 Clinical Allergy at University Hospitals
919499 Blumenthal, 4.5-9 cr

5542 Research in Pulmonary Disease
119503 Kronenberg, 9 cr

5548 Clinical Genetics
719505 King, 9 cr

5554 Fluid Electrolyte, Acid-Base Metabolism
319507 Ma, 9 cr

5556 Renal Diseases
319510 Ferris, 4.5-9 cr

5557 Research in Nephrology
019512 Ferris, ar cr

5562 Medical Nephrology
419515 Rao, 9 cr

5570 Clinical Medicine on the General Clinical Research Center
219516 Bantle, 9 cr

5571 Clinical Toxicology and Emergency Medicine (prereq regis med student)
036830 Mulhausen, 4.5 cr (6B only)

5572 Ambulatory Adult, Geriatric Medicine at St. Paul Ramsey Hospital
119517 Spilane, 9 cr

5573 Externship in Geriatric Medicine at St. Paul-Ramsey Medical Center (prereq regis med)
919518 Irvine, 9 cr

5574 Critical Care in Internal Medicine at Hennepin County Medical Center (prereq 5502)
221282 Schultz, 9 cr

5575 Ambulatory Care Medicine at Hennepin County Medical Center (prereq 5502)
121283 Whitley, 9 cr

5576 Externship in Geriatrics (prereq 5502)
715146 Miles, 9 cr

5583 Diagnosis, Evaluation, and Care of Adults and Children with Cancer
719519 Ramsey, 9 cr

5589 Medicine Externship II at St. Luke's Hospital, Duluth (prereq 5502)
919521 Goldish, 9 cr

5590 Preceptorships in Internal Medicine
519523 Howe, 9 cr

5591 Internal Medicine for the Ambulatory Outpatient (prereq 5502, regis med student)
614152 Howe, 9 cr

5592 Rural Physician Associate Program in Internal Medicine
733727 Howe, ar cr

5594 Psychiatry in Medicine: Consultation-Liason
319524 Popkin, 9 cr

5597 Research in Occupational Health
119525 Johnson, 9 cr

8201 Clinical Medicine
819527 Ferris, ar cr

8202 Clinical Conference
619528 Ferris, 1 cr

8203 Clinical Radiology Conference
419532 Ferris, 1 cr

8204 Pathology Conference
119534 Ferris, 1 cr

8205 Electrocardiographic Conference
919535 Tuna, 1 cr

8206 Nephrology Seminar
219564 Ferris, 3 cr

8209 Tumor Clinical Conference
119565 Kennedy, 1 cr

8210 Infectious Disease Seminar
919566 Sabath, ar cr

8211 Diseases of the Cardiovascular System
719567 Cohn, ar cr

8212 Diseases of the Chest
519568 Kronenberg, ar cr

8213 Diseases of the Kidney
319569 Ferris, ar cr

8214 Diseases of Diabetes, Endocrinology, Metabolism
719570 Oppenheumer, ar cr

8215 Diseases of Hematology
519571 Jacob, ar cr

8216 Diseases of Gastroenterology
319572 Wilson, ar cr

8217 Diseases of Oncology
119573 Kennedy, ar cr

8220 Research in Medicine
019574 Ferris, ar cr

8221 Topics in Medicine
819575 Ferris, ar cr

8223 Topics in Related Basic Science
619576 Ferris, ar cr

METALLURGICAL ENGINEERING (MetE)
Civil and Mineral Engineering
Institute of Technology

5101 Chemical Metallurgy II (prereq 5100 or MatS 5100 or #)
609839 1015-1100 MTWF, MRRC 211, Bitsianes, Moore, 4 cr

R5201 Ore Microscopy (prereq Geo 3401 or #, △)
909863 1315-1400 WF, MRRC 211, Sabelin, 3 cr (lab ar)

5501 Metallurgical Engineering Design II (prereq #)
609890 Smith, 4 cr

5800 Mineral Processing I (prereq #)
209892 1415-1600 MW, MRRC 211, Smith, 4 cr

5902 Pyrometallurgical Process (prereq 5901 or #)
★LECT 1115-1200 MWF, ElectE 115, Bitsianes, 4 cr
725885 –1 LAB 1415-1700 T, CivMinE

5941 Special Problems in Extractive Metallurgical Engineering (prereq sr, grad student)
714272 Smith, 1-6 cr

8001 Applied Process Metallurgy II (prereq #)
221329 0815-0900 MWF, MRRC 211, Moore, 3 cr

8830 Electric and Magnetic Separation of Minerals (prereq #)
121428 Reid, 4 cr

8842 Surface Chemistry of Mineral Suspensions
514273 1215-1300 MWF, MRRC 211, Iwasaki, 3 cr

8922 Research in Extractive Metallurgical Engineering (prereq #) (A-N only)
921429 Moore, ar cr

8932 Physical Chemistry of High Temperature Metallurgical Reactions II (prereq 8930 or #)
221430 1115-1230 TTh, CivMinE 213, Moore, 3 cr

MICROBIOLOGY (MicB)
Medical School

R1101 **Elementary Microbiology** (prereq Biol 1009 or ¶, open to liberal arts students, DH, PT, mort sci, others #)
★LECT 1015-1100 MWF, PWB 2470, Prince
915131 –1 LAB 0815-0900 M, 0815-1000 F, MoosT 2252, 4 cr (dental hygienists, others)

R3103 **General Microbiology** (prereq soph with C avg in prereq courses to maj seq or jr, 10 cr chem, 5 cr biol sci or #)
★LECT 1115-1230 TTh, MoosT 2650, Schmidt, 5 cr
731718 –1 LAB 1300-1545 TTh, MoosT 2252

5205 **Microbiology for Medical Students** (prereq regis med freshman, all others #)
★LECT 1415-1500 MWF, 1315-1400 Th, PWB 2470, Brand, 5 cr
215272 –1 LAB 1015-1200 M, 1515-1700 W, MoosT 2252
915274 –2 LAB 1515-1700 M, 1015-1200 W, MoosT 2252

5225 **Microbiology for Medical Students** (prereq microbiology grad student, all others #)
715275 1415-1500 MWF, 1315-1400 Th, PWB 2470, Brand, 3 cr

5321 **Physiology of Bacteria** (prereq 3103 or 5105 or Biol 5013 or VPB 3013, 10 cr organic chem or biochem, 3 cr genetics)
931720 0815-0930 TTh, MMA 100, Rogers, 3 cr

R5322 **Physiology of Bacteria Laboratory** (prereq 5321 or ¶, a lab course in basic bacteriology)
005724 1315-1500 TTh, MoosT 2252, Rogers, 2 cr

5900 **Topics in Microbiology** (S–N only)
219578 1515-1600 W, Mayo 1050, Rogers, 1 cr

5970 **Directed Studies** (prereq #, △)
306255 Rogers, others, ar cr

5990 **Directed Research** (prereq #, △)
119579 Rogers, others, ar cr

5992 **Practicum: Teaching** (prereq #)
012723 1 cr

R8122 **Advanced Microbiology Laboratory** (prereq 5321 or ¶ or #)
419580 1200-1500 TTh, MoosT 2252, Rogers, 2 cr

R8218 **Immunochemistry and Immunology** (prereq 5216, #...LMed 5274 rec)
219581 1215-1500 F, DVCCRC 104, Gray, 3 cr

8240 **Preceptorship in Medical Microbiology** (max 6 cr; prereq #)
119582 Prince, ar cr

8242 **Diagnostic Microbiology** (prereq grad student in microbiology, #)
919583 Wells, ar cr

R8910 **Seminar** (prereq #)
719584 1215-1300 W, MoosT 2580, Dworkin, 1 cr

8911 **Colloquium in Microbiology**
519585 1 cr

8990 **Research in Microbiology**
319586 Cleary, ar cr

MIDDLE EASTERN AND SOUTH ASIAN STUDIES (MESA)
South And Southwest Asian Studies
Liberal Arts

1504 **Introduction to the Religions of South and Southeast Asia** (§RelS 1031)
137757 1115-1200 MWF, FolH 209, Malandra, 4 cr

3202 **Modern Indian Literature in Translation**
937758 1215-1300 MWF, FolH 205, Munda, 4 cr

3412 **Hinduism** (some background in Indian civilization is helpful)
737759 1015-1100 MWF, CivMinE 214, Junghare, 4 cr

3501 **The Heritage of India** (§Hum 3211)
137760 1215-1400 TTh, FordH 150, Lincoln, 5 cr

3505 **Survey: The Middle East** (§5505, Hist 3505)
937761 1015-1100 MWF, BlegH 245, Farah, 4 cr

3508 **Islam: Iran to India** (§5508)
737762 1215-1300 MWF, FolH 108, Alvi, 4 cr

3542 **History of the Arabs** (§Hist 3542)
537763 0915-1000 MWF, BlegH 110, Farah, 4 cr

5970 **Directed Study** (prereq #, △, CLA approval)
437769 ar cr

5990 **Research** (prereq #, △, CLA approval)
337764 ar cr

8990 **Research** (prereq #)
137765 ar cr

MILITARY SCIENCE (Mil)

R1012 **World Military History** (§Hist 1952; prereq △) (A–N only)
515892 0815-0900 TTh, Armory 116, Westhaus, 2 cr

R1022 **U.S. International Perspectives: Analysis of the U.S. Military Role** (prereq △) (A–N only)
115894 –1 0815-0900 TTh, Armory 103, Heffelfinger, 2 cr
838028 –2 1315-1400 TTh, Armory 116, Heffelfinger, 2 cr

R3111 **Leadership Communication** (§3142) (A–N only)
631548 –1 0815-0930 TTh, FolH 308, Bomersheim, 3–4 cr
431549 –2 1415-1530 TTh, Armory 116, Bomersheim, 3–4 cr

R3132 **Land Navigation and Map Reading** (prereq △, Leadership Laboratory) (A–N only)
831550 –1 0945-1100 TTh, Armory 116A, Deca, 3 cr
631551 –2 1130-1245 TTh, Armory 116A, Deca, 3 cr

3970 **Directed Studies** (prereq #, △) (A–N only)
815896 1–3 cr

MINING ENGINEERING (MinE)
Civil And Mineral Engineering
Institute of Technology

5610 **Mineral Evaluation** (prereq 5600, Stat 3091)
133787 0915-1000 MTWF, CivMinE 202, Dorenfeld, 4 cr

5650 **Mineral Engineering Design I** (prereq 5720, 5722 or #, IT stu or grad IT) (A–N only)
319863 1315-1700 MWF, ElectE 115, 4 cr

5660 **Special Mineral Engineering Problems** (prereq IT stu or grad IT maj) (A–N only)
204479 ar cr

5700 **Mineral Economics: Systems Analysis for Mineral Engineers** (prereq #, IT stu or grad IT) (A–N only)
409695 1215-1300 MTWF, CivMinE 205, Smith, 4 cr

8471 **Research Problems** (prereq #) (A–N only)
119864 ar cr

8602 **Seminar: Mineral Engineering** (prereq #) (S–N only)
019865 ar cr

8641 **Selected Minerals in National and World Affairs** (prereq 5642)
819866 1315-1400 MWF, CivMinE 202, Dorenfeld, 3–4 cr

MORTUARY SCIENCE (Mort)
Health Sciences

R3001 **Orientation in Funeral Services** (A–N only)
337635 1015-1200 TTh, JOAd 2125, 4 cr

R3040 **Psychology of Funeral Service** (prereq introductory course in general psychology) (A–N only)
104572 1415-1500 MWF, JOAd 2125, Burger, 3 cr

R3050 **Restorative Art** (prereq regis mortuary science) (A–N only)
★LECT 1115-1200 TTh, JacH 2153, Burger, 4 cr
215157 –1 LAB 0915-1200 M, JacH 2153B, Burger
915159 –2 LAB 0915-1200 W, JacH 2153B, Burger
115161 –3 LAB 0915-1200 F, JacH 2153B, Burger

R3060 **Embalming** (prereq biology, human anatomy, regis in mortuary science or #) (A–N only)
★LECT 0815-0900 MWF, 0900-1100 T, JacH 2153, Stroud
★REC 0900-1100 Th, JacH 2153, Stroud, 8 cr
838031 –1 LAB 0900-1200 W, JacH 2153A, Stroud
638032 –2 LAB 0900-1200 F, JacH 2153A, Stroud
438033 –3 LAB 0900-1200 M, JacH 2153A, Stroud

R3062 **Gross Human Anatomy** (prereq biology, human anatomy, regis in mortuary science) (A–N only)
512877 –1 LAB 0915-1200 F, JacH 5147, Lee, 3 cr
112879 –2 LAB 0915-1200 M, JacH 5147, Lee, 3 cr
512880 –3 LAB 0915-1200 W, JacH 5147, Lee, 3 cr

R3070 **Funeral Management** (prereq regis mortuary science) (A–N only)
112882 1115-1200 MWF, JOAd 2125, Mathews, 3 cr

R3071 **Funeral Management** (prereq regis mortuary science) (A–N only)
★LECT 1015-1100 MWF, JOAd 2125, Mathews
812884 –1 LAB 0815-1000 W, JOAd 2125, Mathews, 4 cr
612885 –2 LAB 0815-1000 F, JOAd 2125, Mathews, 4 cr
212887 –3 LAB 0815-1000 M, JOAd 2125, Mathews, 4 cr

R3072 **Funeral Management** (prereq regis in mortuary science, 3071) (A–N only)
214154 1315-1400 MW, JOAd 2125, Slater, 2 cr

R3074 **Funeral Service Laws and Rules** (prereq regis in mortuary science) (A–N only)
112891 1315-1500 Th, JOAd 2125, Grayson, Stroud, 2 cr

3080 **Practicum in Funeral Service** (prereq 3001, 3010, 3030, 3040, 3050, 3060, 3061, 3070, 3071, 3270, 3271, LaMP 3050, min of 8 non-dept upper division cr, △) (S–N only)
014701 15 cr

R3090 **Independent Study** (prereq sr)
819639 Burger, Mathews, others, 1 cr

R3271 **Seminar: Funeral Mangement** (prereq regis mortuary science) (S–N only)
119640 1315-1500 T, JacH 2135, Slater, 1 cr

R5040 **Dying and Death in Contemporary Society** (prereq hlth sci maj, pubh grad student, educ sr, certified teacher, mort sci maj, #)
019641 1615-1800 M, 1615-1700 W, JacH 2135, Slater, Burger, others, 3 cr

MUSIC (Mus)
Music
Liberal Arts

R1001 **Fundamentals of Music** (prereq nonmus maj)
715180 –1 0815-0900 MWF, WullH 320, Byrne, 4 cr
015184 –2 1115-1200 MWF, WullH 320, 4 cr
615186 –3 1315-1400 MWF, WullH 320, 4 cr

R1051 **Piano Class for Non-Music Majors**
315442 1515-1600 MW, MusEd 200, 2 cr

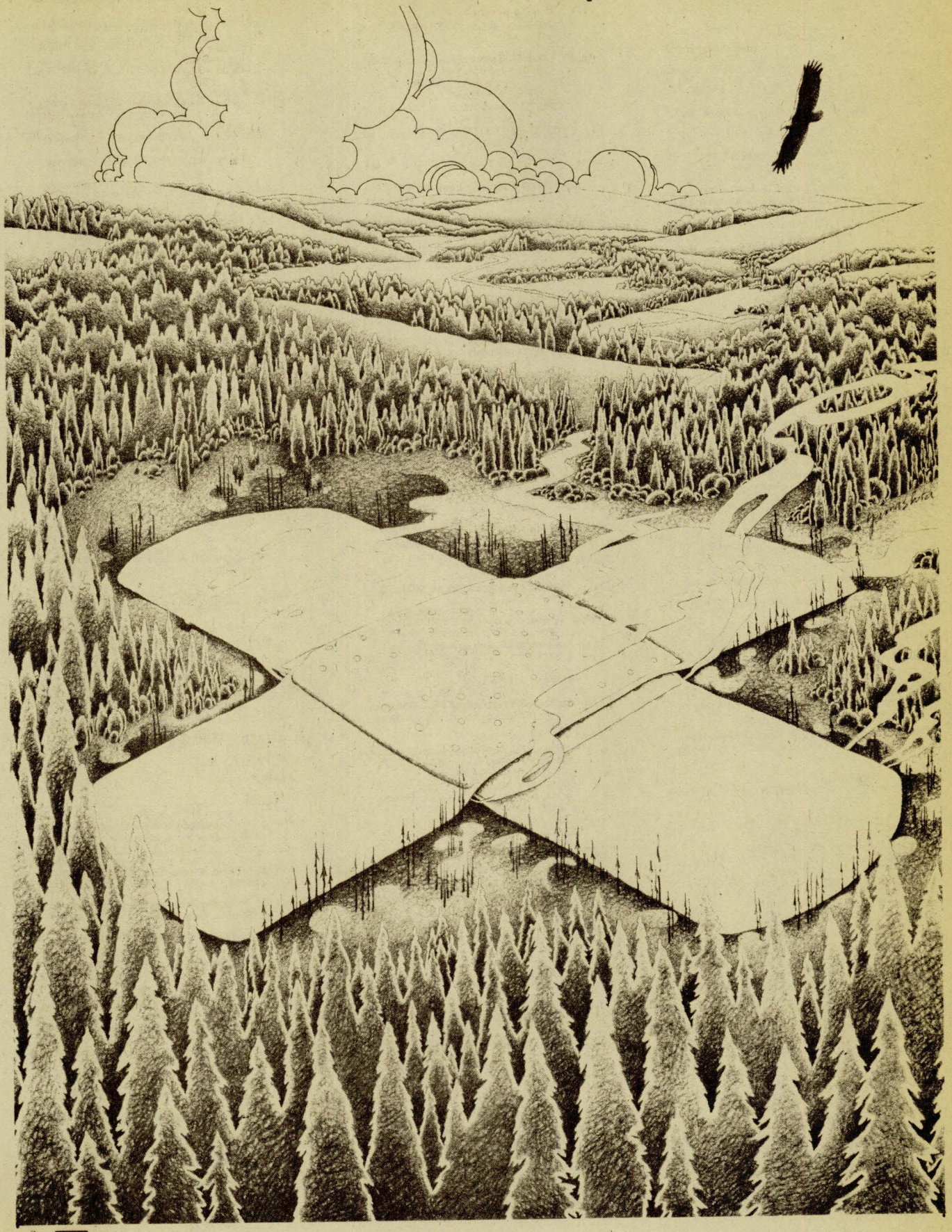
R1052 **Piano Class for Non-Music Majors** (prereq 1051 or #)
015444 –1 1315-1400 MW, MusEd 200, 2 cr
615446 –2 1415-1500 MW, MusEd 200, 2 cr

R1152 **Piano: Class Lessons** (prereq 1151)
415190 –1 0815-0900 MW, MusEd 200, Arrau, 2 cr (written permission required)
115192 –2 1015-1100 MW, MusEd 200, Arrau, 2 cr
515195 –3 1115-1200 MW, MusEd 200, Arrau, 2 cr

R1160 **Voice: Class Lessons**
318504 –1 1215-1300 MW, ScottH 103, 2 cr
405162 –2 1315-1400 MW, ScottH 19, 2 cr
605161 –3 1415-1500 MW, ScottH 19, 2 cr
205163 –4 1215-1300 TTh, ScottH 103, 2 cr
833105 –5 1315-1400 TTh, ScottH 19, 2 cr

1330 **Jazz Improvisation** (max 12 cr; prereq audition, #)
808902 –1 1215-1300 TTh, NMA 5, Buckner, 2 cr
408904 –2 1315-1400 TTh, NMA 5, Buckner, 2 cr

Some burns take 100 years to heal.



Ad Council A Public Service of This Magazine & The Advertising Council

1340 Jazz Ensemble (max 6 cr; prereq audition, #)
208919 –1 1315-1400 MW, NMA 4, Bencriscutto, 1 cr
408921 –2 1115-1300 TTh, NMA 4, Bencriscutto, 1 cr
108923 –3 1315-1400 TTh, NMA 4, Bencriscutto, 1 cr
633106 –4 1715-1800 TTh, NMA 4, Bencriscutto, 1 cr

R**1352 Jazz Class Piano** (prereq 1153 or #)
018506 1215-1300 MW, MusEd 200, Buckner, 2 cr

1410 Band (prereq #)
618508 1515-1700 MTWThF, NMA 4, 5, Bencriscutto, Sanford, 1 cr

1420 Orchestra (prereq #)
818510 1515-1700 MTTh, WullH 320, Massmann, 1 cr

1430 University Chorus, Concert Choir, Women's Chorus, Men's Chorus, St. Paul Campus Chorus (prereq #)
515200 –1 1115-1200 MWF, NMA 5, 1900-2130 T, SciCB 325, Jorgenson, 1 cr
015203 –2 1315-1400 MWF, NMA 5, 1900-2130 T, SciCB 325, Jorgenson, 1 cr
615205 –3 1215-1300 MWF, NMA 5, Jorgenson, 1 cr (Men's Chorus)

1440 Ensemble (prereq #)
618511 –1 1 cr (Guitar)
233108 –2 Miller, 1 cr (Harp)
133109 –3 1 cr (Piano)
433110 –4 1 cr (Strings)
233111 –5 Kim, 1 cr (Concerto Grosso)
133112 –6 1 cr

R**1502 Theory II** (prereq 1501)
♦915209 –1 LECT 1215-1300 TTh, WullH 30, Lubet, 3 cr
♦715213 –2 LECT 1215-1300 WF, WullH 30, Lubet, 3 cr
115216 –1 REC 0815-0900 WF, ScottH 2
615219 –2 REC 1115-1200 WF, ScottH 3
615222 –3 REC 1215-1300 WF, ScottH 2
215224 –4 REC 1415-1500 WF, ScottH 2

R**1512 Ear-Training and Sight-Singing I** (prereq 1511)
515228 –1 0815-0900 TTh, ScottH 2, 1 cr
715230 –2 0915-1000 TTh, ScottH 2, 1 cr
315232 –3 1015-1100 TTh, ScottH 19, 1 cr
615236 –4 1115-1200 TTh, ScottH 2, 1 cr
415240 –5 1215-1300 TTh, ScottH 2, 1 cr

R**1515 Ear-Training and Sight-Singing II** (prereq 1514)
715244 –1 0815-0900 TTh, ScottH 3, 1 cr
015248 –2 0815-0900 TTh, ScottH 103, 1 cr
815252 –3 1115-1200 TTh, ScottH 19, 1 cr
415254 –4 1215-1300 TTh, ScottH 3, 1 cr
115256 –5 1315-1400 TTh, ScottH 2, 1 cr

1602 Music and Society (prereq 1501 or #)
118514 0915-1100 MW, WullH 320, Kagan, 3 cr

1605 History of Westen Music (prereq 1604)
718516 0915-1100 TTh, ScottH 108, Laudon, 4 cr

1804 World Music
933113 1215-1300 MTWTh, ScottH 19, Kagan, 4 cr

3440 Ensemble (prereq #)
118519 –1 1 cr (Guitar)
833153 –2 Miller, 1 cr (Harp)
633154 –3 1 cr (Piano)
433155 –4 1 cr (Strings)
233156 –5 Kim, 1 cr (Concerto Grosso)
133157 –6 1 cr

R**3502 Theory V** (prereq 3501)
♦015265 –1 LECT 1115-1200 TTh, WullH 30, Damschroder, 3 cr
♦815266 –2 LECT 1115-1200 WF, WullH 30, Damschroder, 3 cr
215269 –1 REC 0815-0900 WF, ScottH 103
115273 –2 REC 0915-1000 WF, ScottH 103
515276 –3 REC 1015-1100 WF, ScottH 3
315280 –4 REC 1215-1300 WF, ScottH 3

3505 Theory VIII (prereq 3504)
118701 0915-1100 T, 0915-1000 Th, WullH 30, Lubet, 3 cr

3550 Composition (max 12 cr; prereq 1506, #)
115287 –1 Argento, 2 cr
715289 –2 Fetler, 2 cr
515293 –3 0915-1200 F, ScottH 108, Stokes, 2 cr

3709 Afro-Caribbean, Afro-Hispanic, and Afro-Brazilia Music (§Afro 3301)
829054 0945-1100 TTh, BlegH 260, Southall, 4 cr

3970 Directed Studies (prereq #, △, college approval)
418705 1-15 cr

3980 Directed Teaching (prereq #, △, college approval)
718709 1-4 cr

5330 Jazz Improvisation (max 12 cr; prereq 12 cr of 1330 or audition)
308913 –1 1215-1300 TTh, NMA 5, Buckner, 2 cr
008915 –2 1315-1400 TTh, NMA 5, Buckner, 2 cr

5340 Jazz Ensemble (prereq 6 cr of 1340 or audition by instructor)
708925 –1 1315-1400 MW, NMA 4, Bencriscutto, 1 cr
308927 –2 1115-1300 MW, NMA 4, Bencriscutto, 1 cr
008929 –3 1315-1400 TTh, NMA 4, Bencriscutto, 1 cr
433107 –4 1715-1800 TTh, NMA 4, Bencriscutto, 1 cr

5352 Piano Pedagogy I (prereq 5351)
518713 0915-1100 T, MusEd 200, Arrau, 2 cr

5358 Graduate Piano Seminar (prereq #)
733114 1515-1700 T, ScottH 4, Freed, 2 cr

5360 Woodwind Ensemble (prereq audition)
608898 1115-1300 F, ScottH 19, Anderson, 1 cr

R**5370 Vocal Performance Seminar** (prereq 18 cr applied voice, #)
818717 1515-1700 T, ScottH 19, Ware, 2 cr

5372 Diction for Singers (prereq 5371)
805160 1515-1700 Th, ScottH 19, Weller, 2 cr

5380 Brass Choir (prereq #)
715311 –1 1115-1300 TTh, WullH 320, Baldwin, 1 cr
115314 –2 0915-1100 F, WullH 320, Baldwin, 1 cr

5390 Percussion Ensemble (prereq #)
814103 1315-1500 MW, ScottH 108, Schultz, 1 cr

5399 Performance in Conducting (prereq 5388 or 5385, #)
618721 Lancaster, 4 cr

5410 Band (prereq #)
918725 1515-1700 MTWThF, NMA 4, 5, Bencriscutto, Sanford, 1 cr

5420 Orchestra (prereq #)
118729 1515-1700 MTTh, WullH 320, Massmann, 1 cr

5430 University Chorus, Concert Choir, Women's Chorus, Men's Chorus, St. Paul Campus Chorus (prereq #)
215319 –1 1115-1200 MWF, NMA 5, 1900-2130 T, SciCB 325, Jorgenson, 1 cr
415321 –2 1315-1400 MWF, NMA 5, 1900-2130 T, SciCB 325, Jorgenson, 1 cr
915324 –3 1215-1300 MWF, NMA 5, Jorgenson, 1 cr (Men's Chorus)

R**5440 Ensemble** (prereq #)
508893 –1 1 cr (Guitar)
108895 –2 Miller, 1 cr (Harp)
533115 –3 1 cr (Piano)
333116 –4 1 cr (Strings)
133117 –5 Kim, 1 cr (Concerto Grosso)
033118 –6 1715-1900 T, WullH 30, Ware, 1 cr (Minnesingers)
833119 –7 1 cr

5450 Collegium Musicum (prereq #)
218737 McClary, 1 cr

5460 Contemporary Music Ensemble (prereq #)
118741 1315-1600 F, ScottH 108, Stokes, 2 cr

5470 Opera Workshop (prereq #)
318759 0915-1100 MWF, Sutton, 3 cr 429 Ontario SE,

5490 Chamber Singers (prereq audition)
318745 1515-1700 MWF, WullH 30, Lancaster, 1 cr

5511 Advanced Ear Training I (prereq 1516 or #)
133120 1315-1400 MWF, ScottH 2, Fetler, 3 cr

5522 Keyboard Harmony (prereq 1506, sr or grad)
618749 1215-1300 TTh, MusEd 200, Billmeyer, 2 cr

5540 Jazz Composition, Arranging (prereq 1506, #)
108931 Bencriscutto, 2 cr

5550 Composition I (max 12 cr; prereq 1506, #)
215336 –1 Argento, 2 cr
115340 –2 Fetler, 2 cr
315344 –3 0915-1200 F, ScottH 108, Stokes, 2 cr

5560 Electronic Music Laboratory (prereq 3791 or #)
918756 1415-1700 M, ScottH 20, Stokes, 2 cr

5562 Orchestration (prereq 5561)
318762 1415-1500 MW, ScottH 3, Argento, 2 cr

5602 History of Opera (prereq 9 cr in history of music, art, theatre or European history from 1600 or #)
818765 1315-1400 MTW, ScottH 3, Argento, 3 cr

5635 Baroque Era (prereq 1606)
033121 1015-1200 TTh, WullH 7A, McClary, 4 cr

5742 Vocal Literature (prereq 12 cr in 1104 or 1204 or 1304 or #)
833122 0915-1100 TTh, WullH 320, Sutton, 4 cr

R**5810 Asian Music: Performance** (prereq #)
418767 Kagan, 2 cr

5950 Topics in Music
633123 –1 1315-1500 MW, ScottH 103, Laudon, 4 cr (The Phenomenon of Liszt)
138530 –2 2 cr (Organ Literature of Bach and of France and England to 1800)

8550 Composition (max 18 cr;prereq compl undergrad maj seq in mus theory, comp incl 3543,5503,5553,5563 or #)
615365 –1 Argento, 3 cr
215367 –2 Fetler, 3 cr
215370 –3 0915-1200 F, ScottH 108, Stokes, 3 cr

R**8570 Seminar in Composition** (max 12 cr; prereq grad, #)
433124 1015-1200 TTh, ScottH 103, Ultan, 4 cr

8647 Contemporary Musical Styles (prereq undergrad degree in music)
736370 1015-1200 MW, ScottH 19, Jackson, 4 cr

8754 Choral Literature: Renaissance Through Baroque Eras (prereq grad student, #)
912696 1230-1400 MWF, WullH 7A, Lancaster, 4 cr

8845 Seminar: Advances Research in Music
118769 1015-1200 MW, WullH 7A, McClary, 4 cr

8847 Notation of Polyphonic Music (prereq #)
233125 1015-1200 TTh, ScottH 3, Jackson, 5 cr

8852 History of Music Theory, 1600-1900 (prereq undergrad degree in music)
133126 1415-1600 TTh, WullH 30, Damschroder, 4 cr

8990 Special Problems (prereq △)
218771 2-12 cr

MUSIC APPLIED (MusA)
Music
Liberal Arts

See Section 4, Course Fees, for MusA course fees. **These fees are in addition to tuition and are assessed at registration.**

1101 Piano, Elective (prereq audition, △)
820273 2-4 cr

1102 Harpsichord, Elective (prereq audition, △)
620274 2-4 cr

1103 Organ, Elective (prereq audition, △)
420275 2-4 cr

1104 Voice, Elective (prereq audition, △)
220276 2-4 cr

1105 Violin, Elective (prereq audition, △)
120277 2-4 cr

1106 Viola, Elective (prereq audition, △)
920278 2-4 cr

1107 Cello, Elective (prereq audition, △)
120280 2-4 cr

1108 Double Bass, Elective (prereq audition, △)
720282 2-4 cr

1109 Flute, Elective (prereq audition, △)
120285 2-4 cr

1111 Oboe, Elective (prereq audition, △)
620288 2-4 cr

1112 Clarinet, Elective (prereq audition, △)
420292 2-4 cr

1113 Saxophone, Elective (prereq audition, △)
920295 2-4 cr

1114 Bassoon, Elective (prereq audition, △)
520297 2-4 cr

1115 French Horn, Elective (prereq audition, △)
120299 2-4 cr

1116 Trumpet, Elective (prereq audition, △)
720301 2-4 cr

1117 Trombone, Elective (prereq audition, △)
120304 2-4 cr

1118 Baritone, Elective (prereq audition, △)
020305 2-4 cr

1119 Tuba, Elective (prereq audition, △)
820306 2-4 cr

1121 Percussion, Elective (prereq audition, △)
620307 2-4 cr

1122 Harp, Elective (prereq audition, △)
420308 2-4 cr

1123 Guitar, Elective (prereq audition, △)
220309 2-4 cr

1124 Accordion, Elective (prereq audition, △)
620310 2-4 cr

1125 Sitar, Elective (prereq audition, △)
420311 2-4 cr

1201 Piano, Principal (prereq audition, △)
220312 2-4 cr

1202 Harpsichord, Principal (prereq audition, △)
120313 2-4 cr

1203 Organ, Principal (prereq audition, △)
920314 2-4 cr

1204 Voice, Principal (prereq audition, △)
720315 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

1205 Violin, Principal (prereq audition, △)
720332 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1206 Viola, Principal (prereq audition, △)
520333 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1207 Cello, Principal (prereq audition, △)
320334 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1208 Double Bass, Principal (prereq audition, △)
120335 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1209 Flute, Principal (prereq audition, △)
620338 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1211 Oboe, Principal (prereq audition, △)
820340 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1212 Clarinet, Principal (prereq audition, △)
220343 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1213 Saxophone, Principal (prereq audition, △)
720346 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1214 Bassoon, Principal (prereq audition, △)
120349 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1215 French Horn, Principal (prereq audition, △)
520350 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1216 Trumpet, Principal (prereq audition, △)
320351 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1217 Trombone, Principal (prereq audition, △)
120352 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1218 Baritone, Principal (prereq audition, △)
020353 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1219 Tuba, Principal (prereq audition, △)
620355 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1221 Percussion, Principal (prereq audition, △)
220357 2-4 cr

1222 Harp, Principal (prereq audition, △)
520364 2-4 cr

1223 Guitar, Principal (prereq audition, △)
320365 2-4 cr

1301 Piano, Major (prereq audition, △)
020367 2-4 cr

1302 Harpsichord, Major (prereq audition, △)
120366 2-4 cr

1303 Organ, Major (prereq audition, △)
820368 2-4 cr

1304 Voice, Major (prereq audition, △)
620369 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

1305 Violin, Major (prereq audition, △)
020370 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1306 Viola, Major (prereq audition, △)
620372 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1307 Cello, Major (prereq audition, △)
220374 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1308 Double Bass, Major (prereq audition, △)
120375 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1309 Flute, Major (prereq audition, △)
920376 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1311 Oboe, Major (prereq audition, △)
720377 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1312 Clarinet, Major (prereq audition, △)
220388 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1313 Saxophone, Major (prereq audition, △)
420390 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1314 Bassoon, Major (prereq audition, △)
120392 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1315 French Horn, Major (prereq audition, △)
720394 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1316 Trumpet, Major (prereq audition, △)
320396 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1317 Trombone, Major (prereq audition, △)
120397 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1318 Baritone, Major (prereq audition, △)
020398 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1319 Tuba, Major (prereq audition, △)
820399 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1321 Percussion, Major (prereq audition, △)
520400 2-4 cr

1322 Harp, Major (prereq audition, △)
320401 2-4 cr

1323 Guitar, Major (prereq audition, △)
120402 2-4 cr

1401 Piano, Secondary Required (max 12 cr; prereq mus maj, △)
020403 2-4 cr

1402 Harpsichord, Secondary Required (max 12 cr; prereq mus maj, △)
820404 2-4 cr

1403 Organ, Secondary Required (max 12 cr; prereq mus maj, △)
620405 2-4 cr

1404 Voice, Secondary Required (max 12 cr; prereq mus maj, △)
420406 2-4 cr

1405 Violin, Secondary Required (max 12 cr; prereq mus maj, △)
220407 2-4 cr

1406 Viola, Secondary Required (max 12 cr; prereq mus maj, △)
920409 2-4 cr

1407 Cello, Secondary Required (max 12 cr; prereq mus maj, △)
220410 2-4 cr

1408 Double Bass, Secondary Required (max 12 cr; prereq mus maj, △)
920412 2-4 cr

1409 Flute, Secondary Required (max 12 cr; prereq mus maj, △)
720413 2-4 cr

1411 Oboe, Secondary Required (max 12 cr; prereq mus maj, △)
520414 2-4 cr

1412 Clarinet, Secondary Required (max 12 cr; prereq mus maj, △)
320415 2-4 cr

1413 Saxophone, Secondary Required (max 12 cr; prereq mus maj, △)
120416 2-4 cr

1414 Bassoon, Secondary Required (max 12 cr; prereq mus maj, △)
020417 2-4 cr

1415 French Horn, Secondary Required (max 12 cr; prereq mus maj, △)
820418 2-4 cr

1416 Trumpet, Secondary Required (max 12 cr; prereq mus maj, △)
620419 2-4 cr

1417 Trombone, Secondary Required (max 12 cr; prereq mus maj, △)
020420 2-4 cr

1418 Baritone, Secondary Required (max 12 cr; prereq mus maj, △)
820421 2-4 cr

1419 Tuba, Secondary Required (max 12 cr; prereq mus maj, △)
620422 2-4 cr

1421 Percussion, Secondary Required (max 12 cr; prereq mus maj, △)
220424 2-4 cr

1422 Harp, Secondary Required (max 12 cr; prereq mus maj, △)
320530 2-4 cr

1423 Guitar, Secondary Required (max 12 cr; prereq mus maj, △)
820533 2-4 cr

1501 Piano, Secondary Elective (max 12 cr; prereq mus maj, △)
120537 2-4 cr

1502 Harpsichord, Secondary Elective (max 12 cr; prereq mus maj, △)
720542 2-4 cr

1503 Organ, Secondary Elective (max 12 cr; prereq mus maj, △)
620548 2-4 cr

1504 Voice, Secondary Elective (max 12 cr; prereq mus maj, △)
120554 2-4 cr

1505 Violin, Secondary Elective (max 12 cr; prereq mus maj, △)
120559 2-4 cr

1506 Viola, Secondary Elective (max 12 cr; prereq mus maj, △)
820564 2-4 cr

1507 Cello, Secondary Elective (max 12 cr; prereq mus maj, △)
420566 2-4 cr

1508 Double Bass, Secondary Elective (max 12 cr; prereq mus maj, △)
220570 2-4 cr

1509 Flute, Secondary Elective (max 12 cr; prereq mus maj, △)
720573 2-4 cr

1511 Oboe, Secondary Elective (max 12 cr; prereq mus maj, △)
020577 2-4 cr

1512 Clarinet, Secondary Elective (max 12 cr; prereq mus maj, △)
420583 2-4 cr

1513 Saxophone, Secondary Elective (max 12 cr; prereq mus maj, △)
320592 2-4 cr

1514 Bassoon, Secondary Elective (max 12 cr; prereq mus maj, △)
220598 2-4 cr

1515 French Horn, Secondary Elective (max 12 cr; prereq mus maj, △)
920636 2-4 cr

1516 Trumpet, Secondary Elective (max 12 cr; prereq mus maj, △)
720640 2-4 cr

1517 Trombone, Secondary Elective (max 12 cr; prereq mus maj, △)
320642 2-4 cr

1518 Baritone, Secondary Elective (max 12 cr; prereq mus maj, △)
820645 2-4 cr

1519 Tuba, Secondary Elective (max 12 cr; prereq mus maj, △)
120649 2-4 cr

1521 Percussion, Secondary Elective (max 12 cr; prereq mus maj, △)
920653 2-4 cr

1522 Harp, Secondary Elective (max 12 cr; prereq mus maj, △)
320656 2-4 cr

1523 Guitar, Secondary Elective (max 12 cr; prereq mus maj, △)
120660 2-4 cr

1601 Piano, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
120666 2-4 cr

1602 Harpsichord, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
920670 2-4 cr

1603 Organ, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
020675 2-4 cr

1604 Voice, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
420681 2-4 cr

1605 Violin, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
720685 2-4 cr

1606 Viola, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
120688 2-4 cr

1607 Cello, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
020692 2-4 cr

1608 Double Bass, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
820726 2-4 cr

1609 Flute, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
420731 2-4 cr

1611 Oboe, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
120733 2-4 cr

1612 Clarinet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
520736 2-4 cr

1613 Saxophone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
120741 2-4 cr

1614 Bassoon, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
120747 2-4 cr

1615 French Horn, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
720752 2-4 cr

1616 Trumpet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
120755 2-4 cr

1617 Trombone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
420759 2-4 cr

1618 Baritone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
820760 2-4 cr

1619 Tuba, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
420762 2-4 cr

1621 Percussion, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
520767 2-4 cr

1622 Harp, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
320771 2-4 cr

1623 Guitar, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
020773 2-4 cr

1701 Piano, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
620775 2-4 cr

1702 Harpsichord, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
220794 2-4 cr

1703 Organ, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
320799 2-4 cr

1704 Voice, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
020806 2-4 cr

1705 Violin, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
920815 2-4 cr

1706 Viola, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
120819 2-4 cr

1707 Cello, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
020823 2-4 cr

1708 Double Bass, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
120828 2-4 cr

1709 Flute, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
120831 2-4 cr

1711 Oboe, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
720833 2-4 cr

1712 Clarinet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
020840 2-4 cr

1713 Saxophone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
420843 2-4 cr

1714 Bassoon, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
720850 2-4 cr

1715 French Horn, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
320852 2-4 cr

1716 Trumpet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
820855 2-4 cr

1717 Trombone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
420857 2-4 cr

1718 Baritone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
120562 2-4 cr

1719 Tuba, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
220567 2-4 cr

1721 Percussion, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
520574 2-4 cr

1722 Harp, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
020580 2-4 cr

1723 Guitar, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
720587 2-4 cr

3101 Piano, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
620596 2-4 cr

3102 Harpsichord, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
420602 2-4 cr

3103 Organ, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
520607 2-4 cr

3104 Voice, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
320611 2-4 cr

3105 Violin, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
620615 2-4 cr

3106 Viola, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
120618 2-4 cr

3107 Cello, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
520624 2-4 cr

3108 Double Bass, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
020627 2-4 cr

3109 Flute, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
020630 2-4 cr

3111 Oboe, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
420633 2-4 cr

3112 Clarinet, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
720637 2-4 cr

3113 Saxophone, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
520641 2-4 cr

3114 Bassoon, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
020644 2-4 cr

3115 French Horn, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
420647 2-4 cr

3116 Trumpet, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
420650 2-4 cr

3117 Trombone, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
720654 2-4 cr

3118 Baritone, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
020658 2-4 cr

3119 Tuba, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
820662 2-4 cr

3121 Percussion, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
920667 2-4 cr

3122 Harp, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
720671 2-4 cr

3123 Guitar, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
820676 2-4 cr

3124 Accordion, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
620680 2-4 cr

3125 Sitar, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
920684 2-4 cr

3201 Piano, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
320687 2-4 cr

3202 Harpsichord, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
620694 2-4 cr

3203 Organ, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
820743 2-4 cr

3204 Voice, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
520784 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

3205 Violin, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
320804 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3206 Viola, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
220813 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3207 Cello, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
320818 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3208 Double Bass, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
120822 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3209 Flute, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
420826 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3211 Oboe, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
220830 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3212 Clarinet, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
920832 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3213 Saxophone, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
820838 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3214 Bassoon, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
820841 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3215 French Horn, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
220844 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3216 Trumpet, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
820869 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3217 Trombone, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
620873 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3218 Baritone, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
220875 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3219 Tuba, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
920877 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3221 Percussion, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
605001 2-4 cr

3222 Harp, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
105004 2-4 cr

3223 Guitar, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
505007 2-4 cr

3301 Piano, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
505010 2-4 cr

3302 Harpsichord, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
105012 2-4 cr

3303 Organ, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
605015 2-4 cr

3304 Voice, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
405016 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

3305 Violin, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
905019 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3306 Voila, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
905022 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3307 Cello, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
305025 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3308 Double Bass, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
805028 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3309 Flute, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
005030 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3311 Oboe, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
605032 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3312 Clarinet, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
205034 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3313 Saxophone, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
905036 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3314 Bassoon, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
505038 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3315 French Horn, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
705040 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3316 Trumpet, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
305042 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3317 Trombone, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
005044 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3318 Baritone, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
605046 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3319 Tuba, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
205048 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3321 Percussion, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
020949 2-4 cr

3322 Harp, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
120951 2-4 cr

3323 Guitar, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
420955 2-4 cr

3401 Piano, Secondary Required (max 12 cr; prereq mus maj, △)
120960 2-4 cr

3402 Harpsichord, Secondary Required (max 12 cr; prereq mus maj, △)
120965 2-4 cr

3403 Organ, Secondary Required (max 12 cr; prereq mus maj, △)
620968 2-4 cr

3404 Voice, Secondary Required (max 12 cr; prereq mus maj, △)
620971 2-4 cr

3405 Violin, Secondary Required (max 12 cr; prereq mus maj, △)
220973 2-4 cr

3406 Viola, Secondary Required (max 12 cr; prereq mus maj, △)
320978 2-4 cr

3407 Cello, Secondary Required (max 12 cr; prereq mus maj, △)
320981 2-4 cr

3408 Double Bass, Secondary Required (max 12 cr; prereq mus maj, △)
020983 2-4 cr

3409 Flute, Secondary Required (max 12 cr; prereq mus maj, △)
420986 2-4 cr

3411 Oboe, Secondary Required (max 12 cr; prereq mus maj, △)
220990 2-4 cr

3412 Clarinet, Secondary Required (max 12 cr; prereq mus maj, △)
720993 2-4 cr

3413 Saxophone, Secondary Required (max 12 cr; prereq mus maj, △)
320995 2-4 cr

3414 Bassoon, Secondary Required (max 12 cr; prereq mus maj, △)
620999 2-4 cr

3415 French Horn, Secondary Required (max 12 cr; prereq mus maj, △)
321001 2-4 cr

3416 Trumpet, Secondary Required (max 12 cr; prereq mus maj, △)
021003 2-4 cr

3417 Trombone, Secondary Required (max 12 cr; prereq mus maj, △)
621005 2-4 cr

3418 Baritone, Secondary Required (max 12 cr; prereq mus maj, △)
221007 2-4 cr

3419 Tuba, Secondary Required (max 12 cr; prereq mus maj, △)
921009 2-4 cr

3421 Percussion, Secondary Required (max 12 cr; prereq mus maj, △)
221010 2-4 cr

3422 Harp, Secondary Required (max 12 cr; prereq mus maj, △)
121011 2-4 cr

3423 Guitar, Secondary Required (max 12 cr; prereq mus maj, △)
721013 2-4 cr

3501 Piano, Secondary Elective (max 12 cr; prereq mus maj, △)
521014 2-4 cr

3502 Harpsichord, Secondary Elective (max 12 cr; prereq mus maj, △)
021017 2-4 cr

3503 Organ, Secondary Elective (max 12 cr; prereq mus maj, △)
821018 2-4 cr

3504 Voice, Secondary Elective (max 12 cr; prereq mus maj, △)
821021 2-4 cr

3505 Violin, Secondary Elective (max 12 cr; prereq mus maj, △)
921026 2-4 cr

3506 Viola, Secondary Elective (max 12 cr; prereq mus maj, △)
321029 2-4 cr

3507 Cello, Secondary Elective (max 12 cr; prereq mus maj, △)
521031 2-4 cr

3508 Double Bass, Secondary Elective (max 12 cr; prereq mus maj, △)
321032 2-4 cr

3509 Flute, Secondary Elective (max 12 cr; prereq mus maj, △)
821035 2-4 cr

3511 Oboe, Secondary Elective (max 12 cr; prereq mus maj, △)
621036 2-4 cr

3512 Clarinet, Secondary Elective (max 12 cr; prereq mus maj, △)
421054 2-4 cr

3513 Saxophone, Secondary Elective (max 12 cr; prereq mus maj, △)
221055 2-4 cr

3514 Bassoon, Secondary Elective (max 12 cr; prereq mus maj, △)
121056 2-4 cr

3515 French Horn, Secondary Elective (max 12 cr; prereq mus maj, △)
921057 2-4 cr

3516 Trumpet, Secondary Elective (max 12 cr; prereq mus maj, △)
721058 2-4 cr

3517 Trombone, Secondary Elective (max 12 cr; prereq mus maj, △)
521059 2-4 cr

3518 Baritone, Secondary Elective (max 12 cr; prereq mus maj, △)
921060 2-4 cr

3519 Tuba, Secondary Elective (max 12 cr; prereq mus maj, △)
721061 2-4 cr

3521 Percussion, Secondary Elective (max 12 cr; prereq mus maj, △)
521062 2-4 cr

3522 Harp, Secondary Elective (max 12 cr; prereq mus maj, △)
121064 2-4 cr

3523 Guitar, Secondary Elective (max 12 cr; prereq mus maj, △)
021065 2-4 cr

3601 Piano, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
621067 2-4 cr

3602 Harpsichord, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
421068 2-4 cr

3603 Organ, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
221069 2-4 cr

3604 Voice, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
621070 2-4 cr

3605 Violin, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
421071 2-4 cr

3606 Viola, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
221072 2-4 cr

3607 Cello, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
121073 2-4 cr

3608 Double Bass, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
921074 2-4 cr

3609 Flute, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
721075 2-4 cr

3611 Oboe, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
521076 2-4 cr

3612 Clarinet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
321077 2-4 cr

3613 Saxophone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
121078 2-4 cr

3614 Bassoon, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
321080 2-4 cr

3615 French Horn, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
021082 2-4 cr

3616 Trumpet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
621084 2-4 cr

3617 Trombone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
221086 2-4 cr

3618 Baritone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
921088 2-4 cr

3619 Tuba, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
520526 2-4 cr

3621 Percussion, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
120531 2-4 cr

3622 Harp, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
220536 2-4 cr

3623 Guitar, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
920538 2-4 cr

3701 Piano, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
120545 2-4 cr

3702 Harpsichord, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
820550 2-4 cr

3703 Organ, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
920569 2-4 cr

3704 Voice, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
820578 2-4 cr

3705 Violin, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
120585 2-4 cr

3706 Viola, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
020594 2-4 cr

3707 Cello, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
420597 2-4 cr

3708 Double Bass, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
220603 2-4 cr

3709 Flute, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
120609 2-4 cr

3711 Oboe, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
020613 2-4 cr

3712 Clarinet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
220617 2-4 cr

3713 Saxophone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
820659 2-4 cr

3714 Bassoon, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
620663 2-4 cr

3715 French Horn, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
520669 2-4 cr

3716 Trumpet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
120674 2-4 cr

3717 Trombone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
220679 2-4 cr

3718 Baritone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
120683 2-4 cr

3719 Tuba, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
520686 2-4 cr

3721 Percussion, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
820693 2-4 cr

3722 Harp, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
220701 2-4 cr

3723 Guitar, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
520705 2-4 cr

3801 Piano, Minor (prereq audition, △)
605208 2-4 cr

3802 Harpsichord, Minor (prereq audition, △)
405209 2-4 cr

3803 Organ, Minor (prereq audition, △)
805210 2-4 cr

3804 Voice, Minor (prereq audition, △)
605211 2-4 cr

3805 Violin, Minor (prereq audition, △)
405212 2-4 cr

3806 Viola, Minor (prereq audition, △)
205213 2-4 cr

3807 Cello, Minor (prereq audition, △)
105214 2-4 cr

3808 Double Bass, Minor (prereq audition, △)
705216 2-4 cr

3809 Flute, Minor (prereq audition, △)
505217 2-4 cr

3811 Oboe, Minor (prereq audition, △)
105219 2-4 cr

3812 Clarinet, Minor (prereq audition, △)
305221 2-4 cr

3813 Saxophone, Minor (prereq audition, △)
005223 2-4 cr

3814 Bassoon, Minor (prereq audition, △)
605225 2-4 cr

3815 French Horn, Minor (prereq audition, △)
205227 2-4 cr

3816 Trumpet, Minor (prereq audition, △)
105228 2-4 cr

3817 Trombone, Minor (prereq audition, △)
905232 2-4 cr

3818 Baritone, Minor (prereq audition, △)
705233 2-4 cr

3819 Tuba, Minor (prereq audition, △)
305235 2-4 cr

3821 Percussion, Minor (prereq audition, △)
105236 2-4 cr

3822 Harp, Minor (prereq audition, △)
805238 2-4 cr

3823 Guitar, Minor (prereq audition, △)
205230 2-4 cr

5101 Piano (prereq audition, △)
414105 2-4 cr

5102 Harpsichord (prereq audition, △)
114107 2-4 cr

5103 Organ (prereq audition, △)
914108 2-4 cr

5104 Voice (prereq audition, △)
114110 2-4 cr

5105 Violin (prereq audition, △)
914111 2-4 cr

5106 Viola (prereq audition, △)
514113 2-4 cr

5107 Cello (prereq audition, △)
314114 2-4 cr

5108 Double Bass (prereq audition, △)
114115 2-4 cr

5109 Flute (prereq audition, △)
614104 2-4 cr

5111 Oboe (prereq audition, △)
014116 2-4 cr

5112 Clarinet (prereq audition, △)
614118 2-4 cr

5113 Saxophone (prereq audition, △)
814120 2-4 cr

5114 Bassoon (prereq audition, △)
614121 2-4 cr

5115 French Horn (prereq audition, △)
214123 2-4 cr

5116 Trumpet (prereq audition, △)
914125 2-4 cr

5117 Trombone (prereq audition, △)
514127 2-4 cr

5118 Baritone Horn (prereq audition, △)
114129 2-4 cr

5119 Tuba (prereq audition, △)
514130 2-4 cr

5121 Percussion (prereq audition, △)
314131 2-4 cr

5122 Harp (prereq audition, △)
014133 2-4 cr

5123 Guitar (prereq audition, △)
814134 2-4 cr

5124 Accordian (prereq audition, △)
414136 2-4 cr

5125 Sitar (prereq audition, △)
214137 2-4 cr

8201 Piano, Principal (prereq audition, △)
120884 2-4 cr

8202 Harpsichord, Principal (prereq audition, △)
020885 2-4 cr

8203 Organ, Principal (prereq audition, △)
620887 2-4 cr

8204 Voice, Principal (prereq audition, △)
520901 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

8205 Violin, Principal (prereq audition, △)
020904 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8206 Viola, Principal (prereq audition, △)
620906 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8207 Cello, Principal (prereq audition, △)
420907 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8208 Double Bass, Principal (prereq audition, △)
120909 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8209 Flute, Principal (prereq audition, △)
120912 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8211 Oboe, Principal (prereq audition, △)
421152 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8212 Clarinet, Principal (prereq audition, △)
721156 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8213 Saxophone, Principal (prereq audition, △)
121159 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8214 Bassoon, Principal (prereq audition, △)
121162 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8215 French Horn, Principal (prereq audition, △)
621165 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8216 Trumpet, Principal (prereq audition, △)
421166 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8217 Trombone, Principal (prereq audition, △)
121168 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8218 Baritone, Principal (prereq audition, △)
221170 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8219 Tuba, Principal (prereq audition, △)
521174 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8221 Percussion, Principal (prereq audition, △)
021177 2-4 cr

8222 Harp, Principal (prereq audition, △)
621179 2-4 cr

8223 Guitar, Principal (prereq audition, △)
021180 2-4 cr

8301 Piano, Major (prereq audition, △)
421183 2-4 cr

8302 Harpsichord, Major (prereq audition, △)
121185 2-4 cr

8303 Organ, Major (prereq audition, △)
521188 2-4 cr

8304 Voice, Major (prereq audition, △)
321189 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

8305 Violin, Major (prereq audition, △)
721190 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8306 Viola, Major (prereq audition, △)
521191 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8307 Cello, Major (prereq audition, △)
121193 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8308 Double Bass, Major (prereq audition, △)
021194 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8309 Flute, Major (prereq audition, △)
621196 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8311 Oboe, Major (prereq audition, △)
121199 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8312 Clarinet, Major (prereq audition, △)
621201 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8313 Saxophone, Major (prereq audition, △)
921205 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8314 Bassoon, Major (prereq audition, △)
121209 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8315 French Horn, Major (prereq audition, △)
621215 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8316 Trumpet, Major (prereq audition, △)
221217 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8317 Trombone, Major (prereq audition, △)
621103 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8318 Baritone, Major (prereq audition, △)
421104 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8319 Tuba, Major (prereq audition, △)
221105 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8321 Percussion, Major (prereq audition, △)
121106 2-4 cr

8322 Harp, Major (prereq audition, △)
921107 2-4 cr

8323 Guitar, Major (prereq audition, △)
721108 2-4 cr

8401 Piano, Secondary Required (max 12 cr; prereq mus maj, △)
521109 2-4 cr

8402 Harpsichord, Secondary Required (max 12 cr; prereq mus maj, △)
921110 2-4 cr

8403 Organ, Secondary Required (max 12 cr; prereq mus maj, △)
521112 2-4 cr

8404 Voice, Secondary Required (max 12 cr; prereq mus maj, △)
821116 2-4 cr

8405 Violin, Secondary Required (max 12 cr; prereq mus maj, △)
421118 2-4 cr

8406 Viola, Secondary Required (max 12 cr; prereq mus maj, △)
221122 2-4 cr

8407 Cello, Secondary Required (max 12 cr; prereq mus maj, △)
121128 2-4 cr

8408 Double Bass, Secondary Required (max 12 cr; prereq mus maj, △)
121131 2-4 cr

8409 Flute, Secondary Required (max 12 cr; prereq mus maj, △)
421135 2-4 cr

8411 Oboe, Secondary Required (max 12 cr; prereq mus maj, △)
620534 2-4 cr

8412 Clarinet, Secondary Required (max 12 cr; prereq mus maj, △)
020546 2-4 cr

8413 Saxophone, Secondary Required (max 12 cr; prereq mus maj, △)
720556 2-4 cr

8414 Bassoon, Secondary Required (max 12 cr; prereq mus maj, △)
520560 2-4 cr

8415 French Horn, Secondary Required (max 12 cr; prereq mus maj, △)
920572 2-4 cr

8416 Trumpet, Secondary Required (max 12 cr; prereq mus maj, △)
620579 2-4 cr

8417 Trombone, Secondary Required (max 12 cr; prereq mus maj, △)
320589 2-4 cr

8418 Baritone, Secondary Required (max 12 cr; prereq mus maj, △)
820595 2-4 cr

8419 Tuba, Secondary Required (max 12 cr; prereq mus maj, △)
120604 2-4 cr

8421 Percussion, Secondary Required (max 12 cr; prereq mus maj, △)
520610 2-4 cr

8422 Harp, Secondary Required (max 12 cr; prereq mus maj, △)
420616 2-4 cr

8423 Guitar, Secondary Required (max 12 cr; prereq mus maj, △)
920619 2-4 cr

8501 Piano, Secondary Elective (max 12 cr; prereq mus maj, △)
120626 2-4 cr

8502 Harpsichord, Secondary Elective (max 12 cr; prereq mus maj, △)
820631 2-4 cr

8503 Organ, Secondary Elective (max 12 cr; prereq mus maj, △)
120635 2-4 cr

8504 Voice, Secondary Elective (max 12 cr; prereq mus maj, △)
320690 2-4 cr

8505 Violin, Secondary Elective (max 12 cr; prereq mus maj, △)
220696 2-4 cr

8506 Viola, Secondary Elective (max 12 cr; prereq mus maj, △)
120697 2-4 cr

8507 Cello, Secondary Elective (max 12 cr; prereq mus maj, △)
720699 2-4 cr

8508 Double Bass, Secondary Elective (max 12 cr; prereq mus maj, △)
320706 2-4 cr

8509 Flute, Secondary Elective (max 12 cr; prereq mus maj, △)
020708 2-4 cr

8511 Oboe, Secondary Elective (max 12 cr; prereq mus maj, △)
820712 2-4 cr

8512 Clarinet, Secondary Elective (max 12 cr; prereq mus maj, △)
120716 2-4 cr

8513 Saxophone, Secondary Elective (max 12 cr; prereq mus maj, △)
720721 2-4 cr

8514 Bassoon, Secondary Elective (max 12 cr; prereq mus maj, △)
620727 2-4 cr

8515 French Horn, Secondary Elective (max 12 cr; prereq mus maj, △)
920734 2-4 cr

8516 Trumpet, Secondary Elective (max 12 cr; prereq mus maj, △)
320737 2-4 cr

8517 Trombone, Secondary Elective (max 12 cr; prereq mus maj, △)
420745 2-4 cr

8518 Baritone, Secondary Elective (max 12 cr; prereq mus maj, △)
120750 2-4 cr

8519 Tuba, Secondary Elective (max 12 cr; prereq mus maj, △)
020756 2-4 cr

8521 Percussion, Secondary Elective (max 12 cr; prereq mus maj, △)
020787 2-4 cr

8522 Harp, Secondary Elective (max 12 cr; prereq mus maj, △)
620789 2-4 cr

8523 Guitar, Secondary Elective (max 12 cr; prereq mus maj, △)
820791 2-4 cr

8601 Piano, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
920796 2-4 cr

8602 Harpsichord, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
620811 2-4 cr

8603 Organ, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
320821 2-4 cr

8604 Voice, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
920829 2-4 cr

8605 Violin, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
520834 2-4 cr

8606 Viola, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
620842 2-4 cr

8607 Cello, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
720847 2-4 cr

8608 Double Bass, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
520851 2-4 cr

8609 Flute, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
020854 2-4 cr

8611 Oboe, Principle Beyond Requirement (max 12 cr; prereq mus maj, △)
420860 2-4 cr

8612 Clarinet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
520865 2-4 cr

8613 Saxophone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
120870 2-4 cr

8614 Bassoon, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
920958 2-4 cr

8615 French Horn, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
520963 2-4 cr

8616 Trumpet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
420969 2-4 cr

8617 Trombone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
420972 2-4 cr

8618 Baritone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
720976 2-4 cr

8619 Tuba, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
820984 2-4 cr

8621 Percussion, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
220987 2-4 cr

8622 Harp, Principle Beyond Requirement (max 12 cr; prereq mus maj, △)
120991 2-4 cr

8623 Guitar, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
520994 2-4 cr

8701 Piano, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
820998 2-4 cr

8702 Harpsichord, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
521000 2-4 cr

8703 Organ, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
121002 2-4 cr

8704 Voice, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
821004 2-4 cr

8705 Violin, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
421006 2-4 cr

8706 Viola, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
121008 2-4 cr

8707 Cello, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
121114 2-4 cr

8708 Double Bass, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
621120 2-4 cr

8709 Flute, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
921124 2-4 cr

8711 Oboe, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
521126 2-4 cr

8712 Clarinet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
321130 2-4 cr

8713 Saxophone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
821133 2-4 cr

8714 Bassoon, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
221136 2-4 cr

8715 French Horn, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
121137 2-4 cr

8716 Trumpet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
921138 2-4 cr

8717 Trombone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
721139 2-4 cr

8718 Baritone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
921141 2-4 cr

8719 Tuba, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
521143 2-4 cr

8721 Percussion, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
321144 2-4 cr

8722 Harp, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
021146 2-4 cr

8723 Guitar, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
621148 2-4 cr

MUSIC EDUCATION (MuEd)
Education

R**3011 Teaching Music in the Elementary School** (prereq Mus 1001, elementary educ maj) (A-N only)
915372 –1 0915-1000 MWF, ScottH 4, Borg, 4 cr
515374 –2 1215-1300 MWF, ScottH 4, 4 cr
106614 –3 1515-1600 MWF, ScottH 4, Caswell, 4 cr (IIIA only)

3302 Teaching Vocal and General Music Grades 5-12 (prereq music education maj or #) (A-N only)
116844 1015-1100 MTWThF, ScottH 4, Borg, 4 cr

3415 Choral Laboratory (prereq music education maj or #) (A-N only)
406618 1315-1500 MWF, WullH 30, Caswell, 4 cr

R**3501 String Techniques II** (prereq music education maj or #) (A-N only)
206622 1115-1200 MWF, WullH 330, Remenikova, 3 cr

R**3503 Woodwind Techniques** (prereq music education maj or #) (A-N only)
916859 0915-1000 MTWTh, NMA 5, Schultz, 4 cr

R**3504 Brass Techniques** (§1525; prereq music education maj or #) (A-N only)
516864 0915-1000 MTWTh, NMA 4, Turrentine, 4 cr

R**3516 Instrumental Laboratory II** (prereq music education maj or #) (A-N only)
016870 1015-1100 MTWTh, NMA 4, Schultz, 4 cr

3650 Student Teaching in Music (prereq #) (A-N only)
215384 –1 1415-1600 M, ScottH 2, Schultz, 3-12 cr
515388 –2 1615-1800 W, ScottH 2, Borg, Buckner, 3-12 cr

3801 Psychology of Music I (prereq Psy 1001, 3604 or #) (A-N only)
216891 1015-1100 MTWTh, ScottH 2, Turrentine, 4 cr

3804 Music Therapy Techniques I (prereq maj in music therapy) (A-N only)
505573 1115-1300 T, 1115-1200 Th, 1411 University Ave SE, Nolteriek, 4 cr

3850 Field Experiences: Music Therapy (max 10 cr; prereq 3800, 3804) (S-N only)
315392 –1 1215-1300 Th, 1411 University Ave SE, Nolteriek, 1-2 cr
434094 –2 1315-1400 Th, 1411 University Ave SE, Nolteriek, 1-2 cr

3851 Internship: Music Therapy (prereq #) (S-N only)
716894 Nolteriek, 6 cr

3852 Internship: Music Therapy (prereq 3852) (S-N only)
816899 Nolteriek, 6 cr

5621 Supervision and Administration of School Music (§5231; prereq #) (A-N only)
234095 1615-1800 Th, ScottH 103, Borg, 3 cr

5661 Music in Therapy (A-N only)
134096 1615-1800 W, 1411 University Ave SE, Nolteriek, 3 cr

5970 Independent Study (prereq educ or grad stu) (A-N only)
616905 1-4 cr

8282 Seminar: Historical, Philosophical, and Psychological Issues (8281-8282-8283†; prereq 8281)
516914 1615-1800 T, ScottH 103, Schultz, 2 cr

8990 Research Problems (prereq knowledge of elementary statistics)
816918 1-12 cr

NAVAL SCIENCE (Nav)

R**0204 Professional Training in Naval Science** (prereq #) (S-N only)
315408 1515-1700 W, Armory 116, Conrad, 0 cr

R**1101 Naval Ships Systems I** (prereq #)
015413 –1 0915-1000 TTh, Armory 202, May, 2 cr
415416 –2 1215-1300 TTh, Armory 202, May, 2 cr

R**1103 Principles of Naval Weapons Systems** (prereq #) (A-N only)
438095 –1 0915-1000 MW, Armory 202, Wilson, 2 cr
238096 –2 1115-1200 MW, Armory 202, Wilson, 2 cr

R**3303 Inland and Coastal Navigation** (prereq #)
304439 1215-1300 MTWThF, Armory 12A, Currie, 3 cr

R**3453 Amphibious Warfare II** (prereq 3452) (A-N only)
935976 0915-1000 MF, Armory 205, Conrad, 2 cr

NEUROLOGY (Neur)
Medical School

5120 Selected Problems in Neurology (prereq regis med)
119587 Klassen, ar cr

5121 Descriptive Neurology (prereq regis in occupational or physical therapy)
019588 1215-1300 TWTh, OwreH 2210, Moriarty, 2 cr

5122 Pediatric Neurology: Health Care Psychology Interns (prereq #)
819589 Greenberg, ar cr

5510 Externship in Clinical Neurology (prereq regis med)
119590 Klassen, ar cr

5541 Pediatric Neurology: Neurochemistry (prereq regis med)
019591 Swaiman, ar cr

5542 Pediatric Neurology (prereq regis med)
819592 Swaiman, ar cr

5544 Clinical Electroencephalography (prereq regis med)
619593 Torres, ar cr

5545 Electromyography (prereq regis med)
419594 Kennedy, ar cr

5570 Immunology-Veterans Administration Hospital (prereq regis med)
219595 Ansari, ar cr

8200 Clinical Neurology
119596 Klassen, ar cr

8201 Clinical Pediatric Neurology
919597 Swaiman, ar cr

8202 Research in Neurology
719598 Klassen, ar cr

8203 Applied Electroencephalography
519599 Torres, ar cr

8204 Applied Electromyography
219600 Kennedy, ar cr

8205 Applied Neuropathology
719603 Sung, ar cr

8233 Neurological Clinical Pathological Conference
019610 Klassen, 1 cr

8234 Neuropsychology Conference
619612 Meier, 1 cr

8236 Research in Neuropathology
419613 Sung, ar cr

8704 Survey of Neuropathology (§Path 8702)
119615 Sung, 1 cr

8705 Neurological-Neurosurgical Conference (§Surg 8318, Rad 0124)
919616 Klassen, 1 cr

NEUROSURGERY (NSu)
Medical School

5500 Externship at the University Hospitals (prereq regis med)
519618 Chou, Seljeskog, others, 4.5-9 cr

5510 Externship at Veterans Hospital (prereq regis med)
319619 Maxwell, Turner, 4.5-9 cr

5511 Externship at Hennepin County Medical Center (prereq regis med)
719620 Rockswold, 4.5-9 cr

5512 Externship at St. Paul Ramsey Hospital (prereq regis med)
519621 Thienprasit, 4.5-9 cr

5520 Neurosurgical Investigation (prereq regis med)
319622 Bloedel, 9 cr

5530 Neuropsychology
119623 Meier, 3 cr

5550 Neurophysiological Literature Seminar (prereq medical school course in physiology, #)
019624 Bloedel, 1 cr

8305 Neurosurgical Diagnosis
819625 Chou, Seljeskog, others, 4 cr

8308 Neurosurgical Problems and Management
419627 Chou, Seljeskog, others, 4 cr

8311 Operative Neurosurgery
219628 Chou, Seljeskog, others, 4 cr

8316 Neurosurgical Research
119629 Bloedel, Chou, 6 cr

8318 Neuroradiological Conference
219631 1300-1400 F, Mayo C231, Chou, Seljeskog, others, 1 cr (Todd Amph)

8320 Neurosurgical Conference
719634 0800-1100 S, Mayo B507, Chou, Seljeskog, others, 2 cr

8322 Neurosurgery-Ophthalmology Seminar-Part I
319636 0800-0900 T, Mayo B524, 1 cr

8330 Neurosurgery Literature Seminar
119637 2000-2200 Th, MoosT 2580, Chou, Seljeskog, others, 2 cr

NORWEGIAN (Nor)
Scandinavian Languages
Liberal Arts

R**1102 Beginning Norwegian** (prereq 1101)
415478 –1 0815-0900 MTWThF, FolH 104, 5 cr
215482 –2 1115-1200 MTWThF, AkerH 313, 5 cr
515486 –3 1315-1400 MTWThF, Arch 20, 5 cr

1105 Intermediate Norwegian (prereq 1104)
719214 0915-1000 MWF, FolH 204, Simpson, 4 cr

3670 Readings in Norwegian Literary Texts (max 28 cr; prereq 3101)
519215 1015-1100 MWF, FolH 203, Mishler, 4 cr

NURSING, SCHOOL OF (Nurs)

R**5200 Introduction to Nursing** (prereq nursing student or △)
234663 1015-1200 WF, HSUnitF 2110, 2140, 4 cr

R**5204 Helping Relationships I** (prereq 5200 or 5201, psychology, growth and development or ¶)
915498 –1 1015-1200 MW, East Bank, 2 cr
415500 –2 1215-1400 TTh, HSUnitF, 2 cr
715504 –3 1415-1600 TTh, HSUnitF, 2 cr
015508 –4 1415-1600 TTh, HSUnitF, 2 cr
815512 –5 0815-1000 WF, HSUnitF, 2 cr



It's pretty hard not to like an Army ROTC Scholarship.

Just look at what it covers: full tuition, books, lab fees. Plus, it pays you up to $1,000 each school year it's in effect.

But what we think you'll like best about our scholarship is the commitment. Because it leads to a commission in the Army Nurse Corps (ANC) after graduation.

As an Army nurse, you'll belong to one of the largest, most comprehensive health care teams in the world. Training on state-of-the-art equipment. And using the latest techniques.

An Army nurse is an Army officer, too. So along with professional recognition, you'll also receive all the prestige, privileges and respect that go with being a leader in today's Army.

And don't forget, the Army Nurse Corps is part of a worldwide organization. Which means you'll have the opportunity to work in different cities around the country. And different countries around the world. Without losing seniority or benefits.

So make your commitment to nursing really pay off. Begin your future in the Army Nurse Corps. And that begins with Army ROTC.

For more information about scholarship opportunities, contact the Army ROTC Professor of Military Science on your campus. Or write: Army ROTC, Dept. NX, P.O. Box 9000, Clifton, N.J. 07015.

ARMY ROTC.
BE ALL YOU CAN BE.

R5205 Tools I (prereq admission to nurs, 5200 or 5201, microbiology, physiology or ¶)
410328 –1 LAB 1015-1200 W, HSUnitF 4120, 1 cr
210332 –2 LAB 1015-1200 W, HSUnitF 4120, 1 cr
510336 –4 LAB 1015-1200 F, HSUnitF 4120, 1 cr

R5404 Tools II (prereq 5206, LaMP 5170 or ¶, anatomy, MdBc 3050, Phcl 1009 or ¶)
110338 –1 LAB 0815-1000 TTh, HSUnitF 4120, 2 cr
310340 –2 LAB 0815-1000 TTh, HSUnitF 4120, 2 cr
010342 –3 LAB 1015-1200 TTh, HSUnitF 4120, 2 cr
610344 –4 LAB 1015-1200 TTh, HSUnitF 4120, 2 cr
210346 –5 LAB 1315-1500 TTh, HSUnitF 4120, 2 cr

R5405 Tools II (prereq 5404, LaMP 5171 or ¶)
915548 –1 0815-1000 M, HSUnitF 4120, 1 cr
715552 –2 1015-1200 M, HSUnitF 4120, 1 cr
015556 –3 1215-1400 F, HSUnitF 4120, 1 cr
415562 –5 1415-1600 F, HSUnitF 4120, 1 cr

R5408 Adaptation II (prereq 5207, LaMP 5170 or ¶LaMP 5170)
519666 1215-1400 F, MoosT, 2 cr

R5409 Helping Relationships II (prereq group theory or 5208 or ¶, 5207, abnormal psychology or ¶)
815574 –1 0815-1000 MW, HSUnitF, 2 cr
115578 –2 1015-1200 MW, HSUnitF, 2 cr
215580 –3 1315-1500 TTh, HSUnitF, 2 cr
715583 –4 0815-1000 WF, HSUnitF, 2 cr
537097 –5 1015-1200 WF, HSUnitF, 2 cr

R5611 Synthesis Incorporating Concepts of Chronicity (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1400 T, MoosT 2520, 4 cr
014410 –1 CLN
814411 –2 CLN
414413 –3 CLN
214414 –4 CLN
914416 –5 CLN
714417 –6 CLN
314419 –7 CLN
714420 –8 CLN
417506 –9 CLN

R5612 Synthesis Incorporating Concepts of Stress and Crisis (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1500 T, HSUnitF, 4 cr (RN only)
314422 –1 CLN
114423 –2 CLN

R5613 Synthesis Incorporating Concepts of Loss (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1400 Th, MoosT 2520, 4 cr
614426 –1 CLN
214428 –2 CLN
414430 –3 CLN
114432 –4 CLN
714434 –5 CLN
314436 –6 CLN
014438 –7 CLN
114440 –8 CLN

R5614 Synthesis Incorporating Concepts of Health (prereq 5404, 5405 or ¶5405, 5407, 5408, 5409, abnormal psy, Phcl 1009, LaMP 5171 or ¶5171)
★LECT 1315-1500 Th, MoosT 2690, 3 cr (RN only)
814442 –1 CLN
414444 –2 CLN

R5615 Synthesis in Complex Nursing Situations I (prereq 5611, 5612, 5613, 5614, FScN 3602)
★LECT 1315-1500 W, MoosT 2530, 5 cr
114446 –1 CLN
714448 –2 CLN
914450 –3 CLN
714451 –4 CLN
314453 –5 CLN

R5616 Synthesis in Complex Nursing Situations II (prereq 5611, 5612, 5613, 5614, FScN 3602)
★LECT 5 cr
217510 –1 CLN
917512 –2 CLN
517514 –3 CLN
117516 –4 CLN
017517 –5 CLN
617519 –6 CLN

R5714 Nursing History and Physical Assessment (prereq sr, 2 level II synthesis courses, grad student in nursing or RN, #)
613583 1215-1500 TTh, HSUnitF, 3 cr (lab ar)

R5722 An Introduction to The Nurse as a Leader for Change Through Participation in the Legislative Process (prereq any two of the following: 5611, 5612, 5613, 5614 or # or grad)
717527 1415-1600 W, MoosT 2571, 5 cr

5799 Self-Directed Study as a Means of Accomplishing Nursing Electives (prereq any two of the following: 5611, 5612, 5613, 5614)
905652 ar cr

R5801 Gerontological Nursing Seminar (prereq #)
413584 1515-1700 W, HSUnitF, Taylor, 2 cr

R5816 Leadership/Management (prereq 5611, 5612, 5613, 5614, 5615 or 5616, FScN 3602)
★LECT 1015-1200 M, HSUnitF 2110, 2140, 6 cr
414458 –1 CLN
214459 –2 CLN
614460 –3 CLN
214462 –4 CLN
114463 –5 CLN

R5902 Nursing and the Politics of Health (prereq grad student, #)
938201 0915-1200 F, HSUnitF, Fahy, 3 cr

R5999 Clinical Study (prereq any two of the following: 5611, 5612, 5613, 5614)
815641 0815-1000 M, HSUnitF 2120, 2130, 1 cr

8001 Special Educational Experiences in Nursing (prereq △)
319667 ar cr

8009 Special Topics (prereq #)
119668 ar cr

R8010 Structure of the Discipline of Nursing (prereq △)
738202 1215-1500 W, MMA 100, Sime, 3 cr

R8011 Moral and Ethical Positions in Nursing (prereq △)
415657 0815-1100 W, MoosT 2571, Crisham, 3 cr

R8012 Conceptual Framework for Nursing Practice (prereq 8010)
715664 –1 1615-1900 W, PWB 5206, Egan, 3 cr
115667 –2 Weise, 3 cr (Rochester)

R8014 Research in Nursing (prereq inferential statistics, △)
815672 0915-1200 F, PWB 5206, King, 3 cr

R8030 Nursing Intervention Models (8 cr must be completed before any cr is given; prereq 8011, 8012 or ¶8011, #)
915677 –1 0915-1100 T, 1215-1400 T, PWB 5258, Sodergren, 8 cr (cln ar) (Med Surg)
715681 –2 1215-1400 TTh, PWB 5266, Gordon, 8 cr (cln ar) (Psych Mental Health)
115684 –3 0915-1300 W, MoosT 2146, Rossi, 8 cr (cln ar) (NMW)

8050 Problems in Nursing (prereq #)
819673 1-9 cr

8051 Special Topics in Nursing Research
913587 1-9 cr

8060 Advanced Clinical Nursing (prereq △, #)
619674 3-9 cr

8063 Nursing Consultation
134664 3 cr

R8313 Care of the Childbearing Family in Risk (prereq physiology, #)
119677 0915-1300 W, MoosT 2154, Hangsleben, 4-6 cr (lab ar)

R8415 Nurse Clinician Role Development (prereq any nursing Focus I course, a course dealing with the health care delivery system)
719679 1215-1500 T, Snyder, 6-9 cr (lab ar)

R8422 Psychiatric-Mental Health Nursing: Family Dynamics and Therapy (prereq 8421)
719682 1015-1200 T, MoosT 2154, Kjervik, 3 cr (lab ar)

R8431 Childbearing-Childrearing Family Nursing I (prereq 8030)
319684 1515-1800 T, MoosT 2113, Rode, 4-6 cr (lab ar)

8451 Teaching-Learning Process in Nursing (prereq 8030, ¶course in learning theory, #)
434662 0915-1200 TTh, MoosT 2146, Corcoran, 4 cr (lab ar)

8509 Special Topics: Nursing Education (prereq #)
419692 ar cr

8601 Clinical Nursing Leadership I (prereq 8600)
934665 6 cr (cln ar)

8609 Special Topics in Nursing Supervision (prereq #)
119694 ar cr

R8702 Nursing Administration II (prereq 8701, #)
719696 1015-1200 T, PWB 5254, Edwardson, 6 cr (cln ar)

NUTRITION (Nutr)
Agriculture & Home Econ

8745 Seminar (prereq #)
116253 1600-1645 T, FScN 23, Savaiano, 1 cr

8990 Graduate Research (prereq #)
504441 2-5 cr

OBSTETRICS AND GYNECOLOGY (Obst)
Medical School

5500 Externship in Obstetrics and Gynecology (prereq regis med)
919650 Foreman, others, 9 cr

5520 Obstetrics and Gynecology Externship in Clinical Practice (prereq regis med)
719651 Foreman, others, 4.5 cr

5540 Advanced Externship in Obstetrics and Gynecology (prereq 5500)
519652 Foreman, others, ar cr

5560 Research in Reproduction (prereq regis med)
319653 Foreman, others, ar cr

5575 Gynecological Pathology and Diagnostic Cytology (prereq 5500)
119654 Okagaki, Brooker, 9 cr

5590 Preceptorship in Obstetrics and Gynecology (prereq 5500)
019655 Foreman, others, 9 cr

8201 Advanced Obstetrics and Gynecology I
819656 Prem, others, ar cr

8202 Advanced Obstetrics and Gynecology I (prereq 8201)
619657 Prem, others, ar cr

8203 Advanced Obstetrics and Gynecology I (prereq 8202)
419658 Prem, others, ar cr

8204 Advanced Obstetrics and Gynecology I (prereq 8203)
219659 Prem, others, ar cr

8205 Advanced Obstetrics and Gynecology II
619660 Prem, others, ar cr

8206 Advanced Obstetrics and Gynecology II (prereq 8205)
219662 Prem, others, ar cr

8207 Advanced Obstetrics, Gynecology II (prereq 8206)
119663 Prem, others, ar cr

8208 Advanced Obstetrics, Gynecology II (prereq 8207)
719665 Prem, others, ar cr

8209 Advanced Obstetrics and Gynecology III
019669 Prem, others, ar cr

8210 Advanced Obstetrics and Gynecology III (prereq 8209)
319670 Prem, others, ar cr

8211 Advanced Obstetrics and Gynecology III (prereq 8210)
119671 Prem, others, ar cr

8212 Advanced Obstetrics and Gynecology III (prereq 8211)
019672 Prem, others, ar cr

8213 Advanced Obstetrics and Gynecology IV (prereq 8212)
419675 Prem, others, ar cr

8214 Advanced Obstetrics and Gynecology (prereq 8213)
219676 Prem, others, ar cr

8215 Advanced Obstetrics and Gynecology IV (prereq 8214)
919678 Prem, others, ar cr

8216 Advanced Obstetrics and Gynecology IV (prereq 8215)
119680 Prem, others, ar cr

8217 Seminar: Obstetrics and Gynecology IV (prereq 8216)
919681 Prem, others, ar cr

8218 Seminar: Obstetrics and Gynecology (prereq 8217)
519683 Prem, others, ar cr

8219 Seminar: Obstetrics and Gynecology (prereq 8218)
119685 Prem, others, ar cr

8221 Seminar: Obstetrics and Gynecology (prereq 8219)
019686 Prem, others, ar cr

8222 Gynecological Oncology (prereq 8221)
819687 Prem, others, ar cr

8223 Gynecological Oncology (prereq 8222)
619688 Prem, others, ar cr

8224 Gynecological Endocrinology I (prereq 8223)
419689 Prem, others, ar cr

8225 Gynecological Endocrinology II (prereq 8224)
619691 Prem, others, ar cr

8226 Obstetrical Physiology and Anesthesiology (prereq 8225)
219693 Prem, others, ar cr

8227 Preceptorship in Clinical Practice (prereq 8226)
919695 Prem, others, ar cr

8228 Selected Aspects of Radiation Therapy (prereq 8227)
519697 Prem, others, ar cr

8229 Selected Aspects of Medical Oncology (prereq 8228)
319698 Prem, others, ar cr

8230 Research in Reproduction (prereq 8229)
119699 Prem, others, ar cr

OPERATIONS MANAGEMENT (OM)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for OM courses.

R3000 Introduction to Operations Management (A-N only)
136706 1045-1230 MW, AndH 210, Daniels, 4 cr

R8041 Project Management (§5050; prereq 3000 or MBA 8050, grad mgmt/IR student or grad SMgt approval) (A-N only)
936707 1730-2050 M, BlegH 245, Armstrong, 4 cr

R8057 Operations Process Management (§5057; prereq 3000 or MBA 8050, grad mgmt/IR stu or grad SMgt approval) (A-N only)
921317 –1 1315-1500 MW, BlegH 335, Scudder, 4 cr

R8850 Topics in Operations Management (prereq 3000, grad mgmt/IR student or grad SMgt approval) (A-N only)
834030 0915-1200 M, Mgmt/Econ 128, Schroeder, ar cr

8990 Readings in Operations Management (prereq consent of adviser, #, 2nd yr grad stu, requisite intro courses, grad SMgt approval) (A-N only)
516525 ar cr

8995 Graduate Research in Operations Management (prereq consent of adviser, #, 2nd yr grad stu, requisite intro courses, grad SMgt approval) (A-N only)
116527 ar cr

OPHTHALMOLOGY (Oph)
Medical School

5100 Introduction to Anatomy, Histology, and Embryology (prereq physician or vet med student)
919700 0715-0830 Th, PWB 9335, Cameron, 1 cr

5180 Externship (prereq regis med)
615074 ar cr

5190 Research Problems (prereq regis med)
415075 ar cr

8101 Clinical Opthalmology
719701 0800-1700 MTWThF, PWB 9100, Doughman, others, 8 cr (Eye Clinic)

8106 Strabismus Management (prereq grad physician or grad in veterinary science)
114155 0800-0900 M, PWB 9339, Letson, 1 cr

8111 Intraocular Inflammation, Uveitis, Ocular Tumors (prereq grad physican or grad in veterinary science)
833265 1500-1600 F, PWB 9339, Cameron, 3 cr

8119 Clinical Pathological Correlations in Ophthalmology (prereq grad physician or grad in veterinary sci)
514158 1600-1800 F, PWB 9339, Cameron, 1 cr

8120 Scope of Ophthalmic Pathology (prereq grad physician or grad in veterinary science)
314159 1400-1500 F, PWB 9339, Cameron, 2 cr

8131 Practical Ocular Surgery
319703 0800-1200 MTWThF, Doughman, others, 3 cr (Mayo OR)

8142 Ophthalmic Pathology Laboratory
119704 1330-1530 T, PWB 9335, Cameron, 2 cr

8152 Ophthalmology Laboratory
819706 15 cr

8155 Special Topics in Ophthalmology (prereq #)
419708 1-3 cr

ORAL AND MAXILLOFACIAL SURGERY (OSur)
Dentistry

5257 Ambulatory General Anesthesia
525886 Waite, 1 cr

5260 Oral Surgery Clinic
918367 10 cr

5265 Oral Surgery Colloquia
518369 5 cr

5270 Oral and Maxillofacial Radiology Review
238048 Waite, 1 cr

5275 Oral Pathology Review
138049 Waite, 1 cr

8250 Advanced Oral Surgery
016920 Waite, others, ar cr

8251 Seminar: Oral Surgery (max 1 cr)
616922 Waite, others, ar cr

8252 Research in Oral Surgery
216924 Waite, others, ar cr

8253 Problems in Oral Surgery
116973 Waite, others, ar cr

8255 General Surgery
116990 Thompson, others, ar cr

8258 Anesthesia II Seminar
616998 Waite, others, 1 cr

ORAL BIOLOGY (OBio)
Dentistry

8001 Research in Oral Biology
416873 Shapiro, ar cr

8002 Tutorial in Oral Biology
116875 Shapiro, ar cr

8010 Oral Biology
716880 Germaine, 3 cr

8022 Topics in Oral Biology (prereq #)
016884 Shapiro, 1-3 cr

8030 Seminar
104605 Messer, 1 cr

ORAL PATHOLOGY (OPat)
Dentistry

5017 Oral Pathology Clinic
416887 Sedano, ar cr

8001 Research in Oral Pathology
116897 Gorlin, Vickers, ar cr

8002 Oral Pathology (prereq 5251, 5252)
316901 Sedano, ar cr

8004 Histopathology
016903 Vickers, 1 cr

8006 Current Literature Review
216907 Vickers, 1 cr

8008 Clinical Oral Pathology
116908 Vickers, 1 cr

8010 Current Literature Review
929112 Vickers, 1 cr

8011 Surgical Oral Pathology
216910 Vickers, ar cr

8016 Histopathology
729113 Vickers, 2 cr

8301 Human Development Genetics II (prereq 8300)
716913 Witkop, 2 cr

ORAL RADIOLOGY (ORad)
Dentistry

8500 Fundamentals of Radiation Biology (prereq 8400)
112423 Kuba, 3 cr

8600 Radiological Health, Hygiene, and Protection (prereq 8400)
329115 Kuba, 1-3 cr

8900 Oral Radiology Research (prereq #)
116916 Kuba, ar cr

ORTHODONTICS (Otho)
Dentistry

5002 Clinical Orthodontics
417005 Speidel, others, ar cr

8001 Research in Orthodontics
117010 Speidel, others, ar cr

8201 Growth and Development
317014 Speidel, others, ar cr

8205 Orthodontic Diagnosis and Treatment Planning
417019 Speidel, others, ar cr

8209 Orthodontic Seminar
617021 Speidel, others, ar cr

8217 Topics in Orthodontics
217023 Speidel, others, ar cr

ORTHOPAEDIC SURGERY (OrSu)
Medical School

5180 Orthopaedics I (prereq regis med)
819740 Thompson, others, ar cr

5185 Orthopaedics II: Externship in Orthopaedic Surgery (prereq regis med)
619741 Thompson, others, ar cr

5186 Research Problems in Orthopaedic Surgery (prereq regis med)
419742 Thompson, others, ar cr

5187 Externship in Orthopaedic Surgery and Fractures-St. Paul Ramsey Hopsital (prereq regis med)
219743 Comfort, ar cr

5188 Externship in Orthopaedic Surgery and Fractures-Gillette Children's Hospital (prereq regis med)
119744 Vanden Brink, ar cr

5189 Externship in Orthopaedic Surgery and Fractures-St. Luke's Hospital, Duluth (prereq regis med)
719746 ar cr

5190 Externship in Orthopaedic Surgery and Fractures-Veterans Hospital (prereq regis med)
319748 Premer, ar cr

5191 Orthopaedic Externship at Hennepin County Medical Center (prereq regis med)
319751 Gustilo, ar cr

8401 Orthopaedic Conference
019753 Thompson, others, 3 cr

8403 Fractures
819754 Gustilo, 5 cr

8404 Fractures
219757 Comfort, 5 cr

8405 Orthopaedic Diagnosis
219760 Thompson, others, 3 cr

8407 Pediatric Orthopaedics
119761 Vanden Brink, 5 cr

8408 Orthopaedic Problems and Management
919762 Thompson, others, 5 cr

8409 Orthopaedic Problems and Management
319765 Winter, 5 cr

8410 Orthopaedic Pathology
019767 Thompson, others, 2 cr

8411 Orthopaedic Operative Surgery
819768 Thompson, others, 5 cr

8412 Orthopaedic Anatomy
619772 House, 2 cr

8416 Orthopaedic Research
419773 Bradford, 5 cr

OTOLARYNGOLOGY (Otol)
Medical School

5500 General ENT Elective
219774 4.5 cr

5501 Acting Internship-ENT Elective
119775 9 cr

5503 Research Basic Science (prereq regis med student)
919776 ar cr

8220 Research
319779 Paparella, 18 cr

8230 Clinical Otorhinolaryngology
319782 Adams, Duvall, others, 6 cr

8231 Surgery of Ear, Nose, and Throat
019784 Paparella, Duvall, 4 cr

8232 Maxillofacial Surgery
819785 Hilger, Paparella, 1 cr

8233 Plastic and Reconstructive Surgery of the Head and Neck
219788 Adams, Duvall, 1 cr

8234 Anatomy of the Head and Neck and Temporal Bone Dissection
219791 Jung, 2 cr

8235 Roentgenology of the Head and Neck
119792 Adams, 2 cr

8236 Pharmacology in ENT
919793 2 cr

8237 Endoscopy
719794 Duvall, 2 cr

8238 Pathology of the Ear, Nose, and Throat
519795 Duvall, Paparella, 2 cr

8239 Otoneurology
919907 Paparella, Duvall, 2 cr

8240 Allergy
719911 Berlinger, 2 cr

8241 Tumor Clinic
019915 Adams, Duvall, 1 cr

8242 Audiology of Speech Pathology
419918 Lassman, Harford, 2 cr

8243 Introduction to Research Methodology
619920 Paparella, Ward, 2 cr

8244 Seminar: Current Literature
719925 Paparella, Adams, others, 1 cr

8245 Master's Thesis Research
319927 ar cr

8246 Ph.D. Thesis Research
119931 ar cr

8247 Physiology of Hearing (§Phsl 8216; prereq #)
819933 Ruggero, 3 cr

8248 Readings in Auditory Physiology (prereq #)
419935 1-3 cr

PATHOBIOLOGY (Path)
Laboratory Medicine And Pathology
Medical School

5102 Organ Systems Pathology (prereq pathobiology grad student or △)
★LECT 0815-0900 M, 1315-1400 T, MoosT 2650
137524 –1 LAB 1415-1600 T, 2-7 cr
037525 –2 LAB 1415-1600 Th, 2-7 cr

5104 Autopsies (prereq regis grad med or #)
319328 Burke, Snover, ar cr

5109 Seminar: Selected Topics in Pathobiology (prereq #)
517190 Benson, 1 cr

5110 Seminar: Pathology (prereq #)
119346 1200-1300 M, Mayo C231, 1 cr (Todd Amph)

5113 Surgical Pathology (prereq regis grad med or #)
519375 Dehner, Rosai, ar cr

5128 Experimental Immunopathology (prereq regis med or grad med)
319376 Kersey, 4 cr

5140 Seminar: Experimental Chronobiology
119377 Halberg, 1 cr

5141 Problems in Experimental and Clinical Chronobiology
019378 Halberg, ar cr

5169 Research in Human Genetics (prereq #)
819379 Eaton, ar cr

5170 Advanced Problems: Medical Genetics (prereq #)
106069 Eaton, ar cr

5179 Seminar: Chemistry (prereq #)
119380 Steffes, 1 cr

5180 Advanced Chemistry (prereq #)
019381 Benson, ar cr

5400 Selection and Care and Use of Animals in Biomedical Research (prereq grad student in life sciences)
819382 1015-1100 MWF, MoosT 2520, Manning, 3 cr

5416 Mathematical Models in Pathobiology II: Transforms and Physiological Systems (prereq knowledge of biomedical computing, calculus, pathobiology)
134485 1415-1530 TTh, MoosT 2530, Ackerman, 3 cr

5865 Departmental Seminar (prereq #)
619383 0800-0900 W, Mayo D230, 1 cr (Eustis Amph)

8109 Pathobiology II (8108-8109-8110†; prereq MdBc 5100, 5101 or ¶, Anat 5103, 5104 or ¶ or #)
919387 0915-1000 MWF, JacH 3145, Ahmed, Bach, others, 3 cr

8122 Basic Science of Cancer (prereq MdBc 5100)
719391 1515-1600 T, JacH 3145, Wattenberg, 1 cr

8135 Biochemical Aspects of Cell Growth and Cell Damage (prereq #)
234484 1545-1700 TTh, MoosT 2690, Ahmed, 3 cr

8141 Research Topics and Methods in Pathobiology (8140-8141†; prereq 8140) (A-N only)
438050 Mariani, 2 cr

8200 Advanced Problems (prereq #)
519392 ar cr

8201 Research
019395 ar cr

8207 Research in Experimental and Clinical Chronobiology
619397 Halberg, ar cr

8237 Laboratory in Optical Transforms of Electron Micrographs (prereq Anat 8135, 8136, 8137 or equiv, plus #...BioC 5523 or Chem 5574 or equiv desirable)
506335 Runge, ar cr

8273 Advanced Immunology (prereq #)
219399 Azar, 6 cr

8702 Survey of Neuropathology (§Neur 8704)
406067 Sung, Mastri, 1 cr

PEDIATRIC DENTISTRY (Pedo)
Dentistry

5414 Advanced Clinical Pedodontics (prereq #)
917025 Till, others, ar cr

8001 Research (prereq #)
517027 Till, others, ar cr

8290 Hospital Pedodontics I (prereq #)
117029 Till, others, ar cr

8291 Hospital Pedodontics II (prereq #)
317031 Till, others, ar cr

8292 Pedodontic Literature (prereq #)
017033 Feigal, others, ar cr

8294 Pedodontic Diagnosis and Treatment Planning (prereq #)
617035 Feigal, others, ar cr

8295 Independent Pedodontic Study (prereq #)
217037 Till, others, ar cr

PEDIATRICS (Ped)
Medical School

5501 Pediatric Clerkship
219936 Satran, ar cr

5503 Pediatric Clerkship with Outstate Clinicians
119937 Satran, ar cr

5504 Clinical Aspects of Pediatric Psychology (prereq #)
815929 ar cr

5512 Pediatric Acting Internship
719939 Satran, 9-18 cr

5515 Child Development at St. Paul Ramsey Hospital
719942 Davis, ar cr

5520 Pediatric Out-Patient
319944 Satran, ar cr

5522 Ambulatory Pediatrics at Hennepin County Medical Center (prereq 5501)
119945 Tobin, 9 cr

5523 Outpatient Externship at Community University Health Care Center
019946 Smelker, ar cr

5532 Clinical Allergy and Immunology at University Hospitals
819947 Page, ar cr

5534 Pediatric Cardiology at the University Hospital
619948 Moller, ar cr

5535 Infectious Diseases
419949 Ferrieri, ar cr

5536 Pediatric Hematology/Oncology at the University Hospitals
819950 Nesbit, ar cr

5537 Pediatric Endocrinology and Metabolism at the University
619951 Ulstrom, ar cr

5538 Pediatric Gastroenterology
419952 Sharp, ar cr

5539 Neonatal Medicine Externship
219953 Boros, ar cr

5540 Pediatric Neurology
920152 Swaiman, ar cr

5542 Clinical Pharmacology at the University
720153 Mirkin, ar cr

5543 Nephrology at the University
520154 Michael, ar cr

5544 Pediatric Pulmonary Disease
320155 Warwick, ar cr

5545 Diagnosis, Evaluation, and Care of Adults and Children with Cancer
120156 Ramsay, ar cr

5547 Topics in Maternal and Child Care (prereq 5500, 5501 or 5502, #)
020157 tenBensel, ar cr

5548 Pediatric Genetics at the University
820158 Pierpont, 9 cr

5553 Adolescent Medicine
512362 Blum, 9 cr

5555 Neonatal Clerkship (prereq 5501 or 5512)
113717 Opitz, ar cr

5556 Clinical Pediatrics Clerkship (prereq 5501 or 5512)
913718 Blau, ar cr

5560 Research/Special Problems in Pediatrics (prereq regis med) (S-N only)
037637 ar cr

8200 Graduate Seminar
620159 Krivit, 1.5 cr

8202 Pediatric Clinic (prereq #)
820161 Krivit, ar cr

8204 Residency in Pediatrics (prereq #)
420163 Krivit, ar cr

8206 Pediatric Special Interest (prereq #)
220164 Krivit, ar cr

8208 Pediatric Research (prereq #)
920166 ar cr

PERIODONTICS (Pero)
Dentistry

8000 Advanced Clinical Periodontology
917039 Bandt, Pihlstrom, ar cr

8100 Research in Periodontology
117041 Pihlstrom, ar cr

8200 Lectures
717043 Pihlstrom, ar cr

8250 Supporting Structures of the Teeth
036696 Pihlstrom, Schaffer, ar cr

8300 Seminar: Periodontology
317045 Bandt, Pihlstrom, ar cr

PERSIAN (Per)
South And Southwest Asian Studies
Liberal Arts

1102 Beginning Persian (prereq 1101)
718905 1315-1500 MW, 1315-1400 F, KlaCt 158, Tavakoli, 5 cr

3012 Intermediate Persian (prereq 3011)
318907 1615-1800 MW, FolH 108, Alvi, 4 cr

5970 Directed Readings (prereq 3013, #, △, CLA approval)
018909 ar cr

PERSONAL ORIENTATION (PO)
Liberal Arts

R1001 How to Study (cannot be applied toward any CLA degree)
816028 –1 0915-1000 MWF, JonesH 2, 2 cr
616032 –2 1115-1200 MWF, JonesH 2, 2 cr
116035 –3 1215-1300 MWF, JonesH 2, 2 cr
516038 –4 1315-1400 MWF, JonesH 2, 2 cr
316042 –5 0800-0845 MWF, CofH 120, 2 cr (StP)
236350 –8 1515-1700 M, 1515-1600 W, 2 cr (Comstock Hall Study Lounge)

PHARMACEUTICS (Phm)
Pharmacy

8101 Readings in Pharmaceutics (prereq #)
119727 Zimmerman, 1 cr

8200 Research Problems (prereq #)
212291 ar cr

8441 Physical Pharmacy (prereq Phar 5680, survey course in physical chemistry or #)
338476 Rippie, 3 cr

PHARMACOGNOSY (Phcg)
Pharmacy

5840 Introductory Pharmacognosy (prereq MicB 3103, Phar 5440 or #)
919728 Abul-Hajj, 3 cr

5899 Special Problems in Pharmacognosy (prereq #)
719729 ar cr

8400 Selected Topics
119730 3 cr

8500 Pharmacognosy Seminar
417098 1 cr

8600 Readings in Pharmacognosy (prereq #)
919731 1 cr

8900 Research in Pharmacognosy (prereq #)
125888 ar cr

PHARMACOLOGY (Phcl)
Medical School

1001 Dental Therapeutics (prereq regis dental hygiene program or #)
712439 0745-0930 W, Holte, 2 cr

5102 Pharmacology for Pharmacy Students (prereq 5101 or #) (A–N only)
★LECT 1015-1100 MWF, MoosT 2620, Dunham, 4 cr
520168 –1 LAB 1315-1400 F, MoosT 3110

5104 Pharmacology for Dental Students
320169 0845-0930 MTWTh, MoosT 2530, Wilcox, 4 cr

5109 Problems in Pharmacology (prereq #)
720170 Shideman, ar cr

5111 Pharmacology (prereq 5110 or #)
837848 4 cr

5515 Clinical Pharmacology at the University Hospitals
217796 Mirkin, 9 cr

8111 Advanced Pharmacology (prereq MdBc 5110 or BioC 5752, PhsI 8111, ¶PhcI 5111 or #) (A–N only)
837638 Goldberg, 2 cr

8203 Research in Pharmacology (prereq #)
520171 ar cr

8204 Seminar: Selected Topics in Pharmacology (max 3 cr; prereq 5110 or #)
320172 1215-1300 W, MlrdH 3257, Sladek, 1 cr

8207 Seminar: Psychopharmacology (max 3 cr; prereq #)
120173 Sparber, 1 cr

8211 Physiological Disposition of Drugs (prereq MdBc 5101 or #)
020174 1515-1600 MWF, MlrdH 3257, Mannering, 3–4 cr

8217 Cardiovascular-Renal Pharmacology (prereq 5110 or #)
834190 1515-1630 TTh, MlrdH 3257, Zimmerman, 3 cr

PHARMACY (Phar)
Pharmacy

5210 Terminology of Health Sciences
619643 Bast, 2 cr (Independent Study ar, HSUnitF 5135)

5260 Social and Behavioral Pharmacy (prereq one course in behavioral science) (A–N only)
325890 0815-0900 MWF, OwreH 2210, Martinson, 3 cr

5286 Drugs and Society (prereq 5285 or #)
419644 Gallo, 1–3 cr

5290 Specialty Clerkships
219645 Cloyd, ar cr

5303 Communication for the Health Sciences I (prereq pharmacy student or #)
626074 0815-0900 T, JacH 2135, 0815-0900 Th, HSUnitF 2120, 2130, Bast, 1 cr

5304 Communication for the Health Sciences II (prereq phcy student or #)
334864 Bast, 1 cr

5305 Humanistic Case Studies in Health Care
713266 1615-1830 W, HSUnitF 2110, 2140, Galle, 3 cr

5315 Interpersonal Competencies
931717 1315-1600 F, MMA 125, Bast, 2 cr

5340 Therapeutic Agents III (prereq 5330 or #) (A–N only)
919647 1115-1200 MWThF, 1015-1200 T, MoosT 2620, Johnson, 5 cr

5390 Community Practice Clerkship (prereq 3rd yr pharmacy student) (S–N only)
721321 Benson, 12 cr

5392 Hospital Practice Clerkship (prereq 3rd yr pharmacy student) (S–N only)
521322 Mann, 12 cr

5396 Pharm.D. IV Clerkship (prereq 5312 or #) (S–N only)
121324 1615-1800 W, MoosT 2650, Cloyd, 12 cr

5421 Instrumental Methods (prereq Chem 3303 or #) (A–N only)
229155 1115-1200 TTh, OwreH 2210, Abdel-Monem, 2 cr

5440 Biochemistry of Medicinals (prereq 5430 or #) (A–N only)
006999 1115-1200 MWF, 1015-1100 Th, MMA 125, Portoghese, 4 cr

R5441 Therapeutic Agents Lab I (prereq ¶5421) (A–N only)
706382 –1 LAB 1315-1600 T, HSUnitF 3150, Abdel-Monem, 1 cr
306384 –2 LAB 1315-1600 W, HSUnitF 3150, Abdel-Monem, 1 cr
006386 –3 LAB 1315-1600 Th, HSUnitF 3150, Abdel-Monem, 1 cr

5504 Pathophysiology and Therapeutics of Gastro-Intestinal Diseases (prereq PharmD candidate or #) (A–N only)
138141 0815-1000 MWF, MoosT 2520, 0815-1000 TTh, OwreH 2210, Peterson, 3 cr

5505 Pathophysiology and Therapeutics of the Kidney and Urinary Tract (prereq PharmD candidate or #) (A–N only)
615821 1315-1500 TTh, MMA 100, 4 cr

5506 Pathophysiology and Therapeutics of Fluids and Electrolytes (prereq PharmD candidate or #) (A–N only)
215823 1015-1200 TTh, MoosT 2530, 1515-1700 TTh, MoosT 2650, Angaran, 3 cr

5508 Pathophysiology and Therapeutics of Infectious Diseases (prereq PharmD candidate) (A–N only)
338140 1015-1200 MWF, MoosT 2690, Rotschafen, 4 cr

5510 Pathophysiology and Therapeutics of Endocrine and Metabolic Diseases (prereq PharmD candidate) (A–N only)
634868 1515-1700 MW, MoosT 2530, Dullinger, 1 cr

5610 Principles of Drug Delivery I (prereq Chem 3303, Phys 1046, Math 1221) (A–N only)
405937 1015-1100 MTWF, OwreH 2210, Rippie, 4 cr

5630 Biopharmaceutics (prereq 5620) (A–N only)
719648 0915-1000 MWF, MoosT 2620, 3 cr

R5631 Biopharmaceutics Lab (prereq ¶5630 or credit in 5630) (A–N only)
325887 –1 LAB 1315-1600 MW, HSUnitF 3120, 2 cr
025889 –2 LAB 1315-1600 TTh, HSUnitF 3120, 2 cr

5685 Clinical Pharmacokinetics (prereq 5680 with grade of A or # or PharmD candidate) (A–N only)
621327 1315-1500 MW, MoosT 2650, Sawchuk, 3 cr

5970 Directed Studies (prereq #)
519649 1–5 cr

5999 Special Problems (prereq #)
507002 ar cr

PHILOSOPHY (Phil)
Liberal Arts

R1001 Introduction to Logic
★LECT 0915-1000 MWF, NichH 45, Dolan
416131 –1 REC 0915-1000 T, FordH 55, 5 cr
716135 –2 REC 0915-1000 T, MinMet 116, 5 cr
016139 –3 REC 0915-1000 T, FordH 150, 5 cr
116141 –4 REC 1015-1100 T, FordH 150, 5 cr
416145 –5 REC 1015-1100 T, MechE 212, 5 cr
116150 –6 REC 1015-1100 T, MurH 311, 5 cr
316154 –7 REC 0915-1000 Th, FordH 55, 5 cr
616158 –8 REC 0915-1000 Th, FordH 130, 5 cr
416162 –9 REC 0915-1000 Th, MinMet 116, 5 cr
★LECT 1315-1400 MWF, NichH 45, Lewis
716166 –10 REC 1315-1400 T, FordH 349, 5 cr
531669 –11 REC 1315-1400 T, FordH 130, 5 cr
931670 –12 REC 1415-1500 T, FordH 130, 5 cr
421331 –13 REC 1315-1400 Th, FordH 349, 5 cr
121333 –14 REC 1315-1400 Th, FordH 130, 5 cr
921334 –15 REC 1415-1500 Th, FordH 130, 5 cr

R1002 Introduction to Philosophy
★LECT 0915-1000 MWF, MMA 125, Kitcher
816174 –1 REC 0815-0900 T, FordH 40, 5 cr
116178 –2 REC 0915-1000 T, FordH 40, 5 cr
916182 –3 REC 0915-1000 Th, FordH 40, 5 cr
★LECT 1115-1200 MWF, MechE 18, Root
116186 –4 REC 1115-1200 T, FordH 130, 5 cr
016190 –5 REC 1115-1200 Th, FordH 130, 5 cr
916196 –6 REC 1215-1300 Th, FordH 170, 5 cr

R1002H Honors Course: Introduction to Philosophy (prereq honors regis or #)
111868 1115-1200 MTWF, FordH 60, Mason, 5 cr

R1003 Introduction to Ethics
318616 1015-1100 MTWF, FordH 130, Dahl, 5 cr

R3002 General History of Western Philosophy
★LECT 1015-1100 MWF, FordH 120, Terrell
416209 –1 REC 1015-1100 T, LindH 315, 5 cr
216213 –2 REC 1015-1100 Th, MurH 311, 5 cr

R3004 General History of Western Philosophy
★LECT 1115-1230 TTh, FordH 120, Gunderson
534488 –1 REC 1115-1200 M, FordH 70, 5 cr
334489 –2 REC 1115-1200 W, FordH 70, 5 cr

R3005 Introduction to the Philosophy of Plato
734490 1115-1200 MWF, FordH 130, Dolan, 4 cr

R3202 Symbolic Logic II (§5202; prereq 3201 or #)
★LECT 1315-1400 MWF, FordH 115, Hanson
706673 –1 REC 1315-1400 Th, FordH 285, 5 cr

3231 Introduction to the Philosophy of Language (prereq 1001 or 3201 or 5201 or #)
437254 0915-1000 MWF, FordH 70, Owens, 4 cr

R3302 Moral Problems of Contemporary Society
534491 0915-1000 MTWF, FordH 130, 5 cr

R3631 Logic of Scientific Reasoning (§5631; prereq 1001 or 3201)
334492 1015-1100 MWF, FordH 150, Savage, 4 cr

R3910 **Major Seminar** (prereq upper division standing, philosophy maj)
510305 1245-1400 TTh, FordH 359, Peterson, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
618623 1-5 cr

3980 **Directed Instruction** (prereq #, △, college approval)
918627 1-5 cr

5046 **Kant** (prereq 3003 or #)
134493 1215-1300 MWF, FordH 175, Kitcher, 4 cr

5101 **Metaphysics** (prereq one qtr history of philosophy or #)
034494 1015-1100 MWF, FordH 447, C A Anderson, 4 cr

R5202 **Symbolic Logic II** (§3202; prereq 3201 or 5201 or #)
★LECT 1315-1400 MWF, FordH 115, Hanson
206684 –1 REC 1315-1400 T, FordH 120, 5 cr

5324 **Ethics and Education** (prereq 8 cr in phil or educ or #)
834495 0945-1100 TTh, FordH 70, Scheman, 2-4 cr

5414 **Political Philosophy** (prereq 1004 or #)
706687 1015-1100 MWF, FordH 70, Wallace, 4 cr

5415 **Philosophy of Law** (prereq 1003 or 1004 or 3302 or social science maj or #)
634496 1415-1645 W, FordH 170, Sartorius, 4 cr

5512 **Philosophy and Literary Criticism** (prereq 5 cr in philosophy or #)
306689 1115-1200 MWF, FordH 447, Eaton, 4 cr

5603 **Philosophical Problems of Space and Time**
138097 1245-1400 TTh, FordH 447, Earman, 4 cr

5611 **Philosophy of the Social Sciences I** (prereq 12 cr in philosophy or social sciences or #)
610313 1315-1400 MWF, FordH 175, Root, 4 cr

5615 **Minds, Bodies, and Machines** (prereq 4 cr in philosophy or #)
210315 1415-1530 TTh, FordH 175, Gunderson, 4 cr

5760 **Selected Topics in Philosophy: Perception and Cognition** (prereq 4 3xxx-5xxx cr in philosophy or #)
737258 1415-1500 MWF, FordH 175, Savage, 4 cr

5970 **Directed Studies and Research** (prereq #, △, CLA approval)
718631 1-5 cr

5990 **Directed Studies and Research** (prereq #, △, CLA approval)
318633 1-5 cr

8090 **Seminar in History of Philosophy** (prereq #)
234498 1515-1700 Th, FordH 359, Terrell, 4 cr

8180 **Seminar: Philosophy of Language** (prereq #)
237255 1515-1700 W, FordH 359, Owens, 4 cr

8310 **Seminar: Moral Philosophy** (prereq 5311 or #)
134499 1515-1700 T, FordH 359, Dahl, 4 cr

8970 **Directed Study and Research** (prereq passing grade on written prelim exam for PhD in philosophy)
418641 1-4 cr

8990 **Directed Study and Research** (prereq passing grade on written prelim exam for PhD in philosophy)
521336 1-4 cr

PHYSICAL EDUCATION (PE)
School of Physical Ed, Rec, School Health Ed Education

For Facility Fee, see section 4
Courses listed below are ranked numerically according to activity level, i.e., the level of skill required. The activity level of each course is indicated by the second digit in the course number, 0 = first level, 1 = second level, and so on. Thus 1007, for example, is a first-level course and 1107 is a second-level course. In most cases, the lower level course is prerequisite for the higher; however, students who can demonstrate sufficient skill in an activity may usually register for the most advanced course without completing the prerequisite(s).
Most of the courses are considered high intensity; that is, they require a high level of physical exertion. Thus students are encouraged to consider carefully any limits on their health or physical fitness and to consult a physician if they have any questions about their health or about their ability to participate safely in the physical activities involved in any courses for which they wish to register.

Open to ALL Students

R1004 **Diving, Springboard** (prereq 1007 or #)
938120 0815-0910 TTh, CookeH 15, Lincoln, 1 cr

R1007 **Swimming**
616256 –1 0915-1000 MWF, CookeH 10, Wu, 1 cr
738121 –2 1115-1200 MWF, NorrisH 58, 1 cr
538122 –3 1315-1400 MWF, NorrisH 58, 1 cr
338123 –4 1015-1110 TTh, NorrisH 51, 1 cr
138124 –5 1215-1310 TTh, NorrisH 58, 1 cr

R1014 **Conditioning**
116270 –1 0815-0900 MWF, FieldHse, StadS 264, Smith, 1 cr
616273 –2 0915-1000 MWF, FieldHse, StadS 264, Smith, 1 cr
916277 –3 1015-1100 MWF, FieldHse, StadS 264, Davis, 1 cr
716281 –4 0815-0910 TTh, FieldHse, StadS 264, Schneider, 1 cr
116284 –5 0915-1010 TTh, FieldHse, StadS 264, 1 cr
416288 –6 1115-1210 TTh, FieldHse, StadS 264, Griffin, 1 cr
038125 –7 1800-2000 T, FronH, Griffin, 1 cr
838126 –8 1000-1055 TTh, Gym, 1 cr (StP)

R1015 **Weight Training**
516296 –1 0915-1000 MWF, StadN 202, Berseth, 1 cr
716300 –2 1015-1100 MWF, StadN 202, Yeboah, 1 cr
016304 –3 1115-1200 MWF, StadN 202, Wells, 1 cr
216308 –4 0815-0910 TTh, StadN 202, Yeboah, 1 cr
638127 –5 0915-1010 TTh, StadN 202, Davis, 1 cr
438128 –6 1015-1110 TTh, StadN 202, Davis, 1 cr
238129 –7 1115-1210 TTh, StadN 202, Helmerson, 1 cr

R1031 **Sabre Fencing**
638130 0915-1010 TTh, NorrisH 60, Jacobson, 1 cr

R1032 **Badminton**
131643 0815-0910 TTh, CookeH 325, Wu, 1 cr

R1033 **Foil Fencing**
831645 0915-1010 TTh, NorrisH 60, Jacobson, 1 cr

R1034 **Judo**
116334 –1 1215-1310 TTh, StadN 207, Holm, 1 cr
816336 –2 1315-1410 TTh, StadN 207, Holm, 1 cr

R1035 **Karate**
616340 –1 0915-1010 MW, PeikG G100, Fusaro, 1 cr
916344 –2 1015-1110 MW, PeikG G100, Fusaro, 1 cr

R1036 **Racquetball**
116348 –1 0815-0910 MW, StadN 208, Helmerson, 1 cr
016352 –2 0915-1010 MW, StadN 208, 1 cr
216356 –3 1015-1110 MW, StadN 208, Lee, 1 cr
116360 –4 1315-1410 MW, StadN 208, Anderson, 1 cr
316364 –5 1415-1510 MW, StadN 208, Anderson, 1 cr
016366 –6 0815-0910 TTh, StadN 208, 1 cr
816370 –7 0915-1010 TTh, StadN 208, Kablaoui, 1 cr
938151 –8 1015-1110 TTh, StadN 208, Wolfe, 1 cr
738152 –9 1115-1210 TTh, StadN 208, 1 cr
538153 –10 1315-1410 TTh, StadN 208, 1 cr
338154 –11 1415-1510 TTh, StadN 208, Lee, 1 cr
138155 –12 0900-0955 TTh, Gym, 1 cr (StP)

R1043 **Beginning Horsemanship**
516380 –1 1600-1800 M, CookeH 420, Bryant Lake Stables, Krotee, 1 cr
816384 –2 1600-1800 T, CookeH 420, Bryant Lake Stables, Krotee, 1 cr
216387 –3 1600-1800 Th, CookeH 420, Bryant Lake Stables, Krotee, 1 cr

R1044 **Self Defense**
731654 –1 0915-1010 TTh, PeikG G100, Bendickson, Brandl, 1 cr
531655 –2 1015-1110 TTh, PeikG G100, Bendickson, Brandl, 1 cr
521367 –3 1415-1510 TTh, StadN 207, Holm, 1 cr
038156 –4 1800-2000 T, StadN 207, Holm, 1 cr
838157 –5 1800-2000 Th, TerH, Bendickson, Brandl, 1 cr

R1046 **Apparatus**
317126 1015-1110 MW, CookeH 302, Roethlisberger, 1 cr

R1047 **Archery** (moderate intensity)
017128 1015-1110 MW, NorrisH 60, Schneider, 1 cr

R1048 **Bowling** (moderate intensity)
504620 –1 1015-1100 MWF, CMU, Helmerson, 1 cr
104595 –2 1115-1200 MWF, CMU, Helmerson, 1 cr
638158 –3 0915-1010 TTh, CMU, Lee, 1 cr
438159 –4 1015-1110 TTh, CMU, Lee, 1 cr

R1050 **Golf** (moderate intensity)
838160 –1 1115-1210 TTh, StadS 267, Schneider, 1 cr
638161 –2 1215-1310 TTh, StadS 267, Schneider, 1 cr

R1052 **Rifle Marksmanship** (moderate intensity)
116407 –1 0915-1010 MW, Armory, Coons, 1 cr
116410 –2 1015-1110 MW, Armory, Coons, 1 cr

R1053 **Ice Skating**
316414 –1 0815-0900 MWF, WmsA, Patten, 1 cr
616418 –2 0915-1000 MWF, WmsA, Patten, 1 cr
438162 –3 1015-1100 MWF, WmsA, 1 cr

R1056 **Nordic (Cross Country) Skiing**
416422 –1 1400-1530 MWF, Gym, 1 cr (StP) (Jan 4-Feb 3)
238163 –2 0900-1100 TTh, Gym, 1 cr (StP) (Jan 3-Feb 2)

R1057 **Skiing**
716426 –1 1330-1530 T or 1530-1730 T, BFAB 285, Krotee, 1 cr
316428 –2 1330-1530 Th or 1530-1730 Th, BFAB 285, Krotee, 1 cr
116432 –3 1530-1730 F or 1900-2100 F, BFAB 285, Krotee, 1 cr

R1059 **Track and Field**
138164 1015-1110 TTh, FieldHse, Wells, 1 cr

R1060 **Tumbling, Floor Exercise, and Trampoline**
613695 1215-1310 MW, CookeH 302, Roethlisberger, 1 cr

R1067 **Basketball**
116438 –1 1315-1400 MWF, CookeH 325, Wells, 1 cr
938165 –2 1115-1210 TTh, NorrisH M153A, 1 cr
738166 –3 1400-1455 TTh, Gym, Wells, 1 cr (StP)

R1070 **Ice Hockey**
516444 –1 1315-1400 MWF, WmsA, Buetow, 1 cr
816448 –2 1315-1410 TTh, WmsA, Buetow, 1 cr

R1074 **Volleyball**
216454 –1 0815-0900 MWF, NorrisH M151, 1 cr
916456 –2 0915-1000 MWF, CookeH 325, 1 cr
716460 –3 1015-1100 MWF, CookeH 325, Griffin, 1 cr
538167 –4 1115-1200 MWF, CookeH 325, Griffin, 1 cr
338168 –5 1115-1210 TTh, CookeH 325, Davis, 1 cr
138169 –6 1315-1410 TTh, CookeH 325, DeDeyn, 1 cr
538170 –7 1415-1510 TTh, CookeH 325, DeDeyn, 1 cr

R1107 **Swimming** (prereq 1007)
029165 –1 1015-1100 MWF, NorrisH 58, 1 cr
338171 –2 1315-1410 TTh, NorrisH 58, Wu, 1 cr

R1135 **Karate** (prereq 1035)
617133 1115-1210 MW, PeikG G100, Fusaro, 1 cr

R1143 **Intermediate Horsemanship** (prereq 1043 or #)
817146 1600-1800 W, CookeH 420, Bryant Lake Stables, Krotee, 1 cr

R1154 **Figure Skating** (prereq 1053)
516492 –1 0815-0910 TTh, WmsA, Drew, 1 cr
138172 –2 0915-1010 TTh, WmsA, Drew, 1 cr

R1157 Skiing (prereq 1057)
416498 –1 1330-1530 T or 1530-1730 T, BFAB 285, Krotee, 1 cr
616502 –2 1330-1530 Th or 1530-1730 Th, BFAB 285, Krotee, 1 cr

R1174 Volleyball (prereq 1074)
038173 1415-1500 MWF, CookeH 325, 1 cr

R1205 Scuba and Skin Diving (prereq 1107)
838174 1015-1200 TTh, CookeH 15, BFAB 285, Aubineau, 1 cr

R1207 Swimming (prereq 1107)
638175 1115-1210 TTh, NorrisH 58, 1 cr

R1248 Bowling (prereq 160 average) (moderate intensity
417148 1115-1210 TTh, CMU, Sleezer, 1 cr

R1254 Figure Skating (prereq 1154)
438176 1015-1110 TTh, WmsA, 1 cr

R1257 Skiing (prereq 1157)
217152 1330-1530 T or 1530-1730 T, BFAB 285, Krotee, 1 cr

R1306 Advanced Lifesaving (prereq ability to swim 440 yds)
816515 –1 1215-1300 MWF, CookeH 15, 1 cr
238177 –2 0915-1100 TTh, NorrisH 58, 1 cr

R1410 Water Safety Instructor (prereq curr ARC adv Lifesaving Cert, have or concurrently acquire ARC First Aid, CPR Cert)
536936 0915-1100 TTh, CookeH 10, Stoner, 2 cr

R1415 Theory, Practice of Weight Training, Conditioning (prereq 1014, 1015 or #)
317157 1615-1710 MTWTh, BFAB 101, 285, Rohde, 2 cr

R1497 Directed Study (prereq 3 cr in physical education, △)
117158 Krotee, 1-6 cr

Professional Courses

R1521 Gymnastics (A-N only)
116530 –1 1115-1200 MWF, CookeH 308, Yeboah, 1 cr (women's events)
416534 –2 1115-1200 MWF, CookeH 302, Roethlisberger, 1 cr (men's events)

R1522 Gymnastics (prereq 1521) (A-N only)
716538 –1 1115-1230 TTh, CookeH 308, Yeboah, 1 cr (women's events)
516542 –2 1115-1230 TTh, CookeH 302, Roethlisberger, 1 cr (men's events)

R1871 Introduction to Physical Education (prereq physical education maj) (A-N only)
504598 0930-1100 TTh, CookeH 214, 325, Shick, 3 cr

R1875 Orientation to Teaching Physical Education (prereq physical education maj) (A-N only)
017162 0800-0900 MWF, CookeH 206, Anderson, 4 cr

R1990 Directed Study (prereq △) (A-N only)
117170 Stoner, 1-6 cr

R3113 Motor Learning and Motor Development (A-N only)
617214 1015-1200 TTh, CookeH 215, Plack, 4 cr

3114 Prevention and Care of Injuries (prereq 3110 or Anat 1027) (A-N only)
217216 1015-1100 MWF, BFAB 285, Marshall, 3 cr

R3143 Organization and Management of Sport (prereq 2 cr coaching course) (A-N only)
917218 0915-1000 MWF, BFAB 285, Krotee, 3 cr

R3144 Administration (§3120; prereq physical education maj, sr) (A-N only)
117220 0915-1000 TTh, NorrisH 201, Anderson, 2 cr

R3150 Introduction to Evaluation (A-N only)
717222 0815-0900 MTWTh, CookeH 214, 325, Shick, 4 cr

R3169 Volleyball Coaching (prereq 1174 or #) (A-N only)
317224 0815-0900 TTh, BFAB 101, 285, Wells, 2 cr

R3178 Track and Field Coaching (prereq 1654 or 1059 or #) (A-N only)
017226 0915-1000 TTh, BFAB 285, Griak, 2 cr

R3322 Teaching Physical Education: Elementary School (prereq 1871, 1875) (A-N only)
604611 1015-1200 MWF, NorrisH M153A, M153, 3, Lampe, 5 cr

R3327 Teaching Physical Education in the Elementary School (prereq elementary education maj) (A-N only)
816580 –1 1315-1400 MWF, NorrisH M153A, M153, 4, Lampe, 3 cr (IIIA only)
116584 –2 1415-1500 MWF, NorrisH M153A, M153, 3, Berseth, 3 cr

R3621 Student Teaching: Elementary (prereq 3322, 3323, SeEd 3150, 3155 or Elem 3100, PubH 3385, 3386) (S-N optional)
717236 1615-1800 W, CookeH 215, Lampe, Stube, 6 cr (addnl hrs ar)

R3622 Student Teaching: Secondary (prereq 3322, 3323, SeEd 3150, 3155 or Elem 3100, PubH 3385, 3386) (S-N optional)
317238 1615-1800 W, CookeH 215, Anderson, Winters, 6 cr (addnl hrs ar)

R3624 Student Teaching: Coaching (S-N only)
117234 1815-1930 W, CookeH 214, Winters, 3 cr

R3625 Supervised Practical Experience (max 6 cr; prereq △) (S-N only)
417232 Stoner, 3 cr

R3900 Directed Study (prereq △) (A-N only)
817230 Stoner, 1-9 cr

5101 Physical Education Activities for the Handicapped (prereq 5100 or SpEd 5101 or PsyS 5101) (A-N only)
617228 1800-2000 M, CookeH 214, Breihan, 3 cr (1 hr ar)

5103 Practicum: Physical Education for the Handicapped in a Mainstreamed Setting (prereq 5100, 5101 or #) (S-N only)
617696 1800-2000 T, CookeH 215, Breihan, 1-3 cr (1 hr ar)

5121 Contributions of Basic Science to Physical Education (prereq #) (A-N only)
534295 1600-1800 M, CookeH 215, Stoner, 3 cr (1 hr ar)

5131 Motor Development (prereq 3112 or #) (A-N only)
934293 1600-1800 W, CookeH 215, Plack, 3 cr (1 hr ar)

5136 Psychology of Coaching (prereq 3113 or #) (A-N only)
734294 1600-1800 T, CookeH 214, Krotee, 3 cr (1 hr ar)

5351 Seminar: Teaching Physical Education in Colleges and Universities (max 3 cr, §Rec 5351, Hlth 5351; prereq △) (A-N only)
506965 1 cr

5387 Detection and Prevention of Coronary Heart Disease (§PubH 5387) (A-N only)
117242 1615-1800 MW, CookeH 214, Serfass, 4 cr

5981 Problems (prereq MEd candidate, #) (A-N only)
417246 ar cr

5983 Readings: Physical Education (max 9 cr; prereq educ or grad stu) (A-N only)
217250 ar cr

8381 Laboratory Research Techniques (prereq 5980 or ¶)
517254 1800-2000 T, CookeH S7, Serfass, 1-3 cr

8980 Research Problems (max 2 cr; prereq 5980, PsyF 5110 or #) (S-N only)
117256 1615-1800 Th, CookeH 226, Alexander, 1 cr

8981 Research Problems (prereq 8980 or #) (S-N only)
817258 ar cr

PHYSICAL MEDICINE AND REHABILITATION (PMed)
Medical School

R1002 Orientation to Physical Therapy (S-N only)
620176 1215-1300 T, ChRC R220, Carey, 1 cr

5135 Pathokinesiology (prereq #) (A-N only)
834464 Pohtilla, 3 cr

5150 Kinesiological Electromyography and Nerve Conduction (prereq #) (A-N only)
015315 1600-1800 T, 1600-1900 Th, ChRC R204, Allison, 3 cr

5182 Functional Neuroanatomy and Neurophysiology (prereq regis OT or PT)
120179 1015-1200 MWF, MMA 100, Huss, 5 cr

5221 Therapeutic Procedures II (prereq regis PT)
720184 0815-1000 MWThF, ChRC R220, Ellingham, Gardner, 4 cr

5230 Theory and Technique of Muscle Function, Tests, and Measurements (prereq regis PT)
120187 1315-1500 MWF, 1315-1400 TTh, ChRC R220, Pohtilla, 5 cr

5270 Rehabilitation Procedures (prereq regis PT)
220195 1015-1200 MWThF, ChRC R220, Scudder, 4 cr

5289 Patient Assessment (prereq regis PT)
320205 1415-1600 W, ChRC R208, R262, 1415-1500 F, ChRC R208, Carey, Pauley, 3 cr

5290 Administration (prereq regis PT)
620209 1215-1400 T, Mayo C368, Gardner, 3 cr (field exp ar)

5293 Introduction to Research Design (prereq 5292, regis PT)
420213 1315-1400 MWF, ChRC R208, Amundsen, 3 cr

5294 Independent Study in Physical Therapy (prereq #) (A-N only)
034463 Ellingham, ar cr

5311 Therapeutic Activities (prereq regis OT)
520221 1315-1600 MF, ChRC R262, Bollinger, Esch, 4 cr

5341 Theory I: Psychosocial Dysfunction (prereq regis OT) (A-N only)
820225 0915-1100 TTh, ChRC R262, Eliason, Zschokke, 3 cr

5344 Theory: Physical Dysfunction II (prereq regis OT) (A-N only)
220231 0915-1100 MWF, ChRC R262, Arndts, 3 cr

5375 Community Resources and Health Care Issues (prereq regis OT) (S-N only)
920233 1215-1400 TTh, ChRC R208, Arndts, 4 cr

5380 Administration and Supervision (prereq regis OT)
320236 0915-1100 TTh, ChRC R208, Esch, 3 cr

5391 Orientation to Work Evaluation (prereq regis OT)
020241 1415-1600 T, Mayo C368, Bollinger, 1 cr

5394 Evaluation and Treatment of Sensory Intergrative Dysfunction (prereq 5182)
920247 1215-1400 MF, Mayo C368, 1215-1400 W, ChRC R262, Dahlstrom, 4 cr

5395 Independent Study in Occupational Therapy (prereq regis OT)
320253 Lepley, ar cr

5410 Adult Rehabilitation Medicine (prereq regis med)
917798 ar cr

5411 Rehabilitation Medicine: Children (prereq regis med)
717799 ar cr

5414 Physical Medicine and Rehabilitation for the Family Physician (prereq regis med)
217801 ar cr

5415 Private Practice in Physical Medicine and Rehabilitation
117802 4.5-9 cr

5416 Physical Medicine and Rehabilitation at St. Paul Ramsey
717804 ar cr

5441 Adult Physical Medicine, Rehabilitation: Health Care Psychology Interns (prereq #)
118035 ar cr

5841 Instrumentation and Analysis Techniques (prereq Phys 1031, 1032 or equiv)
605659 Patterson, 3 cr

8103 Clinic (prereq regis PT)
405873 Pauley, Ellingham, ar cr

8130 Seminar: Current Literature in Physical Therapy
305879 Scudder, Amundsen, 1 cr

8135 Advanced Kinesiology (prereq kinesiology course)
134462 Pohtilla, 3 cr

8150 Research Methodology: Physical Therapy in Electromyography and Nerve Conduction (prereq #)
805868 Allison, 3 cr

8170 Special Topics in Physical Therapy (prereq #)
605869 Amundsen, 1 cr

8185 Problems in Physical Therapy (prereq regis PT)
005870 Amundsen, Allison, others, ar cr

8188 Teaching Practicum (max 8 cr; prereq #)
105875 Ellingham, Allison, others, ar cr

8192 Research Design in Physical Therapy (prereq #)
620257 Amundsen, 3 cr

8193 Research Problems in Physical Therapy (prereq 8192 or #)
805871 Amundsen, Allison, others, ar cr

8195 Research in Physical Therapy (prereq #)
605872 Amundsen, Allison, others, ar cr

8200 Physical Medicine and Rehabilitation Service
434466 Magness, ar cr

8205 Readings in Physical Medicine and Rehabilitation (max 2 cr)
234467 0900-1000 M, ChRC R208, Kottke, 2 cr

8206 Conference on Physical Medicine and Rehabilitation
520266 0800-0900 F, ChRC R208, Magness, 2 cr

8207 Basic and Applied Physiatry
120268 0800-0900 M, 1400-1600 F, ChRC R208, Magness, 2 cr

8210 Research in Physical Medicine
320270 ar cr

8212 Electromyography (prereq #)
134468 1300-1700 MTWThF, ChRC R311, Magness, ar cr

8220 Seminar: Physical Medicine and Rehabilitation
020272 0800-0900 W, ChRC R208, Magness, 2 cr

PHYSICS (Phys)
Institute of Technology

R1001 The Physical World (§any physics courses other than 1061, no cr for IT stu; prereq one yr high school algebra)
207110 1015-1100 MTWF, Phys 170, Hintz, 4 cr (Companion lab is 1005)

R1005 Physics Laboratory (no cr for IT students; prereq 1001 or ¶) (S-N only)
916019 1 cr (Lab time assigned first 2 days of class)

R1041 Introductory Physics (§other intro phys crse, no cr IT ex arch, pre-arch, env des; prereq hs alg, plane geometry)
607119 1415-1500 MTWF, Phys 150, Waddington, 4 cr (Companion lab is 1045)

R1042 Introductory Physics (§other intro physics course, no cr IT except arch, pre-arch, env design; prereq 1041) (Companion lab is 1046)
807121 –1 1415-1500 MTWF, Phys 166, Jones, 4 cr
107125 –2 1400-1445 MTWF, ClaOff B45, Broadhurst, 4 cr (StP)

R1045 Introductory Physics Laboratory (no cr IT except arch, pre-arch, environmental design; prereq 1041 or ¶) (S-N only)
610229 1 cr (Lab time assigned first 2 days of class)

R1046 Introductory Physics Laboratory (no cr IT except arch, pre-arch, environmental design; prereq 1042 or ¶) (S-N only)
810231 –1 1 cr (Mpls) (Lab time assigned first 2 days of class)
033992 –2 1 cr (StP) (Lab time assigned first 2 days of class)

R1105 General Physics (no cr for IT students; prereq 1104)
520087 1115-1200 MTWThF, Phys 150, Mauersberger, 4 cr (Companion lab is 1108)

R1108 General Physics Laboratory (no cr for IT students; prereq 1107, 1105 or ¶) (S-N only)
110235 1 cr (Lab time assigned first 2 days of class)

R1271 General Physics (prereq Math 1221 or 1321 or 1621 or ¶) (Companion lab is 1275)
716684 –1 0815-0900 MTWThF, Phys 166, Winckler, 4 cr
016688 –2 1015-1100 MTWThF, Phys 150, Greenlees, 4 cr
016691 –3 1115-1200 MTWThF, Phys 133, Tang, 4 cr
531722 –4 1315-1400 MTWThF, Phys 166, Shupe, 4 cr

R1275 General Physics Laboratory (prereq 1271 or 1311 or ¶) (S-N only)
710237 1 cr (Lab time assigned first 2 days of class)

R1281 General Physics (prereq 1271, completion of or ¶Math 1231, 1331, 1621) (Companion lab is 1285)
916697 –1 0815-0900 MTWThF, Phys 150, Courant, 4 cr
116701 –2 1215-1300 MTWThF, Phys 166, Mantis, 4 cr

R1285 General Physics Laboratory (prereq 1275, 1281 or 1331 or ¶) (S-N only)
310239 1 cr (Lab time assigned first 2 days of class)

R1291 General Physics (prereq 1281) (Companion lab is 1295)
016707 –1 0915-1000 MTWThF, Phys 166, 4 cr
816711 –2 1315-1400 MTWThF, Phys 150, Marquit, 4 cr

R1295 General Physics Laboratory (prereq 1285, 1291 or 1341 or ¶) (S-N only)
310242 1 cr (Lab time assigned first 2 days of class)

R1321 Comprehensive Introductory Physics with Calculus (prereq 1311, ¶Math 1221 or 1521 or 1621 or equiv)
137094 1015-1100 MTWF, Phys 133, Johnson, 4 cr

R3011 Oscillations (prereq 1291, Math 3221 or ¶ or equiv)
120098 0915-1000 MTWF, Phys 131, Bayman, 4 cr

R3501 Modern Physics (§3511, 3512, 3513, no cr for physics majs; prereq 1291 or 1106)
620100 1315-1400 MTWF, Phys 170, 4 cr

R3512 Modern Physics (prereq 3511, Math 3221 or ¶ or 3066 or ¶)
220102 1015-1100 MTWF, Phys 131, Peterson, 4 cr

R3515 Physics Laboratory (prereq 3501 or ¶ or 3512 or ¶)
410460 –1 LAB 1415-1700 T, Phys 225, Blair, 1 cr
110462 –2 LAB 0815-1100 Th, Phys 225, Blair, 1 cr
710464 –3 LAB 1415-1700 Th, Phys 225, Blair, 1 cr
110470 –4 LAB 1415-1700 F, Phys 225, Blair, 1 cr

R3970 Directed Study (prereq #, △)
520106 1-5 cr

R5022 Introduction to Analytic Mechanics (prereq 5021)
320110 0915-1000 MTWF, Phys 170, Ruddick, 4 cr

R5023 Introduction to Electric and Magnetic Fields (prereq 3011, Math 3231 or equiv)
120111 1115-1200 MTWF, Phys 210, Kellogg, 4 cr

R5032 Topics in Mathematical Physics (prereq 5031)
820113 0915-1000 MTWF, Phys 143, Suura, 4 cr

R5052 Classical Physics (prereq 5051)
320558 0800-0900 MWF, Phys 210, Lysak, 4 cr

R5091 Physical Acoustics of Music (no cr for phys grad student; prereq 1 yr high school algebra, upper div or grad standing in music or music educ or equiv background in music theory, practice or #)
120568 0915-1000 MTWF, Phys 133, Roll, 5 cr

R5102 Introduction to Quantum Mechanics (prereq 5101)
120576 1315-1400 MTWF, Phys 210, Hamermesh, 4 cr

R5122 Methods of Experimental Physics II (prereq 5121 or #)
520591 1215-1300 MWF, Phys 170, Heller, Zimmermann, 4 cr (lab ar)

R5124 Experimental Project (prereq 5123, #)
705815 Heller, Zimmermann, ar cr

R5152 Quantum Mechanics (prereq 5151)
720606 0800-0910 T, 0800-0950 Th, Phys 143, Valls, 4 cr

R5202 Thermal and Statistical Physics (prereq 5201)
407123 1015-1100 MTWF, Phys 143, Weyhmann, 4 cr

R5232 Introduction to Solid State Physics (prereq 5231)
620629 0915-1000 MTWF, Phys 210, Dahlberg, 4 cr

R5451 Cloud Physics (prereq Math 3211 or equiv, 1 yr general physics)
620632 1215-1300 MWF, Phys 131, G Freier, 3 cr

R5805 Contemporary Optics (prereq #)
320639 1515-1600 MTWF, MechE 102, 4 cr

R5950 Seminar (prereq △)
520655 1600-1730 W, Phys 131, ar cr

R5970 Directed Studies (prereq #, △)
220665 1-5 cr

R5990 Directed Research (prereq 3rd yr, △)
320673 ar cr

R8082 General Relativity (prereq 8081)
536841 1215-1300 MWF, Phys 236A, Kapusta, 3 cr

R8122 Relativistic Quantum Mechanics (prereq 8121 or #)
120702 1315-1400 MWF, Phys 236A, Rudaz, 3 cr

R8200 Seminar: Solid-State and Low-Temperature Physics
120710 1415-1600 Th, Phys 236A, Zimmermann, ar cr

R8212 Transport Theory (prereq 5153 or #)
720718 1015-1100 MWF, Phys 157, Goldman, 3 cr

R8222 Solid-State Physics (prereq 8221)
205809 1115-1200 MWF, Phys 143, Huang, 3 cr

R8300 Seminar: Nuclear Physics
120772 1415-1600 W, Phys 236A, Kapusta, ar cr

R8312 Nuclear Physics (prereq 8311)
333990 1415-1500 MTF, Phys 236A, Ellis, 3 cr

R8360 Seminar: Mass Spectroscopy
420776 1515-1700 F, Phys 236A, Pepin, ar cr

R8370 Seminar: Elementary Particle Physics
220777 1515-1700 T, Phys 210, Rudaz, ar cr

R8372 Elementary Particle Physics (prereq 8122 or #)
205812 1415-1500 MWF, Phys 157, Gasiorowicz, 3 cr

R8380 Advanced Topics in Elementary Particle Physics (prereq #, 1105 or ¶)
336842 1315-1430 TTh, Phys 143, Walsh, ar cr

R8400 Seminar: Cosmic-Ray and Space Physics
220780 1515-1700 Th, Phys 143, P Freier, ar cr

R8411 Cosmic Ray and Space Physics (prereq 5102, 5053 or #)
133991 0915-1000 MWF, Phys 157, P Freier, 3 cr

R8420 Seminar: Magnetospheric Physics (max 3 cr)
920782 1515-1700 F, Phys 157, Winckler, 1-3 cr

R8440 Seminar: Atmospheric Physics
320785 1215-1300 T, Phys 157, Mantis, ar cr

R8500 Plan B Project (no cr toward PhD; prereq #) (S-N only)
620792 4 cr

R8950 Seminar: Problems of Physics Teaching and Higher Education (prereq grad standing in physics or #)
920801 1615-1700 T, Phys 236A, Heller, 1 cr

R8990 Research in Physics (prereq #)
620808 ar cr

PHYSIOLOGY (Phsl)
Medical School

1002 Human Physiology (prereq 1 qtr biology, 1 qtr chemistry or #, human anatomy)
★LECT 1115-1200 MWF, OwreH 2210, Blackshear, 4 cr
305767 –1 DEM 1315-1500 W, MoosT 3110
005769 –2 DEM 1515-1700 W, MoosT 3110

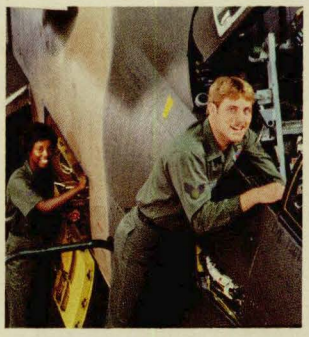
3051 Human Physiology for Nursing and Physical Therapy Students (prereq 1 yr chemistry, biology)
★LECT 0915-1000 MWThF, OwreH 2230, Love, 5 cr
216793 –1 LAB 0815-1000 T, MoosT 3110
716796 –2 LAB 1015-1200 T, MoosT 3110

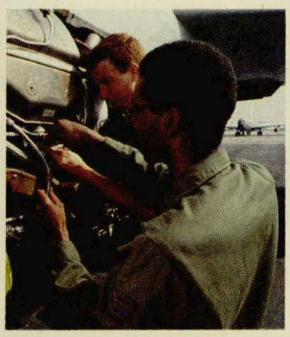
3053 Principles of Physiology (prereq 1 yr college chemistry, physics, math thru integ calculus)
419384 1015-1100 MWF, MirdH 5276, Levitt, 3 cr

3056 Principles of Physiology (prereq 1 yr college chemistry, physics, math thru integ calculus)
219385 1015-1100 MWF, MirdH 5276, Levitt, 5 cr

















Planes don't guard America's skies.

People do.

The people and planes of the Air National Guard stand ready, 24 hours a day, seven days a week, to Guard America's skies. It's a job that's growing in importance and complexity every day. A job that demands first-rate technology. And most importantly, first-rate people. People like you.

To find out more about the challenges and opportunities waiting for you in the Air National Guard, fill out and mail the coupon below. Or call toll-free 800-638-0936.* Because planes don't Guard America's skies. People like you do.

*In Alaska, Hawaii, New Jersey, Puerto Rico, Guam and the U.S. Virgin Islands, consult your local directory.

We Guard America's Skies.

AIR NATIONAL GUARD

A2OMMI**023NP

Complete and mail to:
Air National Guard, P.O. Box 6000, Clifton, NJ 07015.

☐ MALE
☐ FEMALE

NAME (Please Print)

ADDRESS APT

CITY STATE ZIP

AREA CODE: PHONE

OCCUPATION

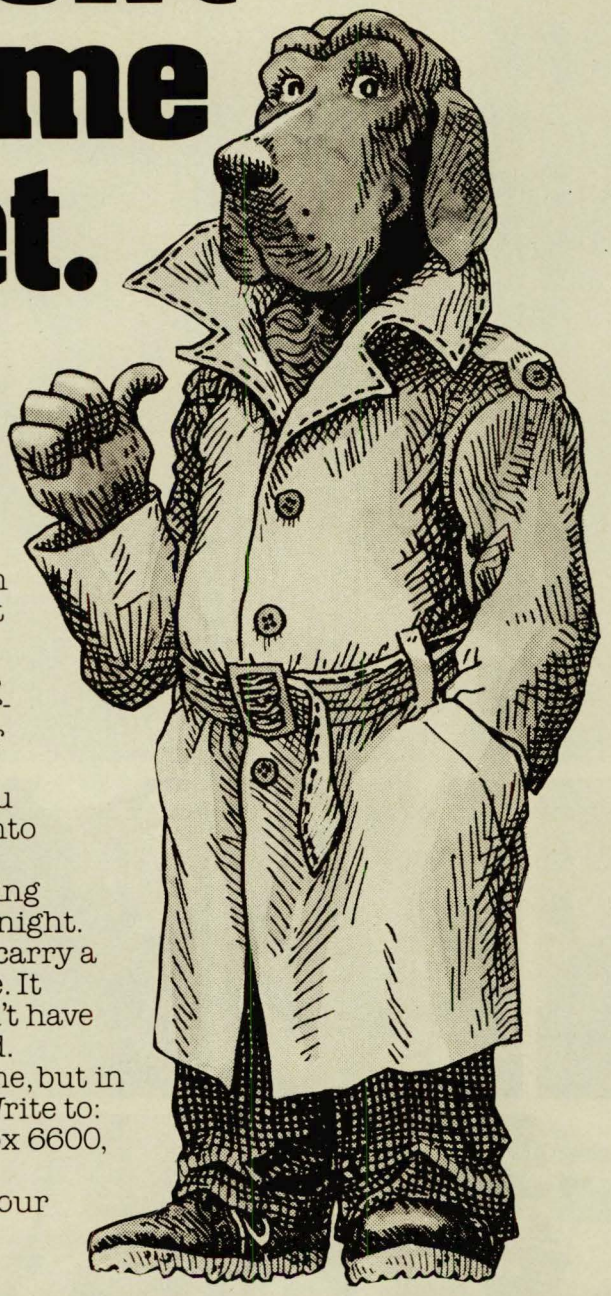
BIRTH DATE

PRIOR MILITARY SERVICE YES NO

BRANCH RANK AFSC/MOS

A2UCPD**093NP

You don't know me ...yet.



But you will. See, I've been assigned to help you learn how to protect yourself against crime. I'll be giving you tips on how to discourage burglars, disappoint muggers, and generally make life a little harder for criminals.

Like, for instance, did you know if a burglar can't break into your place after four minutes, chances are, he'll quit? So locking your door could ruin a crook's night.

Another example. Don't carry a purse when you don't need one. It makes a lot of sense; if you don't have your purse, it can't be snatched.

You'll be seeing a lot of me, but in the meantime, find out more. Write to: Crime Prevention Coalition, Box 6600, Rockville, Maryland 20850.

Find out what you and your neighbors can do to prevent crime. That's one way to help.

TAKE A BITE OUT OF CRIME

Ad Council

A message from the Crime Prevention Coalition, this publication and The Ad Council.

©1979 The Advertising Council, Inc

Use this card for DIRECTORY OF CLASSES™

Free Information from advertisers.

Advertisers listed below will provide you with free additional information about their products and services. Please circle the number of those that interest you.

1. AIR FORCE
2. AIR NATIONAL GUARD
3. ARMY RESERVE
4. ARMY ROTC OPPORTUNITIES
5. CANON
6. CASIO
7. CHEVROLET CORVETTE
8. DELCO-GM/BOSE
9. DODGE/SHELBY CHARGER
10. FOOTLOCKER
11. FORD/1984 TEMPO
12. GENERAL MOTORS
13. HONDA/AERO
14. INSTITUTE FOR PARALEGAL TRAINING
15. JENSEN/CAR AUDIO
16. THE LEE COMPANY
17. MARINE CORPS
18. MAYBELLINE COSMETICS
19. NATIONAL SECURITY AGENCY
20. NEW YORK CITY HEALTH & HOSPITAL CORP.
21. NURSING '83
22. PANASONIC
23. PONTIAC 1000
24. RADIO SHACK/ COMPUTER CATALOG
25. RADIO SHACK/GENERAL CONSUMER CATALOG
26. SHARP
27. TECHNICS
28. U.S. COAST GUARD
29. U.S. NAVY
30. WDS
31. OLYMPUS

UNIVERSITY COMMUNICATIONS DIRECTORY OF CLASSES

NAME _____ AGE _____

ADDRESS _____ CITY _____ STATE _____ ZIP _____

SCHOOL _____

CLASS A ☐ FRESHMAN
B ☐ SOPHOMORE
C ☐ JUNIOR
D ☐ SENIOR
E ☐ GRADUATE LEVEL

MAJOR F ☐ ENGINEERING
G ☐ SCIENCE/TECHNICAL
H ☐ BUSINESS/FINANCE
J ☐ COMPUTER SCIENCES
K ☐ LIBERAL ARTS
L ☐ OTHER _____

This Card Expires December 31, 1983

DOC 783

Use this card for DIRECTORY OF CLASSES™

Free Information from advertisers.

Advertisers listed below will provide you with free additional information about their products and services. Please circle the number of those that interest you.

1. AIR FORCE
2. AIR NATIONAL GUARD
3. ARMY RESERVE
4. ARMY ROTC OPPORTUNITIES
5. CANON
6. CASIO
7. CHEVROLET CORVETTE
8. DELCO-GM/BOSE
9. DODGE/SHELBY CHARGER
10. FOOTLOCKER
11. FORD/1984 TEMPO
12. GENERAL MOTORS
13. HONDA/AERO
14. INSTITUTE FOR PARALEGAL TRAINING
15. JENSEN/CAR AUDIO
16. THE LEE COMPANY
17. MARINE CORPS
18. MAYBELLINE COSMETICS
19. NATIONAL SECURITY AGENCY
20. NEW YORK CITY HEALTH & HOSPITAL CORP.
21. NURSING '83
22. PANASONIC
23. PONTIAC 1000
24. RADIO SHACK/ COMPUTER CATALOG
25. RADIO SHACK/GENERAL CONSUMER CATALOG
26. SHARP
27. TECHNICS
28. U.S. COAST GUARD
29. U.S. NAVY
30. WDS
31. OLYMPUS

UNIVERSITY COMMUNICATIONS DIRECTORY OF CLASSES

NAME _____ AGE _____

ADDRESS _____ CITY _____ STATE _____ ZIP _____

SCHOOL _____

CLASS A ☐ FRESHMAN
B ☐ SOPHOMORE
C ☐ JUNIOR
D ☐ SENIOR
E ☐ GRADUATE LEVEL

MAJOR F ☐ ENGINEERING
G ☐ SCIENCE/TECHNICAL
H ☐ BUSINESS/FINANCE
J ☐ COMPUTER SCIENCES
K ☐ LIBERAL ARTS
L ☐ OTHER _____

This Card Expires December 31, 1983

DOC 783

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 27346 PHILADELPHIA, PA

POSTAGE WILL BE PAID BY—

UNIVERSITY COMMUNICATIONS
DIRECTORY OF CLASSES
P.O. BOX 13871
PHILADELPHIA, PA 19101

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 27346 PHILADELPHIA, PA

POSTAGE WILL BE PAID BY—

UNIVERSITY COMMUNICATIONS
DIRECTORY OF CLASSES
P.O. BOX 13871
PHILADELPHIA, PA 19101

3071 Human Physiology (prereq 3070)
★LECT 0915-1000 MTWTh, PWB 2470, Meyer, 5 cr
621375 –1 LAB 1315-1500 M, MoosT 3110

3091H Readings (prereq honors candidates in physiology)
111871 Poppele, ar cr

3092H Problems (prereq honors candidates in physiology)
711873 Poppele, ar cr

5101 Human Physiology (prereq biochemistry, 5100)
★LECT 0915-1000 MTWTh, PWB 2470, Meyer, 5 cr
921379 –1 LAB 1315-1500 Th, MoosT 3110
121381 –2 LAB 1515-1700 Th, MoosT 3110

5102 Physiology and Dentistry (prereq 5101, dental student)
719388 0745-0830 Th, MlrdH 5272, Meyer, 1 cr

5108 Nephrology (prereq #)
238034 Harvey, 4 cr

5110 Human Physiology (prereq anatomy, biochemistry)
★LECT 0815-0900 TTh, PWB 2470, Grim, 5 cr
816823 –1 LAB 0815-1200 M, MoosT 3110
416825 –2 LAB 0815-1200 F, MoosT 3110
716829 –3 LAB 0815-1200 W, MoosT 3110

5113 Problems in Physiology (prereq #)
519389 ar cr

5115 Mathematical Neurophysiology (prereq calculus through ordinary differential equations, Stat 8501 or #)
534877 Knox, 4 cr

5441 Quantitative Physiology (prereq 5440)
812304 1015-1100 MWF, MlrdH 5276, Levitt, 3 cr

5551 Literature Seminar
919390 1215-1300 M, MlrdH 5276, 1-2 cr

5552 Readings in Physiology
319393 ar cr

5553 Research in Physiology
119394 ar cr

8108 Nephrology (prereq #)
138035 Harvey, 3 cr

8110 Human Physiology (prereq anatomy, biochemistry)
★LECT 0815-0900 TTh, PWB 2470, Grim, 5 cr
716846 –1 LAB 0815-1200 M, MoosT 3110
516850 –2 LAB 0815-1200 F, MoosT 3110
816854 –3 LAB 0815-1200 W, MoosT 3110

8113 Problems in Physiology (prereq #)
819396 ar cr

8115 Mathematical Neurophysiology (prereq calculus through ordinary differential equations, Stat 8501 or #)
334878 Knox, 4 cr

8201 Literature Seminar
419398 1215-1300 M, MlrdH 5276, 1 cr

8202 Readings in Physiology
019400 ar cr

8203 Research in Physiology
819401 ar cr

PLANT PATHOLOGY (PlPa)
Agriculture

R1001 Introductory Plant Pathology: Lecture and Introduction to Diagnostic Procedures and Laboratory (§3001, 5002; prereq soph, 9 cr plant science)
306899 0800-0945 MWF, KaufL 302, MacDonald, 4 cr

R3001 Introductory Plant Pathology: Lecture, Laboratory and Introduction to Diagnosis (§1001, 5002; prereq soph, 9 cr plant science)
★LECT 0800-0945 MWF, KaufL 302, MacDonald, 6 cr
212369 –1 LAB 1300-1415 MWF, StakH 105, 106, MacDonald
612370 –2 LAB 1430-1545 MWF, StakH 105, 106, MacDonald

3090 Research in Plant Pathology (prereq 1001 or equiv or #)
516184 ar cr

R5006 Fungi, Algae, and Parasitic Seed Plants in Plant Disease (prereq 20 cr hrs in biology, including botany, biochemistry, plant physiology, 5105)
★LECT 0800-0845 TTh, StakH 103, Kommedahl, Wilcoxson, 4 cr
025908 –1 LAB 1400-1645 TTh, StakH 103, 105, Kommedahl, Wilcoxson

R5104 Agricultural Systems Analysis and Modeling (prereq Math 1142 or #)
816188 1000-1045 MWF, PalmC 12, Molina, Teng, 4 cr (lab ar)

R5106 Mycology: Ascomycetes-Fungi Imperfecti (prereq 5105 or MicB 3103 or #)
★LECT 0900-0945 TTh, StakH 103, Stewart, 4 cr
134655 –1 LAB 1000-1145 TTh, StakH 105, Stewart

5215 Insects in Relation to Plant Diseases (§Ent 5215; prereq 5 cr entomology, 5 cr plant pathology or equiv or #)
616192 0800-0945 TThS, HodsonH 490, Wilcoxson, 4 cr

8002 Plant Disease Theory II: Tissues to Whole Plants (prereq 5005, 5006, 5007 or #, 8001)
207012 1400-1530 TTh, StakH 401, Banttari, Zeyen, Kommedahl, 3 cr

8090 Advanced Procedures and Research in Plant Pathology
705104 ar cr

8095 Advanced Procedures and Research in Mycology
834657 Stewart, 1-6 cr

R8201 Seminar
707015 1600-1700 W, StakH 401, Castor, 1 cr

R8202 Seminar
307017 1600-1700 M, StakH 401, Bissonnette, 1 cr

PLANT PHYSIOLOGY (PlPh)
Agriculture

3131 Survey of Plant Physiology (§5131, Bot 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 3021 or BioC 5001)
116262 1200-1245 MTWF, ClaOff B25, Guilfoyle, 4 cr

5131 Survey of Plant Physiology (§3131, Bot 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 3021 or BioC 5001)
825893 1200-1245 MTWF, ClaOff B25, 1200-1245 Th, BioSci 115, Guilfoyle, Frenkel, 4 cr

5183 Water, Minerals, and Translocation (§Bot 5183; prereq 5131)
216275 1450-1550 MWF, AlderH 415, Markhart, Stadelmann, 4 cr

R5188 Research Perspectives in Plant Physiology (prereq Chem 3100, 3101, 8 cr biochemistry, #)
516279 ar cr

R5723 Plant Hormones and Tissue Culture (prereq Chem 3100, 3101, 8 cr biochemistry, #)
413133 Brenner, ar cr

R5970 Special Problems in Plant Physiology
816286 ar cr

8251 Seminar: Plant Physiology
916294 1500-1600 Th, AlderH 310, Jones, 1 cr

POLISH (Plsh)
Russian And East European Studies
Liberal Arts

R1102 Beginning Polish (prereq 1101)
933466 1115-1200 MTWThF, FolH 208, Polakiewicz, 5 cr

5970 Directed Readings (prereq #, △, CLA approval)
019218 1-4 cr

POLITICAL SCIENCE (Pol)
Liberal Arts

R1001 American Government and Politics
916909 –1 1015-1100 MTWThF, AndH 370, Walcott, 5 cr
116911 –2 1215-1300 MTWThF, AndH 370, Maranto, 5 cr
134759 –3 0915-1100 TTh, AndH 270, Trump, 5 cr

1025 World Politics
118648 0815-0900 MWF, AndH 310, Lehman, 4 cr

1026 American Foreign Policy
318650 1215-1300 MWF, BlegH 5, Hopmann, 4 cr

1041 Contemporary Political Ideologies
434760 1245-1400 TTh, AndH 230, Leonard, 4 cr

1054 Introduction to Comparative Politics
234761 1115-1200 MWF, BlegH 10, Jorgensen, 4 cr

3051 Introduction to Political Analysis
306904 0915-1100 TTh, AndH 350, Kvavik, 5 cr

3070 Directed Field Studies (prereq #, △)
618654 1-4 cr

3080 Internship (prereq △) (S-N only)
118657 Backstrom, 4 cr

3085 Introduction to Political Research (prereq 3051 or #)
134762 1115-1230 TTh, AndH 230, Sullivan, 4 cr

R3108H Perspectives on Political Science Research (prereq 1001, political science honors program maj and by consent to other honors prog maj)
611879 1315-1430 TTh, RarigC 610, Shaw, 3 cr

3110H Honors Course: Selected Fields (max 6 cr; prereq 3109)
811881 3-6 cr

3306 The American Presidency (prereq 1001 or #)
918661 0815-0900 MWF, AndH 330, Eyestone, 4 cr

3307 The American Bureaucracy (prereq 1001 or #)
934763 1215-1300 MWF, AndH 330, Walcott, 4 cr

3308 The United States Congress (prereq 1001 or #)
406909 1015-1100 MWF, AndH 350, Shaw, 4 cr

R3353 Field Work in the Local Government (prereq 1001)
236848 1515-1700 TTh, BlegH 255, Backstrom, 4 cr

3562 Delivering Justice
734764 0915-1000 MWF, AndH 370, Olson, 4 cr

3668 Recent Empirical Theory (prereq 3051 or #)
534765 0945-1100 TTh, BlegH 215, Aldrich, 4 cr

3773 Political Development (prereq 3051 or #)
506917 1820-2050 Th, AndH 230, Duvall, 4 cr

3836 Foreign Policy Decision Making
912374 1115-1200 MWF, AndH 310, Sampson, 4 cr

3970 Directed Studies (prereq #, △, college approval)
118665 1-6 cr

5321 American Economic Policy (prereq 1001 or #)
334766 1315-1400 MWF, BlegH 215, Eyestone, 4 cr

5323 American Defense Policy (prereq 3835 or 3836 or 6 cr in ROTC or #)
134767 1115-1230 TTh, AndH 350, Goldman, 4 cr

5446 Government and Politics of South Asia (prereq 12 cr upper division work in social science)
136849 1315-1400 MWF, BlegH 135, 5 cr

5454 Chinese Government and Politics (prereq 1054 or 3051 or 12 crs in social sciences or #)
834769 1215-1300 MWF, BlegH 135, Templin, 4 cr

R5501 Principles of American Constitution I (prereq 1001 or equiv)
134770 1315-1500 MW, BlegH 10, Krislov, 5 cr

5655 Development of Political Thought: Early Modern (Renaissance to the Age of Revolution) (§5666; 1061 or 9 crs in social science rec)
★LECT 1015-1100 MWF, AndH 330, Dietz
138107 –1 REC 1315-1400 W, AndH 330, 4 cr

5738 American Political Campaigns and Elections (prereq 1001 or #)
834772 1215-1350 TTh, AndH 250, Backstrom, 4 cr

5877 Comparative Foreign Policy (prereq 3835 or 3825 or 3836 or 3826)
637768 1115-1200 MWF, BlegH 155, Goldman, 4 cr

5885 International Peace and Violence (prereq 3835 or 3825 or 3836 or 3826 or #)
921365 0915-1000 MWF, AndH 330, Job, 4 cr

R8102 Approaches to Political Research
218673 1515-1700 T, SocSci 1383, Simon, 3 cr

8140 Individual Readings and Research in Methodology (prereq #, △)
918675 1-3 cr

8150 Research Seminar: Methodology (prereq #)
518677 3 cr

8222 Positive Theory (prereq #)
434774 1315-1500 Th, Law 1, Aldrich, 3 cr

8240 Individual Reading and Research in Political Thought (prereq #, △)
118679 1-3 cr

8250 Research Seminar: Political Theory (prereq #)
318681 3 cr

8312 Seminar: Legislative Process (prereq #)
506951 1315-1500 F, SocSci 1383, Shaw, 3 cr

8313 Seminar: Executive Process (prereq #)
234775 1515-1700 Th, SocSci 1383, Eyestone, 3 cr

8327 Seminar: Intergovernmental Relations (prereq #)
236851 1315-1500 T, Law 1, Gray, 3 cr

8331 Seminar: Constitutional Law (prereq 5501, 5502 or #)
134776 1315-1500 Th, BlegH 255, Olson, 3 cr

8340 Individual Reading and Research in American Politics (prereq #, △)
018683 1-3 cr

8350 Research Seminar: American Politics (prereq #)
618685 3 cr

8412 American Foreign Policy (prereq 8411 or #)
806969 1315-1500 W, SocSci 1383, Ostrom, 3 cr

8440 Individual Reading and Research in International Relations (prereq #, △)
118688 1-3 cr

8450 Research Seminar: International Politics and Foreign Policy (prereq #)
118691 3 cr

8601 Government and Politics in Western Europe (prereq 5441)
734778 1515-1700 Th, BlegH 260, Shively, 3 cr

8640 Individual Readings and Research in Comparative Politics (prereq #, △)
318695 1-3 cr

8650 Research Seminar: Comparative Politics (prereq #)
018697 3 cr

PORTUGUESE (Port)
Spanish And Portuguese
Liberal Arts

R1001 Beginning Portuguese
819009 0915-1000 MTWThF, FolH 207, 5 cr

R1002 Beginning Portuguese (prereq 1001 or #)
429168 0815-0900 MTWThF, FolH 302, 5 cr

R1004 Intermediate Portuguese Grammar and Composition (prereq 1003 or 1103)
019011 1215-1300 MTWThF, FolH 302, 5 cr

R1005 Intermediate Portuguese (prereq 1004 or 1104)
219015 1115-1200 MTWThF, KoltH S134, 5 cr

R3910 Topics in Luso-Brazilian Literature (prereq 3104 or #)
133702 1215-1300 MWF, FolH 203, Costa-Lima, 4 cr

3970 Directed Studies (prereq #, △, college approval)
919017 1-5 cr

5521 Literature in Traditionalist/Expansionist Portugal (prereq three 3xxx Port courses or △)
033703 1415-1600 T, 1415-1500 Th, FolH 207, Sousa, 4 cr

5970 Directed Readings (max 15 cr; prereq #, △, CLA approval)
519019 1-5 cr

5990 Directed Research (prereq #, △, CLA approval)
719021 1-5 cr

8960 Research: Comparative Lusophone Literary Topics
833704 1415-1500 MWF, FolH 107, Costa-Lima, 4 cr

PROSTHODONTICS (Pros)
Dentistry

8001 Research in Prosthodontics
017047 Goodkind, ar cr

8003 Advanced Technical Restorative Dentistry
617049 Goodkind, ar cr

8005 Advanced Clinical Prosthodontics I
817051 Goodkind, ar cr

8006 Advanced Clinical Prosthodontics II (prereq #)
417053 Goodkind, ar cr

8012 Topics in Prosthodontics (prereq #)
917056 Goodkind, ar cr

8016 Seminar: Prosthodontics II (prereq #)
117063 Goodkind, ar cr

8025 Seminar: Applied Biomaterials I (prereq #)
617066 Douglas, Goodkind, ar cr

8034 Advanced Clinical Maxillofacial Prosthetics (prereq 8030, 8032, #)
217068 Yeh, ar cr

PSYCHOEDUCATIONAL STUDIES (PsyS)
Educational Psychology
Education

3106 Exceptional Students in Regular Classes (§5106) (A-N only)
904632 –1 1315-1500 T, CivMinE 212, Walter, 2 cr (elem ed maj only)
204689 –2 1615-1800 W, BuH 120, Balow, 2 cr (secondary ed maj only)

5100 Childhood Language Development: Classroom Implications (§SpEd 5100) (A-N only)
034902 1310-1500 TTh, PtH 102, Rose, 3 cr

R5101 Education of Exceptional Children (§SpEd 5101) (A-N only)
117329 0900-1200 S, PeikH 315, Knowlton, 4 cr

5106 Exceptional Students in Regular Classes (§3106) (A-N only)
404691 –1 1315-1500 T, CivMinE 212, Walter, 2 cr (elem ed maj only)
104693 –2 1615-1800 W, BuH 120, Balow, 2 cr (secondary ed maj only)

5108 Parent and Professional Planning for Handicapped Students (§SpEd 5108) (A-N only)
834903 1615-1800 MW, ChDev 216, Reynolds, 3 cr

R5110 Counseling Procedures (§CSPP 5110) (A-N only)
517058 –1 1615-1845 M, BuH 125, 3 cr
517061 –2 1315-1545 T, BuH 123, Matross, 3 cr

R5111 Counseling Procedures II (prereq 5110) (A-N only)
704700 1315-1545 M, PeikH 325, Shaffer, 3 cr

5114 Diagnosis and Remediation of Learning Disability II (§SpEd 5111; prereq 5113, ¶5611 or SpEd 5110, 5611, #) (A-N only)
717334 1615-1930 Th, PtH 214, Walter, 4 cr

5117 Clinical Use of Tests in Psychological Services (§CSPP 5120; prereq PsyF 5110 or Psy 3801, PsyF 5121 or Psy 5862 or #) (A-N only)
317336 1315-1500 TF, BuH 125, Snoke, 3 cr

5120 Introduction to Mental Retardation (§SpEd 5120, CPsy 5315; prereq 5101 or SpEd 5101 or #) (A-N only)
017338 0915-1030 TTh, PtH 215, Turnure, 4 cr

5123 Methods and Materials for Severely Retarded Preschool and School Age Pupils (§SpEd 5123; prereq 5101 or SpEd 5101) (A-N only)
817342 1615-1800 TTh, PtH 111, 4 cr

5126 Methods and Materials for Teaching Children with Severe Multihandicapping Conditions (§SpEd 5126; prereq 5101 or 5120 or SpEd 5101 or 5120 or CPsy 5315) (A-N only)
634904 1615-1930 W, PtH 111, Voeltz, 4 cr

R5152 Disturbed and Disturbing Students I: Background and Assessment (§SpEd 5152) (A-N only)
434905 1630-1900 W, BioSci 58, Wood, 3 cr (StP)

R5153 Disturbed and Disturbing Students II: Program Selection, Operation, Modification, and Evaluation (§SpEd 5153; prereq 5152 or SpEd 5152) (A-N only)
417358 1630-1900 T, Wood, 3 cr (Irondale High School)

5170 Introduction to Education of Visually Handicapped Children (§SpEd 5170; prereq #) (A-N only)
234906 1630-1900 W, PtH 215, Knowlton, 3 cr

5302 Workshop: Special Education (prereq #) (A-N only)
934911 Deno, 2 cr (Data-Based Management of Instruction)

5306 Behavioral Procedures with Severely and Profoundly Handicapped People (§SpEd 5301, 5304; PsyF 5149 or Psy 5017 rec) (A-N only)
117346 1630-1900 M, PtH 215, 4 cr

5320 Group Counseling: Principles and Procedures (§CSPP 5320; prereq course in counseling theory) (A-N only)
306935 1415-1700 Th, BuH 125, A Anderson, 3 cr (1 hr ar)

R5331 Career Development: Theory and Counseling Applications (§CSPP 5331) (A-N only)
717348 1615-1830 W, BuH 125, W Tennyson, 3 cr

R5540 Seminar: The College Student (§CSPP 5540, HiEd 5540; prereq 6 cr in psychology or educational psychology) (A-N only)
317353 1815-2030 M, BuH 123, Rest, 3 cr

5601 Practicum: Special Education (S-N optional; prereq #)
517089 –1 Wood, ar cr
317093 –2 Walter, ar cr
225901 –3 Voeltz, ar cr
306949 –4 ar cr

R5900 Independent Study (max 12 cr; prereq #) (A-N only)
417103 –1 ar cr (special ed maj only)
917106 –2 ar cr (counseling maj only)
717110 –3 Egeland, ar cr (school psych maj only)

8150 Psychological Aspects of Counseling Supervision (§CSPP 8150; prereq 8510, 8604 or CSPP 8510, CSPP 8604, #)
117363 Snoke, 3 cr

8153 New Approaches to Psychopathology in Children, Adolescents (§SchP 8512)
134901 1015-1130 TTh, EltH N534, Egeland, Sroufe, 3 cr

R8303 Counseling Theory and Procedures II (§CSPP 8303; prereq 8302, ¶8603, PsyF 5122, #)
517366 1415-1800 Th, BuH 125, A Anderson, 3 cr

8306 Field Placement in Counseling and Student Personnel Psychology (max 9 cr; prereq MA student in CSPP, ¶8303, ¶8603)
117368 1-3 cr

R8311 Techniques of Psychoeducational Assessment: Special Populations (§SchP 8311; prereq 8310 or SchP 8310, #)
317370 1215-1400 TTh, EltH N647, 5 cr

8502 Seminar: Special Education (prereq #)
734909 1315-1500 TTh, FolH 103, Turnure, ar cr

8508 Seminar: School Psychology (prereq #)
617374 Weinberg, 2 cr

R8511 Seminar: Advanced Counseling Research (§CSPP 8511; prereq PhD student, #)
104703 1015-1200 WF, BuH 125, W Tennyson, Hummel, 4 cr

8514 Theories and Methods of Intervention: Groups
321371 1600-1900 W, EltH N534, Erickson, 3 cr

8520 Seminar: Research in School Psychology (max 6 cr; prereq #)
217376 1315-1500 F, EltH N534, Egeland, 2 cr

8525 Sociocultural Theory, Research on Handicapping Conditions (§SpEd 8520)
238356 1615-1915 M, ChDev 105, 4 cr

edit . . . type . . . copy . . . spiral . . .

CAMPUS TYPING

DISSERTATIONS—
we meet all univ. specs

REPORTS & MANUSCRIPTS
technical, legal, foreign language

RESUMES—
same day service

LETTERS—
individual & repetitive

WE CAN DO IT!!!
FROM START TO FINISH

CAMPUS TYPING
800 WASHINGTON AVE. S.E.
378-2210

. . . copy . . . spiral . . . bookbinding . . . type

. . . bookbinding . . . edit . . . type . . . copy . . . spiral

Is Labor Day. . .

A. Your signal to head indoors and curl up until spring?

B. The beginning of another season to be outdoors?

C. The day you put snow tires on your car?

If you picked answer "B", **THE OUTDOOR STORE** has everything you need to enjoy autumn. We carry a complete line of cotton and wool sweaters, parkas, wool shirts, footwear, camping equipment and accessories, bicycle touring accessories and canoes.

THE OUTDOOR STORE is a buying association for students, staff and faculty. We bring you the best in outdoor equipment and clothing for less. We're in the St. Paul Student Center, check us out!

OUTDOOR STORE

373-1404 — St. Paul Student Center
M-F 8-5 Wed til 8 Sat 9-4

LSAT·GMAT·
GRE·GRE PSYCH·GRE BIO
MCAT·DAT·MAT·PCAT·OCAT·VAT
TOEFL·SSAT·PSAT·SAT·ACHIEVEMENTS
ACT·MSKP·NMB·VQE·ECFMG·FLEX·NDB·NPB
NCB·1·NCLEX·RN·CGFNS·CPA·SPEED READING
ESL REVIEW·INTRODUCTION TO LAW SCHOOL

Preparation - It's A Great Feeling!

Stanley H. KAPLAN
EDUCATIONAL CENTER

Call Days, Eves & Weekends

The Global Campus



Explore the University of Minnesota's global campus with a study abroad program through the Extension Classes Office of Study Abroad (ECOSA).

Spanish in Cuernavaca, winter quarter
Anthropology in Mexico, winter quarter
Literature in London, spring quarter
Swedish in Växjö, spring quarter
French in Montpellier, spring quarter
Hebrew Ulpan in Israel, summer
Forestry Seminar in Scandinavia, summer
German and Austrian Studies in Graz, fall quarter
Art Education Seminar in Europe, summer
Family Issues Seminar in Scandinavia, summer
Minnesota Studies in International Development
International Program in Toledo, Spain

For more information, contact
Extension Classes
Office of Study Abroad
University of Minnesota
202 Wesbrook Hall
77 Pleasant Street S.E.
Minneapolis, Minnesota 55455
(612) 373-1855

University of Minnesota

Continuing Education and Extension
An equal opportunity educator and employer

8542 College Student Personnel Work-Student Activities (§CSPP 8542; prereq 8140 or CSPP 8140)
917378 1515-1700 T, MorH 115, Zander, 2 cr

8560 Seminar: Administration of Special Education (§EdAd 5180; prereq 5160 or SpEd 5160, EdAd 5103 or #)
717382 1615-1800 M, PtH 111, Weatherman, 3 cr

8600 Clinical Practice in School Psychology (prereq 8310 or SchP 8310)
317384 Egeland, 1-5 cr

8601 Advanced Practicum (prereq #)
017386 ar cr

R8603 Counseling Practicum II (§CSPP 8603; prereq ¶8303, 8602, #)
113166 1315-1500 MW, BuH 123, Snoke, 3 cr

8610 Practicum: School Psychological Services (prereq #)
417389 Lindborg, 1-5 cr

8614 Counseling Practicum: Student Counseling Bureau (max 9 cr, §CSPP 8614; prereq 8613)
004704 1415-1600 Th, ChDev 105, Fiedler, Loeffler, 3 cr

8641 Clinical Practice in Diagnosis and Treatment of College Learning Difficulties (§CSPP 8641; prereq 8341 or CSPP 8341)
217393 1415-1600 W, EddyH 202, Baldwin, 3 cr

8700 Internship: School Psychological Services (prereq 8610 or SchP 8610, #)
917395 Egeland, Lindborg, 5-15 cr

8701 Internship: Counseling and Student Personnel Psychology (§CSPP 8701, max 9 cr for MA and specialist students, max 18 cr for PhD students)
517397 Snoke, 0-6 cr

8710 Internship: Instruction and Supervision in School Psychology (§SchP 8710; prereq 8700 or SchP 8700 or #, doctoral candidate in school psychology)
117399 1-9 cr

8900 Research Problems (prereq #)
317160 –1 ar cr (special ed maj only)
617164 –2 ar cr (counseling maj only)
917168 –3 ar cr (school psych maj only)

8910 Directed Study (prereq #)
717172 –1 ar cr (special ed maj only)
117175 –2 ar cr (counseling maj only)
817177 –3 ar cr (school psych maj only)
638547 –4 1600-1900 M, EltH N534, 3 cr

PSYCHOLOGICAL FOUNDATIONS OF EDUCATION (PsyF)
Educational Psychology
Education

R3380 Introduction to Human Relations (prereq education jr or sr) (S-N only)
★LECT 1615-1800 M, SciCB 125, Oden, Maruyama
117184 –1 REC 1415-1600 T, PtH 111, 3 cr
517187 –2 REC 1900-2045 T, ChDev 105, 3 cr
317191 –3 REC 0815-1000 W, BuH 125, 3 cr
617195 –4 REC 1415-1600 W, PtH 111, 3 cr
117198 –5 REC 1415-1600 W, ChDev 216, 3 cr
217202 –6 REC 0815-1000 Th, BuH 125, 3 cr
910222 –7 REC 1415-1600 Th, PtH 111, 3 cr

R5110 Introductory Statistical Methods (S-N optional)
707046 –1 1015-1200 MW, PtH 215, Stecklein, 4 cr
607055 –2 1615-1800 TTh, PtH 102, Stull, 4 cr

5111 Applied Matrix and Vector Concepts (S-N only)
717401 0815-0900 MWF, EltH N647, Terwilliger, 1 cr (Jan 9-27)

5112 Statistical Methods Computer Laboratory (prereq 5110 or equiv) (S-N only)
512510 0815-1000 T, EltH N647, Anderson, 2 cr

5120 Educational Measurement in the Classroom (S-N optional)
317403 1615-1800 MW, Arch 60, Joselyn, 4 cr

5121 Basic Principles of Measurement (S-N optional; prereq 5110 or 8110 or Psy 3801 or equiv)
017405 1515-1600 MWF, BuH 125, Merwin, 3 cr

5152 Knowing, Learning, and Thinking (A-N only)
734781 1730-2000 W, PtH 214, Samuels, 4 cr

5162 Personality and Social Development (prereq 5 cr introductory psychology) (A-N only)
321337 1630-1900 T, BuH 120, Rest, 3 cr

R5172 Structuring Learning: Social Psychological Approaches (A-N only)
417408 0800-1600 S, BuH 120, D Johnson, 3 cr (Jan 7, 14, 21, March 3)

5330 Computer Programming (S-N optional; prereq sr)
010227 0915-1000 MWF, EltH N647, Anderson, 3 cr

5333 Introduction to Computer Operations: U of M Systems, SPSS (S-N only)
510238 1515-1600 MTWThF, EltH N647, Anderson, 1 cr (Jan 9-20)

5525 Educational Research Colloquium (max 6 cr) (S-N only)
207074 1215-1330 F, BuH 123, Merwin, 1 cr (alt F)

5621 Practicum: Instruments and Procedures for Evaluation (S-N optional; prereq 5125, 5121 or equiv)
617410 1015-1130 TTh, EltH N647, Welch, 3 cr

5900 Directed Study (S-N optional; prereq #)
417411 ar cr

8110 Statistical Methods (prereq 5110 or Psy 3801)
717415 0815-0900 MWF, WullH 230, MacEachern, 3 cr

R8111 Statistical Methods (prereq 8110)
817244 –1 0915-1000 MWF, WullH 230, MacEachern, 3 cr
117248 –2 1415-1530 MW, WullH 230, Terwilliger, 3 cr
917252 –3 1615-1730 MW, WullH 230, Stecklein, 3 cr

8114 Multiple Regression Analysis (prereq 5111, 8111, ¶5111 or #)
317417 1115-1200 MWF, EltH N647, Terwilliger, 3 cr

8120 Methods in Educational Research (prereq PhD student only - spring qtr)
707189 1515-1700 T, BuH 240, Corcoran, 3 cr

8520 Seminar: Research Planning (max 3 cr)
017419 Stecklein, 1 cr

8523 Theory of Psychological Scaling (prereq 5121, 8111 or #)
010230 1415-1600 MW, PeikH 315, Davison, 3 cr

8554 Instructional Psychology (prereq course in learning and/or instructional psychology)
534782 1515-1730 Th, WullH 130, Burris, 3 cr

8572 Organizational Development and Change (prereq 5170)
334783 1615-1900 M, PtH 214, D Johnson, 4 cr

8721 Internship: Evaluation (max 12 cr; prereq #)
817423 1015-1200 F, BuH 330, Welch, 3 cr

8900 Research Problems (prereq #)
417425 ar cr

8910 Problems: Statistics for Students in Education and Psychology
217426 Stecklein, MacEachern, others, ar cr

8920 Problems: Measurement (max 9 cr)
907191 –1 1415-1600 MW, PeikH 315, Davison, 3 cr
707192 –2 Terwilliger, Stecklein, others, 1-3 cr

R8921 Problems: Evaluation (prereq 5621 or 8525)
031661 –1 1215-1400 F, BuH 330, Kellogg, ar cr (alt F)
307194 –2 Merwin, Kellogg, others, ar cr

8930 Research Problems: Computer Applications (prereq #)
210234 Anderson, ar cr

8940 Research Problems: Learning and Cognition (prereq #)
007196 Bart, ar cr

8960 Research Problems: Personality (max 9 cr; prereq #)
917428 Rest, ar cr

8970 Research Problems: Social Psychology (prereq #)
317434 1930-2100 T, BuH 330, D Johnson, Maruyama, ar cr (alt T)

PSYCHOLOGY (Psy)
Liberal Arts

1001 Introduction to Psychology
018733 1315-1400 MTWThF, WilleyH 125, 175, Burkhardt, Fox, others, 5 cr

R1004 Introductory Laboratory Psychology (1004-1005†; prereq soph, 1001 or ¶)
★LECT 0915-1000 M, MMA 100, Viemeister
017291 –1 LAB 0915-1200 T, EltH 150, 4 cr
217295 –2 LAB 0915-1200 T, EltH 160, 4 cr
517299 –3 LAB 1315-1600 T, EltH 150, 4 cr
717303 –4 LAB 1315-1600 T, EltH 160, 4 cr
017307 –5 LAB 0915-1200 W, EltH 150, 4 cr
431678 –6 LAB 1315-1600 W, EltH 160, 4 cr

R1005 Introductory Laboratory Psychology (1004-1005†; prereq 1004)
★LECT 0915-1000 W, MMA 100, Fox, Peterson
117315 –1 LAB 0915-1200 Th, EltH 50, 4 cr
317319 –2 LAB 0915-1200 Th, EltH 60, 4 cr
117323 –3 LAB 1315-1600 Th, EltH 50, 4 cr
417327 –4 LAB 1315-1600 Th, EltH 60, 4 cr
217331 –5 LAB 0915-1200 F, EltH 50, 4 cr
231679 –6 LAB 1315-1600 F, EltH 60, 4 cr

R1011 Career Decision Making (cannot be applied toward any CLA degree)
818779 1215-1400 T, EltH N119, Sarkissian, 2 cr

3014 Introduction to Applied Psychology (prereq 1001)
010244 0915-1000 MWF, FordH 155, Brown, 4 cr

R3051 Introduction to Cognitive Psychology (prereq 1001, 1005 or ¶)
018781 0945-1100 TTh, FordH 155, 4 cr

3201 Introduction to Social Psychology (prereq 1001)
218785 1415-1530 TTh, WilleyH 175, Snyder, 4 cr

3960 Undergraduate Seminar (prereq 1001, #, △)
518789 1-5 cr

3970 Directed Studies (prereq #, △, college approval)
318793 1-8 cr

3990 Directed Research (prereq #, △, college approval)
736367 1-8 cr

R5012 Psychology of Learning (prereq 1001, 1005, 3011 or Biol 1107, EBB 3111 or # except for grad students)
218804 1015-1100 MWF, EltH N119, Overmier, 4 cr

R5054 Psychology of Language (prereq 3011 except for students in honors sequence, grad students)
518808 1215-1300 MWF, EltH N119, 4 cr

R5101 Personality (§3101; prereq 5862 or ¶, honors candidate or grad student)
818815 0945-1100 TTh, WullH 230, Tellegen, 4 cr

R5125 Differential Psychology (5125-5126†; prereq 5862 or #, honors candidate or grad student)
507078 1115-1230 TTh, BuH 120, Bouchard, 4 cr

R5141 Psychology of Women (prereq 1001)
518839 0815-0930 TTh, WullH 230, Schletzer, 4 cr

5206 Research Methods in Social Psychology (prereq 1001, 3201, 3801 or # or grad)
506920 1415-1530 TTh, EltH N647, Heath, 4 cr

R5604 Abnormal Psychology (§3604; prereq honors maj; # for grads)
618847 1415-1600 TTh, EltH N119, Leon, 4 cr

5609 Psychobiology of Addictive Behavior (prereq 1001)
113183 0945-1100 TTh, MMA 100, Pickens, 4 cr

R5701 Personnel and Industrial Psychology (prereq 1001, 3801 or #)
918854 1245-1400 TTh, Phys 133, Taylor, Roberson, 4 cr

5751 Psychology of Advertising (§Jour 5251; prereq 1001)
510241 0915-1000 TThF, MurH 105, Jones, 4 cr

5861 Quantitative Methods (prereq #)
629492 0915-1030 TTh, EltH 225, Viemeister, 4 cr

5884 Methods for Multivariate Covariation Analysis (prereq 5862 or #)
134454 1315-1400 M, 1315-1500 W, EltH N119, Cudeck, 4 cr

5901H Honors Project (prereq sr, #)
713185 1-8 cr

5960 Topics in Psychology (prereq 1001, #)
318860 1-5 cr

8004 Seminar: Philosophical Psychology (8004-8005†; prereq course in logic or philosophy, PhD candidate in psych or philosophy)
018862 1515-1700 Th, DiehlH 672, Meehl, 3 cr

8015 Readings in the Analysis of Operant Behavior (prereq Psy 5017, 5019 or ¶, #)
618864 1330-1500 Th, EltH N257, Thompson, 3 cr

8107 Cross-Cultural Study of Personality (prereq 5101, 5604 or equiv or #)
118917 Butcher, 3 cr

8202 Advanced Social Psychology-Close Relationships (prereq #)
118934 1000-1200 Th, EltH N305, Berscheid, 3 cr

8205 Seminar: Research in Social Psychology (prereq 8204, #)
318938 1300-1500 Th, EltH N305, Berscheid, Snyder, others, 3 cr

8214 Marriage and Family Counseling I (§FSoS 8214; prereq #)
118942 1000-1215 T, McNH 69, Boss, 3 cr (StP)

8502 Counseling Psychology II: Assessment (prereq 5862, counseling psychology stu or #)
★LECT 1415-1500 MW, EltH N595, Dawis, 3 cr
925903 –1 LAB 1315-1500 F, EltH N595, Dawis

8515 Practicum in Student Counseling (prereq 8514)
518954 1415-1600 Th, ChDev 105, Loper, 3 cr

8518 Practicum in Rehabilitation Counseling (prereq 8503 or #)
418963 1315-1500 TTh, Mayo 796, Athelstan, 3 cr

8520 Fieldwork in Applied Psychology (prereq #)
218978 1-6 cr

8525 Seminar: Student Personnel Work (prereq #)
818989 1-6 cr

8542 Seminar: Practices, Approaches and Issues in Counseling Psychology (prereq grad student in counseling psychology or #)
619013 1515-1700 F, EltH N218A, Lofquist, 1 cr (alt F)

8545 Seminar: Research in Counseling Psychology (prereq 8544)
619027 1615-1800 M, EltH N595, Hansen, 1 cr (alt M)

8552 Marriage and Family Counseling: Internship II (prereq 8214, 8215, 8216, #)
619044 1500-1630 M, Berry 103, ar cr (StP)

8560 Internship in Counseling Psychology (prereq #)
219046 1-6 cr

8562 Seminar: Vocational Counseling for Work Adjustment (prereq 8561)
819060 1015-1130 F, EltH N595, Dawis, 2 cr

8565 Advanced Seminar: Vocational Counseling for Work Adjustment (prereq 8564)
319068 1015-1130 M, EltH N595, Lofquist, 2 cr

8612 Professional Methods in Clinical Psychology I: Assessment (prereq clinical psychology maj or #)
★LECT 1415-1530 TTh, EltH N423, Butcher, Tellegen, 4 cr
325906 –1 LAB 1315-1500 W, EltH N423, Butcher, Tellegen

8620 Practicum in Clinical Psychology (prereq #)
219080 1-6 cr

8621 Professional Methods: Clinical Psychology II: Methods of Intervention (prereq PhD candidate in clinical psychology, 8611, 8612, 8613, 8614 or #)
634451 Hollon, 2 cr

8632 Professional Methods in Clinical Psychology III: Research in Psychotherapies (prereq PhD candidate in clinical psychology, 8611, 8612, 8613, 8614 or #)
021339 Kendall, 3 cr

8640 Seminar: Topics in Clinical Psychology (prereq #)
319099 1-6 cr

8645 Seminar: Advanced Clinical Psychology (prereq 8644)
519103 1 cr

8648 Seminar: Advanced Child Clinical Psychology (prereq #)
436833 Leon, 2 cr

·8670 Internship in Clinical Psychology (prereq PhD candidate in clinical psychology, permission of director of training program)
119105 2-4 cr

8704 Seminar: Industrial and Organizational Psychology (prereq #)
434452 Campbell, 4 cr

8882 Seminar: Psychometric Methods (8881-8882-8883†; prereq 8881)
210248 1115-1300 W, EltH N668, Weiss, 1 cr

8900 Seminar: Behavioral Genetics (prereq #)
718855 2 cr

8970 Seminar: Special Areas of Psychology and Related Sciences (prereq #)
119114 1-6 cr

8980 Directed Teaching in Psychology (prereq #)
519117 1-6 cr

8990 Research Problems (prereq #)
319121 1-6 cr

PUBLIC AFFAIRS (PA)

5131 Leadership and Policy Issues Seminar (prereq 5130, △)
238146 –1 1600-2100 M, Terry, 3 cr (Rm 137, 2610 University Ave)
138147 –2 1600-2100 T, Terry, 3 cr (Rm 137, 2610 University Ave)

5134 Social Ethics in Policy Seminar (prereq 5133, △)
938148 1900-2130 W, Terry, 3 cr (Rm 137, 2610 University Ave)

5141 Energy Policy I: Supply and Demand Options (prereq grad or △)
219127 1820-2050 W, SocSci 307, Abrahamson, 4 cr

5161 Technology Planning I (prereq #)
934391 1115-1300 TTh, BlegH 330, Geesaman, 4 cr

R5521 Strategy and Tactics in Project Planning
519134 1900-2130 T, BlegH 260, Bryson, 4 cr

5525 Organizational Design and Change (A-N only)
136857 0815-0930 TTh, BlegH 330, Bryson, 4 cr

5550 Proseminar (prereq #)
117430 –1 1715-1900 Th, SocSci 307, Schwartz, 2 cr (Juvenile Justice and Child Welfare Policy)
534393 –2 1315-1500 F, Law 1, 2 cr (Private Sector Development)

5981 Directed Study (prereq #)
134395 ar cr

8121 Policy Process II (prereq #)
025892 1515-1700 MTh, BlegH 110, 3 cr

8203 Selected Topics: Systems Analysis (prereq 8201 or #)
007215 1015-1200 W, Mgmt/Econ 136, Brandl, 3 cr

8204 Public Economy (prereq #)
719181 1515-1700 W, Mgmt/Econ 136, Heller, 3 cr

R8207 Application of Quantitative Methods for Policy Analysis (prereq #)
510109 –1 1515-1700 TF, BlegH 110, Weiler, 3 cr
910110 –2 1515-1700 TF, BlegH 220, M Dewar, 3 cr

8252 Workshop (prereq #)
834397 –1 1315-1500 MW, Mgmt/Econ 136, M Dewar, Fass, ar cr (The Minnesota Economy)
434399 –2 1820-2050 M, Law 15, Bradford, ar cr (Community Development)
834402 –3 1315-1500 T, Law 3, Eustis, ar cr (Long Term Care)
134406 –4 1315-1500 Th, Law 15, Kudrle, Hopmann, ar cr (Foreign Policy Analysis)
534409 –5 1315-1500 Th, Law 3, T Dewar, ar cr (Topics in Social Policy)
734411 –6 1900-2100 Th, Law 3, Einsweiler, ar cr (Public Service Redesign)
334413 –7 1015-1200 F, Law 1, Jernberg, ar cr (Financial Management)

8321 Intergovernmental Administration Relations (prereq #)
134414 0945-1100 TTh, BlegH 240, Jernberg, Naftalin, 3 cr

R8405 Planning and Analysis of Development Projects (prereq Econ 3101 or #) (A-N only)
614703 0915-1200 M, Mgmt/Econ 136, Fass, 4 cr

8526 Seminar: Urban Public Policy
034415 0915-1100 W, SocSci 1383, Naftalin, 3 cr

8610 Seminar: Policy Analysis of the Health Care Sector (prereq #)
319183 1315-1500 W, SocSci 307, Kudrle, 3 cr

8630 Income Maintenance Policy Seminar I (prereq #)
834416 1115-1300 Th, SocSci 1383, 3 cr

8981 Individual Readings, Research in Public Policy Analysis, Administration (prereq #)
119184 ar cr

PUBLIC HEALTH (PubH)

R3001 Personal and Community Health (§3004, GC 3114)
319992 1015-1100 MWF, WilleyH 175, Rothenberger, 3 cr

R3004 Basic Concepts in Personal and Community Health (§3001, 3033, GC 3114)
020000 1015-1100 MTWThF, WilleyH 175, Rothenberger, 5 cr

R3033 Fundamentals of Alcohol and Drug Abuse (§3004)
920006 1015-1100 TTh, WilleyH 175, Rothenberger, 2 cr

R3034 Topics in Alcohol and Drug Problems (prereq #)
720010 ar cr

3386 Physiological Hygiene (prereq 3385)
120013 1215-1300 MTWF, CookeH 215, Alexander, Serfass, 4 cr

3400 Directed Studies: Biometry (prereq #)
017663 ar cr

R5001 Philosophical and Conceptual Bases of Public Health Practice (prereq public health grad student or #)
633199 1415-1500 M, 1415-1600 W, HSUnitF 2110, 2140, Schwanke, 2 cr

R5004 Field Instruction in Public Health (prereq #)
520025 ar cr

R5005 Topics in Public Health (prereq advanced proposal, #)
120027 ar cr

R5007 Health Leadership and Effecting Change (§HSU 5007; prereq public health or public health grad student or #)
333200 1615-1800 M, MoosT 2571, Schwanke, 4 cr

R5015 Topics in Interdisciplinary Studies (prereq #)
820029 ar cr

R5022 Human Sexuality for Health and Helping Professionals II (§HSU 5027, FSoS 5240, SW 5010; prereq 5021 or #)
920054 1715-1930 Th, MoosT 2530, Larson, Maddock, others, 3 cr

R5040 Dying and Death in Contemporary Society (§Hlth 5402, HSU 5040, Mort 5040; prereq health science maj, public health grad, educ sr,
120103 1615-1800 M, 1615-1700 W, JacH 2135, Rothenberger, Burger, others, 3 cr

5043 Fundamentals of Alcohol and Drug Problems
437657 1315-1400 T, 1315-1500 Th, MMA 125, Kincannon, 3 cr

R5044 Topics in Alcohol and Drug Problems (prereq advance proposal, #)
237207 1-4 cr

5045 Contributors to Alcohol and Drug Problems (§HSU 5035; prereq #)
137208 1415-1630 T, Mayo A272, Kincannon, 3 cr

R5049 Alcohol and Drug Problems: Assessment and Response (prereq 5043, 5045 or #)
937209 1415-1630 W, Mayo A272, Kincannon, 3 cr

R5055 Health Education Methods and the Current Emphasis on Health and Wellness (prereq health education maj or #)
033202 0815-1100 Th, PWB 5224, Carlaw, 3 cr

5056 Planning for Health - Educational Approaches to Change through Planning (prereq 5055, grad student in health sciences or #)
712764 1715-2000 W, MoosT 2580, Carlaw, Mills, others, 3 cr

R5065 Health in the Workplace: A Health Education Perspective (prereq grad student in health sciences)
833203 1015-1200 M, 1015-1100 W, Mayo 1250, Veninga, 3 cr

R5080 Internship in Patient Education Studies (prereq health education maj)
637169 Carlaw, others, ar cr

R5081 Internship in Family and Community Studies (prereq health education maj)
037170 Carlaw, others, ar cr

R5082 Internship in Occupational Health Education Studies (prereq health education maj)
837171 Carlaw, others, 10 cr

R5083 Internship in Health Policies and Planning (prereq health education maj)
637172 Carlaw, others, ar cr

R5097 Topics: Selected Readings (prereq grad student in health sciences)
437173 Carlaw, others, ar cr

5098 Topics: Selected Readings (prereq #)
117984 ar cr

R5099 Advanced Seminar in Health Education II (prereq 5095, hlth education maj)
633204 1215-1400 Th, Mayo A272, Carlaw, 2 cr

5150 Topics: Environmental Health (prereq #)
320429 Barber, ar cr

5157 Environmental Health II (prereq envrionmental health student or #)
520431 1115-1200 TTh, MoosT 2520, 2 cr

5159 Seminar: Environmental Health (prereq environmental health student)
120433 1315-1500 Th, JacH 2135, 1 cr

5171 Environmental Microbiology (prereq MicB 3103 or #)
620436 1115-1200 MWF, MoosT 2520, Ruschmeyer, Vesley, 3 cr

R5172 Environmental Microbiology Laboratory (prereq 5171, #)
407316 1315-1500 T, BoynHS S35, Vesley, 2 cr

5184 Air Analysis (prereq 5211, #) (S-N only)
207415 1415-1500 M, Thompson, 3 cr

5201 Measurement and Application of Ionizing Radiation
507291 –1 0915-1100 T, MoosT 2571, Barber, 2 cr
214185 –2 0915-1100 T, MoosT 2571, Barber, 3 cr (lab ar)

5202 Nuclear Power and the Environment (prereq 5201 or #)
110176 –1 0915-1100 Th, MoosT 2571, Barber, 2 cr
315294 –2 0915-1100 Th, MoosT 2571, Barber, 3 cr (lab ar)

5212 Ventilation Control of Environmental Hazards (prereq 5211, #)
720444 1015-1100 MWF, Mayo 1220, McJilton, 3 cr

5219 Seminar: Occupational Health (prereq occupational health student, #)
320446 Johnson, McJilton, others, 1 cr

5243 Water and Health
536578 1315-1400 MWF, MoosT 2580, Singer, 3 cr

5263 Pathophysiology for the Environmental Scientist (prereq 5262 or #)
310192 1415-1500 MWF, Mayo 1210, Stevens, Garry, 3 cr

5269 Seminar: Environmental and Occupational Toxicology (prereq 5261 or #)
010194 1115-1200 F, MoosT 2580, Stevens, 1 cr

R5300 Comparative Medicine and Public Health
417537 0915-1000 TTh, MoosT 1108, R K Anderson, 2 cr

R5306 Animal Models of Human Disease (prereq VPH maj or #)
220455 R K Anderson, Manning, 3 cr

R5308 Comparative Medicine and Public Health (prereq VPH maj or #)
815297 R K Anderson, Robinson, 2 cr

R5317 Problems in Veterinary Medical Administration and Supervision (prereq VPH maj or #)
920457 R K Anderson, 3 cr

5326 Research in Animal/Human Health (prereq VPH maj or #)
520459 ar cr

R5333 Biological Bases and Epidemiology of Health and Disease (prereq course in microbiology, a basic course in biostatistics)
★LECT 1215-1300 MWF, MoosT 2690, Mandel
806261 –1 LAB 1515-1700 T, MoosT 2620, 4 cr
906266 –2 LAB 1515-1700 F, MoosT 2620, 4 cr

5335 Epidemiology of Infections and Communicable Diseases (prereq basic epidemiology and biostatistics)
306269 1315-1400 MWF, MoosT 2530, Anderson, Osterholm, 3 cr

5340 Epidemiology: Strategies and Methods (prereq 5330, 5333, #)
506271 1115-1300 TTh, MoosT 2580, Mandel, 3 cr

R5342 Public Health Bacteriology (prereq MicB 5216, 5232, 5234, #)
820211 1215-1400 MWF, Stickle, ar cr (MN State Health Dept)

5370 Applied Epidemiology (prereq 5330, 5333, basic course in biostatistics or #)
120215 R K Anderson, 1–5 cr

5379 Topics in Epidemiology (prereq epidemiology student or #)
720217 2 cr

R5387 Detection of Coronary Heart Disease (prereq introductory anatomy, physiology, #)
120223 1600-1800 MW, CookeH 214, Leon, Crow, others, 4 cr

5392 Public Health Approaches to Health Behavior Change (prereq grad standing or #)
237174 3 cr

5408 Biometric Methods II (prereq grade of B in 5414 or #)
629170 0915-1000 MWF, MoosT 2585, Goldman, 3 cr

5410 Biometry in Clinical Studies II (prereq 5409)
420227 1315-1400 MWF, Mayo 1220, Loewenson, 3 cr

R5414 Biometric Methods I (prereq public health or grad school regis or #)
120229 0915-1100 TTh, Mayo 1220, Boen, 3 cr

5431 Biomedical Computing II (prereq 5430 or #)
720234 0915-1000 MTWTh, MoosT 2580, Rich, 4 cr

5434 Computer Methodology in the Delivery of Health Care II: Introduction to Medical Decision-Making Techniques (§LMed 5197; prereq 5432, 5452 or #)
020238 1115-1230 TTh, HSUnitF 2130, Connelly, 3 cr

R5452 Biometry II (prereq 5450, ¶5453)
620243 1015-1100 MWF, MoosT 2530, Jeffries, 3 cr

5453 Biometry Laboratory II (prereq ¶5452)
220245 1015-1100 TTh, MoosT 2520, Jeffries, 2 cr

5459 Introduction to Mathematical Theory in Biometry (prereq 2 qtrs calculus or #)
520249 1115-1200 T, 0815-0900 ThF, Mayo 1220, Jeffries, 3 cr

5462 Clinical Trials and Life Table Techniques (prereq biometry or epidemiology student, #)
720251 1115-1200 MWF, Mayo 1220, Kjelsberg, 3 cr

5470 Topics in Biometry (prereq #)
020255 ar cr

5500 Public Health-Normal Growth and Development
012740 1630-1900 T, Mayo 1210, Pflug, 3 cr

5502 Program Planning and Development in Public Health Nursing (prereq grad status, 5509, 5333, 5413, 5414, 5806, 5751 or equiv) (A-N only)
037203 1315-1500 W, Mayo 1205, Spradley, 3 cr

5504 Community Health Systems Maintenance (prereq 5503 or #)
837204 1315-1500 T, Mayo 1205, Lentsch, 3 cr

5512 Adult at Risk: A Public Health Nursing Approach (prereq 5511 or #) (A-N only)
218012 1015-1200 F, Mayo 1205, Ostwald, 3 cr

5513 Topics: Adult Health (prereq #) (S-N only)
433205 Ostwald, 1–3 cr

5521 Public Health Nursing: Education I (prereq 5509) (A-N only)
118013 1315-1500 T, Mayo 1210, Aroskar, 3 cr

5523 Public Ethics/Politics and Public Health (prereq PubH student or #)
637205 1315-1500 M, Mayo 1250, Aroskar, 2–3 cr

R5530 Public Health Nursing Practicum (prereq #) (S-N only)
620260 1315-1500 F, Mayo 1205, Aroskar, others, 1–6 cr

5531 Public Health Nursing Practicum (prereq #) (S-N only)
812738 Aroskar, 1–6 cr

5544 Public Health Nursing of Infants and Young Children (prereq grade of B in 5543)
233206 1015-1100 T, 1015-1200 F, Mayo 1250, Berkseth, 3 cr

5545 Public Health Nursing of Children 5 to 12 (prereq grade of B in 5543)
437206 1115-1200 T, 1015-1200 F, Mayo 1325, Berkseth, 3 cr

5547 Topics: Public Health Nursing of Child Populations (prereq #) (S-N only)
517464 Berkseth, 1–3 cr

5551 Nursing Administration Seminar II (prereq 5550)
229172 Spradley, 3 cr

5575 Topics: Public Health Nursing (prereq #)
720265 –1 ar cr
829488 –2 ar cr

5590 Theory and Practice of Occupational Health Nursing (prereq public health nursing student)
938179 Richard, 2–4 cr

R5591 Preventive Aspects of Occupational Health Programming (prereq occupational health nursing student)
020269 1215-1500 M, Mayo 1205, Gerberich, Richard, 3 cr

5594 Injury Prevention in the Workplace, Community, and Home (prereq basic course in epidemiology)
129173 0915-1000 T, 0915-1100 F, HSUnitF 2120, Gerberich, 3 cr

5597 Topics: Injury Prevention in the Workplace, Community and Home (prereq basic course in epidemiology)
929174 Gerberich, 1–3 cr

5611 Programs in Maternal and Child Health
820290 0815-1000 Th, Mayo 1250, ten Bensel, 3 cr

R5612 Human Genetics and Public Health (prereq #)
120294 0915-1000 MWF, Mayo 1220, Schacht, 3 cr

5614 Field Experience in Maternal and Child Health (prereq MCH grad student) (S-N only)
320298 ten Bensel, Splett, ar cr

5615 Health of the School Age Child (prereq 5610, grad student or #)
238180 1615-1800 M, Mayo 1250, St Germaine, 3 cr

5618 Youth and Health: An Introduction (§YoSt 5133)
006274 0915-1100 T, MoosT 2585, Baizerman, 3 cr

R5620 Chronic and Handicapping Conditions of Children: Prediction and Intervention with High Risk (prereq 5613 or #)
729175 1015-1200 Th, PWB 5206, Leonard, 3 cr

5621 Maternal and Child Health Student/Faculty Seminar (prereq MCH student) (S-N only)
520302 1315-1500 Th, Mayo A387, ten Bensel, others, 1 cr (MCH Reading Room)

5630 Family Planning Issues in Maternal and Child Health (prereq #)
237658 1615-1800 T, Mayo 1250, Lia-Hoagberg, 3 cr

5649 Topics: Maternal and Child Health (prereq #)
520316 ten Bensel, others, ar cr

5654 Topics: Dental Public Health (prereq student in dental public health or #)
320317 ar cr

5657 Independent Study: Dental Public Health (prereq student in dental public health or #)
120318 ar cr

5658 Ecology of Dental Health (prereq student in dental public health or #)
020319 1315-1500 TWThF, MoosT 2107, Block, ar cr

5659 Analysis of Dental Health Education (prereq student in dental public health or #)
318079 ar cr

5660 Field Experience: Dental Public Health (prereq student in dental public health or #)
320320 ar cr

5663 Administrative Residency in Dental Public Health (prereq student in dental public health or #)
120321 ar cr

5701 Public Health Administration II (prereq student in public health administration, 5700 or #) (S-N only)
933208 1315-1500 Th, Block, 1 cr (MN State Hlth Dept)

5703 Public Health Administration Clerkship (prereq student in public health administration or #)
929403 ar cr

5704 Field Experience: Public Health Administration (prereq student in public health administration or #)
020322 ar cr

5707 Independent Study: Public Health Administration (prereq student in public health administration or #) (S-N only)
221346 1-12 cr

5713 Principles of Organization and Management of Health Maintenance Organizations II (prereq student in public health administration, 5712 or #)
820323 1315-1500 W, BoynHS, Rupprecht, 2 cr

5720 Interpersonal Effectiveness in Health Administration (prereq student in public health administration or #)
733209 1015-1200 T, Mayo 1205, Veninga, 2 cr

5723 Administrative Residency (prereq student in public health administration or #)
115300 ar cr

5739 Public Health Administration (prereq student in public health administration or #)
133210 ar cr

R5741 Organizational Theory (prereq hospital administration student or #)
121347 0815-0930 TTh, MoosT 2520, Choi, 3 cr

R5743 Management of Departments Within Health Services Organizations (prereq 5742)
921348 0815-1000 M, 1415-1600 F, Mayo 1250, Sweetland, Kasbohm, 2 cr

R5751 Principles of Management in Health Services Organizations (prereq grad level student)
620324 1015-1200 MW, Mayo D230, Culbertson, 3 cr (Eustis Amph)

R5756 Financial Accounting in Health Organizations (prereq hospital administration student or #)
714188 1315-1500 MTh, PWB 5254, 5258, Tranter, 4 cr

R5758 Hospital and Other Health Care Organizations Financial Statement Analysis (prereq 5757)
112767 1800-2100 Th, MoosT 2520, Oszustowicz, 4 cr

5760 Operations Research and Control Systems for Hospitals (prereq 5404 or #)
933211 0915-1100 W, JacH 2135, 0915-1100 F, MoosT 2580, Dowd, 3 cr

R5767 Applied Field Research II (prereq 5766) (A-N only)
107299 1315-1515 W, Mayo 1250, Weckwerth, 3 cr

5770 Topics: Hospital and Health Care Administration (prereq hospital administration student or #)
112770 ar cr

R5791 Public Health and Medical Care Organizations (prereq hospital admin student or grad student) (A-N only)
606276 1015-1200 T, 1015-1100 Th, OwreH 2230, Resnick, 3 cr

R5795 Planning and Marketing Health Services (prereq MHA students or #)
211920 1515-1730 T, PWB 2470, Rice, 3 cr

5800 Research Project in Health Psychology
220326 1-6 cr

5801 Directed Study in Health Psychology
120327 1-4 cr

5802 Special Topics in Health Psychology (prereq health psych maj or #)
920328 ar cr

5804 Fundamentals of Health Behavior Change (prereq #) (A-N only)
533213 1215-1400 Th, HSUnitF 2110, 2140, Hung, 3 cr

5810 Professional Seminar in Health Psychology (prereq MPH student) (S-N only)
138178 Petzel, 1 cr

5851 Human Interaction Laboratory (§HSU 5024; prereq #)
900998 1615-1800 W, PWB 5224, Ayers, 4 cr (lab ar)

5852 Program Evaluation in Health and Mental Health Settings (§HSU 5026; prereq 5414 or basic statistics course)
220360 1515-1700 MW, HSUnitF 2120, 2130, Garrard, 4 cr

5869 Clerkship in Psychological Assessment (prereq grad students in clinical psychology, school psychology or #)
311925 1-4 cr

5870 Clerkship in Neuropsychological Assessment (prereq health psychology maj or #)
011927 Meier, 1-4 cr

5871 Fieldwork Experience in Health Psychology (prereq health psychology maj or #) (S-N only)
811928 1-4 cr

5872 Case Conference in Health Psychology (prereq health psychology maj or #) (S-N only)
011930 1 cr

5873 Case Conference in Neuropsychology (prereq health psychology maj or #) (S-N only)
811931 Meier, 1 cr

5877 Internship in Clinical Psychology (prereq PhD candidate and 400 hrs clerkship experience) (S-N only)
611932 1-4 cr

5878 Health Psychology Clinic Internship (prereq health psychology maj or #) (S-N only)
211934 Petzel, others, 1-4 cr

5879 Medical Consultation for Health Psychology Interns (prereq health psychology maj or #) (S-N only)
911936 Brantner, 1-4 cr

5880 Health Psychology Internship at the Boynton Health Service (prereq health psychology maj or #) (S-N only)
511938 Bugge, Heiberg, 1-4 cr

5881 Health Psychology for the Physically Handicapped Child (prereq health psychology maj or #) (S-N only)
711940 Blackburn, 1-4 cr

5882 Introduction to Neuropsychological Assessment (prereq health psychology maj or #) (S-N only)
311942 Meier, 1-4 cr

5883 Advanced Neuropsychological Assessment (prereq health psychology maj or #) (S-N only)
011944 Meier, 1-4 cr

5884 Rural Community Mental Health Internship for Psychologists (prereq health psychology maj or #) (S-N only)
611946 Kollmorgen, Moorman, others, 1-4 cr

5885 Community Child Guidance Center Psychology Internship (prereq health psychology maj or #) (S-N only)
411947 Hanvik, Reed, others, 1-4 cr

5886 Student Counseling Bureau Psychology Internship (prereq health psychology maj or #) (S-N only)
111949 Loper, others, 1-4 cr

5888 Behavioral Medicine (prereq PhD candidate and 400 hrs clerkship experience or #) (S-N only)
111952 Hung, 1-4 cr

5889 Case Seminar in Health Psychology (prereq health psychology maj or #) (S-N only)
911953 Petzel, Schofield, 2 cr

5890 Supervised Psychological Therapy (prereq health psychology maj or #) (S-N only)
511955 1-4 cr

5891 Health Psychology Laboratory (prereq Psy 8611, 8612, 8613, 8614)
512216 2 cr

5895 Group Supervision of Psychotherapy (prereq health psychology maj or #, psychiatry resident)
812772 Schofield, 2 cr

5900 Field Course I: Public Health Nutrition (prereq public health nutrition student)
207317 Splett, 1-4 cr

5901 Seminar: Public Health Nutrition (prereq public health nutrition maj)
907319 1015-1200 Th, HSUnitF 2110, Splett, 1-6 cr

5906 Field Course II: Public Health Nutrition (prereq public health nutrition maj)
207320 Splett, 1-8 cr

5909 Topics in Public Health Nutrition (prereq public health nutrition student or #)
907322 Brown, Fleming, 1-12 cr

8003 Research
920362 ar cr

8150 Research: Environmental Health (prereq #)
720363 1-6 cr

8330 Research in Epidemiology (prereq epidemiology maj)
520378 1-8 cr

8331 Field Practice in Epidemiologic Investigations (max 8 cr; prereq epidemiology maj)
320379 1-8 cr

8343 Advanced Epidemetrics (prereq 5330 or 5333, 5340, 5461)
815302 1415-1530 TTh, Mayo 1220, McHugh, 3 cr

8378 Advanced Seminar in Epidemiology (prereq epidemiology maj)
720380 Mandel, 1-2 cr

8379 Seminar in Epidemiology (prereq epidemiology student or #)
520381 1515-1700 M, MoosT 1108, Mandel, 2 cr

8385 Seminar: Physiological Hygiene (prereq physiological hygiene maj, #)
707287 1 cr

8386 Readings in Physiological Hygiene (prereq physiological hygiene maj, #)
800878 ar cr

8387 Research in Physiological Hygiene and Related Areas (prereq physiological hygiene maj, #)
600879 ar cr

8389 Seminar: Topics in Health Behavior Science (prereq physiological hygiene maj, #)
507288 3 cr

8400 Seminar: Biometry
320382 ar cr

8421 Advanced Biometric Methods II (prereq 8420)
120383 1315-1400 MWF, Mayo 1210, Johnson, 3 cr

8449 Topics in Biometry (prereq 5450, #)
020384 ar cr

8450 Research in Biometry
820385 ar cr

8597 Research: Injury Prevention in the Workplace, Community and Home (prereq basic courses in epidemiology, statistics, PubH 5594)
415304 Gerberich, others, 3-6 cr

8760 Topics in Hospital and Health Care Administration (prereq PhD student in hospital administration)
120389 Weckwerth, 3 cr

8761 Readings in Theory and Principles of Hospital and Health Care Administration (prereq 8760)
907305 Weckwerth, 3 cr

8762 Contemporary Problems of Hospital and Related Health Services
106279 1315-1500 Th, Mayo 1250, Weckwerth, 3 cr

8780 Advanced Statistical Methods in Health Care Research (prereq one quarter each of applied and theoretical statistics)
629184 1315-1500 T, Mayo 1250, Weckwerth, 3 cr

QUANTITATIVE ANALYSIS (QA)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for QA courses.

R1050 Elementary Managerial Statistics (prereq Math 1111 or 1131) (A-N only)
★LECT 1515-1630 MW, AndH 310, Benson
534605 –1 LAB 0815-0930 T, Law 35, 4 cr
334606 –2 LAB 0945-1100 T, Law 35, 4 cr
134607 –3 LAB 1115-1230 T, BlegH 425, 4 cr
034608 –4 LAB 1245-1400 T, BlegH 425, 4 cr
834609 –5 LAB 0815-0930 W, Law 35, 4 cr
134610 –6 LAB 0945-1100 W, Law 35, 4 cr

R3055 Introduction to Management Sciences (prereq 1050, Math 1142 or equiv) (A-N only)
★LECT 1430-1545 TTh, AndH 210, Hill
831578 –1 LAB 0815-0930 F, Law 35, 4 cr
031580 –2 LAB 0945-1100 F, Law 35, 4 cr
631582 –3 LAB 1115-1230 F, Law 35, 4 cr
231584 –4 LAB 1245-1400 F, Law 35, 4 cr
931586 –5 LAB 1415-1530 F, Law 35, 4 cr

R8110 Implementation of Management Science (prereq 5000, grad mgmt/IR student or grad SMgt approval) (A-N only)
634613 1315-1600 W, Mgmt/Econ 130, Adams, 4 cr

R8191 Statistical Methods I: Regression (prereq MBA 8020 or equiv, grad mgmt/IR student or grad SMgt approval) (A-N only)
425895 1730-2050 Th, BlegH 115, Rothermel, 4 cr

R8236 Stochastic Processes (prereq 5000 or #, grad mgmt/IR student or grad SMgt approval) (A-N only)
434614 1415-1530 TTh, BlegH 205, Feiring, 4 cr

8990 Readings in Quantitative Analysis (prereq #, grad SMgt approval) (A-N only)
916540 ar cr

8995 Research in Quantitative Analysis (prereq #, grad SMgt approval) (A-N only)
116544 ar cr

RADIOLOGY (Rad)
Medical School

0120 X-Ray Conference (prereq #)
419434 1600-1800 T, Mayo C231, Gedgaudas, 0 cr (Todd Amph)

0121 Medical Roentgenologic Conference
219435 1130-1200 T, Mayo C231, Gedgaudas, 0 cr (Todd Amph)

0123 Surgical Roentgenologic Conference
719438 0900-1100 S, Mayo C231, Gedgaudas, 0 cr (Todd Amph)

0124 Neurosurgical-Roentgenologic Conference
919440 1300-1430 F, Mayo C231, Gold, 0 cr (Todd Amph)

0125 Cardiovascular Roentgenologic Conference
519442 1200-1300 Th, Mayo B167, Amplatz, 0 cr (Rigler Lib)

0126 Roentgenologic Conference on Chest Diseases
019445 1200-1300 M, Mayo B167, Gedgaudas, 0 cr (Rigler Lib)

0220 Nuclear Medicine: Clinical Conference
619447 1700-1800 T, Mayo C231, Loken, 0 cr (Todd Amph)

5101 Externship: Diagnostic Radiology-University Hospitals (prereq regis med)
419448 Gedgaudas, ar cr

5102 Externship: Diagnostic Radiology-Veterans Administration Hospital (prereq regis med)
619450 Reinke, ar cr

5103 Externship: Diagnostic Radiology-Hennepin County General Hospital (prereq regis med)
219452 Tsai, ar cr

5104 Externship: Diagnostic Radiology-St. Paul Ramsey Hospital (prereq regis med)
119453 Day, ar cr

5105 Externship: Diagnostic Radiology-St. Luke's Hospital, Duluth (prereq regis med)
919454 Ahrens, ar cr

5140 Special Problems: Roentgenology (prereq regis med)
719455 Gedgaudas, ar cr

5171 Physics of Nuclear Medicine (§BPhy 5171, TRad 5171; prereq 5170 or #)
119458 1600-1700 W, 1500-1600 Th, Mayo B167, Morin, 3 cr (Rigler Lib)

5240 Special Problems: Nuclear Medicine (prereq regis med)
819463 Loken, ar cr

5511 Roentgen Technique
619464 1700-1800 M, Mayo C231, Morin, 1 cr (Todd Amph)

5530 Externship in Nuclear Medicine At University Hospital (prereq regis med)
219466 Loken, ar cr

5540 Special Problems: Radiological Physics (prereq regis med)
119467 Morin, ar cr

8100 Gastrointestinal Roentgenology
919468 Frick, ar cr

8101 Urologic Roentgenology
719469 Goldberg, ar cr

8102 Neurological Roentgenology
119470 Gold, ar cr

8103 Cardiovascular Roentgenology
919471 Amplatz, ar cr

8104 Pediatric Roentgenology
719472 Day, ar cr

8105 Pulmonary Roentgenology
519473 Gedgaudas, ar cr

8150 Research: Roentgenology
319474 Gedgaudas, ar cr

8200 Nuclear Medicine
119475 Loken, ar cr

8210 Fundamentals of Nuclear Medicine (prereq 1st yr resident)
819477 1600-1700 M, Mayo C231, Loken, 1 cr (Todd Amph)

8250 Research; Nuclear Medicine
019476 Loken, ar cr

8450 Research: Radiation Biology
619478 Morin, Song, ar cr

8550 Research: Radiological Physics
419479 Morin, ar cr

RECREATION, PARK, AND LEISURE STUDIES (Rec)
School of Physical Ed, Rec, School Health Ed
Education

R1520 Orientation to Leisure and Recreation (A-N only)
904503 0915-1100 MW, CookeH 206, Cain, Simpson, 5 cr

R1600 Leadership in Social Activities (A-N only)
504505 1315-1430 MW, CookeH 206, 3 cr

R3530 Recreation and Park Areas and Facilities (prereq 1520, recreation maj or △) (A-N only)
133750 1315-1500 TTh, CookeH 206, McAvoy, 5 cr

R3550 Park and Recreation Administration (prereq 3530, 3540 or #) (A-N only)
617262 0915-1100 TTh, CookeH 206, Schultz, 5 cr

3700 Senior Internship (prereq sr, recreation maj or minor, △) (S-N only)
715342 Fredrickson, Schleien, 1-15 cr

3900 Directed Study (max 9 cr; prereq recreation maj only, △) (S-N optional)
217264 3 cr

R5160 Conservation of Park Resources (prereq 1520 or 5100 or △) (A-N only)
117265 1115-1230 TTh, CookeH 214, McAvoy, 3 cr

R5180 Employee Recreation Services (prereq 1520 or 5100 or #) (A-N only)
033751 1615-1830 Th, CookeH 206, Schultz, 3 cr

R5200 Recreation in Community Education (prereq 1520 or 5100 or △) (A-N only)
717267 1615-1830 T, CookeH 206, 3 cr

R5220 Therapeutic Recreation Services (prereq 5210 or △) (A-N only)
317269 1115-1300 MWF, CookeH 206, Weiss, 5 cr

R5230 Recreation and Mental Retardation (prereq 5210, 5220 or #) (A-N only)
515939 1115-1230 TTh, CookeH 206, Schleien, 3 cr

R5255 Leisure Education for Special Populations (prereq 5220, PsyS 5110 or #, △) (A-N only)
833752 1430-1700 M, CookeH 206, Weiss, 3 cr

5630 Practicum: Therapeutic Recreation (prereq recreation M.Ed. or grad) (A-N only)
015346 Weiss, Schleien, 3-9 cr

5640 Practicum: Public Recreation and Parks (prereq recreation M.Ed. or grad) (A-N only)
815350 McAvoy, Schultz, 3-9 cr

5981 Problems (prereq MEd candidate, #) (A-N only)
517271 ar cr

5983 Readings: Recreation (prereq MEd, grad or △) (A-N only)
117273 1-3 cr

8980 Research Problems (prereq 5980, PsyF 5110 or #) (S-N only)
817275 1 cr

8981 Research Problems (prereq 8980 or #) (S-N only)
417277 ar cr

RELIGIOUS STUDIES (RelS)
Liberal Arts

1031 Introduction to the Religions of South and Southeast Asia (§MESA 1504)
619190 1115-1200 MWF, FolH 209, Malandra, 4 cr

3102 Religions of the American People
919194 0915-1000 MWF, CivMinE 212, Ross, 4 cr

3970 Directed Studies (prereq #, △, college approval)
706513 3-5 cr

5111 Interpretation of Myth (§Hum 5711; prereq jr or sr or #)
233741 1415-1530 TTh, FordH 285, Lincoln, 4 cr

5890 Senior Seminar (prereq sr maj or #)
519196 1415-1700 W, FordH 70, Tapp, 3-5 cr

5960 Topics in Religious Studies: Martin Luther, 1483-1983 (prereq #)
933743 1115-1230 TTh, Mgmt/Econ 136, Tracy, 4 cr

8970 Directed Studies (prereq △)
106516 2-5 cr

RESOURCE AND COMMUNITY DEVELOPMENT (RCD)
Agriculture

1010 Issues in the Environment
208385 1100-1145 MWF, CentLib 6, Adams, 3 cr

5100 Interdisciplinary Seminar II (5099-5100†, §AgEc 5100, AgEt 5100, LA 5100, Soil 5100; prereq 5099 or #)
116298 1500-1645 TTh, ClaOff B42, 4 cr

5110 Special Problems (max 12 cr; prereq RCD sr, #)
316302 1-4 cr

5200 Community Development Simulation (prereq #)
315358 1300-1445 TTh, ClaOff 27, Maki, 3-4 cr

RHETORIC (Rhet)
Agriculture

R1101 Writing to Inform and Persuade (§Comp 1011; prereq ¶1104 required)
417831 –1 0900-0945 MWF, HckrH 100, 4 cr
717835 –2 1000-1045 MWF, HckrH 302, 4 cr
017839 –3 1100-1145 MWF, HckrH 209, 4 cr
817843 –4 0930-1045 TTh, HckrH 302, 4 cr
433950 –5 1100-1215 TTh, HckrH 302, 4 cr

R1104 Library Laboratory (S-N only)
233951 –1 LAB 1000-1045 M, CentLib 6, 1 cr
133952 –2 LAB 1230-1315 T, CentLib 6, 1 cr
933953 –3 LAB 0900-0945 W, CentLib 6, 1 cr
733954 –4 LAB 1200-1245 W, CentLib 4, 1 cr
533955 –5 LAB 0930-1015 Th, CentLib 8, 1 cr
738572 –6 LAB 1100-1145 Th, CentLib 8, 1 cr

R1151 Writing in Your Major (prereq completion of freshman communication requirement, soph status)
333956 –1 1100-1145 MWF, HckrH 302, Walzer, 4 cr
133957 –2 0930-1045 TTh, HckrH 210, Bennett, 4 cr

R1222 Public Speaking (prereq completion of freshman communication requirement)
117872 –1 0800-0845 MTWTh, HckrH 222, Wendt, 4 cr
417876 –2 0900-0945 MTWTh, CentLib 4, Eyo, 4 cr
917879 –3 1000-1045 MTWTh, CentLib 4, Eyo, 4 cr
117881 –4 1100-1145 MTWTh, CentLib 4, 4 cr
317885 –5 1200-1245 MTWTh, HckrH 222, McBride, 4 cr
817888 –6 1300-1345 MTWTh, HckrH 222, McBride, 4 cr
617892 –7 0800-0915 TTh, CentLib 6, Hardesty, 4 cr
117895 –8 0930-1045 TTh, CentLib 6, Hardesty, 4 cr
517898 –9 1100-1215 TTh, CentLib 6, McDowell, 4 cr
117900 –10 1230-1345 TTh, HckrH 209, Bennett, 4 cr

R1301 Humanities: Modern Thought and the Enlightenment
817907 1000-1045 MWF, HckrH 312, Marchand, 4 cr

R1302 Humanities: Modern Thought and the Industrial Revolution
116200 0900-0945 MWF, HckrH 312, Walzer, 4 cr

R1303 Humanities: Modern Thought and the Impact of Evolution
716202 1100-1145 MWF, HckrH 312, Marchand, 4 cr

R1500 Introduction to Word Processing (prereq #) (S-N only)
133960 1400-1600 MWF, HckrH 329, Winkler, 2 cr

R3166 Scientific and Technical Graphics (prereq #)
★LECT 1400-1515 TTh, HckrH 302, Connolly, 4 cr
033961 –1 LAB 1300-1345 T, HckrH 224, Connolly
833962 –2 LAB 1600-1645 Th, HckrH 224, Connolly

R3254 Advanced Public Speaking (prereq 1222)
605564 1000-1045 MTWTh, HckrH 222, Gore, 4 cr

R3266 Communication, Discussion, in Small Group Decision Making (prereq completion of freshman communication requirement)
916215 0900-0945 MTWTh, HckrH 222, Gore, 4 cr

3270 Speech: Special Problems (prereq #)
516217 Connolly, Gore, others, 1-5 cr

R3370 American Humanities
137085 1200-1245 MWF, HckrH 312, Horberg, 4 cr

3374 Special Problems in Humanities (prereq #)
633963 Horberg, Marchand, others, 1-2 cr

R3375 Humanities: Agricultural Heritage
316221 1300-1345 MWF, HckrH 100, Cardwell, Scanlan, 4 cr

R3381 Humanities: 20th-Century Culture
037086 1100-1215 TTh, HckrH 312, Hayes, 4 cr

R3562 Writing in Your Profession (prereq completion of freshman communication requirement, 1151, jr status)
817955 –1 0900-0945 MWF, HckrH 111, Tregesar, 4 cr
117959 –2 1000-1045 MWF, HckrH 209, 4 cr
917963 –3 1000-1045 MWF, HckrH 111, Scanlan, 4 cr
317966 –4 1000-1045 MWF, HckrH 100, Kantar, 4 cr
113885 –5 1100-1145 MWF, HckrH 111, Scanlan, 4 cr
433964 –6 1100-1145 MWF, HckrH 100, Kantar, 4 cr
233965 –7 1200-1245 MWF, HckrH 111, Somers, 4 cr
133966 –8 1300-1345 MWF, HckrH 111, Somers, 4 cr
933967 –9 0930-1045 TTh, HckrH 100, Horberg, 4 cr
733968 –10 1100-1215 TTh, HckrH 111, Ferguson, 4 cr
533969 –11 1230-1345 TTh, HckrH 111, Schuelke, 4 cr
933970 –12 1400-1515 TTh, HckrH 302, 4 cr
733971 –13 1530-1700 T, Agr 202, Pearsall, 2-4 cr (Agronomy students only)
533972 –14 1300-1500 Th, GrnH 120, Ferguson, 2-4 cr (Forestry students only)

3572 Grammatical Editing for Technical Writers (prereq #) (S-N only)
333973 Walzer, 2 cr

5000 Professional Experience Program (prereq #) (S-N only)
816224 Connolly, McDowell, others, 4 cr

5100 Technical Communication: Special Problems (prereq #)
416226 Connolly, McDowell, others, ar cr

R5170 Managerial Communications (prereq freshman communication or equiv)
707130 1300-1415 MW, HckrH 302, Hayes, 4 cr

5180 Internship in Technical Communication (prereq #)
116228 Connolly, McDowell, others, 4-6 cr

R5257 Scientific and Technical Presentation (prereq 1222, 3562 or #)
★LECT 0930-1045 TTh, HckrH 224, Connolly, 4 cr
033975 –1 LAB 1100-1145 W, HckrH 224, Connolly
433978 –2 LAB 1300-1345 W, HckrH 224, Connolly

R5258 Interviewing: Dynamics of Face-to-Face Communication
216230 1400-1515 TTh, HckrH 222, McDowell, 4 cr

R5551 Report and Thesis Writing (prereq 3562 or #)
905571 1400-1645 Th, HckrH 209, Winkler, 3 cr

R5571 Writing for Special Purposes (prereq technical communication maj or minor, freshman commication, 3562 or #)
916232 –1 1600-1745 T, HckrH 224, Betsinger, Winkler, 2 cr (The Grant Proposal)
133949 –2 1400-1545 Th, HckrH 317C, Winkler, 2 cr (The Newsletter)

RUSSIAN (Russ)
Russian And East European Studies
Liberal Arts

R1102 Beginning Russian (prereq 1101)
517979 –1 0815-0900 MTWThF, WullH 130, Bernstein, 5 cr
317983 –2 1015-1100 MTWThF, WullH 130, Donchenko, 5 cr
017985 –3 1115-1200 MTWThF, WullH 130, Prokopov, 5 cr
206782 –4 1315-1400 MTWThF, WullH 130, Jahn, 5 cr

R1105 Intermediate Russian (prereq 1104)
617990 –1 1315-1400 MTWThF, ChDev 218, Polakiewicz, 5 cr
117993 –2 1415-1500 MTWThF, WullH 130, Jahn, 5 cr

R3102 Third-Year Russian (prereq 3101)
704454 0915-1000 MTWThF, BuH 123, Corten, 5 cr

3105 Readings of Russian Poetry and Novel (prereq 3104)
119220 0915-1000 MTWThF, WullH 130, Prokopov, 5 cr

3422 Literature: Tolstoy to Solzhenitsyn in Translation (§5422; prereq 1106 or # for Russ lang/lit maj)
435696 –1 1015-1100 MWF, BuH 123, Kulesov, Corten, 4 cr
235697 –2 1015-1100 MTWF, BuH 123, Kulesov, Corten, 4 cr (Russian maj only)

3511 Russian Culture to the mid-19th Century (prereq 1106 for Russ lang/lit maj)
135698 –1 0815-0900 MWF, ChDev 218, Donchenko, 4 cr
935699 –2 0815-0900 MWThF, ChDev 218, Donchenko, 4 cr (Russian maj only)

3970 Directed Readings (prereq #, △, college approval)
819222 3-5 cr

5401 Dostoevsky in Translation
219225 1215-1300 MWF, WullH 130, Kulesov, 4 cr

5422 Literature: Tolstoy to Solzhenitsyn in Translation (§3422)
635700 1015-1100 MWF, BuH 123, Kulesov, Corten, 4 cr

5970 Directed Readings (prereq #, △, CLA approval)
515360 1-4 cr

SANSKRIT (Skt)
South And Southwest Asian Studies
Liberal Arts

5132 Beginning Sanskrit (prereq 5131)
737860 0915-1000 MTWThF, KlaCt 190, Malandra, 5 cr

5202 Intermediate Sanskrit (prereq 5201)
918921 0915-1000 MTWThF, KlaCt 190, Malandra, 5 cr

5970 Directed Readings (prereq #, △, CLA approval)
518923 ar cr

8990 Research (prereq #)
818930 1315-1500 M, KlaCt 196, ar cr

SCANDINAVIAN (Scan)
Scandinavian Languages
Liberal Arts

3503 Scandinavian Folklore
337697 1245-1400 TTh, FolH 209, Grimstad, 4 cr

3611 Expressionism in Scandinavian Literature
337473 0815-0900 MWF, FolH 209, Simpson, 4 cr

3613 Children's Literature in Scandinavia
806843 0915-1000 MWF, FolH 308, Mishler, 4 cr

3614 Popular Fiction and Culture in Scandinavia
033944 1215-1300 MWF, FolH 209, Windahl, 4 cr

3670 Topics in Scandinavian Literature: Short Story Masterpieces from Isak Dinesen
137698 1315-1400 MWF, FolH 209, Mishler, 4 cr

3970 Directed Studies (max 15 cr; prereq #, △, college approval)
106847 1-5 cr

5421 Finnish Folklore: The Kalevala
833945 1115-1200 MWF, FolH 50, Vahamaki, 4 cr

5615 Ibsen and the Beginnings of Modern Drama
633946 1015-1100 MWF, FolH 50, Stockenstrom, 4 cr

5670 Topics in Scandinavian Literature: Short Story Masterpieces from Isak Dinesen
037699 1315-1400 MWF, FolH 209, Mishler, 4 cr

5702 Old Norse: Language and Literature (prereq 5701)
313125 1415-1530 TTh, FolH 406, Grimstad, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
821360 1-15 cr

8702 Philological Proseminar II: Introduction to Philology
233948 1515-1700 M, FolH 207, Liberman, 2-4 cr

8970 Research: Scandinavian Literature and Language
621361 1-6 cr

SCHOOL HEALTH EDUCATION (Hlth)
School of Physical Ed, Rec, School Health Ed
Education

R1500 American Red Cross Standard First Aid and Personal Safety (A-N only)
018036 –1 1015-1100 MWF, NorrisH 201A, Vokaty, 2 cr
818040 –2 1115-1200 MWF, NorrisH 201A, Vokaty, 2 cr
118044 –3 1415-1530 TTh, NorrisH 201A, Vokaty, 2 cr

R1502 **Basic Life Support** (S-N only)
117279 1215-1300 MWF, NorrisH 201, Vokaty, 1 cr

R3320 **Methods and Materials in School Health Education** (prereq 3100) (A-N only)
217281 1615-1845 T, NorrisH 4, Cobb, 3 cr

R3330 **Teaching Health in the Elementary School** (prereq elementary education maj) (A-N only)
118052 1315-1445 TTh, NorrisH 3, Bonstrom, 3 cr

3601 **Student Teaching: Elementary School** (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A-N only)
917283 Cobb, 3 cr

3602 **Student Teaching: Junior High School** (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A-N only)
517285 Cobb, 3-6 cr

3603 **Student Teaching: Senior High School** (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A-N only)
817289 Cobb, 3-6 cr

3999 **Directed Studies: School Health Education** (max 6 cr; prereq upper division maj or min in school health education, #) (S-N only)
938036 Cobb, Needle, 1-6 cr

5069 **Community Health Education Practicum for School Health Education Students** (prereq 5072) (A-N only)
617293 Cobb, 6 cr

5120 **Role of the School Health Educator in Health Appraisal** (A-N only)
917297 1800-2030 W, NorrisH 3, Cobb, 3 cr

R5402 **Death Education in Contemporary Society** (§PubH 5040; prereq educ sr, lic tchr, hlth sci maj, mort sci maj, sch or pubh nurs or #) (A-N only)
317305 1615-1800 M, 1615-1700 W, JacH 2135, Slater, Rothenberger, 3 cr

5685 **School-Based Projects in School Health Education** (max 12 cr; prereq school health M.Ed.) (A-N only)
617309 Cobb, 1-12 cr

5700 **Workshop: Contemporary Social Health Problems** (max 12 cr; prereq △) (A-N only)
907160 1600-1900 Th, NorrisH 3, 1-12 cr

5981 **Problems** (prereq #) (A-N only)
417313 Cobb, Needle, ar cr

5983 **Readings: Health Education** (prereq sr honor, grad student, #) (A-N only)
717317 Cobb, Needle, 1-3 cr

8980 **Research Problems** (prereq 5980, PsyF 5110 or #) (S-N only)
517321 1615-1800 Th, CookeH 226, Alexander, 1 cr

8981 **Research Problems** (prereq 8980 or #) (S-N only)
817325 Cobb, Needle, ar cr

SECONDARY EDUCATION (SeEd)
Curriculum And Instruction
Education

R3150 **Introduction to Secondary School Teaching** (prereq educ stu, 5 cr introductory psychology) (A-N only)
918076 –1 0815-1000 MWF, PeikH 40, Bruning, 5 cr
718080 –2 1015-1200 MWF, PeikH 40, Bruning, 5 cr
018084 –3 1315-1500 MWF, PeikH 40, Willie, 5 cr

3151 **Directed Study** (prereq △) (A-N only)
916926 1-9 cr

R3152 **Practicum: Secondary Education** (max 7 cr; prereq educ stu, △) (S-N only)
418090 –1 1515-1600 TTh, PeikH 375, 1-7 cr (math maj only)
118092 –2 Gennaro, 4 cr (science maj only)

R3155 **Psychological Foundations of Secondary Education** (prereq educ stu, Psy 1001) (A-N only)
★LECT 1015-1100 MWF, MechE 18
118108 –1 LAB 0815-1000 T, PeikH 46, 5 cr
118111 –2 LAB 1015-1200 T, PeikH 46, 5 cr
518114 –3 LAB 1015-1200 Th, PeikH 46, 5 cr
018117 –4 LAB 1215-1400 Th, PeikH 46, 5 cr
818121 –5 LAB 1300-1445 T, VoTech R280, 5 cr (StP)

3156 **The Social Sciences and the Social Studies** (max 6 cr; prereq social studies maj, #) (A-N only)
516928 0815-1000 TTh, PeikH 165, Glenn, 3 cr

3325 **Instructional Practice in English, Speech, and Theatre Arts** (A-N only)
716930 1415-1600 MW, PeikH 225, Beckman, 4 cr

3327 **Teaching of Writing in the Secondary School** (prereq 3150, 3155) (A-N only)
534913 1315-1500 TTh, PeikH 315, Beach, 3 cr

3331 **Introduction to Teaching Reading in Content Areas** (A-N only)
116933 1215-1400 MW, PeikH 225, Prenn, 3 cr

3335 **Teaching Second Languages** (A-N only)
816935 1515-1800 T, PeikH 215, Jorstad, 3 cr

3349 **Teaching Social Studies in the Secondary School** (prereq social studies maj) (A-N only)
416937 0815-1000 MW, PeikH 165, Mackey, 3 cr

R3356 **Teaching Secondary School Science** (prereq jr, 5 cr introductory psychology, ¶3155) (A-N only)
116939 0815-1000 TTh, PeikH 365, Humphreys, 2 cr

3357 **Teaching Secondary School Science** (prereq science major or minor...for majs, 3356, ¶3152) (A-N only)
216941 1415-1600 MWF, PeikH 365, Gennaro, 4 cr

R3368 **Teaching Secondary School Mathematics** (prereq 3365) (A-N only)
916943 1315-1500 TTh, PeikH 355, 375, House, 3 cr

3600 **Student Teaching** (prereq △) (S-N only)
516945 E Anderson, ar cr

3606 **Student Teaching in Library Science** (prereq sr, Lib 5102, 5201, 5202, 5205, 5302, 5303 or #) (A-N only)
116947 2-6 cr

R3621 **Directed Experiences in Teaching English, Speech, and Theatre Arts** (prereq 3325, #) (S-N only)
718144 –1 1615-1800 M, PeikH 33, Johnson, Reilly, 9 cr (maj only)
018148 –2 6 cr (minors to maj only)

R3631 **Student Teaching in Second Languages** (S-N only)
816949 1615-1800 M, PeikH 215, Jorstad, 3-12 cr

R3641 **Student Teaching in Social Studies** (max 15 cr; prereq 3350, sr) (S-N only)
016951 1615-1800 M, PeikH 165, Fleener, 3-15 cr

3651 **Student Teaching in Science** (prereq sr, 3357, 4 cr in 3352...for minors: 3357, #) (S-N only)
216955 1615-1800 M, PeikH 365, 1-12 cr

3661 **Student Teaching in Mathematics** (prereq 3365 during same year) (S-N only)
916957 Bledsoe, 3-12 cr

5151 **School-Based Projects in Social Studies Education** (max 12 cr) (A-N only)
516959 Glenn, Mackey, 1-12 cr

5153 **New Perspectives in the Social Studies** (max 12 cr) (A-N only)
134915 1615-1800 T, PeikH 165, Mackey, 3 cr

5175 **Secondary Remedial Reading Instruction** (prereq 5344 or Elem 5331 or #) (A-N only)
516962 1615-1800 M, PeikH 225, Graves, 3 cr

5194 **English Language Arts Curricula in the Secondary School** (A-N only)
034916 1615-1800 W, PeikH 225, Piche, 3 cr

5217 **Programs and Curricula in Bilingual Education** (prereq 5216 or #) (A-N only)
834917 1600-1800 MW, PeikH 25, Walker, 4 cr

5320 **Literature for Adolescents** (A-N only)
634918 0900-1230 S, PeikH 225, Beach, 3 cr (alt S, begins Jan 7)

5351 **Directed Study** (max 6 cr; prereq educ or grad stu) (S-N optional)
616967 ar cr

5385 **Planning and Assessing Second Language Instruction** (A-N only)
216969 0830-1200 S, PeikH 215, Jorstad, 4 cr

R5394 **Workshop: Science Education: Microcomputer Applications in the Science Classroom** (max 12 cr) (A-N only)
536886 0900-1200 S, PeikH 355, Gennaro, 3 cr

5395 **School-Based Projects in Science Education** (max 12 cr; prereq MEd student in science education) (A-N only)
416971 Gennaro, 1-12 cr

5404 **Language, Culture and Education** (§Spch 5404) (A-N only)
434919 1315-1500 TTh, PeikH 225, Piche, 4 cr

5659 **School-Related Projects in Language Arts** (max 12 cr; prereq MEd student in English education) (A-N only)
516976 Beach, Graves, others, 1-12 cr

8188 **Information Sources and Research in Second Language Learning and Teaching**
515164 1600-1830 TTh, PeikH 27, Lange, 5 cr

8387 **Seminar: Second Language Education**
016979 1330-1530 F, PeikH 215, Jorstad, Walker, 1-3 cr

8801 **Problems: Teaching Social Studies** (prereq 5150, 5152, 5156, 8104 or #)
016982 Mackey, Glenn, 3-9 cr

8871 **Problems: Curriculum Construction** (prereq #)
616984 Gennaro, ar cr

8894 **Problems: Second Languages and Cultures Education** (max 8 cr)
216986 Lange, Paige, Jorstad, Walker, ar cr

8895 **Readings in English Education**
916988 Beach, Graves, Piche, 1-3 cr

8896 **Problems: Teaching English**
716992 Beach, Graves, Piche, ar cr

8898 **Readings in Second Languages and Cultures Education**
316994 Lange, Paige, Jorstad, Walker, 1-3 cr

SMALL ANIMAL CLINICAL SCIENCES (SACS)
Veterinary Medicine

5152 **Diagnostic and Therapeutic Techniques** (prereq #)
420485 1300-1350 ThF, ClaOff B36, AnScVM 135, 1400-1550 ThF, VetHos C254, C256, McKeever, others, 2 cr

5172 **Small Animal Medicine** (prereq 5171 or #) (A-N only)
120481 0900-0950 MTWThF, VetHos A325, Hardy, others, 5 cr

5265 **Comparative Cardiology** (prereq regis vet med, 3rd or 4th yr or grad or #)
020482 1300-1450 M, AnScVM 111, Ogburn, 2 cr

5271 **Hospital Management** (prereq regis vet med, 3rd or 4th yr or grad or #)
820483 1500-1650 M, AnScVM 135, Hardy, others, 1 cr (Feb 6-March 5)

5285 **Canine Clinical Neurology** (prereq regis vet med, 3rd or 4th yr or grad or #)
620484 1500-1650 M, AnScVM 135, Hardy, 1 cr (Jan 9-30)

5351 **Veterinary Surgery** (prereq CVM 5350 or #) (A-N only)
★LECT 1100-1150 TWThF, AnScVM 125, Lipowitz, Wallace, others, 5 cr
618198 –1 LAB 1300-1550 T, VetHos C254
818202 –2 LAB 1300-1550 W, VetHos C254

8180 **Advanced Clinical Neurology** (prereq #)
920488 Fletcher, Hardy, others, ar cr

8190 **Comparative Cardiovascular Diseases** (prereq grad)
720489 Ogburn, 3 cr

8191 **Advanced Comparative Electrocardiology** (prereq grad)
120490 Ogburn, 3 cr

8192 **Special Cardiology Clinics** (prereq grad)
720492 Ogburn, ar cr

8196 **Internal Medicine in Small Companion Animals** (prereq grad)
520493 Osborne, others, 2 cr

8197 **Advanced Dermotologic Clinics** (prereq grad or #) (A-N only)
320494 McKeever, ar cr

8198 **Problems in Veterinary Comparative Dermatology** (prereq grad or #)
120495 McKeever, ar cr

8290 **Advanced Veterinary Medicine** (prereq 5172, LACS 5162, #)
020496 Osborne, others, ar cr

8291 **Advanced Diagnosis and Therapeutics of Animal Diseases** (prereq 5172, LACS 5162, #)
820497 Osborne, others, ar cr

8292 Seminar: Veterinary Medicine (prereq #)
620498 Osborne, others, ar cr

8293 Medical Conference (prereq 5172, LACS 5162, #)
420499 Osborne, others, ar cr

8297 Advanced Clinical Veterinary Ophthalmology (prereq grad or #)
120500 Bistner, 3 cr

8298 Research in Veterinary Ophthalmology (prereq grad or #)
020501 Bistner, 3-5 cr

8299 Research in Veterinary Medicine
820502 Osborne, others, ar cr

8390 Seminar: Veterinary Surgery (prereq #)
620503 Caywood, Lipowitz, others, ar cr

8391 Advanced Small Animal Surgery (prereq CVM 5350 or equiv, #)
420504 Caywood, Lipowitz, others, ar cr

8394 Surgery of the Gastrointestinal System (prereq LACS 5160 or #)
220505 Caywood, Lipowitz, others, ar cr

8396 Advanced Veterinary Anesthesia (prereq LACS 5355, #)
920507 Raffe, Robinson, ar cr

8410 Surgical Physiology (prereq 8391, #)
520509 Caywood, Lipowitz, others, 2 cr

8471 Therapeutic Radiology (max 2 cr; prereq 5452, #)
720511 Feeney, G Johnston, others, ar cr

8480 Seminar: Veterinary Radiology (prereq 5452, #)
520512 0800-0850 T, VetHos 282, G Johnston, Feeney, others, 1 cr

8483 Abdominal Roentgenology (max 3 cr; prereq 5452, #)
936836 Feeney, G Johnston, others, ar cr

8490 Advanced Veterinary Radiology (prereq 5450, 5451, 5452 or equiv, #) (A-N only)
020515 Feeney, G Johnston, others, 1-2 cr

SOCIAL AND ADMINISTRATIVE PHARMACY (SAPh)
Pharmacy

8100 Seminar
218236 –1 Wertheimer, 1 cr
718239 –2 Daniels, 1 cr

8200 Research Problems
719732 ar cr

8235 Legislative Control (prereq #)
938098 Fredrickson, 3 cr

8255 Drug Marketing (prereq #)
602163 1315-1430 MF, HSUnitF 7189, Kabat, 3 cr

8270 Clinical Conferences
519733 Cloyd, 2 cr

8280 Administrative Clerkship (prereq △)
319734 ar cr

8290 Clinical Clerkship (prereq 8270)
119735 Angaran, 2-5 cr

8301 Clinical Therapeutics
019736 Angaran, 3 cr

8400 Special Clinical Problems
819737 ar cr

8420 Social and Behavioral Aspects of Pharmacy Practice (prereq #)
337652 Wertheimer, 3 cr

8611 Research Design (prereq #)
421362 Martinson, 3 cr

8701 Hospital Pharmacy Administration I (prereq #) (A-N only)
619738 Roberts, 3 cr

8702 Hospital Pharmacy Survey (prereq 8701, #)
419739 Kabat, 1 cr

SOCIAL AND PHILOSOPHICAL FOUNDATIONS OF EDUC (SPFE)
Educational Policy And Administration
Education

R3090 School and Society (prereq sr) (A-N only)
718256 1415-1600 T, 1415-1500 Th, Arch 10, Bagley, 3 cr

3099 Directed Study (prereq #) (A-N only)
017436 Bagley, Beck, others, 1-6 cr

5099 Directed Study (max 9 cr, S-N optional; prereq #)
617438 Bagley, Beck, others, ar cr

5102 Education Imagery in Europe and America (S-N optional)
617441 1615-1800 M, BuH 123, Bagley, 3 cr

5131 Comparative Education (A-N only)
217443 1615-1800 W, WullH 130, Beck, 3 cr

5171 Anthropology and Education (§Anth 5145) (A-N only)
434628 1515-1730 Th, PtH 215, Dobbert, 4 cr

5174 Field Method for the Study of Education (§Anth 5316, S-N optional; prereq 5171 or 5172 or Anth 5145 or 5144 or 1502)
917445 1515-1730 W, ChDev 218, Dobbert, 4 cr

R5180 Introduction to the Economics of Education (§EdAd 5280) (A-N only)
517447 1615-1900 W, EdHAn 64, Lewis, 4 cr

5192 Sociology of Higher Education (§Soc 5958; prereq introductory statistics or #) (A-N only)
117449 1615-1800 W, ElfH N119, Clark, 4 cr

5202 Politics of Education (§8202, EdAd 5202, 8202) (A-N only)
234629 1615-1800 T, ChDev 216, Mazzoni, 3 cr

5210 Social Forecasting and Educational Futures (A-N only)
317451 1615-1800 T, WullH 230, Harkins, 3 cr

8220 Seminar: Social and Educational Futures (max 6 cr; prereq 5209 or 5210 or 5211 or #)
017453 1830-2030 M, ChDev 218, Harkins, 1-6 cr

8241 Problems: History and Philosophy of Education (prereq #)
617455 Bagley, Beck, others, ar cr

8260 Seminar: Social, Philosophic Foundations of Education
107133 1515-1700 M, ChDev 218, Clark, 3 cr

SOCIAL WORK (SW)
Home Economics

R1003 Community Experience in Social Welfare (prereq 1001, △) (S-N only)
315277 0915-1000 M, FolH 107, Quam, 1 cr

R3004 Social Work Issues and Human Development Through the Life Cycle (prereq 1001, CPsy 1301)
019252 1015-1200 WF, FordH 115, Sullivan, 4 cr

R3005 Social Work: The Art of Helping People (§5401; prereq 1001, 3004)
619254 1015-1200 WF, FordH 285, A Stewart, 4 cr

R3101 Current Social Policy Problems and Social Welfare (§5101; prereq 1001)
721383 1215-1400 MW, FordH 285, Battle, 4 cr

3970 Directed Studies (prereq maj, #, △, college approval)
419255 1-15 cr

3990 Directed Research (prereq #, △, college approval)
719259 ar cr

R5022 Human Sexuality for the Health and Helping Professionals II (§HSU 5027, PubH 5022, FSoS 5240, Hlth 5700)
137242 1715-1930 Th, MoosT 2530, Maddock, Larson, others, 3 cr

5211 Advanced Theories of Human Growth and Change (prereq grad standing or 12 cr in social sciences)
913427 1315-1600 Th, FordH 70, Quam, 3-4 cr

R5601 Ethno-Cultural Concepts in Social Work Practice (prereq 1001)
015279 1615-1900 T, FordH 50, Stewart, 3-4 cr

R8010 Field Instruction I (4 cr or ar cr by #) (S-N only)
519263 –1 1100-1300 T, FordH, Johnston, ar cr
114172 –2 1100-1300 T, FordH, ar cr
914173 –3 1100-1300 T, FordH, ar cr
714174 –4 1100-1300 T, FordH, ar cr
514175 –5 1100-1300 T, FordH 170, ar cr

8020 Field Instruction II (4 cr or ar cr by #; prereq 8010) (S-N only)
819267 Johnston, ar cr

R8130 Seminar: History of Social Work (§Hist 5821; prereq Hist 5349, #)
919275 1900-2100 M, SocSci 307, Chambers, 4 cr

R8150 Special Topics in Social Policy: Community Interventions in Health (prereq #)
810844 0915-1200 Th, FordH 170, Bracht, 3 cr

R8203 Family Stress
934925 1300-1600 Th, McNH 69, McCubbin, 3 cr (StP)

R8300 Organizational Behavior
619285 0915-1200 Th, FordH 60, Hollister, 3 cr

R8301 Organizational Analysis, Management, and Administration
136981 1615-1900 T, FordH 170, Carter, 3 cr

R8305 Community Development
936982 0915-1200 M, FordH 115, Wattenberg, 3 cr

R8307 Theories of Social Planning and Social Change
736983 1315-1600 Th, FordH 60, Pandey, 3 cr

R8350 Special Topics: Management, Planning, and Development: MPD Concentration Workshop (prereq MPD concentration or #)
410846 1615-1800 M, FordH 175, Pandey, 1-4 cr (alt M)

R8401 Social Work Methods with Individual Clients (prereq 8400)
318339 –1 1315-1600 M, FordH 170, Hagen, 3 cr
318342 –2 0815-1100 T, FordH 170, Quam, 3 cr

R8406 Supervision and Consultation in Social Work Practice (prereq 8401, #)
910320 0915-1200 Th, FordH 447, Johnston, Sullivan, 3 cr

R8407 Strategies of Family Intervention (prereq 8401, 2nd yr MSW student, #)
510322 0915-1200 M, FordH 170, Peterson, 3 cr

R8414 Social Work Methods with Groups (prereq 8400 or #)
219287 1315-1600 T, FordH 60, Cohn, 3 cr

R8421 Social Work Practice in Mental Health Settings (prereq 8122, 8400, 8401)
536984 0815-1100 T, FordH 60, Abramson, 3 cr

R8423 Chronic Illness-Impact on Families (prereq 8122, 8400, 8401 or #)
738099 1315-1600 Th, FordH 160, Battle, 3 cr

R8450 Special Topics: Practice with Individuals, Families and Groups (prereq 8401 or #)
100093 –1 0815-1100 M, FordH 349, 1-4 cr
621392 –2 1315-1600 M, FordH 349, Cohn, 3 cr (Group Treatment: Strategies with Families, Children and Adults)
117458 –3 1315-1600 T, FordH 70, 3 cr (Direct Work with Adolescents)

R8460 Special Topics in the Personal Social Services (prereq 8401, #, for doctoral student only)
438100 1415-1700 M, FordH 60, Edleson, ar cr

R8901 Scientific Inquiry in Social Work
336985 0915-1200 M, FordH 285, AuClaire, 3 cr

8970 Directed Study (prereq #)
219290 ar cr

8990 Research Projects (max 6 cr)
919292 ar cr

R8991 Seminar on Research (prereq MSW)
507310 0915-1200 Th, FordH 50, AuClaire, 2 cr

SOCIOLOGY (Soc)
Liberal Arts

R1001 Introduction to Sociology
018358 –1 0915-1000 MWF, BlegH 5, Fischer, 4 cr
818362 –2 1015-1100 MWF, BlegH 5, J Clark, 4 cr
118366 –3 1315-1400 MWF, AndH 310, 4 cr
918370 –4 1115-1230 TTh, AndH 310, Spitzer, 4 cr
118374 –5 1245-1400 TTh, AndH 310, Fulton, 4 cr

R1001H Honors Course: Introduction to Sociology
711890 1215-1300 MWF, BlegH 350, T Anderson, 4 cr

R1002 American Community
418378 –1 0915-1000 MWF, AndH 250, Cooperman, 4 cr
934830 –2 0945-1100 TTh, AndH 250, Nelson, 4 cr

R3101 Introduction to American Criminal Justice (§CJS 3101)
115362 1115-1230 TTh, BlegH 5, Inverarity, 4 cr

R3102 Introduction to Criminal Behavior and Social Control (§3103; prereq 3101)
010065 1215-1300 MWF, AndH 250, Finestone, 4 cr

R3201 Principles of Social Psychology (prereq 1001)
★LECT 0815-0930 TTh, AndH 230, Brandon
118391 –1 LAB 0815-1000 M, BlegH 350, 5 cr
418395 –2 LAB 1015-1200 T, Mgmt/Econ 128, 5 cr
918398 –3 LAB 0915-1100 W, Mgmt/Econ 130, 5 cr
901133 –4 LAB 0945-1130 Th, Mgmt/Econ 128, 5 cr

R3201H Honors Course: Principles of Social Psychology (prereq sociology honors student, 1001 or 1001H or #)
★LECT 0815-0930 TTh, AndH 230, Brandon
111893 –80 LAB 1015-1200 F, BlegH 350, 5 cr

R3501 The Family System (prereq 1001 or #)
719309 0945-1100 TTh, BlegH 5, Reiss, 4 cr

R3503 Sex, Romance, and Relationships (prereq 1001)
919311 1315-1400 MWF, BlegH 5, Asher, 4 cr

R3551 World Population Problems
819317 1245-1400 TTh, AndH 350, Kennedy, 4 cr

3671 Comparative Rural Societies: Latin America (prereq 8 cr in sociology, anthropology, economics or political science or #)
136874 1245-1400 TTh, Law 20, Ellenbogen, 4 cr

R3801 Sociological Methods I: Descriptive Statistics (prereq basic algebra or Math 0009)
★LECT 0945-1100 TTh, AndH 230, McTavish
618430 –1 LAB 0815-0900 MW, BlegH 410, 5 cr
218432 –2 LAB 1115-1200 MW, BlegH 410, 5 cr
518436 –3 LAB 1115-1200 TTh, BlegH 410, 5 cr
318440 –4 LAB 1215-1300 TTh, BlegH 410, 5 cr
718077 –5 LAB 1315-1400 TTh, BlegH 410, 5 cr

R3802 Sociological Methods II: Statistical Inference (prereq 3801)
★LECT 1115-1200 MWF, BlegH 250, Leik
718449 –1 LAB 1215-1300 MW, BlegH 410, 5 cr
918451 –2 LAB 1315-1400 MW, BlegH 410, 5 cr
518453 –3 LAB 0815-0900 TTh, BlegH 410, 5 cr
818457 –4 LAB 1015-1100 TTh, BlegH 410, 5 cr

R3802H Honors Course: Sociological Methods II: Statistical Inference (prereq 3801H or #)
★LECT 1115-1200 MWF, BlegH 250, Leik
611896 –80 LAB 1015-1100 MW, BlegH 410, 5 cr

R3811 Computer Usage for Social Statistics (¶3801 rec) (S-N only)
710075 1115-1200 T, AndH 250, Rasmussen, 1 cr

R3937 Social Gerontology: Elders in American Society (prereq 1001 or #)
121369 0815-0930 TTh, AndH 330, McTavish, 4 cr

3970 Directed Studies (prereq #, △, college approval)
219323 1–15 cr

3990 Sociology Honors Thesis (max 8 cr; prereq jr or sr sociology honors student, #, △, college approval)
119324 4–8 cr

R3991 Junior Honors Seminar (prereq jr or sr sociology honors student or #)
719326 0945-1130 T, SocSci 307, Fine, 1–4 cr

R5102 Criminology (prereq 3101, 3102 or #)
137791 0815-0930 TTh, BlegH 120, Kruttschnitt, 4 cr

R5141 Juvenile Delinquency (prereq 3101, 3102 or #...5161, 5162 rec)
610862 1015-1100 MWF, BlegH 130, Finestone, 4 cr

R5161 Criminal Law in American Society (§CJS 5101)
534832 0945-1100 TTh, Law 20, Samaha, 4 cr

R5201 Introduction to Social Psychology (no cr for soc maj; prereq 8 cr in soc, anthropology, psychology, political science or econ)
813517 1415-1500 MWF, BlegH 220, Mortimer, 4 cr

R5301 Social Movements in Changing Society (prereq 3401 or 5401 or #)
334833 0915-1000 MWF, BlegH 245, Donohue, 4 cr

R5355 Opinion and Communication: Social Factors (prereq 16 cr in sociology or #)
134834 0815-0900 MWF, BlegH 245, Carter, 4 cr

R5401 Social Organizations (no cr soc maj; prereq 8 cr in soc, anthropology, psychology, political science or econ)
034835 1115-1200 MWF, BlegH 220, Galaskiewicz, 4 cr

R5411 Formal Organizations (prereq 3401 or 5401 or 8 cr in soc, anthropology, psychology, political sci or econ or #)
407350 1515-1630 MW, BlegH 130, Reynolds, 4 cr

R5511 Comparative Family Organization (prereq 8 cr in sociology or #)
634837 –1 1115-1230 TTh, BlegH 240, Reiss, 4 cr (undergrad or grad)
434838 –2 1115-1230 TTh, BlegH 240, Reiss, 3 cr (grad only)

R5601 Urban Sociology (prereq 3401 or 3405 or 5401 or #...some statistics rec)
434841 1015-1100 MWF, BlegH 255, T Anderson, 4 cr

R5703 Social Life, Cultural Change (prereq 8 cr in social science or #)
018800 0815-0930 TTh, BlegH 215, Fulton, 4 cr

R5755 Social Structure, Political Behavior (prereq 3401 or 5401 or #)
134851 1315-1400 MWF, BlegH 255, Bradley, 4 cr

5951 Minority Group Relations (prereq 3201, 3401 or 5201 or #)
134843 1245-1400 TTh, SmithH 315, Sykes, 4 cr

R5954 Women and Men in the United States Today (prereq 3201 or 3401 or 3405 or 3503 or 5201 or 5401 or #)
937808 0815-0930 TTh, BlegH 220, Laslett, 4 cr

R5958 Sociology of Higher Education (§SPFE 5192; prereq 1001 or equiv or #)
918806 1615-1800 W, EltH N119, S Clark, 4 cr

R5960 Topics in Sociology
614250 –1 0945-1200 T, Mgmt/Econ 160, Laslett, 4 cr (The Family in Historical Perspective)
236879 –2 0915-1200 W, Mgmt/Econ 160, R Anderson, 4 cr (Major Project Research Seminar)

5970 Directed Studies (prereq #, △, CLA approval)
718810 1–15 cr

R8090 Topics (prereq #)
731671 –1 ar cr
531672 –2 Reynolds, ar cr
734845 –3 1415-1600 Th, BlegH 330, Spitzer, 4 cr (Explorations in and Practice of Visual Sociology)

R8102 Seminar: Research in Social Deviance
534846 1315-1500 W, Mgmt/Econ 128, Kruttschnitt, 3 cr

R8361 Seminar: Research, Theory on the Sociology of Culture (prereq #)
738149 1215-1400 T, SocSci 307, Fine, 3 cr

R8415 Theories of Social Organization
501135 1415-1600 Th, Mgmt/Econ 160, Galaskiewicz, 3 cr

R8702 Seminar: Social Theory
334847 1315-1500 W, BlegH 350, Inverarity, 3 cr

R8714 Comparative Sociology: Perspectives in Theory and Research
134848 1500-1800 W, ClaOff B36, Ellenbogen, 3 cr (StP)

R8802 Seminar: Recent Developments in Sociological Research Techniques
218821 1900-2200 T, SocSci 307, Reynolds, 3 cr

R8811 Methods of Social Research (prereq 3802, 3803 or #)
★LECT 1515-1700 MW, BlegH 125, Simmons, 4 cr
334850 –1 LAB 1415-1600 F, BlegH 350

R8818 Fieldwork and Laboratory Training in Social Research (prereq 8817)
007361 1015-1200 W, Mgmt/Econ 128, R Anderson, 5 cr

SOIL SCIENCE (Soil)
Agriculture

R1122 Introductory Soil Science (prereq Chem 1001 or 1004)
207138 0900-0945 MW GrnH 120, Cooper, 4 cr (3 hr lab ar)

R3218 Tillage for Seedbed Preparation and Soil and Water Management (S-N only)
734540 1300-1445 W, Soils 215, Swan, 1 cr

R3416 Soil Fertility (prereq 1122)
★LECT 0900-0945 MWF, GrnH 211, Malzer, 5 cr
★REC 1300-1345 M, Soils 215
034527 –1 LAB 1300-1645 W, Soils 120
★REC 0800-0845 T, Soils 215
634529 –2 LAB 0800-1145 Th, Soils 120
★REC 1300-1345 T, Soils 215
834531 –3 LAB 1300-1645 Th, Soils 120

R3418 Seminar: Removal of Plant Nutrients from Soils by Percolation, Runoff, and Erosion (S-N only)
534538 1500-1645 W, Soils 215, Adams, 1 cr

5000 Professional Experience Program (prereq #) (A-N only)
516234 4 cr

5100 RCD Interdisciplinary Seminar II (5099-5100†; prereq 5099)
934536 1500-1645 TTh, ClaOff B42, Adams, 4 cr

R5102 Agricultural Systems Analysis and Modeling (prereq Math 1142 or #)
131571 1000-1045 MWF, PalmC 12, Molina, Teng, 4 cr (lab ar)

5114 Special Problems in Soils (max 10 cr; prereq 1122 or #)
116236 1–5 cr

5228 Seminar: Climatology, Meteorology, and Agriculture (max 3 cr; prereq #)
836845 1500-1600 Th, Soils 215, Baker, 1 cr

R5230 Soil-Plant Water Relations (prereq 1122, general botany)
334539 1100-1145 MWF, AlderH 310, Gaudreau, 3 cr

5240 Microclimatology (prereq Math 1111, 10 cr physics or #)
816238 1400-1445 MTWThF, PalmC 12, Baker, 5 cr

R5416 Soil Fertility (§3416; prereq 1122)
★LECT 0900-0945 MWF, GrnH 211, Malzer, 4 cr
★REC 1300-1545 T, Soils 215, Bloom
134535 –1 LAB 1300-1645 Th, Soils 120

5550 Peatlands: Formation, Classification, and Utilization (prereq 1122 or #)
016240 0800-0915 TTh, BioSci 58, Farnham, 3 cr

8111 Colloquia in Soil Science (prereq maj or min or #)
616242 1–4 cr

8124 Research Problems in Soils
216244 2–5 cr

8128 Seminar: Soils
916246 1500-1645 M, Soils 215, 1 cr

SPANISH (Span)
Spanish And Portuguese
Liberal Arts

R1101 Beginning Spanish: Oral Approach
434967 –1 0815-0900 MTWThF, KoltH S135, 5 cr
518548 –2 0915-1000 MTWThF, KoltH S135, 5 cr
518551 –3 1015-1100 MTWThF, KoltH S135, 5 cr
018554 –4 1115-1200 MTWThF, KoltH S135, 5 cr
218558 –5 1215-1300 MTWThF, KoltH S135, 5 cr

R1102 Beginning Spanish: Oral Approach (prereq 1101 or 1 yr high school Spanish)
218575 –1 0815-0900 MTWThF, KoltH S133, 5 cr
518579 –2 0815-0900 MTWThF, KoltH S134, 5 cr
518582 –3 0915-1000 MTWThF, KoltH S134, 5 cr
118584 –4 0915-1000 MTWThF, ChDev 105, 5 cr
818586 –5 1015-1100 MTWThF, ChDev 105, 5 cr
618590 –6 1115-1200 MTWThF, KoltH S138, 5 cr
218592 –7 1215-1300 MTWThF, KoltH S138, 5 cr
718595 –8 1215-1300 MTWThF, KoltH S136, 5 cr
118598 –9 1315-1400 MTWThF, KoltH S136, 5 cr
318602 –10 1315-1400 MTWThF, KoltH S135, 5 cr
618606 –11 1315-1400 MTWThF, KoltH S138, 5 cr

R1103 Beginning Spanish: Oral Approach (prereq 1102 or 2 yrs high school Spanish)
718614 –1 0815-0900 MTWThF, KoltH S138, 5 cr
234968 –2 1015-1100 MTWThF, JonesH 1, 5 cr
018621 –3 1115-1200 MTWThF, AkerH 211, 5 cr

R1104 Intermediate Spanish, Oral Approach: Interpretation of Modern Problems (prereq 1103 or 3 yrs high school Spanish)
134969 –1 1015-1100 MTWF, AmundH 154, 4 cr
434970 –2 1215-1300 MTWF, KoltH S139, 4 cr

R1105 Intermediate Spanish, Oral Approach: Discussions of Modern Literature and the Press (prereq 1104 or 4 yrs high school Spanish)
234971 –1 1115-1200 MTWF, AkerH 215, 4 cr
734960 –2 1315-1400 MTWF, JonesH 11, 4 cr

R1502 Culture, Civilization of Latin America: Indian, European-Colonial, African Roots
907403 1215-1300 MWF, FordH 155, Jara, 4 cr

R3001 Spanish Pronunciation: Standard, Colloquial, Dialectal (prereq 1105 or #)
710125 1015-1100 TTh, FolH 103, Mantini, 3 cr

R3002 Reading for Speed and Comprehension (prereq 1105)
319023 1115-1200 MW, FolH 205, Madrid, 3 cr

R3004 Written Communication: Formal and Informal (prereq 1105)
419031 0915-1000 MWF, FolH 208, Jones, 4 cr

R3005 Oral Communication: Speaking and Listening (prereq 1105)
719035 1015-1100 MWF, FolH 208, Jones, 4 cr

3104 The Art of Reading Literary Texts (prereq 3002)
019039 1115-1200 MWF, FolH 204, Spadaccini, 4 cr

R3213 Spanish Literature: Aspects of Drama (prereq 3104)
534961 1015-1100 MWF, FolH 205, Ramos, 4 cr

R3601 Spanish America: Revolution and the New Literary Consciousness
334962 1315-1400 MWF, FolH 50, Vidal, 4 cr

R3920 Topics in Spanish American Literature (max 12 cr; prereq 3104 or #)
134963 1215-1300 MWF, FolH 203, Costa-Lima, 4 cr

3970 Directed Studies (prereq #, △, college approval)
019042 1–5 cr

5111 The Literature of Spanish Crisis of the 20th Century (prereq three or 5xxx literature courses in Span or Port)
034964 1315-1400 MWF, FolH 203, Ramos, 4 cr

5711 The Structure of Modern Spanish: Phonology (prereq 10 cr from 3001-3005 series or #)
834965 1215-1400 T, 1215-1300 Th, FolH 203, Mantini, 4 cr

5970 Directed Readings (max 15 cr; prereq #, △, CLA approval)
519053 1–5 cr

5990 Directed Research (prereq #, △, CLA approval)
019056 1–5 cr

8300 Research in the Historigraphy of the Spanish Literature
634966 1215-1300 MWF, FolH 204, Spadaccini, 4 cr

8970 Directed Readings in Romance Languages (prereq △)
619058 ar cr

SPANISH-PORTUGUESE (SpPt)
Spanish And Portuguese
Liberal Arts

3801 Honors Seminar (prereq 20 cr toward maj including 3104, departmental honors candidate or #)
419062 4 cr

3980 Directed Instruction (max 8 cr; prereq #, △, college approval) (S–N only)
119064 1–4 cr

8005 Ibero-Romance Bibliographical Research
117024 1515-1600 MWF, FolH 52, Wiemers, 4 cr

SPEECH-COMMUNICATION
(Spch)
Liberal Arts

R1101 Fundamentals of Speech-Communication: Oral Communication (§1441)
618699 –1 0815-1000 MW, FolH 307, 4 cr
818703 –2 0815-1000 MW, JonesH 4, 4 cr
118707 –3 1015-1200 M, JonesH 4, 1015-1200 F, FolH 306, 4 cr
918711 –4 1015-1200 MF, FolH 406, 4 cr
118715 –5 1215-1400 MW, FolH 307, 4 cr
418719 –6 0815-1000 TTh, FolH 406, 4 cr
218723 –7 0815-1000 TTh, FolH 306, 4 cr
518727 –8 1015-1200 TTh, FolH 406, 4 cr
318731 –9 1015-1200 TTh, JonesH 4, 4 cr
618735 –10 1215-1400 TTh, FolH 307, 4 cr
918739 –11 1215-1400 TTh, FolH 305, 4 cr
718743 –12 0815-1000 W, FolH 406, 0815-1000 F, JonesH 4, 4 cr

R1102 Fundamentals of Speech-Communication: Communication Process
119072 1015-1100 MWF, NichH 45, Petronio, 4 cr

1110 Freshman Discussion and Debate (prereq freshman who qualify for freshman debate squad, #)
419076 1415-1630 WF, KoltH S132, 2 cr

R1313 Analysis of Oral Argument
413536 –1 0815-1000 MF, FolH 406, 4 cr
213537 –2 1215-1400 MW, FolH 305, 4 cr
913539 –3 1415-1500 MWF, FolH 305, 4 cr
113541 –4 1015-1200 TTh, FolH 307, 4 cr
713543 –5 1215-1400 TTh, FolH 306, 4 cr
134745 –6 1015-1200 WF, JonesH 4, 4 cr
934746 –7 1215-1400 W, FolH 306, 1215-1400 F, FolH 305, 4 cr

R3111 Leadership Communication (4 cr with ROTC lab, §Air 3302)
918773 –1 0815-0930 TTh, FolH 308, 3–4 cr
118777 –2 1415-1530 TTh, Armory 116, 3–4 cr

3192H Honors Course: Tutorial Seminar in Speech (prereq honors candidate in speech-communication, △, #)
111912 1015-1200 Th, FolH 302, Shapiro, 4 cr

R3201 Introduction to Broadcasting Production
618783 –1 0815-1000 MW, RarigC 610, 4 cr (spch-comm and jour majs only)
918787 –2 0815-1000 TTh, RarigC 610, 4 cr (spch-comm and jour majs only)
718788 –3 1515-1700 TTh, RarigC 610, 4 cr (spch-comm and jour majs only)
718791 –4 1215-1400 WF, RarigC 610, 4 cr (spch-comm and jour majs only)
018795 –5 1415-1600 WF, RarigC 610, 4 cr (spch-comm and jour majs only)
108217 –6 0815-1000 MW, RarigC 610, 4 cr
108220 –7 0815-1000 TTh, RarigC 610, 4 cr
108226 –8 1515-1700 TTh, RarigC 610, 4 cr
808222 –9 1215-1400 WF, RarigC 610, 4 cr
508229 –10 1415-1600 WF, RarigC 610, 4 cr

R3202 Producing Videotape in the Field (prereq 3201)
618797 –1 0815-1200 F, RarigC 610, 4 cr (spch-comm and jour majs only)
708231 –2 0815-1200 F, RarigC 610, 4 cr

R3203 Radio Production (prereq 3201)
319085 –1 1015-1200 MW, EddyH 28, 4 cr (spch-comm and jour majs only)
008235 –2 1015-1200 MW, EddyH 28, 4 cr

R3204 Studio Television Production (prereq 3201)
609971 –1 1015-1200 MW, RarigC 616, 4 cr (spch-comm and jour majs only)
909989 –2 1015-1200 TTh, RarigC 616, Bart, 4 cr (spch-comm and jour majs only)
408238 –3 1015-1200 MW, RarigC 616, 4 cr
608240 –4 1015-1200 TTh, RarigC 616, 4 cr

R3401 Theories of Interpersonal Communication (prereq 1102 or #, Psy 1001)
719097 1315-1400 MWF, FordH 55, 4 cr

R3441 Communicating in Organizations (prereq 1102 or 1101 or equiv)
838207 –1 0815-1000 TTh, JonesH 4, 4 cr (spch-comm maj only)
638208 –2 0815-1000 TTh, JonesH 4, 4 cr

R3605 Public Speaking (prereq 1101)
118813 –1 1015-1200 MW, FolH 307, 4 cr (spch-comm maj only)
418817 –2 1215-1400 MF, FolH 306, Borgestad, 4 cr (spch-comm maj only)
118819 –3 1415-1600 MW, FolH 306, 4 cr (spch-comm maj only)
408174 –4 1015-1200 MW, FolH 307, 4 cr
408160 –5 1215-1400 MF, FolH 306, Borgestad, 4 cr
208161 –6 1415-1600 MW, FolH 306, 4 cr

3620 Intercollegiate Debate and Oratory (prereq #)
919101 1415-1630 WF, KoltH S133, 2 cr

R3641 Discussion and Conference Methods (prereq 1101 or 1101H or #)
918823 –1 0815-1000 MW, FolH 306, 4 cr (spch-comm maj only)
518825 –2 1015-1200 MW, FolH 306, 4 cr (spch-comm maj only)
818829 –3 0815-1000 TTh, FolH 307, 4 cr (spch-comm maj only)
618833 –4 1015-1200 TTh, FolH 306, 4 cr (spch-comm maj only)
918837 –5 1215-1400 TTh, FolH 406, 4 cr (spch-comm maj only)
718841 –6 1215-1400 TTh, FolH 108, 4 cr (spch-comm maj only)
708164 –7 1415-1600 TTh, FolH 306, 4 cr (spch-comm maj only)
308166 –8 0815-1000 MW, FolH 306, 4 cr
008168 –9 1015-1200 MW, FolH 306, 4 cr
108170 –10 0815-1000 TTh, FolH 307, 4 cr
438209 –11 1015-1200 TTh, FolH 306, 4 cr
838210 –12 1215-1400 TTh, FolH 406, 4 cr
638211 –13 1215-1400 TTh, FolH 108, 4 cr
438212 –14 1415-1600 TTh, FolH 306, 4 cr
238213 –15 0815-1000 MW, FolH 306, 4 cr (SMgt, pre-bus maj only)
138214 –16 1015-1200 MW, FolH 306, 4 cr (SMgt, pre-bus maj only)
938215 –17 0815-1000 TTh, FolH 307, 4 cr (SMgt, pre-bus maj only)
738216 –18 1015-1200 TTh, FolH 306, 4 cr (SMgt, pre-bus maj only)
538217 –19 1215-1400 TTh, FolH 406, 4 cr (SMgt, pre-bus maj only)
338218 –20 1215-1400 TTh, FolH 108, 4 cr (SMgt, pre-bus maj only)
138219 –21 1415-1600 TTh, FolH 306, 4 cr (SMgt, pre-bus maj only)

3970 Directed Studies (no cr for spch-comm maj; prereq at least one spch-comm course, #, △, college approval)
819107 ar cr

3980 Directed Instruction (max 8 cr, no cr for speech-communication maj; prereq #, △, college approval) (S–N only)
419109 1–4 cr

R5211 Contemporary Problems in American Broadcasting (prereq 3211 or equiv, #)
334749 1315-1600 MW, FolH 406, Mayerle, 4 cr

R5232 International Broadcasting
908177 –1 1015-1200 TTh, FolH 305, Browne, 4 cr (spch-comm maj only)
508179 –2 1015-1200 TTh, FolH 305, Browne, 4 cr

R5261 Communicative Processes of Television (prereq 3211 or #)
708181 –1 1615-1800 MW, FolH 50, Cohen, 4 cr (spch-comm maj only)
808186 –2 1615-1800 MW, FolH 50, Cohen, 4 cr

R5402 Problems in Interpersonal Communication (prereq 3401 or #)
119119 –1 1315-1500 MWF, FolH 110, Shapiro, 4 cr (spch-comm maj only)
834741 –2 1315-1500 MWF, FolH 110, Shapiro, 4 cr

R5403 The Theory Construction and Analysis in Communication (prereq 3401 or #)
208192 –1 1015-1200 TTh, FolH 205, Sykes, 4 cr (spch-comm maj only)
708195 –2 1015-1200 TTh, FolH 205, Sykes, 4 cr

R5404 Language, Culture, and Education (§SeEd 5404; prereq 1102, 3401 or #)
734750 1315-1500 TTh, PeikH 225, Piche, 4 cr

R5411 Small Group Communication (prereq 3641 or #) (A-N only)
537889 –1 1615-1800 MW, FolH 406, 4 cr (spch-comm maj only)
737888 –2 1615-1800 MW, FolH 406, 4 cr

R5414 Authority and Power in Task-Oriented Communication (prereq 3641 or #) (S-N only)
534751 –1 1315-1500 TTh, FolH 110, Howell, 4 cr (spch-comm maj only)
334752 –2 1315-1500 TTh, FolH 110, Howell, 4 cr

R5431 The Process of Persuasion (prereq 1102, Psy 1001)
819138 –1 1615-1800 TTh, FolH 50, Howell, 4 cr (spch-comm maj only)
408207 –2 1615-1800 TTh, FolH 50, Howell, 4 cr

R5452 Workshop in Intercultural Communication (prereq #...5451 rec) (S-N only)
819141 Howell, 4 cr

R5615 Introduction to Rhetorical Criticism (prereq 1101 or 1101H...3601 rec)
134753 0815-0900 MWF, FolH 305, Scott, 4 cr

R5616 Public Address in Britain and the Commonwealth (prereq 1101 or 1101H or #)
108212 0915-1000 MWF, FolH 305, Jensen, 4 cr

5970 Directed Readings (prereq nine 3xxx-5xxx speech-communication cr, #, △, CLA approval)
719150 ar cr

8110 Seminar: Advanced Speech Problems (prereq undergrad maj in speech or eqiv, #)
838322 1015-1200 MW, FolH 305, Cohen, 3 cr

8202 Quantitative Research in Speech-Communication (prereq 8101 or Jour 8001 or #...Spch 8201 rec)
034754 1530-1700 TTh, FolH 307, Sykes, 3 cr

8231 Seminar: National, International Systems of Broadcasting (prereq 5231 or 5232 or #)
834755 0830-1000 M, JonesH 1, Browne, 3 cr

8402 Seminar: Interpersonal Communication Problems
319152 1615-1800 W, FolH 307, Shapiro, 3 cr

8452 Seminar: Facilitating Intercultural Communication (prereq 5451 or #...8451 rec)
136809 1415-1600 M, FolH 103, Howell, 3 cr

8621 Seminar: History and Criticism of Public Address (prereq 5617, 5618 or △)
434757 1615-1800 W, FolH 305, Bormann, 3 cr

8990 Research (prereq #, △)
019154 ar cr

STATISTICS (Stat)
Liberal Arts

R1051 Introduction to Ideas of Statistics (prereq high school higher algebra)
★LECT 1000-1045 MWF, ABLMS 125, Brant, (StP)
018876 –1 REC 1000-1045 T, ClaOff B30, 4 cr (StP)
818880 –2 REC 1000-1045 Th, ClaOff B42, 4 cr (StP)
★LECT 1315-1400 MWF, Arch 10, C Chen
118884 –3 REC 1315-1400 T, VinH 211, 4 cr
518890 –4 REC 1315-1400 Th, VinH 211, 4 cr
★LECT 1415-1500 MWF, MurH 308, Lindgren
818894 –5 REC 1415-1500 T, VinH 211, 4 cr
118898 –6 REC 1415-1500 Th, VinH 211, 4 cr

R3091 Probability and Statistics (§5121, 5131; prereq differential, integral calculus)
★LECT 0815-0900 MWF, MurH 308, K Chen
700551 –1 REC 0815-0900 T, VinH 211, 4 cr
300553 –2 REC 0815-0900 Th, VinH 211, 4 cr
★LECT 0915-1000 MWF, FordH 120, Tierney, (IT majs)
600557 –3 REC 0915-1000 T, VinH 211, 4 cr
200559 –4 REC 0915-1000 Th, VinH 211, 4 cr
★LECT 1015-1100 MWF, WullH 230, Buehler, (IT majs)
100563 –5 REC 1015-1100 T, VinH 211, 4 cr
700565 –6 REC 1015-1100 Th, VinH 211, 4 cr
★LECT 1115-1200 MWF, Arch 40, Eaton, (IT majs)
000569 –7 REC 1115-1200 T, VinH 211, 4 cr
100571 –8 REC 1115-1200 Th, VinH 211, 4 cr
★LECT 1215-1300 MWF, MurH 308
434953 –9 REC 1215-1300 T, VinH 211, 4 cr
934956 –10 REC 1215-1300 Th, VinH 211, 4 cr

R5021 Statistical Analysis I (prereq college algebra or #)
★LECT 0900-0945 MWF, ABLMS 125, C Chen, (StP)
618928 –1 LAB 0900-1045 T, ClaOff B36, 5 cr (StP)
418932 –2 LAB 1100-1245 T, ClaOff B36, 5 cr (StP)
518940 –3 LAB 0900-1045 Th, ClaOff B36, 5 cr (StP)
★LECT 1100-1145 MWF, ClaOff B35, Chaloner, (StP)
818944 –4 LAB 1100-1245 Th, ClaOff B36, 5 cr (StP)
800573 –5 LAB 1300-1445 Th, ClaOff B25, 5 cr (StP)

R5022 Statistical Analysis II (prereq 5021 or #)
★LECT 0915-1000 MWF, BlegH 10, Lahiff, (soc sci majs)
918952 –1 LAB 0815-1000 Th, BlegH 340, 5 cr
118956 –2 LAB 1215-1400 Th, BlegH 230, 5 cr
618959 –3 LAB 1415-1600 F, BlegH 330, 5 cr
★LECT 1300-1345 MWF, ClaOff B35, Brant, (StP)
118965 –4 LAB 1100-1245 T, ClaOff B30, 5 cr (StP)
518968 –5 LAB 0900-1045 Th, ClaOff B30, 5 cr (StP)
318972 –6 LAB 1300-1445 Th, ClaOff B42, 5 cr (StP)

R5121 Theory of Statistics (§5131; prereq Math 1231 or 1331 or 1621)
★LECT 1315-1400 MWF, MurH 308, Tierney
307941 –1 REC 1315-1400 T, VinH 301, 4 cr
107942 –2 REC 1315-1400 Th, VinH 301, 4 cr

R5122 Theory of Statistics (prereq 5121)
★LECT 1215-1300 MWF, VinH 1, Cohen
418980 –1 REC 1215-1300 T, VinH 206, 4 cr
918983 –2 REC 1215-1300 Th, VinH 206, 4 cr

R5132 Theory of Statistics (prereq 5131)
118987 –1 1015-1100 MWF, VinH 2, Sudderth, 4 cr
018991 –2 1115-1200 MWF, VinH 211, K Chen, 4 cr
500583 –3 1315-1400 MWF, VinH 211, Berry, 4 cr

R5201 Sampling Methodology in Finite Populations (prereq 5021 or 5121 or 3091 or #)
619156 1400-1500 MWF, ClaOff B30, Martin, 4 cr (StP)

R5421 Analysis of Categorical Data (prereq 5022 or 5122 or 5133 or #)
219158 0910-1010 MWF, VinH 2, Larntz, 4 cr

5601 Nonparametric Methods (prereq 5022 or 5122 or #)
534958 1515-1615 MWF, ClaOff 27, Bingham, 4 cr (StP)

5900 Tutorial Course (prereq #)
419160 –1 Berry, ar cr
817082 –2 Berry, ar cr

8152 Mathematical Statistics (prereq 8151)
119162 1115-1215 MWF, VinH 213, Lindgren, 4 cr

8163 Applied Statistical Methods (prereq 8162)
019168 1300-1400 MWF, ClaOff 27, Larntz, 4 cr (StP)

8172 Theory of Inference (prereq 8171)
634949 1345-1500 TTh, VinH 213, Geisser, 3 cr

8312 Linear Models and Experimental Design (prereq 8311)
819172 1430-1545 MW, VinH 206, Buehler, 3 cr

8331 Statistical Computing (prereq 8162 or #)
334959 0900-1000 MW, ClaOff 31, Weisberg, 3 cr (StP)

8411 Multivariate Analysis (prereq 8153)
834948 1415-1530 MW, VinH 213, Eaton, 3 cr

8801 Statistical Consulting (prereq #)
419174 1-3 cr

8900 Seminar in Statistical Literature (prereq #)
119176 1-3 cr

8932 Advanced Topics in Statistics: Entropy and Information (prereq #)
034947 1215-1330 TTh, VinH 213, Sudderth, 3 cr

SURGERY (Surg)
Medical School

5500 Externship: Surgery at the University and Affiliated Hospitals (prereq regis med)
619500 Cerra, ar cr

5501 Emergency Room Externship
419501 Cerra, 9 cr

5502 Externship in the Surgical Intensive Care Unit (prereq regis med)
017808 9 cr

5503 Research Problems in Surgery (prereq regis med) (S-N only)
817809 9 cr

5523 Externship in Colon and Rectal Surgery: Veterans Administration Hospital (prereq regis med)
219502 Goldberg, ar cr

5583 Diagnosis, Evaluation, Care of Adults, Children with Cancer
017811 9 cr

8200 Clinical Surgical Problems in Management
919504 Najarian, 5 cr

8201 Surgical-Roentgenological Conference
519506 0915-1300 S, Mayo B139, Najarian, 1 cr (Todd Amph)

8202 Surgical Research
119508 Najarian, 5 cr

8203 Surgery Complications and Research Conference
119511 1600-1700 T, PWB 11157, Najarian, 1 cr

8206 Biomedical Engineering Seminar (prereq 8205)
819513 Blackshear, 1-3 cr

8207 Transplantation, Bone Marrow Conference
619514 1630-1700 Th, PWB 11157, Najarian, 1 cr

SWEDISH (Swed)
Scandinavian Languages
Liberal Arts

R1102 Beginning Swedish (prereq 1101)
219029 –1 0815-0900 MTWThF, FolH 204, 5 cr
119033 –2 1015-1100 MTWThF, KoltH S132, 5 cr
319037 –3 1315-1400 MTWThF, FolH 105, 5 cr

1105 Intermediate Swedish (prereq 1104)
319216 0915-1000 MTWTh, MRRC 211, Windahl, 4 cr

3670 Readings of Swedish Literary Texts (max 28 cr; prereq 3101)
119217 0915-1000 MWF, FolH 205, Stockenstrom, 4 cr

TEXTILES AND CLOTHING (TexC)
Home Economics

R1601 Laboratory in Basic Apparel Principles (1601-1602†)
417800 0900-1130 T, McNH 480, 2 cr

R1602 Fitting the Human Subject (prereq △)
★LECT 0900-0945 T, McNH 475, Hethorn, 2 cr
919051 –1 LAB 1000-1145 T, McNH 475, Hethorn
818409 –2 LAB 1000-1145 T, McNH 480, Fiore

R1603 Advanced Principles of Apparel Production (prereq 1602 or ¶)
★LECT 0900-0945 Th, McNH 475, Fiori
525919 –1 LAB 1000-1145 Th, McNH 475, Fiori, 2 cr

R1680 Opportunities in Textiles and Clothing (S-N only)
917803 1500-1545 W, McNH 198, Grindereng, 1 cr

3003 Cooperative Education Program (prereq soph, HE 1003, #) (S-N only)
117807 1-3 cr

R3604 Flat Pattern Design (prereq soph, 1603, 3662 or Dsgn 1525 or △)
117810 1300-1445 MWF, McNH 480, Hethorn, 3 cr

R3621 Textiles (prereq soph, Chem 1002, 1003 or 1005 or #)
★LECT 0900-0945 MWF, McNH 69, Franzen, (1 hr ar)
519070 –1 LAB 0800-0945 TTh, McNH 322, 5 cr
819074 –2 LAB 1000-1145 TTh, McNH 322, 5 cr
119078 –3 LAB 1300-1445 TTh, McNH 322, 5 cr

R3622 Textiles for Interiors (prereq 3621, #)
817812 1300-1445 MWF, McNH 340, 3 cr

R3623 Performance Evaluation of Textiles (prereq 3621)
734215 0900-1145 TTh, McNH 340, Franzen, 3 cr

R3643 Retail Merchandising (prereq 1641, Mktg 3065)
506240 1000-1145 MWF, McNH 470, Badenoch, 5 cr

R3644 Retail Experience Seminar I (prereq 3rd qtr soph, 1641, 1642, 200 hrs or ¶200 hrs approved selling experience) (S-N only)
417814 1300-1445 W, McNH 470, Abeln, 2 cr

R3645 Retail Experience Seminar II (prereq 3643 or ¶, 3644, additional 200 hours or ¶200 hours approved selling experience) (S-N only)
117816 1500-1645 W, McNH 470, Badenoch, 2 cr

R3662 Aesthetics of Clothing (prereq Psy 1001, Dsgn 1501 or #)
★LECT 1200-1245 TTh, McNH 470, DeLong
819091 –1 LAB 1300-1445 T, McNH 470, 3 cr (Retail merchandising/textiles and clothing/costume design students)
119095 –2 LAB 1300-1445 Th, McNH 470, 3 cr

5003 Cooperative Education Program (5003-5004†; prereq sr, ¶5004, #, minimum GPA of 2.50) (S-N only)
717818 –1 Badenoch, 4-8 cr (Retail merchandising students)
006243 –2 4-8 cr (Textiles and clothing students)

5004 Cooperative Education Integrative Paper (5003-5004†; prereq sr, ¶5003, #) (A-N only)
917820 –1 Badenoch, 4 cr (Retail merchandising students)
806244 –2 4 cr (Textiles and clothing students)

5624 Textile Coloration and Finishing (prereq 5621)
436881 1600-1800 TW, McNH 363, R Johnson, 5 cr

R5629 Characterization of Knitted Fabrics (prereq 5628 or #)
634210 1000-1130 MW, McNH 340, Brown, 3 cr

R5661 Clothing and Human Behavior (prereq sr, Soc 1001, Psy 1001 or #)
134213 1300-1445 TTh, McNH 198, Williams, 4 cr

8621 Readings in Textiles (prereq #)
017825 Brown, R Johnson, 1-3 cr

8625 Problems: Textiles and Clothing (max 9 cr; prereq #)
617827 Brown, R Johnson, 3-9 cr

8661 Readings in Clothing (prereq min 12 cr in textiles and clothing courses, #)
217829 Eicher, DeLong, others, 1-3 cr

8663 Problems: Clothing and Textiles (max 9 cr; prereq #)
117833 Eicher, DeLong, others, 3-9 cr

8681 Integrative Seminar (S-N only)
615169 1600-1730 Th, McNH 395, Brown, 1 cr

THEATRE ARTS (Th)
Liberal Arts

R1101 Introduction to the Theatre
519182 1015-1200 TTh, RarigC 190, Ballet, 4 cr

R1102 Drama and Media
609436 1015-1200 MW, RarigC 190, Neely, Nolte, 4 cr

R1301 Beginning Acting for Non-Theatre Majors (prereq 1101 or ¶)
619125 –1 0915-1000 MWF, RarigC 90, 4 cr
919129 –2 0915-1000 TThF, RarigC 90, 4 cr

R1321 Beginning Acting: Creative Approach (prereq 1101, 1504, 3rd qtr freshman or above)
919132 –1 1515-1700 MW, RarigC 210, 4 cr
119136 –2 0815-1000 TTh, RarigC 20, 4 cr

R1326 Beginning Acting: Technique (prereq 1321)
419143 –1 1015-1100 MTWThF, RarigC 10, Moulton, 4 cr
719147 –2 1115-1200 MTWThF, RarigC 10, 4 cr

R1328 Mime and the Mask I (prereq 1321)
019185 1315-1500 MW, RarigC 10, Berry, 2 cr

R1405H Honors Course: Introduction to the Theatre (prereq 1101, #)
811914 0915-1000 MW, RarigC 75, 2 cr

R1502 Makeup for the Actor (prereq 1504, clean-shaven face)
819186 0815-1000 TTh, RarigC 45, 2 cr

R1504 Elements of Technical Theatre (prereq 1101 or ¶)
500597 0915-1000 TTh, RarigC 190, Josal, 4 cr (lab ar)

3172 History of the Theatre (prereq 1101, 1504)
407946 1315-1500 TTh, BlegH 235, Gadberry, 4 cr

R3321 Advanced Acting: Characterization (prereq 1326)
619187 0815-1000 TTh, RarigC 185, McIntyre, 4 cr

3412H Honors Course: Tutorial Seminar in Theatre Arts (prereq candidate for honors in theatre arts, △)
411916 0-3 cr

R3515 Technical Theatre Production II (prereq 1504)
100599 0915-1000 MW, 0915-1100 F, RarigC 190, Crellin, Mcntgomery, 4 cr (lab ar)

R3711 Stage Direction (§3708, 5711; prereq 1321, jr or sr)
219189 1315-1500 TTh, RarigC 185, Hamilton, 4 cr

R3801 Oral Interpretation of Fiction (prereq 1504 or 1804 or Spch 1101)
209438 –1 1315-1500 MW, RarigC 20, Congdon, 4 cr
207950 –2 1015-1200 TTh, RarigC 90, 4 cr

R3950 Topics in Theatre: Platform Performance (prereq △, SMgt maj)
238101 –1 1315-1500 MW, RarigC 210, 4 cr
138102 –2 0815-1000 TTh, BlegH 130, 4 cr

R3980 Directed Instruction (max 8 cr; prereq compl of course in which teaching will be done, #, △, college approval)
419191 1-3 cr

R5100 Theatre Practicum (prereq △, #, written permission) (A-N only)
219192 Gadberry, others, 1-6 cr

R5110 Theatre Performance (max 9 cr; prereq #, written permission) (S-N only)
119193 Montgomery, 1 cr

R5115 Playwriting (§3115; prereq 1321 or #)
634546 0915-1200 Th, RarigC 75, Nolte, 4 cr

5171 History of Theatre (prereq sr or grad student)
134549 1315-1430 TTh, BlegH 250, Nolte, 4 cr

R5312 Intermediate Voice Production for the Theatre (prereq 5311, BFA candidate or theatre arts grad) (A-N only)
234551 1115-1200 MTWTh, RarigC 20, Nash, 4 cr

R5314 Stage Combat: Unarmed (prereq 1326 or grad student, #)
509431 1315-1500 TTh, RarigC 10, Berry, 2 cr

R5323 Acting for the Camera (prereq 3321 or grad student, written permission)
319197 1315-1500 TTh, RarigC 515, Moore, 4 cr

R5335 Acting for Music-Theatre (prereq 5334, written permission)
700579 0815-1000 MW, 0915-1000 F, RarigC 185, Goldstein, 4 cr

R5514 Advanced Problems in Scene Design (prereq 3513 or #)
307955 1315-1500 TTh, RarigC 275, Josal, 4 cr (lab ar)

R5520 Costuming Crafts and Techniques (max 8 cr; prereq 3515, 5512 or #)
134552 1015-1200 TTh, RarigC 275, Crellin, 4 cr (lab ar)

R5540 Scene Painting Techniques (prereq 3513 or #)
934553 1015-1200 MWF, RarigC 130, Brockman, 4 cr

R5712 Stage Direction (prereq 3708 or 3711 or 5711, 3513, 3515, 3801)
119198 1315-1500 MW, RarigC 185, Adey, 4 cr

R5720 Plays in Production and Performance (max 6 cr for undergrads; prereq 5712, written permission)
719200 2-4 cr

R5728 Theatre Management Problems: Audience and Financial Development (prereq 5718)
909409 1015-1200 T, RarigC 75, Neely, 2 cr

R5760 Advanced Stage Management (max 6 cr for undergrads; prereq 5716 or ¶, written permission)
319202 Montgomery, 1-3 cr

5803 Oral Interpretation of Drama (prereq 1504, 3801 or grad student)
734554 1315-1500 TTh, RarigC 20, Congdon, 4 cr

R5910 Topics in Theatre: Acting Workshop: Classical Styles (prereq written permission of instructor)
236638 –1 1515-1700 MW, RarigC 185, Ramos, 2 cr (Jan 16-Feb 8)
436640 –2 1515-1700 TTh, RarigC 185, Ramos, 2 cr (Jan 17-Feb 9)

R5920 Topics in Theatre: Acting Process
136639 1015-1200 TTh, RarigC 185, Berry, 4 cr

R5940 Topics in Theatre: Stage Dialects
236641 1515-1700 TTh, RarigC 210, Hamilton, 4 cr

R5950 Topics in Theatre: Coaching the Actor (max 12 cr)
409390 1515-1700 MW, RarigC 185, Adey, 4 cr

5970 Directed Readings (prereq 9 cr in theatre, #, △, CLA approval)
119203 2-6 cr

R8175 Seminar: European Theatre History (prereq 5171, 5172, 5173, #)
034558 1015-1200 F, RarigC 275, Cadberry, 4 cr

R8312 Advanced Voice Production for the Theatre (prereq 8311, written permission) (A-N only)
834559 1015-1100 MTWTh, RarigC 20, Nash, 4 cr

R8322 Problems in Acting (prereq 8321, written permission)
019204 1115-1200 MTWThF, RarigC 210, McIntyre, 4 cr

R8327 History and Technique of Stage Movement (prereq 8326, written permission)
619206 0915-1000 MTWThF, RarigC 10, Moulton, 4 cr

R8712 Seminar: Stage Direction (prereq 5712 or equiv)
807961 1515-1700 MW, RarigC 75, Hamilton, 4 cr

8980 Directed Instruction (prereq △)
419207 1-3 cr

8990 Research (prereq #, △)
219208 ar cr

THERAPEUTIC RADIOLOGY (TRad)
Medical School

3100 Mathematics (prereq #)
118349 3 cr

3110 Physics (prereq #)
218351 2 cr

3121 Radiation Physics (prereq #)
918353 3 cr

5171 Physics of Nuclear Medicine (§Rad 5171, BPhy 5171; prereq 5170 or #)
019526 1600-1700 W, 1500-1600 Th, OwreH 2230, Levitt, others, 3 cr

5173 Physics of Radiation Therapy (§Rad 5173, BPhy 5173; prereq 5170 or #)
419529 1630-1730 W, 1600-1730 F, OwreH 2210, Khan, others, 3 cr

5340 Special Problems in Radiation Therapy
619531 ar cr

5505 Externship in Radiation Therapy (prereq regis med)
219533 Levitt, others, ar cr

5506 Cancer Diagnosis and Treatment (prereq regis med)
719536 ar cr

5507 Advanced Externship in Radiation Therapy (prereq regis med)
519537 ar cr

5508 Special Problems in Radiation Biology
319538 Song, others, ar cr

5512 Dosimetry of Internal and External Radiation Emitters
119539 0730-0830 W, Mayo B141, Khan, others, 1 cr

5540 Special Problems in Radiological Physics (prereq regis med)
519540 Khan, others, ar cr

5583 Diagnosis, Evaluation, and Care of Adults, Children with Cancer
319541 0800-0900 Th, Mayo B507, Kim, Ramsay, others, 9 cr

5800 Radiation Oncology-Pathology
119542 ar cr

8300 Radiation Therapy
019543 ar cr

8310 Fundamentals of Radiation Therapy
819544 1630-1730 M, Mayo B141, 1 cr (Except 1st M of month, 1700-1800)

8315 Radiation Therapy Pathology
619545 1 cr

8320 Radiation Therapy Treatment Planning Problems
419546 1 cr

8325 Radiation Therapy Pediatrics Oncology
219547 1 cr

8350 Research in Radiation Therapy
119548 ar cr

8410 Seminar: Radiation Biology
919549 Song, others, 1 cr

8450 Research in Radiation Biology
219550 Song, others, ar cr

8550 Research of Radiation Physics
119551 Khan, others, ar cr

TRANSPORTATION (Tran)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for Tran courses.

R**3054 Fundamentals of Transportation** (§8154; prereq Econ 1002) (A-N only)
★LECT 1115-1200 MWF, BlegH 5, Beier
308393 –1 LAB 0815-0900 T, BlegH 425, 4 cr
608397 –2 LAB 0915-1000 T, BlegH 425, 4 cr
008400 –3 LAB 1015-1100 T, BlegH 425, 4 cr

R**3064 Business Logistics** (§8264; prereq 3054) (A-N only)
219211 1015-1200 TTh, Law 15, Harper, 5 cr

R**8264 Business Logistics** (§3064; prereq 3054 or 8154, grad mgmt/IR student or grad SMgt approval) (A-N only)
112440 1015-1200 TTh, Law 15, Harper, 5 cr

R**8990 Readings in Transportation and Business Logistics** (prereq consent of adviser, #, grad SMgt approval) (A-N only)
616547 ar cr

R**8995 Graduate Research in Transportation and Business Logistics** (prereq grad SMgt approval) (A-N only)
616550 ar cr

UNIVERSITY COLLEGE (UC)

R**3075 Independent Study** (prereq △)
615897 ar cr

3200 Introductory Period (prereq UWW student, △) (S-N only)
215899 ar cr

3201 Directed Studies (prereq UWW student, △) (S-N only)
815901 8 cr

3211 Degree Planning (prereq University Without Walls student, △) (S-N only)
112591 7 cr

3212 Degree Planning (prereq University Without Walls student, △) (S-N only)
812593 7 cr

3213 Degree Planning (prereq University Without Walls student, △)
412595 7 cr

3291 Graduation Dossier Preparation (max 21 cr; prereq University Without Walls student, △) (S-N only)
112597 7 cr

3292 Graduation Dossier Preparation (max 21 cr; prereq University Without Walls student, △) (S-N only)
712599 7 cr

3293 Graduation Dossier Preparation (max 21 cr; prereq University Without Walls student, △)
212601 7 cr

3299 Graduation Dossier Examination (prereq University Without Walls student, prior submission of dossier for examination, △) (S-N only)
012589 7 cr

3401 Directed Studies (prereq University Scholars student, △)
415903 ar cr

URBAN STUDIES (UrbS)
Liberal Arts

R**3102 Urban Studies Colloquia** (prereq #) (S-N only)
819219 –1 1315-1500 T, Mgmt/Econ 160, Wiley, 2 cr
536967 –2 1415-1600 W, Law 1, Zaidman, 2 cr

R**3500 Workshops** (prereq jr or sr, #)
619223 –1 1315-1600 Th, Mgmt/Econ 130, Portmann, 4 cr
512684 –2 1815-2100 Th, Mgmt/Econ 160, Cummings, 4 cr

R**3900 Internship** (max 12 cr; prereq jr, sr, △)
119234 1800-2000 M, Mgmt/Econ 160, Hickey, 1-6 cr

R**3970 Directed Studies** (prereq #, △, college approval)
019235 ar cr

URDU (Urdu)
South And Southwest Asian Studies
Liberal Arts

1102 Beginning Urdu (§Hndi 1102, 5102; prereq 1101)
218995 1315-1400 MTWThF, FolH 52, Staneslow, 5 cr

5132 Intermediate Urdu (§3032; prereq 5131)
518999 5 cr

5970 Directed Readings (prereq #, △, CLA approval)
919003 ar cr

5990 Directed Research (prereq #, △, CLA approval)
519005 ar cr

8990 Research (prereq #)
119007 ar cr

UROLOGIC SURGERY (Urol)
Medical School

5180 Externship in Urology (prereq regis med)
617813 ar cr

8250 Urological Surgery
919552 0800-1200 MWF, 4 cr (Mayo OR Room H)

8251 Cystoscopy and Urological Diagnosis
719553 0800-1200 MTWThF, Fraley, 4 cr (Cysto Suite)

8252 Urological Conference
519554 0800-0900 S, Fraley, 4 cr (Sta 57 Conf Room)

8253 Research in Urology
319555 Fraley, 4 cr

8254 Urological Seminar
119556 1300-1400 MWF, Mayo A503, Fraley, 3 cr

8255 Urological Radiological Conference
019557 1300-1400 MTWThF, Mayo A503, Fraley, 3 cr

8256 Urological Pathological Conference
819558 1600-1700 W, Mayo A503, Fraley, 3 cr

8257 Selected Topics on the Genitourinary System (prereq MD or PhD degree, PhD with #)
517836 2 cr

VETERINARY BIOLOGY (VB)
Veterinary Medicine

5102 Veterinary Neurobiology (prereq #)
★LECT 0900-0950 T, 1300-1350 Th, AnScVM 125, Beitz, Fletcher, others, 3 cr
125910 –1 LAB 1400-1650 Th, AnScVM 104

5105 Microscopic Anatomy of Domestic Animals (prereq #)
★LECT 0900-1050 MWF, AnScVM 125, Czarnecki, Gallant, 4 cr
825912 –1 LAB 1000-1130 MWF, AnScVM 104

5140 Vertebrate Microanatomy (prereq 5120 or #)
119954 Weber, 1-6 cr

5149 Topics of Organology (prereq 5104, #)
719956 1-5 cr

5211 Veterinary Biochemistry Laboratory (prereq #)
005772 –1 LAB 1400-1650 M, AnScVM 104, Jorgensen, Louis, 1 cr
405775 –2 LAB 1400-1650 W, AnScVM 104, Jorgensen, Louis, 1 cr

5212 Veterinary Biochemistry and Nutrition (prereq #)
319958 1300-1350 MW, 1100-1150 TTh, AnScVM 135, Jorgensen, Louis, others, 4 cr

5306 Animal Physiology (prereq regis vet med or #)
★LECT 0800-0850 MWF, AnScVM 135, Good, Jankus
119248 –1 LAB 1300-1350 T, AnScVM 125, 1300-1650 T, AnScVM 161, Dziuk, Duke, others, 5 cr
★DEM 0800-0950 Th, AnScVM 125

5401 Veterinary Pharmacology (prereq 5400 or #)
★LECT 0800-0850 MWF, AnScVM 125, A Larson, 4 cr
★REC 1400-1650 M, AnScVM 125, 161, A Larson
819253 –1 LAB 0900-1150 Th, AnScVM 161, A Larson

5920 Independent Research in Veterinary Biology (prereq #)
919969 ar cr

5950 Directed Studies (prereq #, △)
119971 1-5 cr

8112 Research Propositions in Morphology (prereq #)
319975 2 cr

8113 Research Propositions in Morphology (prereq #)
819981 2 cr

8114 Research Propositions in Morphology (prereq #)
419983 2 cr

8134 Comparative Veterinary Neurology (prereq 5100, #)
119985 4 cr

8135 Comparative Veterinary Neurology (prereq 5100, #)
519988 4 cr

8136 Experimental Comparative Veterinary Neurology (prereq 8135, #)
719990 3 cr

8148 Seminar: Veterinary Anatomy (prereq 5100, 5104 or #)
519991 1 cr

8330 Seminar: Physiology and/or Pharmacology (prereq #)
119993 ar cr

8349 Research in Physiology (prereq #)
819995 ar cr

8448 Problems in Veterinary Pharmacology (prereq 5401, #)
219998 Gray, A Larson, ar cr

VETERINARY MEDICINE (CVM)
Veterinary Medicine

5400 Laboratory Animal Medicine (prereq #) (A-N only)
138150 0800-0950 T, AnScVM 135, 3 cr

5762 Clinics (prereq #)
220021 0800-1150 M, 0800-1650 TWThFS, VetHos, 16 cr

VETERINARY PATHOBIOLOGY (VPB)
Veterinary Medicine

5504 Veterinary Clinical Pathology (prereq 5503 or #)
★LECT 1300-1350 TTh, VetS 145, Perman, Grindem, 3 cr
119274 –1 LAB 1400-1650 T, VetS 225, 229
719276 –2 LAB 1400-1650 Th, VetS 225, 229

5521 Surgical Pathology (prereq #)
620002 D Barnes, 3 cr

5522 Diagnostic Pathology (prereq #)
420003 D Barnes, 5 cr

5524 Pathology of Spontaneous Diseases of Poultry (prereq #)
407381 Walser, 3 cr

5533 Directed Studies in Veterinary Pathobiology (prereq regis vet med, 4th yr, #)
120005 K H Johnson, Hayden, others, ar cr

5602 Veterinary Parasitology II (prereq 5601 or #)
★LECT 1300-1350 MWF, VetS 145, Schlotthauer, Stromberg, 4 cr
119282 –1 LAB 1400-1450 W, VetS 145, 1400-1650 W, VetS 225, 229
819284 –2 LAB 1400-1450 F, VetS 145, 1400-1650 F, VetS 225, 229

5702 Pathogenic Bacteria and Fungi (prereq 5701 or equiv or #) (A–N only)
★LECT 0900-0950 MWF, AnScVM 135, Loken, 5 cr
925917 –1 LAB 1000-1150 MWF, VetS 325

5704 Avian Diseases (prereq 5503, 5703 or #)
320009 1000-1150 T, 0800-0850 Th, VetS 145, Newman, 3 cr

5707 Poultry Disease Control (not open to vet med students; prereq Biol 1002, AnSc 1100, MicB 3103 or equiv)
320012 0800-0950 TTh, VetS 215, 3 cr

5748 Problems in Veterinary Microbiology and Public Health (prereq 5703 or equiv, #)
020014 ar cr

8500 Seminar: Veterinary Pathology (prereq 5503, #)
420017 O'Leary, 1–3 cr

8504 Seminar: Advanced Veterinary Histopathology (prereq 5502, 5503, #)
120019 1600-1700 M, VetS 215, Hayden, 1 cr

8531 Veterinary Necropsy (max 6 cr; prereq 5501, 5502, 5503, #)
420020 O'Leary, Leininger, others, 1–2 cr

8532 Comparative Neuropathology (prereq #)
017629 O'Leary, 2 cr

8533 Problems: Pathology (prereq #)
120022 K H Johnson, Hayden, others, ar cr

8534 Problems: Clinical Pathology (prereq #)
920023 Perman, others, ar cr

8612 Immunity to Parasitic Infections: Helminths (prereq parasitology immunology, #)
234193 Stromberg, 3 cr

8648 Problems in Veterinary Parasitology (prereq 5602, #)
720024 ar cr

8700 Seminar: Veterinary Microbiology (prereq #)
320026 Ward, 1 cr

8720 Advanced Veterinary Microbiology (prereq #)
020028 ar cr

8721 Advanced Poultry Diseases (prereq 5704, #)
120030 Newman, ar cr

8724 Advanced Veterinary Diagnostic Microbiology (prereq #)
020031 Ward, ar cr

VOCATIONAL EDUCATION (VoEd)
Vocational And Technical Education Education

5300 Philosophy and Practice of Vocational Education (A–N only)
617617 1600-1830 W, VoTech R385, Miletich, 3 cr

5400 Education for Work (prereq 5300 or #) (A–N only)
733923 1600-1830 T, VoTech R385, G Swanson, 3 cr

5500 Introduction to Vocational Education Administration (A–N only)
506609 1600-1830 M, VoTech R285, Knaak, 3 cr

R5750 Training in Industry and Business (A–N only)
133926 1830-2130 Th, VoTech R280, R Swanson, 4 cr

R5760 Organization Development in Industry and Business (A–N only)
033927 1830-2130 W, VoTech R285, McLean, 3–4 cr

5780 Internship: Training and Development (max 15 cr; prereq 5750) (S-N optional)
121364 McLean, R Swanson, ar cr

5800 Working with Special Needs Students (A–N only)
104457 1300-1430 TTh, VoTech R285, McLean, 3 cr

WOMEN'S STUDIES (WoSt)
Liberal Arts

R1006 Introduction to Women's Studies
★LECT 0915-1000 MWF, FordH 55, Geiger
219306 –1 REC 1015-1100 M, FordH 60, 4 cr
119307 –2 REC 1115-1200 M, FordH 175, 4 cr
919308 –3 REC 0915-1000 T, FordH 447, 4 cr
119310 –4 REC 1115-1200 T, FordH 70, 4 cr
719312 –5 REC 1215-1300 T, FordH 70, 4 cr
319314 –6 REC 1015-1100 W, FordH 60, 4 cr
019316 –7 REC 1115-1200 W, FordH 175, 4 cr
619318 –8 REC 1015-1100 Th, MinMet 124, 4 cr
819320 –9 REC 1115-1200 Th, FordH 70, 4 cr
419322 –10 REC 1215-1300 Th, FordH 70, 4 cr

R3001 The Biology of Women (prereq Biol 1011 or PhsI 1001 or #)
113272 0945-1100 TTh, FordH 349, Zita, 4 cr

R3200 Women and Work: Visions for the Future (max 12 cr)
407140 1415-1600 TTh, FordH 349, Faunce, 4 cr

R3300 Comparative Study of Women: International Perspectives (max 8 cr; prereq introductory courses in one or two social sciences)
729225 0815-0930 TTh, FordH 349, Knudson, 4 cr

R3900 Seminar: Feminist Theory (prereq △)
933242 1315-1500 M, FordH 447, 4 cr

3970 Directed Studies (prereq #, △, college approval)
219239 1–15 cr

3980 Directed Instruction (prereq #, △, college approval)
619240 1–5 cr

3990 Directed Research (prereq #, △, college approval)
419241 1–5 cr

R5377 Feminist Therapies
533244 1230-1530 W, FordH 349, Faunce, 4 cr

R5404 Feminist Criticism of Concepts of the Self (prereq 12 cr WoSt courses or substantail work in phil, religious stds, soc sci or psy or #)
333245 1245-1400 TTh, FordH 175, Scheman, 4 cr

5970 Directed Studies (max 12 cr; prereq #, △, CLA approval)
219242 1–5 cr

YOUTH DEVELOPMENT AND RESEARCH (YoSt)
Home Economics

R5120 Independent Study in Youth Studies (max 12 cr; prereq #)
317837 Baizerman, Beker, others, ar cr

5130 Special Topics in Youth Studies (max 15 cr; prereq #)
637785 1715-1900 Th, SocSci 307, Schwartz, 3–5 cr (Mpls)

R5133 Youth and Health (prereq 5331, Soc 1001, CPsy 5303, PubH 3004 or #)
206071 0915-1100 T, MoosT 2585, Baizerman, 3 cr (Mpls)

5200 Working with Youth Through Adults (max 9 cr; prereq BA degree, consent of faculty)
706494 1000-1600 F, McNH 386A, Hedin, 1–3 cr

R5202 Practicum (prereq 5201)
917848 1000-1200 T, McNH 386A, Seltzer, 4 cr

5331 Youth Agencies, Organizations and Youth Service Systems (prereq two courses in sociology/anthropology, work exper in a youth agency or organization)
417845 1600-1830 Th, McNH 386A, 3 cr

5601 International Development Practicum (prereq participation in international development collateral)
737177 Seltzer, ar cr

8002 Advanced Seminar in Youth Studies (prereq #)
117841 Baizerman, Beker, others, 3 cr

ZOOLOGY (Zool)
Biological Sciences

8970 Seminar
616483 0 cr

8980 Special Research
216485 ar cr

8990 Research
916487 ar cr

COURSES OPEN THROUGH EXTENSION CLASSES

The following list indicates those day school courses, scheduled before 4 p.m., which are open to Extension students. (If you are a currently enrolled day school student, you may not register through Extension for the following day school courses.) You should use this list in conjunction with the Schedule of Classes to determine which courses and sections you are eligible to register for. Occasionally, courses not on the following list are also open to Extension students with written permission from the instructor and departmental office. **No 8000-level courses are available under this program.**

All courses which have **R** preceding the course number have limited enrollment. Of the total number of spaces available in these courses, only a very few are open to Extension students. You must register early to avoid disappointment. If a department is marked with an * on the list below, written permission is required from both the instructor and the departmental office for all limited-enrollment (**R**) courses. This written permission must contain specific permission for all parts of the course (e.g., LECT, LAB, REC), and the section numbers for those parts must be clearly identified (for example, LECT 1, LAB 12). For courses in departments without the *, no written permission is required. Written permission is never required for non-limited courses (no **R** before the course number).

As an Extension student, you are subject to the same requirements as day school students. You must meet prerequisites in order to register for a class and you must obtain an authorized and signed Registration Override Permit from the instructor before registering for any course in which the symbol # appears as part of the prerequisite statement. (See Section 2 for an explanation of this and other symbols used in the Schedule of Classes.) Usually, you need only call and request that the form be sent out to you. In some instances, however, you may have to come to campus to obtain permission.

Check your 1983-84 *Extension Classes Bulletin* for instructions on how, when, and where to register. Call 376-3000 for a bulletin, registration forms, and a brochure with more complete information on registration and tuition rates.

Afro-American Studies: All courses
American Indian Studies: All courses
Ancient Near Eastern and Jewish Studies: All courses
Animal Science: All courses
Anthropology: All courses
Architecture: All courses *except* 3082, 3092, 5112, 5122
Art History: All courses
Art Studio*: All courses *except* 1701, 3710, 5710
Astronomy: 1011, 1015
Biochemistry*: All courses
Biology*: All courses *except* 1008
Botany: All courses
Chicano Studies: All courses
Child Psychology: All courses
Civil Engineering*: All courses
Classics*: All courses
Communication Disorders: All courses
Danish: All courses
Dutch: All courses
East Asian Studies: All courses
Ecology and Behavioral Biology*: All courses
Educational Administration: All courses
English Language and Literature: All courses *except* 1009, 1016, 3241, 3242, 3243, 3852
Family Social Science: All courses *except* 1401, 3260, 5200
Finnish: All courses
Forest Products: All courses
Forest Resources: 1201, 5103, 5105, 5212, 5262
French: All courses
French and Italian: All courses
General College*: All courses
Genetics and Cell Biology: All courses *except* 3022, 5022
Geography: All courses
German: All courses *except* 1101
Higher Education: All courses
History: All courses *except* 5550 thru 5990
History of Medicine: All courses
Humanities*: All courses
Industrial Engineering/Operations Research*: All courses available after regular registration period with permission of instructor.
Insurance: 3220
Interdepartmental Studies: 3101, 5403
Italian: All courses
Journalism*: 1001, 3007, 3008, 5251, 5531, 5611, 5615, 5725, 5777, 5825
Landscape Architecture*: 1022, 1024, 1031, 3002
Latin American Studies: All courses
Linguistics: All courses
Mathematics: All courses
Mechanical Engineering*: All courses available after regular registration period with permission of instructor.
Microbiology: All courses
Military Science: All courses
Music Education: All courses *except* 1001, 1051, 3550, 5550
Norwegian: All courses
Pharmacy: All courses
Philosophy: All courses *except* 1001, 1002, 3302
Polish*: All courses
Political Science: All courses *except* 1001, 3306, 5738
Portuguese*: 1001 thru 5521
Psychology*: All courses *except* 1004, 1005 and Honors courses.
Public Affairs: All courses *except* 5141, 5521
Public Health*: 3001, 3004, 3033, 5004, 5005, 5015, 5040, 5045, 5049, 5098, 5157, 5184, 5201, 5300, 5308, 5333, 5335, 5340, 5500, 5504, 5512, 5594, 5611, 5612, 5618, 5620, 5649, 5800, 5801, 5802
Religious Studies*: All courses
Russian*: All courses
Russian and East European Studies*: All courses
Scandinavian: All courses
Social and Philosophical Foundations of Education: All courses
Social Work: All courses *except* 5601
Sociology: All courses
South and Southwest Asian Studies: All courses
Spanish*: 1101 thru 3920
Speech-Communication*: All courses *except* 3441
Statistics*: 1051 thru 5900
Swedish: All courses
Theatre Arts*: 1101, 1102, 1301, 1504, 3321, 3515, 5171, 5514
Urban Studies*: All courses
Women's Studies: All courses

COURSE DESIGNATORS
(Twin Cities)

Acct	Accounting
AdPy	Adult Psychiatry
AEM	Aerospace Engineering and Mechanics
Afro	Afro-American Studies
AgEc	Agricultural Economics
AgEd	Agricultural Education
AgEn	Agricultural Engineering
AgET	Agricultural Engineering Technology
AgJo	Agricultural Journalism
Agri	Agriculture
Agro	Agronomy and Plant Genetics
Air	Aerospace Studies
Akka	Akkadian
AmIn	American Indian Studies
AmSt	American Studies
Anat	Anatomy
ANEJ	Ancient Near Eastern and Jewish Studies
Anes	Anesthesiology
AnSc	Animal Science
AnSt	Ancient Studies
Anth	Anthropology
Arab	Arabic
Arch	Architecture
ArEd	Art Education
Arm	Aramaic
ArtH	Art History
ArtS	Art Studio
Ast	Astronomy
BA	Business Administration
Ben	Bengali
BFin	Finance
BGS	Business, Government and Society
BioC	Biochemistry (Biol Sci)
Biol	Biology
BLaw	Business Law
BME	Business and Marketing Education
Bot	Botany
BPhy	Biophysical Sciences
CAPy	Child and Adolescent Psychiatry
CDis	Communication Disorders
CE	Civil Engineering
Chem	Chemistry
ChEn	Chemical Engineering
Chic	Chicano Studies
Chn	Chinese
CHS	College Honors Seminar
CISy	Curriculum and Instructional Systems
Clas	Classics
ClCv	Classical Civilization
CLit	Comparative Literature
Comp	Composition and Communication
CPsy	Child Psychology
CSci	Computer Science
CVM	College of Veterinary Medicine
Dan	Danish
Dent	Dentistry
Derm	Dermatology
DH	Dental Hygiene
Dnce	Dance
Dsgn	Design
Dtch	Dutch
EAS	East Asian Studies
EBB	Ecology and Behavioral Biology
Econ	Economics
EdAd	Educational Administration
Educ	Adult and Teacher Education
EE	Electrical Engineering
Elem	Elementary Education
Endo	Endodontics
Engl	English Language and Literature
Ent	Entomology
ESL	English as a Second Language
Fin	Finnish
ForP	Forest Products
FoSt	Foreign Study
FPAd	Family Planning Administration
FPCH	Family Practice and Community Health
FR	Forest Resources
Fren	French
FrIt	French and Italian
FScN	Food Science and Nutrition
FSoS	Family Social Science
FW	Fisheries and Wildlife
GC	General College
GCB	Genetics and Cell Biology
Geo	Geology and Geophysics
GeoE	Geo-Engineering
Geog	Geography
Ger	German
Grad	Graduate School
Grk	Greek
HCol	Honors Colloquium
HE	Home Economics
Hebr	Hebrew
HEEd	Home Economics Education
HiEd	Higher Education
Hist	History
Hlth	School Health Education
HMed	History of Medicine
Hndi	Hindi
Hort	Horticultural Science
HSci	History of Science and Technology
HSU	Health Science Units
Hum	Humanities
ID	Interdepartmental Study
IEOR	Industrial Engineering/Operations Research
Ind	Industrial Education
InMd	Interdisciplinary Medicine
Ins	Insurance
IntR	International Relations
IofT	Institute of Technology
IR	Industrial Relations
Ital	Italian
Jour	Journalism and Mass Communication
Jpn	Japanese
JwSt	Jewish Studies
LA	Landscape Architecture
LACS	Large Animal Clinical Sciences

LaMP	Laboratory Medicine and Pathology
LAS	Latin American Studies
Lat	Latin
Law	Law
LFA	Literature and Fine Arts
Lib	Library School
Ling	Linguistics
LMed	Laboratory Medicine
Luch	Luchuan
Mar	Marathi
Math	Mathematics
MatS	Materials Science
MBA	Master of Business Administration
MdBc	Biochemistry (Medical)
MdGk	Modern Greek
ME	Mechanical Engineering
Med	Medicine
MedC	Medicinal Chemistry
MedT	Medical Technology
MESA	Middle Eastern and South Asian Studies
MetE	Metallurgical Engineering
Mgmt	Management
MicB	Microbiology
Mil	Military Science
MinE	Mining Engineering
MIS	Management Information Systems
Mktg	Marketing
Mort	Mortuary Science
MthE	Mathematics Education
MuEd	Music Education
Mus	Music
MusA	Music Applied
Nav	Naval Science
Neur	Neurology
Nor	Norwegian
NSu	Neurosurgery
Nurs	Nursing
Nutr	Nutrition
OBio	Oral Biology
Obst	Obstetrics and Gynecology
OM	Operations Management
OPat	Oral Pathology
Oph	Ophthalmology
ORad	Oral Radiology
OrSu	Orthopedic Surgery
OSur	Oral Surgery
Otho	Orthodontics
Otol	Otolaryngology
PA	Public Affairs
Path	Pathology
PE	Physical Education
Ped	Pediatrics
Pedo	Pediatric Dentistry
Per	Persian
Pero	Periodontics
Phar	Pharmacy
Phcg	Pharmacognosy
Phcl	Pharmacology
Phil	Philosophy
Phm	Pharmaceutics
Phsl	Physiology
Phys	Physics
PlPa	Plant Pathology
PlPh	Plant Physiology
Plsh	Polish
PMed	Physical Medicine and Rehabilitation
PO	Personal Orientation
Pol	Political Science
Port	Portuguese
Pros	Prosthodontics
Psy	Psychology
PsyF	Psychological Foundations
PsyS	Psychoeducational Studies
PubH	Public Health
QA	Quantitative Analysis
Rad	Radiology
RCD	Resources and Community Development
Rec	Recreation, Park, and Leisure Studies
RelS	Religious Studies
Rhet	Rhetoric
Russ	Russian
SACS	Small Animal Clinical Sciences
SAPh	Social and Administrative Pharmacy
Scan	Scandinavian
SeEd	Secondary Education
Serb	Serbo-Croatian
Skt	Sanskrit
Slav	Slavic
Soc	Sociology
Soil	Soil Science
Span	Spanish
Spch	Speech-Communication
SPFE	Social and Philosophic Foundations of Education
SpPt	Spanish Portuguese
Stat	Statistics
Sum	Sumerian
Surg	Surgery
SW	Social Work
Swed	Swedish
TexC	Textiles and Clothing
Th	Theatre Arts
Thai	Thai
Tib	Tibetan
TRad	Therapeutic Radiology
Tran	Transportation
Turk	Turkish
UC	University College
UrbS	Urban Studies
Urdu	Urdu
Urol	Urologic Surgery
VB	Veterinary Biology
VoEd	Vocational Education
VPB	Veterinary Pathobiology
WoSt	Women's Studies
Ydsh	Yiddish
YoSt	Youth Development and Research
Zool	Zoology

DIRECTORY FOR DEPARTMENT OFFICES

Adult and Teacher Education ..... PeikH 175
Aerospace Engineering and Mechanics ..... AkerH 107
Aerospace Studies ..... Armory 3
Afro-American Studies ..... SocSci 214
Agricultural and Applied Economics ..... ClaOff 231
Agricultural Education ..... VoTech 320
Agricultural Engineering (Agri) ..... AgEng 213
Agricultural Engineering (IT) ..... AgEng 213
Agricultural Journalism ..... HckrH 326
Agronomy and Plant Genetics ..... Agr 303
American Indian Studies ..... SocSci 812
American Studies ..... LindH 225
Anatomy ..... JacH 4-135
Ancient Near Eastern & Jewish Studies ..... KlaCt 178
Anesthesiology ..... Mayo B515
Animal Science ..... PetH 120
Anthropology ..... FordH 215
Architecture ..... Arch 110
Art Education ..... WullH 135
Art History ..... JonesH 107
Art, Studio ..... ArtB 208
Astronomy ..... Phys 356

Biochemistry (BioC) ..... GorL 140
Biochemistry (Med) ..... MlrdH 4-225
Biological Sciences ..... SnH 123
Biology ..... SnH 223
Biophysical Sciences ..... TNCE 200
Botany ..... BioSci 220
Business and Marketing Education ..... VoTech 420

Chemical Engineering and Materials Science ..... AmundH 151
Chemistry ..... SmithH 139
Chicano Studies ..... FordH 489
Child Psychology ..... ChDev 158
Civil and Mineral Engineering ..... MinMet 112
Classics ..... FolH 310
Communication Disorders ..... ShevH 115
Comparative Literature ..... FolH 301
Computer Science ..... LindH 136
Counseling, Student Personnel Psychology ..... BuH 139
Curriculum and Instructional Systems ..... PeikH 130

Dance ..... NorrisH 101
Dental Hygiene ..... MoosT 5-164
Dentistry ..... MoosT 15-209
Dermatology ..... PWB 4-240
Design ..... McNH 240

East Asian Studies ..... FolH 113
Ecology and Behavioral Biology ..... Zoology 109
Economics ..... Mgmt/Econ 1035
Educational Administration ..... PeikH 275
Electrical Engineering ..... ElectE 139
Elementary Education ..... PeikH 125
English ..... LindH 207
Entomology ..... HodsonH 219

Family Practice, Community Health ..... PWB 6-240
Family Social Science ..... McNH 290
Fisheries and Wildlife ..... HodsonH 219
Food Sciences, Nutrition ..... FScN 225
Forest Products ..... KaufL 203
Forest Resources ..... GrnH 110
French and Italian ..... FolH 200

General College ..... NichH 106
Genetics and Cell Biology ..... BioSci 250
Geography ..... SocSci 414
Geology and Geophysics ..... PillsH 106
German ..... FolH 219

Higher Education ..... BuH 105
History ..... SocSci 614
History of Science & Technology ..... Phys 428
Home Economics ..... McNH 32
Home Economics Education ..... VoTech 325
Horticultural Science ..... AlderH 305
Humanities ..... FordH 314

Industrial Education ..... VoTech 425
Interdepartmental Study (CLA) ..... JohH 220

Journalism, Mass Communication ..... MurH 111

Laboratory Medicine ..... Mayo D242
Large Animal Clinical Sciences ..... VetTchHos 225
Law School ..... Law 285
Library School ..... WaLib 419
Linguistics ..... KlaCt 142

Management, School of ..... Mgmt/Econ 225
Mathematics ..... VinH 127
Mathematics Education ..... PeikH 125
Mechanical Engineering ..... MechE 125
Medical Technology ..... PWB 15-170
Medicine ..... PWB 14-110
Microbiology ..... Mayo 1060
Military Science ..... Armory 108
Mining Engineering ..... MinMet 112
Mortuary Science ..... Botany 400
Music ..... ScottH 106
Music Education ..... ScottH 104

Naval Science ..... Armory 203
Neurology ..... PWB 12-100
Nursing ..... HSUnitF 5-140

Obstetrics and Gynecology ..... MoosT 12-211
Ophthalmology ..... PWB 9th floor
Otolaryngology ..... PWB 8-240

Pediatrics ..... PWB 13-112
Pharmacology ..... MlrdH 3-260
Pharmacy ..... HSUnitF 5-130
Philosophy ..... FordH 355
Physical Education ..... CookeH 224
Physical Medicine and Rehabilitation ..... Mayo 860
Physics ..... Phys 148
Physiology ..... MlrdH 6-255
Plant Pathology ..... StakH 304
Plant Physiology ..... BioSci 220
Political Science ..... SocSci 1414
Psychiatry ..... Mayo A605
Psychoeducational Studies ..... BuH 204
Psychological Foundations ..... BuH 204
Psychology ..... EltH N218
Public Affairs ..... SocSci 909
Public Health ..... Mayo 1360

Radiology ..... Mayo B238
Recreation, Park, and Leisure Studies ..... CookeH 203
Rhetoric ..... HckrH 202
Russian & East European Studies ..... EltH 253

Scandinavian Languages ..... FolH 210
School Health Education ..... CookeH 110
Secondary Education ..... PeikH 145
Small Animal Clinical Sciences ..... VetTchHos C339
Social, Philosophical Foundations of Educ ..... PeikH 275
Social Work ..... FordH 400
Sociology ..... SocSci 1114
Soil Science ..... Soils 125
South and Southwest Asian Studies ..... KlaCt 192
Spanish and Portuguese ..... FolH 34
Special Education ..... BuH 206
Speech-Communication ..... FolH 317
Statistics ..... VinH 270
Surgery ..... PWB 11-100

Textiles and Clothing ..... McNH 364
Theatre Arts ..... MdbH 208

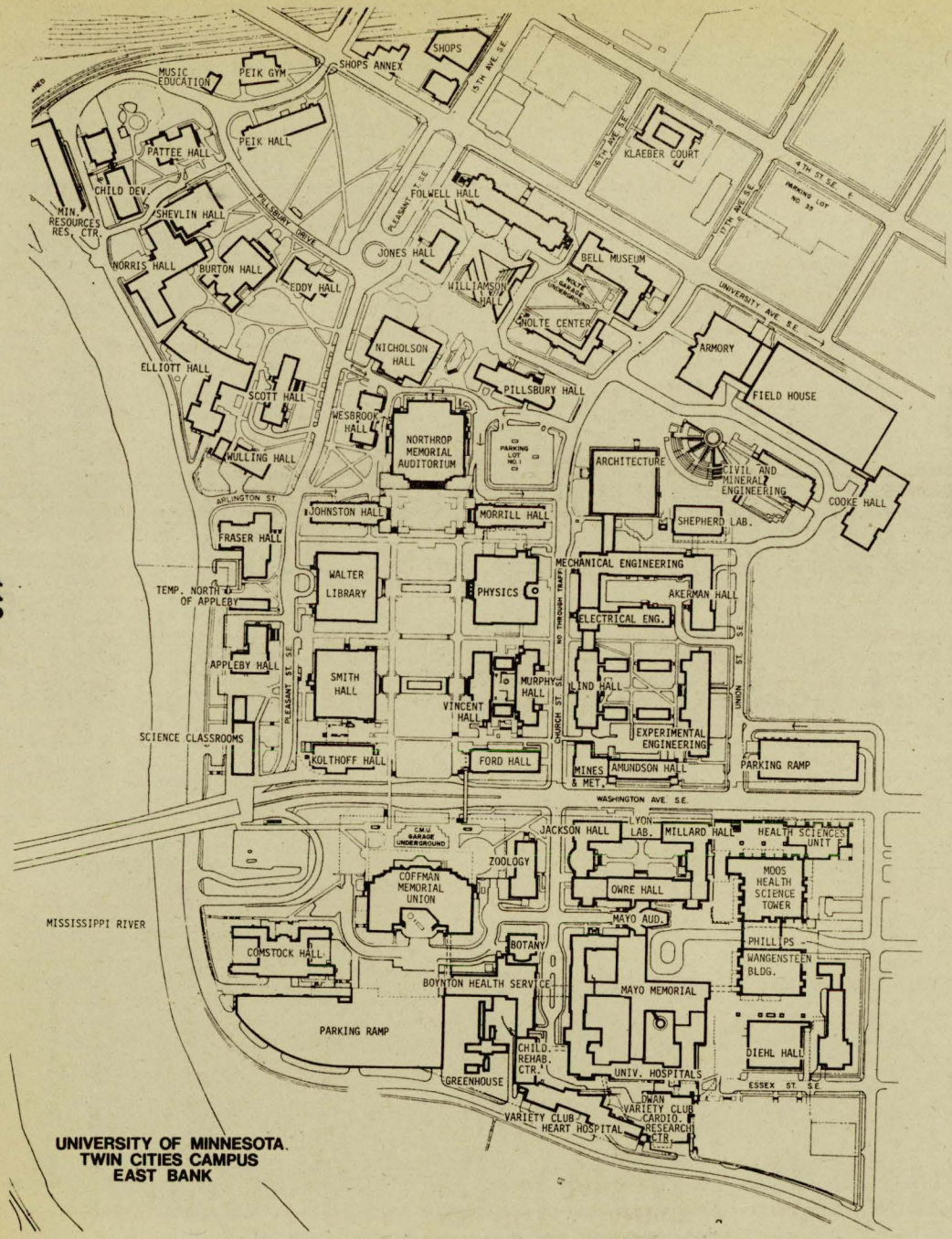
University College:
Intercollege Program (ICP) ..... TNA 213
University Without Walls (UWW) ..... WesH 201

Veterinary Biology ..... AnScVM 295K
Veterinary Pathobiology ..... VetS 205g
Vocational and Technical Education ..... VoTech 210

Women's Studies ..... FordH 492

Youth Development and Research ..... McNH 386

Zoology ..... Zoology 109



UNIVERSITY OF MINNESOTA
TWIN CITIES CAMPUS
EAST BANK

BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

MINNEAPOLIS

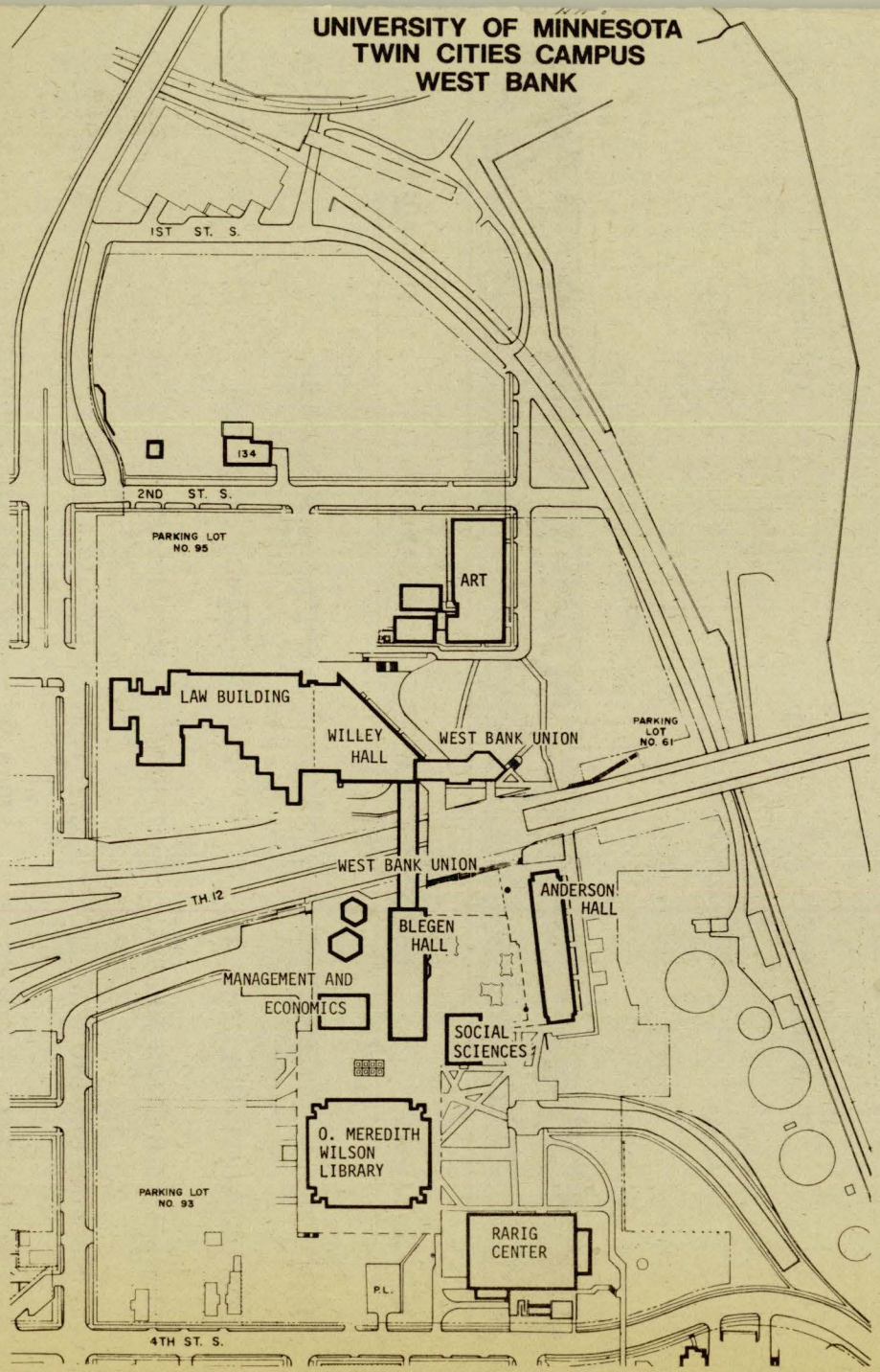
East Bank

AkerH, Akerman Hall ⊡
AmundH, Amundson Hall ♿ * L
ApH, Appleby Hall ■ *
Arch, Architecture ♿ * L
Armory ⊡
BellMus, Museum of Natural History ♿ * L
BFAB, Bierman Field Athletic Building ⊡ * L
Botany ⊡
BoynHS, Boynton Health Service ♿ * L
BuH, Burton Hall ♿ * L
CenH, Centennial Hall
ChDev, Child Development ♿ *
ChRC, Children's Rehabilitation Center ♿ * L
CivMinE, Civil and Mineral Engineering ♿ * L
CMU, Coffman Memorial Union ♿ * L
CookeH, Cooke Hall ■
DiehlH, Diehl Hall ♿ *
DVCCRC, Dwan Variety Club Cardiovascular Research Center ♿ * L
EddyH, Eddy Hall ■
EdHAn, Eddy Hall Annex
ElectE, Electrical Engineering ⊡
EltH, Elliott Hall ♿ * L
ExpE, Experimental Engineering ■
FieldHse, University Field House
FolH, Folwell Hall ♿ * L
FordH, Ford Hall ♿ * L
FraserH, Fraser Hall ⊡
FronH, Frontier Hall ♿ *
HL, St. Anthony Falls Hydraulic Laboratory (Hennepin Island)
HolB, Holman Bldg
HSUnitF, Health Sciences Unit F ♿ * L
JacH, Jackson Hall ♿ *
JOAd, Jackson-Owre Addition ♿ *
JohH, Johnston Hall ♿ * L
JonesH, Jones Hall ■
KlaCt, Klaeber Court ⊡
KoltH, Kolthoff Hall ♿ * L
LindH, Lind Hall ♿ * L
LyonL, Lyon Laboratories
Mayo, Mayo Memorial ♿ * L
MechE, Mechanical Engineering ♿ * L
MinMet, Mines and Metallurgy ♿ *
MlrdH, Millard Hall ♿ *
MMA, Mayo Memorial Auditorium ⊡
MoosT, Moos Health Sciences Tower (formerly HSUnitA) ♿ * L
MorH, Morrill Hall ♿ * L
MRRC, Mineral Resources Research Center ■
MurH, Murphy Hall ■
MusEd, Music Education ■
NichH, Nicholson Hall ♿ * L
NMA, Northrop Memorial Auditorium ♿ * L
NorrisH, Norris Hall ⊡ L
OwreH, Owre Hall ♿ * L
PeikG, Peik Gym ⊡
PeikH, Peik Hall ⊡ *
Phys, Tate Laboratory of Physics ⊡ *
PiH, Pioneer Hall ⊡
PillsH, Pillsbury Hall ■
PtH, Pattee ⊡
PWB, Phillips Wangensteen Building ♿ * L
SaH, Sanford Hall ■
SciCB, Science Classroom Building ⊡ *
ScottH, Scott Hall ■
ShepLab, Shepherd Laboratories ♿ *
ShevH, Shevlin Hall ■
SmithH, Smith Hall ♿ *
Stad, Stadium ⊡ L
TerH, Territorial Hall ■
TNA, Temporary, North of Appleby ■
TNCE, Temporary, North Court of Engineering ■
VFWCRC, VFW Cancer Research Center
VinH, Vincent Hall ♿ *
WaLib, Walter Library ♿ * L
WesH, Wesbrook Hall ■
WmsA, Williams Arena ⊡ L
WmsonH, Williamson Hall ♿ * L
WullH, Wulling Hall ⊡ *
Zoology ♿ * L

CODES:

♿ = accessible building
⊡ = partially accessible
■ = inaccessible building
* = elevator
L = adapted lavatory

For a map, *Guide for the Handicapped*, and further information, contact Physical Planning at 373-5765 or Rehabilitation Services at 376-3143.



Continued on page 114

BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

MINNEAPOLIS

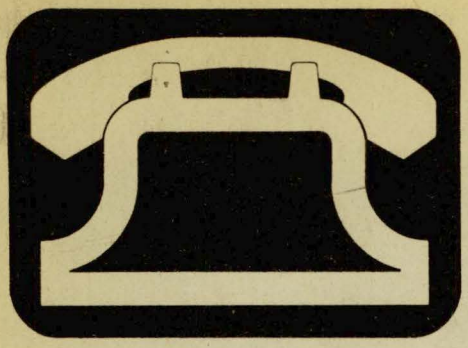
West Bank

AndH, Anderson Hall ♿ *
ArtB, Art Building (2020 Washington Ave S) ⊡
BlegH, Blegen Hall ♿ * L
Law, Law Building ♿ * L
MdbH, Middlebrook Hall ♿ * L
Mgmt/Econ, Management/Economics Building ♿ *
OMWL, O. Meredith Wilson Library ♿ * L
RarigC, Rarig Center ♿ * L
SocSci, Social Sciences Building ♿ *
WBU, West Bank Union ♿ L
WilleyH, Willey Hall ♿ * L

CODES:

♿ = accessible building
⊡ = partially accessible
■ = inaccessible building
* = elevator
L = adapted lavatory

For a map, *Guide for the Handicapped*, and further information, contact Physical Planning at 373-5765 or Rehabilitation Services at 376-3143.



Emergency and Frequently Called Telephone Numbers

Emergency Numbers

DEPARTMENT	PHONE NUMBER

TO REPORT FIRE — SERIOUS INJURY — ILLNESS — MAJOR UTILITY FAILURE

FROM U HOSPITALS PATIENT—OCCUPIED BUILDING ..... DIAL 123

FROM ALL OTHER CAMPUS LOCATIONS ..... DIAL 133

UNIVERSITY POLICE 373-3550

YOUTH EMERGENCY SERVICE 339-7033

Frequently Called Numbers

DEPARTMENT	PHONE NUMBER
BOYNTON HEALTH SERVICE	373-3141
CAMPUS ASSISTANCE CENTER	373-1234
COUNSELING BUREAU (MPLS)	373-4193
COUNSELING BUREAU (ST.P)	373-1140
CRISIS COUNSELOR, BOYN HS	373-4119
EMPLOYMENT, STUDENT	373-3674

DEPARTMENT	PHONE NUMBER
FINANCIAL AID (MPLS)	376-2424
FINANCIAL AID (ST.P)	376-2572
HEALTH SERVICE (ST.P)	373-0960
HOUSING OFFICE	373-7542
INFORMATION, UNIVERSITY	373-2002
OFFICE FOR STUDENTS WITH DISABILITIES	376-2716

Radio Shack's TRS-80® Campus Computers Are In a Class By Themselves



8K Model 100 Portable Computer **$799**
26-3801

Only $45 Per Month on CitiLine Credit

PC-4 Pocket Computer **69.95**
26-3650

PC-4 Interface **39.95**
26-3651

PC-4 Printer **79.95**
26-3652

The Model 100 Portable Computer helps you be more resourceful with its timesaving and organizational capabilities! Simply turn on the Model 100 and you have instant access to five built-in programs (plus your own files). Personal word processing is easy with the full size keyboard and 8-line by 40-character display. Use the communications program and built-in modem to access other computers and information networks. In addition, Model 100 is a phone directory, address book, appointment calendar and telephone auto-dialer, and it contains a very powerful BASIC programming language. Take the Model 100 anywhere, too—it weighs under four pounds and operates on batteries or optional-extra AC adapter.

The PC-4 Pocket Computer is a real computer at a remarkably low price! It's more powerful and easier to program (uses BASIC language) than a programmable calculator, which makes it ideal for tough engineering, business and math problems. The expandable 544-character memory can even hold multiple programs. With the cassette interface and an optional cassette recorder, save and load your own programs and data, or print them out on the PC-4 printer.

Available Nationwide. See the TRS-80 Model 100 and PC-4 at the Radio Shack Computer Center or participating store or dealer near you.

Radio Shack®
The biggest name in little computers®
A DIVISION OF TANDY CORPORATION

☐ **Send me your free TRS-80 Computer Catalog today!**

Mail To: Radio Shack, Dept. 84-A-51
300 One Tandy Center, Fort Worth, Texas 76102

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE _____

Prices apply at participating Radio Shack stores and dealers.

Personal Telephone Numbers

Name	Number

Make it with us and the sky's the limit.

Looking for a chance to move in the fast lane? Then check out Marine Corps Aviation. The training is superb. The challenges are unique. Your ticket to fly is your college diploma and your drive to succeed. If you've got what it takes, you could be at the controls of anything from a Cobra to a Harrier to the hottest thing flying, the F-18 Hornet. If you want to take it to the limit, mail the card or call toll-free, 800-423-2600. In California, 800-252-0241.



Marines

Maybe you can be one of us. The few. The proud. The Marines.

November 1983

OCTOBER

S	M	T	W	T	F	S
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

DECEMBER

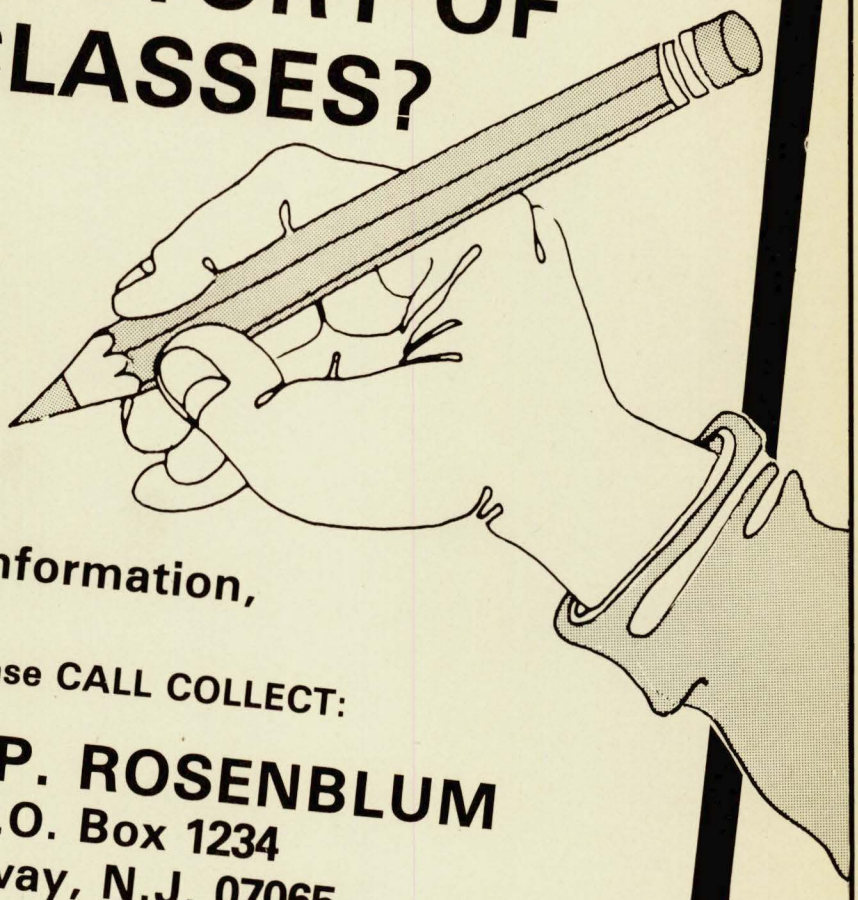
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

Take note of this!



Are you interested in advertising in this DIRECTORY OF CLASSES?



Every student must read this official school publication. We offer 100% readership.

For additional information,

Please CALL COLLECT:

DAVID P. ROSENBLUM
P.O. Box 1234
Rahway, N.J. 07065
(201) 382-6161

OLYMPUS OM-G

The Olympus OM-G complements your creativity in a unique way. With a complement of capabilities never before available in any SLR. At any price.

It's the world's lightest SLR with the ruggedness to accept a blazing 5-FPS motor drive. So you can capture sudden moments of motion, or emotion, as never before.

It's the world's smallest SLR with aperture-priority versatility and OTF™ (Off-the-film) automation that actually fine-tunes your exposure during exposure.

It's the world's only SLR with incredibly-bright Lumi-Micron Matte focusing screen. So even in dim light, you focus and compose quickly. Confidently. Creatively.

Its built-in controls let you compensate auto-exposures, or move to manual at 11 shutter speeds. Always, brilliant viewfinder LEDS show the mode you're exploring.

They even show full charge and correct exposure with Olympus T-Series flash units. Which offer creative bounce, filtered, macro and off-camera capabilities.

Depth-of-field preview. Stepless shutter speeds from 1/1000 to over 2 seconds. Interchangeable Steady-Grips for handling ease and comfort. Metal-alloy precision.

Over 300 professional OM System lenses and components. For creative capabilities incomparable in an SLR so affordable.

The OM-G offers it all.

The Olympus OM-G. See it now at your Olympus dealer. (Or write Olympus, Woodbury, NY 11797. In Canada: W. Carsen Co. Ltd., Toronto.)

It's the best way to complement your creativity.

It complements your creativity like no other SLR ever created.



OLYMPUS®
When you have more to say than just smile.

$30 CASH REBATE ON OLYMPUS OM-G!

The camera that raises the standard of creativity now lowers the cost.

The Olympus OM-G raises the standard of creative photography in a unique way. With a complement of creative capabilities you'll find in no other SLR. At any price.

It's the world's smallest SLR with professional OTF™ automation that measures light right off-the-film.

It's the world's lightest SLR with the rugged precision to accept a 5-frames-per-second motor drive.

It's the world's only SLR with incredibly-bright Lumi-Micron Matte focusing screen. So even in dim light, you can compose and create quickly.

And it's compatible with over 300 OM System components.

So hurry to your dealer, make your best deal and buy your OM-G with Olympus lens from July 1 to Oct. 31, 1983. You'll get great pictures AND a $30 rebate direct from Olympus!



OLYMPUS®
When you have more to say than just smile.

UM USLS

University Student
LEGAL SERVICE

Any student enrolled at U of M, Twin Cities campus and paying the student service fee is eligible for our services. **USLS** provides **legal advice** and **representation** by a staff of licensed attorneys without charge to fee-paying students for a wide range of legal problems including landlord-tenant, consumer, divorce, DWI and immigration. We also provide **referral** to other resources.

USLS
160 West Bank Union Skyway
376-5237
Call for an appointment

9,280 students have discovered the

hidden
UNIVERSITY

Join them for an alternative way of learning.

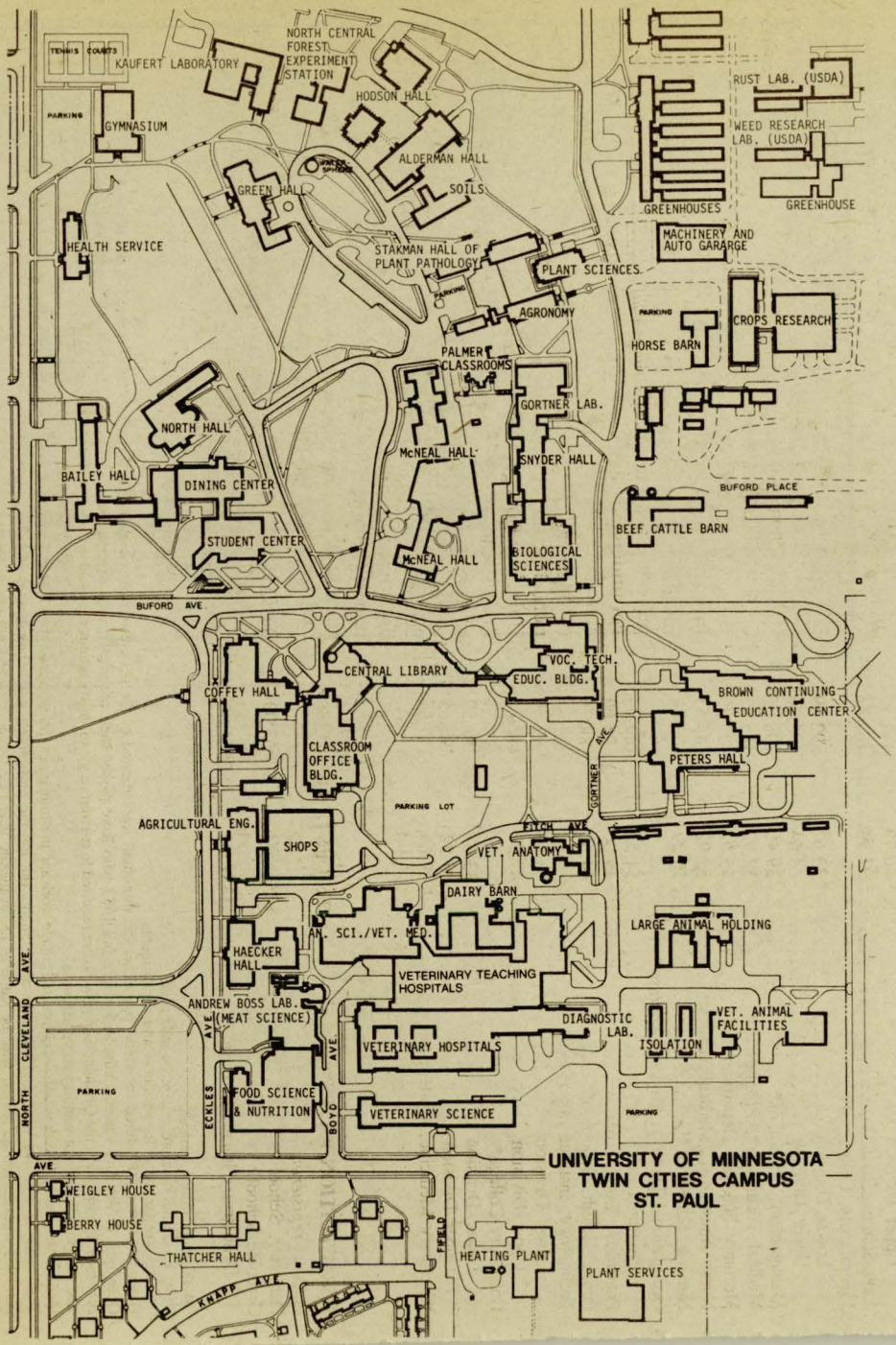
Take these credit courses at your own pace in your own place:

Comp 1011 and new upper division courses
Span 1101-02-03, 1502
Math 1201-11-21-31
Psy 1001
Phys 1271-81-91

Independent Study offers 365 courses in 81 academic departments. Pick up a bulletin — 45 Wesbrook Hall.

Phone 373-3256. MasterCard VISA

Independent Study. Continuing Education and Extension. University of Minnesota — an equal opportunity educator and employer



BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

ST. PAUL

ABLMS, Andrew Boss Laboratory-Meat Science ♿ *
AgEng, Agricultural Engineering ⊡ *
Agr, Agronomy ■
AgrPGGh, Agronomy/Plant Genetics Greenhouse
AlderH, Alderman Hall ♿ *
AnAren, Animal Arena
AnScVM, Animal Science, Veterinary Medicine ⊡ *
Berry, Berry House (1304 Cleveland Ave N) ⊡
BioSci, Biological Sciences Center ⊡ *
CentLib, St. Paul Campus Central Library ♿ *
ClaOff, Classroom Office Bldg ♿ *
CofH, Coffey Hall ♿ *
DinC, Dining Center ♿ *
EBCEC, Earle Brown Continuing Education Center ♿ * L
FScN, Food Science and Nutrition ♿ *
GorL, Gortner Laboratory of Biochemistry ♿ *
GrnH, Green Hall ♿ * L
Gym, Gymnasium ■
HckrH, Haecker Hall ⊡
HodsonH, Hodson Hall ♿ *
KaufL, Kaufert Laboratory ♿ *
McNH, McNeal Hall ♿ * L
NorH, North Hall ■
PalmC, Palmer Classroom Building ⊡
PetH, Peters Hall ⊡
PlSci, Plant Sciences ■
SnH, Snyder Hall
Soils ♿ *
StakH, Stakman Hall of Plant Pathology ■
StCen, Student Center ♿ * L
VetA, Veterinary Anatomy ⊡
VetDL, Veterinary Diagnostic Laboratories ■
VetTchHos, Veterinary Teaching Hospitals ⊡
VetS, Veterinary Science ■
VoTech, Vocational-Technical Education ♿ * L
Weigley, Weigley House (1316 Cleveland Ave N)

CODES:

♿ = accessible building
⊡ = partially accessible
■ = inaccessible building
* = elevator
L = adapted lavatory

For a map, *Guide for the Handicapped*, and further information, contact Physical Planning at 373-5765 or Rehabilitation Services at 376-3143.

Continued from page 111

TWIN CITIES CAMPUS TUITION SCHEDULE 1983-84

PER-CREDIT TUITION RATES	RESIDENT	NON-RESIDENT
Students registering in:		
Agriculture, College of*		
Lower Division	$ 33.67	$ 92.59
Upper Division	41.38	113.79
Biological Sciences, College of*	41.71	114.70
Dental Hygiene*		
Lower Division	33.67	92.59
Upper Division	38.99	107.22
Baccalaureate Program	38.99	107.22
Dentistry, School of	110.91	221.82
Education, College of*		
Lower Division	33.67	92.59
Upper Division	41.16	113.19
Forestry, College of*		
Lower Division	33.67	92.59
Upper Division	44.96	123.64
General College*		
Lower Division	33.67	92.59
Upper Division	33.95	93.36
Graduate School	70.89	141.78
Thesis credits	70.89	70.89
Dentistry, clinical fields in	110.91	221.82
Law	91.94	183.88
M.B.A., day program	98.00	141.78
M.B.A., evening program	98.00	98.00
Veterinary Medicine, clinical fields in	98.83	197.66
Home Economics, College of*		
Lower Division	33.67	92.59
Upper Division	40.79	112.17
Law School	91.94	183.88
Liberal Arts, College of*		
Lower Division	33.67	92.59
Upper Division	34.64	95.26
Management, School of*	39.40	108.35
Medical Technology, Program in*	52.92	145.53
Mortuary Science, Department of*	45.02	123.80
Nurse Anesthetist (Medical School)*	52.92	145.53
Nursing, School of*	50.29	100.58
Occupational Therapy, Physical Therapy, Programs in*	54.52	149.93
Pharmacy, College of*	45.00	90.00
Public Health, School of*	44.38	88.76
Technology, Institute of*		
Lower Division	33.67	92.59
Upper Division	40.99	112.72
University College*		
Lower Division	33.67	92.59
Upper Division	35.22	96.85
Veterinary Medicine, College of	98.83	197.66

TERM TUITION RATES**	RESIDENT	NON-RESIDENT
Students registering in:		
Dentistry, School of	$1331.00	$2662.00
Graduate School		
Dentistry, clinical fields in	1331.00	2662.00
Medicine, clinical fields in		
1-5 credits	375.00	750.00
6-10 credits	749.00	1498.00
11-15 credits	1124.00	2248.00
16 or more credits	1498.00	2996.00
Veterinary Medicine, clinical fields in	1186.00	2372.00
Law School (semester rate)	1103.00	2206.00
Medical School		
1-5 credits	375.00	750.00
6-10 credits	749.00	1498.00
11-15 credits	1124.00	2248.00
16 or more credits	1498.00	2996.00
Veterinary Medicine, College of	1186.00	2372.00

SPECIAL FEE CATEGORIES (PER TERM)	RESIDENT	NON-RESIDENT
Dental fellow specialists	$ 121.00	$ 121.00
Graduate students in minimum fee classifications:[1]		
Doctoral candidates in final quarter	165.00	165.00
Continuous registration[2]	65.00	65.00
Student status[3]	70.89	70.89
Graduate medical or dental fellows[4]	749.00	749.00
Medical fellow specialists, post M.D.	121.00	121.00
Pharmacy externs	121.00	121.00
Pharmacy fellow specialists	121.00	121.00
Psychology fellow specialists	121.00	121.00
Preparatory instruction	$100.00 per course	
Managers M.B.A. program	$4950.00 per year	
SUMMER SESSION (per credit)[5]***	by college of enrollment	
CONTINUING EDUCATION AND EXTENSION[6] AND INDEPENDENT STUDY[7]*** (per credit)		
1000-level courses	$34.00	
3000-level courses	by college of course	
5000-level courses	by college of course	
8000-level courses	$68.00	

PRE-CREDIT TUITION—The first section of the tuition schedule lists per-credit tuition rates. Tuition will be assessed on a per-credit basis for most colleges and schools of the University. For undergraduates, tuition will vary according to class standing and college of registration. If you are a lower division student (with 90 or fewer credits) in the Colleges of Agriculture, Education, Forestry, Home Economics, Liberal Arts, General College, University College, or Institute of Technology, you will pay the lower division rate. If you are an upper division student (with 91 or more conpleted credits) *or if you have been admitted to an upper division college or program* (i.e., College of Biological Sciences, College of Pharmacy, School of Management, School of Nursing, Medical Technology, Morturary Science, Occupational Therapy, Physical Therapy, and the baccalaureate program in Dental Hygiene), you will pay the per-credit rate listed for the college, school, or program in which you are registering.

TUITION PLATEAU—There is a 14-18 credit tuition plateau for undergraduates. For 1-14 credits you will be charged for each credit according to the per-credit tuition rate that applies to you. If you

*14-18 credit tuition plateau.
**For 12 credits or more except as indicated.
***Rates are the same for residents and nonresidents.
[1]Graduate students registered for credit pay either the minimum fee indicated or the per-credit rate, whichever is higher.
[2]Open only to doctoral students admitted before fall 1983 who have passed their preliminary oral examinations.
[3]For students enrolled in the Graduate School who are required to register (e.g., to satisfy requirements of an assistantship or fellowship) but who are not enrolled in courses and are not eligible for continuous registration.
[4]Medical and dental fellows who have completed course work and preliminary examinations for the Ph.D. degree may pay the continuous registration tuition rate. Those who have completed course work and language requirements but not the preliminary examinations may pay the student status tuition rate.
[5]For 1983 summer terms, tuition was the same as the academic year rate. Rates for 1984 not available.
[6]Effective fall quarter 1983.
[7]Effective July 1, 1983.

register for 15 or 16 or 17 or 18 credits you will be charged the same amount of tuition and fees (excluding course fees) as you would be charged for taking 14 credits. Each credit above 18 will be charged for on a per-credit basis. All colleges, schools, and programs that have a plateau (including lower division) are marked with an * in the per-credit tuition section.

TERM TUITION—Certain professional schools and colleges and certain Graduate School programs have term tuition rates for 12 or more credits (except where indicated). Use the second section of the tuition schedule to determine if term tuition applies to your registration. If you are registering for fewer than 12 credits in any of the areas listed (excluding Medicine) you will pay at the per-credit tuition rate listed in the first section of the tuition schedule.

STUDENT SERVICES FEE

All students registered for 6 or more credits must pay a $79.40-per-quarter ($119.10-per-semester) student services fee in addition to tuition. Courses that carry no degree credit (Comp 0011, Math 0005, 0006, 0007, & 0009, and all courses in which the student registers as an auditor) count in the determination of the credit total for the student services fee on a one class hour = one credit basis. For example, registration in Math 0009, which meets for 5 class hours per week, counts as 5 credits towards assessment of the fee.

Certain students, including those registered in minimum fee classifications, are exempted from the student services fee requirement. Such students may elect to pay the fee if they wish to use the services covered by the fee.

Twin Cities campus students who have paid the student services fee may request a refund of the portion of the fee allocated to the Board of Publications. Refunds will be available at the Bursar's Office (145 Williamson Hall, West Bank Bursar, 107 Coffey Hall) during the first two weeks *only* of the appropriate quarter. Students must present original receipts of paid fee statements to obtain a refund.

Distribution of student services fee—

$ 2.81	—Board of Publications *(Daily)*
39.85	—Boynton Health Service
.18	—Child Care Consortium
.20	—Council of College Boards
.41	—Cultural Programs
.095	—Elections Commission
.05	—Intercollegiate Debate and Forensics Program
.145	—International Reciprocal Student Exchange Program
.05	—International Student Exchange Program
.439	—International Study and Travel Center
.32	—Minnesota International Student Association
4.00	—Minnesota Union Expansion
16.95	—Minnesota Union Operations
.98	—MSA Forum
.583	—Music Programs
.085	—National Student Exchange
5.874	—Recreational Sports
1.78	—Recreational Sports Facilities Planning
.11	—St. Paul Board of Colleges
.076	—Student Advocate Service
.25	—Student Emergency Loan Fund
2.99	—Student Legal Service
.143	—Student Ombudsman Service
1.00	—University Community Video
.03	—WMMR Radio
$79.40	—TOTAL

HEALTH SERVICE AND HOSPITALIZATION CHARGES

At the time of registration, students who pay the student services fee will be paying for outpatient health coverage as part of that fee. Students who do not pay the student services fee may purchase this outpatient health coverage directly from Boynton Health Service. The Health Service provides most outpatient care free of charge to all students who either pay the student services fee or pay the Health Service directly for health coverage through the Extended Outpatient Benefits Plan.

Boynton Health Service is open and available throughout the calendar year. Prepaid benefits include both emergency and general care as well as consultation with specialists on physical or mental health problems. Specialty services include gynecology (including contraceptive services, pregnancy testing, and counseling), allergy, orthopaedics, ophthalmology, dermatology, ear-nose-throat, chest diseases, internal medicine, neurology, neurosurgery, proctology, surgery, and urology.

The student services fee for the Health Service does not cover surgical procedures, hospitalization, services related to hospitalization, prescriptions, or eye glasses, dental care, or certain other procedures. Students are required to carry hospitalization insurance coverage. A University-sponsored hospitalization insurance policy is available and may be purchased from the Bursar when tuition and fees are paid or purchased at the Health Service, room W-227A. Only students who pay the student services fee or the separate health service fee are eligible for this coverage. Dependent insurance coverage is also available, but may only be purchased at Boynton Health Service, room W-227A.

Partial Exemption From Student Services Fee—If you are a member of a health maintenance organization such as Coordinated Health Care, Group Health, MedCenter, Physician's Health Plan, SHARE, or HMO Minnesota, or if you have health insurance which duplicates Boynton Health Service prepaid benefits, you may apply for a partial exemption of the health service portion of the student services fee *no later than the end of the second week of classes*. To apply, show proof of coverage to the Boynton Health Service Cashier, room W220, who will certify a Health Service Fee Adjustment Request form. You must present this form to the registration clerk in order to receive the partial deduction from your student services fee assessment.

Students who do not pay the full Health Service fee waive all prepaid benefits but may use the Health Service on a fee-for-service basis. For detailed information about health coverage and fee exemptions, contact the Boynton Health Service, room W220 (373-3780) or see *Welcome to Boynton Health Service*, a booklet available at the Health Service. General information and a copy of the booklet may be obtained by calling 373-3141.

ID CARD REPLACEMENT

ID cards are required in many areas of the University to process student services. *If you have registered within the last two years and need a replacement ID card for any reason* (excluding normal wear of the embossing surface), you must purchase an authorization card for $5 at the Bursar's Office, 145 Williamson Hall (or from the cashier in 107 Coffey Hall, St. Paul). Bring this authorization card to the Certification Service, 155 Williamson Hall (or 130 Coffey Hall), where staff will enter your name and file number as they appear on your official record. Finally, you must bring this completed authorization to the ID card office, 248 Williamson Hall, where you will be issued a new card. (Note: lost ID cards that have been turned in are kept at the Information Booth in Williamson Hall for six months.) *If you have **not** registered within the last two years and have lost or never been issued an ID card,* you may receive an authorization from the Registration Center, 202 Fraser Hall (130 Coffey Hall for St. Paul-based students) or from the Certification Service, 155 Williamson Hall. To receive your new card, bring the authorization to the ID card office, 248 Williamson Hall.

PAYMENT OF FEES

Installment Payment Chart

IF YOU:	THEN YOU ALSO PAY:			
	$10 Late Payment Fee	$10 Installment Payment Fee	$20 Late Payment Fee	Total
Pay 100% by due date(s).				$ 0
Pay less than 100% by due date(s). Pay balance by January 16.	✓			$10
Pay 50% by due date(s). Pay balance by February 6.		✓		$10
Pay less than 50% by due date(s). Pay balance after January 16 but by February 6.	✓	✓		$20
Pay 50% by due date(s). Do *not* pay balance by February 6.		✓	✓	$30
Pay less than 50% by due date(s). Do *not* pay balance by February 6.	✓	✓	✓	$40

ıstallment Payment Plan—You have the option of paying 50% f your tuition and fees by the due date(s) on your fee statement(s). ' you pay the 50% installment amount, a bill will be mailed to you ›r the balance plus a $10 installment payment fee. This balance, ıcluding the $10 installment payment fee, will be due on the Friday f the fifth week of the quarter—February 6 for winter 1984. For ‹ample, if your tuition and fees are $500, you may choose to pay 250 by the due date. You will be billed for the balance—the :maining $250 plus the $10 installment payment fee—and this mount ($260) will be due February 6.

'ou may choose this option for one, some, all, or none of your fee ıtements. For each fee statement, you should either make a ıyment of 50% by the due date—and thereby choose the install- ıent plan—or pay the amount in full by the due date. You will be harged only one $10 installment payment fee per quarter, even if ou choose the installment payment plan for more than one fee ıtement.

Vhen you choose this option, you have two fee payment dates for ach fee statement: the original due date for the 50% installment mount and February 6 for the balance. You will be charged a $10 ıte payment fee for each original due date you miss. If you have ıade *no* payment on your tuition and fees by January 16, you will e placed on the Installment Payment plan: you will be billed for our tuition and fees, plus a $10 late payment fee and the $10 ıstallment payment fee. In all cases, if you miss the February 6 ıyment date, you will be charged a $20 late payment fee and a hold ⁄ill be placed on your record. Use the table at the top of the page for ıose fees you will be assessed if you pay in installments and/or pay ıte.

'he Installment Payment plan may not be suitable for veterans and ertain other students who need to be certified as having paid tuition nd fees in full by the beginning of the quarter. Check with the 'ertifications Unit, 155 Williamson Hall, for more information.

Vhere to Pay—Pay your tuition and fees at the Bursar's Office 145 Williamson Hall on the East Bank, ground floor of Blegen Hall n the West Bank in Minneapolis, or the Cashier's Office in 107 'offey Hall in St. Paul). Your fee statement and a check or money rder may be dropped in the fee deposit box in Fraser Hall or Coffey lall or the lower concourse of Williamson Hall next to the Bursar's)ffice. The receipted fee statement may be picked up after ten ⁄orking days at the East Bank Bursar's Office, 145 Williamson lall, in Minneapolis or at the registration windows in 130 Coffey lall in St. Paul.

lailing Your Payment—The fee statement and a check or money rder may be mailed to the Bursar's Office in Minneapolis (145 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455) or to the cashier in St. Paul (107 Coffey Hall, 1420 Eckles Avenue, St. Paul, MN 55108). When mailing your payment for tuition and fees, you must enclose all copies of your fee statement. *Do not remove the student copy before sending in payment but do remove the lower portion—your course confirmation document.* If you want your receipted fee statement returned to you by mail, you must enclose a self-addressed, stamped envelope. If you do not include this return envelope, you can pick up your receipted copy after ten working days at the Bursar's Office to which you mailed your payment (or the registration windows in 130 Coffey Hall for St. Paul students).

When to Pay—For students who register through December 29, tuition and fees are due within 10 working days following the date of registration. (If you register on Tuesday, December 6, for example, you must pay tuition and fees on or before Tuesday, December 20.) For students who register from January 3 through Janaury 12, fees are due Janaury 16. Fees for students who register on or after January 13 are due within two working days following the date of registration.

Financial Aid Recipients—You must turn in your Course Request form and receive your fee statement by December 29, even if you have not yet received your financial aid check. If you register after December 29, you will be charged a late registration fee.

If you present a restrictively endorsed financial aid check in payment of tuition and fees, it will be applied in full toward the total amount of tuition and fees assessed. You are not eligible for the Installment Payment plan if your financial aid check is 100% or more of your tuition and fees. If your check is less than 100% but at least 50% of our tuition and fees, you can participate in the Installment Payment plan—your check, *in full*, would be your first payment, and your balance would be due Friday of the fifth week of the quarter. If your financial aid check is less than 50% of your tuition and fees, you can participate in the installment plan by using other funds to complete the first (50%) payment.

Fee Statement Due Dates—Each fee statement you receive has its own due date. Later fee statements do not extend the due date(s) on earlier fee statements. A $10 late payment fee can be charged for any fee statement that is paid after the due date printed on it. If you mail your fee statement and payment to the Bursar's Office, the postmark date must be the same as or earlier than the due date printed on the fee statement, or you will be billed for a $10 late payment fee by Students Accounts Receivable.

Late Payment Fees—You must pay 50-100% of your tuition and fees by the due date(s) on your fee statement(s) to avoid late payment fees. The late payment fee is $10 through the fifth week of the quarter. You must pay your account in full by Friday of the fifth week of the quarter or you will be charged an additional $20 late payment fee. Use the table at the beginning of this section for a breakdown of the fees you will be charged if you pay late.

Fee Statements—Do not destroy or throw away any fee statements you receive from the Registration Center. All copies of unpaid fee statements must be turned in to the Bursar's Office. You should keep all fee statements for the quarter together with your student ID card; many University facilities such as the libraries, Boynton Health Service, the Bursar's check cashing service, and athletic facilities require fee statement(s) as proof of enrollment.

Duplicate Fee Statements—Duplicate unreceipted fee statements for the current quarter may be obtained at your Registration Center until registration for the next quarter begins. If your fees are paid, Student Accounts Receivable can issue a payment verification letter or validate your unreceipted copy at B1 Fraser Hall or 130 Coffey Hall (150 Williamson Hall for students with mobility impairments). Duplicate fee statements for any quarter prior to spring quarter 1982 may be obtained at the Certification Service in 155 Williamson Hall or the registration windows in 130 Coffey Hall.

Credit Balance Fee Statements—Credit balance fee statements have a dollar amount in the "Amount Due" box that is followed by "CR," which means that your obligation to the University has been reduced by that amount. If you have already paid your fees, you may obtain a refund voucher by presenting the credit balance fee statement to Student Accounts Receivable. (See also Refunds, on the following page.) If all of your fees have not been paid and the amount on the credit balance fee statement is less than what you owe on your other fee statements, take all fee statements to the Bursar's Office and pay the difference. If the credit amount is more than the amount that you owe, go to Student Accounts Receivable for further information.

Billing Statement for Installment Payment Plan—If you pay tuition and fees on the Installment Payment plan, you should receive, during the third or fourth week of the quarter, a billing statement for the balance of your tuition plus the $10 installment payment fee. **If you do not receive this billing statement, you *must* obtain a payment voucher on or before February 6 from Student Accounts Receivable** at B1 Fraser Hall (Bursar's departmental window, 145 Williamson Hall, for students with mobility impairments) in Minneapolis or 130 Coffey Hall in St. Paul. If you do not obtain this payment voucher and pay the balance of your tuition and fees by February 6, you will be charged a $20 late payment fee, and a hold will be placed on your record. If you want to pay your balance *before* you receive your billing statement, go to Student Accounts Receivable where a payment voucher for the balance plus the $10 installment payment fee will be prepared for you.

Tuition and Fees Paid by Various Agencies—If you have authorization for the University to bill a donor for your tuition and fees, you should bring your authorization *before the beginning of registration* to the Registration Center (202 Fraser Hall, 130 Coffey Hall for St. Paul-based undergraduates and adult specials, or 150 Williamson Hall for students with mobility impairments). If you are unable to present your authorization before the beginning of registration, bring it with you when you register.

Note: you will have a hold placed on your record if your sponsoring agency falls behind in payment for more than two quarters. You will ultimately be held responsible for all unpaid tuition and fees if your sponsoring agency does not fulfill its obligations.

Regents' Scholarships—If you are registering for a course with a Regents' Scholarship, you should bring your authorization to the Registration Center when you register. You must return to the Registration Center for an adjusted fee statement *if you receive your authorization after you have registered.* **(Regents' Scholarshi authorizations should *never* be mailed to the Bursar.)** If you fa to receive authorization by the due date on your first (or 01) fe statement, you will be assessed a $10.00 late payment fee. Regents Scholarships cover only tuition for approved courses. You ar responsible for all course fees and special fees. Failure to pay thes fees by the due date on your first (or 01) fee statement will make yo liable for a $10.00 late payment fee.

Payroll Deduction for Graduate Students—To be eligible fo payroll deduction, you must be a graduate student holding at least 25% graduate assistant appointment for an entire quarter. Thos students holding only hourly graduate assistant appointments including those teaching classes in Continuing Education an Extension, are not eligible. Your tuition and student services fe must total at least $150. (The student services fee is the onl deductible fee.) In addition, you must earn enough in your last fou pay periods to cover your tuition and fees in four equal installment (see Note, below).

You must apply for payroll deduction by the due date on your fe statement to avoid a late payment fee. However, application fo payroll deduction is *never* possible after Friday of the first week o the quarter.

Procedures for applying for payroll deduction vary by campus *Minneapolis-based students*—after you register take your fe statement to Student Accounts Receivable, B1 Fraser Hall, and fil out a payroll deduction authorization card. You will be then given form to take to the Certifications window in 202 Fraser Hall, when you will be issued a credit balance fee statement. Take your credi balance fee statement and your original fee statement to the Bursar' Office to be receipted. (Failure to do so by the due date on your fe statement will result in a late payment fee.) *St. Paul-base students*—when you register, request payroll deduction. After yo fill out a payroll deduction authorization card, you will be credite directly on your original fee statement for the amount to b deducted.

All students must pay all fees not covered by payroll deductio (e.g., MPIRG, hospitalization, course fees) by the due date(s) o their original fee statement(s) to avoid late payment fee(s).

If upon review Student Accounts Receivable denies your applica tion for any reason (e.g., temporary or incorrect Social Securit Number, insufficient income to cover deducted amount in fou payments), they will send you a bill for tuition and fees with a new due date. This bill must be paid by the new due date to avoid a lat payment fee.

If you cancel/add anytime through the first week of the quarter return to Student Accounts Receivable to have your payrol deduction application adjusted. After the first week of the quarter tuition and fees for added courses cannot be put on your payrol deduction and must be paid by the due date(s) on the new fe statement(s). If you cancel courses after the first week of the quarter, you cannot receive a refund for credited tuition and fees until the last of the four payroll deductions has been made.

Note: tuition and fees are withheld in four equal installments from the last four pay periods of the quarter. For example, if your tuitio and deductible fees total $800, this amount will be withheld from your last four paychecks in equal installments of $200. To b eligible for payroll deduction, you must *net* at least $220 pe paycheck (the extra $20 is added because no payroll check can b issued for less than $20). If you discover, after you have applied, that your net pay will not cover your deductions, contact Student Accounts Receivable in B1 Fraser Hall for a new fee statement. I you are ineligible for payroll deduction, you can use the Installmen Payment plan available to all students (see preceding page).

Further information on payroll deduction procedures is available from the Graduate Assistants Office, 411 Johnston Hall (376-3644).

VETERANS CERTIFICATION

Ch. 34 and Ch. 35 Veterans—Veterans must register and pay fees like every other student. If you are a veteran, you must conduct your business with the Veterans Administration separately from your business at the University; proper application is your own responsibility. Late payment fees will not be waived because you are waiting to receive your check(s) from the Veterans Administration. The University assists you by certifying as required. You initiate this certification at the Certification Service, 155 Williamson Hall.

Do the following:

Apply at the Certification Service, 155 Williamson Hall, for benefits on or before your first day of class. You will not get paid unless you do apply. You must present your receipted fee statement *in person* every quarter. If you are returning for another quarter, your previous period of education under the law having been officially interrupted, you must fill out a re-entrance form at the Certification Service, 155 Williamson Hall, notifying the Veterans Administration that you wish to resume training status.

New and returning veterans—you must provide a certified copy of the birth certificate for each child claimed as dependent and a certified copy of your marriage certificate if you claim your spouse as a dependent. (Certified copies have the Clerk of Courts stamp attached—notarized copies are *not* acceptable.) **If you do not provide these documents you will be paid at the single rate of pay.**

Ch. 31 Veterans (veterans approved for Rehabilitation Program)—When you have received your fee statement, have it approved at the Certification Service, 155 Williamson Hall, and then receipted by the Bursar's Office. Bring the receipted statement and your course list to the Certification Service, 155 Williamson Hall, to obtain an order for books and supplies.

Additional information concerning University attendance under the above designated laws may be obtained at the Certification Service in 155 Williamson Hall or in the Official Daily Bulletin printed in the *Minnesota Daily* and posted on campus bulletin boards.

REFUNDS

Tuition and Course Fees—To be entitled to a refund, you should file for official cancellation at the Registration Center as soon as you decide to withdraw from a class or classes. If you officially cancel all courses before classes begin, you are entitled to a 100% refund. After classes begin, tuition and course fees are refunded on the following basis: if you cancel within the first week, you get 90%; within the second, 80%; third, 70%; fourth, 60%; fifth, 50%; sixth, 40%. After the sixth week of class, there is *no* refund unless retroactive cancellation has been authorized. A complete or partial refund of tuition and course fees through retroactive cancellation is only possible for one calendar year after the end of the quarter. After this calendar year, retroactive cancellation is still possible, but you will not receive any refund of paid tuition and fees and will *not* be released from your obligation for any unpaid tuition and fees. Appeals to this policy should be directed to the Student Relations Unit, 150 Williamson Hall.

Retroactive cancellation must always be authorized and must be accompanied by a Final Attendance Verification form for each course (signed by the instructor) or by a signed statement, from the instructor for each course, verifying that you never attended class or stating the day you stopped attending class (note: these statements *must* be written on official University stationery).

Student Services Fee—Usually, if you cancel below 6 credits *before the end of the sixth week of class*, you can request, when you process your cancellation, a refund for tuition and fees (see above). If you have been assessed the University-sponsored hospitalization at registration, however, any refund of your student services fee must be requested at and authorized by Boynton Health Service, room W227. If you receive a refund of the student services fee, you may no longer use the services provided by the fee. To continue using these services, you must continue to be enrolled and not be issued any refund. If you completely cancel out of the University and qualify for a tuition refund, you must also accept a prorated refund of the student services fee unless you retain University-sponsored hospitalization (see below). However, *no* refund of the student services fee will be issued after the sixth week of the quarter, even if retroactive cancellation is authorized.

University-Sponsored Hospitalization—Refunds of the University-sponsored hospitalization insurance fee will be issued *only through the end of the second week of classes* and must be processed at Boynton Health Service, room W227. If you cancel completely during this refund period, you may opt to retain your hospitalization, but will not then be given any refund of the student services fee.

Special Fees—The orientation fee is never refunded. There is also no refund of the record service fee. **MPIRG is not refunded through the Registration Centers**—refund instructions are published every quarter in the Official Daily Bulletin, a column printed in the *Minnesota Daily* and posted on campus bulletin boards. All other special fees assessed at registration are refunded through the sixth week of class at the same rate as tuition and course fees (see above). There is *no* refund of special fees after the sixth week of class, even if retroactive cancellation is authorized.

Refunds for Students on Payroll Deduction—If you cancel courses, you cannot receive a refund for tuition and fees that are being deducted until two weeks after all four payments have been deducted from your check.

Financial Aid Refund Policy—If you receive financial aid, you must maintain full-time status (a minimum of 12 credits for undergraduates, 8 credits for graduate students). If you cancel courses and your credit total falls below full-time status, you may not qualify for a tuition refund. Federal regulations require that all or a portion of your tuition refund must be credited to the financial aid funds from which you received assistance. Refunds may also be sent to the lender of a student loan to reduce the principal on that loan. **Repayment of financial aid is calculated according to the date on which your cancellation is effective. If you cancel courses at the 100% refund rate during a quarter—including retroactive cancellation—you must repay *all* financial aid received during that quarter.** If the refund amount is insufficient to repay the appropriate financial aid fund, you will be billed for the difference by Student Accounts Receivable. You will be notified by mail of the disposition of your refund.

COURSE FEES[1]

All fees are per quarter unless otherwise indicated.
Students taking the following courses will pay course fees as follows:

ARTS, STUDIO[2]
Materials fees:
$10—1101, 1102, 1105, 1404, 3140
$15—3110, 3120, 3160
$20—5110, 5120, 5160, 5190
$25—1701, 1702, 3430, 3710, 3720, 5430, 5710, 5790
$30—1510, 1520, 1530, 1811, 1812, 3510, 3520, 3530, 5510, 5520, 5530, 5590
$40—1301, 1302, 3301, 3302, 3304, 3305, 3810, 5310, 5320, 5340, 5350, 5390
$45—5810
$50—3303, 5330
$70—3820, 5820
Arranged (amount adjusted to individual needs of students or particular class project)—3830, 3970, 3980, 5830, 5970, 8000-level courses

COMPOSITION AND COMMUNICATION
$100[3]—0011 Preparatory Composition

ECOLOGY AND BEHAVIORIAL BIOLOGY
$15—5014, 5016, 5132, 5134 Transportation Fee

FORESTRY
$50—ForP 3300 Wood Industries Tour

HEALTH SERVICE (Field Trips and Foreign Study)
$39.85 per quarter—Required of students on University field trips such as Anthropology, Geology, Mines,

etc. (covers outpatient medical care for emergency illness at nearest facility on approval of the person in charge of the group, up to a maximum of $50 per visit).
Students in University-sponsored foreign travel groups must rely on private insurance coverage while traveling.

LANDSCAPE ARCHITECTURE
$15—3073
$20—5017

MATHEMATICS (Arts)
$100[3]—0005, 0006, 0007, 0009 Preparatory Mathematics

MUSIC, APPLIED
Applied lessons—1 half-hour lesson per week for 2 credits; 2 half-hour lessons or 1 hour lesson per week for 4 credits.
Music majors who have passed the entrance exam: $0 per 2 credits
Majors taking extra credits (beyond requirement) or taking lessons on a second instrument: $32 per 2 credits
Non-majors, elective credit: $96 (0-2 credits)

PUBLIC HEALTH
$200—5755 Administrative Residency

SOIL SCIENCE
$15—3520, 5510 Transportation Fee
$25—5565 (SS) Field Course

[1]Fees are subject to change.
[2]Materials fees—assessed at the time of registration. Arranged fees are collected by department.
[3]In lieu of tuition

SERVICE FEE, INTERNATIONAL PROGRAMS
$100-$250 per quarter according to services provided—for international students supported under contractual arrangements with sponsoring agencies or entities requiring special administrative or management services beyond those normally provided.

SPEECH AND HEARING CLINIC
U of M students, staff, and faculty are not charged for clinical services provided in the Speech and Hearing Clinic.
Outpatients:
Speech Pathology, Clinical Management—$2 per session
Audiologic Evaluation—$25
Audiologic Evaluation for Senior Citizens—$15
Audiology Screening—$2
Audiology Screening Follow-up—$5

TECHNOLOG
$1.80 required of all Institute of Tec nology students who pay the stude services fee—assessed at registr tion

IOK REVIEW
$1.20 required of all School Management students who pay t student services fee—assessed registration

[1]Fees are subject to change.
[2]Graduation fees and diploma sizes under review for winter quarter.

SPECIAL FEES[1]

COGS (COUNCIL OF GRADUATE STUDENTS)
$.55 required of all graduate students who register for one or more credits —assessed at registration.

COLLEGE OF EDUCATION—PLACEMENT SERVICE FEE
$30—Registration fee for graduate students, alumni, and others (annual fee)
$20—College of Education seniors (annual fee—assessed with graduation fee)
$5—Bulletin service fee for non-seniors (quarterly fee)
Bachelor of science degree candidates from College of Education (except Recreation, Park, and Leisure Studies students) are required to register with placement section of the Education Career Development Office or to secure an official exemption from that office. Graduate students and alumni seeking employment in education positions may also use placement services.

CREDIT BY SPECIAL EXAMINATION
$30—Check with your college office for further information.

DIPLOMA, OVERSEAS MAILING
For sending a diploma *air mail* to address outside the United States, Canada, or Mexico
$3—small diploma
$6—large diploma
(Fee optional)

DIPLOMA REPLACEMENT FEE[2]
$17—small diploma
$20—large diploma

ENGLISH FOR INTERNATIONAL STUDENTS
For international students needing instruction in English—$93.50 per quarter administrative fee plus instructional and materials fee ranging from $290.75-$888.75.

GRADUATION FEE (each degree)[2]
$15—including small diploma
$22.50—including large diploma

HOSPITALIZATION INSURANCE, UNIVERSITY SPONSORED
$53 per quarter—available only to students who pay the student service fee or the separate health service fee.

INTERNATIONAL STUDENT AID FEE
$4 per quarter required of **all** non-immigrant students who have temporary visa status.

LATE PAYMENT FEE
$10 through fifth week of quarter
$20 sixth week of quarter and after

LATE REGISTRATION FEE
$10 through the first two weeks of classes and $20 thereafter.

MINNESOTA PUBLIC INTEREST RESEARCH GROUP (MPIRG)
$2 (refusable/refundable)—assessed with student services fee.

MUSIC PRACTICE ROOM
$1 per qtr for one, $2 for two, 50 cents for each addtl hr per week—all instruments except organ.
.25 per hr—small organ
.50 per hr—large organ

ORIENTATION FEE
$15 required of all new students *except* new graduate students who attended the University as undergraduates and *except* students in law, medicine, veterinary medicine, dentistry, and public health, and in master of education and master of agriculture programs.

RECORD SERVICE FEE
$6 required of all new students. This fee provides students with unofficial copies of student records.

RECREATIONAL SPORTS PARTICIPATION FEE
$15 per quarter to cover use of recreational and athletic facilities; $30 for 2 quarters, $45 for 3 quarters. $60 for a whole year—for faculty and staff only. Guest ticket—$2 per visit.

TRANSCRIPT FEE

There is a $2 charge for each *official* certified copy of your studer record. These official transcripts, which are specially certified an embossed with the University's seal, cannot be distributed over th counter but are sent by mail either to you (stamped "Issued t Student") or to the institutions or individuals you have requeste the transcripts for.

Official transcripts can be requested by mail. Requests can also b dropped off at the locations below. No phone requests will b accepted. Requests should include your full name, your student II number, college, dates of enrollment, and complete address(es) t send the transcript(s) to. Minneapolis-based students should sen their requests to the Certifications Unit, 155 Williamson Hall, 23 Pillsbury Drive Southeast, Minneapolis, Minnesota 55455. S Paul-based students should send their requests to the Office c Admissions and Records, 130 Coffey Hall, 1420 Eckles Avenue St. Paul, Minnesota 55108. *All Extension records must be re quested at the Certifications Unit in Minneapolis.* A $2 check money order, or Bursar card must be included for each request Please do not send cash.

The $6 record service fee, paid by all students their first quarter c enrollment, continues to cover *unofficial* copies of student records You may pick up an unofficial copy of your record by presentin your student ID card from 9 a.m. to 2:30 p.m. Monday throug Friday at the quick-service window in 155 Williamson Hall or a 190 Coffey Hall. There is no charge for the quick service; there is however, a limit of one copy per visit.

FACILITY FEES

Facility fees—Students registered in the following courses mus pay the amount indicated to the appropriate facility operator for th use of the facility and/or equipment.

AnSc 1601 Horse Equitation	$60
PE 1034 Judo	$18 (maximum)
PE 1035 Karate	$23 (maximum)
PE 1048, 1148 Bowling	each $15 (maximum)
PE 1052 Riflemanship	$8 (maximum)
PE 1057, 1157, 1257 Skiing	each $60 (maximum)
PE 1205 Scuba and Skin Diving	$20 (maximum)
PE 1043 Beginning Horsemanship	$60
PE 1143 Intermediate Horsemanship	$60

Continued on page 12

December 1983

SUN	MON	TUE	WED	THU	FRI	SAT
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

Continued from page 120

DEPOSIT CARDS AND RENTAL CARDS

Deposit cards may be purchased from the east bank Bursar's Office, 145 Williamson Hall. Chemistry cards are $20; pharmacy cards are $10; art cards are $5. Chapter 31 veterans (veterans on vocational rehabilitation) should obtain a voucher from the Certification Service, 155 Williamson Hall, and present this voucher at the Bursar's Office when they purchase a card.

Chemistry and pharmacy cards MUST be presented for admittance to the first meeting of laboratory class. One card may serve for more than one class. Partially depleted cards are acceptable for admittance to class, provided that the unused portion is not less than the minimum stipulated for that course. The deposit card requirement is waived for graduate teaching assistants.

Laboratory material and breakage will be charged against your deposit card. Any unused balance will be refunded at the end of the course.

You must present your deposit card to be assigned a laboratory desk. If you are disabled, you should speak with your instructor about any special arrangements that are necessary.

Microscope rental cards—Students enrolling in the following courses who do not provide their own microscopes must purchase a microscope rental card: Biology 3013, Microbiology 1101, 3103, 5105, 5233, 5234. The non-refundable card is $3 and may be purchased from the Bursar's Offices.

PE Locker-Towel Rental Cards

Cooke Hall
Locker-Towel rental—$.50 per day, $9 per quarter, $27 for 3 quarters, $36 yearly. Gym clothing—$10 per quarter, $30 for 3 quarters, $40 yearly.

Norris Hall, St. Paul Gymnasium
Locker-Towel rental—$9 per quarter, $27 for 3 quarters, $36 yearly.

The cards for Cooke Hall and the St. Paul Gymnasium are purchased in those facilities.

The cards for Norris Hall are purchased at the Bursar's Offices.

TUITION RATES FOR STAFF MEMBERS

Graduate Assistants—Students registered in the Graduate School and holding appointments as graduate assistants at 25% time or more are privileged to pay resident tuition rates, regardless of source of fund, resident status, or curriculum pursued. Members of the immediate families of qualified graduate students are eligible to pay resident tuition rates in the college in which they are registered. The University defines "immediate family" as spouse, children, parents, or legal guardian or ward living in the same household as the graduate assistant.

Resident tuition rate privileges are extended beyond the term of qualifying appointment, subject to the following rules:

The qualifying appointee must have held one of the above appointments for a minimum of 3 academic quarters, at 25% time or more, after September 15, 1969. Two summer sessions will count as one academic-year quarter. The use of the privileges is extended, after completion of the qualifying 3 quarters of appointment, on a quarter-for-quarter basis up to a maximum of 6 quarters of use. Appointment for 3 quarters entitles extension of the privilege for 3 additional quarters, and appointment for more than 3 quarters entitles extension (on a quarter-for-quarter basis) for not more than 6 quarters. The entitlement of the qualifying appointee and members of his or her immediate family to this privilege will not extend beyond 3 years from the termination of the last or most recent qualifying appointment.

This privilege does not apply to those holding appointments as instructors.

If you are a nonresident Graduate School student holding a curren qualifying appointment as a graduate assistant, your eligibility fo resident tuition will be authorized automatically when your employ ing department processes the documents necessary to put you on th payroll. Follow Graduate School Registration Instructions in Sec tion 1 of this *Class Schedule* and proceed to the Registration Cente in 202 Fraser Hall or 130 Coffey Hall (150 Williamson Hall fo students with mobility impairments). Resident fees will automati cally be assessed. **If nonresident fees are assessed, contact th Graduate Assistants Office, 411 Johnston Hall, 376-3644, fo information on the status of your appointment or for separat resident certification.**

If you are a nonresident Graduate School student who formerly hel a graduate assistantship, or if you are a member of the immediat family of a graduate assistant holding either a current or a forme appointment as a graduate assistant, contact the Graduate Assistant Office, 376-3644, for information on procedures to claim th resident tuition privilege.

Students with bachelor's degrees who are in postbaccalaureat professional degree programs (including doctor of pharmacy master of public health, master of hospital administration, master o agriculture, master of education) and who are teaching assistant paid on the General Operations and Maintenance Fund and ap pointed at 25% time or more are eligible to pay at the resident rate o their college of enrollment.

Graduate and Professional School Fellows/Trainees—Effective fall quarter 1983 graduate students and students seeking profes sional degrees (e.g., M.D., J.D., D.V.M.) who hold fellowships and traineeships are eligible to pay resident tuition rates under the following conditions: their award must be administered by the University and their stipend must at least equal the minimum quarter-time graduate assistantship rate ($3,420 for nine months in 1983-84).

Fellows and trainees who meet the above qualifications can begin accumulating *extended* resident tuition eligibility for all award periods that start on or after fall quarter 1983. (There is no credit fo award periods that occurred prior to fall 1983.) These extension privileges are the same as those privileges provided for graduate assistants (see Graduate Assistants, above).

Members of the immediate families of qualifying fellows and trainees are also eligible to pay resident rates in the college in which they are registered.

If you are a graduate student who qualifies for resident tuition, have your department forward your full name, student ID number, a copy of your award letter, and a copy of your University appointment to the Graduate Fellowship Office, 422 Johnston Hall. For further information on procedures to claim the resident tuition privileges for yourself or immediate family members, contact the Graduate School Fellowship Office, 373-2833.

If you are a student seeking a professional degree who qualifies fo resident tuition, request that your Dean's office forward your name and student ID number to the Graduate Assistants Office, 411 Johnston Hall. Contact the Graduate Assistants Office at 376-3644 for further information and for procedures for resident privileges fo family members.

Others—Medical and dental fellows and University of Minnesota civil service appointees who are working 75% time or more and who are registered in the Graduate School may pay fees at the resident rate. This privilege does not extend to members of the immediate families of such appointees.

Residence counselors with bachelor's degrees are privileged to pay tuition at the resident rate of the college in which they are enrolled.

Full-time faculty members who hold the Ph.D. degree may informally audit courses (with permission of the instructor and on a space-available basis) without registration or payment of fees. Should the need arise, official authorization may be obtained from the Graduate School.

you are a nonresident entitled to resident fee privileges under ıese regulations, show the registration clerk your certification of ppointment card when you turn in your approved Course Enrollıent Request form at the Registration Center in 202 Fraser Hall or 30 Coffey Hall (150 Williamson Hall for students with mobility npairments).

ull-time faculty members with the rank of instructor or above, ivil service personnel eligible for faculty group insurance, certain accredited foreign diplomatic officials, and their immediate families may pay resident fees in all colleges. Similar provision is made, one year after their arrival, for military personnel on duty in Minnesota for reasons other than college attendance. Full-time faculty on the staff of accredited Minnesota colleges (not their families) have the same privilege as provided for University faculty. Persons to whom these provisions apply should contact the Registration, Student Records, and Scheduling Office, 150 Williamson Hall, to make appropriate arrangements.

FINAL EXAMINATION SCHEDULE

The time of the examination for a class is based on the hours and days the class is regularly scheduled. This final examination schedule does not apply to courses offered primarily to students registered in the School of Dentistry, Law School, Medical School, College of Pharmacy, and College of Veterinary Medicine, or to courses numbered over 8000 that have no regularly scheduled classrooms.

To determine the time of a final examination, use the schedules on this page and the next according to the following instructions:

- Find the exam schedule for the college offering the course. To determine the college, see the last line under the department heading in the Schedule of Classes. (Because Schedules A and B can apply to either Minneapolis or St. Paul note the choice of class starting times.)
- Find the class hour and days in the Class Hours column of the schedule, and read across to find the time and date of the examination.
  - Go by the lecture hours rather than the laboratory or recitation hours.
  - Follow the MWF schedule if your class meets more than three days per week.
  - If a course meets on unusual days, follow the MWF exam time. (For example, a class meeting 0815 MTTh or 0815 TF would follow the 0815 MWF exam time.)
  - Courses meeting at irregular times should follow the exam schedule for the meeting time of the day earliest in the week. (For example, a course meeting 0915-1100 T, 0815-0900 Th would follow the 0915 TTh exam time.)
  - Except for split-hour classes, use the first full class hour your class meets for more than one continuous hour. (Fo example, a class meeting 1315-1500 MWF would follo the 1315 MWF examination time schedule.)
  - For split-hour classes in Minneapolis, use the followin arrangement: 0815-0930 TTh use 0815 TTh; 0945-110 TTh use 0915 TTh; 1115-1230 TTh use 1115 TTh; 124 1400 TTh use 1215 TTh; 1415-1530 TTh use 1415 TT 1545-1630 use 1515 TTh.
  - For split-hour classes in St. Paul, use the followir arrangement: 0800-0915 TTh use 0800 TTh; 0930-104 TTh use 0900 TTh; 1100-1215 TTh use 1100 TTh; 123 1345 TTh use 1200 TTh; 1400-1515 TTh use 1400 TT 1530-1615 TTh use 1500 TTh.
- If your course is listed under the Common Examinations, use th common examination hour instead of the hour from Schedule or Schedule B.
- Classes meeting four or more days a week may give 3-ho examinations provided the instructor notifies the Scheduli Office of his/her intention to do so on an A123 form. Three-ho examinations will be scheduled on the respective morning afternoon the examinations would be given: March 13 (083 1130; 1330-1630), March 14 (1330-1630), March 15 (083 1130), March 16 (0830-1130; 1330-1630), March 17 (083 1130; 1330-1630).

Special Note: Examination times for classes meeting at 0715 a 1615 will be arranged by the instructor, who must file Form A1 with the Scheduling Office.

FINAL EXAM SCHEDULES

Schedule A
Courses Offered in Colleges of Education and Liberal Arts, †Health Sciences, †Dentistry, and Public Affairs

Class Hours				Class Hours			
0800 *or* 0815 MWF	1030-1230	F	March 16	1200 *or* 1215 TTh	1330-1530	T	March 13
0800 *or* 0815 TTh	0800-1000	F	March 16	1300 *or* 1315 MWF	1330-1530	F	March 16
0900 *or* 0915 MWF	0800-1000	T	March 13	1300 *or* 1315 TTh	0800-1000	W	March 14
0900 *or* 0915 TTh	1600-1800	Th	March 15	1400 *or* 1415 MWF	0800-1000	S	March 17
1000 *or* 1015 MWF	1330-1530	W	March 14	1400 *or* 1415 TTh	1030-1230	S	March 17
1000 *or* 1015 TTh	1030-1230	W	March 14	1500 *or* 1515 MWF	1330-1530	S	March 17
1100 *or* 1115 MWF	0800-1000	Th	March 15	1500 *or* 1515 TTh	1600-1800	S	March 17
1100 *or* 1115 TTh	1330-1530	Th	March 15	0815-1000 S	0800-1000	S	March 17
1200 *or* 1215 MWF	1600-1800	T	March 13	1015-1200 S	1030-1230	S	March 17

†Courses offered primarily to students other than medical or dental students.

Rooms for 1615-1700 and 1715-1800 hour classes will not be scheduled unless they are requested on Form A123.

Courses beginning at 1730 or 1800 will start at 1815 during exam week.

Schedule B

Courses Offered in Colleges of Agriculture, Biological Sciences, Forestry, and Home Economics, General College, School of Management, and Institute of Technology

Class Hours			
0800 *or* 0815 MWF	1030-1230	F	March 16
0800 *or* 0815 TTh	0800-1000	F	March 16
0900 *or* 0915 MWF	1030-1230	T	March 13
0900 *or* 0915 TTh	1600-1800	Th	March 15
1000 *or* 1015 MWF	1600-1800	W	March 14
1000 *or* 1015 TTh	1030-1230	W	March 14
1100 *or* 1115 MWF	1030-1230	Th	March 15
1100 *or* 1115 TTh	1330-1530	Th	March 15
1200 *or* 1215 MWF	1600-1800	T	March 13

Class Hours			
1200 *or* 1215 TTh	1330-1530	T	March 13
1300 *or* 1315 MWF	1600-1800	F	March 16
1300 *or* 1315 TTh	0800-1000	W	March 14
1400 *or* 1415 MWF	0800-1000	S	March 17
1400 *or* 1415 TTh	1030-1230	S	March 17
1500 *or* 1515 MWF	1330-1530	S	March 17
1500 *or* 1515 TTh	1600-1800	S	March 17
0815-1000 S	0800-1000	S	March 17
1015-1200 S	1030-1230	S	March 17

Rooms for 1615-1700 and 1715-1800 hour classes will not be scheduled unless they are requested on Form A123.
Courses beginning at 1730 or 1800 will start at 1815 during exam week.

Common Examinations—All sections of the following courses are examined together at the time indicated.

Monday, March 12

Acct 1024, 1025—1030-1230
Biol 1009, 1009H, 1101—1030-1230
BFin 3000—1030-1230
BLaw 3058—0800-1000
Math 1008—1330-1530
Math 0009, 1111, 1131, 1142, 1201, 1211, 1221, 1231, 1621, 3211, 3221—1330-1630
Psy 1001—1900-2100
PubH 3001, 3004, 3033—1830-2130
QA 1050—0800-1000
Rhet 1101—0800-1000

Tuesday, March 13

Econ 1002, 1002H—1830-2130
Ger 1102—1830-2130
QA 3055—1830-2130

Wednesday, March 14

CSci 3101, 3102—1830-2130
Econ 1001, 1001H—1830-2130

Rooms—Examinations except common examinations are given in the regularly scheduled classroom unless your instructor arranges for and announces a different room. Note to instructors: requests for special final examination rooms must be submitted to the Scheduling Office by your department office on Form A123 on or before February 3. Notification of room assignments for all A123 forms received in the Scheduling Office by February 3 will be sent to departments on or before March 1.

Examination Scheduling Conflicts—Students are required to take final examinations at the times shown. However, if you have examination conflicts or three exams within a 16-hour period, you may request adjustment with your college office and with your instructor. Such a request must be presented at least two weeks before the examination period begins.

If you miss a final, an I or an N is recorded, depending upon your standing at the time. To make up the exam, you must obtain the instructor's permission.

SCHEDULE COMMITTEE REGULATIONS REGARDING EXAMINATIONS

1. There shall be no variations from the University final examination schedule except by concurrence of the dean of the college and the Director of Scheduling. **This prohibition also precludes moving a final examination from a scheduled time to study day or to the last or earlier meetings of the class, except laboratory final examinations** which cannot be held in accordance with the regular final examination schedule.

   All department requests for adjustment of final examination hours should be made on Form A163 by February 17 to permit publication of the change and orderly consideration of hardships. Additional common examinations may be requested on the same form, which is available in department offices.
2. Instructors requesting any variation from the official examination schedule must agree to give a special make-up examination to any student having examination conflicts or three examinations in one calendar day because of the change in hours.
3. Arranged examinations and authorized variations in published hours shall conform with the hour-periods shown in the examination schedules.
4. **No variations from the University final examination schedule will be considered official** until published in the Official Daily Bulletin printed in the *Minnesota Daily* and posted on campus bulletin boards.
5. Each college shall assume responsibility for making arrangements to spread out examinations for students who have more than two examinations scheduled in one day.
6. Since providing adequate seating for final examinations is a continuing and growing problem:
   a. departments are encouraged to limit final examinations to 2 hours;
   b. alternate seating should be requested only when it is deemed necessary for proper administration of the exam.

WINTER QUARTER GRADES

Academic Staff—Grades are due in the Office of Registration, Student Records, and Scheduling (150 Williamson Hall) within 72 hours after the examination. Grades for winter quarter are due beginning Thursday, March 15; the grades for the last examinations are due on Thursday, March 22 by 8:30 a.m. Messenger service is provided. Please call 373-2153 when grades are ready. *Do not send grades by mail.*

Students—Winter quarter grades for students registered in the College of Liberal Arts, College of Education, General College, University College, School of Nursing, Graduate School, and Institute of Technology may be picked up in the Armory Gymnasium on the first day of spring quarter—March 26—from 8 a.m. to 4 p.m. Grades not picked up on March 26 may be obtained in 202 Fraser Hall for one week beginning April 2. Grades for students in other colleges will be distributed through college offices. **You must show identification to receive grades.**

GRADING POLICIES AND PRACTICES

1. There shall be two grading systems, A-B-C-D-N and S-N. Each college (meaning also each separate school or institute) will determine to what extent and under what conditions each system may be available to its students and faculty. Any college may specify what courses or what proportion of courses taken by its students or by its prospective students must be on a particular grading system.

2. The S-N system represents a self-contained alternative to the A-B-C-D-N system, and the two may not be combined for a particular student in a particular course. Students may receive symbols only from the grading system under which they are registered.

3. When the two grading systems are available to a student, he or she should declare a choice of systems as part of the initial registration. The choice may not be changed after the end of the second week of classes (first week in summer session).

4. The following symbols, as defined, may be used on the University's official transcript, the chronological quarterly record of the student's registrations after the end of the second week of classes (end of first five days of classes for summer sessions). The official transcript is released by the University only at the student's request, with the official seal imprinted.

Grade of A— Represents achievement that is outstanding relative to the level necessary to meet course requirements.

Grade of B— Represents achievement that is significantly above the level necessary to meet course requirements.

Grade of C— Represents achievement that meets the basic course requirements in every respect.

Grade of D— Represents achievement that is worthy of credit even though it does not fully meet the basic course requirements in every respect.

Grade of S— Represents achievement that is deemed by the instructor to be satisfactory for the course in which the student is registered. This definition is intended to imply that the standards for S may vary from one course to another.

Symbol of W— Entered by the Registration, Student Records, and Scheduling Office when a student officially withdraws from a course, in accordance with procedures established by the student's college.

Symbol of I— Assigned by an instructor to indicate **Incomplete**, in accordance with provisions announced in class at the beginning of the quarter, when in the instructor's opinion there is a reasonable expectation that the student can complete successfully the work of the course. An **I** that is not made up by the end of the next quarter of residence becomes an **N**; instructors may set dates within the quarter for make-up examinations. (In the Graduate School, in master's degree programs in undergraduate colleges, and in the doctor of medicine programs, an **I** remains until changed by the instructor.) When an **I** is changed to another symbol, the **I** is removed from the record.

Symbol of N— Assigned when the student does not earn an **S** or a **D** or higher and is not assigned an **I**. It stands for **no credit.**

Symbol of X— Reported to indicate that a student may continue in a sequence course in which a grade cannot be determined until the full sequence of quarters is completed. The instructor will submit a grade for each **X** when the student has completed the sequence.

In connection with all achievement symbols, but especially in connection with S, the instructor is obligated to define to a class as explicitly as possible in its early meetings the performance that will be necessary to earn each.

Symbol of V— Indicates registration as an auditor or visitor, a non-credit, non-grade registration.

Symbol of T— Posted as a supplement in front of the original grade to indicate credits transferred from another institution or from one college or campus to another within the University when re-evaluation is required.

In the doctor of medicine and doctor of veterinary medicine programs, O (Outstanding) may be used with S-N.

5. If a student is permitted by the college to repeat a course, all grades are reported on the official transcript.

6. Any college may set special scholastic or other standards for registration in a particular course, for scholastic probation, for admission, for honors, for continued residence, for degrees, etc.

7. **The grading system described here became effective fall quarter 1977, thereby replacing all previous University systems, but its definitions and provisions may not be applied retroactively to any grades or symbols recorded before that time.**

8. Each transcript will be clearly identified as to the procedures under which it was produced and will be maintained and released under policies in effect during the time of registration.

9. The Assembly Committee on Student Academic Services has authority to grant to individual colleges permission to use experimental grading methods outside the provisions of this official University system, for a specified period, provided that the proposals do not interfere significantly with the registration options of students from other colleges and programs. Such experimental systems shall be reported for information to the Twin Cities Campus Assembly as soon as permitted and, after the specified period, shall be re-evaluated, to be either extended, discontinued, or, with Assembly approval, made a regular system for the unit concerned.

10. The Assembly Committee on Student Academic Services is charged with resolving disputes between and among colleges should procedures developed under this grading system result in unacceptable complications for students registering across college lines. The committee may bring to the Assembly issues it is unable to resolve informally through negotiation, with recommendations for resolution.

January 1984

sunday	monday	tuesday	wednesday	thursday	friday	saturday
NEW YEAR'S DAY 1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

DECEMBER 1983

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

FEBRUARY 1984

S	M	T	W	T	F	S
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29			

STUDENT SHOPPER'S GUIDE

AIR FORCE

MINNEAPOLIS, MN:
Col Robert B. Patrick
AFROTC Dept. 415
University of Minnesota
(612) 373-2205

TWIN CITIES, MN:
Officer Training School
SSgt Bruce Trickel
Rm 586, Bishop Henry Whipple Bldg.

AIR NATIONAL GUARD

ST. PAUL, MN:
MSG Gregory C. Beckwith
TSG Timothy R. Egan
SSG John O. Raymond
HQ 133rd Tac Airlift Wing
Mpls.-St. Paul Intl. Airport
(612) 725-5622

ARMY RESERVE

ST. PAUL, MN:
1457 University Avenue
(612) 644-5688
Or call toll free 1-800-USA-Army

ARMY ROTC

MINNEAPOLIS, MN:
Contact:
Prof. of Military Science
15 Church Street
(612) 373-2212

CANON

Contact your nearest local Canon Dealer.

CASIO

See your nearest local Casio Dealer.

CHEVROLET

The new Corvette. The Rewards of a higher Education. Available at your Chevrolet Dealer.

DELCO

GM/Bose - Experience a totally new class of automotive music systems from DELCO at your local GM Dealer.

DODGE SHELBY CHARGER

It ain't just paint

FOOTLOCKER LOCATIONS

Ridgedale
Minnetonka, MN

Maplewood
Maplewood, MN

Brookdale
Broklyn Center, MN

Burnsville
Burnsville, MN

Rosedale
Roseville, MN

Southdale
Edina, MN

Eden Prairie
Eden Prairie, MN

Seventh St.
Minneapolis, MN

Town Square
St. Paul, MN

Crossroads
St. Cloud, MN

Knollwood
St. Louis Park, MN

Signal Hills
West St. Paul, MN

FORD

The all-new 1984 Ford Tempo Style and Technology in Total Harmony. Available at your Ford Dealer.

GENERAL MOTORS

How much is too much to Drink? See message in this issue.

HONDA

See your local Honda Dealer.

JENSEN

Contact your nearest Jensen car audio dealer.

K-MART

Toshiba On Sale at K-Mart. AM/FM Stereo Radio Cassette, AM/FM 4-Band Cassette and personal stereo cassette players - On Sale At K-Mart Stores Nationwide.

THE LEE COMPANY

For the Lee Dealer nearest you, call Toll Free 1-800-835-2246 x95, In Kansas 1-800-342-2421 x 95

MARINE CORPS

MINNEAPOLIS, MN:
Officer Selection Officer
Room B34, FOB
210 Third Avenue S.

OLYMPUS

Check your yellow pages for the Olympus Dealer nearest you.

PANASONIC

See your Local Authorized Panasonic Dealer.

PONTIAC 1000

T.G.I.F. Available at your Pontiac Dealer.

RADIO SHACK

Visit your nearest Radio Shack Retail Store.

RADIO SHACK

Visit your nearest Radio Shack Computer Center.

SHARP

See your College Bookstore or your local Sharp Dealer.

TECHNICS

Technics is Available Wherever fine audio equipment is sold.

TIME INC.

For subscriptions at Special rates, mail in postage paid reply card.

OTHER LOCAL MERCHANTS

See Display Ad For More Information

MINNEAPOLIS, MN:
Air Force ROTC
Armory, Room 3
Call 373-2205

Art Materials, Inc.
315 14th Ave. S.E.
Call 331-6864

Campus Typing
800 Washington Ave. S.E.
Call 378-2210

Green Mill
(See Ad for Location Nearest You.)

Independent Study
45 Westbrook Hall
Call 373-3256

International Study & Travel Center
44 Coffman Union
Call 373-0180

Jewish Student Center at Hillel House
1521 University Ave. S.E.
Call 379-4026

MSA Store
Ground Floor Coffman

Nelson's Office Supply Stores
(See Ad for Location Nearest You.)
Call 331-5969

Peking Garden Restaurant
2324 University Ave. S.E.
Call 623-3989/623-3992

Rec Sports-Intramurals
(See Ad for Details)
Call 373-4200

Stanley H. Kaplan
328 E. Hennepin
Call 378-9191

Team Electronics
2640 Hennepin
Call 377-9840

The Artery
413 Cedar Ave.
Call 333-2558

University Bindery
2818 Como Ave. S.E.
P&GA Building, Room 180
Call 373-2843

University Community Video
425 Ontario St. S.E.
Call 376-3333

University of Minnesota Extension Classes
202 Wesbrook Hall
77 Pleasant St. S.E.
Call 373-1855

University Student Legal Services
160 West Bank Union Skyway
Call 376-5237

ST. PAUL, MN:
Minnesota Army National Guard
Call 1-800-652-9032

Outdoor Store
St. Paul Student Center
Call 373-1404

PHILADELPHIA, PA:
The Institute for Paralegal Training
1926 Arch Street
Call 215-567-4811

Now You Can Copy Tapes in Half the Time With Radio Shack's Dubbing Deck (and do it for $60 less!)



Reduced $60.00. At $339.95, the Realistic® SCT-28 was a great deal. Now at $279.95, the convenience of a dual-cassette deck is even more affordable!

High-Speed Dubbing. Duplicate your tapes at twice the normal recording speed. You get professional sounding copies and you save time, too—no second deck or patch cords required.

Two Superb Decks in One. Deck-1 is designed for playback only, and features a special narrow-gap tape head. Deck-2 has full record/play capability and a wide-gap head for superior recording results. And both decks feature soft-touch controls for smooth, easy operation.

Continuous-Play Function. You can set the SCT-28 to automatically play two cassettes in sequence for up to two hours of uninterrupted music.

Auto-Search Music System. Deck-1 has ASMS to help you locate your favorite selections quickly. Each time you press the button the SCT-28 finds and plays the next or previous song automatically!

Features for Great-Sounding Copies. You get Dolby*B noise reduction for expanded dynamic range and dramatically lowered tape hiss. Selectors for noise-free metal, CrO_2 high bias and normal cassettes plus a fine-bias control. Two-color, five-step LED peak meters to indicate the signal level. And a normal-speed button so you can listen as you dub. Plus, mike and line inputs let you use the SCT-28 like a regular deck.

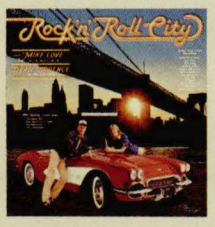
Come in for a hands-on demonstration today and discover high-speed dubbing for yourself. Only $26 per month on Radio Shack/CitiLine credit.

Take it from Mike Love of The Beach Boys and Dean Torrence of Jan and Dean:

"Dean uses the SCT-28 to make copies of my songs, so he can learn to sing."



"Rock'n'Roll City" Dolby Cassette Starring Mike & Dean



Only $4.99

A Radio Shack exclusive! 12 new Rock'n'Roll recordings by Mike & Dean with special guests: The Beach Boys, Paul Revere & The Raiders, and The Association. New recordings of 60's hits will make you feel 18 again. Produced by Daryl Dragon.

Radio Shack®
A DIVISION OF TANDY CORPORATION

*TM Dolby Laboratories Licensing Corp.

Prices apply at participating Radio Shack stores and dealers.

GET YOUR FREE AUDIO CATALOG

32 Full-Color Pages Show You What's Really New in Stereo Hi-Fi!

Name _____

Address _____ Apt. # _____

City _____ State _____ Zip _____

Bring this coupon to your nearby Radio Shack or mail to:
Radio Shack, 300 One Tandy Center, Fort Worth, TX 76102

84A-063

SCHEDULE WORKSHEET

TIMETABLE

PERIOD OR TIME	MON	TUES	WED	THURS	FRI	SAT

COURSES

COURSE NO.	TITLE	INSTRUCTOR



YOU CAN GO FOR IT ALL AT NSA

ELECTRICAL ENGINEERS

■ A wide variety of R & D projects which require Communications, Electronic and Computer Engineering graduates.

MATHEMATICIANS

■ Diverse Problem Solving in Communications Related Areas. Long Range Research and Evaluation of New Techniques.

COMPUTER SCIENTISTS

■ A variety of opportunities in Systems Analysis and Design, Programming, Data Base Management, Computer Networking/Security and Graphics.

LANGUAGE MAJORS

■ Translation, Transcription and Analysis/Reporting for Slavic, Near Eastern and Asian Language Majors.

CO-OP PROGRAMS

■ NSA has an extensive CO-OP Program at the Undergraduate and Graduate levels for students in the disciplines listed above.
- Transportation Paid
- Housing Available

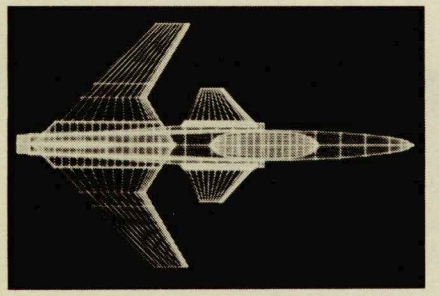
Contact CO-OP Coordinator on your campus.

An Equal Opportunity Employer. U.S. Citizenship Required.

Interested individuals contact:

NATIONAL SECURITY AGENCY
M322 (1GH-DC)
Fort George G. Meade, MD. 20755

ENGINEERING TAKES ON EXCITING NEW DIMENSIONS IN THE AIR FORCE.



Computer-generated design for investigating structural strengths and weaknesses.

Developing and managing Air Force engineering projects could be the most important, exciting challenge of your life. The projects extend to virtually every engineering frontier.

5 CAREER FIELDS FOR ENGINEERS



Air Force electrical engineer studying aircraft electrical power supply system.

Engineering opportunities in the Air Force include these five career areas: aeronautical, architectural, astronautical, electrical and nuclear. Hundreds of diverse specialties are included in a wide variety of work settings. For example, an electrical engineer may work in aircraft design, space systems, power production, communications or research. An aeronautical engineer might be included in wind tunnel testing, designing cockpit displays and flight testing.

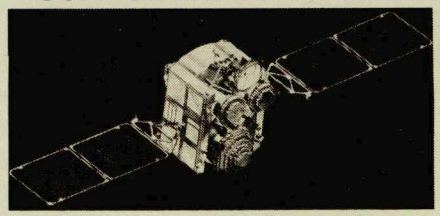
PROJECT RESPONSIBILITY COMES EARLY IN THE AIR FORCE



Air Force aeronautical engineers discuss flight characteristics of a fighter aircraft.

Most Air Force engineers have complete project responsibility early in their careers. For example, a first lieutenant directed work on a new airborne electronic system to pinpoint radiating targets. Another engineer tested the jet engines for advanced tanker and cargo aircraft.

OPPORTUNITIES IN THE NEW USAF SPACE COMMAND



Artist's concept of the DSCS III Defense Satellite Communications System satellite. (USAF photo.)

Recently, the Air Force formed a new Space Command. Its role is to pull together space operations and research and development efforts, focusing on the unique technological needs of space systems. You may have an opportunity to join the team that operates superior space systems as the Air Force moves into the twenty-first century.

To learn more about how you can be part of the team, as an officer, see your Air Force recruiter or call our Engineer Hotline toll free 1-800-531-5826 (in Texas call 1-800-292-5366). There's no obligation.

AIM HIGH
AIR FORCE
A great place for engineers.



Before you work anywhere, take a look at the tools we work with.

NASA's space shuttle. For Air Force officers working as scientists and engineers, the challenge is just beginning. In fact, from laboratories to lasers to launch pads, we have exciting projects and management opportunities very few employers can offer.

For example, Air Force scientists are developing experiments that will be an important part of the space shuttle's cargo in the years to come. Experienced Air Force engineers will work as shuttle mission planners and as astronaut flight controllers.

If you have a technical degree with a science or math background, we may have a challenging future for you as an Air Force officer. It's a future that demands the vision and commitment of people like you. And it's vital to our country.

For more information about Air Force science and engineering opportunities, mail the card. Or call our toll-free Engineer Hotline 1-800-531-5826 (in Texas 1-800-292-5366). Better yet, send your resume to HRS/RSAANE, Randolph AFB, TX 78150. There's no obligation.

AIR FORCE

A great place for scientists and engineers.



T.G.I.F.

You could use a break. You spent so many hours at the library this week you were beginning to get your phone calls there. Now you're free, and ready to go. You've got your nifty Pontiac 1000 full of fuel. And you're about to fill this fun little Hatchback with your favorite friends and refreshments. The beach, the mountains—it really doesn't matter. All you want to do this weekend is hit the road... instead of the books.

PONTIAC **WE BUILD EXCITEMENT**

GM
MARK OF EXCELLENCE

UNIVERSITY OF MINNESOTA

CLASS SCHEDULE

SPRING QUARTER 1984
TWIN CITIES

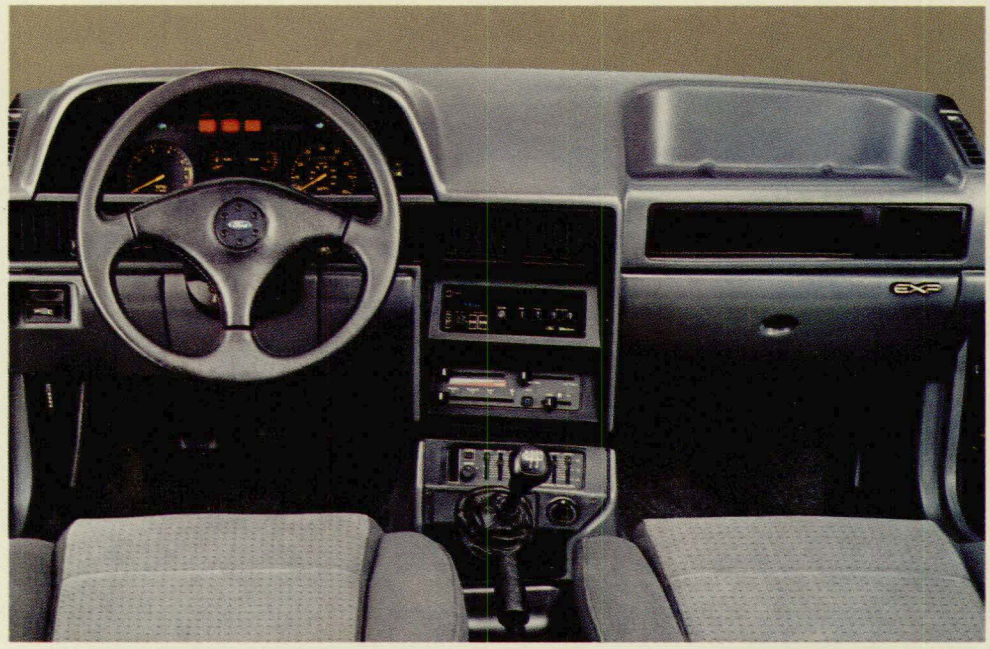


PUBLISHED IN WINTER 1983/84
© 1984 UNIVERSITY COMMUNICATIONS, INC.

Ford EXP Turbo.

New Dash.

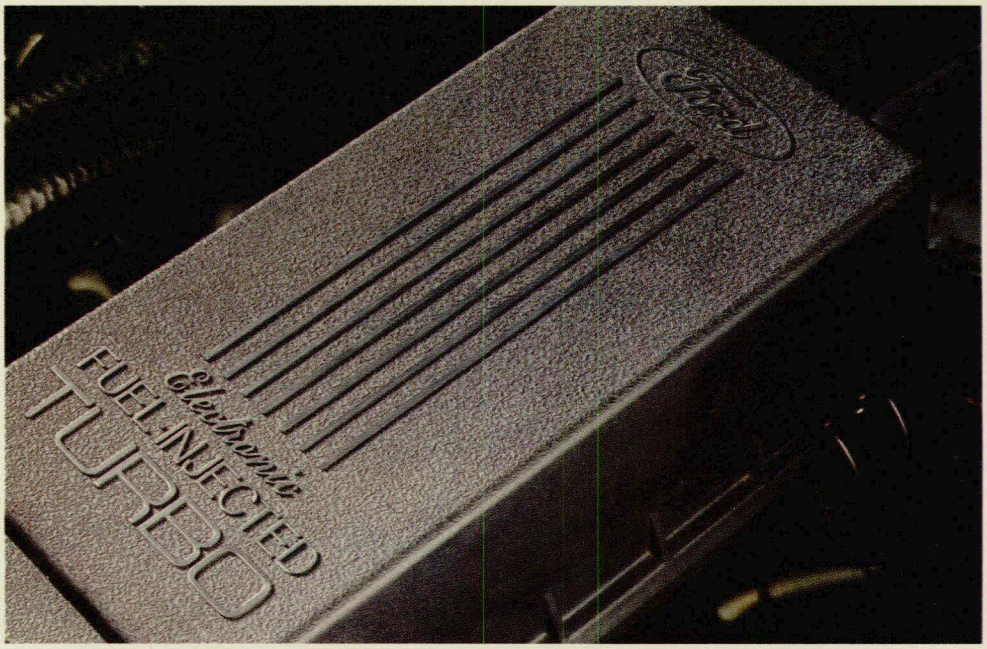
The new EXP Turbo's full-function instrument panel provides you with a dash of technology. All dials and gauges, including the tachometer, turbo-overboost light, and standard AM/FM stereo with cassette are functionally designed and strategically placed. And for improved performance of another kind, there is an optional electronic search stereo plus graphic equalizer.



New Dash.

Cubic inch for cubic inch, the new EXP Turbo's electronically fuel-injected 1.6 liter turbo-charged engine is among the most powerful production engines Ford has ever produced. And yet, despite its performance capabilities, it is projected to deliver amazing ratings of 26 est. MPG/42 hwy. est.

Although EPA mileage ratings were not available at the time of publication, these estimates are projected Ford ratings based on Ford Engineering test data, and are expected to be very close to official EPA ratings. Use for comparison. Your mileage may vary depending on speed, trip length, weather. Actual highway mileage will probably be lower.



New Dash.

You'll also find new spoilers, new aluminum wheels and a new bubble-back hatch. The end result is something rather rare in today's world: A car with all the dash you could ask for.

"Quality is Job 1." An independent survey established Ford makes the best-built American cars. The survey measured owner-reported problems during the first three months of ownership of 1983 cars designed and built in the U.S.

Have you driven a Ford... lately?

Ford



Get it together — Buckle up.

MGC
C568

WHO'D LET A 23-YEAR-OLD WORK WITH THE WORLD'S MOST SOPHISTICATED LASER SYSTEM?

Or evaluate primary sensor performances of multimillion dollar satellites?

Or manage millions of dollars a year in defense contracts?

The Air Force, that's who.

If you're a talented, motivated electrical engineer or plan to be, you don't have to wait to work with the newest, most sophisticated technology around.

You can do it now, as an Air Force officer working as an electrical engineer.

Don't get us wrong. We don't hand it to you on a silver platter. You have to work for it. Hard.

But if you do, we'll give you all the responsibility you can handle. And reward you well for taking it.

You'll get housing, medical and dental care—and excellent pay that increases as you rise in rank.

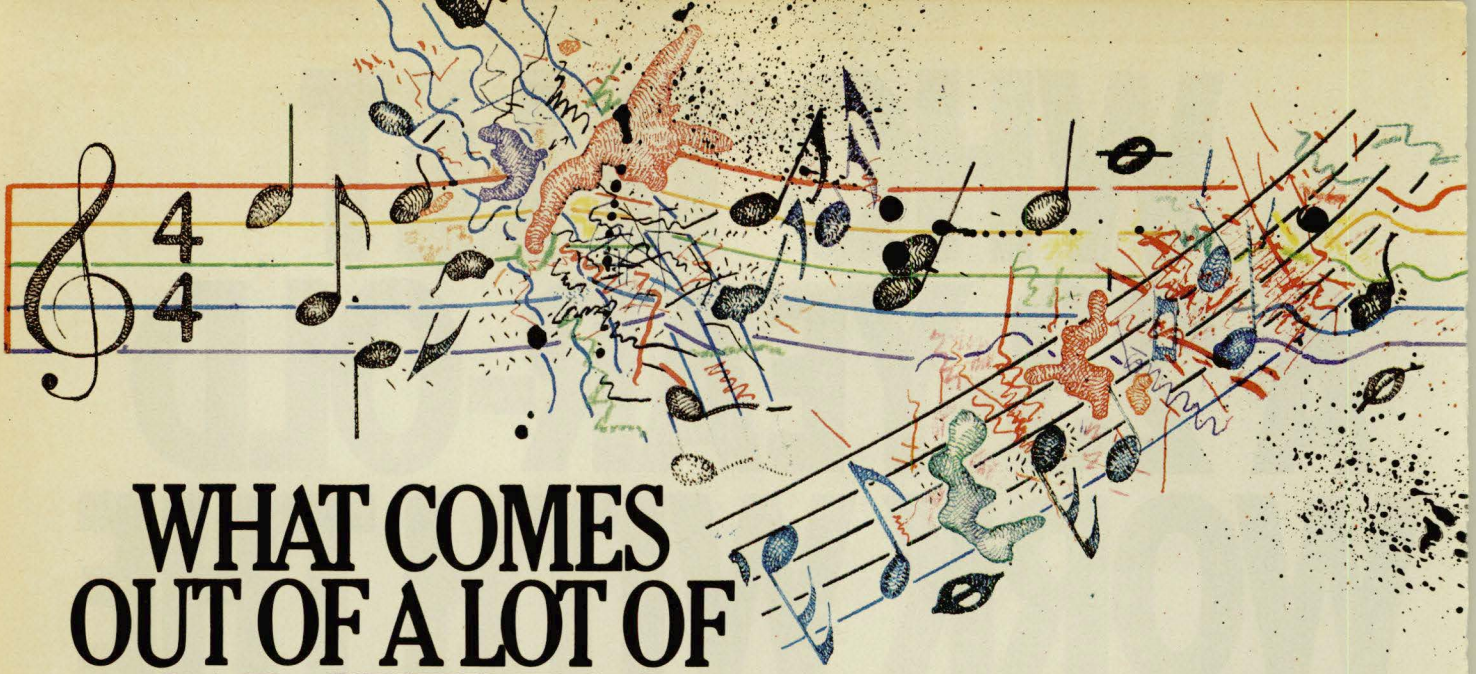
Plus there are opportunities to attend graduate school. If you're qualified and selected, we'll pay 75% of your tuition. Those with special qualifications can even study full time, at no cost.

So plug into the Air Force. Because when it comes to technology, the Air Force can help you achieve great sophistication at a very tender age.

For more information contact your local Air Force recruiter, or call our Engineer Hotline toll-free 1-800-531-5826 (in Texas 1-800-292-5366). Better yet, send your resume to HRS/RSAANE, Randolph AFB, TX 78150. There's no obligation.

AIM HIGH
AIR FORCE

A great place for engineers



WHAT COMES OUT OF A LOT OF CAR STEREOS COULD HARDLY BE CALLED MUSIC.

What comes out of your car's FM stereo tuner may start out as Rock or R&B or Rockabilly or New Wave or Jazz Fusion.

But by the time you add the hiss of FM noise, the crackle and pop of static, the cutting in and out created by multipathing, the cacophony of stations "bleeding" on top of each other, you've ended up with something that could hardly be called *popular* music.

Unfortunately, even in this day and age of hi-tech everything, you still can't get clean, clear FM music in a moving car.

Until now, that is. Because now there's Supertuner III. A car tuner with FM reception so clear, you'll think you're listening to a cassette, instead of a radio.

Of course, it's easy to brag that no other FM stereo tuner virtually eliminates FM interference like Supertuner III.

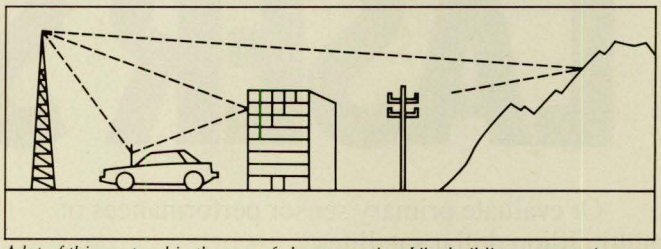
But Pioneer proved it. By road testing Supertuner III against the highest quality FM stereo car tuners on the market.

The test was conducted in Chicago, Illinois, perhaps the worst reception area in the entire country.

Using the same car, with the same antenna, and driving continuously around the same block on the Near North Side (where the world's tallest and third tallest buildings create FM listening havoc) Pioneer put one tuner after another to the test.

And, time after time, the clear winner was Supertuner III.

Of course, these are only words. And words don't sing. At least not like music. So at your earliest convenience we advise you to drive to your nearest Pioneer car stereo dealer. And ask for a demonstration of new Supertuner III.



A lot of things stand in the way of clear reception. Like buildings, mountains, even telephone poles. Radio signals bounce off them like balls on a handball court. Creating static, stations cutting in and out. Unless you have a Supertuner III.

SUPERTUNER™ III.



You'll be able to recognize it easily. It will be the one with something coming out of it that sounds exactly like music.

PIONEER®

Because the music matters.

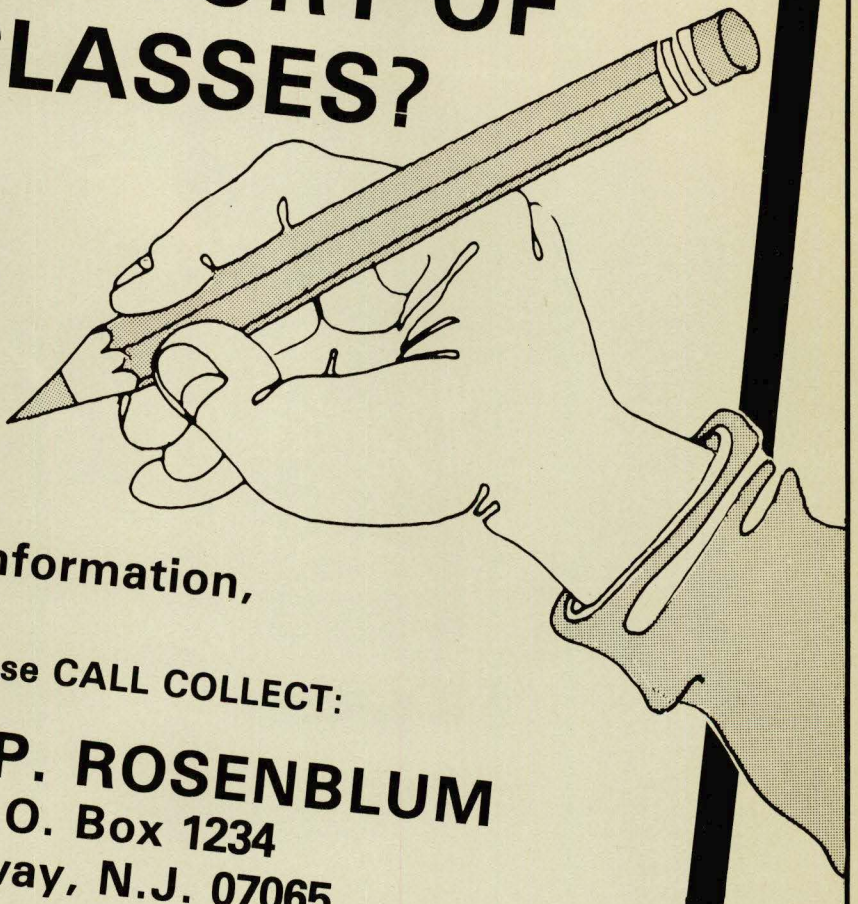
© 1983 Pioneer Electronics (USA) Inc., (800) 447-4700. In Illinois: (800) 322-4400.

Take note of this!



Are you interested in advertising in this

DIRECTORY OF CLASSES?



Every student must read this official school publication. We offer 100% readership.

For additional information,

Please CALL COLLECT:

DAVID P. ROSENBLUM
P.O. Box 1234
Rahway, N.J. 07065
(201) 382-6161

THE BEST TIME TO DESIGN THE MUSIC SYSTEM IS WHEN YOU DESIGN THE CAR.

Music is truly an art. However, bringing that art to you in your car is pure science. No one knows that better than Delco Electronics.

For example, Delco engineers work with General Motors divisions when a car is still on the drawing board to scientifically design the location, mounting, size and shape of every speaker to match that vehicle's acoustics. A Delco Music System is not an afterthought. It is literally designed into the car.

And because we know the electrical system of GM cars, we also build impulse noise blankers into Delco Music Systems to minimize interference.

Finally, Delco's Electronically Tuned Receiver (ETR™) contains audio-processing and computerized signal-processing circuits that help improve reception and automatically lock in a station, keeping it from "drifting" as you drive.



Delco Electronics is truly a leader in automotive electronics technology. When you buy your new car or truck, ask your dealer to demonstrate the science of a Delco Music System (including the incredible Delco-GM/Bose Music System).



Delco Electronics

BRINGING YOU *THE ART OF MUSIC* THROUGH THE SCIENCE OF SOUND.

TABLE OF CONTENTS

Section 1: REGISTRATION	Page
Calendar	2
Course Request Forms	4
Registration Queue	6
Steps in Registration	8
Holds	9
Graduate School Registration Instructions	9
College of Liberal Arts Registration Instructions	10
School of Management Courses, Registration Instructions for	12
Institute of Technology Courses, Registration Instructions for	12
The First Week of Class	12
Change of Registration	13
Withdrawal From the University	13
Graduation	13
Administrative Offices	14
Section 2: COURSES	
How to Use This Schedule	16
Schedule of Classes	18
Courses Open Through Extension Classes	101
Section 3: CODES & MAPS	
Course Designators	102
Directory for Department Offices	104
Building Accessibility/Campus Maps	105
Section 4: TUITION & FEES	
Tuition Schedule 1983-84	108
Student Services Fee	109
Health Service and Hospitalization Charges	109
Student ID Card Replacement	109
Payment of Fees	110
Veterans Certification	112
Refunds	112
Course Fees	112
Special Fees	113
Transcript Fees	113
Facility Fees	113
Deposit Cards and Rental Cards	114
Tuition Rates for Staff Members	114
Section 5: EXAMS & GRADES	
Final Examination Schedule	116
Regulations Regarding Examinations	117
Submission of Final Grades	117
Grading Policies and Practices	118

NOTE: The advertising appearing in this schedule subsidizes the cost of printing. The University receives no profit from such advertising, nor does the University endorse any of the products or advertisers.

DIRECTORY OF CLASSES FOR UNIVERSITY OF MINNESOTA

Published By:
University Communications, Inc.
President:
Andrew C. Citsay
Vice President:
Linda Harris



A Subsidiary of Ziff-Davis Publishing Company
P.O. Box 1234
Rahway, N.J. 07065
(201) 382-6161

Publisher:
University Communications, Inc.
Director of National Advertising:
Jerry Koffler
Director of College Relations:
Edward Seyler

1984

MARCH

			1	2	3	
4	5	6	7	8	■9	10
11	□12	□13	□14	□15	□16	□17
18	○19	20	21	22	23	24
25	■26	27	28	29	30	31

APRIL

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

MAY

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
27	○28	29	30	31		

JUNE

					■1	2
3	□4	□5	□6	□7	□8	□9
10	11	■12	13	14	15	16
24	25	26	27	28	29	30

JULY

1	2	3	○4	5	6	7
8	9	10	11	12	■13	14
15	■16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

AUGUST

			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	■17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

SEPTEMBER

						1
2	○3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	■20	21	22
23/30	24	25	26	27	28	29

OCTOBER

	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

NOVEMBER

				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	○22	○23	24
25	26	27	28	29	■30	

DECEMBER

						1
2	□3	□4	□5	□6	□7	□8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23/30	24/31	○25	26	27	28	29

■ First and Last Days of Instruction
□ Final Examination Dates
○ Classes Excused and Holidays

UNIVERSITY CALENDAR
Twin Cities Campus

Spring Quarter 1984

MARCH

26 *Spring quarter classes begin.*

APRIL

4 Last day for undergraduates and students in professional degree programs to pay graduation fees for spring quarter.

27 Students applying for 1984-85 campus-based financial aid must have their complete and accurate applications **with all required documents** in the Office of Student Financial Aid by this date.

MAY

3 Last day for students in the Graduate School to pay graduation fees for spring quarter.

15 Graduate School application deadline for first term of summer session.

28 Memorial Day, holiday. Classes excused and University offices closed.

JUNE

1 Last day of instruction.

2 Study day.

4-9 Final examinations.

9 *End of spring quarter.*
Graduate School commencement. Candidates for baccalaureate and professional degrees should check with college offices for commencement information.

Summer Session—First Term 1984

JUNE

5 Last date for payment of graduation fees for first term.

12 *First term classes begin.*

15 Graduate School application deadline for second term of summer session.

JULY

4 Independence Day, holiday.

13 *End of first term.*
Commencement. Candidates for baccalaureate degrees should check with college offices for commencement information.

Summer Session—Second Term 1984

JULY

12 Last day for students in the Graduate School to pay graduation fee for second term.

13 Last date for undergraduates and students in professional degree programs to pay graduation fees for second term.

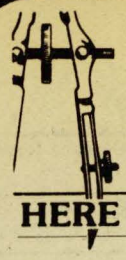
16 *Second term classes begin.*

AUGUST

15 Graduate School application deadline for fall quarter.

16 Fall quarter registration begins (tentative date).

17 *End of second term.*
Candidates for baccalaureate degrees should check with college offices for commencement information.



AIR FORCE ROTC — HERE ARE THE FACTS

When you're discussing something as important as your future, it's urgent that you get the straight facts . . . and that you understand them. Air Force ROTC can be an important part of your future. We would like to outline some of the facts and invite you to look into gathering more.

It's a fact: the Air Force needs highly-qualified, dedicated officers . . . men and women. It's a fact: we need people in all kinds of educational disciplines. It's a fact: we're prepared to offer financial help to those who can qualify for an Air Force ROTC scholarship.

Get together with an AFROTC representative and discuss the program. We'll give you all the facts. It could be one of the most important talks you've ever had with anyone about your educational plans.

For more information, contact:
Major Richard Holden, Room 3
Armory, (612) 373-2205

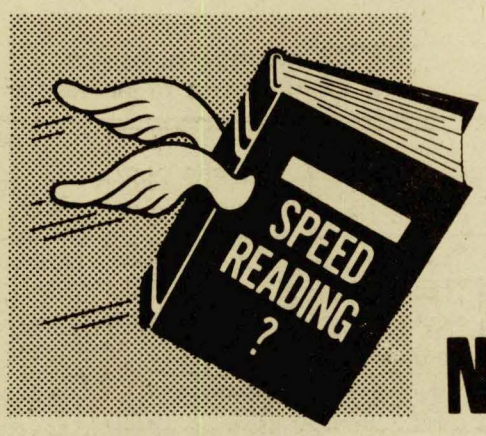
AIR FORCE ROTC
Gateway to a great way of life.

WE KNOW WHAT YOU NEED

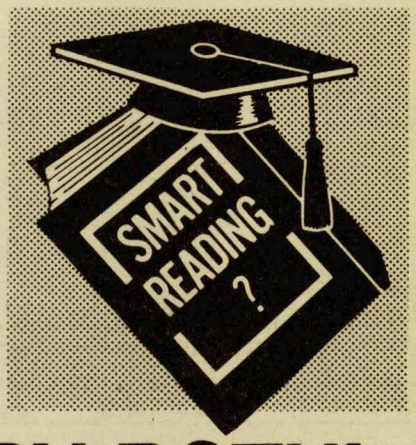
and we've got it... everything for drawing, design, painting, printmaking, ceramics, and sculpture: all of your class needs.... we're here to help you.

the Artery

413 Cedar Ave Mpls Mn 333-2558



NOW



YOU CAN LEARN BOTH!

FINALLY! A SPEED READING PROGRAM THAT CUTS YOUR READING TIME WITHOUT SACRIFICING COMPREHENSION OR RECALL!

FAST AND SMART . . . ISN'T THAT HOW YOU WANT TO READ?

Stanley H. KAPLAN EDUCATIONAL CENTER
PREPARATION SPECIALISTS SINCE 1938

BREAKTHROUGH RAPID READING
Call Days, Evenings or Weekends for Details
378-9191
328 E. HENNEPIN
MPLS, MN 55414

ID CARD IMPRINT (if no ID card, print name, ID or Social Security Number)

COURSE REQUEST
University of Minnesota

College of Enrollment	Street Address		Telephone Number
Major	City	State	Zip Code

Term and Year: __ Fall __ Winter __ Spring __ Summer Session I __ Summer Session II 19__

☐ Original Registration: Number of credits ___ ☐ Cancel/Add: Number of Credits Remaining ___ ☐ Complete Cancel

NOTE: Fill in VARIABLE CREDITS **only** if credits are listed as "ar cr" in the Class Schedule.
Fill in GRADE OPTION **only** if mandatory grading is not listed in the Class Schedule.

COURSE(S)—First Choice (original registration)				COURSE(S)—Second Choice (or cancel/add additions)				CANCELLATIONS	
CALL NUMBER	GRADE OPTION	VARIABLE CREDITS	DESIGNATOR, COURSE NUMBER, AND SECTION	CALL NUMBER	GRADE OPTION	VARIABLE CREDITS	DESIGNATOR, COURSE NUMBER, AND SECTION	CALL NUMBER	DESIGNATOR, COURSE NUMBER, AND SECTION

MPIRG (OPTIONAL)

Minnesota Public Interest Research Group is described in the Class Schedule. The MPIRG fee is $2 per quarter (or $1 per summer term) for those who pay the student services fee. If you choose NOT to pay the MPIRG fee, initial here ——→ ☐
Payment is refundable through MPIRG.

ADVISER APPROVAL (if needed)

ADDITIONAL APPROVAL (if needed)

(P-724B)

A—22 6/83

ID CARD IMPRINT (if no ID card, print name, ID or Social Security Number)

COURSE REQUEST
University of Minnesota

College of Enrollment | Street Address | Telephone Number
Major | City | State | Zip Code

Term and Year: __ Fall __ Winter __ Spring __ Summer Session I __ Summer Session II 19__

☐ Original Registration: Number of credits ___ ☐ Cancel/Add: Number of Credits Remaining ___ ☐ Complete Cancel

NOTE: Fill in VARIABLE CREDITS **only** if credits are listed as "ar cr" in the Class Schedule.
Fill in GRADE OPTION **only** if mandatory grading is not listed in the Class Schedule.

COURSE(S)—First Choice (original registration) | COURSE(S)—Second Choice (or cancel/add additions) | CANCELLATIONS

CALL NUMBER | GRADE OPTION | VARIABLE CREDITS | DESIGNATOR, COURSE NUMBER, AND SECTION | CALL NUMBER | GRADE OPTION | VARIABLE CREDITS | DESIGNATOR, COURSE NUMBER, AND SECTION | CALL NUMBER | DESIGNATOR, COURSE NUMBER, AND SECTION

MPIRG (OPTIONAL)

Minnesota Public Interest Research Group is described in the Class Schedule. The MPIRG fee is $2 per quarter (or $1 per summer term) for those who pay the student services fee. If you choose NOT to pay the MPIRG fee, initial here ——→ ☐
Payment is refundable through MPIRG.

ADVISER APPROVAL (if needed)

ADDITIONAL APPROVAL (if needed)

(P-724B)

A—22 6/83

COMPLETING YOUR COURSE ENROLLMENT REQUEST FORM

(1) Chris R. Student
1234567
ID CARD IMPRINT (if no ID card, print name, ID or Social Security Number)

COURSE REQUEST
University of Minnesota

College of Enrollment	Street Address		Telephone Number
(2) Agriculture	(4) Bailey Hall		373-4343
Major	City	State	Zip Code
(3) Animal Science	St. Paul	MN	55108

(5) Term and Year: ___ Fall ___ Winter X Spring ___ Summer Session I ___ Summer Session II 19 84

(6) X Original Registration: Number of credits 15 ☐ Cancel Add: Number of Credits Remaining ___ ☐ Complete Cancel

NOTE: Fill in VARIABLE CREDITS **only** if credits are listed as "ar cr" in the Class Schedule.
Fill in GRADE OPTION **only** if mandatory grading is not listed in the Class Schedule.

COURSE(S)—First Choice (original registration)				COURSE(S)—Second Choice (or cancel add additions)				CANCELLATIONS	
CALL NUMBER	GRADE OPTION	VARIABLE CREDITS	DESIGNATOR, COURSE NUMBER, AND SECTION	CALL NUMBER	GRADE OPTION	VARIABLE CREDITS	DESIGNATOR, COURSE NUMBER, AND SECTION	CALL NUMBER	DESIGNATOR, COURSE NUMBER, AND SECTION
(7)(A)	(B)	(C)	(D)	(8)				(9)	
724414		4	Rhet 3280	201663			Rhet 3562-4		
416209	S-N		An Sc 1110	31805!			An Sc 3402-2		
618282			An Sc 3305-1						
018274			An Sc 5403-1						

MPIRG (OPTIONAL) (10)
Minnesota Public Interest Research Group is described in the Class Schedule. The MPIRG fee is $2 per quarter (or $1 per summer term) for those who pay the student services fee. If you choose NOT to pay the MPIRG fee, initial here ____→ ___
Payment is refundable through MPIRG.

ADVISER APPROVAL (if needed)
(11) A. H. Smith

ADDITIONAL APPROVAL (if needed)
(12)

(P-724B)

A—22 6 83

(1) *If you do not have your student ID card,* print your name and student ID number (or Social Security Number).

(2) Print the college in which you are enrolled.

(3) Print your major.

(4) Print your complete address and phone number.

(5) Indicate the term (fall, winter, spring, summer I, or summer II) and year that you are registering for.

(6) Check the box for original registration if this is your first registration for the quarter or term and fill in the number of credits you are registering for. If you are making changes in your original registration (cancel/adding), check the cancel/add box and fill in the number of credits you will have *after* completing those changes. Check the "Complete Cancel" box if you are cancelling *all* courses.

(7) This section is for your first choice course requests:

(A) Print the six digit call number. (The call number is to the left of each course listing or each section of a course.)

(B) Mark the grading system you are requesting, *only if the course is offered for both A-N and S-N.* See example above and read the paragraph on Grading Option in Section 2 of this *Class Schedule* for further information.

(C) Print the number of credits only if you are registering for a variable credit course (i.e., 1-4 cr.) or an arranged credit course (ar cr). See example above.

(D) Print the designator (department abbreviation—e.g., ACCT, ELEM, HIST), course number, and section number for each course.

(8) This section is for your second choice course requests. Plan alternatives in case your first choice course requests are closed or otherwise unavailable. List course additions in this section when cancel/adding.

(9) Provide the call number, designator, course and section numbers for any courses you are cancelling. Remember to indicate your credit total in section 6.

(10) MPIRG—see instructions on form. The Minnesota Public Interest Research Group (MPIRG) is a nonprofit, nonpartisan, student-run organization funded at the Twin Cities campus by an optional quarterly fee of $2.00. A statewide advocacy group, MPIRG gives students the opportunity to speak out on public issues and work for social change. The fee supports a professional staff for lobbying, litigation, organizing, and research. During the last year, MPIRG worked to stop cuts in financial aid, protect student constitutional rights, freeze nuclear weapons production, protect the environment, and promote renewable energy.

(11) College, Department, and/or Adviser approval, as required.

(12) Additional approval, as required.

BULLETIN USE

The contents of this schedule and other University bulletins, publications, or announcements are subject to change without notice. University offices can provide current information about possible changes.

EQUAL OPPORTUNITY

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, creed, color, sex, national origin, or handicap. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972, by Sections 503 and 504 of the Rehabilitation Act of 1973, and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455, (612/373-7969), or to the Director of the Office of Civil Rights, Department of Education, Washington, D.C. 20202, or to the Director of the Office of Federal Contract Compliance Programs, Department of Labor, Washington, D.C. 20210.

ACCESS TO STUDENT EDUCATIONAL RECORDS

In accordance with regents' policy on access to student records, information about a student generally may not be released to a third party without the student's permission. The policy also permits students to review their educational records and to challenge the contents of those records.

Some student information—name, address, telephone number, dates of enrollment and enrollment termination, college and class, major, adviser, and degrees earned—is considered public or directory information. To prevent release of such information outside the University while in attendance at the University, a student must notify the records office on his or her campus.

Students are notified annually of their right to review their educational records. The regents' policy, including a directory of student records, is available for review at the information booth in Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Coordinator of Student Support Services, 260E Williamson Hall, (612/373-2106).

REGISTRATION QUEUE—SPRING QUARTER 1984

The registration queue on this page and the next has two parts—stage 1 for graduate, pharmacy, and public health students and seniors (124 or more completed credits) and stage 2 for juniors, sophomores, freshmen, and adult specials. Within each stage, there are name ranges—listing last names (up to 10 letters) and sometimes partial first names. To find your registration time, locate the name range for your last name. For example, if you are a junior named Chris R. Student, your name falls between Stillman, C-Stuelke, Ro in stage 2, and you may register *on or after* 8:15 a.m. on February 28.

Stage 1—Graduate, Pharmacy, and Public Health Students and Seniors (124 or more completed credits)

	8:15 a.m.	8:45 a.m.	9:15 a.m.	9:45 a.m.	10:15 a.m.	10:45 a.m.	11:15 a.m.	11:45 a.m.
February 17	Hant-Hesterman	Hestermao-Hubbard, Ch	Hubbard, Ci-Johnson, Ca	Johnson, Cb-Kasrawi, Ma	Kasrawi, Mb-Kloth, Paul	Kloth, Paum-Kruenegel	Kruenegem-Larson, Vic	Larson, Vid-Lewandowsk
February 20	Oppenheimf-Pedersen, K	Pedersen, L-Pisek, Susa	Pisek, Susb-Ramberg, Pe	Ramberg, Pf-Riley, Patr	Riley, Pats-Roszkowski	Roszkowskj-Sanchez, Ma	Sanchez, Mb-Schneiderf	Schneiderg-Semmes, Rob
February 21	Vanderpoem-Walters, Da	Walters, Db-Wharton, Mi	Wharton, Mj-Wolner, Joa	Wolner, Job-Zinke, Brad	Zinke, Brae-Almanza, Ju	Almanza, Jv-Angerhofer	Angerhofes-Bakre, Meer	Bakre, Mees-Behrendt, R
February 22	Coumbe, Wim-Degroat, Ke	Degroat, Kf-Duddingsto	Duddingstp-Ensley, The	Ensley, Thf-Fish, Jeffr	Fish, Jeffs-Frekot, Joa	Frekot, Job-Gauthier, J	Gauthier, K-Gogoussis	Gogoussit-Griffith, R

Stage 2—Juniors, Sophomores, Freshmen, and Adult Specials

	8:15 a.m.	8:45 a.m.	9:15 a.m.	9:45 a.m.	10:15 a.m.	10:45 a.m.	11:15 a.m.	11:45 a.m.
February 23	Mechels, Mb-Meyer, Dewa	Meyer, Dewb-Miller, Mar	Miller, Mas-Moen, Lauri	Moen, Laurj-Moroz, Mich	Moroz, Mici-Mulholland	Mulhollane-Nali, Karen	Nali, Kareo-Nelson, Joe	Nelson, Jof-Newhouse, E
February 24	Palkowskj-Paulson, Da	Paulson, Db-Perkins, Jo	Perkins, Jp-Peterson, J	Peterson, K-Phan, Ninh	Phan, Nini-Pizarro, Ma	Pizarro, Mb-Pouladiank	Pouladianl-Puls, Pamel	Puls, Pamem-Ralph, Debr
February 27	Rozman, Mio-Ryberg, Ste	Ryberg, Stf-Sanford, Cu	Sanford, Cv-Schenk, Ant	Schenk, Anu-Schneider	Schneides-Schultz, Ma	Schultz, Mb-Seaburg, Cr	Seaburg, Cs-Shaich, Bar	Shaich, Bas-Shining, Ch
February 28	Stillman, C-Stuelke, Ro	Stuelke, Rp-Swanson, Ka	Swanson, Kb-Tank, Barba	Tank, Barbb-Thesing, Gr	Thesing, Gs-Thorkee, Pe	Thorkee, Pf-Tonra, Kris	Tonra, Krit-Trigg, Jody	Trigg, Jodz-Tyler, Joel
February 29	Wendl, Davj-White, Leig	White, Leih-Willhite, S	Willhite, T-Wire, John	Wire, Joho-Woods, Timo	Woods, Timp-Yliniemi, K	Yliniemi, L-Zelenak, Br	Zelenak, Bs-Abbinante	Abbinantf-Aho, Scott
March 1	Balicao, Ci-Bast, Jeffr	Bast, Jeffs-Bednar, Pam	Bednar, Pan-Berends, Em	Berends, En-Bertch, Chr	Bertch, Chs-Bjerke, Dal	Bjerke, Dam-Bloom, Mitch	Bloom, Mitd-Bonse, Kath	Bonse, Kati-Bowman, Dav
March 2	Carlson, Am-Carter, Ani	Carter, Anj-Chang, Whei	Chang, Whej-Christenso	Christensp-Clayton, Ch	Clayton, Ci-Conard, Lis	Conard, Lit-Costello, M	Costello, N-Crowe, Patr	Crowe, Pats-Dahl, Doris
March 5	Dragich, Pb-Dunning, Ge	Dunning, Gf-Edman, Jeff	Edman, Jefg-Ellis, Lynn	Ellis, Lyno-Erickson, J	Erickson, K-Ezekiel, Yo	Ezekiel, Yp-Fenton, Don	Fenton, Doo-Fitch, Mich	Fitch, Mici-Fontilla, D
March 6	Godkin, Com-Grabowski	Grabowskj-Gressett, J	Gressett, K-Guerrero, A	Guerrero, B-Haeg, Grego	Haeg, Gregp-Halvorsen	Halvorseo-Hanson, Dou	Hanson, Dov-Harris, Nea	Harris, Neb-Hauser, Kar
March 7	Hommer, Vid-Howe, Dale	Howe, Dalf-Hurd, Teres	Hurd, Teret-Isberg, Kri	Isberg, Krj-Jahjawidja	Jahjawidjb-Jensen, Kei	Jensen, Kej-Johnson, Cy	Johnson, Cz-Johnson, Li	Johnson, Lj-Johnson, Th
March 8	Kieger, Lav-Kirchmeier	Kirchmeies-Klopp, Ann	Klopp, Ano-Koehler, St	Koehler, Su-Kort, Willi	Kort, Willj-Kravarik, M	Kravarik, N-Krumm, Tere	Krumm, Terf-Kurth, Crai	Kurth, Craj-Laine, Sand
March 9	Leithauses-Leslie, Jam	Leslie, Jan-Ley, Cassan	Ley, Cassao-Lindberg, K	Lindberg, L-Littlejohn	Littlejoho-Longhenry	Longhenrz-Lowenstein	Lowensteio-Lundahl, Je	Lundahl, Jf-Ly, Yang Yi

Stage 1—Graduate, Pharmacy, and Public Health Students and Seniors (124 or more completed credits)

	12:15 p.m.	12:45 p.m.	1:15 p.m.	1:45 p.m.	2:15 p.m.	2:45 p.m.	3:15 p.m.	3:45 p.m.
February 17	Lewandowsl-Luebeck, Au	Leubeck, Av-Markert, Th	Markert, Ti-McGregor, G	McGregor, H-Mikkola, An	Mikkola, Ao-Morstad, An	Morstad, Ao-Nelson, Jef	Nelson, Jeg-Novacek, Mi	Novacek, Mj-Oppenheime
February 20	Semmes, Roc-Simonson, D	Simonson, E-Sodergren	Sodergreo-Steiner, He	Steiner, Hf-Sulsernewt	Sulsernewu-Tappan, Mar	Tappan, Mas-Thompson, R	Thompson, S-Tri, Hutomo	Tri, Hutomp-Vanderpoel
February 21	Behrendt, S-Bieniek, St	Bieniek, Su-Borne, Jeff	Borne, Jefg-Brown, Jeff	Brown, Jefg-Calegar, Ge	Calegar, Gf-Casey, Mark	Casey, Marl-Chiasson, J	Chiasson, K-Cocci, Gian	Cocci, Giao-Coumbe, Wil
February 22	Griffith, S-Hagen, Rona	Hagen, Ronb-Hanszzzzzz						

Stage 2—Juniors, Sophomores, Freshmen, and Adult Specials

	12:15 p.m.	12:45 p.m.	1:15 p.m.	1:45 p.m.	2:15 p.m.	2:45 p.m.	3:15 p.m.	3:45 p.m.
February 22			Mari-Martinson	Martinsoo-Maus, Cathe	Maus, Cathf-McCormick	McCormicl-McGuire, Ka	McGuire, Kb-McManamy, P	McManamy, Q-Mechels, Ma
February 23	Newhouse, F-Nichols, Si	Nichols, Sj-Noreyko, We	Noreyko, Wf-Oden, Eric	Oden, Erid-Olson, Crai	Olson, Craj-Olson, Scot	Olson, Scou-Orth, Micha	Orth, Michb-Ouimet, Jer	Ouimet, Jes-Palkowski
February 24	Ralph, Debs-Rayner, Amy	Rayner, Amz-Reinhart, M	Reinhart, N-Richards, R	Richards, S-Rivas, Anit	Rivas, Aniu-Rodgers, He	Rodgers, Hf-Rondestved	Rondestvee-Rossini, Ma	Rossini, Mb-Rozman, Min
February 27	Shining, Ci-Singer, Lyn	Singer, Lyo-Smayling, S	Smayling, T-Snapp, Jame	Snapp, Jamf-Southwood	Southwooe-Springer, N	Springer, O-Stearns, Jo	Stearns, Jp-Stenlund, M	Stenlund, N-Stillman, B
February 28	Tyler, Joem-Vanderveld	Vandervele-Vesey, Dani	Vesey, Danj-Voytovich	Voytovici-Wallace, Wi	Wallace, Wj-Ward, Shawn	Ward, Shawo-Weber, Lisa	Weber, Lisb-Weinberg, F	Weinberg, G-Wendl, Davi
February 29	Aho, Scotu-Amann, Jeff	Amann, Jefg-Anderson, F	Anderson, G-Anderson, S	Anderson, T-Archambaul	Archambaum-Ash, Karen	Ash, Kareo-Ayaz, Georg	Ayaz, Georh-Bailey, Den	Bailey, Deo-Balicao, Ch
March 1	Bowman, Daw-Brasket, Ro	Brasket, Rp-Briscoe, Al	Briscoe, Am-Bruckman, J	Bruckman, K-Bultman, Th	Bultman, Ti-Burns, Will	Burns, Wilm-Byker, Brad	Byker, Brae-Campbell, J	Campbell, K-Carlson, Al
March 2	Dahl, Dorit-Danielski	Danielskj-Day, Elizab	Day, Elizac-Delehanty	Delehantz-Devitt, Chr	Devitt, Chs-Dikigoropo	Dikigoropp-Doersch, Da	Doersch, Db-Dorn, Julie	Dorn, Julif-Dragich, Pa
March 5	Fontilla, E-Frandrup, D	Frandrup, E-Fries, Cynt	Fries, Cynu-Galbraith	Galbraiti-Gebhart, An	Gebhart, Ao-Gerlach, Je	Gerlach, Jf-Gilbertson	Gilbertsoo-Glasbrenne	Glasbrennf-Godkin, Col
March 6	Hauser, Kas-Heidelberg	Heidelberh-Hennes, Dan	Hennes, Dao-Hester, Bab	Hester, Bac-Hiller, Sar	Hiller, Sas-Hoang, Nguy	Hoang, Nguz-Hogan, Cath	Hogan, Cati-Holm, Phill	Holm, Philm-Hommer, Vic
March 7	Johnson, Ti-Jordan, Jen	Jordan, Jeo-Kagan, Alex	Kagan, Aley-Karakas, Ei	Karakas, Ej-Ke, Matthew	Ke, Matthex-Kelley, Dav	Kelley, Daw-Kennedy, Ja	Kennedy, Jb-Kern, Ricky	Kern, Rickz-Kieger, Lau
March 8	Laine, Sane-Lang, David	Lang, Davie-Larson, Bar	Larson, Bas-Larson, Pau	Larson, Pav-Lawson, Joh	Lawson, Joi-Leahy, Anne	Leahy, Annf-Lee, Joan M	Lee, Joan N-Lefebvre, H	Lefebvre, I-Leithauser
March 9	Ly, Yang Yj-Ma, Quang N	Ma, Quang O-MacKenzie	MacKenzif-Madsen, Mic	Madsen, Mid-Magnuson, S	Magnuson, T-Majka, Chri	Majka, Chrj-Malmberg, S	Malmberg, T-Manns, Jose	Manns, Josf-Marhzzzzzz

section 1 registration

You will be held accountable for all information contained in this *Class Schedule*. Registration is your personal responsibility. You will receive credit only for those courses in which you are properly registered. Likewise, you will be held responsible for every course for which you register unless you officially cancel. To prevent misunderstandings and errors in registration, you should register in person. If you cannot register in person, you may have somebody else register for you *only* with your *written permission and student ID card*. There are no provisions for registering by mail.

☞ RECENT CHANGES ☜

If you are a continuing or returning student, the following recent changes in procedures or policy will be of special interest to you:

Registration queue, spring quarter .....p. 6
Installment Payment Chart .....p. 110

Because this Class Schedule is prepared in December, scheduling changes may also occur prior to or during registration. Your registration terminal always contains the most current and accurate information. Hour and day changes are also published in the Official Daily Bulletin, a column printed in the *Minnesota Daily* and posted on campus bulletin boards. Room changes are posted on classroom doors.

STEPS IN REGISTRATION

Step 1—Find out when you will register. Queued registration for spring quarter begins February 17 and ends March 9. The first stage of the queue (February 17-22) is reserved for graduate students and seniors.

- *If you are a continuing student,* your registration time is on your Registration Status Notice and on the queue on pages 6-7. You must have all holds listed on this notice cleared in order to register. (For more information, see Holds on the next page.)
- *If you were not in attendance winter quarter 1984 or if you did not receive a Registration Status Notice,* check the queue on pages 6-7 to find out when you can register.

You must complete registration by March 23 to avoid a late registration fee. Students who register from March 26 through April 6 will be charged a $10 late registration fee. Students who register on or after April 9 will be charged a $20 late registration fee.

Step 2—If you are a student in the Graduate School, or if you intend to register for courses in the College of Liberal Arts, the School of Management, or the Institute of Technology, read the special instructions (beginning on page 9) that apply to those units.

Step 3—If you are not a citizen of the United States and if you are registering for the first time at the University, read the paragraphs on initial interview and health clearance under International Students, page 9.

Step 4—Fill out a Course Request form. Several forms are included on page 4 in this schedule. You should cut out and use one of these forms; save the second form for any changes in registration.

- Check the Section Status Report (posted outside of 101 Fraser Hall, 16 Johnston Hall, 4 Mechanical Engineering, 170 Anderson Hall, and 130 Coffey Hall) to see if space is available in your limited enrollment courses (**R** precedes the course number). Remember: the Section Status Report lists only *limited* enrollment courses. If you use it exclusively to plan your program, you may overlook courses that have no limit on enrollment.
- Complete your form using the guide on page 5.

Step 5—Have your program approved by your college office, if required. Obtain any Registration Override Permits necessary for admittance to your courses (see sample below). Only approved Registration Override Permits that have been signed, filled out with your name, ID number, course, term, year, and call number, and checked for override type and authority will be accepted. *No handwritten notes will be accepted.*

ID CARD IMPRINT (If no ID card, print name, ID or Social Security Number)

REGISTRATION OVERRIDE PERMIT
University of Minnesota

This form may be used for one override only. Please check term and year, the college or course override, and the authority. For a course override, indicate the course designator, course number, section number, and call number. Sign or stamp beside the override permitted.

Term and Year: ☐ Fall ☐ Winter ☐ Spring ☐ Summer Session I ☐ Summer Session II 19____

COLLEGE OVERRIDE	COLLEGE APPROVAL (signature or stamp)
☐ Registration Time	
☐ College Hold	
☐ Maximum Credit	

COURSE OVERRIDE	Course Designator	Course Number	Section Number	Call Number	APPROVAL (signature or stamp)
☐ Closed Class Authorized by ☐ Department ☐ Instructor					
☐ Course Entry Requirements Authorized by ☐ College ☐ Graduate School ☐ Department ☐ Instructor					

In general, Registration Override Permits must be provided for:

- *registration for any course where # appears in the prerequisite statement;*
- *registration for any course where △ appears in the prerequisite statement* (see Symbols, Section 2, for further information);
- *registration in a limited course that has closed;*
- *registration for any courses or groups of students as described in registration instructions* for the College of Liberal Arts, the School of Management, or the Institute of Technology;
- *other courses which may be restricted by individual units, schools, or colleges.*

Step 6—Bring your Course Request form to your registration center.

- *Students in Minneapolis-based colleges go to 202 Fraser Hall* (150 Williamson Hall for students with mobility impairments).
- *Students in St. Paul-based colleges report to 130 Coffey Hall .*
- Once you turn in your Course Request form and receive a fee statement, *you will be held responsible*

for tuition and fees for all courses listed on your registration unless you formally cancel, even if you never attend class.

Step 7—Pay your tuition and fees. For complete information on tuition and payment of fees, see Section 4.

HOLDS

If you have a hold on your record, you may not register or, in many cases, obtain transcripts until that hold is cleared with the office imposing the hold. A hold may be imposed for financial indebtedness to the University (e.g., for unpaid library fines, unpaid tuition or fees, or delinquent health service payments) or for disciplinary or scholastic reasons. You will usually be notified of an existing or impending hold by the department or office authorizing the hold. Notice of any hold, including the name of the department or office where it may be cleared, also appears on your Registration Status Notice. It is possible that a hold may be placed on your record *after* you receive your Registration Status Notice; you will be informed of any recent holds when you attempt to register.

To remove a hold from your record, you must first pay the debt owed, correct the scholastic deficiency, or be cleared by the Special Counseling Office. For most debts, you will receive a billing statement, which you will submit with payment at the Bursar's Office; you may present the receipted billing statement to the department or office that authorized the hold as evidence that the debt has been paid.

When you clear any hold *in advance of registration*, the unit imposing the hold must notify the Records Office (150 Williamson Hall in Minneapolis, 130 Coffey Hall in St. Paul) that the hold may be removed from your record. *If you have not cleared holds in advance*, you may be given a hold release to take with you to the Registration Center. If you are given a *permanent hold release*, you must leave the release form with the operator when you are validated to register. On occasion, units may issue *temporary hold releases*. A temporary release will allow you to register or receive transcripts only during the quarter in progress. Because a hold remains on your record until it is permanently cleared, you must show the temporary release each time you return to the Registration Center or with every request for a transcript. **If you are issued a temporary hold release, be sure it is returned to you after you have registered.**

INTERNATIONAL STUDENTS

Initial Interview—If you hold a non-immigrant visa (designated F, J, or H) and if you are registering for the first time at the University, you should go to the International Student Adviser's Office, 717 East River Road, Minneapolis, for an initial interview and an appraisal of English language requirements. Bring your passport and INS form I-94 to this interview.

Health Clearance—If you are not a citizen of the United States and if you are registering for the first time at the University, you will be required to present proof of health clearance. This health clearance is obtained at Boynton Health Service, 410 Church Street, Minneapolis, and most often requires *two* visits—the first visit for a skin test for tuberculosis and the second, 48 hours later, for evaluation of the test. If your test results are positive, you will be required to have a chest x-ray. To avoid delay, begin your health clearance at least several days before you wish to register. Note: if you have been tested elsewhere during the past year *and can bring proof of test results to Boynton Health Service*, you will not need to repeat the test.

GRADUATE SCHOOL REGISTRATION INSTRUCTIONS

NEW STUDENTS

- If you are registering for the first time in the Graduate School, obtain your registration materials in 307 Johnston Hall.

PREVIOUSLY REGISTERED STUDENTS

- Pick up your *Class Schedule* in your departmental office.
- Follow these steps to clear any Graduate School holds:

MAST PGM	Bring signed master's program to 316 Johnston Hall.
DOCT PGM	Bring signed doctoral program to 316 Johnston Hall.
SPEC PGM	Bring signed specialist program to 316 Johnston Hall.
THES TITLE	Bring signed thesis title to 316 Johnston Hall.
TRANSCRIPT	Bring bachelor's transcript, showing degree awarded, to 306 Johnston Hall.
PROJ TITLE	Bring project title to 316 Johnston Hall.
GPA	Bring letter releasing hold from major field director of graduate studies to 316 Johnston Hall.
INCOMPLETE	Bring letter releasing hold from major field director of graduate studies to 316 Johnston Hall.
DEAN'S HLD	Come to 306 Johnston Hall for explanation and instructions for clearing.
DOCT CAND	Come to 316 Johnston Hall for explanation and instructions for clearing.
GRAD ASST	Come to 411 Johnston Hall for explanation and instructions for clearing.

- Read this page and Section 1 of this *Class Schedule*.
- Have your adviser sign your Course Request form.
- If you are a nonresident and hold a graduate assistant appointment that entitles you to resident fee privileges, see Tuition Rates for Staff Members, Section 4, for information on how to obtain a certification of appointment slip. See Payment of Fees, Section 4, for information on how to obtain the graduate assistant payroll deduction privilege.
- Pay your fees. See Payment of Fees, Section 4, for further information.

THESIS CREDITS—Students admitted on or after fall 1983 to the Graduate School will be required to register, *before receiving their degree*, for a standard number of thesis credits—16 thesis credits for Plan A Master's and M.Eng. students and 36 thesis credits for Ph.D., Ed.D., and D.M.A. students. Tuition for thesis credits will be the same as the per-credit resident Graduate School rate. Thesis credits will not be counted in the assessment of the student services fee. For thesis credits register for Grad 8777 or 8888. See the course listings under the designator Grad (Graduate School) in Section 2 of this *Class Schedule* for the current call numbers.

STUDENT STATUS—Student status is a special registration category for students who are required to register (e.g., to satisfy requirements of an assistantship or fellowship) but who are not enrolled in courses and are not eligible for continuous registration. This student status category is a no credit, no grade registration. Tuition is equivalent to one credit charged at the resident Graduate School rate. Student status registration replaces the thesis-only and examination-only categories. For student status, register for Grad 0000. See this course listing under the designator Grad (Graduate School) in Section 2 of this *Class Schedule* for the current call number.

OFFICIAL DOCTORAL CANDIDATES—The Graduate School will mail registration materials to students who have passed the preliminary oral examination.

MAXIMUM CREDITS—The maximum credit load for fall, winter, and spring quarters is 16. Refer questions to an Assistant to the Dean, 306 Johnston Hall.

GRADING OPTION—Two grading systems, A-B-C-D-N and S-N, are used in the Graduate School. You must designate your grading option for each course at registration. However, if either A-N only or S-N only is printed after the prerequisite statement for a course, you *must* register for that grading system.

CHANGE OF REGISTRATION—You must obtain your adviser's signature on a Course Request form for any change in registration. Changes after the sixth week require your instructor's signature as well. Changes after the last day of class will not be permitted except with the approval of the Graduate School.

COMMENCEMENT DEADLINES	*Spring 84*	*Summer 84*
Thesis Registration[1]	April 5	June 14
Final Examination Report[2]	May 3	July 12
Bound thesis or project[3]	May 17	July 26
Degree Award Date	June 9	August 17

For *all* degree candidates: Application for Degree submitted to and diploma fee assessed at the Registration Center (202 Fraser Hall, or 150 Williamson Hall for students with mobility impairments); Commencement Attendance Card filed with the Graduate School Office (316 Johnston Hall).

[1]Plan A Master's, M.Engr., Ed.D., and Ph.D. students *must* register a typed draft of the thesis (or project) with the Graduate School approximately one month before the examination.

[2]All other forms and fees must be submitted. For Ed.D., and Ph.D. students only: Survey of Earned Doctorates, 2 copies of Thesis Abstract, microfilming forms and fee, continuous registration fee, final quarter fee.

[3]2 copies must be submitted to Graduate School (Plan A Master's, M.Engr., Ed.D., and Ph.D.).

If you have questions on the above deadlines, call (612) 373-5129.

DOCTORAL ORAL EXAMINATIONS—You must schedule your preliminary and final oral examinations *at least one week in advance* in 316 Johnston Hall (373-7912). These examinations will not be scheduled from the beginning of second term of summer session to the opening of fall quarter unless members of the assigned committee can be assembled without substitution.

COLLEGE OF LIBERAL ARTS REGISTRATION INSTRUCTIONS for Continuing or Previously Registered Students

BEFORE PROCEEDING WITH REGISTRATION:

- You may not register until all holds have been cleared from your record. To clear CLA holds follow these steps:

ADV APP	Your adviser must sign your Course Request form.
CLA	This usually (but not always) means a scholastic committee action. Contact your college office.
DEPT APP	Your Course Request form must be approved by your major department.
MAJ PROG	You must bring an approved program from your major department to your college office.
ORIENT MTG	Contact the office named.
PM ORIENT	Contact your college office, make an appointment, and attend this orientation.
REASSIGN	Report to 214 Johnston Hall, for a new adviser assignment. Students with 39 or more credits will be asked to declare a major.

- Read official CLA communications—you are responsible for knowing their contents:
  All CLA students— any material available at your *Class Schedule* distribution point.
  Honors students— (admitted to the Honors Program)—honors course listings available in 115 Johnston.
- Read the CLA instructions on these pages.
- Check the Section Status Reports in Johnston Hall, ground floor, or in your college office.

PROGRAM APPROVAL

Adviser signature: if needed you should get your adviser's approval *at least 24 hours before you register.*

Scholastic committee approval needed for:

- *registration for more than 19 credits;*
- *freshman registration* in 3000- and 5000-level courses;
- *sophomore registration* in 5000-level courses;
- *registration for courses not listed in the CLA Bulletin;*
- *late registration or late additions to your registration* (scholastic committee approval required after the tenth day of class). For further information about changes in registration, see the *CLA Bulletin* and this *Class Schedule.*
- *cancellation of a course after the sixth week of the quarter.*

  All additions and cancellations are subject to the rules that apply to the original registration.

Apply for scholastic committee approval in your college office.

College approval needed for:

- *registration for independent study, extra credit, directed study, directed research, and directed instruction*—also requires written approval from the department; forms are available in the department. *Before you register,* bring the signed approval form and your completed Course Request form to 214 Johnston Hall for college approval.

Graduate School approval needed for:

- *all registration in 8000-level courses*—must be approved by the instructor, director of graduate studies, and the Graduate School. Approval forms are available in college offices.

FOLLOW THE REGISTRATION STEPS EXPLAINED IN SECTION 1.

S-N REGISTRATION

- *Changes from or to S-N registration* may be made through the tenth day of the quarter. Students wishing to make such a change should follow the cancel-add procedure outlined in Section 1.
- For *sophomores, juniors, seniors,* and *adult specials,* there is no limit on the number of S-N courses in one quarter; *freshmen* may take no more than *half* of a quarter's credits S-N.
- *The number of S-N credits applying to a CLA degree is limited.* See the *CLA Bulletin* for details.
- *Courses in departmental majors* may be taken S-N only if the department has approved such a policy. Otherwise, S-N registration is allowed in all courses listed in the *CLA Bulletin.*



Could You use up to $4,000.00 for TUITION ASSISTANCE ??

The Minnesota Army National Guard has such a program available on a limited basis — first come, first serve. The Guard can also repay Student Loans — up to $10,000!

Find out more — call 1-800-652-9032 in Minnesota.

- Ask in your college office about restrictions on the use of S-N credits in pre-medicine, pre-dentistry, pre-pharmacy, and all interdepartmental programs (such as American Studies, International Relations, Social Welfare, and Urban Studies). **IF YOU ARE IN A PREPROFESSIONAL PROGRAM, YOU SHOULD FOLLOW THE REQUIREMENTS OF THE COLLEGE THAT YOU PLAN TO ENTER.**

REGISTRATION INSTRUCTIONS FOR SCHOOL OF MANAGEMENT COURSES

UNDERGRADUATE COURSES

- *Undergraduate and adult special students enrolled in the School of Management* may register for 3000- and 5000-level School of Management courses on or after their queue time.
- *School of Management undergraduates* may not register for more than 20 credits without approval from an adviser in the undergraduate studies office, 225 Management/Economics.
- *Degree-seeking students who have completed at least 74 credits prior to registration* may also register during the two-stage alphabetical queue for undergraduate School of Management courses required for their degree *if they are majors in one of these specifically approved units*: College of Agriculture; College of Education, business and distributive education and park, recreation, and leisure studies; College of Forestry; College of Home Economics; College of Liberal Arts journalism, urban studies, BIS (if business prerequisites have been completed and grade point averages met); Institute of Technology computer science and industrial engineering; University College ICP (if officially admitted for a business concentration). These students should consult their advising offices for further information.
- *Other non-School of Management undergraduates and graduates who have earned at least 74 credits* may register for undergraduate School of Management courses on or after March 12. It is possible to petition for permission to register in many non-core (elective) courses that may have closed. You must file a Closed Course Petition form in 225 Management/Economics on or after March 12; *proof of 74 completed credits will also be required.*
- *All accounting courses except Acct 1024, 1025, and 3001 are reserved for accounting majors.* Students who are not accounting majors must file a Closed Course Petition form in 225 Management/Economics to obtain permission to register in accounting courses other than 1024, 1025, and 3001. Petitions from School of Management students will be accepted throughout the two-stage queue period. Petitions from others will be accepted on or after March 12, and *proof of 74 completed credits will be required.* It is not possible to petition into Acct 1024 and 1025. For Acct 1024 or 1025, check the Section Status Report daily to see if places may have opened up as other students cancel.
- *Adult special students not enrolled in the School of Management* may register for undergraduate School of Management courses on or after March 12 and must obtain an authorized Registration Override Permit from 225 Management/Economics in order to register. *Proof of 74 completed credits will be required.*

GRADUATE COURSES

- *Graduate students enrolled in the School of Management or Industrial Relations program* may register for most School of Management courses on or after their queue time. (MBA courses are restricted to students enrolled in the MBA program.)
- *Non-School of Management graduate students* may register for School of Management graduate courses **with approval** after the first stage of the queue. Approval for IR graduate courses must be obtained from the Director of Graduate Study in Industrial Relations, 537 Management/Economics. Approval for all other graduate School of Management courses must be obtained from the Director of Graduate Studies, 334 Management/Economics.
- *Adult special students may generally not register for graduate courses.* Any exceptions must be approved by the Director of Graduate Study in Industrial Relations, 537 Management/Economics for IR courses or by the Director of Graduate Studies, 334 Management/Economics for all other School of Management graduate courses.

REGISTRATION INSTRUCTIONS FOR INSTITUTE OF TECHNOLOGY COURSES

- Registration for more than 19 credits requires college approval. Apply for this approval in 105 Lind Hall *before you register.*
- If you are **not** enrolled in the Institute of Technology you may not register for any engineering course without an approved and signed Registration Override Permit from the department offering the course.

THE FIRST WEEK OF CLASS

- Spring quarter classes begin Monday, March 26.
- *You must attend the first class meeting of every course in which you are registered,* unless you have already notified your instructors or the appropriate department offices of your intention to be absent. Registered students who miss the first day without prior instructor approval may forfeit their places in the class to other students. Students who wish to remain enrolled in classes from which they have been absent the first day without permission should contact their instructors as soon as possible; instructors have the right to deny such students admission if their classes are full. Registered students must officially cancel any classes to which they are thus denied admission.
- *If you wish to gain admission to a closed class,* you should first seek permission from the main office in the department offering the course, where you may be put on a waiting list or be referred to the instructor for permission to register for the course. Students who are on a waiting list or who need the instructor's permission to register should attend the first class meeting to see whether the instructor will admit any more students. To obtain space in a closed course, you must have a signed Registration Override Permit from the instructor.
- *If you are 62 or older and are eligible for tuition-free registration through the Senior Citizen Education Program,* you may register on Tuesday, March 27 for classes in which spaces are still available. Call 376-1680 for more information.
- *Winter quarter grades are available March 26* from 8 a.m. to 4 p.m. in the Armory Gymnasium for students registered in the College of Liberal Arts, College of Education, General College, University College, School of Nursing, Graduate School, and Institute of Technology. Grades not picked up on March 26 can be obtained in 202 Fraser Hall for one week beginning April 2. Grades for students in other colleges will be distributed through college offices. **You must show identification to receive grades.**

CHANGE OF REGISTRATION

Subject to certain limitations, you may add or cancel classes or may change grading systems. Course cancellations and changes to or from S-N grading are generally allowed without written permission during the first two weeks of the quarter or before. Addition of a course after the first five days, however, generally requires the instructor's signature on your Course Request form. For specific college policies regarding changes of registration, see your college bulletin or check with your college office.

Graduate students must obtain their adviser's signature on a Course Request form for any change in registration. Changes after the sixth week require the instructor's signature as well. Changes after the last day of class will not be permitted except with the approval of the Graduate School.

Note: If you decide to stop attending a class or classes for which you are registered, you must officially cancel by filing an approved Course Request form. *Failure to attend class does not by itself constitute cancellation.* Unless you officially cancel, you will be responsible for full tuition and fees.

If you decide before the quarter begins not to attend, cancel officially before the first day of classes. During the quarter, you should cancel as soon as you stop attending classes. While cancellation after the end of the quarter is allowed, it is not recommended. A complete or partial refund of tuition and course fees through retroactive cancellation is only possible for one calendar year after the end of the quarter. After the calendar year retroactive cancellation is still possible, but you will not receive any refund of paid tuition and fees and you will not be released from your obligation for all unpaid tuition and fees. (For more information on refunds, see Section 4.)

If you fail to cancel any courses for which you have registered but not paid, you will receive billing statements from Student Accounts Receivable for your tuition and fees, including a $10 late payment fee and a $10 installment payment fee. Unless you make full payment by Friday of the fifth week of the quarter, you will be charged an additional $20 late payment fee and a hold will be placed on your record.

To change your program or grading system, you should:

- Fill out a Course Request form. Use the extra form in this schedule or obtain a form from your college office or Registration Center. Check the box indicating cancel/add and note the number of credits you will have after this change. If you are cancelling *all* courses, check the appropriate box.
- Obtain instructor, adviser, and/or college office approval if required.
- Turn in the Course Request form at your Registration Center, where you will get a revised fee statement. In Minneapolis, you must report to your college validation station before reporting to the registration terminal. Remember that each fee statement you receive has its own due date. Later fee statements do not extend the due date(s) on earlier fee statements.

There is no additional tuition charge when any course cancellation is balanced at the same time by a course addition, i.e., an addition of credits equal to the number of credits being cancelled *or, if you are an undergraduate,* a cancellation and course addition that keeps the total number of credits within the 14-18 credit plateau. For example, if you are registered for 12 credits and cancel a 5-credit course *while at the same time* adding a 5-credit course, you will not be charged additional tuition. Likewise, if you are registered for 15 credits and later cancel a 4-credit course *while at the same time* adding a 5-credit course, your tuition and fees (excluding course fees) will remain the same, *if you are an undergraduate,* because your total number of credits after cancel/adding will remain within the 14-18 credit plateau.

Additional tuition is charged on a per-credit basis for all changes in registration that increase your credit load, *except, for undergraduates, for those credits that fall within the 14-18 credit plateau.* For example, if you add a 4-credit course, increasing your credit load from 12 to 16 credits, you will be charged for your 13th and 14th credit, but will not be charged for your 15th and 16th credit, *if you are an undergraduate,* because they fall within the plateau.

Refunds are issued on a per-credit basis for all changes in registration that decrease your credit load, *except, for undergraduates, for those credits that fall within the 14-18 credit plateau.* For example, if you are registered for 14 credits and cancel a 3-credit course, lowering your credit load to 11, you will receive a refund for 3 credits. However, if you are registered for 18 credits and cancel 3 credits, lowering your credit total to 15, you will *not* be issued a refund, *if you are an undergraduate,* because your total number of credits remains within the plateau.

All refunds are based on the refund rate that applies to the effective date of the cancellation. For additional information on the 14-18 credit tuition plateau and refunds, see Section 4.

WITHDRAWAL FROM THE UNIVERSITY

If you intend to withdraw from the University, you must officially cancel all courses in which you are registered. Before leaving, you must turn in all University property such as library books; military, athletic, or band equipment; laboratory materials; locker keys or locks, and athletic tickets. Veterans must also notify the Certifications Unit, 155 Williamson Hall. A 100% refund of tuition and course fees after the first day of class requires a Final Attendance Verification form for each course (signed by the instructor) or a signed statement from the instructor for each course certifying that you have never attended class (note: these statements *must* be written on official University stationery).

GRADUATION

For June graduation you must file a form called "Application for Degree" at the Registration Center in 202 Fraser Hall in Minneapolis (150 Williamson Hall for students with mobility impairments, or 130 Coffey Hall for St. Paul students). Most colleges expect their students to apply at least two quarters before they intend to graduate. You should check with your college office regarding the last date for applications. For winter quarter graduation, a graduation fee of $15 is due April 4 if you are an undergraduate or if you are enrolled in a professional program (e.g., M.Ed.), and May 3 if you are registered in the Graduate School. Failure to pay this fee by the due date listed on the graduation fee statement will make it impossible for you to graduate before the next succeeding quarter.

If you expect to graduate anytime within the year (through August 1984), file your formal Application for Degree now. If you are a graduate student, you should file as soon as your application is available; the Graduate School distributes the form to Ph.D. and Plan A master's students at the time of thesis registration and to Plan B master's students when they pick up their final examination form. For further information on Graduate School commencement deadlines, see the Graduate School registration instructions in this *Class Schedule*.

ADMINISTRATIVE OFFICES

Registration services are available at the following locations:

- **Registration Center**
  202 Fraser Hall, Minneapolis
  Monday-Friday 8:15-4:15 (during registration)
  Monday-Friday 8:30-3:30 (after 2nd week of quarter)

  For turning in scholarships, registration materials, cancel-add materials, and Application for Degree forms and obtaining fee statements

- **Registration, Student Records, and Scheduling**
  150/155 Williamson Hall

  Student Relations (150)
  Monday-Friday 8-4:15
  376-1680 (9-12, 1-3:30 only)

  For assistance with individual student record problems, questions; registration services for students with mobility impairments; name and address changes; student loan deferments

  Certifications (155)
  Monday-Friday 9-3:30

  For certification letters and Veterans certification

  Transcript Quick-Service (155)
  Monday-Friday 9-2:30

  For mailed copies of official transcripts ($2 charge) and quick-service for unofficial copy of student records (limit one copy per day)

- **St. Paul Admissions and Records**
  130 Coffey Hall (373-0703)
  Monday-Friday 8:15-4:15 (during registration)
  Monday-Friday 9-3:30 (after 2nd week of quarter)

  Registration Service

  For turning in registration materials and cancel-add materials, and obtaining fee statements

  Student Contact Area

  For registration services for students with disabilities
  For assistance with individual student record problems and questions; for certifications; for turning in Application for Degree forms and name and address changes
  For mailed copies of official transcripts—$2 charge (quick-service for unofficial copy of student records available in 190 Coffey Hall from 9-2:30)

- **Student Accounts Receivable**
  B1 Fraser Hall (376-8057)
  Monday-Friday 8:30-3:30
  130 Coffey Hall
  Monday-Friday 10-2

  For obtaining refund vouchers, processing payroll deductions, obtaining fee payment verifications, receiving assistance with student billing problems, questions (concerning only quarters from spring 1982 on)

- **Bursar's Office**
  145 Williamson Hall, East Bank
  Blegen Hall ground level, West Bank
  107 Coffey Hall, St. Paul
  Monday-Friday 8:15-3:30 (West Bank closed 12-12:45)

  For paying tuition and fees, cashing refund vouchers and checks (student ID card and paid fee statement necessary for check cashing), purchasing deposit cards and student ID card authorizations

- **ID Card Office**
  248 Williamson Hall
  Monday-Friday 8-12, 1-4:15

  For obtaining new student ID cards (open through the noon hour during registration)

- **Information Booth**
  first floor concourse,
  Williamson Hall

  For obtaining college bulletins, maps, campus bus information (route 13 and MTC routes 52 only), and miscellaneous publications and information; lost student ID cards turned in; no *Class Schedules* issued

"TEAM'S GOT IT ALL"

COMPUTERS



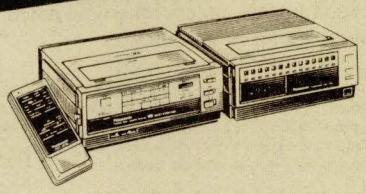
FEATURING

apple computer
Authorized Dealer

AND IBM COMPATIBLE COMPUTERS, SOFTWARE, AND ACCESSORIES!

VIDEO RECORDERS

Panasonic



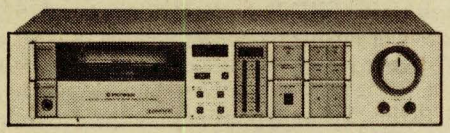
FISHER
SANYO
MAGNAVOX
HITACHI

AUDIO

PIONEER®

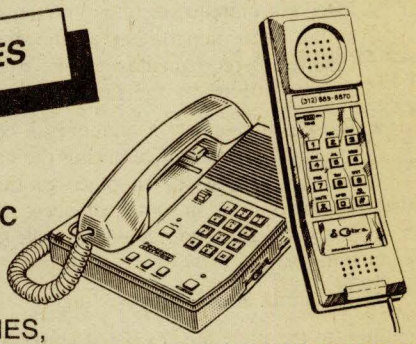
FEATURING

FISHER
AWARD
PIONEER
ATLANTIS
TECHNICS



...AND MANY OTHER BRAND NAMES!

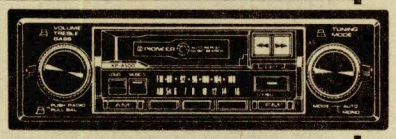
TELEPHONES



PANASONIC
COBRA
MURA

TELEPHONES,
TELEPHONE ANSWERING & ACCESSORIES

CAR STEREO



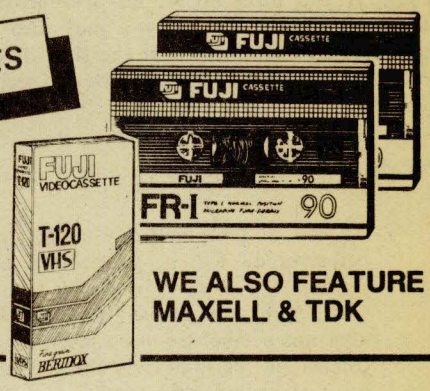
AFS/KRIKET
MITSUBISHI
CONCORD
SANYO

PIONEER®

WHY TEAM CUSTOMERS RETURN AGAIN AND AGAIN!

Simple reasons...Price, Selection, Helpful Service, 14 Day Money-Back Guarantee, 30 Day Price Protection Plan, Financing Available, TEAM Takes Trades and has 10 Convenient Twin City Locations.

ACCESSORIES



FUJI

WE ALSO FEATURE
MAXELL & TDK

TEAM ELECTRONICS

Maplewood Mall	770-5512
Ridgedale Center	544-7412
Rosedale Center	636-5147
Burnsville Center	435-7128
Southdale Center	920-4817
2640 Hennepin, Minneapolis	377-9840
455 Rice, St. Paul	227-7223
1733 S. Robert, West St. Paul	451-1765
1311 4th St. SE, Dinkytown	378-1185

HOW TO USE THIS SCHEDULE

CALL NUMBER—This six-digit number appears to the left of each course or each section of a course. You must use the course numbers and these *specific call numbers* when you fill out your Course Request form.

PREREQUISITES—In order to enroll in some courses, you must either complete or concurrently enroll in certain other courses or have certain qualifications or class standing. These requirements, known as prerequisites, are listed inside the parentheses after the course titles. If no prerequisites are listed, there are usually none, except for the class standing requirement indicated by the course number.

- Class standing requirements, unless otherwise noted, are indicated by course numbers as follows:

0000 to 0998	noncredit courses
1000 to 1998	introductory courses—primarily for freshmen and sophomores
3000 to 3998	intermediate courses—primarily for juniors and seniors, but sometimes open to others with a C average overall and in prerequisites
5000 to 5998	advanced courses—open to juniors, seniors, and graduate students
8000 to 8998	graduate courses—open to graduate students only

- When courses that must be taken in sequence are prerequisites, only the last course of the sequence is listed.
- When no course designator precedes the course number listed as a prerequisite (e.g., 'prereq 3221'), that course is in the same department as the course being offered. Likewise, a prerequisite reading "6 cr" means 6 credits in courses offered by the same department.
- Work equivalent to a prerequisite course (having either the same content or requiring the same competence) is ordinarily accepted in place of that prerequisite. An instructor may, in some instances, waive prerequisites at her or his discretion. See your college bulletin for further information.
- A comma always means "and."

In addition to the prerequisites listed above and expressed in the symbols listed below, departments and colleges may use the registration system to help place certain categories of qualified students into courses or sections on a priority basis (seniors, majors, etc.). **If you meet all stated prerequisites for the course, including class standing, you may also need to meet other qualifications established at the time of registration.** For this reason, it is helpful to list both first *and* second course choices on your Course Request form.

SYMBOLS—The following symbols are used throughout this schedule:

- † All courses preceding this symbol must be completed before credit will be granted for any quarter of the sequence.
- § Credit will not be granted if the equivalent course listed after this symbol has been taken for credit.
- ¶ Concurrent registration is allowed (or required) in the course listed after ths symbol.
- # Registration Override Permit, completed and signed by the instructor, is required for registration.
- △ Registration Override Permit, completed and signed by the unit offering the course, is required for registration.
- H Honors course (follows the course number).
- **R** The letter **R** preceding the course number indicates limited enrollment.
- ★ This symbol designates a part of a course (e.g., lecture) for which a student is automatically registered when registering for a corresponding part of the same course (e.g., lab).
- ♦ This symbol will precede the call numbers of a course with multiple section types (e.g., LECT, LAB, REC) without automatic registration. The student must select and register for one of each of the parts of the course.

NUMBER OF CREDITS—The number of credits approved for a particular course or section of a course appears at the end of the time and room information for each course or course section: e.g., 1015-1100 MWF, BlegH 450, Brown, *4 cr.* You must register for the number of credits indicated; you may not, for example, take a 4-credit course for either more or fewer than the approved 4 credits. A few courses are offered for a variable number of credits, as indicated by the notation "ar cr" (credits arranged) or by an optional-credit notation (e.g., "3-4 cr"). In such cases, you may register for the number of credits agreed upon by you and the instructor.

REGISTERING FOR TOPICS COURSES—A number of departments offer "topics" courses. A "topics" course usually is assigned a single course number (e.g., 3910), but subjects, course titles, and number of credits may change from quarter to quarter. Besides the usual prerequisites, there sometimes are limitations on registration for these courses. A student usually may not register for the same topics course (number) more than a certain number of times over a series of quarters. In the course listing, this restriction appears as part of the prerequisite information inside the parenthesis: "(max 12 cr; prereq. . .)," for example, means a student's total registrations in the course may not exceed a maximum total of 12 credits.

X AND Y REGISTRATION—Most colleges permit X and Y registration (directed or independent study) in their regular courses. Through X registration, you can earn extra credits (with a limit of 3) in a course by arranging with the instructor to complete additional work or explore a subject in more depth. Through Y registration, you can complete a course by studying independently under the instructor's guidance without attending class. Regular fees, deadlines, and grading policies apply, and you must register only for the number of credits approved for the course. Requirements for completing the course must be agreed upon by you and your instructor.

Both types of registration require instructor and department approval. **When you receive this approval you must also obtain a call number with which to register for the course** (call numbers for X and Y registrations are not available at the Registration Centers). For further information, check with your college or department office.

AUDITING COURSES—Most colleges permit auditing in their courses. As an auditor, you enroll in, pay tuition and fees for, and attend classes, but do not complete assignments or take examinations. You receive no credit for the course, but it will be placed on your transcript with the symbol V (Visitor) to indicate your special registration status. Although you do not receive credit, the credit value for the course counts in determining the credit total for the student services fee.

Colleges may have additional requirements for you to meet before you register as an auditor. It may be necessary to have approval from your adviser, instructor, and/or special scholastic committees. Many colleges do not permit registration as an auditor in required courses. Nor do colleges generally allow you to repeat an audited course for credit. For further information, check with your college office.

To register as an auditor once you have received any necessary approval, list the course on your Course Request form and place a V in the grading option column for that course.

GRADING OPTION—If either A-N only or S-N only is printed after the prerequisite statement for a course, you must register for that grading system. If no grading system is listed, you may often register for either A-N or S-N grading. For information on courses offered for S-N grading and any degree or quarter limits on credits taken under this system, consult both your own college office and the college offering the course. **You may not change your grading option after the second week of classes.**

HOURS AND DAYS—This schedule lists both a starting time and an ending time for all classes, using a 24-hour clock. Refer to the table below for help in interpreting these times. To convert any time between 1:00 p.m. and 12:00 midnight from standard time to the 24-hour clock, add 1200 (for example, 3:45 p.m. + 1200 = 1545). To convert from the 24-hour clock to standard time, subtract 1200 (for example, 1615 – 1200 = 4:15 p.m.).

24-hour clock	0800	0900	1000	1100	1200	1300
Standard Time	8:00 a.m.	9:00 a.m.	10:00 a.m.	11:00 a.m.	12:00 noon	1:00 p.m.
24-hour clock	1400	1500	1600	1700	1800	1900
Standard Time	2:00 p.m.	3:00 p.m.	4:00 p.m.	5:00 p.m.	6:00 p.m.	7:00 p.m.

Classes in Minneapolis usually start 15 minutes after the hour. In St. Paul they usually start on the hour. In both Minneapolis and St. Paul, classes continue for 45 minutes after the start time.

The University Senate approved the above 45-minute class periods with the understanding that classes may continue for 50 minutes after the starting time whenever students' schedules permit.

There are also standard approved 75-minute periods, usually meeting on Tuesday and Thursday. In Minneapolis, times for these classes are 0815-0930; 0945-1100; 1115-1230; 1245-1400; 1415-1530; 1545-1700. Corresponding St. Paul times are 0800-0915; 0930-1045; 1100-1215; 1230-1345; 1400-1515; 1530-1645.

Days of the week are abbreviated M, T, W, Th, F, and S.

NO TIME OR PLACE—When hours and days or the place of meeting are missing, consult the instructor or department offering the course.

BUILDING ABBREVIATIONS AND CAMPUS MAPS—Refer to Section 3 for complete building names, locations, and accessibility information.

CHOICE OF CLASSES—When section numbers precede the hours and days listed, you may choose the section in which you wish to enroll (see the first example below). Many courses have a choice of laboratory or recitation periods, but only a single lecture period, in which all students taking the course are automatically registered (see the second example below). If laboratory or recitation sections are distributed under different lecture hour headings (as in the third example below), then your choice of laboratory or recitation hours determines which lecture you are automatically registered in. Occasionally there will be a choice of both lecture and laboratory or recitation periods. If the sections are listed after two or more lecture hour headings (as in the fourth example below), then you must register for and attend any one lecture and any one lab or recitation section.

Example 1

315330—1 0815-0900 TThS
115331—2 0915-1000 MWF
015332—3 1115-1200 TThS

Example 2

★LECT 1015-1100 MWF
815333—1 LAB 1215-1400 M
615334—2 LAB 1215-1400 W

Example 3

★LECT 0915-1000 T
415335—1 LAB 1015-1200 T
215336—2 LAB 1015-1200 Th
★LECT 0915-1000 Th
115337—3 LAB 1315-1500 T
645742—4 LAB 1315-1500 Th

Example 4

◆837302—1 LECT 0815-0900 T
◆637303—2 LECT 0915-1000 Th
437304—1 REC 1015-1200 T
237305—2 REC 1315-1500 T
137306—3 REC 1015-1200 Th
937307—4 REC 1315-1500 Th

COLLEGE BULLETINS—Courses are listed in this *Class Schedule* with a minimum of information—title, prerequisites, day and time, location, and sometimes instructor. For more information about a course, you should consult your college bulletin, where course listings include descriptions of course content. You should not choose your classes on the basis of title alone.

Most college bulletins are available from the information booth in Williamson Hall; some are available only in college offices. You may also consult bulletins outside the Williamson Hall information booth, outside the Student Ombudsman Service on the first floor of Johnston Hall, in the libraries, and in college and department offices, but these copies may not be removed.

COURSE CHANGES—Your registration terminal always contains the most current and accurate information. Hour and day changes are also published in the Official Daily Bulletin, a column printed in the *Minnesota Daily* and posted on campus bulletin boards. Room changes are posted on classroom doors.

SECTION STATUS REPORT—The Section Status Report (closed course list) provides information on the number of spaces available in limited courses and sections (**R** precedes the course number). These reports are posted on a daily basis throughout the registration period outside the following locations: 101 Fraser Hall, 16 Johnston Hall, 4 Mechanical Engineering, 170 Anderson Hall, and 130 Coffey Hall. Check these reports before you fill out your Course Request form.

ACCOUNTING (Acct)
Management

R1024 Principles of Financial Accounting I (§1050; prereq 3rd qtr freshman) (A-N only)
001317 –1 0815-0900 MWF, BlegH 110, 3 cr
601319 –2 0815-0900 MWF, BlegH 125, 3 cr
801321 –3 0815-0900 MWF, BlegH 240, 3 cr
401323 –4 0915-1000 MWF, BlegH 240, 3 cr
101325 –5 1015-1100 MWF, BlegH 240, 3 cr
704258 –6 1115-1200 MWF, BlegH 240, 3 cr
504259 –7 1115-1200 MWF, BlegH 110, 3 cr
704261 –8 1215-1300 MWF, BlegH 110, 3 cr
304263 –9 1215-1300 MWF, BlegH 240, 3 cr
004265 –10 1215-1300 MWF, BlegH 125, 3 cr
604267 –11 1315-1400 MWF, BlegH 125, 3 cr
005853 –12 1315-1400 MWF, BlegH 110, 3 cr
605855 –13 1415-1500 MWF, BlegH 110, 3 cr
405856 –14 1515-1600 MWF, BlegH 110, 3 cr
105858 –15 1515-1600 MWF, BlegH 125, 3 cr

R1025 Principles of Financial Accounting II (§1050; prereq 1024) (A-N only)
701327 –1 0815-0900 MWF, BlegH 230, 3 cr
301329 –2 0815-0900 MWF, BlegH 220, 3 cr
501331 –3 0915-1000 MWF, BlegH 220, 3 cr
101333 –4 1015-1100 MWF, BlegH 220, 3 cr
801335 –5 1115-1200 MWF, BlegH 220, 3 cr
401337 –6 1215-1300 MWF, BlegH 220, 3 cr
201341 –7 1315-1400 MWF, Law 15, 3 cr
901343 –8 1315-1400 MWF, BlegH 420, 3 cr
701344 –9 1415-1500 MWF, BlegH 420, 3 cr
501345 –10 1415-1500 MWF, BlegH 125, 3 cr

R3001 Managerial Accounting (prereq 1025) (A-N only)
028856 –1 0930-1030 MWF, AndH 310, 4 cr
905859 –2 1045-1145 MWF, AndH 310, 4 cr

R3101 Accounting Theory and Practice I (§8101; prereq 1025) (A-N only)
123008 –1 1315-1415 MWF, BlegH 240, 4 cr
323010 –2 1430-1530 MWF, BlegH 240, 4 cr

R3199 Internship in Public Accounting (prereq 5125, #) (S-N only)
129366 3 cr

R3201 Cost Accounting (prereq 3001, MIS 3099, QA 3055) (A-N only)
204269 –1 0930-1030 MWF, BlegH 110, 4 cr
404271 –2 1315-1415 MWF, BlegH 440, 4 cr
104273 –3 1430-1530 MWF, BlegH 440, 4 cr
737017 –4 1545-1645 MWF, BlegH 440, 4 cr

R5125 Auditing Principles and Procedures (prereq 3102, 3201) (A-N only)
023012 –1 1200-1345 TTh, BlegH 240, 4 cr
823013 –2 1400-1545 TTh, BlegH 240, 4 cr
105861 –3 1800-1945 TTh, BlegH 105, 4 cr (MBA, PhD only)

R5126 Internal Auditing (prereq 5125) (A-N only)
523295 1800-1930 TTh, BlegH 125, 4 cr (MBA only)

R5135 Income Tax Accounting (prereq 1051) (A-N only)
223016 –1 1200-1300 MWF, BlegH 230, 4 cr
923018 –2 1545-1645 MWF, BlegH 230, 4 cr

R5180 Advanced Accounting (prereq 3102) (A-N only)
001351 –1 1315-1415 MWF, BlegH 230, 4 cr
828860 –2 1430-1530 MWF, BlegH 230, 4 cr
705863 –3 1800-1945 MW, BlegH 105, 4 cr (MBA, PhD only)

R5270 Reporting for Management Control (§3255, 8255; prereq 3201) (A-N only)
504276 –1 1130-1300 TTh, BlegH 230, 4 cr
733694 –2 1810-1940 TTh, BlegH 115, 4 cr (MBA only)

R5310 Current Topics in Financial Accounting (prereq 3102) (A-N only)
104278 –1 0930-1100 TTh, Law 35, 4 cr
537018 –2 0930-1100 TTh, Law 35, 4 cr (MBA only)
337019 –3 1515-1645 TTh, BlegH 230, 4 cr

R8160 Financial Statement Analysis (§3160; prereq 1051, for nonacct maj only, grad mgmt/IR student or grad SMgt approval) (A-N only)
323296 1800-1940 MW, BlegH 115, 4 cr

R8805 Financial Accounting: Seminar I (prereq #, PhD student, grad SMgt approval) (A-N only)
117998 1115-1300 Th, Mgmt/Econ 128, 4 cr

R8990 Readings in Accounting (prereq #, grad SMgt approval) (A-N only)
823299 1515-1700 TTh, BlegH 340, ar cr

ADULT AND TEACHER EDUCATION (Educ)
Curriculum And Instruction
Education

5103 Adult Education Workshop (max 12 cr; prereq practicing adult educator or #) (A-N only)
017999 –1 1830-2030 M, PeikH 315, Bruning, 3 cr
732884 –2 1830-2100 W, PeikH 46, Hayen, 1 cr (March 28-April 11) (Managing Organizational Behavior: Classroom and Organizational Leadership)

5203 Adult Literacy: Methods and Materials (prereq 5202 or Elem 5331 or #) (A-N only)
204515 1515-1715 T, PeikH 315, Park, 3 cr

5205 Field Experience in Adult Education (max 8 cr; prereq #) (A-N only)
822072 –1 Bruning, 4-8 cr
305350 –2 Copeland, 4-8 cr
005352 –3 Park, 4-8 cr
605354 –4 Williams, 4-8 cr
205356 –5 Willie, 4-8 cr

5301 Designing the Adult Education Program (A-N only)
622073 –1 1545-1800 Th, PeikH 225, Copeland, 3 cr
532885 –2 1800-2030 T, Copeland, 3 cr (Rochester)

5401 Adult Learning and Development Through Life Span (A-N only)
422074 1615-1800 M, PeikH 33, Williams, 3 cr

5501 Continuing Education and the Professions (A-N only)
904517 0845-1100 S, PeikH 46, Willie, 3 cr

5607 Applied International Development Education (A-N only)
332886 1615-1800 T, PtH 214, Braun, 3 cr

5901 Introduction to Community Education (A-N only)
439327 1615-1800 M, Peik 25, Bruning, 3 cr

8284 Problems: Teacher Education (prereq #)
222075 Howey, Willie, 3-9 cr

8302 Problems: Adult Education (prereq #)
922077 –1 Bruning, 1-9 cr
905358 –2 Copeland, 1-9 cr
105360 –3 Park, 1-9 cr
918000 –4 Williams, 1-9 cr
718001 –5 Willie, 1-9 cr

ADULT PSYCHIATRY (AdPy)
Medical School

5104 Adult Outpatient Psychiatry for Health Care Psychology Interns (prereq #)
104829 Sines, ar cr

5105 Adult Inpatient Psychiatry for Health Care Psychology Interns (prereq #)
504830 Sines, ar cr

5107 Human Behavior (prereq regis med) (S-N only)
123793 1015-1100 TThF, PWB 2470, Kroll, 4 cr

5109 Externship in Clinical Psychiatry: Duluth Hospital (prereq regis med)
304831 Olson, 9 cr

5110 Contemporary Hospital Psychiatry: St. Luke's Hospital, Duluth (prereq regis med)
104832 Cowan, 9 cr

5120 Clinical Experience in Interviewing and Diagnostic Skills: Veterans Administration Hospital (prereq regis med)
004833 Magraw, 9-18 cr

5222 Preceptorships in Psychiatry (prereq regis med)
804834 Erickson, Tuason, ar cr

5500 Combined Inpatient and Crisis Intervention Center: Hennepin County Medical Center (prereq regis med)
604835 Jepson, 9 cr

5501 Clinical Psychiatry: St. Paul Ramsey Hospital (prereq regis med)
404836 Tuason, 9 cr

5507 Clinical Research in Psychiatry: University Hospitals (prereq regis med)
104838 Heston, 9 cr

5508 Adult General Psychiatry: University Hospitals (prereq regis med)
904839 Heston, 9 cr

5511 Psychiatry in Medicine: Consultation-Liaison: University Hospitals (prereq regis med)
204840 Popkin, 9 cr

5514 Substance Abuse and Associated Psychiatric Disorders (max 18 cr; prereq Phase D medical student)
216843 Westermeyer, Van Valkenberg, 9 cr

5515 Neuropsychology: University Hospitals (prereq regis med)
916845 Meier, 9 cr

5516 St. Mary's Extended Care Center, Alcoholic Treatment Unit (prereq regis med)
904842 Mann, 4.5-9 cr

5519 Clinical Psychiatry: Abbott-Northwestern Hospital (prereq regis med)
304845 Mayberg, 9 cr

5521 Community Psychiatry: Dakota County Mental Health Center (prereq regis med)
104846 Nagobads, 9 cr

5530 Independent Study (prereq regis med)
723800 Heston, ar cr

5602 Clinical Psychopharmacology Seminar (prereq regis med)
523801 Abuzzahab, 1 cr

5604 Biological Bases of Behavior: University Hospitals (prereq regis med)
323802 Heston, ar cr

5800 Case Conference: Psychiatry in Medicine (prereq MD or #)
123803 Popkin, 1 cr

5801 Consultation-Liaison Psychiatry (prereq MD)
004847 Popkin, ar cr

8201 Clinical Psychiatry (prereq MD)
804848 Miner, ar cr

8203 Advanced Clinical Psychiatry (prereq MD, 8201)
604849 Miner, ar cr

8205 Special Assignments (prereq MD, 8201, 8203)
823805 Miner, 1 cr

8206 Research (prereq #)
223808 ar cr

8227 Biological Psychiatry (prereq MD or #)
804851 Heston, Mitchell, 3 cr

8239 Continuous Case Seminar: Psychoanalytically Oriented Psychotherapy (max 3 cr; prereq #)
123817 London, 1 cr

8243 Introduction to Clinical Theory of Psychoanalytic Psychotherapy (prereq #)
823819 Horton, 3 cr

8264 Presentations on Current, Appropriate Literature Pertaining to all Phases of Medical Health Care (prereq #)
023821 Murtaugh, 1 cr

8265 Readings in Psychosomatic Medicine, Consultation-Liaison Psychiatry (max 3 cr; prereq MD, #)
623823 Popkin, ar cr

8970 Directed Studies (max 9 cr)
123826 Miner, ar cr

AEROSPACE ENGINEERING AND MECHANICS (AEM)
Institute of Technology

R1006 Aerospace Survey and Laboratory prereq 1005, lower division AEM maj) (S-N only)
724199 1315-1400 T, Arch 5, 1 cr

R1015 Statics (prereq Phys 1271, Math 1231, IT stu) (A-N only)
833721 1315-1400 MTWThF, JacH 2135, 4 cr

R3016 Deformable Body Mechanics (prereq 1015, ¶Math 3221, IT stu) (A-N only)
★LECT 1215-1300 MWF, MoosT 2690
723067 –1 REC 1215-1300 TTh, AkerH 313, 4 cr
323069 –2 REC 1215-1300 TTh, AkerH 317, 4 cr
523071 –3 REC 1215-1300 TTh, AkerH 211, 4 cr
123073 –4 REC 1215-1300 TTh, AkerH 215, 4 cr
823075 –5 REC 1215-1300 TTh, AkerH 21, 4 cr
423077 –6 REC 1215-1300 TTh, AkerH 209, 4 cr
008817 –7 REC 1215-1300 TTh, AkerH 225, 4 cr

R3036 Dynamics (prereq 1015, ¶Math 3221, IT stu) (A-N only)
★LECT 0915-1000 MWF, OwreH 2230
223081 –1 REC 0915-1000 TTh, AkerH 309, 4 cr
923083 –2 REC 0915-1000 TTh, AkerH 209, 4 cr
523085 –3 REC 0915-1000 TTh, AkerH 313, 4 cr
123087 –4 REC 0915-1000 TTh, AkerH 317, 4 cr
023088 –5 REC 0915-1000 TTh, AkerH 21, 4 cr
123090 –6 REC 0915-1000 TTh, AkerH 211, 4 cr
823092 –7 REC 0915-1000 TTh, AkerH 215, 4 cr
423094 –8 REC 0915-1000 TTh, Arch 15, 4 cr
203204 –9 REC 0915-1000 TTh, Arch 20, 4 cr

R3093 Statics and Mechanics of Materials II (prereq 3092)
★LECT 0815-0900 MF, Arch 5
★REC 0815-0900 W, Arch 5
733730 –1 LAB 0915-1100 M, ExpE 120, 4 cr
533731 –2 LAB 0915-1100 T, ExpE 120, 4 cr
333732 –3 LAB 0915-1100 W, ExpE 120, 4 cr
133733 –4 LAB 0915-1100 Th, ExpE 120, 4 cr

R5201 Shock Waves and Compressible Fluid Flow (prereq 5200, upper div IT stu)
424200 1015-1100 MTWThF, Arch 5, 4 cr

R5250 Computational Fluid Mechanics (prereq FORTRAN, 5206 or #)
224201 0915-1000 MTWThF, AkerH 225, Moran, 4 cr

R5300 Flight Mechanics (prereq 5206)
★LECT 1215-1300 MWF, Arch 5, 4 cr
728771 –1 REC 1215-1400 Th, Arch 5

R5370 Aerodynamics of V/Stol Flight (prereq 5206)
117032 1515-1700 TTh, AkerH 225, 4 cr

R5435 Introduction to Random Vibrations (prereq 3401 or ME 3201)
633736 1015-1100 MTWF, AkerH 225, 4 cr

R5516 Aerospace Structures II (prereq 5515 or #)
924203 1315-1500 TTh, AkerH 227, 4 cr

R5518 Mechanics of Composite Materials (prereq 3016)
106547 1530-1700 MW, MechE 102, 4 cr

R5583 Mechanics of Solids III (prereq 5580 or #)
724204 1215-1300 MTWF, AkerH 227, 4 cr

R5642 Elementary Aeromechanics Laboratory (prereq 3016, 5200, aerospace engineering maj)
606553 –1 LAB 1415-1600 M, AkerH 30, 2 cr
106556 –2 LAB 1215-1400 T, AkerH 30, 2 cr
906560 –3 LAB 1515-1700 T, AkerH 30, 2 cr
506562 –4 LAB 1415-1600 W, AkerH 30, 2 cr
806566 –5 LAB 1415-1600 Th, AkerH 30, 2 cr
433737 –6 LAB 1415-1600 F, AkerH 30, 2 cr

5647 Aeromechanics Laboratory Projects (prereq 5200, △, aerospace engineering maj)
524205 3 cr

5802 Problems in Mechanics and Materials (prereq △)
324206 1-4 cr

5812 Problems in Fluid Mechanics (prereq △)
124207 1-4 cr

5842 Industrial Assignment (prereq regis in engineering intern program, △)
824209 2 cr

5843 Industrial Assignment (prereq regis in engineering intern program, △)
124210 2 cr

8003 Seminar: Aerospace Engineering and Mechanics (prereq consent of director of graduate studies)
824212 1415-1600 F, AkerH 225, 1 cr

R8203 Fluid Mechanics III (prereq 8202)
424214 1415-1500 MTWTh, AkerH 225, 4 cr

8230 Advanced Gas Dynamics (prereq 8204 or #)
233738 1515-1700 TTh, AkerH 227, 3 cr

8240 Perturbation Methods in Fluid Mechanics (prereq 8202 or #)
133739 0915-1000 MWF, AkerH 227, 3 cr

R8412 Nonlinear Systems (prereq 8411 or #)
124216 1115-1200 MTWF, AkerH 227, 4 cr

8512 Continuum Mechanics III (prereq 8510 or #)
433740 1515-1700 MW, AkerH 227, 4 cr

8540 Theory of Viscoelasticity (prereq # or 8510 or 5580)
133742 1315-1400 MTWF, AkerH 227, 4 cr

8570 Fracture Mechanics (prereq #)
733744 0915-1100 TTh, AkerH 227, 3 cr

8802 Selected Topics in Mechanics and Materials (prereq △)
924217 1-4 cr

8810 Selected Topics in Fluid Mechanics (prereq △)
105432 1-4 cr

8812 Selected Topics in Fluid Mechanics (prereq △)
724218 1-4 cr

8880 Plan B Project (max 4 cr; prereq grad aerospace engineering or mechanics maj, △)
837591 1-4 cr

AEROSPACE STUDIES (Air)

1106 U.S. Support Forces
701182 –1 0915-1000 TTh, Armory 205, Beachem, 1 cr
001186 –2 1015-1100 TTh, Armory 205, Beachem, 1 cr
801190 –3 1315-1400 TTh, Armory 12, Beachem, 1 cr

1206 Modern Employment of Airpower
701196 –1 0815-0900 T, 0815-0945 W, Armory 12, Holden, 2 cr
301198 –2 1115-1200 T, 1115-1245 Th, Armory 116, Holden, 2 cr

R3303 Contemporary Problems: Air Force Management
423113 –1 0815-0930 TTh, Armory 105, McNally, 3 cr
123115 –2 1015-1130 TTh, Armory 105, McNally, 3 cr
132887 –3 1315-1430 TTh, Armory 105, McNally, 3 cr

R3413 Military Law and Service Orientation
401192 –1 0915-1030 TTh, Armory 12, Patrick, 3 cr
101194 –2 1115-1230 TTh, Armory 12, Patrick, 3 cr

AFRO-AMERICAN STUDIES (Afro)
Liberal Arts

1015 Black Protest from Colonial Times to the Present
406215 1115-1230 TTh, BlegH 260, Ward, 5 cr

1025 Black Americans: Socialization, Personality, and Behavior
522650 0945-1100 TTh, BlegH 120, Taborn, 4 cr

1441 Afro-American History and Culture
738717 0945-1100 TTh, BlegH 220, 4 cr

3011 Social Change in East and Central Africa
138715 0915-1000 MWF, BlegH 205, Dean, 4 cr

3013 Cities in Africa: African, Islamic, European Traditions
533650 1015-1100 MWF, SocSci 1383, Coifman, 4 cr

3062 The Black Family
817194 0815-0930 TTh, BlegH 135, 4 cr

3091 Development of a Black Political Strategy
605533 1115-1200 MWF, SocSci 1383, Nimtz, 4 cr

3102 Afro-American Literature
639620 1415-1500 MW, BlegH 10, 4 cr

3105 Afro-American Music Through the 1920's (§Mus 3708)
906218 0945-1100 TTh, BlegH 135, Southall, 4 cr

3865 Afro-American History (§Hist 3865)
938716 0945-1100 TTh, BlegH 260, Lewis, 4 cr

3910 Topics in Afro-American/African Studies
933645–1 0915-1000 TTh, SocSci 101, King, 4 cr (From Brown to Bakke: Blacks and the Desegregation Movement)
839471–2 1315-1500 TTh, BlegH 115, Dean, 4 cr (Refugees of African Origin)

3970 Directed Studies (prereq #, △, college approval)
022653 1-15 cr

5002 Law and Society: A Minority Point of View (prereq 5001)
912276 0945-1100 TTh, SocSci 307, Ward, 5 cr

5072 Racism: Social Psychological Consequences for Black Americans (§3072)
512278 1145-1300 TTh, SocSci 1383, Taborn, 4 cr

5101 Black Women
417196 1115-1230 TTh, BlegH 350, 4 cr

5145 Development in Africa (§Geog 5145, IntR 5145)
439473 1115-1200 MWF, BlegH 245, Scott, 4 cr

5201 Black Composers: Contributions to Western Music and Culture (prereq 1301 or 3105 or 3301, Mus 3708 or 3709, grad or #)
305526 1515-1630 TTh, SocSci 307, Southall, 4 cr

5551 Use of Oral Traditions as Resources for History: Methods
133649 1315-1400 MWF, BlegH 260, Coifman, 4 cr

5800 African Studies Interdisciplinary Seminar: Race and Revolution in Southern Africa: 1880-1980
905540 1315-1500 Th, SocSci 628, Isaacman, 4 cr

5900 Senior Seminar (prereq jr, sr or grad)
822654 1300-1500 F, SocSci 628, Alexis, 2-4 cr

5970 Directed Studies (prereq #, △, CLA approval)
622655 1-6 cr

AGRICULTURAL AND APPLIED ECONOMICS (AgEc)
Agriculture

R1030 Principles of Microeconomics (§Econ 1002; prereq 1020)
323136 –1 1000-1045 MTWTh, ClaOff B45, Peterson, 4 cr
123137 –2 1100-1145 MTWTh, ClaOff B35, Peterson, 4 cr

1030H Principles of Microeconomics (§Econ 1002; prereq 1020, B average or #)
832889 1400-1530 MWF, ClaOff B36, Larson, 4 cr

1400 Agricultural Markets and Prices (prereq 1030)
421524 1000-1045 MTWTh, ClaOff B35, D Dahl, 4 cr

3102 Macroeconomic Theory (§Econ 3102; prereq 1020, 1030 or Econ 1001, 1002 or #)
121526 1100-1145 MTWTh, ClaOff B45, Larson, 4 cr

R3290 Agribusiness Management (prereq 1020, 1030, Mgmt 3001 for ag bus majs, 3101 for others or #)
721528 1300-1445 MW, ClaOff B25, Smith, 4 cr

3410 Economic Organization of the Hospitality Industry (prereq 1020, 1030, Mktg 3000 or #)
921530 1500-1630 MW, ClaOff B42, 4 cr

3440 Livestock Marketing Economics (prereq 1400)
721531 0900-0945 MWF, ClaOff B25, Egertson, 3 cr

3710 Agricultural and Market Policies (prereq 1400 or 3101, 3102 or Econ 3101, 3102 or #)
521532 0800-0845 MTWTh, ClaOff B35, Sundquist, 4 cr

3830 Organizing the Farm Business for Entry, Growth, and Transfer (prereq 3820...3850 rec)
321533 1100-1230 MW, ClaOff B36, Thomas, 4 cr

3831 Organizing the Farm Business for Entry, Growth, Transfer Lab (prereq ¶3830)
032888 1100-1230 F, ClaOff B36, Apland, 1-3 cr

5020 Applied Linear Programming (prereq 1030, Math 1111 or 1131)
621537 1445-1630 TTh, ClaOff B42, Fuller, 3-4 cr

5272 Bayesian Decision Making (§Econ 5272; prereq 5271)
132890 0945-1100 MW, ClaOff 27, Hildreth, 4 cr

5440 Cooperatives and Agribusiness Organization (prereq 1400)
421538 1200-1245 MTWTh, ClaOff B42, R Dahl, 3-4 cr

5550 Food Consumption Economics (§FScN 5474; prereq 3101, Stat 5021, FScN 3472 or #)
221539 0900-0945 MWF, McNH 144, Senauer, 3-4 cr

5560 Economics of Consumer Policies (prereq 3101 or Econ 3101 or #)
621540 0900-1030 TTh, ClaOff B30, Kinsey, 3-4 cr

5610 Land Use Institutions of Local Government (prereq 1020, 1030)
★LECT 1300-1400 TTh, ClaOff B42, Snyder
828955 –1 REC 1500-1700 Th, BioSci 58, Snyder, 3-4 cr

5650 Economics of Natural Resource Policy (prereq 3101 or Econ 3101 or Econ 5151 or #)
421541 1530-1700 MW, ClaOff B30, Easter, Waelti, 3-4 cr

5720 Economics of World Agriculture (prereq 1020, 1030 or #)
221542 1400-1515 MW, ClaOff B30, Raup, 3-4 cr

5750 Agricultural Trade and Commercial Policy (prereq 3101, 3102 or Econ 3101, 3102)
032891 0800-0845 MWF, ClaOff B30, Houck, 3-4 cr

5840 Management of the Farm Business (prereq 3820...3830, 3850 rec)
108078 1300-1430 TTh, ClaOff B36, Apland, Eidman, others, 3-4 cr

5990 Special Topics and Independent Study in Agricultural and Applied Economics (prereq #)
608075 ar cr

8200 Advanced Topics in Agricultural and Appled Economics
212274 1-9 cr

8220 Applied Mathematical Programming (prereq Math 1142, Econ 5151 or #)
121548 Apland, Roe, 3 cr

8231 Agricultural Prices (prereq Econ 5151, 5152)
138794 1600-1645 MWF, ClaOff 27, Brooks, 3 cr

8287 Production Functions: Theory and Estimations (prereq 5860, Stat 5302)
321550 1530-1655 TTh, ClaOff B36, Peterson, 3 cr

8366 Seminar: Applied Regional Economics
421555 1600-1730 TTh, ClaOff B30, Maki, 3 cr

8373 Seminar: Food and Agricultural Policy in the United States
121557 1000-1130 MW, ClaOff B42, Schuh, 3 cr

8382 Seminar: Farm Management and Production Economics
721559 Eidman, 3 cr

AGRICULTURAL EDUCATION (AgEd)
Vocational And Technical Education Education

1001 Introduction to Agricultural Education (A-N only)
522387 1200-1245 W, VoTech R385, Marvin, 1 cr

1010 History and Philosophy of Vocational and Community Education (A-N only)
322388 0800-0845 MWF, VoTech R385, Swanson, 3 cr

R3010 Organization and Direction of FFA Activities (A-N only)
122389 1200-1245 TTh, VoTech R385, Leske, 2 cr

3029 Directed Experience in Agricultural Education (prereq △) (A-N only)
522390 1200-1245 M, VoTech R385, Leske, 1-3 cr

3041 Practicum: Agricultural Education Technology (max 5 cr; prereq △) (A-N only)
322391 –1 1300-1645 T, VoTech R385, Leske, Peterson, 3 cr
912407 –2 1200-1245 F, VoTech R385, Bear, Leske, 1-3 cr
738684 –3 Bear, 3 cr

5021 Education Through Extension Methods (§HEEd 5021; prereq grad or #) (A-N only)
122392 1500-1730 Th, VoTech R385, Norenberg, 3 cr

5024 Extension History and Philosophy (§HEEd 5024; prereq #) (A-N only)
022393 1400-1630 T, VoTech R385, Lewis, 3 cr

5027 Practicum: Placement for Extension Experiences (max 9 cr, §HEEd 3605, 5027) (S-N optional)
622395 Norenberg, 2-9 cr

5028 Teaching Methods in Agricultural Education (prereq SeEd 3155 or ¶) (A-N only)
422396 1000-1045 MTWThF, VoTech R385, Peterson, 5 cr

5049 Agricultural Education for Adults (A-N only)
★LECT 0900-0945 MTWThF, VoTech R385, Persons, 5 cr
836666 –1 LAB 0800-0845 F, VoTech R375, Persons

5061 Program Planning and Evaluation (prereq sr) (A-N only)
122398 1400-1445 MWF, VoTech R385, Marvin, 3 cr

5072 Practicum: Agricultural Business and Industry (max 9 cr; prereq 5071 or #) (A-N only)
704891 0800-0845 T, VoTech R385, Leske, 1-3 cr (lab ar)

5090 Independent Study (prereq sr) (A-N only)
922399 1-3 cr

5095 Independent Study (prereq MEd student in agricultural education) (A-N only)
622400 3 cr

5128 Methods of Teaching (prereq non-agricultural-education maj and/or #) (A-N only)
422401 1000-1045 MWF, VoTech R385, Peterson, 3 cr

5129 Curriculum Planning (prereq 5128 or ¶, non-agricultural-education maj and/or #) (A-N only)
222402 1500-1545 MWF, VoTech R385, Marvin, 3 cr

5200 Seminar: Working with Youth Through Adults (max 9 cr including HEEd 5200 and YoSt 5200; prereq △) (S-N optional)
027111 Leske, 1-3 cr

8001 Research in Agricultural Education (prereq 15 cr educ)
122403 ar cr

8091 Field Problems
922404 3 cr

8303 Seminar: Graduate Studies Review
722405 1600-1745 M, VoTech R385, Leske, 1-3 cr

AGRICULTURAL ENGINEERING (AgEn)
Institute of Technology

1031 Computations in Agricultural Engineering (prereq CSci 3101 or equiv, Math 1231, lower div IT stu)
★LECT 1500-1545 M, AgEng 105, Jordan, 2 cr
028775 –1 LAB 1500-1645 W, AgEng 105

3060 Analysis in Agricultural Engineering (prereq CSci 3101 or equiv, Math 3211, IT stu)
824226 0800-0845 MTWTh, AgEng 16B, Morey, 4 cr

3970 Directed Studies in Agricultural Engineering (prereq #)
624227 2-5 cr

5050 Intern Reports (prereq IT stu)
424228 Flikke, 2 cr

5070 Automatic Control and Instrumentation (prereq 3060, EE 3000 or 3002, IT upper div or grad IT)
★LECT 0900-0945 TTh, AgEng 105, Janni, 4 cr
228779 –1 LAB 1000-1145 TTh, AgEng 102

R5072 Finite Element Method: Fundamentals and Applications (prereq differential equations, IT upper division or grad or #)
224229 1200-1345 TTh, AgEng 108, Gustafson, 4 cr

5082 Design: Soil and Water (prereq completion of appropriate AgEn senior level courses or #, IT upper div)
124233 1400-1545 Th, AgEng 16B, Allred, Larson, others, 4 cr (addnl hrs ar)

5084 Design: Food Engineering (prereq completion of appropriate AgEn senior level courses or #, IT upper div)
224232 1500-1645 M, AgEng 307, Thompson, 4 cr (addnl hrs ar)

5191 Special Problems (prereq #)
624230 2-5 cr

5192 Special Problems (prereq 5191, #)
424231 2-5 cr

8100 Seminar (prereq #, grad IT maj)
538685 Flikke, 1 cr

8190 Advanced Problems and Research (prereq 5191, 5192, △)
324223 2-6 cr

8191 Advanced Problems and Research (prereq 5191, 5192, △)
124224 2-6 cr

8192 Advanced Problems and Research (prereq 5191, 5192, △)
024225 2-6 cr

AGRICULTURAL ENGINEERING TECHNOLOGY (AgET)
Agriculture

R1020 Agricultural Shop-Metalwork (prereq Chem 1004 or #)
★LECT 1300-1345 MW, AgEng 42, Bear, 4 cr
728852 –1 LAB 1400-1645 MW, AgEng 20

1090 Directed Studies (prereq #)
721562 ar cr

3091 Special Problems in Agricultural Engineering (prereq #)
521563 2-5 cr

R3610 Electricity in Agriculture (prereq Math 1111, Phys 1041)
★LECT 0800-0845 MWF, AgEng 105, Gustafson
101221 –1 LAB 1400-1545 T, AgEng 102, 4 cr
801223 –2 LAB 1400-1545 F, AgEng 102, 4 cr

R3615 Crop Processing and Storage (prereq Math 1111, Phys 1041)
★LECT 1100-1145 MWF, AgEng 16B, Flikke, 4 cr
528853 –1 LAB 1400-1645 Th, AgEng 102

5023 Fluids-Principles and Systems (prereq Math 1142, Phys 1042 or #)
★LECT 0900-0945 MWF, AgEng 16B, Goodrich, 4 cr
328854 –1 LAB 1400-1545 M, AgEng 16B

5031 Agricultural Machinery and Mechanization (prereq 5020 or #)
032907 Bear, 1-3 cr

5091 Special Problems in Agricultural Engineering (prereq #)
121565 2-5 cr

5092 Special Problems in Agricultural Engineering (prereq 5091)
021566 2-5 cr

5400 Drainage and Irrigation (prereq Soil 3210)
★LECT 1300-1345 MWF, AgEng 108, Allred, 4 cr
428859 –1 LAB 1400-1645 W, AgEng 16B

AGRICULTURAL JOURNALISM (AgJo)
Agriculture

R3111 Journalistic Techniques (prereq completion of Rhet 1101 and 1102 or equiv, C average, typing ability required)
104869 1000-1145 TTh, HckrH 329, Wells, 5 cr

3530 Publicity (prereq compl of rhetoric communication requirement)
821567 0800-0845 MWF, CentLib 4, Swanson, 4 cr

3936 Special Problems (prereq 3530 or #)
621568 Swanson, ar cr

R5100 Seminar in Agricultural Communication (max 6 cr; prereq sr, #)
821570 1400-1530 TTh, CentLib 8, Wells, others, 3 cr

R5301 Functional Photography (35 mm camera required)
621571 1400-1615 TTh, CentLib 4, Breneman, 4 cr

R5500 Research: Communication Strategies (§Rhet 5500; prereq #)
421572 1600-1845 Th, HckrH 209, McDowell, 4 cr

5936 Special Problems in Agricultural Communications (prereq #)
221573 Breneman, Swanson, others, ar cr

AGRICULTURE (Agri)
Agriculture

R1000 Academic Enrichment and Honors Program: Special Projects (prereq acceptance for Special Opportunity Grant, agriculture maj only, #) (S-N only)
021714 Wharton, 1-15 cr

R1001 Leadership Development: Project LEAD (max 6 cr; prereq agriculture maj, #) (S-N only)
821715 Wharton, 2 cr

AGRONOMY AND PLANT GENETICS (Agro)
Agriculture

R1010 Principles of Agronomy (§3010, 3020, 3030)
721576 1100-1145 MTWF, PalmC 10, Goodding, 4 cr

R1011 Principles of Agronomy-Discussion (prereq ¶1010) (S-N only)
123218 –1 0900-0945 T, Agr 202, Goodding, 1 cr
323220 –2 1200-1245 T, Agr 202, Goodding, 1 cr
023222 –3 1200-1245 W, Agr 202, Goodding, 1 cr

1020 Special Problems (prereq 5 cr agronomy, #)
521577 Smith, 1-3 cr

R3020 Growth, Development, and Culture of Field Crops (prereq Biol 1011, Chem 1005)
★LECT 1000-1045 MTWF, PalmC 10, Cardwell
025570 –1 LAB 1300-1445 M, Agr 106, Cardwell, 5 cr
825571 –2 LAB 1300-1445 T, Agr 106, Cardwell, 5 cr
625572 –3 LAB 0800-0945 W, Agr 106, Cardwell, 5 cr
425573 –4 LAB 1100-1245 W, Agr 106, Cardwell, 5 cr
225574 –5 LAB 0900-1045 Th, Agr 106, Cardwell, 5 cr

R3060 Field Plot Design in Agronomy (prereq jr, △)
★LECT 0800-0845 MWF, Agr 202, Hicks
901245 –1 REC 1300-1445 M, Agr 401, Hicks, 4 cr
101252 –2 REC 1000-1145 T, Agr 401, Hicks, 4 cr

R3200 Seminar (prereq jr or sr, #)
121579 1530-1700 Th, Agr 408, Smith, Goodding, 1 cr

5001 Problems in Agronomy for Advanced Students (prereq 20 cr agronomy, #)
321581 Smith, 1-5 cr

R5040 Corn and Soybean Management (prereq 3010, 3020, 3030, Soil 1122 or #)
121582 1300-1445 TTh, Agr 202, Crookston, 3 cr

R5050 Herbicides (prereq 5030, PlPh 3131, BioC 1302)
406571 0800-0845 MWF, Agr 408, Eberlein, 3 cr

R5060 Small Grains, Sunflower and Sugarbeet Management (prereq 3010, 3020, 3030, 5030, Soil 1122 or #)
212310 1400-1545 MW, Agr 202, Simmons, 3 cr

R5120 Growth, Development, and Culture of Field Crops (§3020; prereq Biol 1011, Chem 1005)
★LECT 1000-1045 MTWF, PalmC 10, Cardwell, 5 cr (lab ar)
112311 –1 REC 0800-0845 F, Agr 401, Cardwell

8010 Research in Agronomy (prereq #)
821584 ar cr

8210 Principles of Plant Breeding II (prereq 8200 or #)
621585 0900-0945 MWF, Agr 202, Geadelmann, 3 cr

R8240 Plant Genetics in Relation to Plant Improvement (prereq GCB 5031, #)
★LECT 1300-1345 MWF, Agr 202, Gengenbach, 3 cr
106564 –1 REC 1400-1445 F, Agr 401, Gengenbach

8280 Current Topics in Plant Breeding (prereq 8210 or #)
125575 Rasmusson, 2 cr

8330 Research in Plant Genetics
421586 ar cr

AKKADIAN (Akka)
Near And Middle Eastern Studies
Liberal Arts

R5013 Elementary Akkadian (prereq 5012)
732917 0815-0900 MWF, FolH 203, Reisman, 4 cr

AMERICAN INDIAN STUDIES (AmIn)
Liberal Arts

1022 Beginning Ojibwe (prereq 1021)
506481 1015-1100 MTWThF, KoltH S135, Oakgrove, 5 cr

1023 Beginning Ojibwe (prereq 1022)
925576 1115-1200 MTWThF, KoltH S132, Northbird, 5 cr

1033 Beginning Dakota (prereq 1032)
422656 1115-1200 MTWThF, KoltH S135, Schommer, 5 cr

3025 Intermediate Ojibwe (prereq 3024)
222657 1315-1400 MTWThF, KoltH S133, Northbird, 5 cr

3026 Ojibwe History and Culture
604284 1315-1400 MWF, KoltH S135, Oakgrove, 4 cr

3035 Intermediate Dakota (prereq 3034)
122658 1315-1400 MTWThF, KoltH S132, Schommer, 5 cr

3036 Dakota History and Culture
922659 1315-1400 MWF, KoltH S134, 4 cr

3112 American Indian History: 1850 to the Present (§Hist 3872)
733663 0915-1000 MWF, BlegH 245, Meyer, 4 cr

5251 American Indians and the Cinema (§AmSt 5251)
139315 0815-0930 TTh, FordH 130, Libertus, 4 cr

5960 Topics in American Indian Studies: The Emerging Urban American Indian
939316 1245-1400 TTh, LindH 216, Libertus, 4 cr

AMERICAN STUDIES (AmSt)
Liberal Arts

R1003 American Culture: 1920s to the Present
436931 –1 1015-1100 MWF, MechE 302, 4 cr
236932 –2 1315-1400 MWF, MechE 302, R Ross, 4 cr
136933 –3 1415-1530 TTh, MechE 302, 4 cr

R3111 Creative Americans and Their Worlds
839356 1415-1530 TTh, MechE 212, Yates, 4 cr

R3113 American Cultural Diversity
122661 –1 1215-1300 MWF, BlegH 440, Menard, 4 cr
133666 –2 0945-1100 TTh, MechE 302, Delattre, 4 cr

R3303 Proseminar: American Studies (prereq 3302)
922662 1415-1645 T, LindH 325, L May, 4 cr

R3920 Topics in American Studies
236705 –1 1245-1400 TTh, Law 20, Silberman, 4 cr (Vietnam War in Literature and Film)
938795 –2 Amo, 4 cr (American Indian Literature)

3970 Directed Studies (prereq #, △, college approval)
722663 1-15 cr

5251 American Indians and the Cinema (§AmIn 5251)
639357 0815-0930 TTh, FordH 130, Libertus, 4 cr

R5920 Topics in American Studies (max 12 cr; prereq #)
522664 –1 1315-1400 MWF, LindH 305, Geffen, 4 cr (American Humor)
439358 –2 1245-1400 TTh, LindH 216, Libertus, 4 cr (The Emerging Urban American Indian)

R8203 Introduction to American Studies (prereq MA candidate)
322665 1215-1400 M, JonesH 1, Marling, 4 cr

R8401 Materials and Methods for the Study of American Civilization (prereq adv degree candidate in AmSt or #)
122666 1415-1615 Th, LindH 305, L May, 3 cr

8500 Studies in American Religious and Philosophical Thought (prereq adv degree candidate in AmSt or #)
033667 1415-1615 W, LindH 305, Delattre, 3 cr

8970 Readings in American Civilization (prereq △)
022667 ar cr

ANATOMY (Anat)
Medical School

1027 Anatomy for Physical Education Students
★LECT 1215-1400 TTh, PWB 2470, Serfass, 4 cr
128623 –1 LAB 1415-1500 TTh, JacH 5169, 5173

R3001 Elementary Anatomy (prereq one qtr college biology)
★LECT 0815-1000 TTh, NichH 45, Coulter, 5 cr
037265 –1 LAB 0815-1000 W, JacH 5163, 5165
837266 –2 LAB 1015-1200 W, JacH 5163, 5165
637267 –3 LAB 1315-1500 W, JacH 5163, 5165
437268 –4 LAB 1515-1700 W, JacH 5163, 5165

3970 Special Problems (prereq #)
123347 2 cr

5109 Gross Human Anatomy for Dental Students (prereq freshman dental student or #)
★LECT 0815-0900 MWF, MoosT 2620, Sorenson, 7 cr
328627 –1 LAB 0915-1200 MWF, JacH 5147, 5149, 5153, 5161

5110 Neuroscience for Dental Students (prereq ¶Phsl 5100, registered dental freshman, #)
★LECT 1315-1400 TWTh, MoosT 2620, Elde, 2 cr
115376 –1 LAB 1415-1700 W, MoosT 3110

5127 Problems in Modern Developmental Biology (prereq 5106 or #)
332922 Hegre, 2 cr

5190 Advanced Anatomy (prereq regis med, 5103, #)
523300 2 cr

5211 Biology of Nerve Cells (prereq GCB 5049, any of the following: Phsl 3053, 3056, 5103, 5111, GCB 5114, VB 5312 or #)
736644 0915-1000 MWF, MoosT 2520, Quick, 3-4 cr (rec ar)

5500 General Gross Anatomy (prereq Phase D)
323301 Robertson, 3-4.5 cr

5501 The Extremities (prereq Phase D)
123302 Robertson, 3-4.5 cr

5502 Head and Neck (prereq Phase D)
023303 Robertson, 3-4.5 cr

5504 The Endocrine System (prereq Phase D)
823304 Hamilton, 3-4.5 cr

5508 The Thorax (prereq Phase D)
623305 Robertson, 3-4.5 cr

5509 The Abdomen (prereq Phase D)
423306 Robertson, 3-4.5 cr

5510 Perineum, Genital-Urinary System and Pelvis (prereq Phase D)
223307 Robertson, 3-4.5 cr

5767 Seminar: Hematology (prereq 5766)
123308 Sundberg, 1 cr

8136 Biological Electron Microscopy: Technics (prereq #)
132923 Erlandsen, 1-5 cr

8155 Advanced Anatomy (prereq #)
223310 1-6 cr

8170 Cell Junction Structure and Physiology (prereq GCB 5048, Phsl 5103 or Phsl 5104 or GCB 5114 or #)
032924 Sheridan, 4 cr

8203 Research in Anatomy (prereq #)
123311 1-10 cr

8207 Seminar: Anatomy (prereq #)
923312 1215-1300 W, JOAd 5137, Hamilton, 1 cr

8223 Neurobiology of Endocrine Regulation (prereq #)
336789 Elde, 3 cr

ANCIENT NEAR EASTERN AND JEWISH STUDIES (ANEJ)
Near And Middle Eastern Studies
Liberal Arts

R3251 Modern Study of the Old Testament
632926 0915-1000 MWF, FolH 209, Reisman, 4 cr

R3505 Ancient Israel: The Hellenistic Period
832925 1315-1400 MWF, FolH 50, Zahavy, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
822668 1-4 cr

ANCIENT STUDIES (AnSt)
Liberal Arts

5100 Topics in Ancient Studies (prereq enrollment in AnSt or #)
122675 –1 1245-1400 TTh, BlegH 105, Jones, 4 cr (Ancient Near East)
733033 –2 1415-1600 T, FolH 207, Aris, 3 cr (Archaeology of the Book)
638757 –3 1500-1700 F, NMA 232, Coulson, 3 cr (Exhibition of the Sarazyn Collection of Ancient Artifacts)

8003 Basic Seminar: Interdisciplinary Research (prereq grad maj or #)
405470 1515-1700 Th, FolH 302, Gibbon, 3 cr

8120 Interdisciplinary Seminar: Ancient Empires (prereq 8110)
333035 1415-1600 M, Gunter, 3 cr

8200 Directed Readings (prereq #)
922676 ar cr

8300 Directed Research (prereq #)
722677 ar cr

8400 Colloquium (prereq enrollment in AnSt)
522678 1515-1700 W, JonesH 1, Gibbon, 2 cr

ANESTHESIOLOGY (Anes)
Medical School

R3106 Advanced Respiratory Care Topics (prereq #)
023348 1315-1400 MTWThF, Mayo C559, Larsen, 5 cr

R3107 Individual Study in Respiratory Therapy (prereq #)
823349 1415-1500 W, Mayo C559, Larsen, ar cr

5015 Directed Study, Anesthesia Topics/Project Course Development (prereq CRNA, regis B.S. in nurs anes, #)
123350 Bell, ar cr

5181 Externship in Clinical Practice of Anesthesiology (prereq regis med)
023351 Anderson, 4.5-9 cr

5186 Clinical Practice in Anesthesia (prereq CRNA, regis B.S. in nurs anes, 5086, #)
623353 Buckley, 15 cr

5268 Seminar in Anesthesia (prereq CRNA, regis B.S. in anes)
223355 1500-1700 F, Mayo B580, Buckley, 2 cr

5286 Directed Study, Anesthesia Topics/Project: Clinical (prereq CRNA, regis B.S. in nurs anes, #)
923357 Bell, ar cr

5386 Education in Nurse Anesthesia (prereq CRNA, regis B.S. in nurs anes, #)
523359 Bell, 1 cr

8265 General Anesthesia
823366 Buckley, 12 cr

8266 Regional Anesthesia
423368 Buckley, 4 cr

8267 Pre-Postanesthetic Evaluation
223372 1530-1800 MTWTh, Mayo B580, Buckley, 2 cr

8268 Seminar: Anesthesia
923374 1500-1700 F, Mayo B580, Buckley, 2 cr

8269 Research in Anesthesia
104905 Buckley, ar cr

ANIMAL SCIENCE (AnSc)
Agriculture

R1107 Swine Practicum (prereq #) (S-N only)
221587 1400-1445 T, PetH 108, Moser, 1 cr

R1110 Dairy Cattle Evaluation
121588 1300-1545 TTh, ClaOff B35, Hansen, 2 cr

1600 Horse Production (§5501)
921589 1300-1345 MTWTh, ABLMS 125, Jordan, 4 cr

R1601 Horse Equitation and Management (facility fee)
523314 1400-1600 F, PetH 110 (first day), Jordan, 1 cr (Hennepin County Vo-Tech, Eden Prairie)

R1603 Beef Practicum (prereq soph, #) (S-N only)
525578 1400-1445 T, HckrH 70, Meiske, 2 cr (3 hrs ar)

3111 Vertebrate Behavior (prereq Biol 1011, 3011 or #)
221590 1400-1545 TTh, AnScVM 135, Phillips, 4 cr

3113 Animal Welfare (prereq soph)
738796 1000-1045 MWF, ABLMS 125, Phillips, 4 cr

3131 Live Animal Performance and Selection
325579 1500-1745 TTh, AnAren 115, Christians, 3 cr

3141 Advanced Dairy Judging (prereq 1110)
121591 Hansen, 1 cr

R3305 Reproductive Physiology, Artificial Insemination, and Lactation (prereq 3301)
★LECT 0900-0945 MTWTh, HckrH 100, Hunter
623322 –1 LAB 1500-1645 W, AnScVM 169, 173, Hunter, 5 cr
223324 –2 LAB 0900-1045 F, AnScVM 169, 173, Hunter, 5 cr

R3402 Applied Animal Nutrition (§1401; prereq 3401)
★LECT 0900-0945 T, PetH 108, Waibel
325582 –1 LAB 1300-1445 T, PetH 108, Waibel, 2 cr
025584 –2 LAB 1500-1645 W, PetH 200, Waibel, 2 cr

5232 Applied Meat Animal Breeding (prereq 3220 or #)
529484 1100-1145 MWF, PetH 108, Boylan, 3 cr

5240 Animal Cytogenetics (prereq GCB 3022 or #)
621599 1300-1445 TTh, PetH 200, Shoffner, 4 cr

5330 Current Topics in Endocrinology (prereq 3301, Biol 3021 or BioC 5001)
321600 1600-1645 W, AnScVM 111, Wheaton, 1 cr

5404 Applied Animal Nutrition
121601 1100-1145 MW, 0800-0845 W, AnScVM 125, Otterby, Olson, others, 3 cr

R5407 Laboratory Analysis of Feedstuffs (prereq sr or #)
021602 1300-1345 MWF, HckrH 70, Goodrich, Otterby, 2 cr

5603 Beef Cattle Production (§5613; prereq 1401 or 3401...3220, 5403 rec)
621604 0800-0845 TWThF, PetH 110, Meiske, 4 cr

5604 Dairy Farm Management (prereq 1520, 5403...3220 rec) (A-N only)
★LECT 1100-1145 MTWTh, AgEng 108, Hansen, 4 cr
112485 –1 REC 1100-1145 F, AgEng 108

R5703 Literature and Seminar (prereq jr)
223341 –1 1400-1445 MW, PetH 108, Donker, 2-3 cr
923343 –2 1500-1545 MW, PetH 108, Donker, 2-3 cr

5710 Special Problems (prereq #)
421605 ar cr

5715 Tutorial (prereq #)
221606 ar cr

8332 Preservation of Spermatozoa and Embryo (prereq 5322, 3 cr upper division biochemistry, #)
★LECT 1400-1445 MWF, AnScVM 169, Graham, 5 cr
318003 –1 LAB 1400-1645 TTh, AnScVM 169

8603 Graduate Seminar (prereq #)
005559 1530-1645 M, HckrH 100, Epley, 1 cr

8750 Concepts and Developments in Meat Science and Technology (prereq #)
121607 C Allen, 1 cr

8810 Research in Animal Science (prereq #)
921608 ar cr

8820 Research in Animal Genetics (prereq #)
721609 ar cr

8830 Research in Animal Physiology (prereq #)
121610 ar cr

8840 Research in Animal Nutrition (prereq #)
921611 ar cr

8850 Research in Muscle Chemistry and Physiology (prereq #)
521613 ar cr

ANTHROPOLOGY (Anth)
Liberal Arts

R1101 Human Origins
★LECT 1015-1130 TTh, SciCB 325, Spector
423354 –1 REC 0815-0900 T, FordH 15, 5 cr
123356 –2 REC 0915-1000 T, FordH 15, 5 cr
723358 –3 REC 0915-1000 T, FordH 20, 5 cr
923360 –4 REC 1215-1300 T, FordH 15, 5 cr
723361 –5 REC 0815-0900 Th, FordH 15, 5 cr
523362 –6 REC 0915-1000 Th, FordH 15, 5 cr
934651 –7 REC 0915-1000 Th, FordH 15, 5 cr
734652 –8 REC 1215-1300 Th, FordH 15, 5 cr

R1101H Honors Course: Human Origins (prereq B avg or #)
★LECT 1015-1130 TTh, SciCB 325, Spector
811640 –80 REC 1015-1100 W, FordH 15, Spector, 5 cr

R1102 Introduction to Social and Cultural Anthropology (§1115)
★LECT 1115-1200 MWF, SmithH 100, Spencer
023365 –1 REC 0815-0900 T, FordH 20, 5 cr
623367 –2 REC 0915-1000 T, FordH 40, 5 cr
223369 –3 REC 0915-1000 T, FordH 60, 5 cr
423371 –4 REC 1015-1100 T, FordH 20, 5 cr
123373 –5 REC 1015-1100 T, FordH 15, 5 cr
723375 –6 REC 1115-1200 T, FordH 175, 5 cr
323377 –7 REC 1115-1200 T, FordH 20, 5 cr
023379 –8 REC 0815-0900 Th, FordH 20, 5 cr
123381 –9 REC 0915-1000 Th, FordH 40, 5 cr
118304 –10 REC 0915-1000 Th, FordH 20, 5 cr
718306 –11 REC 1015-1100 Th, FordH 15, 5 cr
318308 –12 REC 1015-1100 Th, FordH 20, 5 cr
334654 –13 REC 1115-1200 Th, FordH 15, 5 cr
034656 –14 REC 1115-1200 Th, FordH 20, 5 cr

R1102H Introduction to Social and Cultural Anthropology (prereq GPA 3.0 or #)
★LECT 1115-1200 MWF, SmithH 100, Spencer
111644 –80 REC 0915-1000 T, FordH 256, Spencer, 5 cr

3387 Comparative Primate Osteology (prereq 3386)
226062 1315-1600 TTh, FordH 20, Murrill, 5 cr

3970 Directed Studies (prereq #, △, college approval)
322679 ar cr

5102 Principles of Cultural Anthropology (§1102; prereq jr standing only or #)
434645 0915-1000 MWF, FordH 285, Prell, 4 cr

5112 Kinship and Marriage (prereq 1102 or 5102, 3201 or #)
336369 1215-1300 MWF, FordH 285, Ball, 4 cr

5116 Cultural Ecology (prereq 1101, 1102 or 5102, one ethnographic area course or #)
834643 1115-1230 TTh, FordH 285, Hastorf, 4 cr

5132 Symbolic Anthropology (prereq 1102 or 5102, 5112 or #)
538878 0945-1100 TTh, FordH 285, Ingham, 4 cr

5147 Dynamics of Pedagogy in Higher Education (prereq #)
106797 1015-1100 MWF, FordH 170, Sarles, 4 cr

5177 Archaeological Resource Management (prereq 1101)
134647 0815-0900 MWF, FordH 285, Johnson, 4 cr

5186 Nutritional Anthropology (prereq 1101, 1102 or 5102 or #)
322682 0945-1100 TTh, FordH 175, Etkin, 4 cr

5187 Folk Medicine: Cross-Cultural Studies (prereq 1102 or 5102, 3001, # or intro biology, intro social science course, #)
014990 1215-1400 TTh, FordH 40, Etkin, 4 cr

5258 Anthropological Analysis of American Culture (prereq 1102 or 5102 or #)
122683 1315-1400 MWF, FordH 175, Rowe, 4 cr

5305 Studies in Anthropological Classics
934648 1415-1600 T, FordH 256, Penn, 5 cr

5392 Philosophical Anthropology (prereq 1102 or 5102)
734649 1015-1100 MWF, FordH 160, Penn, 4 cr

5910 Topics in Anthropology: Peoples and Cultures of Southeast Asia
017470 1315-1400 MWF, FordH 170, Dunnigan, 4 cr

5920 Topics in Anthropology
634658 1115-1200 MWF, FordH 50, Rowe, 4 cr

R5960 Senior Seminar (prereq sr maj)
022684 –1 1315-1530 W, FordH 60, Ogan, 4 cr (Anthropology and History)
134650 –2 1315-1530 Th, FordH 50, Miller, 4 cr

5970 Directed Readings (prereq #, △, CLA approval) (A-N only)
512328 2-4 cr

8002 Core Seminar: Social Anthropology (prereq anth grad student or #)
712327 1415-1600 W, FordH 235, Ingham, 3 cr

8202 Research Methods in Social and Cultural Anthropology
239328 1315-1530 Th, 3 cr

8420 Seminar: Cultural Change
512331 1415-1600 T, FordH 235, Miller, 3 cr

8950 Directed Studies (prereq #)
822685 ar cr

ARABIC (Arab)
South And Southwest Asian Studies
Liberal Arts

1103 Beginning Arabic (prereq 1102)
023155 1215-1300 MTWThF, FolH 205, Abdallah, 5 cr

3013 Intermediate Arabic (prereq 3012)
823156 1015-1200 TTh, FolH 205, Abdallah, 4 cr

5113 Advanced Literary Arabic and Composition (prereq 5112)
237675 5 cr

5970 Directed Readings (prereq #, △, CLA approval)
623157 ar cr

ARCHITECTURE (Arch)
Architecture & Landscape Architecture
Institute of Technology

R1023 History of Environmental Development: Planning (§LA 1023)
924234 1115-1300 TTh, NichH 45, Jara, 4 cr

R1043 Architectural Graphics (prereq 1042)
724235 1820-2050 W, AkerH 209, Grebner, 2 cr

R3003 Environmental Design (§LA 3003; prereq 3002)
112471 1315-1500 TTh, Arch 35, Lavine, 4 cr

R3083 Architectural Design (prereq 3082)
★LECT 1315-1700 MWF, Arch 40, Lockhart, 6 cr
807572 –1 LAB 1315-1700 MWF, Arch 40, 210

R3091 Architectural Design (prereq 3083, arch maj or adult special)
★LECT 1315-1700 MWF, Arch 50, Stageberg, 6 cr
728866 –1 LAB 1315-1700 MWF, Arch 220

R3092 Architectural Design (prereq 3091)
★LECT 1315-1700 MWF, Arch 50, Stageberg, 6 cr
528867 –1 LAB 1315-1700 MWF, Arch 220

R3093 Architectural Design (prereq 3092)
★LECT 1315-1700 MWF, Arch 50, Stageberg, 6 cr
328868 –1 LAB 1315-1700 MWF, Arch 220

R3970 Directed Study (prereq 3081 or △)
324237 ar cr

R5053 Gothic Architecture (prereq 1021 or #)
133756 1015-1200 MW, Arch 25, Parker, 4 cr

R5111 Architectural Design (prereq 3093, 3064-3065 or ¶, CE 3600-3601-3602 or ¶, IT arch maj or adult special)
★LECT 1315-1700 MWF, Arch 25, Weeks, 6 cr
128869 –1 LAB 1315-1700 MWF, Arch 230

R5112 Architectural Design (prereq 5111)
★LECT 1315-1700 MWF, Arch 25, Weeks, 6 cr
528870 –1 LAB 1315-1700 MWF, Arch 230

R5113 Architectural Design (prereq 5112)
★LECT 1315-1700 MWF, Arch 25, Weeks, 6 cr
328871 –1 LAB 1315-1700 MWF, Arch 230

R5121 Architectural Design (prereq 5133, CE 3602, arch maj) (A-N only)
★LECT 1315-1700 MWF, Arch 35, Grebner, 6 cr
028873 –1 LAB 1315-1700 MWF, Arch 240

R5122 Architectural Design (prereq 5121, arch maj)
★LECT 1315-1700 MWF, Arch 35, Grebner, 6 cr
128872 –1 LAB 1315-1700 MWF, Arch 240

R5123 Architectural Thesis (prereq 5122, submit thesis plan qtr prior to writing, 800 hrs practical exp, 36 lab hrs, △)
024239 1315-1700 MTWThF, Arch 240, Rapson, 12 cr

R5126 Professional Practice (prereq 3rd yr design or ¶, arch maj or adult special)
324240 1015-1200 TTh, Arch 25, Scherer, 4 cr

R5143 Historic Building Conservation (prereq 5141 or #)
018005 1715-1845 TTh, Arch 55, Dunwiddie, 4 cr

R5850 Topics in Theory (prereq arch maj or adult special)
907465 2 cr

R5950 Topics in Architecture (prereq 3093 or #)
124241 1315-1500 Th, Arch 55, Weeks, 3 cr

R5953 Housing and Values (prereq upper division or grad)
307440 1315-1600 T, Arch 30, Clemence, 3 cr

R5958 Energy and Architecture (prereq 3093 or #, arch maj or adult special)
907451 1015-1300 F, Arch 25, LaVine, 4 cr

R5959 Lighting Design Techniques (prereq 3083 or #, arch maj or adult special)
024242 1300-1330 MW, Arch 125, Diedrich, 2 cr

R5961 Computer-Aided Architectural Design (prereq architecture maj, 3083 or #)
618041 1315-1500 TTh, Arch 45, Anderson, 4 cr

R5970 Directed Study (prereq #)
824243 ar cr

R8251 Architectural Design (prereq grad status in architecture) (A-N only)
★LECT 1315-1700 MWF, Arch 55, Rockcastle, Rauma, others, 6 cr
828874 –1 LAB 1315-1700 MWF, Arch 210

R8252 Architectural Design (prereq grad status in architecture) (A-N only)
★LECT 1315-1700 MWF, Arch 55, Rockcastle, Rauma, others, 6 cr
228880 –1 LAB 1315-1700 MWF, Arch 210

R8253 Architectural Design (prereq grad status in architecture) (A-N only)
★LECT 1315-1700 MWF, Arch 55, Parker, Rauma, 6 cr
628875 –1 LAB 1315-1700 MWF, Arch 210

R8254 Architectural Design (prereq grad status in architecture) (A-N only)
428876 1315-1700 MWF, ApH 203, Mulfinger, others, 6 cr

R8255 Architectural Design (prereq grad status in architecture) (A-N only)
228877 1315-1700 MWF, ApH 203, Mulfinger, others, 6 cr

R8256 Architectural Design (prereq grad status in architecture) (A-N only)
128878 1315-1700 MWF, ApH 203, Michelson, others, 6 cr

R8261 Selected Problems in Architecture (prereq grad status in architecture)
307549 1315-1700 MWF, Arch 210, Clemence, Michelson, others, 1-9 cr

R8262 Selected Problems in Architecture (prereq grad status in architecture)
307552 1315-1700 MWF, Arch 210, Clemence, Michelson, others, 1-9 cr

R8263 Selected Problems in Architecture (prereq grad status in architecture)
007554 1315-1700 MWF, Arch 210, Clemence, Michelson, others, 1-9 cr

R8271 Problems in City and Community Design
407557 1315-1700 MWF, Arch 210, Clemence, 9 cr

R8272 Problems in City and Community Design
407560 1315-1700 MWF, Arch 210, Clemence, 9 cr

R8273 Problems in City and Community Design
107562 1315-1700 MWF, Arch 210, Clemence, 9 cr

R8274 Problems in City and Community Design
707564 1315-1700 MWF, Arch 210, Clemence, 9 cr

R8275 Problems in City and Community Design
107567 1315-1700 MWF, Arch 210, Clemence, 9 cr

R8276 Problems in City and Community Design
107570 1315-1700 MWF, Arch 210, Clemence, 9 cr

ART EDUCATION (ArEd)
Curriculum And Instruction
Education

R3000 Art of Children (A-N only)
722078 1215-1400 TTh, WullH 240, 3 cr

3001 Survey of Art Activities (prereq non art education maj) (A-N only)
123454 –1 1415-1600 MWF, WullH 210, 220, Russell, 4 cr
723456 –2 1415-1700 TTh, WullH 210, 220, Russell, 4 cr

R3009 Weaving Without A Loom (A-N only)
522079 1515-1700 MWF, WullH 240, 340, Smits, 4 cr

R3010 Introduction to Weaving (A-N only)
922080 1315-1500 MWF, WullH 340, Smits, 4 cr

R3020 Contemporary Crafts (A-N only)
601708 –1 0915-1200 TTh, WullH 110, 120, Park, 4 cr
105141 –2 1315-1600 TTh, WullH 110, 120, Park, 4 cr

R3130 Community and School Resources in Art Curriculum (prereq 3110) (A-N only)
722081 1415-1600 TTh, WullH 240, Slettehaugh, 3 cr

3200 Field Experiences in Art Education (prereq educ stu) (S-N only)
522082 1615-1800 Th, WullH 110, Slettehaugh, 3-9 cr

3309 Independent Study (max 4 cr; prereq #) (A-N only)
322083 Slettehaugh, 1-4 cr

3600 Student Teaching and Supervision of Art (prereq 3120, 3130, sr in art educ, SeEd 3150, Elem 3101, ¶3610) (S-N only)
022085 3-12 cr

3610 Teaching Art in the Schools (prereq ¶3600) (A-N only)
822086 1615-1800 MW, WullH 110, 120, Russell, 3 cr

R5020 Advanced Contemporary Crafts (prereq 3020) (A-N only)
216616 –1 0915-1200 TTh, WullH 110, 120, Park, 4 cr
916618 –2 1315-1600 TTh, WullH 110, 120, Park, 4 cr

5201 Introduction to Art Therapy (A-N only)
232931 1615-1830 Th, WullH 240, DiBlasio, 3 cr

R5389 Application of Aesthetic Theory in Education (A-N only)
622087 1615-1830 T, WullH 240, DiBlasio, 3 cr

5600 Internship (prereq #) (A-N only)
422088 3-9 cr

5605 Practicum (prereq #) (A-N only)
622090 DiBlasio, 3-9 cr

5900 Professional Problems (prereq MEd student, #) (A-N only)
222092 DiBlasio, Slettehaugh, 3 cr

8900 Problems: Art Education (prereq #)
522096 DiBlasio, Slettehaugh, ar cr

ART HISTORY (ArtH)
Liberal Arts

R1001 Introduction to Visual Arts (§3001)
605581 1415-1530 TTh, WilleyH 125, Poor, 4 cr

R1002 Introduction to the History of Art
622686 1015-1100 MWF, WilleyH 125, Marling, Steyaert, Stoughton, 4 cr

R3008 History of Ancient Art (§1008)
736921 0915-1000 MWF, FraserH 102, McNally, 4 cr

R3009 History of Medieval Art
534801 0815-0900 MWF, FraserH 102, Steyaert, 4 cr

R3011 History of Renaissance and Baroque Art
422687 1215-1300 MWF, FraserH 102, Stoughton, 4 cr

R3012 History of 19th, 20th Century Art
512345 1015-1100 MWF, FraserH 102, Simon, 4 cr

R3465 Master Painters of the Nineteenth Century
705586 1245-1400 TTh, FraserH 102, Waldfogel, 4 cr

R3654 Major Achievements in Scandinavian Art
334802 0945-1100 TTh, FraserH 102, Nelson, 4 cr

R3922 Art of the Film (prereq 3921)
134803 1315-1400 MW, 1315-1530 F, FraserH 102, Silberman, 4 cr

3970 Directed Studies (prereq #, △, college approval)
222688 1-5 cr

3971 Major Project (prereq art history maj, 3895, #)
312346 1 cr

3975 Directed Museum Experience (prereq # Director of Undergrad Studies, Director of Museology or a faculty supervisor) (S-N only)
012348 1-3 cr

R5107 Roman Sculpture (§Clas 5107; prereq jr or #) (A-N only)
536922 1215-1300 MWF, JonesH 207B, McNally, 4 cr

R5234 Gothic Sculpture of the Cathedral Age (prereq 3009 or grad student or #)
634806 1315-1400 MWF, JonesH 207B, Steyaert, 5 cr

R5306 Italian Art of 14th Century (prereq 1 art hist course or #)
234808 0915-1000 MWF, JonesH 207A, Canedy, 4 cr

R5314 Later 16th-Century Italian Architecture, Sculpture, and Painting (prereq 5313 or grad student or #)
134809 1215-1300 MWF, JonesH 207A, Canedy, 5 cr

R5466 The Avant-Garde (prereq 3012 or 5463 or #)
812349 1315-1400 MWF, JonesH 207B, Simon, 5 cr

R5645 Folk Arts of Scandinavia (prereq one art hist course or #)
434810 1245-1400 TTh, JonesH 207B, Nelson, 4 cr

R5767 Japanese Painting
234811 0945-1100 TTh, JonesH 207B, Poor, 4 cr

R5777 Painting of India (prereq 4 cr art hist or #)
134812 1015-1100 MWF, JonesH 207B, Asher, 5 cr

R5925 History of Photography as Art (prereq 3012 or #)
934813 1115-1200 MWF, JonesH 207B, Silberman, 4 cr

5970 Directed Readings (prereq sr, #, △, CLA approval)
122689 1-5 cr

5990 Directed Research (prereq sr, #, △, CLA approval)
607816 1-5 cr

R8520 Seminar: Grant Wood and Regionalism (§AmSt 8203; prereq #)
012351 1415-1600 M, JonesH 1, Marling, 4 cr

8997 Museology IV (prereq 8996)
407820 Smith, 5 cr

ART STUDIO (ArtS)
Liberal Arts

Note:
Materials Fees are assessed at the time of registration for many Studio Arts courses. For course numbers and fee amounts, see Section 4, Course Fees.

R1101 Drawing I
123493 –1 0815-1000 MWF, ArtB 160, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
823495 –2 1015-1200 MWF, ArtB 160, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
423497 –3 1215-1400 MWF, ArtB 160, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
123499 –4 0815-1100 TTh, ArtB 150, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
623501 –5 0915-1200 TTh, ArtB 161, Hendler, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
128791 –6 1315-1600 TTh, ArtB 150, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
528819 –7 0815-1000 MWF, ArtB 160, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
028792 –8 1015-1200 MWF, ArtB 160, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
533339 –9 1215-1400 MWF, ArtB 160, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
733341 –10 0815-1100 TTh, ArtB 150, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
333343 –11 0915-1200 TTh, ArtB 161, Hendler, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
833346 –12 1315-1600 TTh, ArtB 150, 4 cr (Pre-Arch, Arch, Landscape Arch majs only)
433348 –13 0815-1000 MWF, ArtB 160, 4 cr
633350 –14 1015-1200 MWF, ArtB 160, 4 cr
233352 –15 1215-1400 MWF, ArtB 160, 4 cr
133353 –16 0815-1100 TTh, ArtB 150, 4 cr
533356 –17 0915-1200 TTh, ArtB 161, Hendler, 4 cr
333357 –18 1315-1600 TTh, ArtB 150, 4 cr

R1102 Drawing II (prereq 1101)
223503 –1 0815-1000 MWF, ArtB 150, Gray, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
923505 –2 0815-1000 MWF, ArtB 150, Gray, 4 cr
523507 –3 1315-1600 MW, ArtB 150, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
828793 –4 1315-1600 MW, ArtB 150, 4 cr
928820 –5 0915-1200 TTh, ArtB 160, Lyon, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
628794 –6 0915-1200 TTh, ArtB 160, Lyon, 4 cr

R1105 Beginning Painting
023513 –1 0915-1200 MW, ArtB 161, Feinberg, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
623515 –2 0915-1200 MW, ArtB 161, Feinberg, 4 cr
728821 –3 1315-1600 TTh, ArtB 161, Hendler, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
228796 –4 1315-1600 TTh, ArtB 161, Hendler, 4 cr

R1301 Sculpture
523524 –1 0915-1200 TTh, ArtB 65, 90, Potratz, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
123526 –2 0915-1200 TTh, ArtB 65, 90, Potratz, 4 cr

R1302 Sculpture
023530 –1 0915-1200 MW, ArtB 50, Rose, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
623532 –2 0915-1200 MW, ArtB 50, Rose, 4 cr
328823 –3 1315-1600 MW, ArtB 50, Baldwin, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
928798 –4 1315-1600 MW, ArtB 50, Baldwin, 4 cr

R1401 Introduction to Studio Arts
922693 1415-1600 TTh, WilleyH 175, Lyon, 4 cr

R1404 Color (§1104; prereq 1101)
336498 –1 0915-1200 MW, ArtB 140, Somberg, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
136499 –2 0915-1200 MW, ArtB 140, Somberg, 4 cr

R1510 Printmaking: Intaglio (max 8 cr)
722694 –1 0915-1200 TTh, ArtB 170, Myers, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
728799 –2 0915-1200 TTh, ArtB 170, Myers, 4 cr

R1520 Printmaking: Lithography (max 8 cr)
522695 –1 0915-1200 MW, ArtB 176, Krepps, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
228801 –2 0915-1200 MW, ArtB 176, Krepps, 4 cr

R1530 Printmaking: Relief (max 8 cr)
405677 –1 0915-1200 MW, ArtB 175, Bethke, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
928803 –2 0915-1200 MW, ArtB 175, Bethke, 4 cr

R1701 Photo Medium
723540 –1 0915-1200 MW, ArtB 120, Henkel, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
323542 –2 0915-1200 MW, ArtB 120, Henkel, 4 cr (CLA students only)
712389 –3 0915-1200 TTh, ArtB 120, Hallman, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
912391 –4 0915-1200 TTh, ArtB 120, Hallman, 4 cr (CLA students only)

R1811 Ceramics: Handbuilding
833377 –1 0915-1200 TTh, ArtB 10, Hoard, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
433379 –2 0915-1200 TTh, ArtB 10, Hoard, 4 cr

R1812 Ceramics: Wheel Throwing
506111 –1 0915-1200 MW, ArtB 10, MacKenzie, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
328806 –2 0915-1200 MW, ArtB 10, MacKenzie, 4 cr

R3110 Drawing (max 12 cr; prereq 1102, 1401)
223548 –1 1015-1200 MWF, ArtB 150, Gray, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
423550 –2 1015-1200 MWF, ArtB 150, Gray, 4 cr
128824 –3 1315-1600 MW, ArtB 150, Feinberg, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
128807 –4 1315-1600 MW, ArtB 150, Feinberg, 4 cr

R3120 Painting (max 12 cr; prereq 1104, 1105, 1401, 4 cr of 3110 or #)
123552 –1 1315-1600 MW, ArtB 151, Somberg, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
723554 –2 1315-1600 MW, ArtB 151, Somberg, 4 cr
829345 –3 0915-1200 TTh, ArtB 151, Cowette, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
028808 –4 0915-1200 TTh, ArtB 151, Cowette, 4 cr

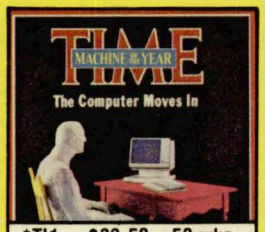
R3140 Drawing and Painting (max 6 cr; prereq 1101 or 1109 or #, arch student)
323556 1700-1900 MW, ArtB 160, 2 cr

R3160 Watercolor (max 12 cr; prereq 1101, 1104, 1401 or #)
322696 1315-1600 TTh, ArtB 141, Rowan, 4 cr (ArtS, ArEd, Appl Dsgn majs only)

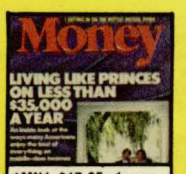
Students! Educators! Save up to 50%



*NY1 $20.00 1 year
$32.00 Regular
$78.00 Newstd
(no gift orders)

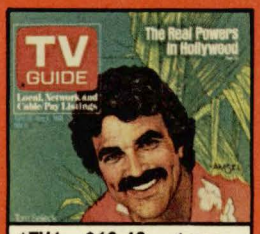


*TI1 $23.50 52 wks
$45.24 Regular
*TI2 $46.99 104 wks
*TI3 $11.70 26 wks
48% Savings!



*MN1 $17.95 1 year
$25.95 Regular
$30.00 Newstd
You Save $8.00!

Lowest Prices Available!



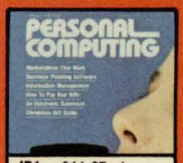
*TV1 $19.40 1 year
$23.40 Regular
$26.00 Newstd
*TV2 $9.70 26 wks
Only 37¢ an issue!



†*BW1 $27.95 1 year
$39.95 Regular
$102.00 Newstd
†*BW2 $17.95 33 wks
(no gift orders)



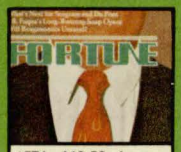
ZB1 $13.95 1 year
$15.00 Regular
$20.00 Newstd
ZB2 $9.77 7 iss
Lowest Price Available!



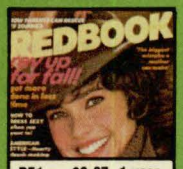
JP1 $11.97 1 year
$18.00 Regular
$30.00 Newstd
Over 33% Off!



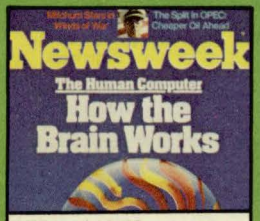
PL1 $18.50 1 year
$22.00 Regular
$37.00 Newstd
50% Off Newsstand!



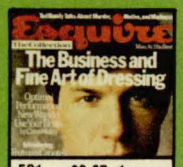
*FT1 $19.50 1 year
$39.00 Regular
$78.00 Newstd
*FT3 $ 9.75 13 iss
50% Discount!



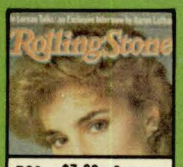
RE1 $9.97 1 year
$11.97 Regular
$18.00 Newstd
$8.00 Off Newstand!



*NE1 $19.50 1 year
$39.00 Regular
*NE2 $39.00 2 yrs
*NE4 $9.75 26 wks
Half Price Offer!

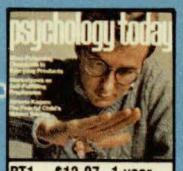


EQ1 $9.97 1 year
$17.94 Regular
$24.00 Newstd
Save Over 44%!

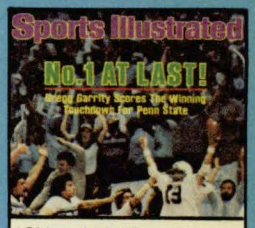


RS2 $7.98 6 mos
$7.98 Regular
$19.50 Newstd
Less than 62¢ an issue!

More Discount Magazines!



PT1 $12.97 1 year
$15.99 Regular
$23.40 Newstd
Guaranteed Lowest Rate!



*SI1 $23.50 52 wks
$45.24 Regular
*SI2 $46.99 104 wks
*SI3 $11.70 26 wks
Only 45¢ an issue!

Money-Back Guarantee

YOU ALWAYS GET the lowest price available plus fast, dependable service! **THAT'S GUARANTEED** — or your money back!

- If you ever find a lower current price for any magazine you order through us, we'll pay you **DOUBLE-THE-DIFFERENCE!**
- And if you're ever dissatisfied with your magazines or service, for any reason, we'll send you a refund for all undelivered issues.

Although publishers may change their rates, your order will always be processed at the lowest current rate.

ORDER FROM US WITH COMPLETE CONFIDENCE! WE HAVE SOLD OVER 3 MILLION DISCOUNT SUBSCRIPTIONS TO STUDENTS AND EDUCATORS ACROSS THE COUNTRY!

Order Your Favorite Magazines — TODAY!

IT'S EASY! Write in magazine codes (example TI1 for Time), circling "R" if renewing. To qualify for these special discounts, you must fill in the required school information. Choose the payment plan most convenient for you and mail today! Remember, you can use your student/educator discount for gift subscriptions, too!

PERSONAL ORDER: ____R ____R ____R ____R

M _____

Address _____

_____

City _____

State _____ Zip _____

College Student: ☐ Undergrad ☐ Grad Year Studies End ____

Educator: ☐Elem ☐ Secondary ☐College Faculty ☐ Other

School Name _____

☐ Payment enclosed ☐ Bill Me Later

☐ VISA ☐ MasterCard Good Thru _____

Card # _____

GIFT ORDER: ____R ____R ____R ____R

M _____

Address _____

_____

City _____

State _____ Zip _____

College Student: ☐ Undergrad ☐ Grad Year Studies End ____

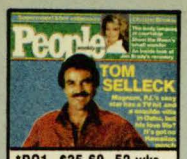
Educator: ☐Elem ☐ Secondary ☐ College Faculty ☐ Other

☐ Neither

School Name _____

THANK YOU FOR YOUR ORDER — SATISFACTION GUARANTEED!

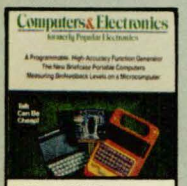
W84



*P01 $35.69 52 wks
$45.24 Regular
$65.00 Newstd
*P03 $17.89 26 wks
Only 68¢ an issue!



AT1 $14.95 1 year
$21.00 Regular
$24.00 Newstd
AT2 $ 9.97 8 iss
Over 28% Off!



PE1 $12.97 1 year
$15.97 Regular
You Save $3.00!



PD1 $12.95 9 iss
$15.00 Regular
$26.55 Newstd
Great Savings!



Students:
#RD2 $7.93 1 year
Educators:
RD1 $13.93 1 year
$18.00 Newstd
Lowest Rate Available!

MAGAZINE	CODE	TERM	REG. RATE	YOUR RATE
American Artist	AA 1	9 iss	14.25	11.47
American Health	JH 1	1 yr	12.00	8.97
American Photo	AF 1	9 iss	14.93	7.47
The Artists Mag	IX 1	1 yr	18.00	9.97
ArtNews	*AN 1	1 yr	22.00	16.95
Astronomy	OZ 1	9 iss	13.50	9.67
The Atlantic	AT 1	1 yr	21.00	14.95
Audio	AU 1	1 yr	15.94	7.97
Backpacker	BP 1	1 yr	18.00	14.97
Basketball Digest	BB 1	1 yr	7.95	6.97
Better Hms & Gdns	BH 1	1 yr	12.97	10.00
Bicycling	BY 1	1 yr	‡18.00	13.97
Business Week	§*†BW 1	1 yr	39.95	27.95
California Mag	¶NW 1	1 yr	15.00	7.50
Car Craft	ZR 1	1 yr	11.94	7.97
Car & Driver	CA 1	1 yr	14.98	9.99
Cats	KA 1	1 yr	‡21.00	15.50
Child Life (7-9)	CL 1	1 yr	11.95	9.97
Columbia Jnl Rev	CJ 1	1 yr	16.00	8.00
Computers & Electr	PE 1	1 yr	15.97	12.97
Connoisseur	ZQ 1	1 yr	19.95	17.95
Consumers Digest	†CN 1	1 yr	13.00	7.97
Contest Hotline	CZ 1	1 yr	12.00	8.97
Cruise Travel	KV 1	1 yr	12.00	9.97
Cycle Guide	CG 1	1 yr	10.00	10.00
Cycle	CY 1	1 yr	13.98	7.99
Darkroom Photo	DF 1	1 yr	18.00	12.97
Discover	*DV 1	1 yr	22.00	14.95
Downbeat	DN 1	1 yr	15.75	15.75
East West Journal	EW 1	1 yr	18.00	9.00
Ebony	EB 1	1 yr	16.00	12.00
Electronic Fun	EG 1	1 yr	18.00	9.97
Ellery Queen	EL 1	10 iss	15.00	11.97
Esquire	EQ 1	1 yr	17.94	9.97
Essence	ES 1	1 yr	10.00	8.96
Family Computing	JF 1	7 iss	10.50	8.97
Fantastic Film	FV 1	1 yr	15.00	9.97
Field & Stream	FS 1	1 yr	11.94	7.94
Flying	FL 1	1 yr	18.98	15.97
Football Digest	FD 1	1 yr	9.95	7.97
Fortune	*FT 1	1 yr	39.00	19.50
Games	GE 2	1 yr	‡21.00	15.97
Golf Digest	GD 1	1 yr	14.95	8.98
Golf	GO 3	1 yr	15.94	7.97
Gun World	GW 1	1 yr	14.00	14.00
Harpers Magazine	HM 1	1 yr	21.00	14.00
Health	FH 1	1 yr	11.97	9.00
Heavy Metal	HV 1	1 yr	24.00	14.00
High Fidelity	HF 1	1 yr	13.95	6.98
High Technology	GY 1	1 yr	21.00	18.00
Hockey Digest	HK 1	1 yr	7.95	6.97
The Homeowner	YH 1	6 iss	7.50	6.00
Horseplay	*HP 1	1 yr	18.00	14.00
Hot Rod	HR 1	1 yr	11.94	5.97
House Beautiful	*HB 1	1 yr	13.97	11.97
Hunting	ZH 1	1 yr	11.94	7.97
Income Opportun	*IO 1	10 iss	8.29	3.98
Inc.	IC 1	1 yr	18.00	14.95
Infoworld	IR 1	1 yr	31.00	15.75
Inquiry	IQ 1	1 yr	‡24.00	18.00
Instructor	*IS 1	1 yr	18.00	9.97
Interview	IN 1	1 yr	20.00	11.97
1001 Home Ideas	DI 1	1 yr	13.97	9.00
Ladies Home Jrnl	LH 1	1 yr	15.97	9.00
Learning	LE 1	1 yr	18.00	12.96
Life	*LI 3	9 mo	18.00	17.79
Mechanix Illus	MX 1	1 yr	11.94	6.94
Media & Methods	MM 1	1 yr	24.00	22.00
Modern Photo	MP 1	1 yr	15.95	7.98
Money Maker	†NK 1	1 yr	19.95	9.98
Money	*MN 1	1 yr	25.95	17.95
Mother Earth Nws	†ME 1	1 yr	18.00	14.97
Mother Jones	*MJ 1	8 iss	14.40	7.47
Motorboat & Sail	ML 1	1 yr	15.97	12.97
Ms	MS 1	1 yr	14.00	9.00
Musician	MV 1	1 yr	18.00	14.00
National Lampoon	NL 1	1 yr	11.95	9.95
The Nation	NV 1	24 iss	17.50	8.95
Natural History	NJ 1	1 yr	18.00	11.95
Newsweek	*NE 1	1 yr	39.00	19.50
New Age	NA 1	1 yr	18.00	15.00
New Body	NU 1	1 yr	15.00	15.00
New Republic	*NR 1	1 yr	45.00	25.00
New Shelter	NS 2	1 yr	10.97	9.97
New Yorker	*§NY 1	1 yr	32.00	20.00
New York Mag	*NM 1	1 yr	32.00	18.00
Odyssey	OD 1	9 iss	11.25	8.97
Omni	*OM 1	1 yr	24.00	18.00
Organic Gardening	OG 2	1 yr	12.00	8.97
Outdoor Life	OL 1	1 yr	13.94	6.97
Outside	OT 1	1 yr	16.00	9.97
Ovation	OV 1	9 iss	15.00	8.99
Parents	PA 1	1 yr	14.00	10.95
Penthouse	PU 1	1 yr	36.00	30.00
People	*PO 1	52 wk	45.24	35.69
Personal Comput	JP 1	1 yr	18.00	11.97
Photographic	PH 1	1 yr	11.94	6.97
Plane & Pilot	PI 1	1 yr	14.00	9.95
Playboy	PL 1	1 yr	22.00	18.50
Playgirl	PD 1	9 iss	15.00	12.95
Pop Mechanics	*PM 1	1 yr	11.97	9.97
Pop Photography	PP 1	1 yr	13.97	6.99
Popular Science	PS 1	1 yr	13.94	6.97
Prevention	PR 3	1 yr	‡18.00	12.97
Pro	ZG 1	1 yr	18.00	9.97
Psychology Today	PT 1	1 yr	15.99	12.97
Radio Electronics	*RK 1	1 yr	14.97	11.97
Readers Dig - Ed	RD 1	1 yr	‡18.00	13.93
Readers Dig - St	‡RD 2	1 yr	13.93	7.93
Redbook	RE 1	1 yr	11.97	9.97
Refunders Digest	RB 1	6 iss	8.95	8.95
Road and Track	RT 1	1 yr	17.94	8.97
Rock Magazine	RZ 1	1 yr	‡11.70	9.00
Rolling Stone	RS 2	6 mo	7.98	7.98
The Runner	RU 1	1 yr	18.00	14.97
Saturday Review	SR 1	1 yr	16.00	12.95
Savvy	ZV 1	1 yr	12.00	9.97
Science Digest	*SD 1	1 yr	13.97	11.97
Science 83	ZB 1	1 yr	15.00	13.95
Self-Reliant	ZL 1	10 iss	12.00	8.97
Sepia	ZJ 1	1 yr	15.00	12.95
Seventeen	*VS 1	1 yr	11.95	10.95
Skiing	SG 1	1 yr	9.98	4.99
Soap Opera Digest	OP 1	17 iss	16.15	13.73
Soccer Digest	SL 1	1 yr	5.95	4.97
Sporting News	ZN 1	26 wk	19.98	9.99
Sports Afield	*SA 1	1 yr	11.97	9.97
Sports Illustrated	*SI 1	52 iss	45.24	23.50
Sports Now	ZW 1	1 yr	12.00	6.97
Sport	SP 1	1 yr	12.00	7.97
Spring	TG 1	1 yr	12.00	9.97
Stereo Review	ST 1	1 yr	9.98	4.99
Technology Illus	TC 1	1 yr	18.00	15.00
Teenage	IW 1	1 yr	5.98	4.97
Tennis	TN 1	1 yr	11.95	6.98
Theatre Crafts	TH 2	1 yr	19.95	11.97
Time	*TI 1	52 iss	45.24	23.50
Trouser Press-Rock	TZ 1	1 yr	15.00	12.00
True Story	TS 1	1 yr	12.95	7.97
TV Guide	*TV 1	1 yr	23.40	19.40
US Magazine	UM 2	16 iss	14.74	8.97
US News	*US 1	1 yr	36.00	18.00
Vanity Fair	VY 1	1 yr	24.00	18.00
Vegetarian Times	VF 1	9 iss	14.96	12.88
Venture	VE 1	1 yr	18.00	9.00
Video Review	VR 2	9 iss	13.50	8.97
Weight Watchers	WW 1	1 yr	11.97	9.97
Womens Sports	WO 1	1 yr	12.00	8.95
Working Mother	WI 1	1 yr	‡18.00	9.95
Working Woman	WG 1	1 yr	16.00	9.95
Worldview	WV 1	1 yr	‡20.00	17.50
World Press Rev	*AS 1	1 yr	17.95	9.95
World Tennis	WT 1	9 iss	11.95	5.98
Writers Digest	WD 1	1 yr	18.00	11.97
W Magazine	WX 1	1 yr	26.00	17.95
Young Miss	YM 1	1 yr	14.00	10.95

Best Selection . . . Guaranteed Lowest Rates!

NEW! **Two to Twelve**
A Child Development Newsletter
For Teachers and Parents
Special Educational Rates
1 Yr $14.95 (Regular $18.00) TQ 1
6 Mos $7.50 (Regular $9.00) TQ 2

* Gift recipients must be educators or college students ‡ Newsstand rates ‡ College students only § No gift orders † New orders only
Delivery: Publishers of weeklies will send first issue in 3-6 weeks; publishers of monthlies in 6-10 weeks. ¶ California residents only

6F000000

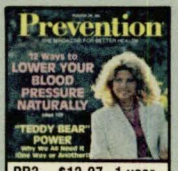
NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL
FIRST CLASS PERMIT NO. 374, LANSING, MICHIGAN
POSTAGE WILL BE PAID BY ADDRESSEE

AMERICAN COLLEGIATE MARKETING
419 Lentz Court
P.O. Box 40500
Lansing, Michigan 48917-9965



*US1 $18.00 1 year
$36.00 Regular
$78.00 Newstd
*US4 $9.00 26 wks
You Save 50%!



PR3 $12.97 1 year
$18.00 Newstd
Guaranteed
Lowest Rate!

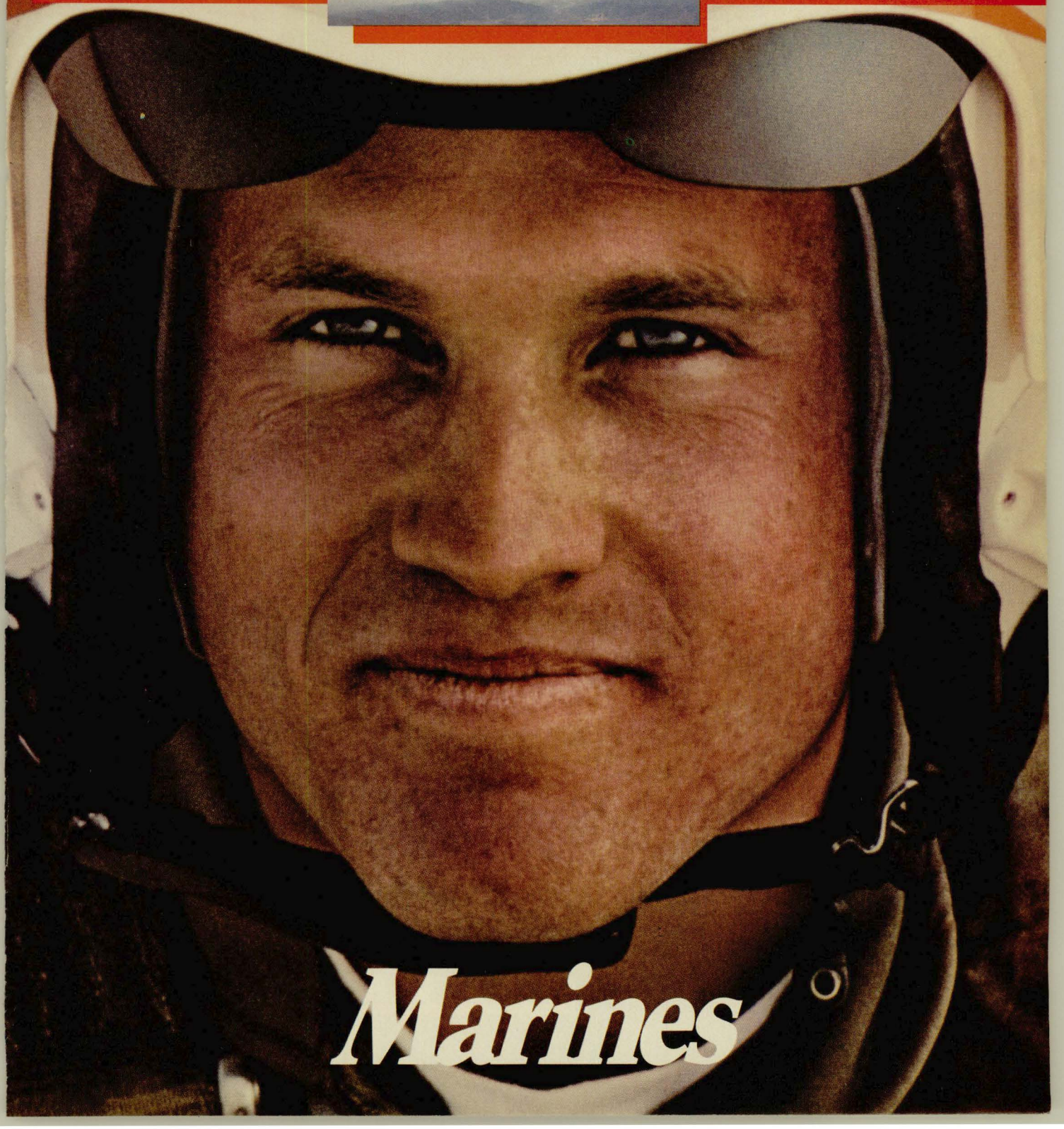
Go farther...faster.

As a Marine Officer, you could be in charge of a Mach 2+ F/A-18A, a vertical take-off Harrier or one of our other jets or helicopters. And you could do it by the time you're 23. But it takes a special commitment on your part. We demand leaders at all levels. We teach you to be one. If you're a freshman or sophomore, ask about our undergraduate officer commissioning programs. If you're a junior, check out our graduate programs. Starting salaries are from $17,000 to $23,000. And you can count on going farther . . . faster.



Maybe you can be one of us.

The Few.
The Proud.
The Marines.



Marines

Today's Chevrolet

Hotter than Texas chili.

Camaro Z28. "Hot." A three-letter word that's synonymous with Z28 in the vernacular of the enthusiast.

What's so hot about Z28? Everything. Styling. Performance. Comfort.

Powered by a track-proven small-block V8,* Z28 delivers throaty bursts of power when you need it. And the optional High Output Package gives Z28 even hotter credentials.

It goes around corners, too. Thanks to a refined torque-arm rear suspension and new, precise front geometry with special upper and lower control arms, Z28 has recorded a lateral acceleration figure of .85g on the GM Proving Grounds.

Simmering shape. Z28 looks as quick as it goes. Sleek, curving lines and a 62-degree raked windshield help provide a low drag coefficient of .339. And Z28's deep front air dam helps reduce nose lift, while aiding steering response.

Take it to your next cookout. So if you've got a taste for something hot, get Camaro Z28. You'll find it's hotter than Texas chili.

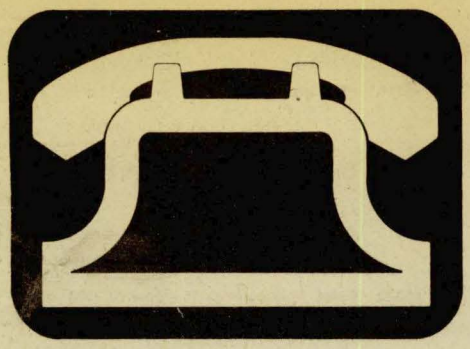
Today's Chevrolet. Bringing you the cars and trucks you want and need. That's what Taking Charge is all about.

*Some Chevrolets are equipped with engines produced by other GM divisions, subsidiaries, or affiliated companies worldwide. See your dealer for details.

Let's get it together... buckle up.

GM





Emergency and Frequently Called Telephone Numbers

Emergency Numbers

DEPARTMENT	PHONE NUMBER

TO REPORT FIRE — SERIOUS INJURY — ILLNESS — MAJOR UTILITY FAILURE

FROM U HOSPITALS PATIENT—OCCUPIED BUILDING ..... DIAL 123

FROM ALL OTHER CAMPUS LOCATIONS ..... DIAL 133

UNIVERSITY POLICE 373-3550

YOUTH EMERGENCY SERVICE 339-7033

Frequently Called Numbers

DEPARTMENT	PHONE NUMBER
BOYNTON HEALTH SERVICE	373-3141
CAMPUS ASSISTANCE CENTER	373-1234
COUNSELING BUREAU (MPLS)	373-4193
COUNSELING BUREAU (ST.P)	373-1140
CRISIS COUNSELOR, BOYN HS	373-4119
EMPLOYMENT, STUDENT	373-3674

DEPARTMENT	PHONE NUMBER
FINANCIAL AID (MPLS)	376-2424
FINANCIAL AID (ST.P)	376-2572
HEALTH SERVICE (ST.P)	373-0960
HOUSING OFFICE	373-7542
INFORMATION, UNIVERSITY	373-2002
OFFICE FOR STUDENTS WITH DISABILITIES	376-2716

R3301 **Sculpture: Direct Metal** (prereq 1301, 1302, 1401)
333388 –1 0915-1200 MW, ArtB 65, 90, ✓ Baldwin, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
133389 –2 0915-1200 MW, ArtB 65, 90, Baldwin, 4 cr

R3303 **Sculpture: Cast Metal** (prereq 1301, 1302, 1401)
122697 –1 1315-1600 TTh, ArtB 185, Potratz, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
828809 –2 1315-1600 TTh, ArtB 185, Potratz, 4 cr

R3304 **Sculpture: Wood and Stone** (prereq 1301, 1302, 1401)
705667 –1 1315-1600 TTh, ArtB 50, Lucey, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
128810 –2 1315-1600 TTh, ArtB 50, Lucey, 4 cr

3305 **Sculpture: Kinetics** (prereq 1301, 1302, 1401)
133392 –1 0915-1200 MW, ArtB 65, 90, Baldwin, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
033393 –2 0915-1200 MW, ArtB 65, 90, Baldwin, 4 cr

3401H **Interdisciplinary Honors Workshop: Music, Studio Arts, Theatre** (prereq jr or sr honors candidate, 1401, #, △)
739317 2-4 cr

3402H **Interdisciplinary Honors Workshop: Music, Studio Arts, Theatre** (prereq jr or sr honors candidate, 1401, #, △)
539318 2-4 cr

3403H **Honors Workshop** (prereq jr or sr honors candidate, 1401, #, △)
011653 2-4 cr

3404H **Honors Workshop** (prereq jr or sr honors candidate, 1401, #, △)
611655 2-4 cr

3405H **Honors Thesis** (prereq 1401, #)
411656 2-4 cr

3406H **Honors Thesis** (prereq 1401, #)
211657 2-4 cr

R3430 **Paper: Pulp to Plastic Expression** (max 12 cr; prereq 1401, 1xxx level studio arts)
433382 –1 0915-1200 TTh, ArtB 176, Krepps, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
133384 –2 0915-1200 TTh, ArtB 176, Krepps, 4 cr

R3510 **Printmaking: Intaglio** (max 12 cr; prereq 1401, 4 cr of 1510 or #)
122708 –1 1315-1600 TTh, ArtB 170, Myers, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
028811 –2 1315-1600 TTh, ArtB 170, Myers, 4 cr

R3520 **Printmaking: Lithography** (max 12 cr; prereq 1401, 4 cr of 1520 or #)
922709 –1 1315-1600 MW, ArtB 176, Krepps, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
828812 –2 1315-1600 MW, ArtB 176, Krepps, 4 cr

R3530 **Printmaking: Relief** (max 12 cr; prereq 1401, 4 cr of 1530 or #)
922712 –1 1315-1600 MW, ArtB 175, Bethke, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
428814 –2 1315-1600 MW, ArtB 175, Bethke, 4 cr

R3710 **Photography** (max 12 cr; prereq 1401, 1701 or Jour 1301 or #)
522714 –1 1315-1600 MW, ArtB 120, Henkel, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
128816 –2 1315-1600 MW, ArtB 120, Henkel, 4 cr (CLA students only)

R3810 **Intermediate Ceramics** (max 12 cr; prereq 1401, 1811, 1812 or #)
022717 –1 1315-1600 TTh, ArtB 10, Hoard, 4 cr (ArtS, ArEd, Appl Dsgn majs only)
928817 –2 1315-1600 TTh, ArtB 10, Hoard, 4 cr

R3820 **Glassworking** (max 12 cr; prereq 1401, 1811 or 1301 or 1302)
033376 1315-1600 MW, ArtB 186, Lane, 4 cr

3970 **Directed Study** (max 8 cr; prereq 24 cr studio arts, #, △, college approval)
822718 –1 Baldwin, 1-5 cr
736269 –2 Bethke, 1-5 cr
136270 –3 Caglioti, 1-5 cr
936271 –4 Cowette, 1-5 cr
736272 –5 Feinberg, 1-5 cr
536273 –6 Gray, 1-5 cr
336274 –7 Hallman, 1-5 cr
136275 –8 Hendler, 1-5 cr
036276 –9 Henkel, 1-5 cr
836277 –10 Hoard, 1-5 cr
636278 –11 Krepps, 1-5 cr
436279 –12 Lane, 1-5 cr
836280 –13 Lucey, 1-5 cr
636281 –14 MacKenzie, 1-5 cr
436282 –15 Myers, 1-5 cr
236283 –16 Potratz, 1-5 cr
136284 –17 Roode, 1-5 cr
936285 –18 Rose, 1-5 cr
736286 –19 Rowan, 1-5 cr
536287 –20 Somberg, 1-5 cr
336288 –21 Brooks, 1-5 cr
339319 –22 Lyon, 1-5 cr

3980 **Directed Instruction** (max 8 cr; prereq #, △, college approval)
622719 –1 Baldwin, 1-5 cr
036293 –2 Bethke, 1-5 cr
836294 –3 Caglioti, 1-5 cr
636295 –4 Cowette, 1-5 cr
436296 –5 Feinberg, 1-5 cr
236297 –6 Gray, 1-5 cr
136298 –7 Hallman, 1-5 cr
936299 –8 Handler, 1-5 cr
636300 –9 Henkel, 1-5 cr
436301 –10 Hoard, 1-5 cr
236302 –11 Krepps, 1-5 cr
136303 –12 Lane, 1-5 cr
936304 –13 Lucey, 1-5 cr
736305 –14 MacKenzie, 1-5 cr
536306 –15 Myers, 1-5 cr
336307 –16 Potratz, 1-5 cr
136308 –17 Roode, 1-5 cr
036309 –18 Rose, 1-5 cr
336310 –19 Rowan, 1-5 cr
136311 –20 Somberg, 1-5 cr
036312 –21 Brooks, 1-5 cr
739320 –22 Lyon, 1-5 cr

R5110 **Drawing** (max 16 cr; prereq 12 cr of 3110 or #)
101820 –1 0915-1200 TTh, ArtB 141, Rowan, 4 cr
801822 –2 4 cr (sr, grad only)

R5120 **Painting** (max 16 cr; prereq 12 cr of 3120 or #)
901827 –1 1315-1600 TTh, ArtB 151, Cowette, 4 cr
501829 –2 4 cr (sr, grad only)

R5160 **Watercolor** (max 16 cr; prereq 12 cr of 3160 or #)
223579 –1 1315-1600 TTh, ArtB 141, Rowan, 4 cr (ArtS, ArEd, Dsgn majs only)
423581 –2 4 cr (sr, grad only)

5190 **Drawing and Painting** (max 16 cr; prereq #, non maj)
022720 3-4 cr

R5300 **Seminar: Sculpture** (prereq studuo arts maj or #)
822721 1615-1800 T, ArtB 75, Lucey, 2 cr

R5310 **Sculpture: Direct Metal** (max 16 cr; prereq 3301)
533390 0915-1200 MW, ArtB 65, 90, Baldwin, 4 cr

R5330 **Sculpture: Cast Metal** (max 16 cr; prereq 3303)
622722 1315-1600 TTh, ArtB 185, Potratz, 4 cr

R5340 **Sculpture: Wood and Stone** (max 16 cr; prereq 3304)
606116 1315-1600 TTh, ArtB 50, Lucey, 4 cr

5350 **Sculpture: Kinetics** (max 16 cr; prereq 3305)
833394 0915-1200 MW, ArtB 65, 90, Baldwin, 4 cr

5390 **Sculpture** (max 16 cr; prereq #, non maj)
522728 3-4 cr

R5400 **Concepts in Contemporary Art** (prereq sr, studio art maj or #)
322729 1615-1800 MW, BlegH 205, Rose, 2 cr

R5430 **Paper: Pulp to Plastic Expression** (max 16 cr; prereq 12 cr of 3430 or #)
933385 0915-1200 TTh, ArtB 176, Krepps, 4 cr

R5510 **Printmaking: Intaglio** (max 16 cr; prereq 12 cr of 3510 or #)
722730 1315-1600 TTh, ArtB 170, Myers, 4 cr

R5520 **Printmaking: Lithography** (max 16 cr; prereq 12 cr of 3520 or #)
522731 1315-1600 MW, ArtB 176, Krepps, 4 cr

R5530 **Printmaking: Relief** (max 16 cr; prereq 12 cr of 3530 or #)
322732 1315-1600 MW, ArtB 175, Bethke, 4 cr

5590 **Printmaking** (max 16 cr; prereq #, non maj)
122733 3-4 cr

R5710 **Photography** (max 16 cr; prereq 12 cr of 3710 or #)
122739 1315-1600 TTh, ArtB 120, Hallman, 4 cr

5790 **Photography** (max 16 cr; prereq #, non maj)
222741 3-4 cr

R5810 **Advanced Ceramics** (max 16 cr; prereq 12 cr of 3810 or #)
722744 0915-1200 MW, ArtB 10, Lane, 4 cr

R5820 **Glass Working** (max 16 cr; prereq 3823 or 12 cr of 3820 or #)
322746 1315-1600 MW, ArtB 186, Lane, 4 cr

5890 **Ceramics and Glass Working** (max 16 cr; prereq #)
122747 3-4 cr

5970 **Directed Studies** (max 12 cr; prereq 24 cr studio arts, #, △, CLA approval)
022748 –1 Baldwin, 1-5 cr
136317 –2 Bethke, 1-5 cr
936318 –3 Caglioti, 1-5 cr
736319 –4 Cowette, 1-5 cr
136320 –5 Feinberg, 1-5 cr
936321 –6 Gray, 1-5 cr
736322 –7 Hallman, 1-5 cr
536323 –8 Hendler, 1-5 cr
336324 –9 Henkel, 1-5 cr
136325 –10 Hoard, 1-5 cr
036326 –11 Krepps, 1-5 cr
836327 –12 Lane, 1-5 cr
636328 –13 Lucey, 1-5 cr
436329 –14 MacKenzie, 1-5 cr
836330 –15 Myers, 1-5 cr
636331 –16 Potratz, 1-5 cr
436332 –17 Roode, 1-5 cr
236333 –18 Rose, 1-5 cr
136334 –19 Rowan, 1-5 cr
936335 –20 Somberg, 1-5 cr
736336 –21 Brooks, 1-5 cr

R8110 **Drawing** (max 12 cr; prereq #)
201839 –1 0915-1200 TTh, ArtB 141, Rowan, 4 cr
401841 –2 4 cr (grad only)

8120 **Painting** (max 24 cr; prereq #)
822749 4 cr

R8300 **20th Century Art Theories in Sculpture** (max 6 cr; prereq #)
122750 1615-1700 M, ArtB 75, Baldwin, 1 cr

8310 **Sculpture: Direct Metal** (max 12 cr; prereq #)
333391 0915-1200 MW, ArtB 65, 90, Baldwin, 4 cr

8330 **Sculpture: Cast Metal** (max 12 cr; prereq #)
022751 1315-1600 TTh, ArtB 185, Potratz, 4 cr

8340 **Sculpture: Wood, Stone** (max 12 cr; prereq #)
406117 1315-1600 TTh, ArtB 50, Lucey, 4 cr

8350 **Sculpture: Kinetics** (max 12 cr; prereq #)
633395 0915-1200 MW, ArtB 65, 90, Baldwin, 4 cr

8510 **Printmaking** (max 32 cr; prereq #)
822752 4 cr

8710 **Photography** (max 24 cr; prereq #)
622753 4 cr

8810 **Ceramics** (max 24 cr; prereq #)
422754 4 cr

8820 **Glassworking** (max 24 cr; prereq #)
222755 4 cr

ASTRONOMY (Ast)
Institute of Technology

R1011 **Descriptive Astronomy** (§1021)
023611 –1 0915-1000 MTWTh, Phys 150, Dickey, 4 cr
623613 –2 1015-1100 MTWTh, Phys 166, Dickey, 4 cr
223615 –3 1215-1300 MTWTh, Phys 150, Davidson, 4 cr
608819 –4 1830-2015 MW, Phys 166, Slovak, 4 cr

R1015 **Descriptive Astronomy Laboratories** (§1025H; prereq high school algebra...high school trigonometry rec)
103298 Dickey, 1 cr (Lab time assigned first 2 days of quarter, Phys 450)

1021H **Introduction to Astronomy** (§1011; prereq high school trigonometry, physics or chemistry)
711663 1315-1400 MTWTh, Phys 131, Humphreys, 4 cr

R1025H Introduction to Astronomy Laboratory (§1015, 1015H; prereq high school algebra, trigonometry, physics or chemistry)
211660 1830-2030 Th, Phys 157, 1 cr

R1201 Topics in Modern Astrophysics (prereq 1011 or 1021, #)
017159 1800-1930 TTh, Phys 236A, DeNoyer, 4 cr

3051 Introduction to Astronomy and Astrophysics (prereq 1 yr calculus, Phys 1106 or 1291 or #)
825599 1315-1400 MWF, Phys 210, Rudnick, 4 cr

3970 Directed Studies (prereq #, △)
030025 1-5 cr

5162 Stars and Stellar Evolution (prereq 3051, Phys 3513 or 3501 or #)
433270 1415-1500 MWF, Phys 210, TJ Jones, 4 cr

5970 Directed Studies (prereq #, △)
324481 1-5 cr

5990 Directed Research (prereq #, △)
124482 ar cr

8200 Seminar
824484 1530-1630 Th, Phys 210, Humphreys, 1-3 cr

8483 Topics in Astrophysics: Evolutionary History of the Galaxy (prereq #)
338686 1015-1130 TTh, Phys 236A, Humphreys, 3 cr

8990 Research in Astronomy and Astrophysics (prereq #)
124488 ar cr

BIOCHEMISTRY (BioC)
Biological Sciences

1302 Elementary Biochemistry II (prereq 1301 or Chem 1002)
821729 0900-0945 MWF, PalmC 10, Glass, 3 cr

R1303 Elementary Biochemistry Laboratory (prereq 1301 or ¶)
★LECT 1200-1245 Th, PalmC 10, Glass
223646 –1 LAB 0900-1145 Th, SnH 122, 128, 2 cr
923648 –2 LAB 1300-1545 Th, SnH 122, 128, 2 cr

3960 Research Topics in Biochemistry (S-N only)
021731 1600-1645 Th, GorL 342, Schottel, 1 cr

5002 Biochemistry Topics (prereq Biol 5001)
421734 0800-0845 MWF, McNH 33, Dagley, 3 cr

R5025 Laboratory in Biochemistry (prereq Biol 5001 or ¶)
★LECT 1200-1245 T, PalmC 10, Ugurbil
123655 –1 LAB 0800-1145 T, SnH 122, 128, 2 cr
823657 –2 LAB 1300-1645 T, SnH 122, 128, 2 cr

5524 Physical Biochemistry: Enzyme Kinetics (§Chem 5524, MdBc 5524; prereq 2 qtrs physical chemistry, 5751 or MdBc 5751 or equiv)
121736 1115-1200 MTThF, OwreH 4218, Lipscomb, 4 cr (Mpls)

5753 General Biochemistry (§MdBc 5753; prereq 5752)
721738 0800-0900 MWF, Zoology 313, Towle, Schottel, 4 cr (Mpls)

5970 Directed Studies (prereq #, △)
721741 ar cr

5990 Directed Research (prereq #, △)
307082 ar cr

8094 Research and Literature Reports
321743 1200-1300 F, GorL 239, Lovrien, 1 cr

8194 Graduate Seminar (prereq △)
021745 1600-1715 W, PalmC 10, Warner, 1 cr

8215 Advanced Topics in Lipid Biochemistry (§MdBc 8215; prereq 5752 or #) (A-N only)
836814 1115-1200 M, 1115-1300 F, OwreH 2210, Schlenk, Frantz, 3 cr (Mpls)

R8225 Tracer Techniques (prereq 5002 or 5753 and 5744 or MdBc 5750, #)
★LECT 1300-1445 M, BioSci 12, Anderson
128783 –1 LAB 1300-1545 WF, SnH 28, Anderson, 1-3 cr

8233 Advanced Topics in Enzyme Biochemistry (§MdBc 8233; prereq 5751 or #) (A-N only)
636815 1000-1045 MWF, BioSci 64, Hogenkamp, 3 cr

8260 Advanced Physical Biochemistry (prereq 5523, △)
221749 1500-1700 M, BioSci 12, Muenck, 2 cr

8290 Current Research Techniques (prereq grad maj in biochem, △)
421751 1-3 cr

8990 Graduate Research (prereq #)
721755 2-5 cr

BIOCHEMISTRY, MEDICAL (MdBc)
Medical School

5053 Problems in Biochemistry (prereq 5100 or 5751)
023382 1-10 cr

5203 Topics: Dental Biochemistry
623384 0845-0930 TTh, MoosT 2530, Singer, ar cr

5444 Muscle Contraction (prereq undergrad courses in biochemistry or physiology, #)
336825 1515-1645 TTh, MoosT 2580, Thomas, Louis, others, 3 cr

5524 Physical Biochemistry: Enzyme Kinetics (§BioC 5524; prereq 2 qtrs physical chemistry...BioC 5751, 5002 or equiv desirable)
223386 1115-1200 MTThF, OwreH 4218, Lipscomb, 4 cr

5753 General Biochemistry (§BioC 5753; prereq 5752)
523393 0800-0900 MWF, Zoology 313, Towle, Warner, 4 cr

8150 Seminar: Biochemistry (S-N only)
023396 1215-1300 Th, OwreH 4218, Ungar, 1 cr

8215 Advanced Topics in Lipid Biochemistry (§BioC 8215; prereq 5752 or #)
932933 1115-1200 M, 1115-1300 F, OwreH 2210, Frantz, Schlenk, 3 cr

8233 Advanced Topics in Enzyme Biochemistry (§BioC 8233; prereq 5751 or #)
136826 1000-1045 MWF, BioSci 64, Hogenkamp, 3 cr (StP)

8290 Current Research Techniques (prereq grad maj in biochem, #) (S-N only)
623398 1-3 cr

8300 Research
707869 ar cr

BIOLOGY (Biol)
Biological Sciences

R1008 Introductory Biology: An Evolutionary Approach
★LECT 1215-1300 MWF, MoosT 2650, Corbin, (Mpls)
835002 –1 REC 0915-1000 M, MinMet 104, 4 cr (Mpls)
635003 –2 REC 1015-1100 M, Zoology 102, 4 cr (Mpls)
435004 –3 REC 1115-1200 M, AmundH 154, 4 cr (Mpls)
235005 –4 REC 1315-1400 M, AmundH 154, 4 cr (Mpls)
135006 –5 REC 0815-0900 W, MinMet 120, 4 cr (Mpls)
935007 –6 REC 0915-1000 W, MinMet 104, 4 cr (Mpls)
735008 –7 REC 1015-1100 W, Zoology 102, 4 cr (Mpls)
535009 –8 REC 1115-1200 W, AmundH 154, 4 cr (Mpls)
935010 –9 REC 1315-1400 W, FordH 349, 4 cr (Mpls)
735011 –10 REC 0915-1000 F, MinMet 104, 4 cr (Mpls)
535012 –11 REC 1015-1100 F, FordH 40, 4 cr (Mpls)
335013 –12 REC 1115-1200 F, AmundH 154, 4 cr (Mpls)

R1008H Introductory Biology: An Evolutionary Approach
★LECT 1015-1100 MWF, Zoology 313, Kottler
835016 –81 REC 1115-1200 M, Zoology 102, 4 cr
635017 –82 REC 1115-1200 W, Zoology 102, 4 cr

R1009 General Biology (§1011)
★LECT 0815-0900 MWF, WilleyH 175, Kirkwood
508182 –1 LAB 0815-1000 TTh, KoltH S167, 5 cr
108184 –2 LAB 0815-1000 TTh, KoltH S170, 5 cr
408188 –3 LAB 1015-1200 TTh, KoltH S167, 5 cr
408191 –4 LAB 1015-1200 TTh, KoltH S170, 5 cr
908194 –5 LAB 1315-1500 TTh, KoltH S160, 5 cr
508196 –6 LAB 1315-1500 TTh, KoltH S167, 5 cr
108198 –7 LAB 1515-1700 TTh, KoltH S160, 5 cr
008199 –8 LAB 1015-1200 WF, KoltH S160, 5 cr
508201 –9 LAB 1315-1500 WF, KoltH S160, 5 cr
108203 –10 LAB 1315-1500 WF, KoltH S167, 5 cr
808205 –11 LAB 1515-1700 WF, KoltH S160, 5 cr
★LECT 1215-1300 MWF, PWB 2470, Fuchs
208208 –12 LAB 0815-1000 TTh, KoltH S177, 5 cr
208211 –13 LAB 0815-1000 TTh, KoltH S179, 5 cr
808219 –14 LAB 1015-1200 TTh, KoltH S177, 5 cr
608223 –15 LAB 1015-1200 TTh, KoltH S179, 5 cr
208225 –16 LAB 1315-1500 TTh, KoltH S170, 5 cr
708228 –17 LAB 1515-1700 TTh, KoltH S167, 5 cr
908230 –18 LAB 0815-1000 WF, KoltH S160, 5 cr
508232 –19 LAB 0815-1000 WF, KoltH S167, 5 cr
108234 –20 LAB 1015-1200 WF, KoltH S167, 5 cr
608237 –21 LAB 1015-1200 WF, KoltH S170, 5 cr
208239 –22 LAB 1315-1500 WF, KoltH S170, 5 cr
208242 –23 LAB 1515-1700 WF, KoltH S167, 5 cr
★LECT 1800-1910 TTh, AndH 210, Goodman
108243 –24 LAB 1920-2100 TTh, KoltH S160, 5 cr

R1009H General Biology (§1011H; prereq honors division or 3-4 yrs high school math, high school chem or △)
★LECT 1215-1300 MWF, PWB 2470, Fuchs
313657 –81 LAB 0815-1000 TTh, KoltH S160, 5 cr
813663 –82 LAB 1015-1200 TTh, KoltH S160, 5 cr

R1101 Heredity and Human Society (§GCB 3002, no cr if taken after 5003 or GCB 3022)
708052 1215-1300 MTWTh, WilleyH 175, Fan, 4 cr

R1103 General Botany (§3012; prereq 1009)
★LECT 1300-1345 MWF, GrnH 120, Biesboer, (StP)
123736 –1 LAB 1000-1245 T, BioSci 182, 5 cr (StP)
823738 –2 LAB 1400-1645 W, BioSci 182, 5 cr (StP)
023740 –3 LAB 0800-1045 Th, BioSci 182, 5 cr (StP)
623742 –4 LAB 1100-1345 Th, BioSci 182, 5 cr (StP)
223744 –5 LAB 1400-1645 Th, BioSci 182, 5 cr (StP)
923746 –6 LAB 1000-1245 F, BioSci 182, 5 cr (StP)
523748 –7 LAB 1400-1645 F, BioSci 182, 5 cr (StP)

R1106 General Zoology (prereq 1009)
★LECT 0815-0900 MWF, Botany B6, Packer, Pusey
423760 –1 LAB 0815-1100 T, KoltH P168, P170, 5 cr
123762 –2 LAB 1215-1500 T, KoltH P168, P170, 5 cr
723764 –3 LAB 0915-1200 W, KoltH P168, P170, 5 cr
323766 –4 LAB 1215-1500 W, KoltH P168, P170, 5 cr
023768 –5 LAB 0815-1100 Th, KoltH P168, P170, 5 cr
123770 –6 LAB 1215-1500 Th, KoltH P168, P170, 5 cr

R1953 Biology Colloquium (prereq 1009 or ¶, #) (S-N only)
021759 1415-1600 M, OwreH 2210, 1-2 cr

R3011 Animal Biology (§1106; prereq 1009, Chem 1005)
★LECT 0950-1050 MWF, GrnH 120, Goldstein, (StP)
123776 –1 LAB 0900-1045 TTh, SnH 13, 5 cr (StP)
723778 –2 LAB 1200-1345 TTh, SnH 13, 5 cr (StP)
523779 –3 LAB 1400-1545 TTh, SnH 13, 5 cr (StP)
723781 –4 LAB 1200-1345 WF, SnH 13, 5 cr (StP)

R3012 Plant Biology (§1103; prereq 1009, Chem 1005)
★LECT 1130-1245 TTh, AnScVM 135, Charvat, (StP)
823786 –1 LAB 0900-1045 TTh, BioSci 151, 5 cr (StP)
623787 –2 LAB 0900-1045 TTh, BioSci 163, 5 cr (StP)
223789 –3 LAB 1300-1445 TTh, BioSci 151, 5 cr (StP)
423791 –4 LAB 1300-1445 TTh, BioSci 163, 5 cr (StP)

R3042 Field Problems in Ecology (prereq 3041 or EBB 3004 or #)
308054 1200-1700 Th, Zoology 101A, Tester, 2 cr (Cedar Creek)

3111 Animal Biology (§3011; prereq 1009, 1106, Chem 1005)
817129 0950-1050 MWF, GrnH 120, Goldstein, 4 cr (StP)

R3950H Undergraduate Seminar (S-N only)
111666 –81 1500-1645 W, BioSci 648, Pratt, 2 cr (New Uses for Plants: A Look Toward the Future) (Bot)
811668 –82 1300-1415 W, Zoology 101B, Abrams, 2 cr (EBB)
812061 –83 1400-1530 T, BioSci 260, Simmons, 2 cr (GCB)

3960H Honors Seminar (prereq △) (S-N only)
612062 –81 1600-1700 T, BioSci 64, 1 cr (StP)
212064 –82 1600-1700 Th, BioSci 64, 1 cr (StP)

3980 Directed Instruction (prereq #)
121761 1-5 cr

5001 Biochemistry (§3021, BioC 5001; prereq 1009, 12 cr organic chem or #)
821763 1300-1400 MWF, PalmC 10, Kirkwood, 4 cr (StP)

5003 Genetics (§GCB 3022, 5022; prereq 5001)
421765 1200-1300 MWF, ClaOff B45, Rubenstein, 4 cr (StP)

5004 Cell Biology (prereq 5001)
121767 1100-1145 MWF, FScN 15, Rosenberg, 3 cr (StP)

R5013 Microbiology (§MicB 3103, 5105, VPB 3103; prereq 5001)
★LECT 0745-0900 TTh, Zoology 313, 5 cr
028971 –1 LAB 0915-1100 TTh, MoosT 2252, Chapman

R5041 Ecology (§3041; prereq Math 1142 or 1211, Biol 1103, 1106 or 3011 or 3012) (A-N only)
★LECT 0915-1000 MTWF, Zoology 313, Morrow, Siniff
137605 –1 REC 1315-1400 M, FordH 349, 4 cr
037606 –2 REC 1015-1100 W, FordH 40, 4 cr
837607 –3 REC 1315-1400 Th, Zoology 313, 4 cr
637608 –4 REC 1415-1500 F, Zoology 108, 4 cr

5061 Developmental Biology (prereq 5003, 5004)
908258 1000-1045 MWF, BioSci 18, Kerr, 3 cr (StP)

R5125 Recombinant DNA Laboratory (prereq #)
838885 1300-1700 TTh, MoosT 2262, 4 cr

5501 Biochemical Evolution (prereq 5 cr biochem)
721769 1100-1145 MWF, PalmC 12, Seal, 4 cr (StP)

R5950 Special Topics (prereq △)
921771 –1 1115-1200 MWF, Zoology 108, Abrams, 3 cr
418011 –2 1800-1930 T, BioSci 18, 2 cr (StP)
039291 –3 1400-1530 W, BioSci 260, Iwanij, W Herman, 2 cr (StP)

5951 Social Uses of Biology (prereq 10 cr sciences) (S-N only)
★LECT 1300-1345 MWF, McNH 197, Cunningham, V Woodward, 4 cr
828972 –1 REC 1400-1445 M, BioSci 438
628973 –2 REC 1400-1445 W, BioSci 438

R8710 Tutorial in Developmental Biology (prereq #, △)
121775 3 cr

R8950 Graduate Seminar (prereq #, △)
821777 1-2 cr

R8970 Special Topics (prereq #, △)
421779 1-3 cr

BIOPHYSICAL SCIENCES (BPhy)
Institute of Technology

5138 Seminar: Biophysical Sciences
424620 1530-1630 Th, MIrdH 5276, Ackerman, ar cr

5157 Biophysics (prereq 28 cr between physics, biology, #...physical chemistry, physiology rec)
224621 1315-1500 TTh, TNCE 220, Schmitt, 3 cr

5172 Radiation Biology (§Rad 5172, TRad 5172; prereq 5170, #)
124622 1600-1730 W, 1600-1700 F, MoosT 2107, Song, Buchsbaum, others, 3 cr

8223 Research
924623 ar cr

8298 Seminar
524625 1415-1600 F, TNCE 220, Schmitt, ar cr

BOTANY (Bot)
Biological Sciences

R1009 Minnesota Plant Life
★LECT 1200-1245 TTh, McNH 33, Morley, (Field trips 1200-1600 T, 2nd half of quarter)
604933 –1 LAB 1000-1145 TTh, BioSci 192, 198, 4 cr
104936 –2 LAB 1300-1445 TTh, BioSci 192, 198, 4 cr
504939 –3 LAB 1500-1645 TTh, BioSci 192, 198, 4 cr

3131 Survey of Plant Physiology (§5131, PlPh 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 5001)
221783 1200-1245 MTWF, ClaOff B35, Gleason, Dale, 4 cr

3950 Undergraduate Proseminar (prereq #)
921785 1 cr

5131 Survey of Plant Physiology (§3131, PlPh 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 5001)
121789 1200-1245 MTWF, ClaOff B35, 1200-1245 Th, BioSci 115, Frenkel, Gleason, others, 4 cr

5182 Plant Metabolism (§PlPa 5182; prereq 5131 or equiv, a course in biochemistry)
321791 0800-0915 TTh, BioSci 18, Soulen, 3 cr

R5205 Flora of Minnesota (prereq 3201 or #)
★LECT 0900-0945 TTh, BioSci 12, Ownbey, 4 cr
328790 –1 LAB 1000-1145 TTh, BioSci 176, Ownbey

5235 Algal Physiology (prereq BioC 1302 or Biol 5001)
338798 1000-1115 MW, BioSci 12, Gleason, 3 cr

5960 Special Topics (prereq #, △)
021793 ar cr

R5970 Directed Studies (prereq #, △)
621795 ar cr

5990 Directed Research (prereq #, △)
705829 ar cr

8950 Seminar: Current Topics in Plant Molecular Biology (prereq #)
421796 1300-1445 M, BioSci 648, Guilfoyle, Dale, 1 cr

8990 Research Problems (prereq #)
221797 ar cr

BUSINESS ADMINISTRATION (BA)
Management

R3998H Independent Study (prereq #)
723246 ar cr

R3998H Honors Course: Independent Study (prereq consent of supervising faculty member, SMgt honors student or # and SMgt approval)
339482 1315-1600 T, Mgmt/Econ 136, Holloway, 4 cr

R8220 Ph.D. Research Seminar (prereq MBA 8005, BA 8200, SMgt PhD student for two qtrs or more or #, grad SMgt approval) (A-N only)
725613 1300-1600 W, Law 1, Van de Ven, Quinn, 4 cr

BUSINESS AND MARKETING EDUCATION (BME)
Vocational And Technical Education Education

R1501 Basic Keyboarding/Typewriting (§BDE 1501, S-N optional for non majors)
136762 –1 1000-1045 MWF, VoTech 240, Sormunen, 3 cr
036763 –2 1300-1345 MWF, VoTech 240, Bertelson, 3 cr
836764 –3 1400-1445 MWF, VoTech 240, Bertelson, 3 cr
636765 –4 1700-1845 TTh, VoTech 240, Davison, 3 cr

R1502 Intermediate Typewriting (§BDE 1502; prereq 1501 or proficiency exam) (A-N only)
436766 1300-1345 MWF, VoTech 230, 240, Bertelson, 3 cr

R1503 Advanced Typewriting (§BDE 1503; prereq 1502 or proficiency exam) (A-N only)
236767 1300-1345 MWF, VoTech 230, 240, Bertelson, 3 cr

R1509 Office Machines (§BDE 1509; prereq 1502 or equiv) (A-N only)
136768 1300-1445 TTh, VoTech 230, Lambrecht, 3 cr

3300 Teaching Typewriting/Keyboarding (§BDE 3300; prereq 1502 or BDE 1502 or ¶ or equiv, SeEd 3155 or ¶) (A-N only)
936769 1500-1645 TTh, VoTech 240, McLean, 3 cr

5156 Teaching Shorthand and Transcription (§BDE 5156) (A-N only)
736773 1600-1745 W, VoTech 240, Lambrecht, 3 cr

5158 Office Management Techniques and Technology (§BDE 5158) (A-N only)
536774 1600-1830 M, VoTech R285, Hopkins, 4 cr

R5160 Word Processing Practicum (§BDE 5160) (A-N only)
336775 0800-0845 MWF, VoTech 230, Sormunen, 2 cr

5253 Teaching Supervisory Training (§BDE 5253) (A-N only)
036777 1830-2130 Th, VoTech R285, Ashmun, 3 cr

5305 Applied Methods: Marketing Education (§BDE 3305; prereq 5304, #) (A-N only)
138687 1300-1445 MWF, VoTech 220, Ashmun, 4 cr

5340 Trends and Issues in Business and Marketing Education (max 6 cr, §BDE 5155, 5250) (A-N only)
038688 1600-1745 T, VoTech 220, Klaurens, 3 cr

5351 Organization and Administration of Business and Marketing Education (§BDE 5351) (A-N only)
836778 1600-1830 W, VoTech 220, Klaurens, 4 cr

5354 Postsecondary Business and Marketing Education (§BDE 5354) (A-N only)
636779 1600-1745 M, VoTech 220, Abeln, 3 cr

5600 School-Based Projects in Business and Marketing Education (max 12 cr; prereq #) (A-N only)
036780 1-12 cr

R5900 Directed Study in Business and Marketing Education (max 6 cr; prereq △) (S-N optional)
836781 –1 1800-1930 T, VoTech 220, Klaurens, 1-6 cr
636782 –2 1-6 cr

8300 Seminar: Research in Business, Marketing, and Economic Education (prereq #)
436783 1 cr

8900 Problems: Business and Marketing Education (max 9 cr; prereq #)
236784 1-9 cr

THESIS

COPYING 6¢ PER COPY

75% RAG BOND PAPER 7¢

BINDING $8.75 PER COPY

- MEETS ALL GRAD SCHOOL STANDARDS
- NO ADDITIONAL CHARGE FOR COLLATING
- ALL IN ONE CONVENIENT LOCATION
- FREE PARKING
- INTER-CAMPUS BUS SERVICE
- PAMPHLET BINDING $5.00
- ON CAMPUS DELIVERY

HOURS:
7 a.m.-noon
12:30 p.m.-3:30 p.m.
Call 373-2843
for complete information

University of Minnesota
University Bindery
P & GA Building, Room 180
2818 Como Avenue S.E.
Mpls, Mn. 55414

THE EARLY BIRD...



GMAT

- Permanent Centers open days, evenings and weekends.
- Low hourly cost. Dedicated full-time staff.
- Complete TEST-n-TAPE[sm] facilities for review of class lessons and supplementary materials.
- Small classes taught by skilled instructors.
- Opportunity to make up missed lessons.
- Voluminous home-study materials constantly updated by researchers expert in their field.
- Opportunity to transfer to and continue study at any of our over 85 centers.

Stanley H. KAPLAN
Educational Center
TEST PREPARATION SPECIALISTS SINCE 1938

Call Days Evenings & Weekends
378-9191
328 East Hennepin Ave.
Near U of M

PEKING GARDEN RESTAURANT

★ GOURMET WEEKDAY LUNCH SPECIALS AT FAST FOOD PRICES ★

- EXCELLENT REVIEWS AND REMARKS FROM THE MPLS. STAR & TRIBUNE, ST. PAUL PIONEER PRESS, MPLS./ST. PAUL MAGAZINE AND TWIN CITIES TODAY.



北京園

- TRY OUT HOT & SPICY HUNAN & SZECHUAN DISHES OR SMOOTH PEKING & CANTONESE DISHES.
- EXCELLENT DECOR & SECLUDED ATMOSPHERE
- AMPLE FREE PARKING

HOURS: SUNDAY-THURSDAY 11:00 to 10:00
FRIDAY-SATURDAY 11:00 to 11:00

2324 UNIVERSITY AVE. S.E.
623-3989/623-3992

master charge VISA AMERICAN EXPRESS

BUSINESS LAW (BLaw)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for BLaw courses.

R3058 **Introduction to Law, and the Law of Contracts and Agency** (§8158; prereq Econ 1002) (A-N only)
★LECT 1115-1200 T, AndH 270, Andrews
123865 –1 LAB 0815-0900 TTh, BlegH 435, Andrews, 4 cr
823867 –2 LAB 0915-1000 TTh, BlegH 435, Andrews, 4 cr
423869 –3 LAB 1015-1100 TTh, BlegH 435, Eastlund, 4 cr

R3088 **Law of Personal Property, Sales Contracts, Commercial Paper, and Wills and Estates** (§8288; prereq 3058)
209228 0815-0930 TTh, BlegH 145, Eastlund, 4 cr

R8158 **Introduction to Law, and the Law of Contracts and Agency** (§3058; prereq Econ 1002, grad mgmt/IR student or grad SMgt approval) (A-N only)
★LECT 1115-1200 T, AndH 270, Andrews
115399 –1 LAB 0915-1000 TTh, BlegH 435, Andrews, 4 cr

R8288 **Law of Personal Property, Sales Contracts, Commercial Paper and Wills and Estates** (§3088; prereq 8158, grad mgmt/IR student or grad SMgt approval)
409230 0815-0930 TTh, BlegH 145, Eastlund, 4 cr

BUSINESS, GOVERNMENT AND SOCIETY (BGS)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for BGS courses.

R3002 **Business and Society** (prereq jr, sr) (A-N only)
633669 –1 0815-0930 MWF, BlegH 145, 4 cr
033670 –2 0915-1030 MWF, BlegH 150, 4 cr
833671 –3 0945-1100 MWF, BlegH 145, 4 cr
633672 –4 1115-1230 MWF, BlegH 145, 4 cr
433673 –5 1245-1400 MWF, BlegH 145, 4 cr
233674 –6 1415-1530 MWF, BlegH 145, 4 cr

R3004 **International Business**
806230 –1 1315-1445 MW, BlegH 150, 4 cr
512393 –2 1015-1145 TTh, BlegH 150, Hastings, 4 cr
133675 –3 1315-1445 TTh, BlegH 150, Hastings, 4 cr

CHEMICAL ENGINEERING (ChEn)
Chemical Engineering & Materials Science
Institute of Technology

R3092 **Industrial Employment**
424293 1-2 cr

R5103 **Principles of Chemical Engineering III** (prereq 5102, upper division chem engr or mat sci maj)
★LECT 0915-1000 MWF, AmundH 240, Schmidt
323881 –1 REC 0815-0900 TTh, AmundH 154, 4 cr
023883 –2 REC 1215-1300 TTh, AmundH 154, 4 cr
623885 –3 REC 1215-1300 TTh, AmundH 158, 4 cr
223887 –4 REC 1415-1500 TTh, AmundH 154, 4 cr
923889 –5 REC 1415-1500 TTh, AmundH 158, 4 cr
123891 –6 REC 1515-1600 TTh, AmundH 154, 4 cr

R5202 **Chemical Engineering Thermodynamics and Kinetics** (prereq 5201, upper division chem engr or mat sci maj)
★LECT 1015-1100 MWF, AmundH 240, Griffin
523894 –1 REC 0815-0900 TTh, AmundH 158, 4 cr
323895 –2 REC 1215-1300 TTh, AmundH 162, 4 cr
123896 –3 REC 1215-1300 TTh, MinMet 120, 4 cr
823898 –4 REC 1415-1500 TTh, AmundH 162, 4 cr
623899 –5 REC 1515-1600 TTh, AmundH 162, 4 cr
323900 –6 REC 1515-1600 TTh, AmundH 158, 4 cr

R5401 **Chemical Engineering Laboratory** (prereq 5102 or ¶, 5103 or ¶, upper division chem engr or mat sci maj)
★LECT 0815-0900 M, AmundH 240, Scriven
125625 –1 LAB 1315-1700 M, AmundH 356, 2 cr
925626 –2 LAB 0815-1200 T, AmundH 356, 2 cr
725627 –3 LAB 1315-1700 T, AmundH 356, 2 cr
525628 –4 LAB 1315-1700 W, AmundH 356, 2 cr
325629 –5 LAB 0815-1200 Th, AmundH 356, 2 cr
725630 –6 LAB 1315-1700 Th, AmundH 356, 2 cr
525631 –7 LAB 1315-1700 F, AmundH 356, 2 cr
325632 –8 LAB 0815-1200 S, AmundH 356, 2 cr

R5502 **Process Evaluation and Design** (prereq 5501 or #, upper division chem engr or mat sci maj)
★LECT 1115-1200 MWF, AmundH 240, Ranz
223906 –1 REC 1415-1600 T, MinMet 124, 4 cr
123907 –2 REC 1415-1600 T, MinMet 120, 4 cr
923908 –3 REC 1415-1600 Th, MinMet 120, 4 cr

R5603 **Process Control** (prereq 5601 or #)
737115 1215-1300 MWF, AmundH 162, Jensen, 3 cr

R5604 **Process Control Laboratory** (prereq 5601)
123910 –1 1315-1700 T, MinMet 104, Jensen, 2 cr
723912 –2 1315-1700 W, AmundH 154, Hu, 2 cr

R5640 **Polymerization Reactor Engineering** (prereq chem engineering reactor design course or #)
224294 1115-1230 TTh, MechE 102, 202, Tirrell, 4 cr

R5753 **Biological Engineering Analysis** (prereq 5752)
124295 1515-1700 MW, AmundH 158, Fredrickson, 3 cr

R5761 **Flow of Fluids in Porous Media with Applications to Oil Recovery**
132971 0815-0900 MWF, AmundH 162, Davis, 3 cr

R5771 **Colloids and Dispersions** (prereq physical chemistry)
636118 1515-1700 TTh, MechE 102, Evans, 3 cr

R5904 **Special Topics**
407235 ar cr

R8005 **Physical Rate Processes** (prereq 8004)
724297 1015-1100 MWF, AmundH 158, Cussler, 3 cr

R8102 **Problems in Fluid Mechanics** (prereq 8101)
537116 1415-1500 MWF, AmundH 158, Scriven, 3 cr

R8105 **Principles, Applications of Rheology** (prereq 8101 or AEM 8510 or #)
332970 1315-1400 MWF, MinMet 116, Macosko, 3 cr

R8203 **Advanced Mathematics for Chemical Engineers** (prereq 8202)
524298 0815-1000 TTh, AmundH 162, Luskin, 3 cr

R8401 **Chemical Reaction Kinetics-Kinetics of Homogeneous Reactions** (prereq #)
213599 1115-1200 MWF, AmundH 158, Carr, 3 cr

R8640 **Polymerization Reactor Engineering**
324299 1115-1230 TTh, MechE 102, 202, Tirrell, 3 cr

8803 **Seminar**
924301 1315-1600 TTh, AmundH 240, 1 cr

R8902 **Research in Chemical Engineering**
124300 1415-1700 MF, AmundH 162, ar cr

R8903 **Research in Chemical Engineering**
724302 ar cr

CHEMISTRY (Chem)
Institute of Technology

Note:
For 1000-level recitation sections, rooms will be posted outside SmithH 211 (PalmC 10 for St. Paul sections) two days before the first day of classes.
Each student registering for a laboratory course must purchase a blue Chemistry Deposit Card from the bursar and present that card to the instructor in order to be admitted to a lab section. Students without cards will not be permitted to check into lab and will forfeit their desk assignments. A students with a deposit card used in a previous chemistry lab must have at least a $10 balance remaining on that card to use it again; if the balance is less than $10, the student must purchase a second card.
SEE SECTION 4, DEPOSIT CARDS.
Every student who checks into a lab must check out of the lab before the end of the quarter, even if he or she drops the course, or be charged a $10.00 check-out fee.

R1003 **Physical World, Chemistry** (§any other college chem course; prereq 1 yr high school algebra...high school chem rec)
★LECT 1115-1200 MWThF, SciCB 375, Wilson, 5 cr
403301 –1 REC 1415-1500 M,
★LAB 1515-1700 M, SmithH 210
903304 –2 REC 1415-1500 T,
★LAB 1515-1700 T, SmithH 210
303307 –3 REC 1415-1500 Th,
★LAB 1515-1700 Th, SmithH 210

R1004 **General Principles of Chemistry** (1004-1005†; prereq hs chem or equiv, placement Index of Y or predicted Math GPA 1.90 on
★LECT 1415-1500 TWThF, SciCB 325, Reynolds, 5 cr
328935 –1 REC 1215-1300 M,
128936 –2 REC 1315-1400 M,
★LAB 1415-1700 M, SmithH 210
812416 –3 REC 0815-0900 T,
★LAB 0915-1200 T, SmithH 210
612417 –4 REC 0815-0900 Th,
★LAB 0915-1200 Th, SmithH 210

R1005 **General Principles of Chemistry** (1004-1005†, §1001-1002, 1014, 1031-1032; prereq 1004)
♦123924 –1 LECT 0915-1000 MWThF, SciCB 375, Lipsky, 5 cr (Registration for one of the rec/lab sections is also required)
♦723926 –2 LECT 1015-1100 MTWF, SciCB 375, Conroy, 5 cr (Registration for one of the rec/lab sections is also required)
♦323928 –3 LECT 1315-1400 MTWTh, SciCB 375, Conroy, 5 cr (Registration for one of the rec/lab sections is also required)
♦523930 –4 LECT 0800-0845 MTThF, PalmC 10, Mann, 5 cr (StP) (Registration for one of the rec/lab sections is also required)
705118 –1 REC 1215-1300 M,
505122 –2 REC 1315-1400 M,
★LAB 1415-1700 M, SmithH 110
805126 –3 REC 0815-0900 T,
★LAB 0915-1200 T, SmithH 110
605130 –4 REC 1215-1300 T,
905134 –5 REC 1315-1400 T,
★LAB 1415-1700 T, SmithH 110
305137 –6 REC 1215-1300 W,
305140 –7 REC 1315-1400 W,
★LAB 1415-1700 W, SmithH 110
805143 –8 REC 0815-0900 Th,
★LAB 0915-1200 Th, SmithH 110
405145 –9 REC 1215-1300 Th,
205146 –10 REC 1315-1400 Th,
★LAB 1415-1700 Th, SmithH 110
905148 –11 REC 1215-1300 F,
905151 –12 REC 1315-1400 F,
★LAB 1415-1700 F, SmithH 110
305154 –13 REC 1300-1345 M, (StP)
★LAB 1400-1645 M, SnH 222, (StP)
805157 –14 REC 1300-1345 T, (StP)
★LAB 1400-1645 T, SnH 222, (StP)
605158 –15 REC 1300-1345 W, (StP)
★LAB 1400-1645 W, SnH 222, (StP)
405159 –16 REC 1300-1345 Th, (StP)
★LAB 1400-1645 Th, SnH 222, (StP)

R1006 **Principles of Solution Chemistry** (prereq 1005 or 1032)
★LECT 1015-1100 MWF, SciCB 325, Brasted, 4 cr
329504 –1 LAB 1315-1700 M, SmithH 210
129505 –2 LAB 0815-1200 T, SmithH 210
029506 –3 LAB 1315-1700 T, SmithH 210
829507 –4 LAB 1315-1700 W, SmithH 210
629508 –5 LAB 1315-1700 Th, SmithH 210

R1008 **Physical World, Chemistry** (§any other college chem course; prereq 1 yr high school algebra...high school chem rec)
005321 1115-1200 MWThF, SciCB 375, Wilson, 4 cr

R1014 **Concepts of Chemistry** (§1001-1002, 1004-1005, 1031-1032; prereq Phys 1105 or 1281 or #, IT stu or △)
024306 1415-1500 MWThF, SciCB 375, Wertz, 4 cr

R1133 **Elementary Quantitative Analysis** (prereq 1032)
★LECT 0815-0900 MWF, SmithH 225, Swofford
423970 –1 LAB 0815-1200 TTh, SmithH 310, 5 cr
123972 –2 LAB 0915-1200 MW, 0915-1100 F, SmithH 310, 5 cr

R3100 **Quantitative Analysis Lecture** (3100-3101†; prereq 1005 or 1032, non-chem maj)
824307 1215-1300 MWF, SciCB 375, Lodge, 3 cr

R3101 **Quantitative Analysis Laboratory** (3100-3101†; prereq 3100 or ¶)
523975 –1 0815-1200 MW, SmithH 310, Swofford, 2 cr
123977 –2 1315-1700 MW, SmithH 310, Swofford, 2 cr
823979 –3 1315-1700 TTh, SmithH 310, Swofford, 2 cr

R3301 **Elementary Organic Chemistry I** (§3331; prereq 1005 or 1032)
424309 0915-1000 TWThF, SmithH 100, Que, 4 cr

R3302 **Elementary Organic Chemistry II** (prereq 3301, 3305 or ¶)
823982 –1 0915-1000 TWThF, SciCB 325, E Miller, 4 cr
423984 –2 1015-1100 TWThF, SmithH 225, Barbara, 4 cr

R3303 **Elementary Organic Chemistry III** (prereq 3302, 3306 or ¶)
824310 1115-1200 TWThF, SciCB 175, Leete, 4 cr

R3304 **Elementary Bioorganic Chemistry** (prereq 3302 or 3332 or equiv)
313691 1015-1100 MWF, SmithH 325, Gray, 4 cr

R3305 **Elementary Organic Chemistry Laboratory I** (prereq 3301 or ¶)
★LECT 0915-1000 M, SmithH 100, E Miller
523989 –1 LAB 1315-1700 M, SmithH 349, 2 cr
723991 –2 LAB 1315-1700 M, SmithH 349, 2 cr
323993 –3 LAB 1315-1700 T, SmithH 349, 2 cr
023995 –4 LAB 1315-1700 T, SmithH 349, 2 cr
623997 –5 LAB 1315-1700 T, SmithH 349, 2 cr
223999 –6 LAB 1315-1700 W, SmithH 349, 2 cr
024001 –7 LAB 1315-1700 Th, SmithH 349, 2 cr
624003 –8 LAB 1315-1700 Th, SmithH 349, 2 cr
224005 –9 LAB 1315-1700 F, SmithH 349, 2 cr

R3306 **Elementary Organic Chemistry Laboratory II** (prereq 3302 or ¶)
♦604222 –1 LECT 0915-1000 M, SciCB 325, Barbara, 2 cr
♦924010 –2 LECT 1015-1100 M, SmithH 225, Barbara, 2 cr
524012 –1 LAB 1315-1700 M, SmithH 349
124014 –2 LAB 1315-1700 M, SmithH 349
824016 –3 LAB 1315-1700 M, SmithH 349
424018 –4 LAB 1315-1700 T, SmithH 349
624020 –5 LAB 1315-1700 T, SmithH 349
224022 –6 LAB 1315-1700 T, SmithH 349
924024 –7 LAB 1315-1700 W, SmithH 349
524026 –8 LAB 1315-1700 W, SmithH 349
124028 –9 LAB 1315-1700 W, SmithH 349
324030 –10 LAB 1315-1700 W, SmithH 349
124031 –11 LAB 1315-1700 Th, SmithH 349
024032 –12 LAB 1315-1700 Th, SmithH 349
824033 –13 LAB 1315-1700 F, SmithH 349
424035 –14 LAB 1300-1645 T, SnH 322, (StP)
124037 –15 LAB 1300-1645 Th, SnH 328, (StP)
724039 –16 LAB 1300-1645 Th, SnH 322, (StP)
924041 –17 LAB 1300-1645 F, SnH 328, (StP)

R3333 **Introductory Organic Chemistry III** (prereq 3332)
624311 0815-0900 MWF, SmithH 325, Hoye, 3 cr

R3336 **Introductory Organic Chemistry III Laboratory** (prereq 3333 or ¶...¶3333 rec)
★LECT 0815-0900 T, SmithH 325, Fenton
824047 –1 LAB 1315-1700 MW, KoltH 398, 2 cr
424049 –2 LAB 1315-1700 TTh, KoltH 398, 2 cr
624051 –3 LAB 1315-1700 TTh, KoltH 398, 2 cr

3499 **Senior Thesis** (prereq #, 4th yr)
424312 ar cr

3970 **Directed Studies** (prereq #)
224313 ar cr

3993 **Special Topics in Chemistry** (prereq #)
025634 1215-1300 Th, SmithH 325, Gladfelter, 1 cr

R5126 **Modern Analytical Chemistry** (prereq 3332, 3335, chem engr maj or △)
006548 0815-0900 TTh, SciCB 325, Stankovich, 4 cr (lab ar)

5128 **The Small Computer in the Chemical Laboratory** (prereq 5127 or #)
313903 1015-1100 MWF, KoltH S132, Evans, 5 cr

R5305 **Intermediate Organic Chemistry** (prereq 3303 or 3333)
★LECT 1015-1100 TWF, SmithH 111, Noland, 4 cr
828941 –1 REC 1015-1100 Th, SmithH 111

R5365 **Organic Qualitative Analysis** (prereq 3303 or 3333)
006551 1315-1400 TTh, SmithH 111, Fenton, 4 cr (lab ar)

R5533 **Quantum Chemistry** (prereq 1 yr college chemistry, Phys 1291 or ¶ or 1106 with #, Math 3211)
924315 1115-1200 MWF, SciCB 325, 1115-1200 T, SciCB 375, Hexter, 4 cr

R5535 **Statistical Mechanics and Reaction Kinetics** (prereq 5534)
624325 1015-1100 MWThF, SmithH 315, Lumry, 4 cr

R5536 **Quantum Chemistry Laboratory** (prereq 5533 or ¶)
405355 –1 LAB 1315-1700 M, KoltH 284, Overend, 2 cr
705359 –2 LAB 1315-1700 W, KoltH 284, Overend, 2 cr
505363 –3 LAB 1315-1700 Th, KoltH 284, Overend, 2 cr

R5538 **Physical Chemistry Laboratory** (prereq 5535 or ¶)
805367 –1 LAB 1315-1600 T, KoltH 284, Wertz, 1 cr
605371 –2 LAB 1315-1600 W, KoltH 284, Wertz, 1 cr

5580 **Physical Chemistry of Polymers** (prereq 5534 or 5535 or #)
238986 1315-1400 MWF, SmithH 111, Prager, 3 cr

5763 **Survey of the Chemistry of Non-Transition Elements** (prereq 5732 or #)
224327 1215-1300 MTWF, SmithH 315, Ellis, 4 cr

5803 **Chemistry of Industry** (prereq chem sr or grad student or #)
137197 0815-0900 MWF, SmithH 315, Heilman, Rassmussen, 4 cr

5993 **Selected Topics** (prereq △, sr)
924329 1515-1630 TTh, SmithH 315, Gladfelter, 3 cr

8100 **Survey of Analytical Chemistry**
124331 1 cr

8104 **Spectroscopic Methods of Analysis** (prereq 5133 or equiv or #) (A-N only)
233769 0915-1000 MWF, KoltH S132, Bryant, 3 cr

8190 **Seminar: Modern Problems in Chemical Instrumentation and Analysis** (prereq 8129)
324335 Lodge, 1 cr

8300 **General Survey of Organic Chemistry**
024337 1 cr

8305 **Advanced Organic Chemistry III** (prereq 8304 or #)
624339 0915-1000 MWF, SmithH 111, Livinghouse, 4 cr

8390 **Seminar: Organic Chemistry**
824341 1930-2300 W, SmithH 325, 1 cr

8403 **Bioorganic Chemistry I** (prereq 3303 or 3333 or equiv)
806549 1015-1100 MWF, KoltH S133, Fisher, 4 cr

8500 **General Survey of Physical Chemistry**
624342 1 cr

8533 **Introductory Quantum Mechanics and Spectroscopy** (prereq 8532)
224344 1115-1200 MWF, SmithH 111, Moscowitz, 4 cr

8543 **Thermodynamics, Statistical Mechanics, and Kinetics** (prereq 8542)
924346 0815-0900 MWF, SmithH 111, Truhlar, 4 cr

8546 **Advanced Statistical Mechanics** (prereq 8541-8542) (A-N only)
011992 0915-1000 MWF, KoltH S136, Prager, 4 cr

8560 **Seminar: Biological Systems**
524348 1550-1700 Th, SmithH 225, ar cr

8590 **Seminar: Physical Chemistry**
324352 1615-1800 M, SmithH 225, Prager, 1 cr

8700 **General Survey of Inorganic Chemistry**
024354 1 cr

8790 **Seminar: Modern Problems in Inorganic Chemistry** (prereq △)
824355 1630-1830 Th, SmithH 325, 1 cr

8990 **Research in Chemistry** (prereq △)
424357 ar cr

8993 **Special Topics in Chemistry** (prereq △)
124359 1015-1100 MWF, KoltH S136, Fristad, 3 cr

8996 **Special Topics in Chemistry** (prereq △)
224361 1115-1200 MWF, KoltH S136, Britton, 3 cr

CHICANO STUDIES (Chic)
Liberal Arts

1105 **Introduction to Chicano Studies: The Beginnings**
638886 0915-1000 MWF, FordH 447, Rojas, 4 cr

3330 **Chicano Topics: Chicano Theatre** (max 12 cr)
139296 1415-1500 MWF, LindH 217, Duarte-Clark, 4 cr

3405 **Spanish for the Spanish Speaking: Intermediate Conversation and Composition** (prereq 1201, 1202, 1203 or one yr Span)
939302 1415-1500 MWF, FordH 160, Arevalo, 4 cr

3510 **Chicano Literature: Topics: Contemporary Chicano/Latino Drama** (max 12 cr; prereq 3507 or 3508 or #...some knowledge of Span rec)
713705 1115-1200 MWF, FordH 447, Duarte-Clark, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
922757 ar cr

CHILD AND ADOLESCENT PSYCHIATRY (CAPy)
Medical School

5203 **Child and Adolescent Psychiatry for Psychology Interns** (prereq #)
123915 Erbaugh, 1-5 cr

5204 **Diagnostic Methods in Child and Adolescent Psychiatry** (prereq med student, #)
023916 Lawton, Greenberg, 1 cr

5500 **Pediatric Psychiatry Liaison** (prereq regis med student)
823917 Pearson, 9 cr

5520 **Outpatient Clinical Child and Adolescent Psychiatry for Primary Care Trainees** (prereq med student, #)
623918 Jensen, ar cr

5602 **Introductory Readings in Child and Adolescent Psychopathology** (prereq med student or MD, #)
823920 3 cr

5603 **Inpatient Clinical Child Psychiatry for Primary Care Physicians** (prereq med student, #)
623921 Realmuto, ar cr

5608 **Introduction to Family Therapy: Theory and Practice** (prereq MD and/or #, basic psychopath course, cur supervised involvement treatment of cases)
423922 Miner, 3 cr

5610 **Biomedical Research: Principles and Design** (prereq introductory statistics, #)
305056 Yellin, 3 cr

8100 Readings in Child, Adolescent, and Family Psychiatry (prereq MD, #)
223923 Miner, 1 cr

8110 Diagnostic Methods in Child, Adolescent, and Family Psychiatry (prereq MD, #)
923925 1 cr

8120 Therapeutic Methods in Child and Adolescent Psychiatry (prereq MD, #)
523927 Greenberg, Stocking, 1 cr

8200 Outpatient Clinical Child and Adolescent Psychiatry (prereq MD, #)
123929 Jensen, 3 cr

8212 Clinical Inpatient Child Psychiatry (prereq MD, #)
323931 Realmuto, 3 cr

8214 Inpatient Clinical Adolescent Psychiatry (prereq MD, #)
123932 3 cr

8216 Pediatric Psychiatry Liaison (prereq MD, #)
023933 Pearson, 3 cr

8223 Family Therapy (prereq MD, #)
104306 Miner, 1 cr

8228 Research in Child and Adolescent Psychiatry (prereq MD, #)
823934 Yellin, 1 cr

8233 Mental Health Administration, Training Seminar (prereq MD, #)
105057 Miner, 1 cr

8248 Residential Child and Adolescent Treatment (prereq MD, #)
005058 Miner, 3 cr

8253 Child and Adolescent Community Psychiatry (prereq MD, #)
805059 Miner, 2 cr

8301 Seminar in Child, Adolescent, and Family Psychiatry (prereq MD, #)
623935 1 cr

CHILD PSYCHOLOGY (CPsy)
Education

1301 Introductory Child Psychology (§5301; prereq 5 cr introductory psychology)
524107 –1 1015-1100 MWF, SmithH 100, Gunnar, 4 cr
124109 –2 1820-2050 M, ElthH N119, Salapatek, 4 cr

R1970 Directed Study (prereq #)
522051 ar cr

3303 Adolescent Psychology (§5303; prereq 5 cr introductory psychology)
322052 –1 1015-1100 MWF, NichH 211, Dolgin, 4 cr
033331 –2 1820-2050 W, ChDev 216, Palmer, 4 cr

3304 Introduction to Maturity and Aging (prereq 1301 or equiv)
122053 1115-1200 MWF, SmithH 325, Perlmutter, 4 cr

R3308 Research Methods in Child Psychology (prereq 1301, Psy 1004) (S-N optional)
235022 1315-1445 TTh, ChDev 216, Breslow, 4 cr

3311 Behavioral and Emotional Problems (§5311; prereq 1301 or equiv)
022054 1315-1400 MWF, AmundH 240, Sroufe, 4 cr

3331 Processes of Socialization of Children (§5331; prereq 1301 or equiv)
822055 0915-1000 MWF, Botany B6, Hartup, 4 cr

3332 Cross-Cultural Child Development (prereq 4 cr in child psychology) (S-N optional)
313481 1115-1200 MWF, BuH 120, DeHart, Livingston, 4 cr

3343 Introduction to Cognitive Development (prereq 1301) (S-N optional)
833329 0915-1000 MWF, ChDev 216, A Pick, 4 cr

3361H Honors Seminar II: Research and Theory in Developmental Psychology (prereq 1301 or equiv, #)
711680 0930-1100 TTh, ChDev 216, H Pick, 4 cr

R3980 Directed Instruction (max 4 cr; prereq #) (S-N only)
622056 1-4 cr

5303 Adolescent Psychology (§3303; prereq 5 cr introductory psychology)
422057 –1 1015-1100 MWF, NichH 211, Dolgin, 4 cr
633333 –2 1820-2050 W, ChDev 216, Palmer, 4 cr

5311 Behavioral and Emotional Problems (§3311; prereq 1301 or equiv)
422060 1315-1400 MWF, AmundH 240, Sroufe, 4 cr

5315 Introduction to Mental Retardation (§SpEd 5120 or PsyS 5120; prereq 1301 or equiv)
733324 1630-1800 TTh, ChDev 105, Turnure, 4 cr

5331 Processes of Socialization of Children (§3331; prereq 1301 or equiv)
122062 0915-1000 MWF, Botany B6, Hartup, 4 cr

5341 Perceptual Development (prereq 1301 or #)
533325 1315-1400 MWF, ChDev 216, Salapatek, 4 cr

5345 Language Development (prereq 1301 or #)
107455 1415-1500 MWF, ChDev 216, Morgan, 4 cr

R5970 Directed Study (prereq #)
722064 ar cr

R5990 Directed Research (prereq #)
522065 ar cr

8320 Seminar: Current Issues in Teaching Developmental Psychology (prereq #)
322066 1215-1330 M, ChDev 102, Collins, 1 cr

8327 Ethology of Child Behavior (prereq #)
122067 1345-1500 TTh, ChDev 102, Charlesworth, 3 cr

8341 Advanced Perceptual Development (prereq Psy 5031, #)
807460 1415-1530 MW, ChDev 102, H Pick, 3 cr

8351 Theory, Practices in Preschool (prereq #)
133327 1030-1200 TTh, ChDev 105, Moore, 3 cr

8360 Seminar: Developmental Psychology (prereq #)
022068 Maratsos, ar cr

8970 Independent Study (prereq #)
822069 ar cr

8990 Research Problems (prereq #)
122070 ar cr

CHINESE (Chn)
East Asian Studies
Liberal Arts

R1013 Beginning Modern Chinese (prereq 1012)
825635 –1 LECT 0915-1000 TTh, FolH 303, Cass
625636 –2 LECT 1115-1200 TTh, FolH 303, Cass
♦429509 –1 REC 0815-0900 MTWThF, FolH 303, 5 cr
♦829510 –2 REC 1215-1300 MTWThF, FolH 303, 5 cr

3023 Intermediate Modern Chinese (prereq 3022)
722789 1115-1200 MTWThF, FolH 107, Wang, 5 cr

3033 Introductory Classical Chinese (prereq 3032)
422785 0915-1000 MWF, FolH 302, Mather, 4 cr

3043 Third Year Modern Chinese (prereq 3042)
622784 1115-1200 MWF, FolH 103, Liu, 4 cr

3090H Honors Tutorial (prereq △)
811685 1-4 cr

3165 Chinese Drama in English Translation
837106 1315-1400 MWF, FolH 302, Liu, 4 cr

3970 Directed Studies (prereq #, △, college approval)
122787 1-4 cr

5043 Third Year Modern Chinese (prereq 3042)
922788 1115-1200 MWF, FolH 103, Liu, 4 cr

5451 Studies in Chinese Linguistics (prereq 5251 or 5252)
732965 1415-1530 TTh, FolH 52, S Wang, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
904582 1-4 cr

CIVIL ENGINEERING (CE)
Civil And Mineral Engineering
Institute of Technology

R3200 Introduction to Transportation Engineering (prereq Phys 1271, IT stu) (A-N only)
524365 0915-1000 MTWF, CivMinE 212, Huber, 4 cr

R3300 Elements of Soil Mechanics (prereq AEM 1015, IT stu) (A-N only)
332998 1015-1200 TTh, CivMinE 205, Haitjema, 4 cr

R3301 Soil Mechanics Laboratory (prereq 3300, IT stu) (A-N only)
433009 –1 LAB 0915-1200 M, CivMinE 350, Haitjema, 1 cr
833010 –2 LAB 1315-1600 M, CivMinE 350, Haitjema, 1 cr
633011 –3 LAB 0915-1200 T, CivMinE 350, Haitjema, 1 cr
433012 –4 LAB 1315-1600 T, CivMinE 350, Haitjema, 1 cr

R3400 Fluid Mechanics (§AEM 5200; prereq Math 3221, AEM 1015 or 3016, IT stu or forest products maj) (A-N only)
★LECT 1115-1200 MWF, Arch 5, Parker
424147 –1 LAB 1415-1700 M, CivMinE 277, Farell, 4 cr
224148 –2 LAB 1415-1700 T, CivMinE 277, Farell, 4 cr
424150 –3 LAB 1415-1700 W, CivMinE 277, Farell, 4 cr
724154 –4 LAB 1415-1700 Th, CivMinE 277, Farell, 4 cr
524155 –5 LAB 1415-1700 F, CivMinE 277, Farell, 4 cr

R3500 Introduction to Environmental Engineering Problems and Analysis (prereq Chem 1005)
008123 1015-1100 MTWTh, CivMinE 212, Semmens, 4 cr

3602 Structural Design for Architects (prereq architecture maj or adult special, AEM 3092, 3093, CE 3600, 3601) (A-N only)
024368 0915-1000 MTWThF, Arch 40, Cerny, 4 cr

R5002 Engineering Economics (prereq jr or sr IT stu or adult special or grad) (A-N only)
124370 1115-1200 TTh, CivMinE 212, Huber, 2 cr

5099 Advanced Design, Analysis, Research or Tutorial in Civil Engineering (prereq approval by faculty adviser) (A-N only)
024371 ar cr

5201 Highway Traffic Characteristics and Operation (prereq 3200, IT stu or grad) (A-N only)
624373 1515-1700 TTh, CivMinE 213, Michalopoulos, 4 cr

5301 Applied Soil Mechanics (prereq 3300, 5300, IT stu or grad) (A-N only)
508103 1615-1800 MW, CivMinE 205, Vardoulakis, 4 cr

5302 Applied Rock Mechanics (prereq 5300, IT stu or grad) (A-N only)
505685 0815-0900 MTWF, CivMinE 213, Crouch, 4 cr

5304 Design of Highway and Airport Pavements (prereq 3300, 3700, IT stu or grad) (A-N only)
205678 1615-1800 TTh, ExpE 265, Skok, 4 cr

R5402 Computational Hydraulics (prereq 5401, CSci 3101 or #, IT stu or grad) (A-N only)
★LECT 0915-1000 MWF, CivMinE 205, Gulliver
224165 –1 LAB 1415-1700 T, CivMinE 202, 4 cr

R5403 Hydraulic Structures (prereq 5401 or #, IT or grad stu) (A-N only)
★LECT 1315-1400 MWF, CivMinE 205, Stefan
133000 –1 LAB 1415-1700 F, HL, 4 cr

R5405 Hydrology and Hydrologic Design (prereq 5401 or #, IT stu or grad) (A-N only)
★LECT 1115-1200 MWF, CivMinE 205, Bowers
724171 –1 LAB 1415-1700 M, CivMinE 202, 4 cr
524172 –2 LAB 1415-1700 W, CivMinE 202, 4 cr
839292 –3 LAB 0915-1200 Th, CivMinE 202, 4 cr

R5420 Introduction to Water Resources Management
639293 0815-0900 MTWF, CivMinE 205, Silberman, 4 cr

R5501 Analysis and Design of Wastewater Systems (prereq 3400, 3500 or #, IT stu or grad) (A-N only)
★LECT 0815-0900 MWF, CivMinE 212, Maier
533003 –1 LAB 1315-1500 T, CivMinE 205, 4 cr
333004 –2 LAB 1415-1600 W, CivMinE 205, 4 cr
133005 –3 LAB 1315-1500 Th, CivMinE 205, 4 cr

R5600 **Linear Structural Systems** (prereq AEM 1015, 3016, IT stu or grad) (A-N only)
224375 1015-1100 MTWF, CivMinE 202, 4 cr

R5601 **Matrix Analysis of Structures** (prereq 5600, IT stu or grad) (A-N only)
124376 1115-1200 MWF, CivMinE 212, 4 cr

R5603 **Introduction to Construction Materials** (prereq IT upper div student, AEM 3016) (A-N only)
139323 –1 LAB 0815-1100 T, CivMinE 340, 2 cr
039324 –2 LAB 0815-1100 Th, CivMinE 340, 2 cr
839325 –3 LAB 1315-1600 Th, CivMinE 340, 2 cr

R5610 **Design of Metal Structures: Introduction** (prereq 5600, 5603, upper division IT stu or grad) (A-N only)
924377 –1 1415-1600 MW, CivMinE 212, Galambos, 4 cr
833007 –2 1415-1600 MW, ExpE 177, 4 cr

R5615 **Prestressed Concrete** (prereq 5611, IT or grad stu...5613 rec) (A-N only)
633008 1715-1900 TTh, CivMinE 212, Cerny, 4 cr

8099 **Civil Engineering Research** (prereq #) (A-N only)
524379 1-5 cr

8202 **Freeway Operations** (prereq #)
924380 1515-1700 MW, CivMinE 214, Michalopoulos, 4 cr

8321 **Mechanics of Granular Media** (prereq 5300)
808107 1015-1200 TTh, CivMinE 214, Drescher, 4 cr

8419 **Water Resources Systems Simulation** (prereq 5401 or #)
933001 1315-1500 TTh, CivMinE 213, Song, 4 cr

8421 **Incompressible Potential Flow** (§AEM 5204; prereq 5435 or #)
733002 1615-1800 MW, CivMinE 213, Arndt, 3 cr

8425 **Advanced Grounderwater Mechanics** (prereq 5425 or #)
608111 1415-1600 MW, CivMinE 213, Strack, 4 cr

8437 **Topics: Hydrodynamics Theory** (prereq #)
905683 3 cr

8499 **Advanced Hydraulic Laboratory** (prereq #)
524382 Bowers, 2 cr

8506 **Aquatic Chemistry for Environmental Engineers** (prereq 8505)
208127 0915-1100 TTh, CivMinE 213, Eisenreich, 4 cr

8507 **Physical Chemical Processes for Water and Wastewater Treatment - Part II** (prereq 5500, 5501, 8505 or #)
033006 1115-1200 MWF, CivMinE 213, Semmens, 3 cr

8551 **Seminar: Models of Aquatic Environments** (prereq 8550)
324383 1615-1800 T, CivMinE 214, Stefan, 1-5 cr

8560 **Seminar: Special Topics in Environmental Engineering** (prereq #)
124384 1515-1600 Th, CivMinE 205, Semmens, 1 cr

8621 **Structural Dynamics II** (prereq 8620 or #)
908115 1315-1500 MW, CivMinE 214, Krauthammer, 4 cr

8622 **Dynamic Soil-Structure Analysis** (prereq 5300, 8620, 8621) (A-N only)
338820 0915-1100 MW, CivMinE 213, Krauthammer, 4 cr

8699 **Seminar: Structures** (prereq 8698, #)
024385 1215-1400 F, CivMinE 213, ar cr

CLASSICAL CIVILIZATION (ClCv)
Liberal Arts

R3340 **Practicum in Archaeological Field Techniques** (prereq classical civilization maj or #, one course in ancient art or archaeology)
721433 1015-1200 TTh, FordH 290C, Gunter, 4 cr (Field work 1015-1600 TTh, May-June)

R3940 **Proseminar: Classical Traditions in Western Culture: Social and Political Thought** (prereq classical civilization maj or △)
932964 1515-1700 M, LindH 305, Sibley, 4 cr

3970 **Directed Studies** (prereq #, △, college approval)
416632 1-15 cr

3990 **Directed Research** (prereq #, △, college approval)
116634 1-15 cr

CLASSICS (Clas)
Classics
Liberal Arts

R1002 **Age of Pericles**
733369 1015-1100 MWF, FolH 308, Billigmeier, 4 cr

1006 **Age of Nero**
305686 1115-1200 MWF, FordH 55, Sheets, 4 cr

1045 **Basic Program in Technical Terminology and Word Study** (prereq ¶1048, 3046)
701859 3 cr (Orientation 0815-0900 M, March 26 or 0915-1000 T, March 27 or 0815-0900 M, April 2, Armory 116. Independent study ar)

1048 **Greek and Latin Terminology in the Medical and Biological Sciences** (§1141, 3048; prereq 1045 or ¶ or 3045)
101865 2 cr (Orientation 0815-0900 M, March 26 or 0915-1000 T, March 27 or 0815-0900 M, April 2, Armory 116. Independent study ar)

1141 **Greek and Latin Terminology for Nursing** (§1048)
601871 3 cr (Orientation 0815-0900 M, March 26 or 0915-1000 T, March 27 or 0815-0900 M, April 2, Armory 116. Independent study ar)

3046 **Advanced Etymology: Vocabulary of the Sciences and Humanities** (prereq 1045 or ¶)
801884 2 cr (Orientation 0815-0900 M, March 26 or 0915-1000 T, March 27 or 0815-0900 M, April 2, Armory 116. Independent study ar)

3970 **Directed Studies** (prereq #, △, college approval)
105690 1-5 cr

5004 **Eroticism and Family Life in the Graeco-Roman World** (prereq soph)
133370 1315-1500 MW, FolH 110, Erickson, 4 cr

R5107 **Roman Sculpture** (§ArtH 5107; prereq jr or #)
936965 1215-1300 MWF, JonesH 207B, McNally, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
005691 1-5 cr

5980 **Directed Instruction** (prereq #, △, CLA approval)
605693 4 cr

5990 **Directed Research** (prereq #, △, CLA approval)
205695 4 cr

8910 **Seminar: Problems in Classical Archaeology** (§ArtH 8910; prereq #)
506786 1515-1700 W, FolH 303, Keuls, 4 cr

COLLEGE HONORS SEMINAR (CHS)
Honors Program
Liberal Arts

R3775 **The Norman Conquest-1066** (prereq jr, sr, reg honors div)
335965 1415-1600 W, Mgmt/Econ 130, B Bachrach, 4 cr

R3776 **World War II At Home: A Documentary Approach** (prereq jr, sr, reg honors div)
139329 1315-1500 T, WaLib 102, David Klaassen, 4 cr

R3777 **Religious Ethics in America** (prereq jr, sr, reg honors div)
035967 1415-1600 T, FordH 50, Roland DeLattre, 4 cr

R3778 **The Literature of Australia** (prereq jr, sr, reg honors div)
835968 0915-1100 M, FolH 304, Wlad Godzich, 4 cr

R3779 **Genetics and Human Disease** (prereq jr, sr, reg honors div)
635969 1415-1600 W, MoosT 17252, Burt Shapiro, 4 cr

R3781 **Regulation/Competition in Health** (prereq jr, sr, reg honors div)
035970 1315-1500 T, MoosT 2146, Lester E Block, 4 cr

R3785 **Law and Literature** (prereq jr, sr, reg honors div)
136687 1315-1500 M, JohH 125, K Van D'Elden, 4 cr

R3787 **Families in Frontier Minnesota** (prereq jr, sr, regis honors div)
439330 1315-1500 W, FordH 50, Russell Menard, 4 cr

3970 **College Honors Seminar: Directed Studies** (prereq jr, sr honors, #, △, college approval)
239331 1-5 cr

COMMUNICATION DISORDERS (CDis)
Liberal Arts

R3100 **Clinical and Research Observation** (prereq department written permission) (S-N only)
822766 2 cr

3101 **Introduction to Speech Pathology and Audiology**
622767 1015-1200 MW, FolH 303, Martin, others, 4 cr

5101 **Communication Problems of Children**
422768 1630-1830 M, FolH 303, S Doyle, others, 3 cr

5306 **Hearing Science** (prereq 5301, 5302 or #)
222769 0815-1000 MW, ChDev 218, Ward, 4 cr

5502 **Stuttering**
622770 1415-1600 TTh, FolH 303, Martin, Haroldson, 4 cr

5506 **Aphasia** (prereq 5302 or #)
422771 1700-1845 TTh, FolH 303, Brookshire, 4 cr

5707 **Audiology in Educational Settings** (prereq 5703 or #)
233187 0915-1100 T, 0915-1000 Th, ShevH 119, Carlstrom, 3 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
222772 ar cr

R8305 **Laboratory Instrumentation** (prereq 5301 or #)
★LECT 1315-1500 W, ShevH 119, Speaks, Van Tasell, Yanz
605838 –1 LAB 1315-1400 M, ShevH 119, 2 cr
405839 –2 LAB 1415-1500 M, ShevH 119, 2 cr
805840 –3 LAB 1515-1600 M, ShevH 119, 2 cr
★LECT 1315-1500 WF, ShevH 119, Speaks, Van Tasell, Yanz
105844 –4 LAB 1315-1400 M, 1515-1600 F, ShevH 119, 4 cr
905845 –5 LAB 1415-1500 M, 1515-1600 F, ShevH 119, 4 cr
505847 –6 LAB 1515-1600 MF, ShevH 119, 4 cr

8503 **Seminar: Voice** (prereq 5508 or #)
133188 0815-1000 T, ShevH 205A, Starr, 3 cr

R8504 **Seminar: Articulation** (prereq 5504 or #)
122773 1215-1400 Th, FolH 302, McDermott, 3 cr

R8507 **Seminar: Cleft Palate** (prereq 5507 or #)
922774 0915-1100 F, MoosT 6274, Moller, Starr, 3 cr

8512 **Seminar: Language Retardation** (prereq 5305 or #)
722775 1615-1900 W, ShevH 119, Reichle, 3 cr

8520 **Clinical Education in Speech/Language Pathology** (prereq #)
522776 2-6 cr

8521 **Clinical Education in Speech/Language Pathology** (prereq #)
618007 2-6 cr

8718 **Seminar: Hearing** (prereq #)
933189 1315-1600 Th, ShevH 119, Yanz, 3 cr

8720 **Clinical Education in Audiology** (prereq #)
322777 2-6 cr

8721 **Clinical Education in Audiology** (prereq #)
218009 2-6 cr

8990 **Research** (prereq #)
122778 ar cr

COMPARATIVE LITERATURE (CLit)
Liberal Arts

5555 Introduction to Semiotics
139332 1415-1700 W, FolH 302, Godzich, 4 cr

R5910 Topics in Comparative Literature (prereq reading knowledge of Fren, Ger or Span or #)
533762 –1 1115-1200 MWF, LindH 320, Firchow, 4 cr (Modern Poetry)
733761 –2 1245-1400 TTh, FolH 203, Grottanelli, 4 cr (Social Dynamics and the Structure of Mythic Narrative)
333763 –3 1415-1700 F, FolH 52, Wierzewski, 4 cr (East European Cinema Since 1945)

5970 Directed Readings (prereq #, △, CLA approval)
133764 1–4 cr

8930 Advanced Comparative Literature Seminar: European Enlightenment (prereq 8951-8952-8955 or #)
022779 1415-1700 M, FolH 301, Schulte-Sasse, 4 cr

8955 Seminar: Comparative Literature (8951-8952-8955†; prereq 8952)
322780 1415-1700 T, FolH 301, Sousa, 4 cr

8970 Directed Reading (prereq grad student in comparative lit, △)
122781 1–4 cr

COMPOSITION AND COMMUNICATION (Comp)
Liberal Arts

0011 Preparation for Writing Practice (prereq assignment to category 4; # after first day of class) (S-N only) (course fee)
838868 1015-1100 MWF, Phys 210, 0 cr

R1011 Writing Practice I (prereq assignment to category 2 or 3)
107701 –1 LECT 0815-0900 MWF, LindH 203, 5 cr
807703 –2 LECT 0915-1000 MWF, AkerH 313, 5 cr
607704 –3 LECT 1015-1100 MWF, AkerH 309, 5 cr
407705 –4 LECT 1215-1300 MWF, LindH 215, 5 cr
107707 –5 LECT 1315-1400 MWF, ChDev 218, 5 cr
★LAB 0815-0930 TTh, FordH 55
907708 –6 LECT 0915-1000 MWF, Arch 20, 5 cr
107710 –7 LECT 0915-1000 MWF, Arch 15, 5 cr
907711 –8 LECT 1115-1200 MWF, MinMet 116, 5 cr
707712 –9 LECT 1215-1300 MWF, LindH 203, 5 cr
507713 –10 LECT 1415-1500 MWF, AkerH 215, 5 cr
★LAB 0945-1100 TTh, FordH 55
107715 –11 LECT 0815-0900 MWF, LindH 229, 5 cr
007716 –12 LECT 0915-1000 MWF, FordH 160, 5 cr
607718 –13 LECT 1015-1100 MWF, MinMet 116, 5 cr
607721 –14 LECT 1115-1200 MWF, VinH 213, 5 cr
407722 –15 LECT 1415-1500 MWF, KoltH S133, 5 cr
★LAB 1115-1230 TTh, FordH 55
207723 –16 LECT 1015-1100 MWF, FordH 447, 5 cr (ESL only)
107724 –17 LECT 1115-1200 MWF, ElectE 115, 5 cr (ESL only)
707726 –18 LECT 1315-1400 MWF, AkerH 211, 5 cr (ESL only)
★LAB 1115-1230 TTh, FordH 155
507727 –19 LECT 0815-0900 MWF, LindH 303, 5 cr
107729 –20 LECT 1015-1100 MWF, ChDev 216, 5 cr
513639 –21 LECT 1115-1200 MWF, ChDev 105, 5 cr
513642 –22 LECT 1215-1300 MWF, LindH 229, 5 cr
113644 –23 LECT 1315-1400 MWF, AkerH 317, 5 cr (MLK only)
436802 –24 LECT 1415-1500 MWF, KoltH S132, 5 cr
★LAB 0945-1100 TTh, JacH 2135

1013 Writing Practice II (prereq grade of X in 1011 or 1012, △) (S-N only)
507730 –1 4 cr
307731 –2 4 cr (ESL only)

R1027 Intermediate Expository Writing (prereq compl Writing Practice requirement; pre-Fall 1982 students:1001 or Comm 1001 or eqv)
225042 –1 0815-0900 MWF, LindH 315, 4 cr
925044 –2 0815-0900 MWF, LindH 305, 4 cr
525046 –3 0915-1000 MWF, ElectE 115, 4 cr
125048 –4 0915-1000 MWF, AkerH 211, 4 cr
325050 –5 0915-1000 MWF, AkerH 215, 4 cr
025052 –6 0915-1000 MWF, AkerH 317, 4 cr (ESL only)
625054 –7 1015-1100 MWF, Arch 45, 4 cr
225056 –8 1015-1100 MWF, Phys 236A, 4 cr
925058 –9 1015-1100 MWF, FordH 70, 4 cr
507744 –10 1015-1100 MWF, ElectE 115, 4 cr
107746 –11 1115-1200 MWF, LindH 315, 4 cr
307759 –12 1115-1200 MWF, AkerH 215, 4 cr
307762 –13 1115-1200 MWF, Phys 236A, 4 cr
007764 –14 1215-1300 MWF, LindH 315, 4 cr
607766 –15 1215-1300 MWF, LindH 303, 4 cr
107769 –16 1215-1300 MWF, LindH 320, 4 cr
107772 –17 1315-1400 MWF, FordH 160, 4 cr
907773 –18 1315-1400 MWF, FordH 40, 4 cr (MLK only)
507775 –19 1315-1400 MWF, Arch 45, 4 cr
007778 –20 1415-1500 MWF, LindH 203, 4 cr
807779 –21 1415-1500 MWF, LindH 320, 4 cr

R3011 Writing About Literature (prereq fulfillment of writing practice req, jr)
207804 –1 0915-1000 MWF, LindH 303, 4 cr
107805 –2 1015-1100 MWF, MinMet 104, 4 cr
534667 –3 1115-1200 MWF, MinMet 104, 4 cr

R3012 Writing About Nonfiction Texts (prereq fulfillment of writing practice req, jr)
907806 –1 1215-1300 MWF, LindH 325, 4 cr
707807 –2 1415-1500 MWF, LindH 325, 4 cr

R3013 Writing for Arts other than Literature (prereq fulfillment of writing practice req, jr)
307809 –1 0945-1100 TTh, VinH 206, 4 cr
507811 –2 0945-1100 TTh, KoltH S136, 4 cr
334668 –3 1115-1230 TTh, KoltH S136, 4 cr

R3014 Writing for the Quantitative Social Sciences (prereq fulfillment of writing practice req, jr)
107813 –1 0945-1100 TTh, ElectE 115, 4 cr
107819 –2 1115-1230 TTh, VinH 213, 4 cr
134669 –3 1115-1230 TTh, FordH 70, 4 cr

R3015 Writing About Science (prereq fulfillment of writing practice req, jr)
907823 –1 1015-1100 MWF, LindH 302, 4 cr
307826 –2 1315-1400 MWF, LindH 315, 4 cr
013659 –3 0815-0930 TTh, MinMet 116, 4 cr

R3027 Advanced Expository Writing (prereq fulfillment of writing practice req, jr)
107830 –1 0815-0900 MWF, BlegH 210, 4 cr
807832 –2 0815-0900 MWF, BlegH 350, 4 cr
407834 –3 0915-1000 MWF, BlegH 350, 4 cr
207835 –4 1015-1100 MWF, BlegH 350, 4 cr
107836 –5 1115-1200 MWF, BlegH 350, 4 cr
707838 –6 1315-1400 MWF, RarigC 610, 4 cr
507839 –7 0815-0930 TTh, BlegH 350, 4 cr
507842 –8 0945-1100 TTh, BlegH 250, 4 cr
007845 –9 0945-1100 TTh, BlegH 440, 4 cr (SMgt honors students only)
607847 –10 1115-1230 TTh, BlegH 115, 4 cr

R3031 Technical Writing for Engineers (prereq fulfillment of writing practice req, jr)
607850 –1 0915-1000 MWF, LindH 315, 4 cr (ESL only)
107853 –2 1015-1100 MWF, LindH 315, 4 cr
507856 –3 1215-1300 MWF, LindH 340, 4 cr
007859 –4 0815-0930 TTh, LindH 303, 4 cr
038870 –5 0945-1100 TTh, LindH 303, 4 cr

R3032 Preprofessional Writing for Business (prereq fulfillment of writing practice req, jr)
107861 –1 0815-0900 MWF, BlegH 225, 4 cr
607864 –2 0915-1000 MWF, BlegH 225, 4 cr
907868 –3 1015-1100 MWF, BlegH 225, 4 cr
507873 –4 1015-1100 MWF, BlegH 115, 4 cr (SMgt honors students only)
007876 –5 1115-1200 MWF, BlegH 115, 4 cr
407879 –6 1115-1200 MWF, BlegH 225, 4 cr
607881 –7 1215-1300 MWF, BlegH 225, 4 cr
407882 –8 1215-1300 MWF, BlegH 115, 4 cr
313660 –9 1315-1400 MWF, BlegH 235, 4 cr
013662 –10 1415-1500 MWF, BlegH 225, 4 cr
938862 –11 0815-0930 TTh, BlegH 225, 4 cr
738863 –12 0815-0930 TTh, BlegH 255, 4 cr
538864 –13 0945-1100 TTh, BlegH 255, 4 cr
338865 –14 0945-1100 TTh, Law 3, 4 cr
138866 –15 1115-1230 TTh, BlegH 255, 4 cr
038867 –16 1245-1400 TTh, BlegH 255, 4 cr

R3080 Special Projects in Advanced Composition (max 6 cr; prereq fulfillment of writing practice req, jr, written perm of major advisor, △)
107884 –1 2 cr (ESL only)
638869 –2 2 cr (honors student, △)

COMPUTER SCIENCE (CSci)
Institute of Technology

R3001 Perspectives on Computers and Society (prereq soph or #)
324402 1115-1230 TTh, SmithH 100, Borgwardt, 4 cr

R3101 A FORTRAN Introduction to Computer Programming (prereq non-computer science maj, Math 1111 or 1201 or equiv or #)
713431 –1 0815-0900 MWF, MinMet 116, Venkatesan, 4 cr
313433 –2 0915-1000 MWF, MechE 221, Venkatesan, 4 cr
113434 –3 1015-1100 MWF, Armory 116, Borgwardt, 4 cr
813436 –4 1115-1200 MWF, VinH 1, Afshari, 4 cr
613440 –5 1215-1300 MWF, Zoology 102, Afshari, 4 cr
213442 –6 1315-1400 MWF, AkerH 225, Gini, 4 cr
518128 –7 1415-1500 MWF, Arch 60, Rosen, 4 cr
718130 –8 1515-1600 MWF, Arch 15, Berzins, 4 cr

R3102 Introduction to Pascal Programming (prereq non-computer science maj, Math 1111 or 1201 or equiv or #)
913444 –1 0815-0900 MWF, AkerH 225, Venkatesan, 4 cr
513446 –2 0915-1000 MWF, AkerH 309, Venkatesan, 4 cr
013449 –3 1215-1300 MWF, AkerH 225, Boley, 4 cr

R3104 Introduction to Programming and Problem Solving (prereq Math 1211 or equiv or #)
★LECT 1415-1530 MW, SmithH 100
413455 –1 LAB 1115-1200 TTh, AkerH 225, Dovolis, 5 cr (CSci, EE maj only)
113457 –2 LAB 1215-1300 TTh, Arch 55, Dovolis, 5 cr
913458 –3 LAB 1315-1400 TTh, MinMet 116, Dovolis, 5 cr
113460 –4 LAB 1415-1500 TTh, SmithH 325, Dovolis, 5 cr
913461 –5 LAB 0915-1000 WF, Arch 45, Dovolis, 5 cr
713462 –6 LAB 1015-1100 WF, Arch 40, Dovolis, 5 cr
513463 –7 LAB 1115-1200 WF, AkerH 225, Dovolis, 5 cr
113465 –8 LAB 1215-1300 WF, CivMinE 212, Dovolis, 5 cr

R3106 Fundamentals of Algorithms and Languages II (prereq 3104, 3105 or #)
024404 1615-1730 MW, Arch 10, Berzins, 4 cr

R3107 Introduction to the Structure and Programming of Computer Systems (§5101; prereq computer science maj, 3104 or #)
824405 –1 0945-1100 TTh, Arch 35, Boley, 4 cr
238888 –2 1515-1630 TTh, Arch 40, Gray, 4 cr

R3400 Discrete Structures of Computer Science (prereq Math 1231 or 1331 or #)
424407 1115-1230 TTh, Phys 133, Stein, 4 cr

R5102 Structure and Programming of Software Systems II (prereq CLA or upper division IT computer science maj or grad, 3107 or 5101 or #)
029568 –1 1115-1200 MWF, MechE 108, Dovolis, 4 cr
218138 –2 1615-1730 TTh, MechE 212, El Ziq, 4 cr

R5104 System Simulation: Languages and Techniques (prereq CLA or upper division IT computer science maj or grad, 3107 or 5101, Stat 3091 or #)
839387 0815-0930 MW, FordH 120, 4 cr

R5105 Theory of Machine Arithmetic (prereq 3107 or 5101 or #)
637043 1545-1700 TTh, LindH 229, Stein, 4 cr

R5106 Structure of Higher Level Languages (prereq CLA or upper division IT computer science maj or grad, 5102, 5121 or #)
224408 1715-1830 TTh, FordH 120, El Ziq, 4 cr

R5107 Computer Graphics I (prereq CLA or upper division IT computer science maj or grad, 3107 or 5101, 5121 or #)
425640 –1 0815-0930 TTh, MechE 102, 202, Miller, 4 cr

R5117 Computer Graphics II prereq CLA or upper division IT computer science maj or grad, 3107 or 5101, 5121 or #)
438890 1615-1730 MW, Arch 45, Singley, 4 cr

R5121 Introduction to Data Structures (prereq CLA or upper div IT comput sci maj or grad stu or EE or math maj, 3106, 3400 or #)
510420 0915-1030 WF, ExpE 193, Du, 4 cr

R5122 Advanced Data Structures (prereq CLA or upper div IT computer sci maj or grad stu or EE or math maj, 5121 or #)
505623 1115-1230 WF, ExpE 193, Du, 4 cr

R5201 Introduction to Computer Architecture (prereq CLA or upper division IT computer science maj or grad, 3400, 3107, 5101 or #)
124409 1415-1530 TTh, Arch 10, Borgwardt, 4 cr

R5211 Data Communications and Computer Networks (prereq CLA or upper div IT computer science maj or grad stu or EE or math maj, 5102 or #)
110422 –1 1245-1400 TTh, MechE 108, Afshari, 4 cr

R5281 Computer Aided Design (prereq 5122, 5201)
813467 –1 0815-0930 MW, MechE 102, 202, Sahni, 4 cr

R5301 Numerical Analysis (prereq Math 3142 or equiv or #...a knowledge of Pascal or FORTRAN is assumed)
437044 1545-1700 TTh, Arch 35, Rosen, 4 cr

R5302 Numerical Analysis (prereq 5301 or #)
424410 –1 1115-1230 TTh, MechE 108, Rosen, 4 cr

R5305 Numerical Methods for Ordinary Differential Equations (prereq 5302 or #)
237045 1245-1400 TTh, MechE 202, Munro, 4 cr

R5400 Introduction to Automata Theory (prereq CLA or upper div IT computer sci maj or grad stu or EE or math maj, 3105, 3400 or #)
224411 –1 0945-1100 TTh, MechE 108, 202, Venkatesan, 4 cr

R5521 Pattern Recognition (prereq CLA or upper division IT computer science maj or grad, 5301 or Stat 3091 or #)
137046 0945-1100 TTh, FordH 170, Gini, 4 cr

R5599 Problems: Nonnumeric Computation (prereq #)
438887 1445-1600 TTh, MechE 202, Afshari, 1–4 cr

R5702 The Principles of Database Systems (prereq CLA or upper division IT computer science maj or grad, 5122 or #)
005626 0945-1100 TTh, ExpE 193, Carlis, 4 cr

R8199 Seminar: Languages and Systems (prereq #)
639388 1315-1400 TTh, MinMet 120, Berzins, 1–3 cr

R8399 Seminar: Numerical Analysis (prereq #)
118147 1115-1230 TTh, LindH 315, Boley, 1–3 cr

R8402 Algorithms-Techniques and Theory (prereq 8401)
937047 1015-1130 MW, LindH 216, Sahni, 4 cr

R8404 Theory of Computation (prereq 8403)
737048 1415-1530 TTh, LindH 302, Ibarra, 4 cr

R8599 Seminar: Nonnumeric Computation (prereq #)
539156 1315-1430 TTh, LindH 303, Gini, 1–3 cr

R8799 Seminar: Information Sciences (prereq #)
529002 1330-1500 TTh, ExpE 193, Hoare, 1–3 cr

R8899 Computer Science Colloquium (prereq grad) (S-N only)
413469 –1 1530-1700 M, MechE 108, 1 cr

CURRICULUM AND INSTRUCTIONAL SYSTEMS (CISy)
Curriculum And Instruction
Education

5000 Educational Technology: Instructional Systems (§SeEd 5000 or 5102) (A-N only)
832973 1615-1800 T, EdHAn 62, Carrier, 1 cr

5002 Educational Technology: Instructional Equipment Resources (§SeEd 5002 or 5102) (A-N only)
632974 1615-1800 M, EdHAn 62, Philipson, 1 cr

R5003 Educational Technology: Computers in the Classroom (§SeEd 5003 or 5102) (A-N only)
432975 1615-1800 T, PeikH 355, Trollip, 1 cr

R5006 Educational Technology: Instructional Computer Programming (A-N only)
204353 1615-1800 M, PeikH 355, Trollip, 1 cr

5209 Principles and Procedures in Designing Instruction (prereq 5000) (A-N only)
122098 1615-1815 Th, PeikH 46, Carrier, 4 cr

R5212 Preparation of Media Materials: Computer (§SeEd 5212; prereq 5201, 5205 or SeEd 5201, 5205) (A-N only)
722100 1015-1200 W, PeikH 355, Tennyson, 2 cr

R5216 Instructional Simulations and Learning Games: Development and Classroom Use (§SeEd 5131) (A-N only)
232976 1615-1815 W, PeikH 355, Trollip, 3 cr

5509 Directed Individual Study (max 6 cr; prereq △) (A-N only)
022104 Carrier, Kimpston, others, 1–6 cr

5600 Introduction to Curriculum Systems (§SeEd 5113) (A-N only)
622106 1615-1815 T, BuH 123, Willie, 3 cr

5700 Curriculum Planning Processes (§SeEd 5170; prereq 5600 or SeEd 5113 or Elem 5100) (A-N only)
105830 1615-1815 T, PeikH 325, Kimpston, 4 cr

R8100 Curriculum and Instruction Core: Curriculum (prereq PhD student or △)
904355 1615-1800 Th, PeikH 315, Ahlgren, 2 cr

R8101 Curriculum and Instruction Core: Instruction (prereq PhD student or △)
504357 1015-1200 Th, EdHAn 64, Carrier, 2 cr

8309 Instructional Systems: Development and Management Theory (prereq 5201, 5203)
705832 1615-1830 T, EdHAn 64, Tennyson, 4 cr

8416 Curriculum and Instructional Systems Seminar (prereq △)
122109 1015-1100 T, PeikH 27, Carrier, Tennyson, 1–4 cr

8501 Problems: Instructional Systems (prereq △)
222111 Carrier, Ahlgren, others, ar cr

8600 Seminar: Curriculum Implementation and Change (max 4 cr; prereq 5605 or SeEd 5114 or △)
505833 1615-1815 W, EdHAn 64, Kimpston, 2 cr

8700 Curriculum and Instructional Systems Field Experience (max 6 cr; prereq #)
922113 Kimpston, 3–6 cr

8800 Problems: Secondary School Supervision (prereq △)
522115 E Anderson, ar cr

DANCE (Dnce)
School of Physical Ed, Rec, School Health Ed
Education

R1022 Ballroom Dance
301671 –1 1315-1410 TTh, NorrisH M151, Lampe, 1 cr (men only)
101681 –2 1315-1410 TTh, NorrisH M151, Lampe, 1 cr (women only)

R1023 Folk and Square Dance
601692 –1 1415-1510 TTh, NorrisH M153A, M153, Stern, 1 cr (men only)
901696 –2 1415-1510 TTh, NorrisH M153A, M153, Stern, 1 cr (women only)

R1024 Modern Dance
101700 –1 1215-1310 MW, PeikG G65, 1 cr
133019 –2 1115-1210 TTh, NorrisH M153A, M153, Bonsignore, 1 cr

R1025 Ballet
422222 –1 0815-0910 TTh, NorrisH 67, Atwood, 1 cr
839275 –2 1615-1710 TTh, PeikG G65, Atwood, 1 cr

R1122 Ballroom Dance (prereq 1022)
301704 –1 1515-1600 MWF, NorrisH M151, Lampe, 1 cr (men only)
001706 –2 1515-1600 MWF, NorrisH M151, Lampe, 1 cr (women only)

R1124 Modern Dance (prereq 1024)
222223 1115-1210 MW, PeikG G65, Bonsignore, 1 cr

R1125 Ballet (prereq 1025 or #)
639276 1515-1610 TTh, PeikG G65, 1 cr

R1224 Modern Dance (prereq 1124)
122224 1115-1210 MW, NorrisH M151, Winter, 1 cr

R1225 Ballet (prereq 1125 or #)
922225 0915-1010 TTh, PeikG G65, Atwood, 1 cr

R1324 Modern Dance (prereq 1224)
722226 1115-1210 TTh, NorrisH M151, Winter, 1 cr

R1514 Improvisation (prereq △) (A-N only)
836120 1515-1700 M, NorrisH 67, Jasmin, 1 cr

R1517 Ethnic Dance Heritage I (max 8 cr) (A-N only)
139273 –1 1315-1600 MW, NorrisH M151, Sealy, 2 cr
039274 –2 1315-1600 TTh, NorrisH 67, Hayden, 2 cr

R1715 Modern Dance Technique and Improvisation III (prereq 1615, △) (A-N only)
522227 0915-1100 TThF, NorrisH M151, Bonsignore, 2 cr

R1718 Ballet III (prereq 1618, △) (A-N only)
322228 1115-1300 MW, NorrisH 67, Savino, 2 cr

R3283 Modern Dance Technique and Improvisation VI (prereq 3282 or #) (A-N only)
315540 0915-1100 MTWTh, NorrisH 67, NMA 100, Bonsignore, 3 cr

R3286 Ballet VI (prereq 3285 or #) (A-N only)
015542 1115-1300 F, PeikG G65, Savino, 1 cr

R3383 Modern Dance Technique and Improvisation (prereq 3382, dance maj, △) (A-N only)
122229 0915-1100 MTWThF, NorrisH M153A, M153, Winter, 5 cr

R3392 Dance Production (prereq △) (A-N only)
522230 1515-1700 TTh, NorrisH 67, Jette, 3 cr

R3395 Advanced Improvisation (prereq 1515, 1615, 1715, △) (A-N only)
322231 1500-1700 W, NorrisH 67, Jasmin, 1 cr

R3610 Student Teaching in Dance: Elementary (prereq 3394, △) (A-N only)
605127 1715-1900 T, NorrisH 3, Jette, 6 cr

R3611 Student Teaching in Dance: Secondary (prereq 3326, △) (A-N only)
615544 1715-1900 T, NorrisH 3, Jette, 6 cr

R3612 Field Experiences in Teaching Dance (prereq 3326, 3608, △) (A-N only)
205129 1715-1900 T, NorrisH 3, Jette, 6 cr

DANISH (Dan)
Scandinavian Languages
Liberal Arts

R1103 Beginning Danish (prereq 1102)
723117 1115-1200 MTWThF, FolH 108, 5 cr

3101 Advanced Danish (prereq 1105)
523118 1245-1400 TTh, FolH 108, Houe, 4 cr

3670 Readings in Danish Literary Texts (max 28 cr; prereq 3101)
323119 1245-1400 TTh, FolH 108, Houe, 4 cr

DENTAL HYGIENE (DH)
Dentistry

1016 Issues in Dental Hygiene (A-N only)
★LECT 0745-0830 T, OwreH 2210, Newell, 3 cr
608206 –1 LAB 0845-1000 T, MoosT 2585, Newell
108209 –2 LAB 0845-1000 Th, MoosT 2585, Newell

1093 Dental Hygiene Core III (prereq 1092) (A-N only)
★LECT 1215-1400 W, MoosT 5125, Sander, 3 cr
312668 –1 LAB 1015-1200 Th, MoosT 2585, Sander

1192 Dental Hygiene Clinic II (prereq 1191) (A-N only)
★LECT 0845-0930 Th, MoosT 5125, Stoltenberg, 4 cr
037248 –1 CLN 0930-1215 TWF, Stoltenberg
837249 –2 CLN 1315-1600 TThF, Stoltenberg

1203 Dental Specialties (A-N only)
★LECT 0745-0930 F, MoosT 5125, Fellows, 3 cr
005531 –1 LAB 1415-1615 W, MoosT 5130, Fellows

1204 Dental Specialties Practicum (prereq 1203) (S-N only)
112672 Tuchner, 1 cr

3061 Community Outreach (prereq 1301) (A-N only)
205891 0845-1200 WF, Newell, 2 cr

3094 Dental Hygiene Core IV (prereq 1093) (A-N only)
936996 –1 LAB 0845-1000 M, MoosT 5140, Knorr, 3 cr
★CLN 1330-1600 M, Knorr

3096 Dental Hygiene Core VI (prereq 3095) (A-N only)
812674 0745-0930 M, MoosT 5125, Grayden, 3 cr

3176 General and Oral Pathology (A-N only)
921818 0745-0930 T, 0745-0830 Th, MoosT 5125, Sauk, 3 cr

3194 Dental Hygiene Clinic IV (prereq 3193) (A-N only)
★LECT 0745-0830 Th, MoosT 5125, Stoltenberg, 6 cr
633042 –1 CLN 0930-1215 MTWThF, Stoltenberg
433043 –2 CLN 1315-1600 MTWThF, Stoltenberg

3275 Oral Radiology I (A-N only)
721819 0745-0930 W, MoosT 5125, Brand, 2 cr

3276 Clinical Radiology (A-N only)
028825 Kuba, 2 cr

3399 Independent Study
008204 ar cr

DENTISTRY (Dent)
Dentistry

5003 Fixed Prosthodontic Technic (prereq 5002)
★LECT 1315-1400 M, MoosT 2690, Keck, 3 cr
628844 –1 LAB 1415-1700 MW, MoosT 4210A

5005 Fixed Prosthodontics: Independent Study
621831 Colman, ar cr

5007 Fixed Prosthodontics II
421832 0745-0830 Th, MoosT 2530, Colman, 1 cr

5012 Fixed Prosthodontics Clinic (prereq 5011)
415464 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 9139, Colman, 3 cr

5017 Fixed Prosthodontics Clinic
928848 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 9139, Colman, 3 cr

5044 Organization and Management of Dental Practice II (prereq 5043)
115466 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 8223, Loupe, 1 cr

5050 Dental Ergonomics and Auxilary Utilization
221833 0815-0900 W, MoosT 2690, DiAngelis, 1 cr

5054 Dental Auxiliary Utilization Clinic (DAU I) (prereq 5053)
715468 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 8223, DiAngelis, 2 cr

5055 Health Ecology: Independent Study
121834 Martens, ar cr

5060 General Dentistry Clinic (Team II)
921835 Martens, 2 cr

5070 Health Ecology Elective
721836 Martens, ar cr

5075 Rural Dental Preceptorship Program
521837 Martens, 2 cr

5080 Dental Auxiliary Utilization Clinic
321838 DiAngelis, 1 cr

5090 Organization and Management of Dental Practice III
121839 0745-0930 M, MoosT 2530, Johnson, 2 cr

5094 Professional Problem Solving
205597 Bebeau, 1 cr

5097 Professional Problem Solving (prereq 5096)
714207 Bebeau, 1 cr

5102 Human and Oral Genetics: Independent Study
521840 Witkop, ar cr

5150 Operative Dentistry I
321841 0800-0845 TTh, MoosT 2620, Hill, 2 cr (0800-0945 TTh, March 27, 29, April 3, 5)

5153 Operative Dentistry Laboratory
505914 0900-1200 TTh, MoosT 4144A, Hill, 2 cr

5156 Introduction to Operative Dentistry Clinic
915470 1000-1230 MWF, 1400-1630 F, MoosT 8127, Larson, 1 cr

5158 Operative Dentistry: Independent Study
821939 Geistfeld, ar cr

5160 Operative Dentistry II
121940 0745-0830 T, MoosT 2530, Geistfeld, 2 cr

5163 Operative Clinic (prereq 5162)
515472 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 8127, Geistfeld, 3 cr

5167 Clinical Operative Dentistry
728849 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 8127, Geistfeld, 3 cr

5170 Seminar: Operative Denistry
021941 Geistfeld, 1 cr

5171 Class III Direct Gold Restorations (prereq 5160, 5163)
114289 Larson, 1 cr

5172 Esthetic Direct Anterior Restoratives (prereq 5160)
514290 Larson, 1 cr

5173 Clerkship in Operative Dentistry (prereq 5160, 5165)
114292 2 cr

5174 Dental Caries: Etiology, Pathology and Prevention
014293 Jensen, 1 cr

5175 Esthetic Dentistry Clinic (prereq 5172)
815073 Larson, 1 cr

5250 Oral Pathology: Independent Study
821942 Gorlin, ar cr

5252 Oral Pathology (prereq 5251)
836702 0845-0930 WF, MoosT 2530, Sedano, ar cr (2 hr lab ar)

5319 Oral Surgery Clinic
621943 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 7407, Waite, 1 cr

5320 Oral Surgery: Independent Study
421944 Waite, ar cr

5322 Office Emergencies
221945 Gatto, 1 cr

5372 Orthodontics II (prereq 5371)
105598 0745-0830 WF, MoosT 2530, Speidel, 2 cr

5376 Orthodontic Laboratory
121946 1000-1200 F, MoosT 4144A, Speidel, 1 cr

5380 Orthodontics
215031 Speidel, 2 cr

5381 Head and Neck Anatomy Review
015055 Speidel, 1 cr

5385 Orthodontics: Independent Study
721948 Speidel, ar cr

5401 Pediatric Dentistry I
921950 1315-1400 F, MoosT 2620, Till, 1 cr

5405 Pediatric Hospital Dentistry
615057 Till, ar cr

5406 Advanced Pediatric Dentistry Clinic (prereq 5404)
814294 Till, ar cr

5407 Minor Tooth Movement
215059 Till, 1 cr

5411 Clinical Pediatric Dentistry (prereq 5410)
223047 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 6125, Till, 1 cr

5415 Clinical Pediatric Dentistry (prereq 5414)
123051 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 6125, Till, 1 cr

5420 Pediatric Dentistry: Independent Study
521952 Till, ar cr

5452 Periodontology II
321953 0815-0900 MT, 1315-1400 W, MoosT 2690, Bakdash, ar cr

5460 Periodontology: Independent Study
121954 Bakdash, ar cr

5465 Clinical Periodontology II
021955 0945-1215 MTWThF, 1400-1630 MTWThF, MoosT 7336, Bandt, 1 cr

5468 Clinical Periodontology III
115474 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 7336, Bandt, ar cr

5471 Clinical Periodontology IV (prereq 5470)
128850 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 7336, Bandt, 1 cr

5553 Removable Prosthodontics: Independent Study
821956 Morstad, ar cr

5555 Removable Prosthodontics II and Laboratory
★LECT 1315-1400 TTh, MoosT 2690, Anderson, 4 cr
228846 –1 LAB 1415-1700 TTh, MoosT 4210A

5564 Removable Prosthetics Clinic (prereq 5563)
815476 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 9160, Morstad, 3 cr

5567 Removable Prosthodontics
623045 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 9160, Morstad, 2 cr

5568 Review: Partial Removable Prosthetics
415061 Petersen, 1 cr

5569 Removable Prosthetics
115063 Morstad, ar cr

5575 Maxillofacial Prosthodontics and Implantology
915064 Petersen, 1 cr

5577 Review of Complete Denture Prosthetics
715065 Petersen, 1 cr

5601 Introduction to Biomaterials II
★LECT 1215-1400 M, MoosT 2620, Hampel, 3 cr
128847 –1 LAB 1415-1700 Th, MoosT 4144A

5602 Biomaterials: Independent Study
621957 Hampel, ar cr

5603 Biomaterials Update (prereq completion of first three years of undergrad prog)
214297 Douglas, 1 cr

5628 Endodontics Clinic
615480 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 8127, Jensen, 1 cr

5630 Endodontics: Independent Study
421958 Jensen, ar cr

5631 Surgical Endodontics Elective
221959 Jensen, ar cr

5632 Advanced Molar Endodontics
114298 Jensen, ar cr

5633 Update in Endodontics
614300 Jensen, ar cr

5644 Hospital Dentistry (prereq 5643)
723053 Gatto, 1 cr

5650 Porcelain Fused to Metal Restorations
621960 Noble, 1 cr

5654 Oral Anatomy: Independent Study
421961 Noble, ar cr

5677 Dental Research Training
315067 Legler, ar cr

5680 Oral Biology: Independent Study
221962 Shapiro, ar cr

5751 Occlusion II
★LECT 1315-1400 F, MoosT 2690, Schulte, 3 cr
★LAB 1015-1200 Th, MoosT 4210, Schulte
225641 –1 CLN 0815-1000 Th, MoosT 9146

5755 Occlusion: Independent Study
121963 Schulte, 2 cr

5760 Public Communication
115068 Smith, 1 cr

5780 Clinical Roentgenology
915484 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 7221, Kuba, ar cr

5781 Advanced Clinical Roentgenology
921964 Kuba, ar cr

5784 TMJ Pathology and Facial Pain
015069 Brand, 1 cr

5785 Oral Radiology: Independent Study
721965 Kuba, ar cr

5802 Treatment Planning Clinic I (prereq 5801)
115488 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 7555, Little, 1 cr

5806 Treatment Planning Clinic II (prereq 5805)
423046 0945-1215 MTWThF, 1300-1600 MTWThF, MoosT 7555, Little, 2 cr

5807 Treatment Planning: Independent Study
521966 Little, ar cr

5809 Patient Management II
106122 0915-1000 T, 0815-0900 F, MoosT 2690, Little, 3 cr

5973 General Practice Seminar IV
713316 Simmons, ar cr

5977 General Practice Clinical Administration IV
115071 Simmons, ar cr

5983 General Practice Clinic IV
313318 Simmons, ar cr

5987 General Practice Clinic VIII
015072 Simmons, ar cr

5989 Advanced Clinical Geriatric Dentistry (prereq #)
127334 Martens, ar cr

5990 Field Experience: Administration in a Multidisciplinary Health Center (prereq #)
027335 Martens, ar cr

5994 Oral Health Services for Older Adults (prereq 5993)
825991 Martens, ar cr

5995 Advanced Clinical Restorative Dentistry
321967 Geistfeld, ar cr

5999 Dental Clinic
121968 Jensen, ar cr

8127 Teaching and Evaluation: Dentistry II (prereq 8126)
021969 Martens, 3 cr

8129 Topics and Problems in Dental Education (prereq #)
121971 Loupe, ar cr

8140 Topics: Restorative Dentistry
021972 Geistfeld, ar cr

8150 Research: Restorative Dentistry
821973 Geistfeld, ar cr

8400 Occlusion
621974 Goodkind, 1 cr

8500 Seminar: Research Design (prereq introductory course in statistics, #)
421975 3 cr

DERMATOLOGY (Derm)
Medical School

5181 Clinical Problems in Dermatology (prereq regis med)
523409 1515-1630 W, MoosT 2580, Gentry, 4.5 cr (addnl hrs ar, Manick)

5182 Preceptorship in Dermatology (prereq regis med)
723411 Manick, 4.5 cr

5183 Advanced Dermatology (prereq regis med)
323413 Manick, ar cr

5184 Special Course in Dermatology
023415 Manick, ar cr

5185 Research in Dermatology (prereq 5181)
823416 Dahl, 9 cr

8225 Clinical Dermatology
423418 Goltz, ar cr

8226 Clinical Seminar
523426 1300-1700 WF, PWB 4272, Goltz, ar cr

8227 Histology of the Skin
323430 1500-1600 M, PWB 4272, Goltz, Orkin, ar cr

8228 Research
223419 Zelickson, ar cr

8229 Electron Microscopy in Dermatology
423421 Zelickson, ar cr

8230 Functional Biology of the Skin
123423 Dahl, ar cr

8231 Clinics in Dermatology for Non-Dermatologists
923424 Goltz, ar cr

8232 Seminar: Dermatologic Histopathology and Mycology
723425 ar cr

DESIGN (Dsgn)
Design, Housing And Apparel
Home Economics

R1521 Design Process: Color (prereq △)
028887 –1 LAB 1100-1245 MWF, McNH 262, 4 cr
828888 –2 LAB 0900-1145 TTh, McNH 262, Ginthner, 4 cr

R1523 Design Process: Visual Presentations (prereq △)
628889 –1 LAB 1100-1245 MWF, McNH 258, 4 cr
028890 –2 LAB 1300-1545 TTh, McNH 258, 4 cr

R1525 Design Process: Two Dimensional Design (prereq △)
828891 0900-1045 MWF, McNH 258, Larkin, 4 cr

R1531 Surface Fabric Design (prereq 1521, 1523, 1525 or #, △)
628892 0900-1145 MW, McNH B9, Abell, 4 cr

R1533 Metalsmithing: Introduction to Techniques (prereq 1521, 1523, 1525 or #, △)
428893 1000-1145 MWF, McNH 10, Ordos, 4 cr

R1543 Fashion Illustration (prereq 1541 or #, △)
228894 1545-1730 MW, McNH 262, Ryan, 4 cr

R1544 Costume Design: Special Techniques (prereq 1531, 1541, △)
128895 0900-1045 MWF, McNH 205, 212, Amir-Fazli, 4 cr

R1552 Introduction to Housing, Interior Design (§1551; prereq soph)
422589 1300-1345 MWF, McNH 33, Nagle, 3 cr

R1554 Interior Design I: Spatial Design Experiences (prereq 1501, 1521, 1523, 1552, Ind 1600, △)
928896 0900-1145 TTh, McNH 316, Scudder, 3 cr

R1555 Interior Design I: Interior Design Problems (prereq 1554, △)
728897 1300-1445 MWF, McNH 316, Erickson, 3 cr

R3527 Design Process: Three Dimensional Design (prereq 1525, 1521, 1523 or #, △)
128900 –1 LAB 1300-1445 MWF, McNH B3, 4 cr
928901 –2 LAB 0900-1145 TTh, McNH B3, 4 cr

R3533 Metalsmithing: Fabrication (prereq 1533, △)
728902 1300-1445 MWF, McNH 10, Ordos, 4 cr

R3548 Lighting Design for Environmental Spaces
108873 1600-1900 Th, McNH 33, Ginthner, 3 cr

R3550 Interior Design Presentation (prereq 1555, pass portfolio review, △)
528903 1300-1545 TTh, McNH 316, Birkeland, 3 cr

R3559 Interior Design Business Procedures and Client Relationships (prereq 3553) (A-N only)
822590 1800-2000 W, McNH 146, Lee, 3 cr

3562 Real Estate Practice (prereq 1551, 1552 or #)
216714 1810-2110 W, AndH 330, Musil, 3 cr

R3563 Environment: Housing and Community (prereq 1501, 1551 or 1552 or #)
622591 1000-1145 TTh, McNH 216, Franklin, 4 cr

R3575 Senior Seminar: Interior Design (to be taken last two qtrs prior to graduation or #) (S-N only)
422592 1200-1245 M, McNH 216, Erickson, 1 cr

R3580 Internship in Housing (max 15 cr; prereq completion one-half professional sequence, #) (S-N only)
222593 1200-1245 M, McNH 212, Franklin, 5-15 cr

R3581 Field Experience in Interior Design: Retail or Community Service (prereq 3553, Psy 1001) (S-N only)
122594 1200-1245 W, McNH 216, Erickson, 3 cr

R3583 Field Experience in Costume Design (prereq completion of at least one-half of professional sequence or #) (S-N only)
922595 Amir-Fazli, 4 cr

R3584 Field Experience in Design (max 15 cr; prereq #, plan to be submitted, approved in advance by adviser, employer) (S-N only)
722596 –1 Abell, ar cr
339398 –2 Bagley, ar cr
139399 –3 Burningham, ar cr
939400 –4 Larkin, ar cr
739401 –5 ar cr

R5509 History of Decorative Arts: Metal, Ceramics, Wood, and Glass (prereq 5505 or equiv)
522597 1100-1145 MWF, McNH 33, Blade, 4 cr

R5515 20th Century Interiors and Furnishings (prereq 5514 or #)
322598 1500-1615 MW, McNH 33, Nagle, 4 cr

R5518 History of Costume: 19th and 20th Century (prereq 3517 or #)
122599 1000-1145 MWF, McNH 216, Shenoi, 4 cr

R5531 Surface Fabric Design III (prereq 3531, portfolio review, △)
334024 1300-1545 MW, McNH B9, Abell, 4 cr

R5544 Costume Design Problems (prereq 5541 or #, △)
328904 0900-1145 TTh, McNH 205, 212, Amir-Fazli, 4 cr

R5554 Interior Design IV: Contract Design (prereq 3553, 3557, TexC 3621 or #, △...ForP 3310, TexC 3622 rec)
128905 –1 LAB 1300-1645 MWF, McNH 333, 4 cr
539402 –2 LAB 0900-1145 TTh, McNH 305, Hutchins, 4 cr

R5555 Honors Thesis: Interior Design (prereq completion of all other professional courses, # program committee approval)
922600 15 cr

R5561 Housing Management (prereq 1551 or 1552, 3563 or #)
722601 1600-1800 TTh, McNH 216, Franklin, 5 cr

R5584 Readings in Design (no srs; prereq #)
522602 –1 Bagley, 1-3 cr
339403 –2 Ginthner, 1-3 cr
139404 –3 Larkin, 1-3 cr

R5585 Problems in Design: General (max 12 cr; prereq #, △)
322603 –1 Abell, 2-4 cr
039405 –2 Bagley, 2-4 cr
839406 –3 Blade, 2-4 cr
639407 –4 Larkin, 2-4 cr

R5586 Problems in Design: Housing and or Interiors (max 12 cr; prereq #, △)
122604 –1 Erickson, 2-4 cr
439408 –2 Ginthner, 2-4 cr

R5587 Problems in Design: Jewelry (max 12 cr; prereq #, △, passed portfolio review)
022605 3-4 cr

R5588 Problems in Design: Textiles (max 12 cr; prereq #, △, passed portfolio review)
822606 –1 Abell, 3-4 cr
239409 –2 Burningham, 3-4 cr

R5589 Problems in Design: Costume (max 12 cr; prereq 5518 or equiv, #, passed portfolio review)
622607 3-4 cr

R8525 Design Process: Two-Dimensional Design (prereq 1501, 1521, 1523, 1525, 3527, 5505 or equiv, △)
028906 1300-1445 MWF, McNH 258, Larkin, 4 cr

R8576 Seminar: Design Instruction (max 6 cr)
222609 1200-1245 W, McNH 240K, Larkin, 1 cr

R8584 Readings in Design (prereq #)
622610 1-3 cr

R8585 Problems in Design (prereq #)
422611 1-5 cr

R8586 Problems in Interior Design (prereq #)
222612 1-5 cr

R8587 Problems in Design (prereq #)
122613 1-5 cr

8588 Directed Study in Design (prereq #) (A-N only)
437559 –1 Abell, Blade, others, 1-5 cr
837560 –2 1500-1545 W, Larkin, 1-5 cr

DUTCH (Dtch)
German
Liberal Arts

R1103 Beginning and Intermediate Dutch: Classroom Reading, Listening, Writing, Speaking (§1110; prereq 1102)
637186 1215-1300 MTWThF, FolH 207, Van Kampen, 5 cr

R1110 Beginning Dutch: Individualized Reading, Listening, Writing (first 3 cr must be completed as a unit, max 15 cr, §1101-1102-1103)
122988 1115-1200 T, WaLib 111, 1-15 cr (1st meeting) (addnl hrs ar)

R3011 Conversation and Composition (prereq 1105 or #)
437187 1615-1800 T, 1715-1800 Th, FolH 203, van Kerkwijk, 4 cr

R3012 Conversation and Composition (prereq 3011)
237188 1615-1800 T, 1715-1800 Th, FolH 203, van Kerkwijk, 4 cr

3310 Studies in Dutch Authors (prereq 1103 or 15 cr of 1110 or #)
322987 1615-1800 M, 1615-1700 Th, FolH 203, van Kerkwijk, 4 cr

3970 Directed Studies (prereq 1105, #, △, college approval)
705457 van Kerkwijk, 1-5 cr

EAST ASIAN STUDIES (EAS)
East Asian Studies
Liberal Arts

1032 Religions of East Asia (§RelS 1032)
533048 1415-1500 MWF, FolH 50, Mather, 4 cr

R3003 Chinese-Japanese Calligraphy (prereq Chn/Jpn 3002 or EAS 3002 or #)
939297 1315-1400 W, JonesH 4, Matsumoto, 2 cr

3300 Proseminar: Interdisciplinary Topics in East Asian Studies (max 12 cr)
522793 1415-1600 T, FolH 304, Cass, 4 cr

3868 Asians in America: An Ethnic Perspective (§Hist 3868)
505475 1115-1230 TTh, FolH 105, Tsuchida, 4 cr

ECOLOGY AND BEHAVIORAL BIOLOGY (EBB)
Biological Sciences

R3001 Introduction to Ecology (open to jrs and above but not to biol majs)
★LECT 1015-1145 TTh, Zoology 313, Tester
406814 –1 REC 0915-1000 M, Zoology 108, 4 cr
106816 –2 REC 1315-1400 T, Zoology 102, 4 cr
706818 –3 REC 1315-1400 Th, Zoology 102, 4 cr
506819 –4 REC 1015-1100 F, Zoology 102, 4 cr

R3111 Vertebrate Behavior (§AnSc 3111; prereq Biol 1106 or 3011 or #)
921799 1400-1545 TTh, AnScVM 135, Phillips, 4 cr (StP)

R5112 Invertebrate Biology (prereq Biol 1106 or 3011 or #)
★LECT 1315-1400 MWF, Zoology 102, Barnwell
725658 –1 LAB 1415-1700 WF, Zoology 101C, 5 cr

R5116 Introduction to Animal Parasitology (prereq Biol 1106 or 3011)
★LECT 0915-1000 MWF, Zoology 102, Gilbertson
136793 –1 LAB 1415-1630 TTh, Zoology 101D, 5 cr

R5128 Adaptation and Macroevolution: Vertebrates (prereq Biol 1106 or 3011)
233190 1315-1400 MWF, Zoology 108, Regal, 4 cr

R5134 Introduction to Ornithology (prereq Biol 1106 or 3011) (course fee)
★LECT 0815-1000 MW, BellMus 311, Warner, 5 cr (Field trips F plus 1 F-Sun ar)
828826 –1 LAB 0815-1200 F, BellMus 311

R5149 Behavioral Genetics (prereq Biol 5003 or GCB 3022 or 5022 or equiv) (A-N only)
618301 1015-1130 TTh, Zoology 108, Merrell, 4 cr

R5156 Comparative Animal Physiology (prereq Biol 1106 or 3011, Chem 3302 or #)
★LECT 0815-0900 MWF, Zoology 102, Schmid, 5 cr
003147 –1 REC 0815-0900 T, Zoology 102
★LAB 1315-1700 T, Zoology 11, 18
503189 –2 REC 0815-0900 Th, Zoology 102
★LAB 1315-1700 Th, Zoology 11, 18

R5608 Ecosystems: Form and Function (prereq 3004 or 5601 or Biol 3041, Chem 1002 or 1005)
739298 1200-1400 TTh, Zoology 108, Davis, 3 cr

5970 Directed Studies (prereq #, △)
621800 ar cr

5990 Directed Research (prereq #, △)
206829 ar cr

R8014 Paleoecological Methods (prereq #)
421801 Bright, 5 cr

8390 Graduate Seminar (prereq #)
221802 ar cr

8391 Advanced Work in Ecology and Behavioral Biology (prereq #)
121803 ar cr

8990 Graduate Research (prereq #)
921804 ar cr

ECONOMICS (Econ)
Liberal Arts

R1001 Principles of Macroeconomics (§1004; prereq 3rd qtr fr or CDS student, knowledge of elem algebra at level of Math 0006)
★LECT 1115-1200 T, WilleyH 125, 175, Green, Heller
324500 –1 REC 0815-0900 MWF, BlegH 120, 4 cr
024502 –2 REC 0915-1000 MWF, BlegH 120, 4 cr
624504 –3 REC 1015-1100 MWF, BlegH 120, 4 cr
224506 –4 REC 1115-1200 MWF, BlegH 120, 4 cr
924508 –5 REC 1215-1300 MWF, BlegH 120, 4 cr
124510 –6 REC 1315-1400 MWF, BlegH 120, 4 cr
★LECT 0815-0930 TTh, 1115-1200 T, WilleyH 175, Domian, Green, Heller
724512 –7 REC 0815-0900 M, BlegH 115, 5 cr
324514 –8 REC 1215-1300 M, BlegH 155, 5 cr
024516 –9 REC 0815-0900 W, BlegH 115, 5 cr
824517 –10 REC 0915-1000 W, AndH 370, 5 cr
424519 –11 REC 1215-1300 W, BlegH 155, 5 cr
624521 –12 REC 0815-0900 F, BlegH 115, 5 cr
224523 –13 REC 0915-1000 F, AndH 370, 5 cr
924525 –14 REC 1015-1100 F, BlegH 440, 5 cr
524527 –15 REC 1115-1200 F, BlegH 440, 5 cr
124529 –16 REC 1215-1300 F, BlegH 130, 5 cr

R1001H Honors Course: Principles of Macroeconomics (§1004, 1014; prereq 3rd qtr fr, knowl of elem algebra at level Math 0006...B average rec)
★LECT 1115-1200 T, WilleyH 175, Green, Heller
611722 –80 REC 1215-1300 MWF, BlegH 255, 5 cr

R1002 Principles of Microeconomics (§1015, 1005, 3001, 3002; prereq 3rd qtr freshman, knowl of elem algebra at level Math 0006)
424536 –1 1115-1200 MWF, WilleyH 125, 0815-0900 M, BlegH 205, 4 cr
124538 –2 1115-1200 MWF, WilleyH 125, 0815-0900 W, BlegH 205, 4 cr
224540 –3 1115-1200 MWF, WilleyH 125, 0915-1000 W, BlegH 420, 4 cr
924542 –4 1115-1200 MWF, WilleyH 125, 1315-1400 W, BlegH 250, 4 cr
524544 –5 1115-1200 MWF, WilleyH 125, 0815-0900 F, BlegH 205, 4 cr
124546 –6 1115-1200 MWF, WilleyH 125, 0915-1000 F, BlegH 255, 4 cr
701974 –7 1115-1200 MWF, WilleyH 125, 1015-1100 F, BlegH 255, 4 cr
624549 –8 1115-1200 MWF, WilleyH 125, 1315-1400 F, BlegH 255, 4 cr
824551 –9 0815-0900 MWF, BlegH 135, 4 cr
424553 –10 0915-1000 MWF, BlegH 135, 4 cr
124555 –11 1015-1100 MWF, BlegH 135, 4 cr
724557 –12 1115-1200 MWF, BlegH 135, 4 cr
324559 –13 1215-1300 MWF, BlegH 135, 4 cr
524561 –14 1315-1400 MWF, BlegH 135, 4 cr

R1002H Honors Course: Principles of Microeconomics (§1005, 1015; prereq 3rd qtr fr, knowl of elem alegebra at level of Math 0006...B avg rec)
711730 1115-1200 MWF, BlegH 255, 5 cr

R1004 Principles of Macroeconomics (§1001; prereq 1 qtr calculus)
022698 1315-1400 MWF, VinH 1, 4 cr

R1005 Principles of Microeconomics (§1002; prereq 1 qtr calculus)
822699 1415-1500 MWF, VinH 1, 4 cr

R3101 Microeconomic Theory (§3105, 5151, no cr SMgt student; prereq 1001, 1002, Math 1111 or 1131 or equiv)
724574 –1 0815-0900 MWF, BlegH 435, 4 cr
324576 –2 1015-1100 MWF, BlegH 125, 4 cr
024578 –3 1115-1200 MWF, BlegH 125, 4 cr
124580 –4 1215-1300 MWF, BlegH 435, 4 cr

R3102 Macroeconomic Theory (prereq 1001, 1002, Math 1111 or 1131 or equiv...3101 rec)
924590 –1 0915-1000 MWF, BlegH 125, Larsen, 4 cr
524592 –2 1115-1200 MWF, BlegH 420, 4 cr
124594 –3 1215-1300 MWF, BlegH 420, 4 cr
109383 –4 1100-1145 MTWTh, CluOff B45, Helmberger, 4 cr (StP)

R3103 Welfare Economics (prereq 3101 or 3101H)
001978 1115-1200 MWF, AndH 330, Coen, 4 cr

R3105 Managerial Economics (§3101, BGS 3001; prereq pre-Mgmt or SMgt student, 1001, 1002, 1 qtr calculus)
★LECT 0945-1100 TTh, AndH 210, Meurer
709279 –1 REC 0815-0900 M, BlegH 255, 4 cr
909281 –2 REC 1315-1400 M, Law 20, 4 cr
509283 –3 REC 0815-0900 W, BlegH 420, 4 cr
809287 –4 REC 1215-1300 W, BlegH 250, 4 cr
609291 –5 REC 1315-1400 W, Law 20, 4 cr
909300 –6 REC 0815-0900 F, BlegH 255, 4 cr
809306 –7 REC 1215-1300 F, BlegH 155, 4 cr

R3701 Money and Banking (§5721, 5701; prereq 1001, 1002, non maj)
★LECT 0815-0930 TTh, WilleyH 125
205504 –1 REC 0815-0900 W, BlegH 415, 4 cr
105505 –2 REC 0815-0900 F, BlegH 415, 4 cr
705507 –3 REC 0915-1000 F, BlegH 420, 4 cr
505508 –4 REC 1015-1100 F, BlegH 230, 4 cr
305509 –5 REC 1115-1200 F, BlegH 435, 4 cr
705510 –6 REC 1215-1300 F, BlegH 150, 4 cr
505511 –7 REC 1315-1400 F, BlegH 220, 4 cr

R3801 Elements of Public Finance (§5821; prereq 1001, 1002, non maj)
509249 0915-1000 MWF, BlegH 230, Langan, 4 cr

3970 Directed Studies (prereq #, △, college approval)
522700 ar cr

R5021 Economics, Ethics, Economic Philosophy (prereq 1001, 1002)
322701 1415-1500 MWF, BlegH 250, Smith, 3-5 cr

R5152 Elements of Economic Analysis: Income and Employment (§3102; prereq 1001, 1002, 1 qtr calculus, grad student or #)
122702 0945-1100 TTh, BlegH 125, Schmitz, 3 cr

R5162 Microeconomic Theory (no grad cr; prereq 5161)
★LECT 1245-1400 TTh, BlegH 125, Ito, 5 cr
939333 –1 REC 1650-1750 Th, BlegH 260

5163 Microeconomic Theory (no grad cr; prereq 5162)
★LECT 0945-1100 TTh, BlegH 145, Ito
108064 –1 REC 1545-1645 Th, BlegH 245, 5 cr

R5166 Macroeconomic Theory (no grad cr; prereq 5165)
★LECT 1415-1530 TTh, BlegH 145, Prescott, 5 cr
939008 –1 REC 1545-1745 Th, BlegH 110

R5231 Introduction to Econometrics (prereq QA 3053 or Stat 5022 or #)
622705 1115-1230 TTh, BlegH 145, Craig, 4 cr

5263 Applied Econometrics (no grad cr; prereq 5262)
★LECT 1415-1530 MW, BlegH 330, Lee, 5 cr
328952 –1 REC 1415-1530 F, BlegH 330

5272 Bayesian Decision Making (§AgEc 5272; prereq 5271)
335870 0945-1100 MW, RarigC 616, Hildreth, 4 cr

R5401 International Economics (§5431; prereq 1001, 1002, non maj)
414301 0815-0930 TTh, AndH 230, Shy, 4 cr

R5421 Prospective World Economy (§IntR 5802; prereq 5401 or 5431 or #)
422706 1315-1400 MWF, BlegH 215, Smith, 4 cr

The Most Sophisticated Training Ground For Nuclear Engineering Isn't On The Ground.



It's on a Navy ship.

The Navy has more than 1,900 reactor-years of nuclear power experience—more than anyone else in America. The Navy has the most sophisticated nuclear equipment in the world. And the Navy operates over half of the nuclear reactors in America.

With a nuclear program like that, you know the Navy also offers the most comprehensive and sophisticated nuclear training.

Every officer in the Nuclear Navy completes a full year of graduate level technical training. Outside the Navy, this kind of program would cost you thousands. In the Navy, you're paid while you learn.

Then, as a nuclear-trained officer, you supervise highly trained personnel in the operation of the most advanced nuclear propulsion plants ever developed. You get a level of technical and management experience unequalled anywhere else.

You get important responsibilities and you get them fast. Because in the Navy, as your knowledge grows, so do your responsibilities.

Today's Nuclear Navy is one of the most challenging and rewarding career choices a man can make. And that choice can pay off while you're still in school. Qualified juniors and seniors earn approximately $1,000/month while they finish school.

As a nuclear-trained officer, after 4 years with regular promotions and pay increases, you can be earning as much as $40,500. That's on top of a full benefits package that includes medical and dental care, and 30 days' vacation earned each year.

As a nuclear-trained officer, you also earn a place among this nation's most qualified and respected professionals. So, if you're majoring in math, engineering or the physical sciences, send in the coupon. Find out more about the most sophisticated training ground for nuclear engineering. Today's Nuclear Navy.

NAVY OPPORTUNITY INFORMATION CENTER
P.O. Box 5000, Clifton, NJ 07015

W225

☐ Please send me more information about becoming an officer in the Nuclear Navy. (ØN)

Name_____
First (Please Print) Last

Address_____ Apt. #_____

City_____ State_____ Zip_____

Age_____ †College/University_____

‡Year in College_____ ♦GPA_____

▲Major/Minor_____

Phone Number_____
(Area Code) Best Time to Call

This is for general recruitment information. You do not have to furnish any of the information requested. Of course, the more we know, the more we can help to determine the kinds of Navy positions for which you qualify.

DC 83/84

Navy Officers Get Responsibility Fast.

5463 International Trade and Payments Theory (no grad cr; prereq 5462)
136124 1115-1230 TTh, BlegH 125, Chipman, 5 cr

R5531 Labor Economics (§3501; prereq 3101, 3102)
222707 1245-1400 TTh, BlegH 120, Simler, 4 cr

R5623 Housing Markets and Public Policy in the United States (prereq 1001, 1002)
638824 0815-0930 TTh, BlegH 120, Swan, 4 cr

5673 Industrial Organization and Government Regulation (no grad cr; prereq 5672)
412841 1115-1200 MWF, BlegH 205, Mohring, 5 cr

R5721 Money and Banking (§3701, 5701; prereq 3102)
338056 1115-1200 MWF, BlegH 215, Vinopal, 4 cr

R5731H Honors Course: Macroeconomic Policy (prereq 3102...B average rec)
538055 0945-1100 TTh, BlegH 330, Hansen, 5 cr

R5821H Honors Course: Elements of Public Finance (prereq 3101, 3103...B average rec)
111739 1015-1100 MWF, BlegH 420, Langan, 5 cr

R5831 Cost-Benefit Analysis (prereq 3101...3103 rec)
835873 1215-1300 MWF, BlegH 215, Bando, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
122711 ar cr

8102 Microeconomic Theory (prereq 8101)
★LECT 1245-1400 TTh, BlegH 125, Ito, 4 cr
739334 –1 REC 1650-1750 Th, BlegH 260

8103 Microeconomic Theory (prereq 8102)
★LECT 0945-1100 TTh, BlegH 145, Ito
008073 –1 REC 1545-1645 Th, BlegH 245, 4 cr

8106 Macroeconomics Theory (prereq 8105)
★LECT 1415-1530 TTh, BlegH 145, Prescott, 4 cr
739009 –1 REC 1545-1745 Th, BlegH 110

8113 Introduction to Mathematical Economics (prereq 8112)
238826 0945-1100 MW, RarigC 616, Hildreth, 3 cr

8162 Mathematical Economics (prereq 8161)
039047 1415-1700 W, BlegH 120, Yannelis, 3 cr

8185 Advanced Topics in Macroeconomics (prereq #)
518422 1545-1700 TTh, BlegH 335, Sargent, 3 cr

8193 Workshop in Mathematical Economics (prereq 8192)
625670 1515-1700 M, Mgmt/Econ 136, Jordan, 3 cr

8203 Applied Econometrics (prereq 8202)
★LECT 1415-1530 MW, BlegH 330, Lee, 4 cr
028954 –1 REC 1415-1530 F, BlegH 330

8213 Econometrics (prereq 8212)
422723 0915-1030 MW, BlegH 340, Sims, 3 cr

8281 Advanced Topics in Econometrics (prereq #)
737079 1215-1330 MW, BlegH 340, Sims, 3 cr

8293 Workshop in Econometrics (prereq #)
217300 Sims, ar cr

8403 International Trade and Payments Theory (prereq 8402)
936125 1115-1230 TTh, BlegH 125, Chipman, 3 cr

8493 Workshop in Trade and Development (prereq 8492)
222724 1530-1700 T, Mgmt/Econ 128, ar cr

8603 Industrial Organization and Government Regulation (prereq 8602)
012849 1115-1200 MWF, BlegH 205, Mohring, 3 cr

8693 Workshop in Applied Microeconomics (prereq 8692)
122725 1530-1700 W, Mgmt/Econ 128, ar cr

8793 Workshop in Macroeconomics (prereq 8792)
922726 ar cr

8990 Individual Research
722727 ar cr

EDUCATIONAL ADMINISTRATION (EdAd)
Educational Policy And Administration
Education

5128 Workshop: Educational Administration: Microcomputing in Health and the Human Services (S-N optional)
634059 1615-1800 Th, PeikH 355, Ammentorp, 3 cr

5167 The American Middle School (A-N only)
704972 1000-1200 S, PeikH 315, Popper, 3 cr

5181 Seminar: Administration of Special Education (§PsyS 8560, 8561; prereq 5103 or SpEd 5160 or PsyS 5160 or #) (A-N only)
622204 1615-1800 M, ChDev 105, Weatherman, 3 cr

5200 Design and Management of Education Services (A-N only)
422205 1830-2030 Th, BuH 123, Ammentorp, 3 cr

5210 Financing Elementary and Secondary Schools (§8210) (A-N only)
034060 1830-2030 M, BuH 123, Mueller, 3 cr

5214 School Management Information Systems (§8214) (A-N only)
935833 1830-2030 Th, PeikH 355, 3 cr

5224 Legal Implications of Acts by School Boards, Administrators, and Teachers (§8224) (A-N only)
834061 1615-1800 T, BlegH 210, Hooker, 3 cr

5226 Educational Facilities Planning (§8226) (A-N only)
634062 1615-1800 W, NichH 122, Alkire, 3 cr

5250 American Higher Education (§Educ 5250, HIEd 5250) (S-N optional)
208001 1615-1800 Th, BuH 240, Hearn, Corcoran, 4 cr

5292 The Law and Postsecondary Educational Institutions (§HiEd 5292) (A-N only)
434063 1830-2030 W, BlegH 245, Hooker, 3 cr

8212 School Budgeting (prereq 5210)
234064 1830-2030 T, PeikH 225, Sederberg, 3 cr

8216 Recent Research: Elementary School Administration (prereq 8215)
134065 1830-2030 T, PeikH 315, Alkire, 3 cr

8218 Seminar: The Social Organization of Schools (prereq 5201 or #)
412502 1615-1800 M, FolH 302, Popper, 3 cr

8220 Quantitative Foundations for Management Methods
125673 1615-1800 T, NichH 216, 3 cr

8223 Quantitative Techniques for Decision Making (prereq 8220 or #)
722209 1615-1800 W, ChDev 216, Hendrix, 3 cr

8228 Problems: Higher Education (§HiEd 8228; prereq #)
112504 ar cr

8235 Seminar: Applied Humanism in Administrative Behavior: The Modern Perspective (prereq 5201 or #)
905814 1615-1800 Th, ChDev 218, Popper, 3 cr

8238 Seminar: Theory and Research (prereq 8218, 8235, educ admin maj or #)
122210 1615-1800 M, BuH 240, Morgan, Mazzoni, 3 cr

8241 Seminar: Internship
722212 1315-1500 Th, PeikH 225, Alkire, Nickerson, 0-9 cr

8242 Seminar: Public School Personnel Programs (prereq 5227 or #)
638922 1615-1800 Th, NichH 122, Alkire, 3 cr

8248 Seminar: Metropolitan School Governance (prereq 8202)
934066 1830-2030 Th, PeikH 225, Mazzoni, 3 cr

8264 Secondary School Principalship
105818 1830-2030 W, PeikH 315, Nickerson, 3 cr

8270 Problems: Elementary School Administration (prereq #)
022216 ar cr

8271 Problems: Secondary School Administration (prereq #)
622218 ar cr

8272 Problems: Educational Administration
422219 1-3 cr

8273 Field Study (prereq #)
822220 0-10 cr

8276 Seminar: Administration of Curriculum in the Two-Year College (prereq 5274)
622221 1830-2030 Th, PeikH 315, Morgan, 3 cr

8290 Financing Higher Education (§HiEd 8290; prereq #)
738829 1830-2030 M, BuH 240, Hearn, 3 cr

8341 Analysis of Education Policy Systems (prereq 8340)
734067 1830-2030 W, PeikH 355, Ammentorp, 3 cr

ELECTRICAL ENGINEERING (EE)
Institute of Technology

R1400 Circuits Laboratory (prereq 3009 or ¶, IT maj)
313027 –1 LAB 0815-1000 T, ElectE 121, 1 cr
113028 –2 LAB 1015-1200 T, ElectE 121, 1 cr
113031 –3 LAB 1315-1500 T, ElectE 121, 1 cr
813033 –4 LAB 1515-1700 T, ElectE 121, 1 cr
613034 –5 LAB 1515-1700 W, ElectE 121, 1 cr
213036 –6 LAB 0815-1000 Th, ElectE 121, 1 cr
913038 –7 LAB 1515-1700 Th, ElectE 121, 1 cr
113040 –8 LAB 1515-1700 F, ElectE 121, 1 cr

R3003 Circuits and Electronics (no EE majs; prereq IT student, Phys 1291, Math 3221 or ¶)
413049 1215-1300 MTWF, SciCB 175, 4 cr

R3004 Circuits and Electronics Laboratory (no EE majs; prereq IT student, 3003 or ¶)
613051 –1 LAB 1315-1500 M, ElectE 118, 1 cr
213053 –2 LAB 1515-1700 M, ElectE 118, 1 cr
913055 –3 LAB 0815-1000 T, ElectE 118, 1 cr
513057 –4 LAB 1015-1200 T, ElectE 118, 1 cr
113059 –5 LAB 1315-1500 T, ElectE 118, 1 cr
313061 –6 LAB 1515-1700 W, ElectE 118, 1 cr
013063 –7 LAB 1015-1200 Th, ElectE 118, 1 cr
613065 –8 LAB 1215-1400 Th, ElectE 118, 1 cr
638807 –9 LAB 1415-1600 Th, ElectE 118, 1 cr
438808 –10 LAB 1315-1500 F, ElectE 118, 1 cr

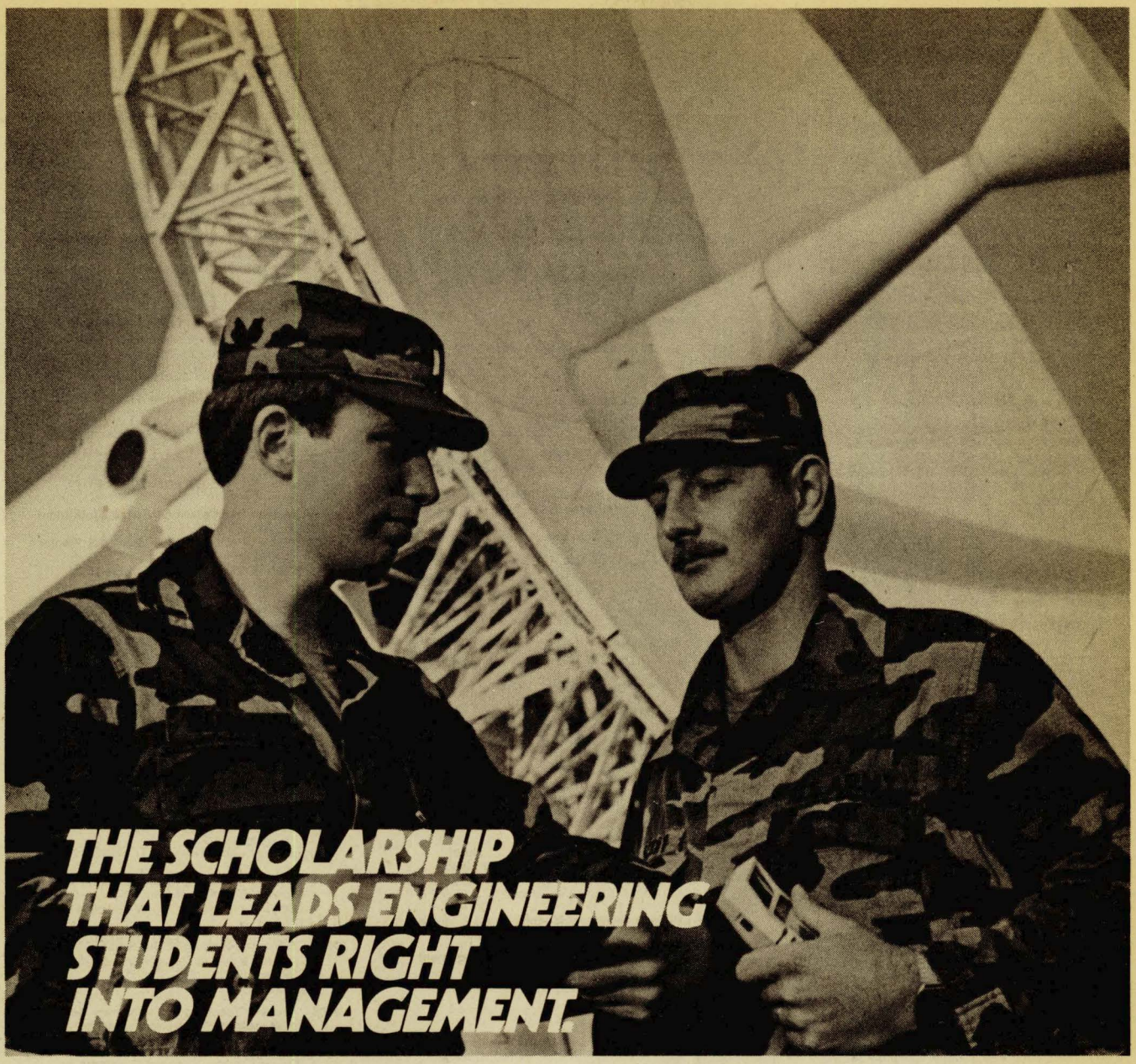
R3010 Linear Circuits II (prereq IT student, at least C grades in 3009, Math 3212 or 3221, Phys 1291 or ¶Phys 1291) (A-N only)
★LECT 1115-1200 MWThF, PWB 2470, 4 cr
113076 –1 REC 1315-1400 M, AkerH 309
813078 –2 REC 1415-1500 M, AkerH 309
013080 –3 REC 1515-1600 M, AkerH 309
613082 –4 REC 1615-1700 M, AkerH 309
213084 –5 REC 1415-1500 T, AkerH 211
913086 –6 REC 1515-1600 T, AkerH 211

R3012 System Design (prereq 3011, upper division elec engr maj)
924413 0915-1000 MTWF, Arch 5, 4 cr

R3061 Analog Electronics (prereq 3010, 3060, upper division elec engr or mech engr maj)
★LECT 1315-1400 MTWF, AkerH 209, 4 cr
934147 –1 REC 1415-1500 M, MechE 302
734148 –2 REC 1515-1600 M, MechE 302
534149 –3 REC 1615-1700 M, MechE 302

R3062 Digital Electronics (prereq 3061, 3351, upper division elec engr or mech engr maj)
934150 1115-1200 MWThF, MoosT 2690, 4 cr

R3110 Electric and Magnetic Fields (prereq upper div elec or mech engr maj, at least C grades in Phys 1291, Math 3212 or 3231) (A-N only)
★LECT 0815-0900 MTWF, Arch 35, 4 cr
534152 –1 REC 1415-1500 T, AkerH 309
334153 –2 REC 1515-1600 T, AkerH 309
134154 –3 REC 1615-1700 T, AkerH 309



There's a lot more to an Army ROTC scholarship than tuition, books, lab fees, supplies and up to $1,000 per school year for living expenses.

There's leadership. You start sharpening your ability to lead while you're still in engineering school. So when you graduate as a second lieutenant, you're ready to take charge.

You're trim, fit. You know how to motivate people. And you're capable of managing the thousands of dollars worth of equipment you're in charge of.

And as you progress, you'll discover increasing opportunities to advance your engineering skills, to attend graduate school, while you serve your country.

All the while, you'll be acquiring the management skills that industry leaders look for.

So look into an Army ROTC scholarship. Talk it over with the Professor of Military Science on your campus. Or write: Army ROTC, Dept. BW, P.O. Box 9000, Clifton, N.J. 07015.

And start your move into engineering and management.

ARMY ROTC.
BE ALL YOU CAN BE.

R3111 Electromagnetic Waves (prereq 3110, Math 3221, upper division elec engr maj)
★LECT 0815-0900 MWThF, SciCB 175, 4 cr
834156 –1 REC 1315-1400 W, MechE 221
634157 –2 REC 1415-1500 W, MechE 302
434158 –3 REC 1515-1600 W, MechE 302
234159 –4 REC 1615-1700 W, MechE 302
634160 –5 REC 1315-1400 Th, AkerH 211
434161 –6 REC 1315-1400 Th, AkerH 215

R3352 Microprocessors (prereq soph IT maj) (A–N only)
★LECT 1015-1100 MWF, OwreH 2230, 4 cr
713090 –1 REC 1315-1400 W, AkerH 309
313092 –2 REC 1415-1500 W, AkerH 309
013094 –3 REC 1515-1600 W, AkerH 309
613096 –4 REC 1615-1700 W, AkerH 309
213098 –5 REC 1315-1400 Th, AkerH 309
813100 –6 REC 1415-1500 Th, AkerH 309
♦413102 –1 LAB 1515-1700 M, ElectE 210
♦113104 –2 LAB 1810-2000 M, ElectE 210
♦713106 –3 LAB 0815-1000 T, ElectE 210
♦313108 –4 LAB 1015-1200 T, ElectE 210
♦513110 –5 LAB 1315-1500 T, ElectE 210
♦113112 –6 LAB 1515-1700 T, ElectE 210
♦813114 –7 LAB 0815-1000 W, ElectE 210
♦413116 –8 LAB 1315-1500 W, ElectE 210
♦234162 –9 LAB 0815-1000 Th, ElectE 210
♦134163 –10 LAB 1215-1400 Th, ElectE 210
♦934164 –11 LAB 1515-1700 Th, ElectE 210
♦734165 –12 LAB 1810-2000 Th, ElectE 210
♦534166 –13 LAB 1515-1700 F, ElectE 210

R3401 Junior Electrical Engineering Laboratory (prereq 3400, 3011 or ¶, 3061 or ¶) (A–N only)
★LECT 1215-1300 W, Arch 25
824727 –1 LAB 1415-1700 W, ElectE 21, 2 cr
424729 –2 LAB 0815-1100 Th, ElectE 21, 2 cr
624731 –3 LAB 0815-1100 Th, ElectE 21, 2 cr
224733 –4 LAB 1115-1400 Th, ElectE 21, 2 cr
924735 –5 LAB 1115-1400 Th, ElectE 21, 2 cr
524737 –6 LAB 1415-1700 Th, ElectE 21, 2 cr
124739 –7 LAB 1415-1700 Th, ElectE 21, 2 cr
324741 –8 LAB 1415-1700 F, ElectE 21, 2 cr

R3402 Junior Electrical Engineering Laboratory (prereq 3401, 3062 or ¶) (A–N only)
★LECT 1215-1300 M, Arch 25
624745 –1 LAB 1415-1700 M, ElectE 21, 2 cr
224747 –2 LAB 1415-1700 M, ElectE 21, 2 cr
924749 –3 LAB 0815-1100 T, ElectE 21, 2 cr
124751 –4 LAB 0815-1100 T, ElectE 21, 2 cr
724753 –5 LAB 1115-1400 T, ElectE 21, 2 cr
324755 –6 LAB 1115-1400 T, ElectE 21, 2 cr
024757 –7 LAB 1415-1700 T, ElectE 21, 2 cr
624759 –8 LAB 1415-1700 T, ElectE 21, 2 cr
824761 –9 LAB 1415-1700 W, ElectE 21, 2 cr
208791 –10 LAB 1415-1700 F, ElectE 21, 2 cr

R3476 Industrial Assignment I (prereq regis in intern program)
524415 2 cr

R3477 Industrial Assignment II (prereq 3476)
124417 2 cr

R5002 Digital Signal Processing (prereq 3012, IT stu or grad IT maj)
824419 1215-1300 TWThF, Arch 40, 4 cr

R5053 Design of Digital Circuits (prereq upper division elec engr or grad IT, 3351, 3062 or equiv) (A–N only)
007666 1115-1200 MWF, Arch 50, 3 cr

R5090 Digital Circuit Design Laboratory (prereq ¶5053)
137569 1 cr

R5120 Acoustics for Architects and Planners (no EE majs; prereq Math 1231, Phys 1122 or 1052 or #...background in stat meth desirable)
134171 0815-0900 MWF, Arch 45, 3 cr

R5161 Physical Electronics (prereq 5160, IT stu or grad IT maj)
007683 LECT 0945-1100 TTh, LindH 302, 4 cr (lab ar)

R5203 Data Communication (prereq upper division elec engr maj or grad IT, 3012, Stat 3091 or #) (A–N only)
207687 1315-1400 MWF, MechE 18, 3 cr

R5241 Data Communications Laboratory (prereq ¶5203)
337571 1 cr

R5252 Digital Control Systems (prereq upper division elec engr maj or grad IT, 3351, 3352 or equiv, 5002 or ¶5002) (A–N only)
907689 1415-1500 MWF, Phys 170, 3 cr

R5290 Digital Control Systems Laboratory (prereq ¶5252)
137572 1 cr

R5322 Electromechanical Processes and Devices (prereq 5300 or #, IT stu or grad IT maj)
607685 0815-0900 MWF, ElectE 115, 4 cr (lab ar)

R5333 Energy Conversion Methods (prereq 3060, 3111, Phys 3501 or ME 3301 or #) (A–N only)
424424 1515-1600 MWF, 1515-1700 T, Arch 60, 4 cr

R5470 Directed Study (prereq △)
224425 ar cr

R5478 Industrial Assignment III (5478-5479†; prereq 3477, regis in intern program) (A–N only)
124426 2 cr

R5479 Industrial Assignment IV (5478-5479†; prereq 5478)
924427 2 cr

R5502 Synthesis of Active and Passive Networks (prereq 5501)
034172 –1 0945-1100 TTh, MechE 102, 3 cr

R5573 Test and Diagnostics (prereq 5572)
213120 –1 0915-1000 MWF, MechE 108, 3 cr

R5576 VLSI Device Modeling (prereq 5572)
113121 –1 1015-1100 MWF, MechE 108, 3 cr

R5656 High-Speed, Compound Semiconductor Devices III (prereq 5655)
837090 0815-0900 MWF, MechE 302, 3 cr

R5662 Semiconductor Properties and Devices (prereq 5661)
524446 –1 1115-1200 MWF, MechE 102, 3 cr

R5669 Magnetic Recording (prereq #)
634174 1115-1230 TTh, ElectE 115, 3 cr

R5670 Basic Microelectronics (prereq #)
★LECT 0815-0900 TTh, MechE 302, 4 cr
234176 –1 LAB 1415-1700 T, ElectE 315
134177 –2 LAB 1415-1700 W, ElectE 315
934178 –3 LAB 1415-1700 Th, ElectE 315
734179 –4 LAB 1415-1700 F, ElectE 315

R5680 Principles of Thin Film Technology (prereq #)
713123 0815-0930 TTh, ElectE 115, 4 cr (lab ar)

R5752 Nonlinear System Design (prereq grad standing or #)
324447 1215-1300 MWF, MechE 221, 3 cr

R5760 Biological System Modelling and Analysis (prereq #)
124448 4 cr

R5815 Semiconductor Power Devices and Applications (prereq 3052, 3402 or grad standing)
625992 0815-0930 TTh, Arch 45, 3 cr

R5854 Advanced Computer Networks (prereq grad IT maj or EE adult special, CSci 5211 or #) (A–N only)
238809 –1 1015-1100 MWF, MechE 102, 3 cr

R8060 Bipolar Transistor Theory (prereq 5660 or #)
134180 1215-1300 MWF, ElectE 115, 3 cr

R8090 Seminar: Electronics (prereq #)
324450 –1 1515-1700 F, MechE 102, ar cr

8191 Seminar: Surface Physics (prereq #)
624454 Cohen, ar cr

8252 Advanced Control Topics (prereq 8251)
736868 1245-1400 TTh, Arch 15, 3 cr

R8290 Seminar: Control Theory (prereq #)
124457 –1 1415-1500 Th, MechE 102, ar cr

8340 Seminar: Electric Power (prereq #)
724459 Albertson, ar cr

R8356 Computer Architecture II (prereq 8355)
307678 –1 1315-1400 MWF, MechE 108, 3 cr

8460 Plan B Project (prereq #)
324464 4 cr

ELEMENTARY EDUCATION (Elem)
Curriculum And Instruction Education

R3300 Children's Literature (A–N only)
024810 –1 1315-1400 TTh, BuH 125, 3 cr
624812 –2 1315-1400 TTh, BuH 123, 3 cr

R3316 Teaching English in the Elementary School (prereq 3100, 3101, Engl 3851) (A–N only)
224814 –1 1015-1100 MWF, PeikH 315, Monson, 3 cr (Blk Y) (¶sec 1, 3331)
924816 –2 1015-1100 MWF, PeikH 225, Taylor, 3 cr (Blk Z) (¶sec 2, 3331)

R3331 Teaching Reading in the Elementary School (prereq 3100, 3101) (A–N only)
724820 –1 1115-1200 MWF, PeikH 315, Manning, 3 cr (Blk Y) (¶sec 1, 3316)
324822 –2 1115-1200 MWF, PeikH 225, Taylor, 3 cr (Blk Z) (¶sec 2, 3316)

R3346 Teaching Science in the Elementary School (prereq 3100, 3101, 10 cr in natural science) (A–N only)
624826 –1 1015-1200 MWF, PeikH 375, Rakow, 3 cr (Blk W) (¶sec 1, 3361, sec 1, 3391)
224828 –2 1015-1200 MWF, PeikH 385, Humphreys, 3 cr (Blk X) (¶sec 2, 3361, sec 2, 3391)

R3361 Teaching Social Studies in the Elementary School (prereq 3100, 3101) (A–N only)
124832 –1 0915-1000 MWF, PeikH 385, Cogan, 3 cr (Blk W) (¶sec 1, 3346, sec 1, 3391)
724834 –2 0915-1000 MWF, PeikH 375, Buggey, 3 cr (Blk X) (¶sec 2, 3346, sec 2, 3391)

R3377 Nursery School-Kindergarten Curriculum II (prereq 3376) (A–N only)
901651 –1 1315-1500 TTh, PeikH 48, Reuter, 3 cr
101655 –2 1630-1745 TTh, NichH 207, Weigand, 3 cr

R3378 Social Learning in Early Childhood Education (prereq CPsy 3301) (A–N only)
122117 1515-1630 TTh, PtH 215, McLoone, 3 cr

R3391 Teaching Mathematics in the Elementary School (prereq 3100, 3101, Math 1005, 1006) (A–N only)
124840 –1 0815-0900 MWF, PeikH 385, Stochl, 3 cr (Blk W) (¶sec 1, 3346, sec 1, 3361)
824842 –2 0815-0900 MWF, PeikH 375, Post, 3 cr (Blk X) (¶sec 2, 3346, sec 2, 3361)

3600 Student Teaching in the Elementary School, Half Days (prereq 12 cr methods, △) (S–N only)
022118 6 cr

3603 Student Teaching in the Kindergarten (prereq 6 cr elem student tchg, △) (S–N only)
122120 6 cr

3604 Student Teaching in the Nursery School (prereq approval of major adviser, director student teaching) (S–N only)
022121 3–6 cr

3605 Student Teaching in Elementary School: Half Days, Full Days (prereq 15 cr methods, △) (S–N only)
822122 9 cr

3607 Student Teaching in Elementary School: Full Days (prereq 18 cr methods, △) (S–N only)
622123 12 cr

3621 Junior Practicum in Elementary Education (max 6 cr; prereq elementary education maj) (S–N only)
422124 1–2 cr

3630 Student Teaching in Elementary School Literature (prereq 10 cr in elem student tchg, △) (S–N only)
222125 3 cr

3631 Student Teaching in Elementary School English (prereq 10 cr in elem student tchg, △) (S–N only)
922127 3 cr

3633 Student Teaching in Elementary School Reading (prereq 10 cr in elem student tchg, △) (S–N only)
522129 3 cr

3634 Student Teaching in Elementary School Science (prereq 10 cr in elem student tchg, △) (S–N only)
922130 3 cr

3636 Student Teaching in Elementary School Social Studies (prereq 10 cr in elem student tchg, △) (S–N only)
722131 3 cr

3639 Student Teaching in Elementary School Mathematics (prereq 10 cr in elem student tchg, △) (S–N only)
522132 3 cr

WE STAND OUT FROM THE CROWD



MSA Store is Non-Profit. That means great savings for you on your school, entertainment and personal needs. Compare our prices on items like clothes, records, backpacks, calculators, school supplies, film processing, gifts and health & beauty supplies. You'll see why MSA Store is the Minnesota Students' Alternative!

Students Helping Students.

Open M-F, 8-7
Saturday 11-5
Sunday 1-5
Ground Floor Coffman

NON-PROFIT · MSA STORE · STUDENT-OWNED & OPERATED

SOME COURSES IMPROVE SCORES – WE IMPROVE STUDENTS, TOO!



BUILD YOUR SKILLS TO BOOST YOUR SCORE!

PREPARE FOR:

LSAT

LIVE CLASSES

- TEST-N-TAPE® LIBRARY
- REINFORCEMENT TEST
- HOMESTUDY PACKET

CLASSES STARTING
FEB., APRIL, MAY

Stanley H. KAPLAN EDUCATIONAL CENTER

Call Days, Evenings & Weekends
378-9191
328 E. HENNEPIN
MPLS, MN 55414

TEST PREPARATION SPECIALISTS SINCE 1938

379-4026

THERE IS A JEWISH STUDENT CENTER AT HILLEL HOUSE

- ***Good Hot Food Served M-F, 11:15-1:30*
- ***Ping-Pong, Pool, Color TV*
- ***Free Use of Electric Typewriters*
- ***Israel Action Committee*
- ***Campus Jewish Appeal*
- ***Rainbow Sign: A National Jewish Project to Prevent Nuclear War*

1521 UNIVERSITY AVE. SE, MPLS

edit . . . type . . . copy . . . spiral . . .

CAMPUS TYPING

DISSERTATIONS–
we meet all univ. specs

REPORTS & MANUSCRIPTS
technical, legal, foreign language

RESUMES–
same day service

LETTERS–
individual & repetitive

WE CAN DO IT!!!
FROM START TO FINISH

CAMPUS TYPING
800 WASHINGTON AVE. S.E.
378-2210

. . . copy . . . spiral . . . bookbinding . . . type

. . . bookbinding . . . edit . . . type . . . copy . . . spiral

3900 Directed Study (max 6 cr; prereq elementary maj, △) (A-N only)
322133 1-3 cr

5107 Diagnosis and Treatment of Learning Difficulties (A-N only)
133067 Schreiner, 3 cr (Morris)

R5300 Literature for the Elementary School (A-N only)
022135 1615-1800 T, BuH 125, Odland, 3 cr

5305 Survey of Special Collections in Children's Literature (prereq 5300 or #) (A-N only)
033068 1615-1800 Th, BuH 123, Odland, 3 cr

5315 Teaching Composition in the Elementary School (prereq postbac, MED and grad student) (A-N only)
739351 1615-1800 Th, PeikH 25, Monson, 3 cr

R5335 Clinical Diagnosis of Reading Difficulties (prereq 5334) (A-N only)
422138 1615-1800 W, PeikH 155, Schreiner, 3 cr

5337 Beginning Reading Instruction (prereq 3331, #) (A-N only)
833069 1615-1800 M, PeikH 155, Manning, 3 cr

R5347 Workshop: Curriculum Implementation in Elementary School Science (prereq elementary teaching experience) (A-N only)
605824 0900-1200 S, PeikH 385, Johnson, 3-6 cr

5350 Elementary School Science: Materials and Resources (prereq 5349) (A-N only)
422141 Humphreys, 3 cr (Rochester)

R5377 Early Childhood Education: Materials and Resources (prereq 3377 or 5376, teaching experience) (A-N only)
222142 1615-1830 T, WullH 130, Hansen, 3 cr

R5602 Practicum: Improvement of Teaching (prereq MEd student in elementary education, #) (S-N only)
824873 3 cr

R8300 Research in Special Collections of Children's Literature (max 6 cr)
922144 1615-1800 Th, BuH 123, Odland, 1-3 cr

8316 Research: English Composition in Elementary Schools (prereq 5316 or equiv)
539352 1615-1800 W, PeikH 27, Monson, 3 cr

R8916 Problems: Teaching English (prereq #)
424892 Dykstra, Monson, ar cr

R8931 Problems: Teaching Reading (prereq 5331 or SeEd 5344, #)
924895 ar cr

R8961 Problems: Teaching Social Studies (prereq 5361 or SeEd 5155 or 8104, #)
524902 ar cr

R8976 Problems: Teaching Kindergarten (prereq #)
722145 Hansen, 3 cr

R8991 Problems: Improvement of Instruction (prereq #)
024905 ar cr

8992 Research: Educational Diagnosis
133070 1015-1230 T, PeikH 225, Schreiner, 3 cr

ENDODONTICS (Endo)
Dentistry

5302 Advanced Clinical Endodontics
221976 Eldeeb, ar cr

5306 Advanced Clinical Endodontics
121977 Eldeeb, ar cr

5312 Endodontic Emergency Problems
921978 Jensen, 1 cr

5316 Endodontic Emergency Problems
721979 Jensen, 1 cr

5322 Treatment Planning
121980 Jensen, 1 cr

5332 Review of Cases
921981 Jensen, 1 cr

5336 Review of Cases
721982 Jensen, 1 cr

8003 Research in Endodontics
521983 Messer, ar cr

8312 Seminar: Endodontics
321984 Eldeeb, Jensen, others, 2 cr

8316 Seminar: Endodontics (prereq 8315, #)
121985 Eldeeb, Jensen, others, 2 cr

8322 Advanced Endodontic Lectures
021986 Jensen, 1 cr

8330 Diagnosis and Treatment Planning
821987 Jensen, ar cr

8333 Topics in Endodontics (prereq 8332, DDS degree)
621988 Jensen, 1 cr

8335 Endodontic-Periodontics Seminar
421989 Jensen, 1 cr

ENGLISH AS A SECOND LANGUAGE (ESL)
Linguistics
Liberal Arts

R0100 English as a Second Language (prereq △)
824937 –1 0815-0900 MTWThF, LindH 340, 0 cr
424939 –2 0915-1000 MTWThF, LindH 340, 0 cr
624941 –3 0915-1000 MTWThF, LindH 325, 0 cr
224943 –4 1015-1100 MTWThF, LindH 325, 0 cr
924945 –5 1015-1100 MTWThF, LindH 340, 0 cr
524947 –6 1115-1200 MTWThF, LindH 340, 0 cr
124949 –7 1115-1200 MTWThF, LindH 325, 0 cr
324951 –8 1315-1400 MTWThF, LindH 340, 0 cr
024953 –9 1415-1500 MTWThF, AkerH 21, 0 cr
901911 –10 1415-1500 MTWThF, KoltH S139, 0 cr

R0110 English as a Second Language (prereq △)
624955 –1 0815-0900 MTWThF, LindH 325, 0 cr
224957 –2 0815-0900 MTWThF, LindH 320, 0 cr
924959 –3 0915-1000 MTWThF, LindH 320, 0 cr
124961 –4 0915-1000 MTWThF, KoltH S139, 0 cr
724963 –5 0915-1000 MTWThF, KoltH S140, 0 cr
324965 –6 1015-1100 MTWThF, LindH 320, 0 cr
024967 –7 1015-1100 MTWThF, KoltH S139, 0 cr
624969 –8 1115-1200 MTWThF, KoltH S139, 0 cr
824971 –9 1115-1200 MTWThF, KoltH S140, 0 cr
424973 –10 1115-1200 MTWThF, KoltH S138, 0 cr
301914 –11 1315-1400 MTWThF, LindH 325, 0 cr
001916 –12 1315-1400 MTWThF, LindH 320, 0 cr
601918 –13 1315-1400 MTWThF, KoltH S139, 0 cr
801920 –14 1415-1500 MTWThF, KoltH S138, 0 cr
401922 –15 1415-1500 MTWThF, KoltH S140, 0 cr

R0120 English as a Second Language (prereq △)
124975 –1 0815-0900 MTWThF, KoltH S140, 0 cr
724977 –2 0815-0900 MTWThF, KoltH S139, 0 cr
324979 –3 0815-0900 MTWThF, KoltH S138, 0 cr
724980 –4 0915-1000 MTWThF, KoltH S138, 0 cr
324982 –5 0915-1000 MTWThF, KoltH S137, 0 cr
024984 –6 0915-1000 MTWThF, VinH 213, 0 cr
824985 –7 1015-1100 MTWThF, KoltH S138, 0 cr
424987 –8 1015-1100 MTWThF, KoltH S140, 0 cr
124989 –9 1015-1100 MTWThF, KoltH S137, 0 cr
224991 –10 1315-1400 MTWThF, KoltH S138, 0 cr
924993 –11 1315-1400 MTWThF, KoltH S140, 0 cr
524995 –12 1415-1500 MTWThF, KoltH S137, 0 cr

R0130 English as a Second Language (prereq △)
001933 –1 0815-0900 MTWThF, VinH 213, 0 cr
601935 –2 0815-0900 MTWThF, KoltH S136, 0 cr
201937 –3 0815-0900 MTWThF, KoltH S133, 0 cr
901939 –4 0915-1000 MTWThF, KoltH S133, 0 cr
101941 –5 1015-1100 MTWThF, AmundH 54, 0 cr
701943 –6 1015-1100 MTWThF, VinH 213, 0 cr
301945 –7 1115-1200 MTWThF, MRRC 211, 0 cr
001947 –8 1115-1200 MTWThF, KoltH S137, 0 cr
601949 –9 1315-1400 MTWThF, KoltH S137, 0 cr
801951 –10 1315-1400 MTWThF, VinH 213, 0 cr
401953 –11 1415-1500 MTWThF, VinH 213, 0 cr
101955 –12 1415-1500 MTWThF, KoltH S135, 0 cr
701957 –13 1515-1600 MTWThF, KoltH S139, 0 cr
301959 –14 1515-1600 MTWThF, KoltH S140, 0 cr

ENGLISH LANGUAGE AND LITERATURE (Engl)
Liberal Arts

R1009 Introduction to the Study of Literature
602065 –1 0815-0900 MWF, LindH 215, Tregeser, 4 cr
902069 –2 1315-1400 MWF, LindH 215, Dougherty, 4 cr
412449 –3 1515-1600 MWF, LindH 215, Young, 4 cr

R1016 Introduction to American Literature
822735 0945-1100 TTh, LindH 305, Solotaroff, 4 cr

R1017 Introduction to Modern Poetry
802078 1315-1400 MWF, LindH 229, Ward, 4 cr

R1018 Introduction to Modern Fiction
125082 –1 0815-0900 MWF, LindH 302, Santelman, 4 cr
533499 –2 0915-1000 MWF, LindH 302, Galegher, 4 cr

R1019 Introduction to Modern Literature: Drama
605788 1315-1400 MWF, LindH 217, Savage, 4 cr

R1101 Introduction to Fiction Writing (prereq compl of writing practice or equiv)
233500 1115-1230 TTh, LindH 229, Sullivan, 4 cr

R1241 Introduction to Shakespeare
622736 1215-1300 MWF, Arch 10, Haley, 4 cr

R1671 The Short Story
405789 1015-1100 MWF, SciCB 125, Madden, 4 cr

R3101 Intermediate Fiction Writing
639391 1115-1245 TTh, LindH 320, 4 cr

R3113 Survey of English Literature
422737 1015-1100 MWF, LindH 305, Rosendahl, 4 cr

R3116 The Renissance
133501 0915-1000 MWF, LindH 203, Haley, 4 cr

R3117 The Restoration and 18th Century
933502 1315-1400 MWF, LindH 302, Leyasmeyer, 4 cr

R3241 Shakespeare (§3243)
925089 0915-1000 MWF, LindH 305, Reed, 4 cr

R3242 Shakespeare (§3243)
025097 –1 0915-1000 MWF, LindH 215, Wright, 4 cr
625099 –2 1115-1200 MWF, LindH 229, Murray, 4 cr
805790 –3 1415-1500 MWF, LindH 229, Haley, 4 cr
605791 –4 0815-0930 TTh, LindH 203, M Durham, 4 cr
733503 –5 1115-1230 TTh, LindH 203, M Durham, 4 cr
533504 –6 1415-1530 TTh, LindH 215, Eaton, 4 cr

R3357 Modern British Literature, 1939-1975
422740 1015-1100 MWF, LindH 229, Firchow, 4 cr

R3413 Survey of American Literature, 1900-1945
839390 1245-1400 TTh, Arch 25, Ross, 4 cr

R3718 Practical Criticism (prereq 1009 or equiv, two courses in literature or △)
925111 –1 1415-1500 MWF, LindH 215, Fruman, 4 cr
105794 –2 0815-0930 TTh, LindH 305, Bales, 4 cr

R3851 The English Language (§5851)
304389 0915-1000 MWF, Arch 25, Bridwell, 4 cr

R3852 Aspects of the English Language
905795 1115-1230 TTh, LindH 305, Escure, 4 cr

R3960 Junior-Senior Seminar (prereq consent of director of undergrad studies, △)
522745 –1 1015-1130 MW, LindH 303, Roth, 4 cr (Poe and Romantic Fiction)
505797 –2 1315-1430 MW, LindH 303, Hurrell, 4 cr (Fiction and Film)
305798 –3 1415-1530 MW, LindH 302, L Durham, 4 cr (English Lyric Poetry of the 16th Century)

3963H Honors Thesis (prereq honors candidacy in Engl, consent of Engl honors adviser)
711792 4 cr

3970 Directed Studies (prereq #, △, college approval)
722758 1-15 cr

3980 Directed Instruction (prereq #, △, college approval)
522759 ar cr

R5101 Advanced Fiction Writing (prereq # or △)
439392 1415-1700 T, LindH 216, 4 cr

R5103 Advanced Fiction Writing (prereq # or △)
833508 1415-1700 Th, LindH 216, Hampl, 4 cr

R5153 20th Century English Novel
633509 1115-1200 MWF, LindH 305, Reed, 4 cr

R5171 English Drama to the Time of Shakespeare (prereq 3241 or 3242)
033510 1215-1300 MWF, LindH 305, L Durham, 4 cr

R5175 Modern Drama Since 1920
833511 1015-1100 MWF, LindH 217, Leyasmeyer, 4 cr

R5213 Beowulf (prereq 5211)
433513 0945-1100 TTh, LindH 215, Kendall, 4 cr

R5216 Major 14th Century Poets (prereq 5221)
233514 1115-1200 MWF, LindH 215, Ward, 4 cr

R5240 Advanced Shakespeare (max 12 cr; prereq 3241, 3242 or 3243 or #)
133515 0815-0930 TTh, LindH 215, McNaron, 4 cr

R5261 Milton
933516 1115-1200 MWF, LindH 203, Unger, 4 cr

R5483 Folklore (prereq 5481 or 5482 or #)
704373 0815-0930 TTh, LindH 302, Stekert, 4 cr

R5620 British and American Women Writers: Silence and Breaking Silence as Feminist and Literary Traditions (max 16 cr)
333519 0945-1100 TTh, LindH 203, Garner, 4 cr

R5632 Romantic Tradition
733520 1015-1100 MWF, LindH 203, Fruman, 4 cr

R5831 American English
533521 1015-1100 MWF, LindH 215, MacLeish, 4 cr

R5851 Structure of Modern English (§3851)
333522 1245-1400 TTh, LindH 215, Brown, 4 cr

R5910 Topics in English and American Literature
304375 –1 1245-1400 TTh, LindH 229, McNaron, 4 cr (Women Novelists)
133523 –2 1415-1530 TTh, LindH 203, Anderson, 4 cr (Irish Poetry After Yeats)

R5920 Topics in English and American Literature
033524 –1 1115-1230 TTh, LindH 215, Stekert, 4 cr (Folklore and Women)
633526 –2 1415-1530 TTh, LindH 229, Sugnet, 4 cr (Imperial Psychology in Western Literature)

R5940 Figures in English and American Literature: Marlowe and Sidney
833525 1315-1400 MWF, LindH 203, O'Brien, 4 cr

5970 Directed Study in Writing (prereq #, △, CLA approval)
433527 1-4 cr

R8011 Introduction to Advanced Literary Study
138830 1115-1230 TTh, LindH 303, Hancher, 4 cr

R8240 Shakespeare: Feminist Criticism of Shakespeare
233528 1415-1615 T, LindH 320, Garner, 4 cr

R8250 Seminar in 17th-Century Studies: Metaphysical Poetry and Modern Criticism
704387 1415-1615 W, LindH 315, Unger, 4 cr

R8430 Writing of Poetry (prereq #)
136673 1415-1700 T, LindH 315, Hampl, 4 cr

R8530 Studies in 19th Century American Literature: Hawthorne
936478 1415-1615 M, LindH 315, Roth, 4 cr

R8610 Studies in 20th-Century British and American Literature: Poetry and Critical Prose of Hopkins and Joyce
133529 1000-1200 T, LindH 216, Anderson, 4 cr

R8670 Studies in Prose Fiction: Huxley and Orwell
433530 1415-1615 W, LindH 216, Firchow, 4 cr

R8690 Seminar: Studies in Drama: Dramatic Theory
233531 1515-1700 M, LindH 320, Hurrell, 4 cr

R8810 Studies in the English Language
405808 –1 1415-1615 M, LindH 216, Bridwell, 4 cr (Psycholinguistic Foundations of the Reading and Writing Processes)
212453 –2 1415-1615 T, LindH 305, Escure, 4 cr (American Pidgins and Creoles)

8970 Independent Readings (prereq #)
104385 1-15 cr

ENTOMOLOGY (Ent)
Agriculture

R1005 Economic Entomology (prereq Biol 1011 or #)
★LECT 1100-1145 MWF, HodsonH 495, Ragsdale
825148 –1 LAB 1400-1545 MW, HodsonH 485, 4 cr
025150 –2 LAB 1600-1745 MW, HodsonH 485, 4 cr
625152 –3 LAB 0800-0945 TTh, HodsonH 485, 4 cr
225154 –4 LAB 1000-1145 TTh, HodsonH 485, 4 cr
925156 –5 LAB 1300-1445 TTh, HodsonH 485, 4 cr

R3020 Principles of Beekeeping (prereq Biol 1011 or #)
★LECT 0800-0845 TTh, HodsonH 490, Furgala, 4 cr
928882 –1 LAB 0900-1045 TTh, HodsonH 490

3100 Entomological Techniques (prereq 3175 or equiv or #)
121615 ar cr

5001 Basic Entomology (prereq #)
821617 ar cr

5254 Insect Sampling Methods (prereq Stat 5021, 5022 or equiv, #)
738748 1000-1045 MWF, HodsonH 490, Moon, 3 cr

R5275 Medical Entomology (prereq 3175 or #)
★LECT 1300-1345 TTh, HodsonH 480, Price, 4 cr
728883 –1 LAB 1400-1545 TTh, HodsonH 480

5425 Special Lectures in Entomology
421619 ar cr

5901 Special Problems in Entomology (prereq #)
621621 ar cr

8027 Advanced Insect Physiology (prereq 5027)
★LECT 0900-0945 T, HodsonH 542, Jones, 3 cr
333052 –1 LAB 1300-1645 Th, HodsonH 542

8200 Seminar (prereq #)
221623 ar cr

8500 Research in Entomology (prereq #)
921625 ar cr

FAMILY PLANNING ADMINISTRATION (FPAd)
Medical School

5241 Family Planning Administration (prereq #)
423547 Foreman, 3 cr

5243 Topics in Family Planning (prereq #)
223551 3-12 cr

FAMILY PRACTICE AND COMMUNITY HEALTH (FPCH)
Medical School

5500 Preceptorship in Clinical Practice (prereq regis med)
224988 McConnell, 9 cr

5501 Rural Physician Associate Program (prereq completion of Phase A and B U/MN Med School curriculum)
424990 Verby, 0-18 cr

5502 Physician as Counselor in Marriage and Family Problems (prereq regis 5501)
124992 Verby, 2 cr

5503 RPAP Research Paper (prereq ¶5501 or Med 5592) (S-N only)
724994 Verby, 1 cr

5515 Preceptorship in Gerontology Community Health (prereq regis med)
324996 Connolly, 9 cr

5516 Research in Human Sexuality (prereq #)
124997 Satterfield, ar cr

5520 Rural Health Care Model-Onamia, MN (prereq regis med)
024998 Jacobson, McConnell, 9 cr

5525 Management of Patients with Cardiovascular Problems by the Family Physician (prereq regis med)
824999 Nesvacil, Sharkey, 9 cr

5530 Clinical Problems in Family Practice (prereq regis med)
725000 Daly, 9 cr

5535 Community Health in Family Practice (prereq regis med or #)
525001 Thorson, 9 cr

5560 Alcohol and Drug Addiction Treatment Center (prereq regis med)
325002 Nesvacil, 4.5 cr

5562 Interviewing, Physical Examination and Patient Counseling (prereq regis med)
025004 Verby, others, ar cr

5563 Clinical Neuropsychopharmacology (prereq FPCH resident or #)
825005 1200-1330 W, Abuzzahab, 2 cr

5570 Practicum in Counseling Techniques (prereq compl of 1st yr residency)
425007 Conroe, 1 cr

5585 Sexual Problems in Clinical Practice (prereq med student, #)
925013 Satterfield, ar cr

5590 Emergency Medicine for Family Physicians
128637 Lilja, 9 cr

5595 Research in Family Practice: Independent Study
812643 Holloway, 4 cr

5597 Clinical Decision Making (prereq # or 2nd or 3rd yr resident)
138737 Daly, 2 cr

5599 Undergraduate Independent Study
125017 Ciriacy, ar cr

5903 Community Health Rotation (prereq #)
225137 Ciriacy, ar cr

5950 Clinical Issues in Human Sexuality (prereq enroll hlth sci grad prog in CSPP, psy, public hlth, social work, fam soc sci or #)
228636 Coleman, 3 cr

5951 Research in Human Sexuality (prereq #)
329535 ar cr

5955 Directed Study (prereq #)
125138 Satterfield, 1-15 cr

5956 Advanced Topics in Human Sexuality (prereq #, college level introductory course in human sexuality)
529534 Satterfield, others, 3 cr

5958 Small Group Process (prereq #)
925139 Rosenberg, 3 cr

5960 Basic Research Methods Seminar and Practicum
412645 –1 Holloway, 4 cr
913931 –2 4 cr

5965 Seminar on Psychological Medicine: Principles of Human Development Through Life Cycles (prereq 1st yr family practice residency)
116737 1530-1700 W, PWB 6246, Houge, Cole, ar cr

5967 Introduction to Health Data Systems (prereq completion of first yr residency in family practice and community health or #)
933032 1300-1500 T, O'Leary, ar cr

8201 Clinical Family Medicine
225140 Ciriacy, ar cr

8207 Seminar: Common Diseases Seen in Family Practice
725143 Connolly, 1 cr

8208 Family Medicine Conferences
525144 Connolly, 1 cr

8209 Family Medicine X-Ray Conference
325145 Ciriacy, 1 cr

8210 Family Medicine Grand Rounds
025147 1630-1800 W, McConnell, 0-1 cr (2nd W per month, Campus Club)

8212 Clincial Psychiatry Rounds (prereq 1st yr resident in family practice)
625149 Kelly, 1 cr

8223 Introduction to Gerontology, Geriatric Medicine (prereq 2nd yr FPCH resident or #)
816725 1200-1330 W, Pattee, 2 cr

8224 Seminar: Community Mental Health (prereq 3rd yr resident or #)
825151 Kelly, 1 cr

8225 Medical Sociology
425153 Kelly, 3 cr

8226 Seminar: Medical Sociology
125155 Kelly, others, 2 cr

8228 Seminar: Interdisciplinary Health (prereq #)
525158 Kelly, 2 cr

8240 Community Resources
325159 Kelly, 2 cr

8245 Analysis of Instruction, Educational Evaluation
525161 Bland, Houge, ar cr

8250 Quantitative Strategies in Health Care Practice and Research II (prereq 8204)
325162 Weckwerth, 2 cr

8253 Research Problems
125163 ar cr

8582 Practice Management II (prereq 3rd yr resident, 5581)
025164 2 cr

FAMILY SOCIAL SCIENCE (FSoS)
Home Economics

R1001 Dynamics of Family Relationships (§1002)
225235 –1 1200-1315 TTh, McNH 69, Thibault, 3 cr
125236 –2 1115-1230 MW, Arch 30, Turnblom, 3 cr (Mpls)
725238 –3 0915-1030 TTh, BlegH 235, Thibault, 3 cr (Mpls)

R1002 Dynamics of Dating, Courtship, Marriage (§1001; prereq upper division, married or engaged student)
922614 1530-1700 TTh, Arch 45, Leach, 3 cr (Mpls)

R1025 Parenthood
536807 1115-1230 MW, BlegH 130, Markoff, 4 cr (Mpls)

R1401 Household Equipment (prereq soph or #...GC 1163 or Phys 1001 or 1041 rec)
607251 1000-1130 TTh, McNH 180, Yust, 4 cr (lab ar)

3240 Special Topics (max 9 cr; prereq soph or above)
722615 3 cr

R3260 Home Management Principles (prereq AgEc 1030)
033166 1300-1415 TTh, McNH 33, Leach, 3 cr

5001 Human Sexual Behavior (prereq 15 cr psychology or sociology)
522616 1015-1130 TTh, BlegH 130, Neubeck, 4 cr (Mpls)

R5200 Family Relationships (prereq Psy 1001, Soc 1001)
322617 1430-1600 MW, HodsonH 495, Hey, 5 cr

R5218 Family Financial Management (prereq 3260, 5 cr in FSoS or #)
833167 1300-1530 T, McNH 197, Hogan, 3 cr

R5220 Family Economics (prereq 3260 or #)
122618 1400-1445 MWF, McNH 197, Gage, 3 cr

5230 Independent Study in Family Social Science (max 16 cr; prereq #)
022619 1-5 cr

5231 Internship: Planning (prereq #)
322620 Yust, 1 cr

5232 Internship: Work Experience (prereq 5231)
122621 Yust, 5 cr

5233 Internship: Evaluation (prereq 5232)
022622 Yust, 1 cr

R5240 Special Topics in Family Social Science (max 16 cr)
822623 –1 1300-1530 Th, McNH 197, Zimmerman, 3 cr
107231 –2 1715-1930 Th, MoosT 2585, Maddock, Terrel, others, 3 cr (Mpls)

R5242 Death, Other Losses and the Family (prereq 5202 or equiv)
235019 1810-2040 W, McNH 198, Rosenblatt, 3 cr

R5249 Field Work: Directed Community Work Experience (max 15 cr; prereq 5200, #)
125258 –1 1400-1530 M, McNH 180, Yust, 3-5 cr
325260 –2 0900-1030 T, McNH 197, Berry, 3-5 cr
433172 –3 1530-1700 W, McNH 197, Berry, 3-5 cr

R8215 Marriage and Family Counseling II (§Psy 8215; prereq #) (A-N only)
622624 1015-1215 T, AkerH 309, Boss, 3 cr (Mpls)

R8218 Family-of-Origin Seminar II (prereq 8217, #) (A-N only)
633168 1230-1345 T, AkerH 309, Boss, 2 cr (Mpls)

8223 Internship in Teaching College Level Family Courses III (prereq 12 cr in FSoS, #)
433169 1400-1530 W, McNH 290C, Neubeck, 3-6 cr

8230 Directed Study (prereq #)
422625 1-5 cr

8251 Problems: Family Social Science (prereq #)
222626 1-5 cr

8252 Problems: Family Social Science (prereq #)
604995 4 cr

8267 Family Research Methology II (prereq 8266, #)
815039 1400-1800 W, McNH 278, Olson, 4 cr

8270 Practicum: Family Research (prereq #)
122627 1-5 cr

8553 Marriage and Family Counseling Internship III (prereq 8214, 8215, 8216, #)
833170 1500-1630 M, Berry, Hey, ar cr

8666 Dissertation Research (max 15 cr; prereq #) (S-N only)
633171 1-5 cr

FINANCE (BFin)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for BFin courses.

R3100 Financial Management (prereq 3000) (A-N only)
001365 1115-1230 MW, BlegH 415, 4 cr

R3300 Investment Management and Financial Markets (§8300; prereq 3000)
108145 –1 1415-1530 MW, BlegH 215, Strege, 4 cr
108072 –2 1545-1700 MW, BlegH 215, Reik, 4 cr

R3800 Finance Senior Seminar (prereq 3100 or 3300, #) (A-N only)
034320 1415-1700 W, BlegH 415, Carroll, 4 cr

R8702 Seminar in Capital Budgeting and Financial Structure (prereq 8150, grad mgmt/IR student, #, grad SMgt approval) (A-N only)
837025 1115-1230 TTh, BlegH 330, Dothan, 4 cr

R8703 Seminar in Portfolio Theory and Management (prereq 8300, grad mgmt/IR student or grad SMgt approval) (A-N only)
637026 1415-1530 TTh, BlegH 335, Richardson, 4 cr

8990 Readings and Research in Finance (prereq consent of advisor, #, grad SMgt approval)
408143 –1 1415-1700 T, Law 1, Dothan, ar cr (PhD seminar III)
634319 –2 1415-1700 W, Mgmt/Econ 136, ar cr (PhD seminar VI)
638810 –3 ar cr

FINNISH (Fin)
Scandinavian Languages
Liberal Arts

R1103 Beginning Finnish (prereq 1102)
723120 1415-1500 MTWThF, FolH 406, 5 cr

3101 Advanced Finnish (prereq 1105)
523121 1015-1100 MWF, FolH 52, Vahamaki, 4 cr

3670 Readings: Finnish Texts (max 28 cr; prereq 3101)
323122 1015-1100 MWF, FolH 52, Vahamaki, 4 cr

FISHERIES AND WILDLIFE (FW)
Forestry

1002 Wildlife for Non-Majors: Ecology, Values, and Human Impact
039484 3 cr

3167 Techniques of Forest Wildlife Management (given at Cloquet)
521627 Gullion, 1 cr

5000 Professional Experience Program (prereq #) (S-N only)
904906 4 cr

5103 Basic Fishery Biology (prereq #)
121629 ar cr

5106 Basic Wildlife Biology (prereq #)
321631 ar cr

5278 Special Lectures in Wildlife
021633 ar cr

5279 Special Lectures in Fisheries
621635 ar cr

5393 Special Problems in Fishery Biology (prereq #)
421636 ar cr

5398 Special Problems in Wildlife Biology (prereq #)
221637 ar cr

5452 Fishery Management in Inland Waters (prereq 5454 or #)
★LECT 1300-1445 TTh, HodsonH 490, Waters, 5 cr
528884 –1 LAB 1500-1545 TTh, HodsonH 140

5561 Wildlife Ecology, Management I: Planning, Policy and Administration (prereq 3052, sr fisheries or wildlife maj or #)
012396 1400-1545 MW, HodsonH 490, Cohen, 4 cr

5564 Wildlife Ecology, Management IV: Field Problems (prereq sr wildlife maj or #)
121638 1400-1645 F, HodsonH 490, Frenzel, 4 cr

8200 Seminar (prereq #)
221640 ar cr

8364 Research in Fishery Biology (prereq #)
121641 ar cr

8377 Research in Wildlife Biology (prereq #)
721643 ar cr

FOOD SCIENCE AND NUTRITION (FScN)
Agriculture & Home Econ

R1012 Nutrition and Our Food Supply (§1010)
521644 1415-1500 T, 1415-1600 Th, PWB 2470, Addis, 4 cr (Mpls)

3110 Food Chemistry (prereq BioC 1302 or Biol 5001)
809774 1000-1045 MTWF, FScN 15, Warthesen, 4 cr

R3112 Food Chemistry Laboratory (prereq 3110 or ¶)
909782 0800-0945 TTh, ABLMS 135, Smith, 2 cr

3600 Principles of Nutrition (prereq Biol 1009, Chem 1004 or equiv)
609775 1415-1515 MWF, Botany B6, Swan, 4 cr (Mpls)

3642 Community Nutrition (prereq jr, 3600 or equiv, 6 cr of psychology, sociology, anthropology or economics)
136690 1400-1530 TTh, ABLMS 125, 3 cr

R3730 Quantity Food Production Management (prereq 1212 or 3403, 3472)
★LECT 1200-1245 TTh, DinC 152, Mullan
525323 –1 LAB 0800-1145 TTh, DinC 152, 5 cr

3750 Principles of Foodservice Management (prereq 3730, Mgmt 3001)
821648 1300-1415 MW, DinC 152, Mullan, 3 cr

R5100 General Seminar (prereq sr or #) (S-N only)
625328 –1 1200-1245 T, HckrH 209, 1 cr
825330 –2 1200-1245 W, ABLMS 222, 1 cr
625331 –3 1200-1245 Th, HckrH 209, 1 cr
225333 –4 1200-1245 F, ABLMS 222, 1 cr

5111 Independent Study in Food Science and Nutrition (prereq △)
021650 1-5 cr

R5122 Sanitation and Control of Microorganisms (prereq 5120 or #...¶5123, especially for food science, technology maj)
★LECT 1400-1445 MF, FScN 15, Busta
329549 –1 LAB 1300-1345 F, FScN 218, 2 cr
729550 –2 LAB 1500-1545 F, FScN 218, 2 cr

R5123 Microbiology of Food Fermentations (prereq 5120 or #...¶5122 advised, especially for food science, technology maj)
★LECT 1300-1345 MW, FScN 15, McKay
025343 –1 LAB 1100-1245 W, FScN 218, 2 cr
625345 –2 LAB 1400-1545 W, FScN 218, 2 cr

R5312 Chemical and Instrumental Analysis of Foods (prereq 3112, BioC 5025 or #)
★LECT 1000-1045 MWF, ClaOff B30, Davis, Reineccius
225350 –1 LAB 1000-1245 TTh, ABLMS 135, 5 cr
925352 –2 LAB 1400-1645 TTh, ABLMS 135, 5 cr

R5321 Independent Study in Food Microbiology (prereq sr, △)
621652 1200-1245 T, FScN 218, 1-5 cr (1st meeting)

R5406 Current Literature in Foods (max 6 cr; prereq 5413, △)
421653 1000-1045 M, ABLMS 222, Gordon, 2-4 cr (1st meeting)

R5462 Advanced Topics in Sensory Evaluation of Food (prereq 5360)
221654 0800-0845 F, ABLMS 222, Vickers, 2-4 cr (1st meeting)

5474 Food Consumption Economics (§AgEc 5550; prereq AgEc 3101, Stat 5021, FScN 3472 or #)
121655 0900-0945 MWF, McNH 144, Senauer, 4 cr

5524 Sensory Evaluation of Dairy Products (prereq 5360 or #)
129357 1730-1930 Th, FScN 157, Smith, 1 cr

R5642 Field Experience in Community Nutrition (prereq course in human nutrition, #)
709783 –1 0800-0945 M, ABLMS 222, Hanson, Olson, 3-18 cr (CUP only)
209777 –2 Gormican, 3-18 cr

5664 Field Experience in Clinical Nutrition (prereq course in human nutrition, #)
525368 –1 1800-1845 Th, FScN 15, Hanson, Olson, 3-18 cr (CUP only)
725370 –2 Gormican, 3-18 cr

5667 Applied Clinical Nutrition III (prereq 5665, 5666 or demonstrated equiv)
234324 1600-1745 Th, ABLMS 125, Gormican, 2 cr

R5677 Clinical Nutrition Laboratory III (prereq 5667 or ¶) (S-N only)
134325 –1 1300-1345 T, FScN 15, Gormican, 1 cr
934326 –2 1600-1645 W, ABLMS 125, Gormican, 1 cr

5694 Metabolic Basis for Therapeutic Nutrition (prereq 5664 or #)
539299 Phinney, 4 cr

R8101 Research Seminar (prereq #) (S-N only)
025374 –1 1600-1645 Th, FScN 23, Swan, 1 cr
625376 –2 Phinney, 1 cr

8205 General Seminar (prereq #) (S-N only)
721657 1600-1645 M, FScN 23, Smith, 1 cr

8313 Topics in Lipid Chemistry (prereq BioC 5002 or #)
734327 1400-1545 W, ABLMS 222, Csallany, 2 cr

R8324 Microbial Toxins and Toxic Microorganisms in Foods (prereq 5120 or 8120 or #)
534328 1300-1445 TTh, ABLMS 222, Tatini, 4 cr

R8401 Independent Study: Food Science (prereq △)
521658 McKay, 1-5 cr

R8621 Independent Study: Nutrition (prereq #)
721660 1-9 cr

FOREIGN STUDY (FoSt)
Liberal Arts

0900 Study Abroad (prereq permission of study abroad advisor) (S-N only)
922838 Peterson, 0 cr

0910 Study Abroad (prereq permission of study abroad advisor) (S-N only)
722839 Peterson, 0 cr

3130 HECUA Literature, Ideology, Society: Latin America (prereq #)
637575 1-24 cr

3210 Kansas Program in Costa Rica (prereq #)
111294 1-54 cr

3220 Kansas Program in Erlangen, Germany (prereq #)
811296 1-54 cr

3230 Kansas Program in Great Britain (prereq #)
411298 1-54 cr

3240 Kansas Program in Korea (prereq #)
811301 1-54 cr

3250 Kansas Program at Tsukuba University, Japan (prereq #)
113711 1-54 cr

3410 IES Program in Durham, England (prereq #)
211304 1-45 cr

3420 IES Program in London (prereq #)
711307 1-54 cr

3430 IES Program in Nantes, France (prereq #)
511311 1-54 cr

3440 IES Program in Paris (prereq #)
811315 1-54 cr

3450 IES Program in Madrid (prereq #)
111319 1-54 cr

3460 IES Program in Vienna (prereq #)
911323 1-54 cr

3470 IES Program in Freiburg, Germany (prereq #)
111327 1-54 cr

3480 IES European Community Program in Germany (prereq #)
011331 1-27 cr

3490 IES Comparative European Literature Program (prereq #)
611333 1-54 cr

3610 Exchange Study at University of Essex, England (prereq #)
005139 1-54 cr

3810 Bologna Cooperative Studies Program, Italy (prereq #)
837574 1-54 cr

FOREST PRODUCTS (ForP)
Forestry

R1102 Leadership and Management Skills for College of Forestry Students (2 cr with project) (S-N only)
218026 1400-1445 T, GrnH 211, Bell, 1 cr

R3300 Wood Industry Tours (prereq forest products jr or sr or #) (course fee)
222495 Petersen, 2 cr (Field trip Mar 19-23. Travel arrangements must be made with dept before Feb 25)

3325 Directed Study Experience (prereq #)
922497 1-5 cr

5310 Pulp and Paper Process Laboratory (prereq 5305 or #)
104841 1400-1545 Th, KaufL 125, Gertjejansen, 3 cr (lab ar)

5315 Paper Engineering Laboratory (prereq 5312 or #)
★LECT 1300-1345 TTh, KaufL 125, Neuman
338834 –1 LAB 1400-1645 TTh, KaufL 60, Neuman, 2 cr

5355 Mechanics and Structural Design with Wood Products (prereq 5301)
★LECT 1400-1445 MWF, KaufL 302, Haygreen, 4 cr
228863 –1 LAB 1500-1645 W, KaufL 302, Haygreen

5359 Surface and Colloid Chemistry of Papermaking (prereq Chem 5520 or #)
738832 1100-1145 MWF, KaufL 125, Neuman, 3 cr

5361 Adhesion and Adhesives (prereq Chem 3302 or Chem 5520 or ForP 5359 or #)
805823 1200-1310 WF, KaufL 125, Sarkanen, 3 cr

5401 Senior Topics (prereq sr)
522499 ar cr

8300 Research Problems
122501 ar cr

8301 Research Problems
722503 ar cr

8302 Research Problems
322505 ar cr

8303 Advanced Topics: Panel Products Technology
938084 2 cr

8306 Seminar: Forest Products
225686 1500-1645 M, KaufL 225, Sarkanen, 2 cr

FOREST RESOURCES (FR)
Forestry

R1102 Leadership and Management Skills for College of Forestry Students (2 cr with project) (S-N only)
918028 1400-1445 T, GrnH 211, Bell, 1 cr

1203 Introduction to Minnesota's Natural Resources (§1201, for non forestry students)
122506 1515-1815 Th, JonesH 11, Vogt, 3 cr (Mpls)

3104 Forest Ecology (prereq Itasca session)
022507 1300-1345 MWF, GrnH 211, Kurmis, 3 cr

3114 Tree Physiology (prereq Chem 1001 or 1004, 10 cr of biology)
822508 0900-0945 MWF, AlderH 415, Sucoff, 3 cr

3115 Tree Physiology Laboratory (prereq concurrent or previous regis in 3114)
622509 Sucoff, 1 cr

3225 Directed Study Experience (prereq #)
022510 1-5 cr

3232 Management of Recreational Lands (prereq #)
239300 1000-1045 MWF, KaufL 302, Merriam, 3 cr

5140 Application of Silviculture in North American Forest Types (prereq 5100 or #)
239359 1100-1145 MWF, McNH 197, Dixon, 3 cr

5215 Forest Fire Management (prereq 1100, Itasca session, 3103, 5100 or #)
822511 1100-1145 TTh, GrnH 120, Irving, 2 cr

R5216 Special Topics in Forest Fire Management (prereq 5215 or #)
804901 Irving, ar cr

R5217 Field Techniques for Prescribed Burning (prereq 5215 or #) (S-N only)
404903 Irving, 1 cr

R5218 Field Techniques for Forest Fire Control (prereq 5215 or #)
204904 Irving, 1 cr

5223 Timber Management Planning (prereq 5212 or #)
622512 0900-0945 MWF, GrnH 120, Rose, 3 cr

5231 Range Management (prereq Biol 1103 or #)
928865 0800-0845 MWF, KaufL 302, Meyer, 3 cr

5253 Forest Biometry (prereq 5212, Stat 5022 or #)
433091 0945-1100 TTh, GrnH 211, Ek, 3 cr

5261 Advanced Forest Policy and Economics (prereq 5222 or #)
122515 1400-1645 Th, GrnH 14, Ellefson, Gregersen, 3 cr

5264 Quantitative Techniques in Forest Management (prereq 5212, 5222, 5223 or #)
838742 1100-1145 MWF, KaufL 302, Rose, 3 cr

5265 Forest Policy Issues (§5222)
604897 0820-0930 TTh, GrnH 211, Ellefson, 3 cr

5401 Senior Topics (prereq sr in forestry or #)
922516 1-5 cr

5458 Water Quality Management: Ecosystem Approaches (prereq Chem 1005, 3101 or #)
139301 0800-0845 MWF, GrnH 14, 4 cr (lab ar)

R5501 Urban Forest Administration (prereq silviculture, urban forest management, #)
118030 1400-1700 M, GrnH 206, 3 cr

8100 Research Problems: Silviculture
722517 Alm, B Brown, others, ar cr

8101 Research Problems: Forest Tree Physiology
522518 Sucoff, ar cr

8102 Problems: Forest Tree Genetics
322519 Mohn, ar cr

8103 Research Problems: Forest Hydrology
722520 Brooks, ar cr

8107 Seminar: Forest Resources
522521 1500-1545 M, GrnH 211, 1 cr

8200 Research Problems: Forest Management
322522 B Brown, Hallgren, others, ar cr

8201 Research Problems: Forest Economics
022524 Ellefson, Gregersen, ar cr

8202 Research Problems: Forest Biometry
622526 Ek, ar cr

8203 Research Problems: Forest Recreation
222528 Knopp, Merriam, ar cr

8204 Research Problems: Forest Policy
122529 Ellefson, Irving, others, ar cr

8205 Research Problems: Remote Sensing
222531 Meyer, ar cr

8207 Economic Analysis of Forestry Projects (prereq 5261 or #)
204899 Gregersen, 3 cr

8210 Research Methods in Forestry
922533 Sucoff, 3 cr

8211 Seminar: Forest Policy Issues
633090 Ellefson, 3 cr

8212 Advanced Remote Sensing (prereq 5262 or #)
322536 0945-1045 MWF, GrnH 206, 4 cr

FRENCH (Fren)
French And Italian
Liberal Arts

R1101 Beginning French
825411 –1 0915-1000 MTWThF, AmundH 158, 5 cr
425413 –2 1015-1100 MTWThF, Arch 20, 5 cr

R1102 Beginning French (prereq 1101 or one year high school Fren)
725420 –1 0815-0900 MTWThF, AkerH 211, 5 cr
525421 –2 0915-1000 MTWThF, SmithH 315, 5 cr
325422 –3 1015-1100 MTWThF, AkerH 211, 5 cr

R1103 Beginning French (prereq 1102, 1122 or two yrs high school Fren)
425430 –1 0815-0900 MTWThF, FolH 110, 5 cr
125432 –2 0815-0900 MTWThF, Arch 60, 5 cr
725434 –3 0915-1000 MTWThF, Arch 60, 5 cr
325436 –4 0915-1000 MTWThF, LindH 229, 5 cr
025438 –5 1015-1100 MTWThF, Arch 60, 5 cr
125440 –6 1015-1100 MTWThF, ChDev 218, 5 cr
825442 –7 1115-1200 MTWThF, Arch 45, 5 cr
425444 –8 1115-1200 MTWThF, Arch 60, 5 cr
334234 –9 1215-1300 MTWThF, Arch 60, 5 cr
834237 –10 1215-1300 MTWThF, Arch 45, 5 cr

R1104 Intermediate French (prereq 1103 or three yrs high school Fren)
725448 –1 0815-0900 MTWThF, FolH 50, 5 cr
925450 –2 0915-1000 MTWThF, AmundH 154, 5 cr
901620 –3 1115-1200 MTWThF, KoltH S133, 5 cr (concurrent registration 1105, sec 3 required)

R1105 Intermediate French (prereq 1104)
525452 –1 0915-1000 MTWThF, MinMet 124, 5 cr
125454 –2 1015-1100 MTWThF, AmundH 154, 5 cr
801626 –3 1215-1300 MTWThF, KoltH S133, 5 cr (concurrent registration 1104, sec 3 required)

R1113 Decelerated Beginning French (§1103; prereq 1112 with passing grade or 1102 with C or D and approval of Coordinator)
725689 1215-1300 MTWThF, KoltH S137, 3 cr

R3015 French Composition and Conversation (prereq 1105)
625457 –1 1015-1100 MTWTh, Mgmt/Econ 130, Akehurst, 5 cr
225459 –2 0915-1100 TTh, FolH 103, Caplan, 5 cr
425461 –3 1315-1500 TTh, FolH 209, 5 cr

R3016 Advanced French Composition and Conversation (prereq 3015 or #)
125463 –1 1315-1500 MW, Arch 15, 5 cr
925464 –2 0915-1100 TTh, FolH 108, 5 cr

R3017 Stylistics Through Translation (prereq 3016 or superior achievement in 3015, #)
122840 0915-1100 MW, FolH 108, 5 cr

R3101 Introduction to French Literary Texts (prereq 3015)
922841 0915-1100 MW, FolH 208, Knutson, 5 cr

R3102 French Literary Texts: Theatre (prereq 3101)
722842 1315-1500 TTh, FolH 105, Lockhart, 5 cr

R3103 French Literary Texts: Novel (prereq 3101)
522843 1315-1500 MW, FolH 207, 5 cr

R3269 Topics in 19th Century French Literature (prereq 3102, 3103)
137211 0915-1100 TTh, FolH 304, Sivert, 5 cr

R3299 Themes in French Literature (prereq 3102, 3103)
329499 1115-1300 TTh, FolH 50, Paganini, 5 cr

R3502 French Civilization and Culture (prereq 1105)
834223 1315-1500 TTh, FolH 50, Caplan, 5 cr

R3603 20th Century French Theatre in Translation (no cr maj, knowledge of Fren helpful but not necessary)
536953 1115-1300 MW, AkerH 209, Brewer, 5 cr

3970 Directed Readings (prereq undergrad student, #, △, college approval)
322844 1-5 cr

3980 Directed Instruction (prereq 3015, #, △, college approval)
122845 3-5 cr

R5303 Medieval French Drama (prereq 5207 or #)
434225 1615-1700 MTW, FolH 209, Akehurst, 5 cr

R5465 Stendhal (prereq 3209 or above)
336954 1315-1500 T, 1315-1400 Th, FolH 208, Sivert, 5 cr

R8050 Seminar in Fiction (max 15 cr)
434242 1515-1600 T, 1415-1600 Th, FolH 208, Paganini, 5 cr

R8501 Methodology, Bibliography
136955 1215-1500 Th, FolH 304, Conley, 5 cr

8970 Directed Readings
022846 1-5 cr

8980 Directed Teaching (prereq #, △)
822847 1-5 cr

FRENCH AND ITALIAN (FrIt)
French And Italian
Liberal Arts

R3608 New Wave Cinemas
106492 1215-1400 MWF, FordH 55, 4 cr

FRESHMAN-SOPHOMORE COLLOQUIA (HCol)
Honors Program
Liberal Arts

R1010 Honors Colloquium (prereq fr, soph, reg honors div)
022765 2-4 cr

R1020 Honors Colloquium (prereq fr, soph, reg honors div)
604317 2-4 cr

R1030 Honors Colloquium (prereq fr, soph, reg honors div)
204322 2-4 cr

R1040 Honors Colloquium (prereq fr, soph, reg honors div)
104323 2-4 cr

R1050 Honors Colloquium (prereq fr, soph, reg honors div)
904324 2-4 cr

R1060 Honors Colloquium (prereq fr, soph, reg honors div)
504326 2-4 cr

R1070 Honors Colloquium (prereq fr, soph, reg honors div)
404321 2-4 cr

R1080 Honors Colloquium (prereq fr, soph, reg honors div)
204319 2-4 cr

R1970 Honors Colloquium: Directed Studies (prereq fr or soph, reg honors div)
836960 1-4 cr

GENERAL COLLEGE (GC)

General College restricts some sections to certain groups of students. Check at NichH 20 for these restrictions before attempting to register.

R1111 Science in Context: Weather and Climate
022538 0915-1000 MTWThF, SciCB 175, A Johnson, 5 cr (lab ar)

R1112 Science in Context: Human Uses of the Environment (§1113)
134504 1215-1300 MTWThF, SciCB 125, Hatch, 5 cr

R1131 Biological Science: Principles
425475 –1 0915-1000 MTWTh, SciCB 125, Dearden, 5 cr (lab ar)
125477 –2 0915-1000 MTWTh, SciCB 125, Dearden, 5 cr (lab ar)
406120 –3 1415-1500 MTWTh, SciCB 175, 5 cr (lab ar)

R1132 Biological Science, Human Body
725479 –1 1115-1200 MTWThF, SciCB 125, 5 cr
925481 –2 1315-1400 MTWThF, SciCB 175, 5 cr

R1133 Nature Study
029540 0815-1000 TTh, PeikH 225, Hatch, 4 cr

R1137 Biological Science: Laboratory (prereq 1131 or 1132)
134518 –1 LAB 0815-1000 MW, ApH 245, 2 cr
934522 –2 LAB 1015-1200 MW, ApH 245, 2 cr
939414 –3 LAB 1215-1400 MW, ApH 245, 2 cr

R1162 Stellar Astronomy
334508 1115-1200 MTWThF, Phys 131, Policoff, 5 cr

R1163 Principles of Physics
122540 1315-1400 MTWThF, Phys 170, Policoff, 5 cr

R1166 Physical Science: Principles of Chemistry
022541 1315-1400 MTWThF, SciCB 125, Schwabacher, 5 cr

R1173 Geology of the National Parks: An Approach to Regional Geology
034513 1215-1300 MTWThF, NichH 109, Uthe, 5 cr

R1211 People and Problems
208323 1215-1300 MTWThF, NichH 211, F Johnson, 5 cr

R1212 Urban Problems
125494 0915-1000 MTWThF, NichH 109, Smith, 5 cr

R1217 Human Services and Community Resources (prereq #, △)
115135 0915-1100 MWF, PtH 214, Detzner, 6 cr

R1221 Minnesota History (§1223, 1224)
506321 1115-1200 MTWThF, NichH 213, Moen, 5 cr

R1230 United States: Recent History
234534 0915-1000 MTWThF, NichH 207, Moen, 5 cr

R1233 United States: Government and Politics
106323 1015-1100 MTWThF, SciCB 175, Hathaway, 5 cr

R1235 United States: Law in Society
325503 –1 1315-1500 MW, 1315-1400 F, NichH 207, Kahn, 5 cr
025505 –2 1015-1200 TTh, 1015-1100 F, MurH 308, Hower, 5 cr

R1236 United States: The Crime Problem
734537 0815-0900 MTWTh, FolH 105, F Johnson, 4 cr

R1252 International Relations
209536 1215-1300 MTWThF, FolH 308, Jones, 5 cr

R1281 Psychology in Modern Society
★LECT 0915-1000 MWF, NichH 211, Brothen
306126 –1 LAB 0915-1000 TTh, NichH 254, Brothen, 5 cr
106127 –2 LAB 1015-1100 TTh, NichH 254, Brothen, 5 cr
006128 –3 LAB 1015-1100 TTh, NichH 304, 5 cr
806129 –4 LAB 1115-1200 TTh, NichH 254, Brothen, 5 cr
109537 –5 LAB 1115-1200 TTh, NichH 304, 5 cr
534541 –6 LAB 1215-1300 TTh, NichH 254, Brothen, 5 cr
334542 –7 LAB 1215-1300 TTh, NichH 304, 5 cr
034544 –8 LAB 1315-1400 TTh, NichH 254, Brothen, 5 cr
234548 –9 LAB 1415-1500 TTh, NichH 254, Brothen, 5 cr

R1282 Psychology Applied to Human Affairs (prereq 1281)
722548 1315-1400 MTWThF, NichH 213, Wambach, 5 cr

R1283 Psychology of Human Development
922550 0915-1000 MTWThF, SmithH 325, Latts, 5 cr

R1291 The World Today: Geography at Home and Abroad
822556 1015-1100 MTWThF, NichH 213, Steinhauser, 5 cr

R1294 Economics in Contemporary Society (§1295, 1296)
134560 0815-0900 MTWThF, NichH 211, Killen, 5 cr

R1296 Economic Perspectives: Macro Principles and History
422558 1115-1200 MTWThF, NichH 211, Killen, 5 cr

R1311 Art: General Arts (§3311)
325517 –1 0815-0900 MTWTh, NichH 111, Byrne, 4 cr
025519 –2 1115-1200 MTWTh, NichH 111, Byrne, 4 cr
125521 –3 1215-1300 MTWTh, NichH 111, MacInnes, 4 cr
008333 –4 1415-1600 MW, NichH 111, Gates, 4 cr
034561 –5 1315-1500 TTh, NichH 111, Gates, 4 cr

R1357 Philosophy: World Religious Beliefs
306143 0915-1000 M, 0815-1000 WF, NichH 213, Yahnke, 5 cr

R1362 World Literature: Social Experience
422561 1215-1300 MTWThF, NichH 213, Rathburn, 5 cr

R1363 Literature for Children
122563 1115-1200 MTWTh, WullH 230, Adamson, 4 cr

R1371 Literature: Reading Short Stories
722565 0815-0900 MWF, AkerH 209, C Miller, 3 cr

R1374 Literature of the Theater: Film and Drama
338963 0815-1000 TTh, NichH 213, Yahnke, 4 cr

R1381 Radio and Television Today
138964 1215-1300 MWF, NichH 216, 3 cr

R1401 Improving Study Skills, Reading Comprehension, and Vocabulary (§1406 prior to Fall, 1981)
725529 –1 1–3 cr (Individual instruction ar, NichH 1)
125530 –2 1–3 cr (Individual instruction ar, NichH 1)

R1402 Vocabulary Development (§1401 prior to Fall, 1981)
525533 –1 0815-0900 MWF, NichH 209A, Kurak, 3 cr
502009 –2 1015-1100 MWF, NichH 209A, 3 cr
401516 –3 1115-1200 MWF, NichH 209A, Gidmark, 3 cr
834562 –4 1415-1500 MWF, NichH 209A, Koch, 3 cr

R1403 Reading, Comprehension, and Study Skills (§1402 prior to Fall, 1981)
★LECT 0915-1000 MW, NichH 209A
934567 –1 REC 0915-1000 Th, NichH 201, 3 cr
934570 –2 REC 0915-1000 F, NichH 201, 3 cr
★LECT 1215-1300 MW, NichH 209A
034575 –3 REC 1215-1300 Th, NichH 201, 3 cr
634577 –4 REC 1215-1300 F, NichH 201, 3 cr
★LECT 1315-1400 MW, NichH 209A, Yahnke
934584 –5 REC 1315-1400 Th, NichH 201, Yahnke, 3 cr
334587 –6 REC 1315-1400 F, NichH 201, Yahnke, 3 cr

R1405 Technical Reading: Tables and Graphs
625538 1–2 cr (Individual instruction ar, NichH 1)

R1411 Fundamentals of Usage and Style (§1405 prior to Fall, 1981)
108380 –1 3 cr (Individual instruction ar, NichH 1)
008381 –2 3 cr (Individual instruction ar, NichH 1)

R1412 Writing Grammatical Sentences and Developing Organized Paragraphs (§1404 prior to Fall, 1981)
108413 –1 1–2 cr (Individual instruction ar, NichH 1)
408417 –2 1215-1400 TTh, NichH 216, 1–2 cr

R1417 Improving Spelling and Punctuation (§1403 prior to Fall, 1981)
915601 –1 1–2 cr (Individual instruction ar, NichH 1)
515603 –2 1215-1400 TTh, NichH 216, 1–2 cr

R1421 Writing Laboratory: Personal Writing (§1412 prior to Fall 1981)
625541 –1 0815-1000 M, 0815-0900 WF, NichH 216, 4 cr
225543 –2 0815-1000 M, 0815-0900 WF, NichH 209, 4 cr
925545 –3 1015-1200 M, 1115-1200 WF, NichH 209, 4 cr
525547 –4 1015-1200 M, 1115-1200 WF, NichH 216, 4 cr
325548 –5 1215-1400 M, 1215-1300 WF, NichH 209, 4 cr
525550 –6 1215-1400 MW, PeikH 225, 4 cr
325551 –7 1415-1600 M, 1515-1600 WF, NichH 209, 4 cr
025553 –8 0815-1000 TTh, NichH 209, 4 cr
702011 –9 1015-1200 TTh, NichH 216, 4 cr
302013 –10 1015-1200 TTh, NichH 209, 4 cr
802016 –11 1115-1300 TTh, JonesH 2, 4 cr
201548 –12 1215-1400 TTh, NichH 216, 4 cr
201551 –13 1215-1400 TTh, NichH 209, 4 cr
001558 –14 1215-1400 TTh, NichH 209A, 4 cr
906297 –15 0915-1100 WF, NichH 216, 4 cr
934603 –16 0915-1100 WF, NichH 209, Flake, 4 cr

R1422 Writing Laboratory: Communicating in Society (§1423; prereq 1421)
625555 –1 0815-1000 MW, NichH 122, 4 cr
225557 –2 0915-1100 MW, JonesH 1, 4 cr
925559 –3 1015-1200 MW, PtH 111, 4 cr
125561 –4 1015-1200 MW, PtH 102, 4 cr
725563 –5 1115-1300 MW, MechE 202, 4 cr
602020 –6 1215-1400 MW, PtH 111, 4 cr
902024 –7 1315-1500 MW, PeikH 315, 4 cr
302030 –8 1415-1600 MW, NichH 122, 4 cr
908423 –9 0815-1000 TTh, NichH 209A, 4 cr
801576 –10 0915-1100 TTh, JonesH 2, 4 cr
401578 –11 0915-1100 TTh, JonesH 1, 4 cr
201582 –12 1015-1200 TTh, NichH 209, 4 cr
501586 –13 1115-1300 TTh, JonesH 2, 4 cr
301590 –14 1115-1300 TTh, PtH 102, 4 cr
108427 –15 1115-1300 TTh, JonesH 1, Gee, 4 cr
706298 –16 1215-1400 TTh, NichH 209, 4 cr
506299 –17 1215-1400 TTh, NichH 209A, 4 cr
206300 –18 1415-1600 TTh, NichH 122, Gee, 4 cr
106301 –19 0815-1000 WF, PtH 111, 4 cr
234615 –20 0915-1100 WF, NichH 216, 4 cr

R1426 Information Strategies and Research Methods (§1408, 3408, 3426)
218107 1015-1100 TTh, WaLib 102, Oberman, 2 cr

R1432 Basic Mathematics II (§1434; prereq 1431)
134616 –1 1015-1100 MWF, FolH 101, 2 cr
934617 –2 1115-1200 MWF, FolH 101, 2 cr

R1433 Basic Mathematics: Programmed Study (max 10 cr; prereq GCPP math level A, B or C or 1431 or 1432 or 1434, # or △ for 4+ cr/qtr)
701747 –1 1015-1200 TTh, FolH 101, 3 cr
838966 –2 1015-1200 TTh, FolH 101, 3 cr
739415 –3 1315-1500 TTh, FolH 101, 3 cr
539416 –4 1315-1500 TTh, FolH 101, 3 cr

R1434 Mathematics Skills Review (§1431, 1432; prereq GCPP math level B)
502043 –1 0915-1000 MTWThF, FolH 101, 4 cr
102045 –2 0915-1000 MTWThF, FolH 102, 4 cr
802047 –3 1215-1300 MTWThF, FolH 101, 4 cr
815137 –4 1215-1300 MTWThF, FolH 102, 4 cr
734618 –5 1315-1500 MWF, FolH 101, 4 cr
534619 –6 1315-1500 MWF, FolH 101, 4 cr

R1435 Elementary Algebra (prereq GCPP math level C or 1432 or 1434)
202053 –1 0815-0900 MTWThF, FolH 102, 5 cr
302061 –2 1015-1100 MTWThF, FolH 102, 5 cr
002063 –3 1115-1200 MTWThF, FolH 102, 5 cr
706303 –4 1315-1500 MTWThF, FolH 102, 5 cr
634630 –5 1315-1500 MTWThF, FolH 102, 5 cr
234632 –6 1515-1600 MTWThF, FolH 102, 5 cr

R1442 Functions and Problems of Logic
★LECT 0915-1000 MWF, VinH 1, Zanoni
709539 –1 REC 0915-1000 T, VinH 1, Zanoni, 4 cr
109540 –2 REC 0915-1000 Th, VinH 1, Zanoni, 4 cr

R1445 Intermediate Algebra (§1443, 1444; prereq GCPP math level D or 1435)
525581 –1 0815-0900 MTWThF, FolH 101, 5 cr
125583 –2 0915-1100 MTWThF, ApH 150, 5 cr
825585 –3 0915-1100 MTWThF, ApH 150, 5 cr
625586 –4 1315-1500 MTWThF, ApH 150, 5 cr
425587 –5 1315-1500 MTWThF, ApH 150, 5 cr
339417 –6 1515-1600 MTWThF, FolH 101, 5 cr

R1452 Trigonometry and Problem Solving (prereq GC PP Math level E or 1445)
122568 –1 1315-1400 MTWThF, PtH 102, Barnes, 5 cr
434659 –2 1315-1400 MTWThF, PtH 102, Barnes, 5 cr

R1454 Statistics (prereq GCPP math level D or elementary algebra)
425590 1215-1300 MTWThF, NichH 207, Garfield, 5 cr

R1461 Oral Communication: Basic Principles
925593 –1 0815-0900 MTWThF, NichH 107, 5 cr
725594 –2 0915-1000 MTWThF, NichH 107, 5 cr
102093 –3 1215-1300 MTWThF, NichH 107, 5 cr

R1464 Oral Communication: Group Process and Discussion
508506 –1 1015-1200 MW, NichH 107, Amram, 4 cr
601594 –2 1015-1200 TTh, NichH 107, 4 cr
506304 –3 1315-1500 TTh, NichH 107, Amram, 4 cr

R1465 Oral Communication: Interpersonal Communication
525595 –1 1215-1400 MW, NichH 122, 4 cr
802100 –2 0915-1100 TTh, VinH 20, Hansen, 4 cr
834660 –3 1215-1400 TTh, NichH 122, Hansen, 4 cr

R1473 Intermediate American Sign Language-Level 2 (§1474 Winter, Spring 1983; prereq 1472 or 1473 Fall 1982 or 1468 Spring 1982 or #)
139418 1015-1200 TTh, NichH 209A, 4 cr

R1481 Creativity: Art Laboratory: Experiences in the Media (max 9 cr)
125597 –1 0815-1000 MW, NichH 102, 3 cr
025598 –2 1215-1400 MW, NichH 102, 3 cr
525600 –3 1415-1600 MW, NichH 102, 3 cr
634661 –4 0915-1100 TTh, NichH 102, 3 cr

R1483 Creativity: Music Laboratory-How to Read and Write Music (max 6 cr)
702106 –1 1015-1100 MWF, NichH 111, 3 cr
006307 –2 1315-1400 MWF, NichH 111, 3 cr

R1484 Creativity: Writing Laboratory-Individual Writing (max 8 cr; prereq 1421, recommendation of previous writing lab instructor, #, △)
325601 1315-1500 TTh, NichH 214, Balfour, 4 cr

R1502 Career Planning
208452 –1 1015-1200 M, NichH 35, 2 cr
308460 –2 1015-1200 T, NichH 35, 2 cr
608464 –3 1015-1200 W, NichH 35, 2 cr
108467 –4 1015-1200 Th, NichH 35, 2 cr

R1511 Introduction to Modern Business
825604 –1 0815-1000 MW, 0915-1000 F, FordH 115, Kroll, 5 cr
625605 –2 1015-1200 MW, 1015-1100 F, FordH 115, Nelson, 5 cr

R1513 Principles of Small Business Operation
629542 1115-1300 MW, 1115-1200 F, AkerH 309, Goldfarb, 5 cr

R1517 Business Internship in Cooperative Education (prereq #, △)
125608 1700-1930 W, NichH 107, Nelson, 6 cr

R1533 Financial Mathematics: Procedures and Applications (prereq GCPP math level C or 1432 or 1434 or elementary algebra)
806308 0815-0900 MTWThF, NichH 207, Long, 5 cr

R1534 Practical Law
225610 –1 1015-1200 MW, 1115-1200 F, NichH 109, O'Hare, 5 cr
125611 –2 1315-1500 TTh, 1415-1500 F, NichH 207, Kahn, 5 cr

R1535 Introduction to Data Processing (prereq GCPP math level D or 1435 or algebra)
718113 0815-0900 TWThF, ApH 150, Giese, 4 cr

R1536 Introduction to Commercial Art (max 9 cr; prereq previous art experience or #)
525614 –1 1015-1200 MW, NichH 102, MacInnes, 3 cr
125616 –2 1315-1500 TTh, NichH 102, 3 cr

R1537 Salesmanship
412578 –1 1015-1200 TTh, NichH 109, Nelson, 3 cr
638967 –2 1015-1200 TTh, NichH 109, Nelson, 3 cr

R1540 Accounting Fundamentals I
625619 –1 0815-1000 MW, PtH 102, 4 cr
825621 –2 1415-1600 MW, PtH 111, 4 cr
734666 –3 0815-1000 TTh, PtH 102, 4 cr

R1542 Accounting Fundamentals II (prereq 1540)
322570 1115-1300 TTh, JonesH 10, Larson, 4 cr

R1553 Marketing: Principles of Management (prereq 1551 or #)
134672 –1 1115-1300 MW, 1115-1200 F, ApH 150, Peterson, 5 cr
934679 –2 1115-1300 MW, 1215-1300 F, ApH 150, Peterson, 5 cr

R1701 Psychology of Personal Effectiveness
122571 0915-1100 WF, NichH 254, Lundy, 4 cr

R1702 Survival Seminar I: Introduction to Higher Education (prereq #, △) (S–N only)
106315 1015-1200 T, NichH 201, 2 cr

R1705 Psychology and the Management of Stress: Theory and Application (prereq 1281 or #)
229544 1315-1500 TTh, PtH 215, Romano, 4 cr

R1722 Home Life: Parent-Child Relationships
134695 1315-1500 MW, NichH 211, Latts, 4 cr

R1814 The American Indian in American Law (prereq #, △)
129545 1015-1200 TTh, Arch 50, wiger, 3 cr

R1822 Contemporary Race Relations: Comparative Third World Literature
600610 1015-1200 TTh, VinH 1, 5 cr (1 hr ar)

R1831 American Indian Chemical Dependency (prereq #, △)
929546 1315-1400 MWF, NichH 109, Lundy, 3 cr

R1836 Asian American Literature (prereq #, △)
022572 0815-1000 WF, EltH N119, 4 cr

R1844 Minnesota Parties and Politics (prereq 1233 or #)
039419 0815-0900 MTWTh, NichH 109, Hathaway, 4 cr

R1894 Planning a General College Baccalaureate Program (prereq 75 cr) (S–N only)
125633 1415-1600 W, FolH 308, Brothen, 1 cr (first 5 weeks)

R3114 Personal Environmental Health (prereq 1132)
834710 0815-0900 MTWThF, SciCB 125, Dearden, 5 cr

R3173 Geology of the National Parks
634711 1215-1300 MTWThF, NichH 109, Uthe, 5 cr

R3213 Police in the Community
928834 1315-1530 TTh, VinH 1, Dwyer, 4 cr

R3217 Community Service Internship (prereq #, △)
815140 –1 1415-1600 T, NichH 152, Harris, 6–12 cr
108475 –2 1215-1400 W, NichH 254, Foat, 6–12 cr
337151 –3 1415-1600 Th, NichH 152, Harris, 6–12 cr

R3235 Poverty Law (prereq soph, 1235 or #, △...1212 rec)
822573 1215-1400 MW, 1215-1300 F, PtH 214, Hower, 5 cr

R3236 Minnesota Corrections: Penal Alternatives
622574 1115-1200 MTWTh, NichH 207, Harris, 4 cr

R3251 Great Cities of Europe
234713 1415-1500 MTWThF, JonesH 4, Jones, 5 cr

R3276 Multicultural Relations (§3848; prereq soph or #, △)
037685 1215-1300 M, 1215-1400 WF, PtH 215, Smith, 5 cr

R3286 Topical Seminar in Psychology (prereq 1281, #, △)
137152 Brothen, 4 cr

R3292 Urban Decision Making in the Twin Cities (prereq #, △)
417165 1515-1600 MTWThF, NichH 213, Flynn, 5 cr

R3311 Art: General Arts (§1311)
425637 –1 0815-0900 MTWTh, NichH 111, Byrne, 4 cr
225638 –2 1115-1200 MTWTh, NichH 111, Byrne, 4 cr
125639 –3 1215-1300 MTWTh, NichH 111, MacInnes, 4 cr
808477 –4 1415-1600 MW, NichH 111, 4 cr
134714 –5 1315-1500 TTh, NichH 111, Gates, 4 cr

R3335 Music of the Twentieth Century (§1355; prereq 1 music course or #)
222576 0915-1100 TTh, NichH 111, Byrne, 4 cr

R3342 Moral Issues in Business
934715 1015-1200 MW, NichH 122, Kurak, 4 cr

R3345 Morality and the Law
906316 1415-1600 TTh, NichH 216, 4 cr

R3352 Philosophy Through Literature (§1861, 1862)
734716 1415-1500 MTWTh, NichH 109, Kurak, 4 cr

R3377 Murder, Mystery, and Mayhem: Whodunit△
122577 1415-1500 MTWTh, NichH 213, MacInnes, 4 cr

R3423 Writing the Research or Survey Report (prereq 1421...1422 rec)
808480 –1 1415-1600 TTh, NichH 201, Gidmark, 4 cr
912584 –2 1215-1400 Th, VinH 314, 1215-1400 F, NichH 214, Gidmark, 4 cr

R3426 Information Strategies and Research Methods (§1408 or 3408 Spring 1981, §1426)
018120 1015-1100 TTh, WaLib 102, Oberman, 2 cr

R3454 Understanding Quantitative Research Methods (prereq elementary statistics or #)
728835 1700-1930 T, NichH 209, Giese, 4 cr

R3464 Communication in Organizations (prereq 1461 or 1465, 5 cr in psychology)
534720 1015-1200 TTh, NichH 122, Amram, 4 cr

R3465 Communication for Health Workers (1465 rec)
834724 1315-1500 MW, NichH 107, Amram, 4 cr

R3517 Advanced Business Internship in Cooperative Education (prereq #, △)
925643 1700-1930 Th, NichH 109, Nelson, 6 cr

R3531 Writing for Business and the Professions (prereq 1422)
325646 –1 0815-1000 TTh, NichH 216, Adamson, 4 cr
025648 –2 1315-1500 WF, NichH 209, 4 cr

R3532 Legal Writing (prereq 1421, △...1422 rec)
706317 1615-1845 W, NichH 209, C Miller, 4 cr (paralegal students only)

R3533 Functional Communication (prereq #, △, 1421, either 1422 or 1461)
922578 1315-1500 M, 1315-1600 W, NichH 216, Adamson, 5 cr

R3571 Computer Approach: Problem Solving (prereq high school algebra or #)
528836 1115-1300 TTh, ApH 150, Robertson, 4 cr

R3583 Legal Studies: Estate Planning and Administration (prereq 1235, 1534, 1540, paralegal student or #)
122580 1730-2000 Th, Law 35, LaChapelle, 4 cr

R3587 Legal Studies: Internship (prereq paralegal student, △) (S–N only)
722582 Templeton, ar cr

R3594 Legal Studies: Special Topics: Computers in the Law Firm (§3588; prereq 3584, 3586, #, △)
637527 1730-2000 T, Law 45, Melton, 4 cr

R3602 Applied Supervision (prereq 45 cr, 1511, one course in psychology and sociology or #)
415142 0815-1000 TTh, JonesH 10, Kroll, 4 cr

R3605 Interviewing (prereq #, △)
522583 1415-1500 M, 1415-1600 WF, NichH 304, Skovholt, 5 cr

R3612 Mental Health: Principles and Practices (prereq #, △)
618377 1015-1200 WF, NichH 304, Skovholt, 4 cr

R3616 Creativity: Crafts (prereq soph or above, enrolled in RSG or HSG or pre-OT or #)
322584 1115-1300 TTh, NichH 102, Gates, 4 cr

R3644 Human Services: Counseling and Work With Community Resources (prereq HSG student, #, △)
022586 1730-2000 M, NichH 304, Foat, 5 cr

R3723 Principles of Marriage and Family Interventions Internship (prereq 3722, #) (A–N only)
629637 1415-1600 W, NichH 152, Thoen, 6 cr

R3725 The Individual, Sexuality and Society
822587 1015-1100 MTWTh, NichH 207, Thoen, 4 cr

R3834 Conflict and Social Change: Humanities (prereq ¶3835, 3836)
634742 1730-2100 MW, NichH 209A, Koch, 3 cr

R3835 Conflict and Social Change: Social Sciences (¶3834, 3836)
434743 1730-2100 MW, NichH 209A, Wambach, 3 cr

R3836 Conflict and Social Change: Natural Sciences (¶3834, 3835)
234744 1730-2100 MW, NichH 209A, Pleus, 3 cr

R3844 Minnesota Parties and Politics (prereq 1233 or #)
339420 0815-0900 MTWTh, NichH 109, Hathaway, 4 cr

R3894 Planning Your GC Baccalaureate Senior Report (prereq 135 credits, #, △...3423 rec) (S–N only)
035063 1415-1600 Th, NichH 209, Giese, 1 cr

GENETICS AND CELL BIOLOGY (GCB)
Biological Sciences

3008 The Biology of Cancer (prereq Biol 1009)
006839 1315-1430 TTh, PalmC 10, McKinnell, 3 cr

R3022 Genetics (§Biol 5003; prereq Biol 1009, non-biology maj)
★LECT 0945-1100 TTh, OwreH 2230, Sauerbier, (Mpls)
625667 –1 REC 1115-1200 T, MinMet 116, 4 cr (Mpls)
225669 –2 REC 1215-1300 T, MinMet 116, 4 cr (Mpls)
425671 –3 REC 0900-0945 W, BioSci 6, 4 cr
225672 –4 REC 1000-1045 W, BioSci 6, 4 cr

5002 Transmission Electron Microscopy Lab (prereq #) (S–N only)
134042 4 cr

R5015 Histology: Cell and Tissue Organization (prereq Biol 1106 or 3011, plus 4 additional credits in the biological sciences)
★LECT 0830-0945 TTh, ClaOff B25, Cunningham
025682 –1 LAB 1000-1145 TTh, BioSci 107, 5 cr
625684 –2 LAB 1300-1445 TTh, BioSci 107, 5 cr
425685 –3 LAB 1300-1445 WF, BioSci 107, 5 cr

R5022 Genetics (§3022, Biol 5003, not open to grad students in genetics)
★LECT 0945-1100 TTh, OwreH 2230, Sauerbier, (Mpls)
925688 –1 REC 1115-1200 T, MinMet 116, 3 cr (Mpls)
125690 –2 REC 1215-1300 T, MinMet 116, 3 cr (Mpls)
925691 –3 REC 0900-0945 W, BioSci 6, 3 cr
725692 –4 REC 1000-1045 W, BioSci 6, 3 cr

R5030 Laboratory: Genetics (prereq 3022 or 5022 or Biol 5003 or #)
034043 1515-1730 MW, BioSci 245, Snustad, 2 cr

5032 Advanced Genetics II (prereq 5031)
521806 1400-1500 MWF, BioSci 18, Hackett, 4 cr

5033 Population and Quantitative Genetics (prereq 3022 or Biol 5003, course in biometry or statistics or #)
321807 1300-1445 TTh, BioSci 64, Curtsinger, 4 cr

5052 Quantitative Techniques, Cell Biology (calculus, introductory cellular or molecular biology, biochemistry rec)
625698 0815-0945 TTh, BioSci 70, Rubenstein, 4 cr

5970 Directed Studies (prereq #, △)
306840 ar cr

5990 Directed Research (prereq #, △)
106841 ar cr

8060 Current Topics
901312 –1 1400-1530 M, BioSci 260, Simmons, 2 cr
736997 –2 1530-1700 M, BioSci 438, Hackett, 2 cr

8900 Seminar (S–N only)
021809 1530-1700 Th, BioSci 70, Hackett, 1 cr

8910 Journal Clubs (prereq △) (S–N only)
301315 1 cr

8920 Special Topics (prereq △) (S-N only)
321810 1-5 cr

8970 Directed Studies (prereq #, △)
121811 ar cr

8990 Research (prereq #)
021812 ar cr

GEO-ENGINEERING (GeoE)
Civil And Mineral Engineering
Institute of Technology

5262 Geo-Engineering Analysis (prereq IT sr or grad IT maj or #) (A-N only)
924394 1315-1400 TTh, CivMinE 212, 4 cr

5302 Applied Rock Mechanics (prereq 5300, IT stu or grad IT maj) (A-N only)
425699 0815-0900 MTWF, CivMinE 213, Crouch, 4 cr

5662 Special Geo-Engineering Problems (prereq IT sr or #) (A-N only)
724395 ar cr

8350 Advanced Rock Mechanics I (prereq 5302)
524396 1115-1200 MWF, CivMinE 214, Cundall, 4 cr

8603 Seminar: Geo-Engineering (prereq #) (S-N only)
324397 ar cr

8614 Geo-Engineering Research Problems (prereq #) (A-N only)
124398 ar cr

GEOGRAPHY (Geog)
Liberal Arts

R1301 Human Geography
★LECT 1015-1100 MWF, JacH 2135, Weil
325713 –1 REC 1215-1300 MW, FordH 40, 5 cr
025715 –2 REC 1215-1300 MW, FordH 175, 5 cr
825716 –3 REC 1015-1100 TTh, KoltH S133, 5 cr
425718 –4 REC 1015-1100 TTh, Phys 157, 5 cr
625720 –5 REC 0915-1000 WF, FordH 40, 5 cr
425721 –6 REC 0915-1000 WF, FordH 60, 5 cr
★LECT 1215-1300 MWF, WilleyH 125, Rice
706348 –7 REC 0915-1000 TTh, BlegH 150, 5 cr
206359 –8 REC 0915-1000 TTh, BlegH 335, 5 cr
206362 –9 REC 1015-1100 TTh, RarigC 616, 5 cr
106363 –10 REC 1115-1200 TTh, BlegH 445, 5 cr
506366 –11 REC 1115-1200 TTh, BlegH 460, 5 cr
006372 –12 REC 1115-1200 TTh, BlegH 430, 5 cr
106380 –13 REC 1215-1300 TTh, BlegH 430, 5 cr
406389 –14 REC 1215-1300 TTh, BlegH 460, 5 cr
606391 –15 REC 0915-1000 WF, BlegH 460, 5 cr
337134 –16 REC 0915-1000 WF, Mgmt/Econ 128, 5 cr
137135 –17 REC 0915-1000 WF, Mgmt/Econ 130, 5 cr
037136 –18 REC 1015-1100 WF, BlegH 205, 5 cr
837137 –19 REC 1015-1100 WF, BlegH 210, 5 cr
637138 –20 REC 1315-1400 WF, BlegH 430, 5 cr
437139 –21 REC 1315-1400 WF, BlegH 415, 5 cr

R1401 Physical Geography (§NSci 1501)
★LECT 0915-1000 MWF, WilleyH 125, Gersmehl
125728 –1 REC 0815-0900 MF, BlegH 430, 5 cr
325730 –2 REC 0815-0900 MF, BlegH 445, 5 cr
025732 –3 REC 0815-0900 MF, BlegH 460, 5 cr
825733 –4 REC 1015-1100 MF, BlegH 430, 5 cr
425735 –5 REC 1015-1100 MF, BlegH 445, 5 cr
225736 –6 REC 1015-1100 MF, BlegH 460, 5 cr
908597 –7 REC 1115-1200 MF, BlegH 445, 5 cr
508599 –8 REC 1115-1200 MF, BlegH 460, 5 cr
108601 –9 REC 0815-0900 TTh, BlegH 430, 5 cr
708603 –10 REC 0815-0900 TTh, BlegH 445, 5 cr
308605 –11 REC 0815-0900 TTh, BlegH 460, 5 cr
008607 –12 REC 0915-1000 TTh, BlegH 430, 5 cr
608609 –13 REC 0915-1000 TTh, BlegH 445, 5 cr
808611 –14 REC 0915-1000 TTh, BlegH 460, 5 cr
408613 –15 REC 1015-1100 TTh, BlegH 460, 5 cr

R1425 Introduction to Meteorology (§Soil 1262)
★LECT 1830-2045 M, AndH 230, Skaggs
025701 –1 REC 1830-2000 W, BlegH 445, 4 cr
825702 –2 REC 1830-2000 Th, BlegH 445, 4 cr

R1501 The Language of Maps (§3311)
★LECT 1015-1100 MWF, AndH 370, Andrews
933404 –1 REC 1015-1100 T, BlegH 430, 5 cr
733405 –2 REC 1015-1100 T, BlegH 455, 5 cr
533406 –3 REC 1115-1200 T, BlegH 455, 5 cr
333407 –4 REC 1015-1100 Th, BlegH 430, 5 cr
133408 –5 REC 1015-1100 Th, BlegH 455, 5 cr
033409 –6 REC 1115-1200 Th, BlegH 455, 5 cr
333410 –7 REC 0915-1000 F, BlegH 430, 5 cr
133411 –8 REC 0915-1000 F, BlegH 455, 5 cr

3001 Introduction to Geographic Inquiry
713302 1115-1200 MWF, BlegH 150, Porter, 4 cr

3101 Geography of United States and Canada
106452 1115-1200 MWF, BlegH 5, Hart, 4 cr

3111 Minnesota
033412 1415-1500 MWF, AndH 230, Rice, Squires, 4 cr

3131 Middle America
422978 0915-1000 MWF, BlegH 130, Barrett, 4 cr

3141 Africa
837140 0915-1000 MWF, BlegH 440, Scott, 4 cr

3161 Europe
439344 1015-1100 MWF, BlegH 130, Bouman, 4 cr

3221 Australia, New Zealand, Oceania
833413 1215-1300 MWF, BlegH 425, Barrett, 4 cr

3321 Political Geography
433415 0915-1000 MWF, AndH 250, Schwartzberg, 4 cr

3341 Industrialization and World Trade
909443 0945-1100 TTh, BlegH 10, R Adams, 4 cr

3345 Energy and Minerals
838837 1115-1200 MWF, AndH 350, Wilkinson, 4 cr

3355 Environmental Problems
425704 1800-2100 T, BlegH 445, Squires, 4 cr

3371 Introduction to Urban Geography
309446 0945-1100 TTh, BlegH 230, Veness-Randle, 4 cr

3431 Introduction to Plant and Animal Geography (prereq non biology maj)
233416 1015-1100 MWF, AndH 350, Squires, 4 cr

3451 Geography of Soils (§Soil 5512)
809452 1315-1400 MWF, BlegH 460, Gersmehl, 4 cr

R3511 Introduction to Cartography (prereq 5 cr in geog or #)
★LECT 1315-1500 M, BlegH 415, Curry
525757 –1 REC 1515-1700 M, BlegH 455, 5 cr
325758 –2 REC 1315-1500 T, BlegH 455, 5 cr
133417 –3 REC 1315-1500 W, BlegH 455, 5 cr

3801 Development of Geographic Thought (§5801; prereq 3 courses in geog)
637141 1215-1400 MF, BlegH 250, Mather, 4 cr

3940 Directed Field Study (prereq #) (A-N only)
933418 2-4 cr

R3950 Undergraduate Seminar (prereq 10 cr geog or #)
★LECT 1315-1400 M, BlegH 430, Curry-Roper
539349 –1 REC 1415-1500 M, Mgmt/Econ 130, 4 cr
539447 –2 REC 1015-1100 T, Law 1, 4 cr

3970 Directed Readings (prereq #, △, college approval)
622980 1-15 cr

5112 Western United States
138835 0815-1000 MF, Law 15, Mather, 4 cr

5113 Canada and Alaska
438839 1515-1700 MF, BlegH 425, Mather, 4 cr

5132 South America
609467 1315-1400 MWF, BlegH 130, Weil, 4 cr

5142 Geography of East Africa
133420 1415-1500 MWF, BlegH 130, Porter, 4 cr

5145 Development in Africa (§IntR 5145, Afro 5145)
239345 1115-1200 MWF, BlegH 245, Scott, 4 cr

5373 Metropolitan Analysis II (prereq 5372)
317207 0815-1000 TTh, BlegH 130, J Adams, 4 cr

5383 Transportation Geography (prereq 3331 or #)
933421 1820-2050 T, BlegH 430, R Adams, 4 cr

5423 Advanced Climatology (prereq 3421 or #)
133425 1315-1500 MF, BlegH 445, Skaggs, 4 cr

5424 Applied Climatology (§Soil 5424; pereq 3421 or Soil 5420 or #)
038836 1400-1515 TTh, PalmC 12, Skaggs, 3 cr

5444 Geography of Water Resources (prereq 2 courses physical geog or #)
222982 1415-1530 TTh, BlegH 445, Brown, 4 cr

5445 Quaternary Paleogeography
638838 1415-1500 MWF, BlegH 155, Wilkinson, 4 cr

R5512 Cartography: Tactual Graphics (prereq 3511, 3531 or #)
437142 1115-1230 MW, BlegH 455, Andrews, 4 cr

5531 Quantitative Research Design (prereq 3531 or #)
033426 0915-1000 MWF, SocSci 307, Sheppard, 4 cr

8020 Seminar: Economic Geography (prereq #)
506464 1515-1700 W, SocSci 307, Sheppard, 1-3 cr

8120 Seminar: Historical Geography (prereq #)
309480 1515-1700 W, BlegH 430, Barrett, 1-3 cr

8140 Seminar: Africa (prereq #)
137144 1300-1500 F, SocSci 307, Scott, 3 cr

8210 Seminar: South Asia (prereq #)
122983 Schwartzberg, 1-3 cr

8380 Seminar: Medical Geography (prereq 5411 or #)
937145 1300-1500 T, BlegH 430, Weil, 1-3 cr

8800 Seminar: Development of Geographic Thought (prereq #)
737146 1900-2100 W, BlegH 430, Lukermann, 1-3 cr

8970 Directed Readings
722985 1-5 cr

8980 Topics in Geography (prereq △)
537147 –1 1315-1500 M, Law 3, Leitner, 1-3 cr
139346 –2 1415-1600 Th, BlegH 430, Squires, 1-3 cr

8990 Research Problems
522986 ar cr

GEOLOGY AND GEOPHYSICS (Geo)
Institute of Technology

R1001 Physical Geology
★LECT 1315-1400 MTWF, SmithH 100, Paola, 5 cr
125768 –1 LAB 1015-1200 M, FordH 185
925769 –2 LAB 1415-1600 M, FordH 185
225770 –3 LAB 0815-1000 T, FordH 185
125771 –4 LAB 1015-1200 T, FordH 185
925772 –5 LAB 1415-1600 T, FordH 185
525774 –6 LAB 0815-1000 W, FordH 185
325775 –7 LAB 1015-1200 W, FordH 185
125776 –8 LAB 0915-1100 Th, FordH 180
825778 –9 LAB 1015-1200 Th, FordH 185
025780 –10 LAB 1215-1400 Th, FordH 185

R1002 Historical Geology (prereq 1001)
★LECT 1215-1300 MWF, PillsH 110, Hartman, 4 cr
125793 –1 LAB 1015-1200 T, FordH 85
025794 –2 LAB 1415-1600 T, FordH 85

R1005 Geologic Perspectives on Energy
536810 0915-1000 MTWF, MechE 18, Alexander, Shaw, 4 cr

R1111 Introductory Physical Geology (prereq high school or college chemistry or #)
★LECT 1315-1400 MWF, PillsH 110, Stout, Shaw, 5 cr
★REC 1415-1500 F, PillsH 110
003276 –1 LAB 0915-1100 MW, PillsH 100
403279 –2 LAB 1315-1500 TTh, PillsH 100
403282 –3 LAB 1515-1700 TTh, PillsH 100

R3102 Petrology (prereq 3401, geology, geophysics, geo-engineering or mining engineering maj or #)
★LECT 1115-1200 MWF, PillsH 110, Weiblen, 5 cr
225798 –1 LAB 1215-1400 MW, PillsH 125
125799 –2 LAB 1415-1600 MW, PillsH 125
825800 –3 LAB 0915-1100 TTh, PillsH 125
625801 –4 LAB 1515-1700 TTh, PillsH 125

3990 Problems in Geology and Geophysics (prereq #)
439571 1–6 cr

R5002 Structural Geology (§5201, no geology, geophysics, geo-engineering or mining engr majs; prereq 3401 or 5004, #)
★LECT 1015-1100 MWF, PillsH 110, Hudleston, 4 cr
725806 –1 LAB 1315-1500 MW, PillsH 100
325808 –2 LAB 1515-1700 MW, PillsH 100
103258 –3 LAB 0915-1100 TTh, PillsH 100
418073 –4 LAB 1115-1300 TTh, PillsH 100

5100 Advanced General Geology (prereq 1001 or 1111, #) (S–N only)
338767 –1 Alexander, 1–2 cr (Grand Canyon field trip)
739303 –2 1–2 cr

R5201 Structural Geology (prereq 3401, 3102, IT upper division geology, geophysics, geo-engr or mining engr maj or CLA jr or sr geophysics maj or #)
★LECT 1015-1100 MWF, PillsH 110, Hudleston, 5 cr
639567 –1 LAB 1315-1500 MW, PillsH 100
439568 –2 LAB 1515-1700 MW, PillsH 100
239569 –3 LAB 0915-1100 TTh, PillsH 100
639570 –4 LAB 1115-1300 TTh, PillsH 100

5202 Tectonic Styles (prereq 5201 or #)
138768 1315-1400 MWF, PillsH 121, Hudleston, 3 cr

R5313 Aqueous Geochemistry (prereq 5311, Chem 5520 or #)
512829 1415-1500 MWF, PillsH 207C, Seyfried, 4 cr

R5352 Economic Geology: Ferrous Metal and Uranium Deposits (prereq 3401, 5201 or #)
424469 0915-1000 MWF, PillsH 121, Sawkins, 4 cr

R5507 Physics and Chemistry of the Earth III (5505 or 5506 are not required)
824470 1115-1300 TTh, PillsH 121, Alexander, 4 cr

R5513 Principles of Electrical Exploration (prereq Phys 1291)
224473 1015-1100 TTh, PillsH 110, 1015-1100 F or 1315-1400 F, PillsH 207C, Mooney, 3 cr

5603 Geological Limnology (prereq 5601 or EBB 5601)
139573 Engstrom, 5 cr

R5611 Groundwater Geology (prereq 1001 or 1111, Math 1231, 1 qtr physics, chemistry or #)
★LECT 0815-1000 MW, PillsH 110, Pfannkuch, 4 cr
628827 –1 LAB 0815-1000 F, PillsH 110

R5653 Stratigraphic Analysis (prereq 1002 or 3112)
039565 0815-1000 TTh, PillsH 207C, Paola, 4 cr

5990 Senior Thesis (max 6 cr; prereq sr geology or geophysics maj, #)
239572 2 cr

8098 Seminar: Current Topics in Geology and Geophysics (prereq #)
624471 1–6 cr

8099 Research in Geology and Geophysics (prereq #)
124474 1–6 cr

8351 Advanced Mineral Deposits (prereq 5313, 5351 or #)
133546 Sawkins, Seyfried, 3 cr

8402 X-Ray Mineralogy (prereq 1 yr college physics, chemistry)
225820 1115-1200 MWF, PillsH 121, Zoltai, 4 cr (lab ar)

8543 Principles of Rock Magnetism II (prereq 8542 or #)
933547 Banerjee, 3 cr

8564 Properties of the Earth's Mantle: Relationship to Crustal Motion (prereq 5505 or 5506 or 5507 or #)
733548 Banerjee, 3 cr

GERMAN (Ger)
German
Liberal Arts

R1010 Beginning German: Individualized Reading, Listening (first 3 cr must be completed as a unit, max 15 cr, §1101-1102-1103, 1110, 1201-1203, 1210)
105978 –1 1215-1300 W, Armory 116, 1–15 cr (1st meeting) (addnl hrs ar)
534264 –2 1215-1300 Th, Arch 10, 1–15 cr (1st meeting) (addnl hrs ar)

R1102 Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1101)
525824 –1 0915-1000 MTWThF, KoltH S134, Michel, 5 cr
839339 –2 1015-1100 MTWThF, AkerH 317, 5 cr

R1103 Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1102)
825831 –1 0915-1000 MTWThF, MinMet 120, 5 cr
425833 –2 1015-1100 MTWThF, KoltH S134, 5 cr
125835 –3 1115-1200 MTWThF, KoltH S134, 5 cr
725837 –4 1215-1300 MTWThF, JonesH 11, 5 cr

R1105 Beginning and Intermediate German: Classroom Reading, Listening, Writing, Speaking (§1010, 1110, 1201-1202-1203-1204-1205, 1210; prereq 1104)
009501 0915-1000 MTWTh, KoltH S135, Rauch, 4 cr

R1110 Beginning German: Individualized Reading, Listening, Writing (first 3 cr must be completed as one unit, max 15 cr, §1010, 1101-1103, 1201-1203, 1210)
709511 –1 1215-1300 M, Armory 116, 1–15 cr (1st meeting) (addnl hrs ar)
309513 –2 1215-1300 T, Armory 116, 1–15 cr (1st meeting) (addnl hrs ar)

R1203 Beginning and Intermediate German: Classroom Reading, Listening, Writing (§1010, 1101-1102-1103-1104-1105, 1110, 1210; prereq 1202)
834268 1115-1200 MTWThF, AkerH 211, 5 cr

1210 Reading and Listening: Independent Study (§1010, 1102-1103-1104, 1110, 1202-1203-1204; prereq 1201)
022989 1215-1300 T, Arch 5, 1–15 cr (1st meeting) (addnl hrs ar)

R3011 Conversation and Composition (prereq 1105 or placement)
302190 1115-1200 MTWF, FolH 304, Michel, 4 cr

R3012 Conversation and Composition (prereq 3011)
322990 1015-1100 MTWF, FolH 107, Plummer, 4 cr

R3013 Conversation and Composition (prereq 3012)
425850 –1 1315-1400 MTWF, FolH 205, Achberger, 4 cr
125852 –2 0915-1000 TWThF, FolH 205, Brewster, 4 cr

R3016 Techniques of Translation (prereq 3013 or #)
122991 1315-1400 MWF, FolH 208, Hirschbach, 4 cr

R3104 Reading and Analysis of Prose (prereq 1105 or #)
022992 0945-1100 TTh, FolH 207, Thomas, 4 cr

R3105 Reading and Analysis of Drama and Poetry (prereq 1105 or #)
822993 1015-1100 MWF, FolH 204, Taraba, 4 cr

3342 Major Project in German (prereq #) (A–N only)
613485 2 cr

3342H Major Project in German (prereq #) (A–N only)
111800 2 cr

R3422 Storm and Stress (prereq 3104, 3105)
634269 1315-1400 MWF, FolH 105, Schulte-Sasse, 4 cr

R3442 Twentieth-Century Literature: 1918-1933 (prereq 3104, 3105)
834271 1215-1300 MWF, FolH 204, Plummer, 4 cr

R3513 German Civilization and Culture: 1800 to Present (prereq 3104, 3105, one additional 3xxx German course)
622994 1415-1500 MW, 1415-1600 F, FolH 303, Weiss, 4 cr

3590 Directed Studies: German-Speaking Countries (prereq 3501, #)
305994 5 cr

R3603 German Literature in Translation: Modern Literature (no knowledge of German required; prereq non maj or minor)
★LECT 1115-1200 MWF, FordH 155, Achberger
139340 –1 REC 1215-1300 M, FolH 302, Achberger, 4 cr
039341 –2 REC 1415-1500 M, FolH 104, Achberger, 4 cr
839342 –3 REC 1215-1300 W, FolH 304, Achberger, 4 cr
639343 –4 REC 1215-1300 F, FolH 304, Achberger, 4 cr

R3610 German Authors and/or Topics in Translation (max 12 cr, no knowledge of German req; prereq non maj or minor)
634272 1415-1500 MWF, FolH 105, Plummer, 4 cr

R3701 History of German Language (prereq 3104, 3105)
434273 0945-1100 TTh, FolH 204, Firchow, 4 cr

3970 Directed Studies (prereq 3104 or 3105, #, △, college approval)
605998 1–5 cr

5970 Directed Studies (prereq 3104, 3105, 3 addnl German literature courses, #, △, CLA approval)
306000 1–5 cr

8203 Middle High German Courtly Lyric (prereq 8202, 8723 or #)
234274 1515-1700 Th, FolH 304, Wakefield, 4 cr

8302 The 19th Century Novel
636961 1615-1800 T, FolH 108, Brewster, 4 cr

8431 Heine
134275 1515-1700 M, FolH 304, Duroche, 4 cr

8723 Middle High German Language (prereq 8722)
734277 1315-1530 T, FolH 302, Firchow, 4 cr

8733 Old High German (prereq 8732)
934276 1515-1700 F, FolH 103, Liberman, 4 cr

8820 Advanced Theoretical Seminar (max 12 cr; prereq 8112 or 8113 or #)
436962 1515-1700 W, FolH 204, Duroche, 4 cr

8990 Reading and Research (prereq #)
706012 3–6 cr

GRADUATE SCHOOL (GRAD)

0000 Student Status (prereq graduate student)
738314 0 cr

8777 Thesis Credits: Masters (open to graduate students admitted for Fall, 1983 or later)
538315 1–16 cr

8888 Thesis Credits: Doctoral (open to graduate students admitted for Fall, 1983 or later)
338316 1–16 cr

GREEK (Grk)
Classics
Liberal Arts

1103 Selections from Greek Literature (§3051-3052; prereq 1102 or equiv) (A–N only)
722761 1215-1300 MTWThF, FolH 208, Woods, 5 cr

1120 Individualized Introduction to Biblical Greek (max 15 cr, 2-10 cr in any one qtr, §1101-1102-1103, 1110; prereq #)
106752 1215-1300 MW, FolH 104, 1–15 cr (March 26-April 4) (Independent study ar)

3106 Greek Poetry (prereq 1122 or 3052 or 3105 or △))
522762 1315-1400 MWF, FolH 304, Billigmeier, 5 cr

3457 Advanced Undergraduate Greek: Euripides (prereq 3106 or 5 cr of 3120 or 3 yrs high school Greek or △)
033099 1115-1230 TTh, FolH 305, Coulson, 5 cr

3951 Major Project (prereq Grk-Lat or Grk maj, three 3xxx courses in Greek or #) (A–N only)
339076 5 cr

3960H Honors Tutorial (prereq △)
612045 5 cr

3970 Directed Studies (prereq #, △, college approval)
906753 1–5 cr

5320 Greek Literature: Tragedy (max 12 cr)
733100 1315-1400 MWF, FolH 103, Keuls, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
506755 1–5 cr

5980 Directed Teaching (prereq #, △, CLA approval)
306756 ar cr

5990 Directed Research (prereq #, △, CLA approval)
106757 ar cr

R8120 **Greek Text Course** (prereq 3052 or △)
225865 –1 1315-1400 MWF, FolH 304, Billigmeier, 4 cr
533101 –2 1115-1230 TTh, FolH 305, Coulson, 4 cr

HEALTH SCIENCE UNITS (HSU)
Health Sciences

R5011 **The Teaching-Learning Process in the Health Care Setting** (§PubH 5064)
224053 1515-1800 M, MoosT 2571, 2585, Garloff, 3 cr

R5019 **The Rights of Children and Youth: Abuse and Neglect**
336579 1615-1800 MW, MoosT 2650, tenBensel, 4 cr

R5021 **Health Care for the Elderly** (§AdPy 5509)
033460 1615-1800 MW, HSUnitF 2110, 2140, Garetz, 3 cr

R5022 **Health Sciences Education in the 20th Century** (§PubH 5850)
124062 1615-1800 W, MoosT 2571, 2585, Garrard, Harris, others, 3 cr

R5024 **Human Interaction Laboratory for Health Professionals** (§PubH 5851)
224070 1615-1800 W, PWB 5224, Ayers, 4 cr

R5028 **Human Sexuality for the Health and Helping Professionals III** (prereq completion of human sexuality for health and helping professionals II or #)
024077 1715-1930 Th, MoosT 2690, Maddock, Larson, others, 3 cr

R5030 **Humanities and Aging** (§Phar 5008)
539609 1615-1800 W, JacH 2135, Galle, 2 cr

R5031 **Biology of Aging** (§Dent 5070, Phar 5007)
939610 Galle, 2 cr

R5033 **Fundamentals of Alcohol and Drug Problems** (§PubH 5033)
824078 1315-1400 T, 1315-1500 Th, HSUnitF 2110, 2140, Kincannon, Rothenberger, 3 cr

R5039 **Alcohol and Drug Problems: Assessment and Response** (§PubH 5039; prereq PubH 5035 or #)
908566 1415-1630 T, Mayo 1210, Kincannon, 3 cr

5210 **Terminology of the Health Sciences** (§Phar 5210)
624079 Bast, 2 cr

HEBREW (Hebr)
Near And Middle Eastern Studies
Liberal Arts

R1103 **Beginning Hebrew** (prereq 1102)
125874 1115-1200 MTWThF, Arch 20, 5 cr

R1106 **Introduction to Biblical Hebrew** (prereq 1105)
622669 1615-1800 TTh, FolH 104, 5 cr

R1301 **Survey of Hebrew Grammar** (prereq 1102 or 1013 or #)
106662 1315-1400 MWF, FolH 104, 2 cr

R3013 **Intermediate Hebrew** (prereq 3012)
022670 1115-1200 MTWThF, FolH 204, 5 cr

R3017 **Advanced Modern Hebrew** (prereq 3016)
822671 1315-1400 MWF, FolH 108, 4 cr

R3203 **Readings in Biblical Hebrew** (prereq 1103 or 1104 or #)
604656 1615-1800 MW, FolH 107, 4 cr

R3980 **Directed Instruction** (prereq #, △, college approval)
622672 1–5 cr

R5970 **Directed Readings** (prereq 3013, #, △, CLA approval)
422673 ar cr

R5990H **Honors Course: Research** (prereq 5970, #, △, CLA approval)
111806 ar cr

HIGHER EDUCATION (HiEd)
Educational Policy And Administration
Education

5250 **American Higher Education** (§Educ 5250, EdAd 5250) (S-N optional)
615494 1615-1800 Th, BuH 240, Hearn, Corcoran, 4 cr

5292 **The Law and Postsecondary Educational Institutions** (§EdAd 5292) (A-N only)
533163 1830-2030 W, BlegH 245, Hooker, 3 cr

8228 **Problems: Higher Education** (§EdAd 8228; prereq #)
308183 ar cr

8229 **Seminar: Higher Education** (§EdAd 8229; prereq #)
608187 1515-1730 T, NichH 109, Hearn, 1–4 cr

8230 **Seminar: Dissertation Research in Higher Education** (prereq #)
608190 1615-1800 M, BuH 240, Clark, Lewis, 1 cr

8252 **Effective College Teaching** (§Educ 8252; prereq 5250 or EdAd 5250)
108193 1615-1800 T, BuH 240, Burris, 3 cr

8253 **Seminar: Improvement of College Instruction** (prereq #)
333164 1415-1600 T, ChDev 105, 3 cr

8290 **Financing Higher Education** (§EdAd 8290; prereq #)
738751 1830-2030 M, BuH 240, Hearn, 3 cr

HINDI (Hndi)
South And Southwest Asian Studies
Liberal Arts

1103 **Beginning Hindi** (prereq 1102)
423158 –1 1315-1400 MTWThF, JonesH 10, Staneslow, 5 cr
136575 –2 1615-1800 MTh, 1615-1700 W, FolH 103, Staneslow, 5 cr

5133 **Intermediate Hindi** (§3033; prereq 5132)
423161 1415-1500 MTWThF, LindH 340, Staneslow, 5 cr

5163 **Advanced Hindi** (prereq 5162)
223162 Junghare, 4 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
723165 Junghare, Staneslow, ar cr

5990 **Directed Research** (prereq #, △, CLA approval)
523166 Junghare, Staneslow, ar cr

8990 **Directed Research** (prereq #)
323167 Junghare, Staneslow, ar cr

HISTORY (Hist)
Liberal Arts

R1002 **Introduction to Modern European History Since the Middle Ages** (§1002H, 3002, not open to jrs, srs)
★LECT 1015-1100 MW, AndH 250, Maynes
433589 –1 REC 0815-0900 W, BlegH 245, 4 cr
833590 –2 REC 0915-1000 F, RarigC 616, 4 cr
633591 –3 REC 1215-1300 F, BlegH 245, 4 cr

R1003 **Introduction to Modern European History Since the Middle Ages** (§1003H, 3003, not open to jrs, srs)
★LECT 0945-1030 TTh, WilleyH 125, Kieft
509770 –1 REC 0915-1000 M, BlegH 255, 4 cr
625894 –2 REC 1215-1300 M, BlegH 245, 4 cr
225896 –3 REC 0815-0900 T, BlegH 210, 4 cr
125897 –4 REC 1215-1300 T, BlegH 335, 4 cr
925898 –5 REC 1315-1400 T, BlegH 335, 4 cr
725899 –6 REC 0815-0900 W, BlegH 335, 4 cr
425900 –7 REC 0915-1000 W, BlegH 115, 4 cr
125902 –8 REC 0915-1000 W, Mgmt/Econ 136, 4 cr
725904 –9 REC 1315-1400 W, BlegH 10, 4 cr
525905 –10 REC 0815-0900 Th, BlegH 210, 4 cr
125907 –11 REC 1315-1400 Th, BlegH 245, 4 cr
825909 –12 REC 0915-1000 F, BlegH 115, 4 cr

R1003H **Honors Course: Introduction to Modern European History Since the Middle Ages** (§1003, 3003, not open to jrs, srs; prereq #)
★LECT 0945-1030 TTh, WilleyH 125, Kieft
211822 –80 REC 1315-1400 Th, Mgmt/Econ 136, Kieft, 4 cr

R1053 **Ancient Civilization** (§3053)
★LECT 1215-1300 MWF, AndH 250, Kelly
625913 –1 REC 1015-1100 Th, AndH 350, 4 cr
425914 –2 REC 1215-1300 Th, BlegH 335, 4 cr
103177 –3 REC 0915-1000 F, AndH 350, 4 cr
906400 –4 REC 1115-1200 F, BlegH 260, 4 cr

R1101 **Introduction to Medieval History**
★LECT 0915-1000 MWF, AndH 270, Reyerson
209794 –1 REC 1215-1300 M, BlegH 335, 4 cr
909796 –2 REC 1115-1200 T, BlegH 225, 4 cr
709797 –3 REC 0815-0900 W, BlegH 340, 4 cr
110414 –4 REC 1115-1200 Th, BlegH 225, 4 cr
410412 –5 REC 1015-1100 F, BlegH 245, 4 cr
710416 –6 REC 1215-1300 F, BlegH 260, 4 cr

R1301 **American History** (§1301H)
★LECT 1015-1100 MWF, AndH 210, Kreuter
725921 –1 REC 0815-0900 M, BlegH 245, 4 cr
325923 –2 REC 1115-1200 M, BlegH 335, 4 cr
025925 –3 REC 1215-1300 M, BlegH 260, 4 cr
825926 –4 REC 1315-1400 M, BlegH 10, 4 cr
625927 –5 REC 1015-1100 T, Mgmt/Econ 136, 4 cr
425928 –6 REC 1215-1300 T, BlegH 225, 4 cr
225929 –7 REC 0915-1000 W, SocSci 628, 4 cr
625930 –8 REC 1215-1300 W, BlegH 245, 4 cr
225932 –9 REC 1015-1100 Th, BlegH 155, 4 cr
202201 –10 REC 0815-0900 F, BlegH 245, 4 cr
902203 –11 REC 1115-1200 F, BlegH 130, 4 cr
702204 –12 REC 1215-1300 F, BlegH 205, 4 cr

R1301H **Honors Course: American History** (§1301; prereq #)
★LECT 1015-1100 MWF, AndH 210, Kreuter
511826 –80 REC 1315-1500 M, Law 1, 4 cr

R1302 **American History** (§1302H)
★LECT 1115-1200 MWF, AndH 210, Chalberg
925934 –1 REC 0815-0900 M, BlegH 335, 4 cr
525936 –2 REC 1015-1100 M, BlegH 210, 4 cr
125938 –3 REC 1215-1300 M, BlegH 205, 4 cr
325940 –4 REC 0815-0900 T, BlegH 245, 4 cr
025942 –5 REC 1215-1300 T, BlegH 135, 4 cr
625944 –6 REC 0815-0900 W, BlegH 260, 4 cr
225946 –7 REC 1015-1100 W, BlegH 245, 4 cr
925948 –8 REC 1215-1300 W, BlegH 260, 4 cr
125950 –9 REC 1315-1400 W, Law 3, 4 cr
302206 –10 REC 1015-1100 Th, Mgmt/Econ 136, 4 cr
002208 –11 REC 1215-1300 Th, BlegH 225, 4 cr
102210 –12 REC 1215-1300 F, BlegH 350, 4 cr

R1302H **Honors Course: American History** (§1302; prereq #)
★LECT 1115-1200 MWF, AndH 210, Chalberg
311830 –80 REC 0915-1100 M, SocSci 628, Chalberg, 4 cr

R1403 **Survey of Latin American History: 1929 to Present** (§3403)
★LECT 1115-1230 TTh, AndH 350
125955 –1 REC 1115-1200 M, BlegH 260, 4 cr
825957 –2 REC 1315-1400 T, BlegH 225, 4 cr

1422 **The World and the West** (§3422)
506402 0815-0930 TTh, BlegH 220, Kopf, 4 cr

1453 **Survey of Asian Civilizations in the Modern Era** (§1453H, 3453)
009806 0945-1100 TTh, BlegH 115, Kopf, 4 cr

1453H **Honors Course: Survey of Asian Civilizations in the Modern Era** (§1453, 3453; prereq #)
111831 0945-1100 TTh, BlegH 115, Kopf, 4 cr

R1953 **World Military History: A Survey** (§Mil 1013)
122997 0815-0900 TTh, Armory 116, Westhaus, 2 cr

R1959 **Modern Employment of Air Power** (§Air 1206)
809810 –1 0815-0900 T, 0815-0945 W, Armory 12, Holden, 2 cr
109814 –2 1115-1200 T, 1115-1245 Th, Armory 116, Holden, 2 cr

R3002 **Introduction to Modern European History Since the Middle Ages** (§1002, 1002H)
★LECT 1015-1100 MW, AndH 250, Maynes
433592 –1 REC 0915-1000 W, AndH 350, 4 cr
233593 –2 REC 1215-1300 W, BlegH 205, 4 cr
133594 –3 REC 0815-0900 F, BlegH 260, 4 cr

R3003 **Introduction to Modern European History Since the Middle Ages** (§1003, 1003H)
★LECT 0945-1030 TTh, WilleyH 125, Kieft
525967 –1 REC 0915-1000 M, BlegH 115, 4 cr
125969 –2 REC 0815-0900 T, BlegH 340, 4 cr
325971 –3 REC 1215-1300 T, BlegH 110, 4 cr
118237 –4 REC 1215-1300 T, BlegH 220, 4 cr
118357 –5 REC 1315-1400 Th, BlegH 335, 4 cr
033586 –6 REC 0915-1000 F, Mgmt/Econ 136, 4 cr

3033 **Medicine, Disease in History** (§HMed 3003)
002273 0915-1000 MWF, OwreH 2210, Eyler, 4 cr

R3053 **Ancient Civilization** (§1053)
★LECT 1215-1300 MWF, AndH 250, Kelly
425976 –1 REC 1315-1400 Th, BlegH 225, 4 cr
225977 –2 REC 1115-1200 F, BlegH 235, 4 cr

3273 **Modern Scandinavia Since 1807**
306403 0815-0900 MWF, BlegH 105, 4 cr

3283 **Intellectual and Cultural History of Modern Europe**
937534 1215-1300 MWF, BlegH 105, Thayer, 4 cr

R3403 **Survey of Latin American History: 1929 to Present** (§1403)
★LECT 1115-1230 TTh, AndH 350
525984 –1 REC 1115-1200 M, BlegH 440, 4 cr
125986 –2 REC 0815-0900 T, BlegH 440, 4 cr
025987 –3 REC 1115-1200 W, BlegH 260, 4 cr
825988 –4 REC 1315-1400 Th, BlegH 415, 4 cr

3412 History of Brazil, 1808 to Present
633557 0915-1000 MWF, BlegH 215, Schwartz, 4 cr

3422 The World and the West (§1422)
006405 0815-0930 TTh, BlegH 220, Kopf, 4 cr

3425 History of Mexico: The 19th, 20th Centuries
837008 1015-1100 MWF, BlegH 155, Valdes, 4 cr

3453 Survey of Asian Civilizations in the Modern Era (§1453, 1453H)
109859 0945-1100 TTh, BlegH 115, Kopf, 4 cr

3487 Great Ideas in South Asia
233559 1245-1400 TTh, Law 1, Kopf, 4 cr

3489 Modern India
406411 1245-1400 TTh, BlegH 260, Lelyveld, 4 cr

3544 The Arab World in Recent Times (§MESA 3544)
137189 0915-1000 MWF, BlegH 105, Farah, 4 cr

3609 Military History of Medieval Western Europe
633560 0915-1000 MWF, BlegH 210, Bachrach, 4 cr

3614 Women in Medieval Europe, ca. 500-1500
433561 1115-1200 MWF, BlegH 105, Reyerson, 4 cr

3624 France from the Renaissance to Richelieu
233562 0815-0900 MWF, BlegH 215, Tracy, 4 cr

3633 History of Germany: Empire to Hitler, 1848-1945
825876 0945-1100 TTh, AndH 310, Fellner, 4 cr

3653 The English Civil War and Restoration
623000 0945-1100 TTh, BlegH 110, Lehmberg, 4 cr

3706 European Agriculture, Rome to Present
118231 0945-1100 TTh, BioSci 58, Wright, 4 cr (StP)

3756 History of Italy: 1713-1943
423001 0915-1000 MWF, BlegH 260, Thayer, 4 cr

3775 History of the European Jews from the Middle Ages to the Present
133563 0945-1100 TTh, BlegH 105, Rudolph, 4 cr

3823 United States in the 20th Century: 1945 to Present
933564 1015-1100 MWF, BlegH 5, Berman, 4 cr

3845 American Economic History, 1870 to the Present
733565 0815-0900 MWF, BlegH 155, Green, 4 cr

3852 American Labor History in the 20th Century
533566 0915-1000 MWF, BlegH 155, Berman, 4 cr

3865 Afro-American History (§Afro 3865)
037010 0945-1100 TTh, BlegH 260, Lewis, 4 cr

3868 Asians in America: An Ethnic Perspective
123003 1115-1230 TTh, FolH 105, Tsuchida, 4 cr

3872 American Indian History, 1850 to the Present (§AmIn 3112)
837011 0915-1000 MWF, BlegH 245, Anfinson, 4 cr

3883 History of American Foreign Relations
133568 1115-1200 MWF, BlegH 10, Brauer, 4 cr

3902 Urban History of Industrial America
733579 0815-0930 TTh, BlegH 105, Holt, 4 cr

3952H Honors Course: History (3951H-3952H†; prereq 3951H)
811833 1315-1500 M, SocSci 307, Menard, 4 cr

R3955 Introduction to Historical Research (prereq △)
002242 –1 1315-1500 M, SocSci 628, Suppe, 4 cr
113255 –2 1315-1500 W, SocSci 307, Lelyveld, 4 cr

3960 Internship (prereq #, △, college approval)
036360 4-5 cr

3961 Major Paper (prereq △)
923004 1215-1300 MW, SocSci 710, Vecoli, 5 cr

3970 Directed Study (prereq #, △, college approval)
723005 1-15 cr

3990 Directed Research (prereq #, △, college approval)
523006 1-15 cr

5015 Libraries and Archives as Resources for Research
139158 1400-1530 MW, WaLib 102, Grigg, 2 cr

5052 Ancient Near East
238843 1245-1400 TTh, BlegH 105, Jones, 4 cr

5072 History of Rome
033569 0945-1100 TTh, BlegH 205, J Evans, 4 cr

5200 Topics in European History: Comparative Issues in Modern Scandinavia
806440 1315-1430 MW, Mgmt/Econ 128, 4 cr

5266 Modern Russia: The 20th Century
413259 1015-1100 MWF, BlegH 215, Stavrou, 4 cr

5286 Diplomatic History of Europe, 1918 to Present
123011 1115-1230 TTh, AndH 370, Kieft, 4 cr

5334 American Legal History
206426 1315-1400 MWF, BlegH 105, Murphy, 4 cr

R5389 Russian-American Relations, 1917 to Present
333570 1315-1500 MF, BlegH 115, Brauer, 5 cr

5420 Topics: Revolutions in Latin America: Mexico, Cuba and Central America (prereq #)
133571 1215-1300 MWF, BlegH 210, Valdes, 4 cr

5432 Problems in Contemporary Africa
033572 1245-1400 TTh, BlegH 350, Kaba, 4 cr

5519 Proseminar: Topics in Chinese History: Intellectuals and the State in Modern China (prereq #)
633574 1515-1700 F, SocSci 628, Farmer, 5 cr

5573 Proseminar: Roman History (5571-5572-5573†; prereq 5572)
433575 J Evans, 3 cr

5757 Modern Greek Studies (5756-5757†; prereq 5756) A-N only)
239622 3 cr

5785 Proseminar: Diplomatic History of 19th and 20th Century Europe
535950 1315-1500 T, SocSci 101, Fellner, 3 cr

5807 Proseminar: Research in Revolutionary and Jacksonian America (prereq 5805 or 5806 or #)
233576 1315-1500 W, SocSci 628, Howe, 4 cr

R5822 Proseminar: American History in 20th Century (5821-5822†; prereq 5821, #)
933578 1315-1500 T, SocSci 628, Chambers, 4 cr

5862 Proseminar: History of American Immigration (5861-5862†; prereq 5861)
133580 1515-1700 Th, SocSci 628, Vecoli, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
623014 1-15 cr

5990 Directed Research (prereq #, △, CLA approval)
423015 1-15 cr

8143 Medieval French History (8141-8142-8143†; prereq 8142)
733582 1315-1530 W, SocSci 680, Bachrach, 3 cr

8150 Seminar in English History (prereq #)
533583 Lehmberg, 3 cr

8501 Archives Practicum (prereq #)
723019 Klaassen, 4 cr

8511 Archives Administration (prereq 8501, #)
409924 1530-1730 W, WaLib 102, Hinding, 4 cr

8970 Directed Studies (prereq #)
109920 1-15 cr

8990 Directed Research (prereq #)
123020 1-15 cr

HISTORY OF MEDICINE (HMed)
Medical School

3003 Doctors and Disease in History (§Hist 3033, primarily for CLA students)
602986 0915-1000 MWF, OwreH 2210, Eyler, 4 cr

5002 Public Health Issues in Historical Perspective (§PubH 5002)
938747 1315-1430 TTh, PWB 5206, Eyler, 3 cr

5412 Seminar: Emergence of Modern Medicine 1750-1900 (prereq 3001, 3002, 3003, Hist 3031, 3032, 3033 or 5400, 5401, 5402)
823562 Wilson, 3 cr

8232 Readings: History of Science
623563 Wilson, 3 cr

8632 Directed Study (prereq #)
423564 3-15 cr

HISTORY OF SCIENCE AND TECHNOLOGY (HSci)
Liberal Arts

R1713 Technology and Western Civilization: 19th and 20th Centuries (§3713)
★LECT 1315-1400 MWF, SmithH 225, Layton
926016 –1 REC 1315-1400 T, FordH 60, 4 cr
726017 –2 REC 1015-1100 W, FordH 60, 4 cr
326019 –3 REC 1215-1300 W, FordH 70, 4 cr
726020 –4 REC 0915-1000 Th, MechE 221, 4 cr
606567 –5 REC 1415-1500 Th, FordH 40, 4 cr
334296 –6 REC 1115-1200 F, LindH 303, 4 cr

R1813 Introduction to History of Science: Modern Science (§3813)
★LECT 0915-1000 MWF, Phys 133, Shapiro
326022 –1 REC 1215-1300 M, FordH 160, 4 cr
126023 –2 REC 0915-1000 T, Phys 236A, 4 cr
026024 –3 REC 1115-1200 W, FordH 60, 4 cr
209553 –4 REC 1115-1200 Th, FordH 115, 4 cr
308233 –5 REC 1315-1400 Th, Phys 236A, 4 cr
134297 –6 REC 1015-1100 F, LindH 303, 4 cr

3203 History of Biology: Evolution and Genetics Since 1700 (§5203)
406568 1245-1400 TTh, LindH 305, Kottler, 4 cr

R3713 Technology and Western Civilization: 19th and 20th Centuries (§1713)
★LECT 1315-1400 MWF, SmithH 225, Layton
626026 –1 REC 1315-1400 T, FordH 60, 4 cr
426027 –2 REC 1015-1100 W, FordH 60, 4 cr
226028 –3 REC 1215-1300 W, FordH 70, 4 cr
126029 –4 REC 0915-1000 Th, MechE 221, 4 cr
606570 –5 REC 1415-1500 Th, FordH 40, 4 cr
034298 –6 REC 1115-1200 F, LindH 303, 4 cr

R3813 Introduction to History of Science: Modern Science (§1813)
★LECT 0915-1000 MWF, Phys 133, Shapiro
126032 –1 REC 1215-1300 M, FordH 160, 4 cr
726034 –2 REC 0915-1000 T, Phys 236A, 4 cr
326036 –3 REC 1115-1200 W, FordH 60, 4 cr
109554 –4 REC 1115-1200 Th, FordH 115, 4 cr
808236 –5 REC 1315-1400 Th, Phys 236A, 4 cr
834299 –6 REC 1015-1100 F, LindH 303, 4 cr

5203 History of Biology: Evolution and Genetics Since 1700 (§3203)
206572 1245-1400 TTh, LindH 305, Kottler, 4 cr

5760 Selected Topics: National Styles in Scientific Exploration, 1760-1860
438985 1315-1400 T, 1315-1500 Th, FordH 160, Dupree, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
923021 1-15 cr

5990 Directed Research (prereq #, △, CLA approval)
106573 1-15 cr

8970 Directed Study (max 15 cr; prereq #)
706575 1-5 cr

8990 Directed Research (max 15 cr; prereq #)
506576 1-5 cr

HOME ECONOMICS (HE)
Home Economics

R5191 **Development in Home Economics**
122630 1200-1300 MW, McNH 69, Strinden, 2 cr

HOME ECONOMICS EDUCATION (HEEd)
Vocational And Technical Education Education

3315 Adult Education in Home Economics (A-N only)
928638 0900-1030 TTh, VoTech R380, Cooke, 3 cr

3325 Practicum in Child Development (prereq 3320 or ¶, △) (A-N only)
012401 0930-1200 M, McNH 375, Cooke, 1 cr

3520 Home Economics Curriculum and Instruction: Cognitive Learning (prereq 1510) (A-N only)
406036 0800-1000 M, 0800-1100 WF, VoTech R380, Rehm, 5 cr

5021 Education Through Extension Methods (§AgEd 5021; prereq grad or #) (A-N only)
522423 1500-1730 Th, VoTech R385, Norenberg, 3 cr

5024 Extension History and Philosophy (§AgEd 5024; prereq #) (A-N only)
322424 1400-1630 T, VoTech R385, Lewis, 3 cr

R5027 **Practicum: Placement for Extension Experiences** (max 9 cr, §HEEd 3605 or AgEd 5027) (S-N optional)
122425 Norenberg, 2-9 cr

5102 Service Occupations Work Experience (max 12 cr, §5336; prereq #) (S-N optional)
206037 McClelland, 3-6 cr

5200 Seminar: Working with Youth Through Adults (max 9 cr including AgEd 5200 and YoSt 5200; prereq △) (S-N optional)
525712 Olson, 1-3 cr

5407 Family Life Education (max 12 cr) (A-N only)
636801 1600-1830 W, VoTech R370, Rossmann, 3 cr

5440 Computer Applications in Home Economics (A-N only)
238812 1600-1830 W, VoTech 230, 3 cr

5900 Readings: Home Economics Education (max 12 cr; prereq #) (A-N only)
836800 Cooke, 1-3 cr

5920 Directed Studies (prereq #) (S-N optional)
438811 1-6 cr

8305 Research Methods (prereq 8300, 9 cr in history, philosophy of education or history or philosophy, #)
106953 1600-1830 Th, VoTech R380, Plihal, 3 cr

R8500 **Seminar: Curriculum Development** (prereq 5300, 5305, 8300)
734036 1600-1745 M, VoTech 325, Rossmann, 2 cr

8525 Seminar: Administration, Supervision of Home Economics Programs (prereq 5320, 8520 or #...EdAd 8201 or 8253 rec)
534037 1600-1745 T, VoTech R380, Thomas, 2 cr

8631 Practicum: Home Economics Teacher Education (max 6 cr; prereq #)
822427 3 cr

8900 Problems: Home Economics Education (prereq 8300, #)
622428 1-9 cr

HORTICULTURAL SCIENCE (Hort)
Agriculture

R1016 **Greenhouse Management** (prereq 1100)
★LECT 1100-1215 TTh, AlderH 310, Widmer
826039 –1 LAB 1300-1545 W, HrG 172, Widmer, 4 cr

R1022 **Herbaceous Plant Materials**
★LECT 1400-1445 TTh, AlderH 415, Mullin
826042 –1 LAB 1200-1345 TTh, AlderH 415, Mullin, 5 cr
626043 –2 LAB 1500-1545 TTh, AlderH 415, 1545-1645 TTh, AlderH 423, Mullin, 5 cr

R3072 **Turf Management** (prereq Soil 1122, Hort 1100 or Agro 3020)
★LECT 1300-1345 MWF, AlderH 415, White, 4 cr
428909 –1 LAB 1400-1645 M, HrG 172

3076 Arboriculture (prereq 1021, Soil 1122 or FR 1100)
121663 1600-1745 TTh, AlderH 415, 3 cr

3079 Ornamental Horticulture Business Practices
★LECT 1300-1345 MWF, AlderH 423, Wilkins, 3 cr
629363 –1 LAB 1400-1645 M, AlderH 423, Wilkins

3097 Horticulture Practicum (prereq upper division horticulture maj)
021664 4 cr

3098 Undergraduate Research Project (prereq 8 cr upper division horticulture courses)
821665 2-6 cr

5020 Horticultural Techniques for Education Majors (prereq education maj or #)
335903 1630-1900 W, HrG 172, Read, 3 cr

5035 Commercial Vegetable Production: Fruit, Seed, and Leafy Types (prereq 1016, 1036, Soil 1122 or #)
010325 0800-0945 TTh, HrG 172, Davis, 3 cr

5048 Nursery Management and Production II (5046-5048†; prereq 5046)
★LECT 0830-0945 TTh, AlderH 415, Swanson, 4 cr
828910 –1 LAB 1300-1700 T, HrG 174

R5054 **Commercial Floriculture, Spring Crops** (prereq 1016)
★LECT 0900-0945 TTh, HrG 172, Widmer, 3 cr
628911 –1 LAB 1400-1645 Th, HrG 172

5092 Special Problems (prereq #)
221668 1-4 cr

8007 Extension Horticulture Practicum (max 6 cr; prereq 12 grad cr)
121669 Hertz, 1-5 cr

8042 Horticultural Seminar (prereq 9 cr in horticulture)
421670 1600-1645 W, AlderH 415, Hackett, 1 cr

8051 Advanced Problems in Horticultural Crop Breeding (prereq #)
221671 3-9 cr

8052 Advanced Problems in Physiology of Horticultural Crops (prereq #)
121672 3-9 cr

8060 Discussions in Potato Research
921673 Desborough, Lauer, 1 cr

8061 Discussions in Incompatibility (prereq #)
721674 Ascher, 1 cr

8062 Discussions in Plant Hardiness (prereq #)
521675 Li, 1 cr

8064 Discussions in Floricultural Science (prereq #)
321676 Wilkins, 1 cr

8065 Discussions in Postharvest Physiology (prereq #)
121677 Li, Munson, others, 1 cr

8066 Discussions in Horticultural Research (prereq #)
021678 Stadelmann, 1 cr

HUMANITIES (Hum)
Liberal Arts

R1001 **Humanities in the Modern World I** (§3001, Rhet 1301)
126046 –1 0815-0900 MTWTh, MurH 105, Leppert, 5 cr
726048 –2 1415-1500 MTWTh, FordH 155, Powell, 5 cr
529940 –3 0815-0900 MTWTh, MurH 105, Leppert, 5 cr (business and pre-bus only)
606083 –4 1415-1500 MTWTh, FordH 155, Powell, 5 cr (business and pre-bus majs only)

R1002 **Humanities in the Modern World II** (§3002, Rhet 1302)
122800 –1 0915-1000 MTWTh, FordH 155, Powell, 5 cr
018151 –2 0915-1000 MTWTh, FordH 155, Powell, 5 cr (business and pre-business majs only)

R1111 **European Heritage: Greece**
234338 1315-1500 TTh, FolH 308, Hershbell, 5 cr

R1301 **Life of the Mind: Introduction to Methods in the Humanities**
206068 –1 0915-1000 MTWTh, FordH 349, D'Andrea, 5 cr
406070 –2 1015-1100 MTWTh, FordH 349, Cromwell, 5 cr
106072 –3 1215-1300 MTWTh, FordH 349, Mowitt, 5 cr
906073 –4 1015-1200 MW, FolH 104, Erickson, 5 cr

R3004 **Humanities in the Modern World** (§1004, Rhet 3381)
306076 1115-1200 MTWTh, FordH 349, Cromwell, 5 cr

R3005 **Humanities in the Modern World V** (prereq jr or sr)
134339 1315-1500 TTh, FordH 115, Kliger, 5 cr

R3115 **European Heritage: Middle Ages** (prereq jr or sr)
434340 1315-1500 TTh, FordH 285, Kendall, 5 cr

R3117 **European Heritage: Renaissance, Reformation** (prereq jr or sr)
234341 1115-1200 MTWTh, FordH 150, D'Andrea, 5 cr

R3212 **The Heritage of India** (§SoAS 3502)
422804 1415-1530 TTh, BlegH 120, Lelyveld, 5 cr

R3321 **Theories of Culture** (prereq jr or sr)
134342 1415-1500 MTWTh, FordH 55, Mowitt, 5 cr

R3701 **A Time to Laugh: A Study of the Comic Spirit**
806079 1415-1600 TTh, MurH 105, Thomas, 5 cr

R3910 **Topics in the Humanities** (prereq jr, sr or #)
013855 –1 1215-1300 MWF, BlegH 235, Stavrou, 4 cr
734344 –2 1315-1500 MW, FordH 285, Kliger, 4 cr (Aesthetics and the Arts in Cultural Context: Traditional india and Modern Europe)
534345 –3 1015-1200 TTh, LindH 217, Sugnet, 4 cr
334346 –4 1415-1600 TTh, LindH 217, Furia, 4 cr (New York in the 1920s)
134347 –5 1415-1600 W, JonesH 2, Bachrach, 4 cr (The Norman Conquest and Its Impact)

3944H Honors Thesis (prereq sr, candidate for magna or summa honors in humanities, △)
034348 4 cr

3970 Directed Studies (prereq #, △, college approval)
222805 ar cr

5232 Pre-Christian Europe: Germans and Celts (prereq jr or sr or #)
336937 1215-1400 TTh, MinMet 124, Lincoln, 4 cr

R5910 **Topics in the Humanities** (prereq jr, sr or grad)
701523 –1 1215-1300 MWF, BlegH 235, Stavrov, 4 cr
613857 –2 1315-1500 MW, FordH 285, Kliger, 4 cr (Aesthetics and the Arts in Cultural Context: Traditional India and Modern Europe)
834349 –3 1015-1200 TTh, LindH 217, Sugnet, 4 cr
439005 –4 1415-1600 W, JonesH 2, Bachrach, 4 cr (The Norman Conquest and Its Impact)

R5930 **Humanities Proseminar: Secular Humanism and Its Critics** (prereq sr)
006081 1415-1600 W, FordH 175, Tapp, 3 cr

INDUSTRIAL EDUCATION (Ind)
Vocational And Technical Education Education

R1600 **Drafting** (A-N only)
101728 1300-1545 TTh, VoTech 110, Quistad, 3 cr

R1604 **Industrial Materials and Measurement** (A-N only)
822430 1000-1045 M, 1000-1145 WF, VoTech 125, Donnerberg, 3 cr (1 hr ar)

R1606 **Introduction to Industrial Process** (A-N only)
622431 1100-1145 M, 1000-1145 TTh, VoTech 125, Summers, 3 cr (1 hr ar)

R1612 Construction Technology II (prereq 1610) (A-N only)
422432 0800-0945 MWF, VoTech 120, Donnerberg, 3 cr

R1622 Graphic Communications II (prereq 1620) (A-N only)
122434 1400-1545 MWF, VoTech 110, Weber, 3 cr

R1630 Manufacturing I, Processes (prereq 1604, 1606) (A-N only)
536628 1200-1345 MWF, Summers, 3 cr

R1640 Introduction to Power and Energy (prereq 1604, Phys 1014, 1015 or GC 1163, 1451, Math 1111 or 1131) (A-N only)
722436 0900-1145 TTh, VoTech 139, Druker, 3 cr

R1650 Transportation I (prereq 1604, 1606) (A-N only)
522440 1300-1545 TTh, VoTech 140, Litowitz, 3 cr

1800 Career Planning Practicum I (prereq △) (A-N only)
122442 1200-1245 Th, VoTech R280, Schoonmaker, 1 cr

1801 Career Planning Practicum II (prereq 1800, △) (A-N only)
822444 1200-1245 Th, VoTech R280, Schoonmaker, 1 cr

1802 Career Planning Practicum III (prereq 1801, △) (A-N only)
422446 1200-1245 Th, VoTech R280, Schoonmaker, 1 cr

3110 Construction: Intermediate (prereq 1612, #) (A-N only)
122448 Miletich, 3-9 cr

3111 Construction: Advanced (prereq 3110, #) (A-N only)
222450 Miletich, 3-9 cr

R3120 Graphic Communication: Intermediate (prereq 1622, #) (A-N only)
434371 –1 Miletich, 3-9 cr
234372 –2 0800-0945 MWF, VoTech 110, Quistad, 3 cr
134373 –3 1200-1345 MWF, VoTech 110, Cote, 3 cr

3121 Graphic Communication: Advanced (prereq 3120, #) (A-N only)
922452 Miletich, 3-9 cr

3130 Manufacturing: Intermediate (prereq 1632, #) (A-N only)
522454 Miletich, 3-9 cr

3131 Manufacturing: Advanced (prereq 3130, #) (A-N only)
322455 Miletich, 3-9 cr

3140 Power and Energy: Intermediate (prereq 1642, #) (A-N only)
122456 Miletich, 3-9 cr

3141 Power and Energy: Advanced (prereq 3140, #) (A-N only)
022457 Miletich, 3-9 cr

3150 Transportation: Intermediate (prereq 1652, #) (A-N only)
822458 Miletich, 3-9 cr

3151 Transportation: Advanced (prereq 3150, #) (A-N only)
622459 Miletich, 3-9 cr

3700 Student Teaching (prereq 1300, 5360, △) (S-N only)
422463 Schoonmaker, 3 cr

3701 Seminar: Student Teaching (prereq 3700, 3702, 3704, 3706) (S-N only)
222464 1400-1545 F, VoTech R280, Schoonmaker, 1-3 cr

3702 Student Teaching (prereq 1300, 5360, △) (S-N only)
122465 Schoonmaker, 3 cr

3704 Student Teaching (prereq 1300, 5360, △) (S-N only)
922466 Schoonmaker, 3 cr

3706 Student Teaching (prereq △) (S-N only)
722467 Schoonmaker, 3 cr

R3750 Industrial Practices and Processes (prereq #) (A-N only)
522468 1300-1545 T, VoTech R280, Miletich, 3 cr

3900 Independent Study (prereq #) (A-N only)
322469 3 cr

3901 Independent Study (prereq #) (A-N only)
722470 3 cr

3902 Independent Study (prereq #) (A-N only)
322472 3 cr

R5100 Communications Occupational Experience (max 15 cr; prereq #) (A-N only)
022474 Miletich, 1-5 cr

R5101 Production/Manufacturing Occupational Experience (max 15 cr; prereq #) (A-N only)
822475 Miletich, 1-5 cr

R5102 Power/Energy Occupational Experience (max 15 cr; prereq #) (A-N only)
622476 Miletich, 1-5 cr

R5103 Construction Occupational Experience (max 15 cr; prereq #) (A-N only)
422477 Miletich, 1-5 cr

5112 Construction: Specialization (prereq △) (A-N only)
222478 Miletich, 1-9 cr

5122 Graphic Communications: Specialization (prereq △) (A-N only)
122479 Miletich, 1-9 cr

5132 Manufacturing: Specialization (prereq △) (A-N only)
422480 Miletich, 1-9 cr

5142 Power and Energy: Specialization (prereq △) (A-N only)
122482 Miletich, 1-9 cr

5152 Transportation: Specialization (prereq △) (A-N only)
722484 Miletich, 1-9 cr

R5300 Vocational Education Surveys (prereq 5314 or 5325) (A-N only)
934374 1800-2045 W, VoTech R280, Bjorkquist, 3 cr

R5303 Instructional Aids (prereq educ or grad stu) (A-N only)
522485 1600-1845 M, VoTech R250, Kavanaugh, 3 cr

5309 Conference Leading for Industry (prereq #) (A-N only)
734375 1600-1845 Th, VoTech R280, Kavanaugh, 3 cr

5330 Industrial Course Construction (prereq educ or grad stu) (A-N only)
322486 1600-1845 T, VoTech R280, Kavanaugh, 3 cr

5900 School-Based Project in Industrial Education (max 12 cr; prereq 5305, 5325, MEd student) (S-N optional)
122487 1-6 cr

8300 Literature of Industrial Education (prereq #)
534376 1600-1845 M, VoTech R280, Schoonmaker, 3 cr

8700 Seminar: Industrial Education
022488 1200-1245 T, VoTech R280, 0 cr

8900 Research Problems (prereq approval of candidacy)
822489 3-9 cr

8901 Research Problems (prereq approval of candidacy)
122490 3-9 cr

INDUSTRIAL ENGINEERING/OPERATIONS RESEARCH (IEOR)
Mechanical Engineering
Institute of Technology

R5000 Introduction to Industrial Engineering Analysis (prereq Math 1231, IT stu...ME 3900 rec)
824386 0815-1000 TTh, Arch 50, 4 cr

R5040 Introduction to Operations Research (prereq Math 1231, IT or grad...IEOR 5000 rec)
608321 1015-1100 MWThF, Arch 15, 4 cr

R5071 Human Factors in System Design (prereq 5070 and/or 5010, IT stu or grad)
★LECT 1415-1500 MW, Arch 30, 4 cr
313612 –1 REC 1515-1700 W, Arch 30

R5180 Applied Industrial Engineering (prereq 5000, 5010, 5020, 5030, 5040)
424388 3-5 cr

R5221 Industrial Plants (prereq 5010, IT stu or grad)
134079 1315-1400 MWThF, Arch 30, 4 cr

R5254 Design Morphology with Applications (prereq completion of sequences ME 3201/3 or 5, ME 3303 or 5342, upper div mech engr maj)
★LECT 1315-1400 TTh, Arch 50, 4 cr
813615 –1 LAB 1415-1700 TTh, MechE 327

R5311 Management for Engineers (prereq 5000, IT stu or grad)
224389 –1 1215-1300 MWF, MechE 102, 3-5 cr

R5442 Operations Research III (prereq 5441, IT stu or grad)
624390 0915-1000 MWThF, Arch 30, 4 cr

R5445 Topics in Management Science (prereq 5010, 5020, 5030, 5040, IT stu or grad)
424391 1015-1100 MWThF, Arch 30, 3-5 cr

8773 Graduate Seminar (S-N only)
124393 1515-1700 W, MechE 108, 1 cr

8774 Graduate Seminar (S-N only)
124403 1515-1700 W, MechE 108, 1 cr

8775 Graduate Seminar (S-N only)
624406 1515-1700 W, MechE 108, 1 cr

INDUSTRIAL RELATIONS (IR)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for IR courses.

R3000 Topics in Industrial Relations
123252 Pinto, ar cr

R3002 Industrial Relations Systems: Labor Markets and the Management of Human Resources (§8002; prereq Econ 1001, 1002, Psy 1001)
★LECT 0815-0900 MWF, BlegH 5, Gagala
926095 –1 REC 0915-1000 M, BlegH 420, 4 cr
526097 –2 REC 1115-1200 M, BlegH 340, 4 cr
326098 –3 REC 1215-1300 M, BlegH 350, 4 cr
926100 –4 REC 0915-1000 W, Law 15, 4 cr
526102 –5 REC 1115-1200 W, BlegH 340, 4 cr
126104 –6 REC 1215-1300 W, BlegH 350, 4 cr
026105 –7 REC 0915-1000 F, BlegH 425, 4 cr
826106 –8 REC 1115-1200 F, BlegH 360, 4 cr
626107 –9 REC 1215-1300 F, BlegH 360, 4 cr

R3007 Collective Bargaining Negotiations and Modern Labor Relations
426108 –1 1315-1415 MWF, BlegH 210, Flagler, 4 cr
226109 –2 1415-1545 TTh, BlegH 210, Seltzer, 4 cr

R3010 Human Relations and Applied Organization Theory
626110 –1 1430-1530 MWF, BlegH 210, Rosse, 4 cr
426111 –2 0915-1045 TTh, BlegH 210, 4 cr

R8001 Quantitative Methods in Industrial Relations (prereq 8002, Stat 5021, computer access course or # and IR grad student or △)
★LECT 0815-1000 MW, BlegH 360, Schumann, 4 cr
336856 –1 LAB 0815-1000 F, BlegH 360

R8002 An Introduction to Industrial Relations (§3002; prereq Econ 1001, 1002, Psy 1001, IR grad student or △)
023253 –1 1015-1200 TTh, BlegH 360, Scoville, 4 cr
533809 –2 1315-1500 TTh, BlegH 135, Arvey, 4 cr (hospital administration maj only)

R8004 Organization Theory and Analysis (prereq 8002 or # and IR grad student or △)
206085 1315-1500 TTh, BlegH 360, Miller, 4 cr

R8007 Collective Bargaining in the Public and Private Sectors (prereq 8002 or # and IR grad student or △)
106086 1315-1500 MWF, BlegH 360, Schumann, 4 cr

R8012 Industrial Relations Systems (prereq completion of the core sequence in IR or # and IR grad student or △)
833816 1515-1700 MW, BlegH 360, Seltzer, 4 cr

R8013 Organization and Staffing (prereq 8003 or # and IR grad student or △)
433818 0815-1000 TTh, BlegH 360, Arvey, 4 cr

R8014 Organization Design and Administration (prereq 8004 or # and IR grad student or △)
433821 1515-1700 TTh, BlegH 330, Miller, 4 cr

R8990 Independent Study in Industrial Relations (prereq #)
223260 Flagler, ar cr

INSTITUTE OF TECHNOLOGY (IofT)
Institute of Technology

1831H Science and Technology in Society (prereq college approval) (A-N only)
033765 Johnson, Holt, 2 cr

R5211 Information Sources for Science and Technology
324626 0915-1000 TTh, Phys 157, Marion, 2 cr

R5290 Human Powered Technology for Engineering Students (prereq Phys 1271, 1281, 1291)
★LECT 1415-1530 MW, MechE 202, Halley, 4 cr
225719 –1 LAB 0900-1200 S, MechE 202, Halley

INSURANCE (Ins)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for Ins courses.

R3100 Risk Management and Insurance (§8100) (A-N only)
526116 –1 0915-1015 MWF, BlegH 250, Cho, 4 cr
833928 –2 1030-1130 MWF, BlegH 250, Cho, 4 cr

R5231 Life Contingencies II (§Math 5057; prereq 5230 or #)
513298 0815-1000 TTh, BlegH 240, Staub, 4 cr

R8100 Risk Management and Insurance I (§3100; prereq grad mgmt/IR student or grad SMgt approval)
026119 –1 0915-1015 MWF, BlegH 250, Cho, 4 cr
633929 –2 1030-1130 MWF, BlegH 250, Cho, 4 cr

8990 Readings in Risk Management and Insurance (prereq consent of advisor, #, grad SMgt approval)
533924 ar cr

8995 Graduate Research in Risk Management and Insurance (prereq grad SMgt approval)
333925 ar cr

INTERDEPARTMENTAL STUDY (ID)
Liberal Arts

R1003 Social Science Colloquium (prereq ¶Anth 1101 or 1102 or Geog 1301 or 1401 or any 1xxx level hist course or Soc 1001)
837512 1415-1600 T, Arch 20, 1 cr

3101 An Introduction to Marxism
336694 0915-1100 TTh, Zoology 102, Rowe, 4 cr

3252 Metro Intern Seminar (prereq #)
136695 0815-1000 MWF, Cooke, 2 cr (1901 University Ave SE)

3970 Directed Studies (prereq consult with Office for Special Learning Opportunities, JohH 220, college approval)
223288 1-15 cr

INTERDISCIPLINARY MEDICINE (InMd)
Medical School

5115 Clinical Correlations (prereq regis med)
116849 1315-1500 M, PWB 2470, McCollister, 3 cr (March 28-June 4)

5204 Pathophysiology IV (prereq regis med) (S-N only)
337070 0815-1200 MWF, 0815-1100 T, 0815-1300 Th, MoosT 2650, Soltis, 6 cr

INTERNATIONAL RELATIONS (IntR)
Liberal Arts

3091H Honors Course: Supervised Research Paper (prereq sr honors candidate in international relations, △)
711839 Job, 3 cr

3970 Directed Studies (prereq #, △, college approval)
922807 1-15 cr

5145 Development in Africa (§Geog 5145, Afro 5145)
639410 1115-1200 MWF, BlegH 245, Scott, 4 cr

R5802 Prospective World Economy (§Econ 5421; prereq Econ 5401 or 5431 or #)
722808 1315-1400 MWF, BlegH 215, Smith, 4 cr

5831 Analysis of World Futures Models (prereq #)
128881 1015-1100 MWThF, Arch 30, Starr, 4 cr

5900 Topics in International Relations: Language, Ethnic Identity and Nationalism
633459 1415-1630 T, JonesH 2, Marshall, 4 cr

R5910 Topics in International Policy Analysis (prereq international relations maj or #)
817034 –1 0815-0930 TTh, BlegH 330, Hayes, 4 cr (U.S. Policy Towards the U.S.S.R.)
135975 –2 1245-1400 TTh, BlegH 210, Knudson, 4 cr (Sex Roles and International Public Policy)

5930 Topics in International Development
136365 1415-1600 TTh, BlegH 260, 4 cr

ITALIAN (Ital)
French And Italian
Liberal Arts

R1102 Beginning Italian
226126 –1 0915-1000 MTWThF, JonesH 11, 5 cr
926128 –2 1015-1100 MTWThF, FolH 203, 5 cr

R1103 Beginning Italian
126130 1115-1200 MTWThF, FolH 207, 5 cr

R1105 Intermediate Italian (prereq 1104)
306580 1115-1200 M, 1015-1200 TTh, FolH 302, Pipa, 5 cr

R3015 Intermediate Italian Conversation and Composition (prereq 1105 or 1104 with A, recommendation of instructor)
622848 0915-1100 MW, FolH 207, Martinez, 5 cr

R3016 Advanced Italian Composition, Conversation (prereq 3015 or #)
033913 0915-1100 MW, FolH 207, Martinez, 5 cr

R3289 Modern Italian Literature (prereq 3015)
833914 1415-1600 TTh, FolH 205, Pipa, 5 cr

3970 Directed Readings (prereq undergrad, #, △, college approval)
422849 1-5 cr

R5609 Dante (in English)
633915 1315-1500 MW, FolH 107, Martinez, 5 cr

JAPANESE (Jpn)
East Asian Studies
Liberal Arts

R1013 Beginning Japanese (prereq 1012)
905943 –1 LECT 0915-1000 TTh, FolH 107, Jacobsen
605550 –2 LECT 1115-1200 TTh, FolH 209, Jacobsen
♦326134 –1 REC 0815-0900 MTWThF, FolH 107, 5 cr
♦026136 –2 REC 1215-1300 MTWThF, FolH 209, 5 cr

3023 Intermediate Japanese (prereq 3022)
022782 0915-1000 MTWThF, FolH 104, Copeland, 5 cr

3033 Third Year Japanese (prereq 3032)
822783 0915-1000 MWF, FolH 303, Matsumoto, 5 cr

3053 Advanced Japanese Conversation and Composition (§5053; prereq 3033 or #)
806616 1215-1300 MWF, FolH 52, Matsumoto, 4 cr

3090H Honors Course: Tutorial (prereq △)
711842 1-4 cr

3970 Directed Study (prereq 3032, #, △, college approval)
122790 1-4 cr

5043 Classical Japanese (prereq 5042)
922791 1415-1500 MWF, FolH 103, Shohara, 5 cr

5362 Readings in Modern Japanese Literature I (prereq 3033)
233786 1115-1200 MWF, FolH 52, Copeland, 4 cr

5970 Directed Studies in Japanese (prereq #, △, CLA approval)
722792 1-4 cr

JEWISH STUDIES (JwSt)
Near And Middle Eastern Studies
Liberal Arts

3100 Judaism in the Time of Early Christianity (70-640 A.D.)
133103 1215-1300 MWF, FolH 107, Zahavy, 4 cr

3315 Contemporary Israeli Literature in Translation
033104 0915-1000 MWF, FolH 107, Paradise, 4 cr

5970 Directed Readings (max 12 cr; prereq #, △, CLA approval)
222674 1-12 cr

JOURNALISM AND MASS COMMUNICATION (Jour)
Liberal Arts

R1001 Introduction to Mass Communication (A-N only)
609730 –1 1415-1500 MW, MurH 105, 2 cr (pre-jour maj only)
737910 –2 1415-1500 MW, MurH 105, 2 cr

R1002 Visual Communication (A-N only)
006176 –1 0915-1100 TTh, MurH 105, 2 cr (pre-jour maj only)
537911 –2 0915-1100 TTh, MurH 105, 2 cr

R1003 Producting Mass Media Messages (prereq 1001, freshman composition or exemption, △) (A-N only)
★LECT 1115-1200 TTh, MurH 105, Glasser, 4 cr
606178 –1 LAB 0915-1000 M, MurH 435
406179 –2 LAB 1015-1100 M, MurH 435
806180 –3 LAB 1215-1300 M, MurH 435
606181 –4 LAB 0915-1000 W, MurH 435
406182 –5 LAB 1015-1100 W, MurH 435
106184 –6 LAB 1315-1400 W, MurH 435
506187 –7 LAB 0915-1000 F, MurH 435
306191 –8 LAB 1015-1100 F, MurH 435

R1004 Information for Mass Communication (prereq freshman composition or exemption, △) (A-N only)
206197 1115-1200 MWF, MurH 105, Hansen, Dicken-Garcia, 4 cr

R3008 Mass Communication Processes and Structure (prereq △) (A-N only)
106198 0915-1000 MWF, MurH 105, Wackman, 4 cr

R3101 Reporting (prereq prof jour maj status, type 25 wpm, △) (A-N only)
906199 1315-1600 T, 1315-1700 Th, MurH 212, 4 cr

R3121 Public Affairs Reporting (prereq 3101, type 40 wpm, △) (A-N only)
434595 1215-1400 TTh, MurH 311, 4 cr

R3155 Publications Editing (prereq 3101, △) (A-N only)
826154 0915-1200 TTh, MurH 206, 4 cr (1 hr ar)

R3173 Magazine Writing (prereq 3101, △) (A-N only)
136633 1315-1430 TTh, MurH 210, Roberts, 4 cr

R3193 Community Newspaper (prereq prof jour maj status, #, △) (A-N only)
922810 1115-1200 MWF, MurH 311, Brovald, 4 cr

3201 Principles of Advertising (prereq maj status for prof jour, mass comm stu; 1001, study plan filed for intended MC min) (A-N only)
406201 1315-1400 MWF, MurH 105, Wackman, 4 cr

R3241 Advertising Copywriting (prereq prof jour maj status, 3201 or #, △) (A-N only)
★LECT 1115-1230 MW, MurH 30, 4 cr
109912 –1 LAB 1315-1400 M, MurH 210

R3321 **Basic Media Graphics** (prereq professional jour maj status, #, △) (A-N only)
537245 –1 LECT 1315-1400 TTh, MurH 308, Wilson, 4 cr
★LECT 1315-1400 TTh, MurH 308, Wilson
637236 –1 LAB 1415-1600 TTh, MurH 315, 320, Wilson, 4 cr

R3451 **Television and Radio News** (prereq 3101 or maj status in spch with #, △) (A-N only)
102837 1315-1500 MW, MurH 207, Fang, 4 cr (lab ar)

3776 **Mass Communication Law** (A-N only)
522812 0915-1000 MWF, MurH 308, Gillmor, 4 cr

3796 **Mass Media and Politics** (§Pol 3796, jour student must have maj status; prereq 1001 or Pol 1001 or #) (A-N only)
234596 1245-1400 TTh, MurH 105, Flanigan, 4 cr

R3970 **Directed Studies** (prereq maj status for prof jour, mass comm students, #, △, college approval) (A-N only)
322813 1-4 cr

R5131 **Interpretive Reporting** (prereq 3121 or 3173 or 5155 or 5144, △) (A-N only)
709914 –1 0915-1100 TTh, MurH 311, Roberts, 4 cr
134597 –2 0915-1100 TTh, MurH 311, Roberts, 4 cr

R5143 **Interpretation of Science and Technology** (prereq prof jour maj status, 5133 or #, △) (A-N only)
934598 1315-1400 MWF, MurH 311, Tichenor, 4 cr

5251 **Psychology of Advertising** (§Psy 5751; prereq Psy 1001) (A-N only)
609744 1215-1300 MWF, MurH 105, Jones, 4 cr

R5263 **Advertising Campaign Planning and Media Strategy** (prereq prof jour maj status, 5261, Mktg 3000 or #, △) (A-N only)
122814 1415-1500 MWF, MurH 308, Busterna, 4 cr

R5274 **Social, Economic, and Regulatory Aspects of Advertising** (prereq sr or grad status, △) (A-N only)
022815 0915-1000 MWF, MurH 311, Busterna, 4 cr

R5303 **Projects in Photographic Communication** (prereq 5302, △) (A-N only)
937470 1315-1600 TTh, MurH 20, Schwartz, 4 cr

R5322 **Newspaper Design** (prereq 3321, △) (A-N only)
437237 0915-1100 TTh, MurH 315, 320, Wilson, 4 cr

R5444 **Television and Radio Documentary** (prereq 5442, △) (A-N only)
902220 1315-1500 TTh, MurH 207, Ettema, 4 cr (lab ar)

5501 **Communication and Public Opinion I** (prereq 16 cr in social science depts) (A-N only)
222819 1315-1400 MWF, MurH 308, Carter, 4 cr

5601 **History of Journalism** (A-N only)
622820 1015-1100 MWF, MurH 105, Emery, 4 cr

5721 **Mass Media in a Dynamic Society** (prereq 16 crs in social science depts) (A-N only)
906204 1215-1300 MWF, MurH 308, Ward, 4 cr

R5731 **Current Communications Problems** (prereq 16 cr in social science dept, jour, mass comm sr, △) (A-N only)
036634 1515-1730 Th, MurH 30, Dicken-Garcia, 4 cr

R5731H **Honors Course: Current Communications Problems** (prereq prof jour, mass comm sr, 16 crs in social science depts, #, △) (A-N only)
111845 1515-1730 Th, MurH 30, Dicken-Garcia, 4 cr

5801 **International Communication** (prereq 16 crs in social science depts) (A-N only)
506206 1015-1130 MW, MurH 308, Lee, 4 cr

5826 **Mass Communication Systems of Western Europe** (prereq 16 cr in social science departments) (A-N only)
137239 1015-1100 MWF, MurH 311, Lindsay, 4 cr

R5970 **Advanced Projects in Journalism** (max 8 cr; prereq maj status for prof jour, mass comm students, B avg, #, △, CLA approval) (A-N only)
122823 1-4 cr

R5970H **Honors Course: Advanced Projects in Journalism** (max 8 cr; prereq maj status for prof jour, mass comm students, B avg, #, △, CLA approval) (A-N only)
811847 1-4 cr

8002 **Seminar: Mass Communication Research** (prereq 8001) (A-N only)
106208 1015-1200 TTh, MurH 30, Carter, 4 cr

8211 **Seminar: Advertising Research** (A-N only)
734599 1415-1600 MF, MurH 311, Jones, 4 cr

8442 **Seminar: Broadcast News** (prereq 5442 or #) (A-N only)
434600 1315-1600 T, MurH 30, Fang, 4 cr

8515 **Seminar: Communication Analysis** (prereq course in statistics, #) (A-N only)
234601 1015-1200 MW, MurH 430, Tichenor, 4 cr

R8603 **Seminar: History of Mass Communication** (prereq 5601, #, △) (A-N only)
522826 1315-1500 Th, MurH 30, Emery, 4 cr

R8722 **Communication Agencies as Social Institutions** (prereq 5721 or equiv or #, △) (A-N only)
306210 Ettema, Ismach, 4 cr

R8776 **Government and Mass Communication: Administrative Law** (prereq 5777 or #, △) (A-N only)
637592 1315-1500 W, MurH 30, Gillmor, Glasser, 4 cr

8825 **Seminar: International Mass Communication** (prereq 8801, 5801 or 5825 or #) (A-N only)
806213 1315-1600 T, MurH 435, Lee, 4 cr

8828 **Mass Communication Problems of Developing Countries** (prereq 8825 or 8826 or #) (A-N only)
634594 1330-1530 M, MurH 30, Lindsay, 4 cr

R8970 **Advanced Projects in Mass Communication** (max 8 cr; prereq grad maj or min in mass comm, #, △) (A-N only)
529498 1-4 cr

R8990 **Special Problems in Mass Communication** (prereq #, △) (A-N only)
912357 4 cr

LABORATORY MEDICINE (LMed)
Laboratory Medicine And Pathology
Medical School

5136 **Anaerobic Bacteriology** (prereq biochemistry, medical microbiology, diagnostic microbiology or #)
★LECT 1315-1400 TTh, MoosT 2580, Wells
828843 –1 LAB 1415-1700 TTh, MoosT 2262, 2-4 cr

5139 **Advanced Microbiology** (prereq #)
923567 Balfour, ar cr

5169 **Research in Human Genetics** (prereq #)
723571 Eaton, ar cr

5170 **Advanced Problems in Medical Genetics** (prereq #)
523572 Eaton, ar cr

5179 **Chemistry Seminar** (prereq #)
323573 Steffes, 1 cr

5180 **Advanced Chemistry** (prereq #)
123574 Benson, ar cr

5198 **Computer Methodology in the Delivery of Health Care III: Health Information Systems** (§PubH 5435; prereq PubH 5432 or #)
006100 1115-1230 TTh, PWB 9222, Gatewood, 3 cr

5273 **Advanced Immunology** (prereq #)
423578 1215-1300 M, 1530-1630 M, VA Hosp, Azar, ar cr

5274 **Molecular Aspects of Immunology** (prereq #)
234078 0815-1100 Th, JacH 3145, Dalmasso, 3 cr

5768 **Advanced Hematology** (prereq #)
123583 Brunning, ar cr

5864 **Research Seminar** (prereq #)
123591 1200-1300 M, Mayo C231, O'Leary, 1 cr (Todd Amph)

5865 **Departmental Seminar** (prereq #)
123588 0800-0900 W, Mayo D230, Sibley, 1 cr (Eustis Amph)

8235 **Advanced Clinical Laboratory Medicine**
323587 Benson, ar cr

8236 **Research on Clinical Laboratory Problems**
723585 Benson, ar cr

LABORATORY MEDICINE AND PATHOLOGY (LaMP)
Laboratory Medicine And Pathology
Medical School

3050 **Pathology for Mortuary Science** (prereq elementary anatomy, elementary microbiology)
★LECT 1415-1600 T, 1415-1600 WTh, JacH 2153, Runge, 4 cr
428862 –1 LAB 1515-1700 T, JacH 5161

5100 **Pathology for Dental Students** (prereq regis dent)
404223 0915-1000 MWF, MoosT 2690, Runge, 4 cr (lab ar)

5101 **General Pathology** (prereq regis med fr or pathobiology grad) (A-N only)
★LECT 1015-1100 MW, 1315-1500 W, PWB 2470
126225 –1 LAB 1015-1200 W, 1415-1600 W, MoosT 3331, 2-6 cr
726227 –2 LAB 1015-1200 W, 1415-1600 W, MoosT 3331, 2-6 cr

5113 **Surgical Pathology: University Hospitals** (prereq Phase B)
023592 Rosai, ar cr

5114 **Surgical Pathology: Hennepin County General Hospital** (prereq Phase B)
723599 Anderson, ar cr

5115 **Surgical Pathology: Veterans Administration Hospital** (prereq Phase B)
223601 Limas, ar cr

5116 **Clinical and Surgical Pathology Correlations** (prereq regis Phase D med student)
105777 Handler, ar cr

5118 **Endocrine Pathology: St. Paul Ramsey Hospital** (prereq Phase B)
923603 Lakatua, ar cr

5125 **Chronobiology** (prereq Phase B, #)
523605 Halberg, ar cr

5141 **Problems in Experimental Pathology** (prereq Phase B, #)
123607 ar cr

5150 **Anatomic Pathology in a Hospital Setting: University Hospitals** (prereq Phase B)
823609 Burke, ar cr

5151 **Anatomic Pathology in a Hospital Setting: Hennepin County General Hospital** (prereq Phase B)
123610 Anderson, ar cr

5152 **Anatomic Pathology in a Hospital Setting: Veterans Administration Hospital** (prereq Phase B)
423614 Posalaky, ar cr

5153 **Anatomic Pathology in a Hospital Setting: St. Paul Ramsey Hospital** (prereq Phase B)
123616 Posalaky, ar cr

5158 **Cardiac Pathology: Miller Hospital** (prereq Phase B, #)
723618 Edwards, ar cr

5177 **Pathology for Allied Health Students General and System Pathology** (prereq Anat 1004, physiology or ¶)
725725 1015-1200 TTh, MoosT 2620, Bradley, Linne, 4 cr

5181 **Laboratory and Clinical Hematology** (prereq #)
723621 Brunning, ar cr

5182 **Laboratory Studies of Genetic Disorders** (prereq #)
323623 Eaton, ar cr

5184 **Immunohematology in Blood Banking** (prereq #)
823626 McCullough, ar cr

5185 **Laboratory Problems in Blood Coagulation** (prereq #)
623627 Edson, ar cr

5186 **Laboratory Medicine in a Community Hospital** (prereq regis Phase D med student)
905778 Bandt, ar cr

5187 **Clinical Pathology Externship: Mt. Sinai Hospital** (prereq #)
223629 Ward, ar cr

5188 **Clinical Pathology Externship: Methodist Hospital** (prereq #)
423631 Segal, ar cr

5190 **Laboratory Medicine in a Community Hospital: Duluth** (prereq Phase D, #)
123633 Larson, Witrak, ar cr

5192 Laboratory Medicine for Primary Care: Virginia (prereq Phase D)
923634 Knabe, ar cr

5193 Clinical Pathology Externship: Hibbing General Hospital (prereq #)
723635 Nollet, ar cr

5194 Computer Applications in Medicine (prereq #)
523636 Ellis, ar cr

5195 Computer Applications in Medical Research (prereq #)
323637 Ellis, ar cr

LANDSCAPE ARCHITECTURE (LA)
Architecture & Landscape Architecture
Institute of Technology

R1023 History of Environmental Development: Planning (§Arch 1023; prereq 1022)
124278 1115-1300 TTh, NichH 45, Cummings, 4 cr (Mpls)

R3003 Environmental Design: Implementation and Evaluation (prereq 3002)
918272 1315-1500 TTh, Arch 35, Lavine, 4 cr (Mpls)

R3071 Landscape Technology: Ground Form Design (prereq 3083, CE 3100 or AgEn 1400) (A-N only)
924279 1000-1200 MWF, NorH 315, Sykes, 4 cr

3073 Landscape Technology: Land Analysis Techniques (prereq 3072) (A-N only) (facility fee)
224280 1000-1200 MWF, AlderH 405, Nassauer, 4 cr

3083 Basic Design (prereq 3082) (A-N only)
124281 1330-1730 MWF, NorH 315, Nassauer, Sand, 6 cr

3093 Detail Site Design (prereq 3092 or #) (A-N only)
924282 1330-1730 MWF, AlderH 405, Sykes, Close, 6 cr

3094 Independent Study in Graphics (prereq landscape architecture student, #) (A-N only)
318051 1-4 cr

3095 Independent Study in Planting Design (prereq landscape architecture student, #) (A-N only)
018053 1-4 cr

3096 Independent Study in History or Theory (prereq landscape architecture student, #) (A-N only)
724283 1-4 cr

3097 Independent Study in Computer Aided Design (prereq landscape architecture, #) (A-N only)
524284 1-4 cr

3098 Independent Study in Design (prereq landscape architecture student, #) (A-N only)
324285 1-4 cr

3099 Independent Study in Technology (prereq landscape architecture student, #) (A-N only)
124286 1-4 cr

3200 Landscape Architecture Practicum (prereq landscape architecture student, #) (S-N only)
618055 1-6 cr

5110 Advanced Landscape Planning and Design (prereq terminal qtr of study) (A-N only)
024287 1330-1730 MWF, NorH 305, Cline, Olin, 6 cr

5131 Directed Studies in Landscape Architecture History and Theory (prereq third yr landscape architecture student, △) (A-N only)
624289 1-6 cr

5132 Directed Studies in Landscape Architecture Design (prereq third yr landscape architecture student, △) (A-N only)
024290 1-6 cr

5133 Directed Studies in Landscape Architecture Technology (prereq third yr landscape architecture student, △) (A-N only)
824291 1-6 cr

5134 Directed Studies in Emerging Areas for Landscape Architecture (prereq third yr landscape architecture student, △) (A-N only)
218057 1-6 cr

5224 Contemporary Issues in Landscape Architecture (prereq terminal yr of study) (A-N only)
624292 1000-1200 MF, NorH 305, Martin, 4 cr

5228 Seminar: Topics in Campus Planning (prereq 3093 or #) (A-N only)
833086 0800-0945 MF, Arch 110, Hewitt, 4 cr (Mpls)

5265 History of Landscape Architecture: Individual Influences (prereq third yr LA student) (A-N only)
106970 0800-0945 MF, AlderH 310, Hard, 4 cr

LARGE ANIMAL CLINICAL SCIENCES (LACS)
Veterinary Medicine

5153 Diagnostic and Therapeutic Techniques II (prereq #)
805854 –1 LAB 1300-1550 W, VetHos, V Larson, 1 cr
205857 –2 LAB 1300-1550 F, VetHos, Sherman, 1 cr

5160 Large Animal Medicine (prereq 5151 or #)
924489 0800-0850 MWTh, 1000-1050 MWTh, VetHos A325, Ames, Sherman, 6 cr

5165 Veterinary Toxicology (prereq VB 5401 or #) (A-N only)
024483 1100-1150 MW, AnScVM 135, Stowe, 2 cr

5270 Economics and Practice Management (prereq regis vet med or #) (A-N only)
324478 1000-1050 M, AnScVM 125, 1000-1050 F, AnScVM 135, Morris, Stein, 2 cr

5271 Law and Ethics in Veterinary Medicine (prereq regis vet med or #) (A-N only)
938991 0800-0950 Th, AnScVM 135, Sorensen, T Anderson, 2 cr

5273 Economics of Veterinary Medicine (prereq vet med maj)
624485 1300-1450 M, AnScVM 135, Olson, 1 cr

5352 Large Animal Surgery (prereq #) (A-N only)
★LECT 0800-0850 MTWF, VetS 145, Usenik, D Stevens, others, 5 cr
403489 –1 LAB 1300-1550 T,
203493 –2 LAB 1300-1550 Th,

5550 Diagnostics and Obstetrics in Theriogenology (prereq regis vet med or grad or #)
124515 1100-1150 MTh, VetHos A325, Fahning, Zemjanis, 2 cr

5551 Theriogenology Diagnostics Laboratory (prereq regis vet med or grad or #)
205860 –1 LAB 1300-1550 M, Seguin, Fahning, others, 1 cr (Animal Holding Facility)
905862 –2 LAB 0900-1150 F, Sequin, Fahning, others, 1 cr (Animal Holding Facility)

5573 Advanced Dairy Cattle Reproduction (prereq 5570, regis vet med, 3rd or 4th yr or grad or #) (A-N only)
228927 1500-1550 M, AnScVM 335K, 385J, Fahning, Seguin, others, 1 cr

5650 Veterinary Epidemiology and Statistics (prereq 10 cr biology, 12 cr chem or #) (A-N only)
★LECT 1100-1150 TTh, AnScVM 125, 1300-1350 F, VetHos A325, Robinson, Martin, others, 4 cr
726275 –1 LAB 0800-1050 T, AnScVM 125
326277 –2 LAB 0800-1050 Th, AnScVM 125

5651 Veterinary Community Medicine (prereq VPB 5503, 5703 or equiv or #)
624518 0900-0950 MWF, AnScVM 135, Diesch, Pullen, others, 3 cr

5663 International Animal Disease Problems (prereq #) (A-N only)
738992 Diesch, Morris, others, 1 cr

5670 Comparative Medicine and Public Health (prereq PubH 5002, #)
824520 Diesch, Pullen, others, 2 cr

5680 Problems in Veterinary Epidemiology and Public Health (prereq 5650 or equiv or #)
424522 Diesch, Pullen, others, ar cr

5951 Directed Studies (prereq #, △)
124524 1-5 cr

8193 Advances in Clinical Immunobiology (prereq grad or #)
724526 Markham, ar cr

8194 Problems in Diagnostic Virology, Serology and Immunology (prereq grad or #)
324528 Ames, ar cr

8195 Preventive Veterinary Medicine
524530 Diesch, ar cr

8199 Problems in Economics of Animal Health
124532 Sorensen, 1-3 cr

8290 Advanced Veterinary Medicine (prereq 5162, SACS 5172, #)
024533 V Larson, ar cr

8291 Advanced Diagnosis and Therapeutics of Animal Diseases (prereq 5162, SACS 5172, #)
824534 V Larson, ar cr

8294 Advanced Comparative Immunochemistry and Immunobiology (prereq MicB 5216, grad, #)
224537 1300-1350 WF, HckrH 209, Markham, 3 cr

8299 Research in Veterinary Medicine
924539 ar cr

8390 Seminar: Veterinary Surgery (prereq 5365, SACS 5360, #)
724543 1500-1650 M, HckrH 209, Wallace, ar cr

8392 Advanced Large Animal Surgery (prereq 5365, #)
324545 Usenik, ar cr

8393 Problems in Large Animal Orthopedics (prereq 5365, #)
024547 Usenik, 3 cr

8397 Large Animal Anesthesia (prereq SACS 5380, #)
824548 Raffe, Usenik, others, ar cr

8590 Advanced Diagnostic Methods in Reproductive Diseases (prereq 5570 or #)
024550 ar cr

8594 Special Problems in Animal Reproduction (prereq 5570, #)
624552 ar cr

8595 Seminar: Veterinary Obstetrics
224554 1 cr

LATIN (Lat)
Classics
Liberal Arts

1103 Selections from Literature (§3051-3052; prereq 1102 or equiv)
826302 –1 0815-0900 MTWThF, FolH 104, Parker, 5 cr
426304 –2 0915-1000 MTWThF, FolH 105, Hooley, 5 cr
506772 –3 1015-1100 MTWThF, AkerH 21, Smith, 5 cr

3106 Latin Poetry (prereq 1122H or 3052 or 3105 or △)
122764 0915-1000 MTWThF, FolH 110, Belfiore, 5 cr

3457 Advanced Undergraduate Latin (prereq 3106 or 4 yrs high school Latin or △)
133781 0815-0900 MWF, FolH 305, Sonkowsky, 5 cr

3951 Major Project (prereq Greek-Latin or Latin maj, three 3xxx courses in Latin or #) (A-N only)
138902 5 cr

3960H Honors Tutorial (prereq △)
112048 5 cr

3970 Directed Studies (prereq #, △, college approval)
306773 1-5 cr

5235 Medieval Latin (prereq #)
033782 1515-1630 MW, FolH 207, Sonkowsky, 4 cr

5340 Latin Literature: Epic, Pastoral Poetry (max 12 cr)
633784 1415-1530 TTh, FolH 104, Miller, 4 cr

5621 Latin Palaeography (prereq three cr Latin, 3-5 level or #)
812478 1415-1600 T, FolH 207, Aris, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
006775 1-5 cr

5980 Directed Instruction (prereq #, △, CLA approval)
806776 ar cr

5990 Directed Research (prereq #, △, CLA approval)
406778 ar cr

8120 Latin Text Course (prereq 3052 or △, non-maj)
926310 –1 0915-1000 MTWThF, FolH 110, Belfiore, 4 cr
433785 –2 0815-0900 MWF, FolH 305, Sonkowsky, 4 cr

LATIN AMERICAN STUDIES (LAS)
Liberal Arts

5120 Seminar: Topics
123289 1415-1645 W, Law 15, 4 cr

R5970 Directed Studies (prereq #, △, CLA approval)
423290 ar cr

☆ SPORTS SCHEDULE ☆

1984 UNIVERSITY OF MINNESOTA BASEBALL SCHEDULE BROUGHT TO YOU BY

Technics
The science of sound

CREIGHTON	Mar. 31-Apr. 1
at Oklahoma State	Apr. 5
at Oral Roberts Univ.	Apr. 6- 7
at Arkansas	Apr. 8
ST. CLOUD STATE	Apr. 10
WISCONSIN—STOUT	Apr. 11
WISCONSIN-RIVER FALLS	Apr. 14
ST. THOMAS	Apr. 15
MANKATO STATE	Apr. 17
at Iowa State	Apr. 18
NORTHWESTERN	Apr. 21-22
at Mankato State	April 24
IOWA STATE	Apr. 25
at Illinois	Apr. 28-29
at St. Thomas	May 1
at Mankato State	May 2
at Wisconsin—Madison	May 5- 6
BEMIDIJI STATE	May 7
at St. Cloud State	May 8
at Winona State	May 9
IOWA	May 12-13

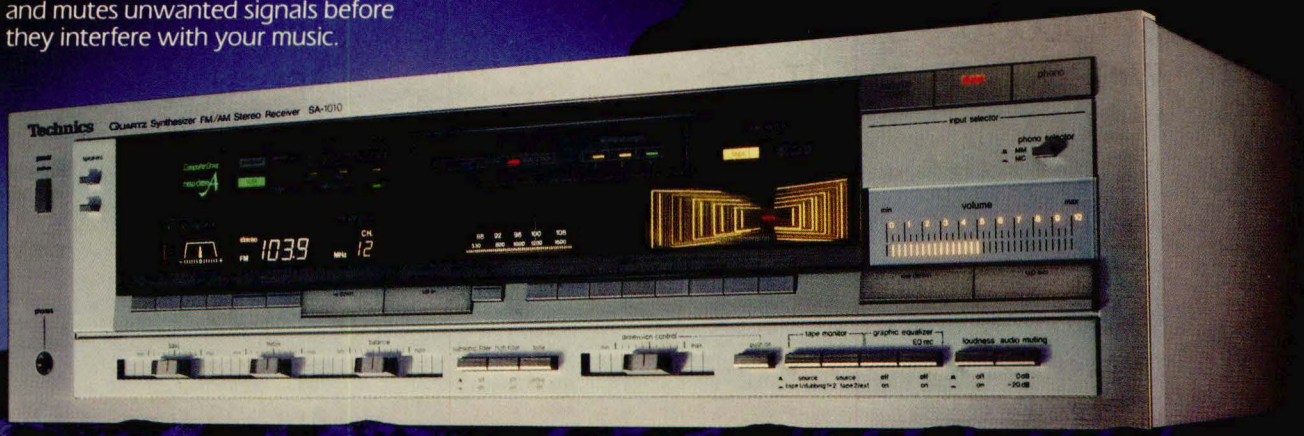
SPORTSPORTSPORTS

Technics introduces an awesome Computer-Drive Receiver. It stops distortion before it starts. And that's just the beginning.

The new Technics SA-1010 Computer-Drive Receiver. A receiver that combines so many technological advances it is the most sophisticated ever to carry the Technics name.

It starts with Technics innovative Computer-Drive technology: a microcomputer with the intelligence to sense potential causes of amplifier distortion. And to stop that distortion before it starts. So your music comes through with breathtaking clarity.

A second computer not only operates the world's most accurate tuning system, quartz synthesis. It also scans and mutes unwanted signals before they interfere with your music.



And the SA-1010's intelligence touches other areas.

A microprocessor is also used in conjunction with Technics Random Access Tuning with auto memory. It allows you to pre-set and store up to 16 of your favorite stations. And to hear any one, in any order, at the push of a button.

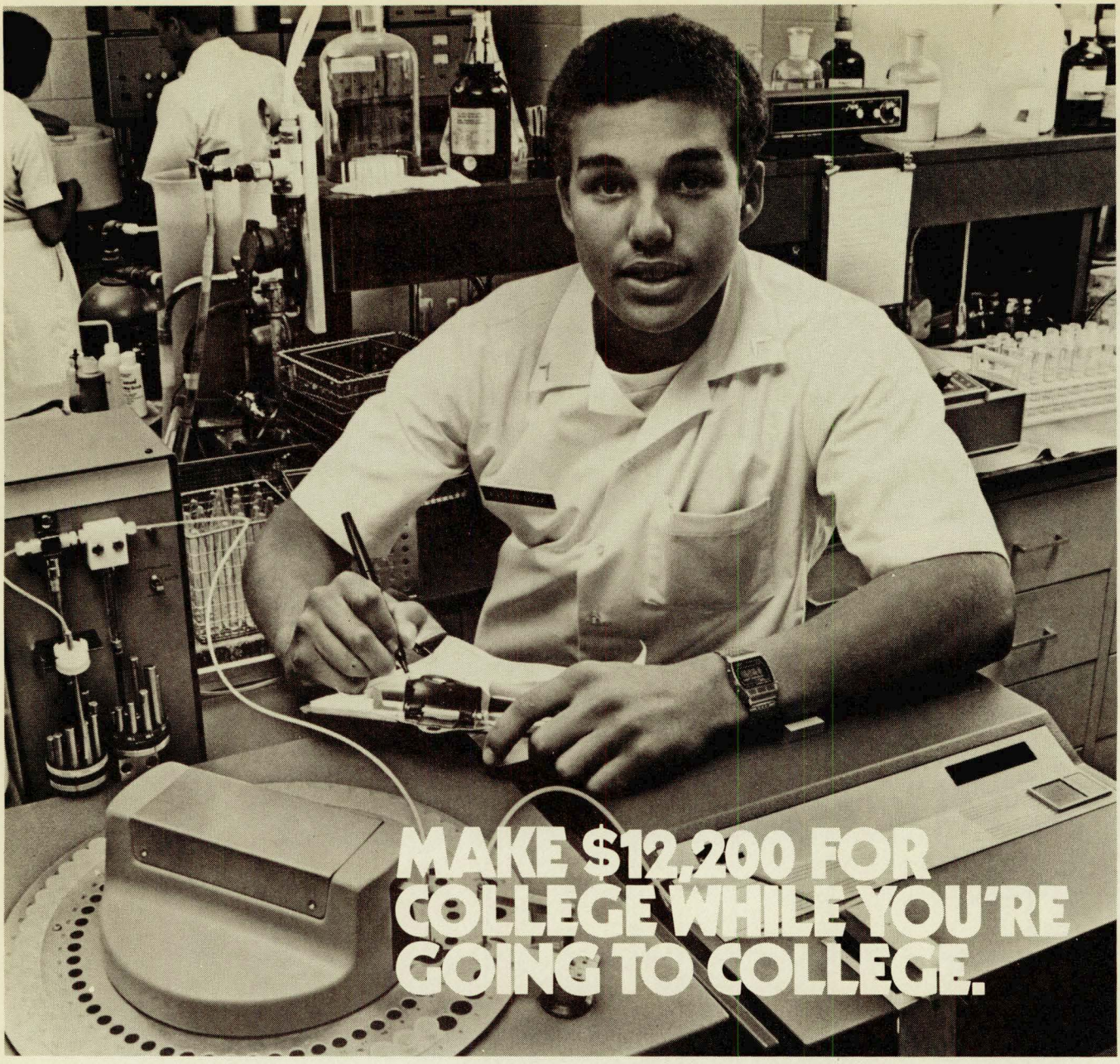
And whatever music you do listen to can be made to virtually envelop you, surround you by engaging Technics Dimension Control circuitry.

Then there's the sheer power of the SA-1010: 120 watts per channel, minimum continuous RMS, both channels driven into 8 ohms, from 20Hz to 20kHz, with no more than 0.003% total harmonic distortion.

And of course, the SA-1010 is ready for digital. It will be able to reproduce the flawless sound of digital sources soon to come.

Power. Perfection. And performance. The awesome SA-1010 Computer-Drive Receiver. From Technics.

Technics
The science of sound



Want a part-time job that doesn't hurt your grades? Or campus life? Give your local Army Reserve unit a weekend a month and a couple of summers during college, and you can earn over $12,200 for college.

Up to $4,000 in college aid is yours just for joining most units. Another $6,000 in earnings for four years of monthly weekends and two-week summer stints. Plus, over $2,200 that you'll earn during two summer training periods. All while you're getting the most out of college. And doing the most you can part-time for your country.

You don't have to wait for college to join the Army Reserve. If you're 17 or older and a junior or senior in high school, join us now. There's no better part-time job in town.

Interested? Call your local Army Reserve recruiter. For the number, call toll free 1-800-USA-ARMY.

ARMY RESERVE.
BE ALL YOU CAN BE.

MAYBELLINE PRESENTS THE

SHINE FREE™

L O O K



Now you can free yourself from the shiny look of oily skin. Maybelline's Shine Free™ cosmetics contain special oil control ingredients to keep you looking shine free for hours and hours. Every Shine Free cosmetic ... powder blush, cover stick, translucent pressed powder, and makeup — stays on without streaking or caking to leave you looking beautifully natural. After all, you were meant to be Shine Free!

Shine Free™
Oil Control Cosmetics from
Maybelline®

©1983 Maybelline Co.



Step ahead of your time to the first talking clock radio with a truly civilized vocabulary.

The new Panasonic talking clock radio (RC-6810) is civilized enough to both tell you the time and wish you a pleasant "good morning," "good afternoon," or "good evening."

When it's time to wake up, it can say, "Good morning, it's six twenty a.m." Press the doze button and it says, "I will wake you again in nine minutes."

Want to drift off to music? Press the sleep button and it says, "I'll turn myself off in 59 minutes. Goodnight."

And it can say a lot more. Either in a man's or a woman's voice.

It also has all the hi-tech features of many other Panasonic clock radios.

Like Accu-Set,™ that lets you set the time electronically, forwards or backwards, with a twist of the dial.

Sure-Alarm battery backup system,* to make sure your alarm will wake you even during a power failure.

And Dual-Alarm, that can be set once to wake up two people at two different times.

The new Panasonic talking clock radio. It says a lot for itself. *9-volt battery not included.

Panasonic®
just slightly ahead of our time.

LIBRARY (Lib)
Liberal Arts

8970 Independent Study in Library Science (prereq #)
022832 ar cr

8990 Library Research (prereq #)
822833 ar cr

LINGUISTICS (Ling)
Linguistics
Liberal Arts

R1001 The Nature of Human Language
706107 1115-1200 MWF, NichH 45, Hammond, 4 cr

R1005 Language and Society
922872 1015-1100 MWF, Botany B6, Kac, 4 cr

R3001 Introduction to Linguistics (§3005, 5001)
★LECT 1115-1200 MTW, FolH 110, Gundel
706110 –1 REC 1115-1200 Th, FolH 110, 5 cr
306112 –2 REC 1115-1200 F, FolH 110, 5 cr

3051H Honors Course: Linguistics (prereq candidacy for honors in linguistics or #)
111859 4 cr

3601 Introduction to Historical Linguistics (§5601; prereq 3001 or #)
504844 1415-1500 MWF, FolH 205, Miranda, 4 cr

3711 Techniques for Language Self-Instruction
839373 0945-1100 TTh, Arch 45, Downing, 4 cr

3970 Directed Studies (prereq linguistics maj, #, △, college approval)
722873 1–5 cr

5006 Experimental Phonetics (prereq 3301 or 5301 or #)
934245 0945-1100 TTh, FolH 52, Pinkerton, 4 cr

5013 Mathematical Linguistics (prereq 5012)
134244 1015-1100 MWF, FolH 103, Hutchinson, 4 cr

5101 Language Types, Linguistic Universals (prereq 3001 or 5001 or #)
106113 1115-1230 TTh, FolH 203, Sanders, 4 cr

5202 Introduction to Syntax (prereq 5201)
522874 1615-1700 MWF, FolH 208, Sanders, 4 cr

5212 Linguistic Pragmatics (prereq 5002, 5201 or #)
436945 1415-1500 MWF, FolH 203, Gundel, 4 cr

5303 Introduction to Phonology (prereq 5302)
322875 1515-1600 MWF, FolH 203, Hammond, 4 cr

5601 Introduction to Historical Linguistics (§3601; prereq 3001 or 5001 or #)
004850 1415-1500 MWF, FolH 205, Miranda, 4 cr

R5712 Field Methods in Linguistics (prereq 5711)
637513 1115-1230 TTh, 1315-1400 F, KlaCt 101, Stenson, 4 cr

R5722 English as a Second Language: Practicum (prereq maj or min in ESL, 5721, #) (S-N only)
122876 1415-1530 TTh, FolH 203, Tarone, 3 cr

5742 Linguistic Description of Modern English (prereq 5741)
022877 1415-1500 MWF, FolH 208, Yule, 4 cr

5821 Sociolinguistics (prereq 3001 or 5001 or #)
534247 1615-1730 TTh, FolH 204, Pinkerton, 4 cr

5910 Seminar in Linguistics (prereq #)
639374 1245-1400 TTh, PeikH 315, Downing, 4 cr

5970 Directed Studies (prereq linguistics or ESL maj, #, △, CLA approval)
822878 1–5 cr

8200 Topics in Syntax and Semantics (prereq 5206 or #)
622879 0815-0900 MWF, FolH 103, Kac, 4 cr

8510 Linguistics Structures (prereq 5202, 5303 or #)
136804 1415-1530 TTh, FolH 306, Jacobson, 4 cr

8600 Topics in Historical Linguistics (prereq 5603 or #)
734246 0915-1000 MWF, FolH 103, Miranda, 4 cr

8731 Research Methods in Language Acquisition (prereq 5702 or 5805 or CDis 5305 or CPsy 5345 or #)
912682 1115-1230 TTh, FolH 52, Tarone, 4 cr

8900 Independent Study (prereq maj, #)
822881 1–5 cr

MANAGEMENT (Mgmt)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for Mgmt courses.

R3001 Fundamentals of Management (§8001) (A-N only)
326408 –1 0800-0900 MWF, Law 20, Roberts, 4 cr
126409 –2 1415-1515 MWF, BlegH 235, Agee, 4 cr
239474 –3 0800-0930 TTh, BlegH 250, 4 cr
139475 –4 1045-1215 TTh, BlegH 235, 4 cr
239491 –3 1230-1400 TTh, BlegH 130, 4 cr

R3002 Psychology in Management (§8006) (A-N only)
806227 1415-1600 MW, BlegH 205, Mihnovets, 4 cr

R3004 Business Policy: Strategy Formulation and Implementation (prereq sr, completion of business core or ¶final core course) (A-N only)
926419 –1 0815-1000 MWF, Law 35, Freeman, 5 cr
226420 –2 0915-1100 MWF, Law 20, 5 cr
033829 –3 1015-1200 MWF, Law 35, Freeman, 5 cr
333830 –4 1315-1500 MWF, Law 35, 5 cr

R3008 Entrepreneurship and the Smaller Enterprise (prereq completion of the business core courses or #)
607640 1015-1200 TTh, BlegH 335, Wickesberg, 4 cr

R5101 Advanced Topics (prereq sr or grad, #, SMgt approval)
923262 1415-1700 TTh, BlegH 435, Whitney, Wickesberg, ar cr (Application required, available in Mgmt/Econ 830)

R8006 Psychology in Management (§3002; prereq grad mgmt/IR student or grad SMgt approval)
338784 –1 1315-1600 T, BlegH 245, Angle, 4 cr
138785 –2 1730-2015 W, BlegH 210, Albert, 4 cr

R8006E Psychology in Management (§3002; prereq grad mgmt/IR student or grad SMgt approval)
038786 1730-2015 W, BlegH 210, Albert, 4 cr

R8008 Entrepreneurship and the Smaller Enterprise (prereq completion of business core courses, grad mgmt/IR student or #, grad SMgt approval)
906736 1015-1200 TTh, BlegH 335, Wickesberg, 4 cr

R8012 Organizational Behavior and Management Analysis (prereq grad mgmt/IR student or grad SMgt approval)
013287 1730-2015 T, BlegH 335, Nichols, 4 cr

R8021 Organization Design and Development (prereq grad mgmt/IR student or grad SMgt approval)
123266 1730-2015 W, Law 1, 4 cr

8303 Organizational Research Seminar (prereq PhD student, or # and Mgmt Grad School approval)
133831 –1 1315-1600 T, Mgmt/Econ 130, Albert, 4 cr
033832 –2 1315-1600 Th, Mgmt/Econ 130, Roberts, 4 cr

R8802 Seminar: Management (prereq grad mgmt/IR student, 3001 or 8001 or MBA 8010 or #, grad SMgt approval)
623272 1515-1730 MW, BlegH 435, Keating, Wickesberg, 4 cr (PhD only)

8990 Readings in Theory and Administration (prereq 2nd yr grad stu, requisite intro courses, consent of adviser, #, grad SMgt approval)
423273 ar cr

8995 Research in Management Theory and Administration (prereq 2nd yr grad stu, requisite intro courses, consent of adviser, #, grad SMgt approval)
223274 ar cr

MANAGEMENT INFORMATION SYSTEMS (MIS)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for MIS courses.

R3098 Elementary COBOL (prereq 3040 or ¶ or 3100 or ¶ or 3300 or ¶) (S-N only)
126426 0915-1000 W, AndH 230, Naumann, 1 cr

R3099 Elementary FORTRAN (prereq 3040 or ¶ or 3100 or ¶ or 3300 or ¶) (S-N only)
026427 1015-1100 W, AndH 230, Naumann, 1 cr

R5098 Intermediate COBOL (prereq 3098) (S-N only)
723313 1115-1200 W, AndH 230, Naumann, 2 cr

R5103 Data Structures and File Processing (prereq 5098, 3100, 3101) (A-N only)
906235 1315-1500 MW, BlegH 220, Everest, 4 cr

R8302 Systems Analysis and Design (prereq 8301, grad mgmt/IR student or grad SMgt approval) (A-N only)
421409 1730-2050 T, BlegH 220, Naumann, 4 cr

R8304 MIS Administration (§8269; prereq 8302, grad mgmt/IR student or grad SMgt approval) (A-N only)
323315 1315-1600 T, Law 35, Wetherbe, 4 cr

R8312 Advanced Systems Development and Administration (prereq 8302, grad mgmt/IR student or grad SMgt approval) (A-N only)
621411 1730-2050 T, BlegH 240, March, 4 cr

R8313 Advanced Database Design, Management Systems, and Administration (§8249; prereq 8303, grad mgmt/IR student or grad SMgt approval) (A-N only)
221413 1530-1715 MW, BlegH 220, Everest, 4 cr

R8850 Topics: Management Information Systems (prereq #, grad SMgt approval) (A-N only)
437576 1515-1800 Th, BlegH 350, Everest, ar cr

8990 Readings in Management Information Systems (prereq consent of adviser, #, 2nd yr grad, requisite intro courses, grad SMgt approval) (A-N only)
823318 ar cr

8995 Graduate Research (prereq consent of adviser, #, 2nd yr grad, requisite intro courses, grad SMgt approval) (A-N only)
623319 ar cr

MARATHI (Mar)
South And Southwest Asian Studies
Liberal Arts

5970 Directed Readings (prereq #, △, CLA approval)
623174 Junghare, ar cr

MARKETING (Mktg)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for Mktg courses.

R3000 Principles of Marketing (§8000; prereq Econ 1002) (A-N only)
326439 –1 1200-1330 MW, AndH 310, Ruekert, 4 cr
526441 –2 1415-1545 MW, AndH 310, Ruekert, 4 cr

R3000H Honors Course: Principles of Marketing (§3000, 8000; prereq Econ 1002 or equiv, SMgt honors student or # and SMgt approval) (A-N only)
638743 0915-1045 MW, BlegH 335, Heckler, 4 cr

R3010 Buyer Behavior and Marketing Analysis (prereq 3000, QA 1050)
925738 –1 0815-0945 TTh, BlegH 425, Ward, 4 cr
725739 –2 1415-1545 TTh, BlegH 125, Gardner, 4 cr

R3020 Marketing Operations Management (prereq 3010)
126449 0915-1045 TTh, Law 15, Misurell, 4 cr

R3030 Sales and Distribution Management (prereq 3020)
006257 1515-1645 MW, BlegH 340, 4 cr

R3050 Marketing Communications (prereq 3020)
508294 –1 1015-1145 TTh, BlegH 240, Meziou, 4 cr
606259 –2 1415-1545 TTh, BlegH 440, Meziou, 4 cr

R3065 **Retail Management** (§8065; prereq 3010)
926453 –1 1015-1145 MW, BlegH 230, Werner, 4 cr
526455 –2 1315-1445 MW, BlegH 245, Werner, 4 cr

R8076 **Sales Management** (prereq either MBA core courses, or MBA 8045, △, grad mgmt/IR student or grad SMgt approval)
633719 1315-1445 TTh, BlegH 330, Walker, 4 cr

R8086 **Product Policy** (prereq either MBA core courses, or MBA 8045, △, grad mgmt/IR student or grad SMgt approval)
823321 1730-2000 M, BlegH 335, Hansen, 4 cr

R8095 **Marketing Research** (prereq either MBA core courses, or MBA 8045, △, grad mgmt/IR student or grad SMgt approval)
423323 1730-2000 T, Mgmt/Econ 136, Gardner, 4 cr

R8098 **Introduction to Consumer Behavior** (prereq either MBA core courses or MBA 8045, grad mgmt/IR student or grad SMgt approval)
123325 0915-1100 TTh, BlegH 340, Walker, 4 cr

R8800 **Seminar: Marketing Theory** (prereq either MBA core courses, or MBA 8045 and △, grad mgmt/IR stu or grad SMgt approval)
033720 0915-1130 T, Mgmt/Econ 128, Ruekert, 4 cr

8990 **Readings in Marketing** (prereq either MBA core courses, or MBA 8045, △, consent of advisor, #, grad SMgt approval)
723327 ar cr

8995 **Graduate Research in Marketing** (prereq either MBA core courses, or MBA 8045, △, consent of advisor, #, grad SMgt approval)
523328 ar cr

MASTER OF BUSINESS ADMINISTRATION (MBA)
Management

R8040 **Financial Management** (prereq MBA students only)
301444 –1 0915-1100 TTh, BlegH 415, Gahlon, 4 cr
601448 –2 1415-1600 TTh, BlegH 415, Gahlon, 4 cr

R8045 **Marketing Management** (prereq MBA students only)
401452 –1 0915-1045 MWF, BlegH 415, Berkowitz, 4 cr
101454 –2 1315-1445 MWF, BlegH 435, Berkowitz, 4 cr

R8050 **Operations Management** (prereq MBA students only)
501460 –1 0815-1000 MW, BlegH 425, Treleven, 4 cr
401466 –2 1315-1500 MW, BlegH 425, Hill, 4 cr

R8060 **Strategy and Policy** (prereq MBA students only)
101471 –1 0815-1000 MWF, BlegH 330, Grambsch, 4 cr
301475 –2 1015-1200 MWF, BlegH 330, Mauriel, 4 cr
601479 –3 1015-1200 MWF, BlegH 425, Grambsch, 4 cr
219113 –4 1515-1730 MW, BlegH 435, Keating, Wickesberg, 4 cr

R8065 **Field Project** (prereq MBA students only)
206314 1315-1500 F, AndH 310, 5 cr

MATERIALS SCIENCE (MatS)
Chemical Engineering & Materials Science
Institute of Technology

3091 **Industrial Employment**
737180 1-2 cr

R3400 **Mechanical Properties of Materials** (prereq 2nd yr IT student)
★LECT 1415-1500 MWF, MechE 108, 212, Gerberich
126958 –1 LAB 1515-1800 M, MinMet 410, 4 cr
326960 –2 LAB 1515-1800 W, MinMet 410, 4 cr
026962 –3 LAB 1515-1800 F, MinMet 410, 4 cr

R5013 **Introduction to Electrical and Magnetic Properties of Materials** (prereq upper division IT standing, 5011 or #)
109957 0815-0900 MWThF, MinMet 124, Weaver, 4 cr

R5102 **Diffusion and Solid State Kinetics** (prereq 5101 or #)
409955 1015-1100 MTWF, MinMet 124, Shores, 4 cr

R5202 **X-Ray Structural Analysis** (prereq upper divison)
234386 1415-1800 TTh, MinMet 410, Sivertsen, 4 cr

R5304 **Failure Analysis** (prereq 3400, 5013, 5411 or #)
★LECT 1115-1200 MW, AmundH 162, 4 cr
439375 –1 LAB 1200-1400 MW, MinMet 410

5483 **Special Problems in Physical Metallurgy and Materials Science** (prereq sr)
125740 ar cr

5500 **Senior Design Project** (prereq sr mat sci maj)
934388 2 cr

R5630 **Polymer Physical Properties** (prereq 5011 or 3400, MatS/Chem 5610 or #)
204224 0915-1000 MWF, MinMet 116, Wellinghoff, 4 cr (lab ar)

R8112 **Solid State Reactions** (prereq #)
139377 1315-1400 MWF, MinMet 104, Shores, 3 cr

R8214 **Structure, Cohesion of Metals, Semiconductors** (prereq 8212)
137483 1015-1200 TTh, MinMet 104, Franciosi, 3 cr

8472 **Seminar: Materials Science and Engineering** (prereq 8471)
124305 1315-1600 TTh, AmundH 240, 1 cr

8482 **Selected Topics in Materials Science and Engineering** (prereq 8481)
524303 ar cr

R8521 **Topics in Electron Microscopy**
737485 0815-1000 TTh, MinMet 104, Wellinghoff, 3 cr

R8522 **Advanced X-Ray Diffraction of Metals** (prereq 5403 or #)
239376 0815-0900 MWF, AmundH 158, Sivertsen, 3 cr

MATHEMATICS (Math)
Institute of Technology

R0009 **Intermediate Algebra** (prereq 1 yr high school algebra or grade of C or better in 0006) (course fee)
826459 –1 0815-0900 MTWThF, Phys 131, 0 cr
918188 –2 0815-0900 MTWThF, SciCB 375, 0 cr

R1005 **Foundations of Arithmetic** (prereq plane geometry, 2 yrs hs algebra, or plane geometry, grade of C or better in 0009)
624308 1015-1100 MWF, BuH 120, 4 cr

R1006 **Foundations of Arithmetic** (prereq 1005)
126466 –1 0915-1000 MWF, VinH 2, 4 cr
726468 –2 1215-1300 MWF, VinH 1, 4 cr

R1008 **Trigonometry** (§1111, 1201; prereq plane geometry, 2 yrs hs algebra or grade of C or better in 0009)
926470 –1 0915-1000 MWF, FolH 308, 4 cr
526472 –2 1115-1200 MWF, SmithH 225, 4 cr
338994 –3 1315-1400 MWF, BuH 120, 4 cr

R1111 **College Algebra and Analytic Geometry** (§1201; prereq plane geometry, 2 yrs hs alg or plane geometry, grade of C or better in 0009)
207902 –1 0900-0945 MTWThF, ClaOff B45, 5 cr (StP)
907904 –2 0815-0900 MTWThF, Phys 170, 5 cr
507906 –3 0915-1000 MTWThF, BuH 120, 5 cr
111790 –4 1115-1200 MTWThF, Arch 40, 5 cr
107908 –5 1215-1300 MTWThF, Arch 35, 5 cr
538993 –6 1315-1400 MTWThF, WullH 230, 5 cr

R1131 **Finite Mathematics** (prereq 3 1/2 yrs high school math or grade of C or better in 1111)
★LECT 1115-1200 MWF, OwreH 2230
326506 –1 REC 1115-1200 TTh, AkerH 209, 5 cr
026508 –2 REC 1115-1200 TTh, Arch 35, 5 cr
126510 –3 REC 1115-1200 TTh, AmundH 240, 5 cr
826512 –4 REC 1215-1300 TTh, CivMinE 212, 5 cr
703515 –5 REC 1215-1300 TTh, Arch 20, 5 cr
003519 –6 REC 1215-1300 TTh, JonesH 4, 5 cr
★LECT 1215-1300 MWF, SmithH 100
603541 –7 REC 1215-1300 TTh, FordH 115, 5 cr
510014 –8 REC 1215-1300 TTh, MechE 212, 5 cr
303565 –9 REC 1215-1300 TTh, LindH 340, 5 cr
103575 –10 REC 1315-1400 TTh, LindH 203, 5 cr
103597 –11 REC 1315-1400 TTh, AmundH 158, 5 cr
903609 –12 REC 1315-1400 TTh, AmundH 154, 5 cr

R1142 **Short Calculus** (§1211, 1511H, 1611; prereq 3 1/2 yrs hs math or grade of C or better in 1111 or 1201)
★LECT 0800-0845 MWF, BioSci 6, (StP)
126516 –1 REC 0800-0845 TTh, BioSci 6, 5 cr (StP)
★LECT 1215-1300 MWF, OwreH 2230
926520 –2 REC 1215-1300 TTh, VinH 1, 5 cr
526522 –3 REC 1215-1300 TTh, PtH 215, 5 cr
126524 –4 REC 1315-1400 TTh, AkerH 313, 5 cr
826526 –5 REC 1315-1400 TTh, AkerH 317, 5 cr

R1142H **Short Calculus** (§1211, 1511H, 1611; prereq 3 1/2 yrs high school math or grade of C or better in 1111 or 1201, fr or soph pre-bus or honors stu)
★LECT 1215-1300 MWF, OwreH 2230
239412 –80 REC 1215-1300 TTh, ChDev 216, 5 cr

R1201 **Pre-Calculus** (§1008, 1111; prereq 4 yrs high school math including trigonometry)
307910 1415-1500 MTWThF, Arch 5, 5 cr

R1211 **Calculus I** (§1142, 1511H; prereq 4 yrs hs math incl trig or grade of C or better in 1201 or 1008, 1111)
★LECT 0915-1000 MWF, SmithH 225
926551 –1 REC 0915-1000 TTh, Botany B6, 5 cr
526553 –2 REC 0915-1000 TTh, Phys 170, 5 cr
126555 –3 REC 0915-1000 TTh, FolH 308, 5 cr
826557 –4 REC 0915-1000 TTh, PillsH 110, 5 cr
★LECT 1115-1200 MWF, Arch 35
626561 –5 REC 1115-1200 TTh, PillsH 110, 5 cr
226563 –6 REC 1115-1200 TTh, Zoology 102, 5 cr
926565 –7 REC 1115-1200 TTh, WullH 130, 5 cr
726566 –8 REC 1115-1200 TTh, SmithH 225, 5 cr
★LECT 1215-1300 MWF, Phys 133
326568 –9 REC 1215-1300 TTh, Phys 131, 5 cr
526570 –10 REC 1215-1300 TTh, Zoology 102, 5 cr
126572 –11 REC 1215-1300 TTh, MurH 308, 5 cr
026573 –12 REC 1215-1300 TTh, PillsH 110, 5 cr
718189 –13 REC 1215-1300 TTh, SmithH 225, 5 cr
★LECT 1315-1400 MWF, VinH 16
518193 –14 REC 1315-1400 TTh, SmithH 225, 5 cr
118195 –15 REC 1315-1400 TTh, PillsH 110, 5 cr
818197 –16 REC 1315-1400 TTh, SmithH 315, 5 cr
418199 –17 REC 1315-1400 TTh, PtH 214, 5 cr

R1221 **Calculus II** (§1321, 1521H, 1621; prereq grade of C or better in 1211)
★LECT 0815-0900 MWF, Phys 133
426576 –1 REC 0815-0900 TTh, VinH 207, 5 cr
126578 –2 REC 0815-0900 TTh, VinH 6, 5 cr
226580 –3 REC 0815-0900 TTh, VinH 20, 5 cr
926582 –4 REC 0815-0900 TTh, VinH 113, 5 cr
526584 –5 REC 0815-0900 TTh, VinH 203, 5 cr
★LECT 0915-1000 MWF, Phys 170
826588 –6 REC 0915-1000 TTh, AmundH 240, 5 cr
626589 –7 REC 0915-1000 TTh, PeikH 315, 5 cr
026590 –8 REC 0915-1000 TTh, Phys 133, 5 cr
826591 –9 REC 0915-1000 TTh, OwreH 2210, 5 cr
426593 –10 REC 0915-1000 TTh, MurH 308, 5 cr
★LECT 1015-1100 MWF, Phys 170
126595 –11 REC 1015-1100 TTh, AmundH 240, 5 cr
726597 –12 REC 1015-1100 TTh, LindH 229, 5 cr
526598 –13 REC 1015-1100 TTh, FolH 110, 5 cr
326599 –14 REC 1015-1100 TTh, FolH 105, 5 cr
526603 –15 REC 1015-1100 TTh, FolH 104, 5 cr
★LECT 1115-1200 MWF, VinH 16
326604 –16 REC 1115-1200 TTh, MurH 311, 5 cr
126605 –17 REC 1115-1200 TTh, PtH 214, 5 cr
826607 –18 REC 1115-1200 TTh, Phys 143, 5 cr
203624 –19 REC 1115-1200 TTh, SmithH 111, 5 cr
★LECT 1215-1300 MWF, MechE 18
603636 –20 REC 1215-1300 TTh, SmithH 111, 5 cr
310015 –21 REC 1215-1300 TTh, Phys 210, 5 cr
110016 –22 REC 1215-1300 TTh, PtH 214, 5 cr
725742 –23 REC 1215-1300 TTh, FolH 107, 5 cr

★LECT 1415-1500 MWF, VinH 16
618203 –24 REC 1415-1500 TTh, VinH 207, 5 cr
218205 –25 REC 1415-1500 TTh, VinH 211, 5 cr
518209 –26 REC 1415-1500 TTh, VinH 301, 5 cr
718211 –27 REC 1415-1500 TTh, VinH 203, 5 cr
★LECT 0815-0900 MWF, MechE 108
318213 –28 REC 0815-0900 TTh, MechE 108, 5 cr

R1231 **Calculus III** (§1331, 1531H, 1621; prereq grade of C or better in 1221)
★LECT 0815-0900 MWF, VinH 16
626611 –1 REC 0815-0900 TTh, VinH 314, 5 cr
226613 –2 REC 0815-0900 TTh, VinH 313, 5 cr
926615 –3 REC 0815-0900 TTh, VinH 311, 5 cr
526617 –4 REC 0815-0900 TTh, VinH 301, 5 cr
★LECT 0915-1000 MWF, Arch 50
326621 –5 REC 0915-1000 TTh, ChDev 218, 5 cr
026623 –6 REC 0915-1000 TTh, SmithH 225, 5 cr
626625 –7 REC 0915-1000 TTh, FolH 209, 5 cr
226627 –8 REC 0915-1000 TTh, VinH 364, 5 cr
★LECT 1015-1100 MWF, Arch 50
126631 –9 REC 1015-1100 TTh, SmithH 325, 5 cr
726633 –10 REC 1015-1100 TTh, VinH 6, 5 cr
526634 –11 REC 1015-1100 TTh, Arch 40, 5 cr
326635 –12 REC 1015-1100 TTh, VinH 209, 5 cr
★LECT 1115-1200 MWF, Zoology 313
826638 –13 REC 1115-1200 TTh, VinH 6, 5 cr
626639 –14 REC 1115-1200 TTh, VinH 20, 5 cr
826641 –15 REC 1115-1200 TTh, VinH 113, 5 cr
426643 –16 REC 1115-1200 TTh, AmundH 158, 5 cr
★LECT 1115-1200 MWF, MechE 18
726647 –17 REC 1115-1200 TTh, AmundH 154, 5 cr
326649 –18 REC 1115-1200 TTh, FordH 40, 5 cr
726650 –19 REC 1115-1200 TTh, ExpE 193, 5 cr
326652 –20 REC 1115-1200 TTh, FordH 170, 5 cr
★LECT 1215-1300 MWF, Zoology 313
626656 –21 REC 1215-1300 TTh, ExpE 193, 5 cr
226658 –22 REC 1215-1300 TTh, Arch 30, 5 cr
426660 –23 REC 1215-1300 TTh, Phys 143, 5 cr
126662 –24 REC 1215-1300 TTh, LindH 325, 5 cr
★LECT 1315-1400 MWF, Zoology 313
526665 –25 REC 1315-1400 TTh, JonesH 4, 5 cr
126667 –26 REC 1315-1400 TTh, LindH 315, 5 cr
826669 –27 REC 1315-1400 TTh, LindH 302, 5 cr
026671 –28 REC 1315-1400 TTh, LindH 217, 5 cr
★LECT 1415-1500 MWF, Phys 131
226675 –29 REC 1415-1500 TTh, VinH 113, 5 cr
926677 –30 REC 1415-1500 TTh, VinH 20, 5 cr
526679 –31 REC 1415-1500 TTh, VinH 6, 5 cr
726681 –32 REC 1415-1500 TTh, VinH 2, 5 cr

R1331 **Calculus III Computer Option** (§1231, 1531H, 1621; prereq grade of C or better in 1321)
★LECT 0915-1000 MWF, Arch 35
236915 –1 REC 0915-1000 TTh, NichH 122, 5 cr
136916 –2 REC 0915-1000 TTh, VinH 311, 5 cr
936917 –3 REC 1015-1100 TTh, VinH 311, 5 cr
736918 –4 REC 1015-1100 TTh, VinH 211, 5 cr
★LECT 1015-1100 MWF, OwreH 2210
836909 –5 REC 0915-1000 TTh, VinH 211, 5 cr
136910 –6 REC 0915-1000 TTh, VinH 113, 5 cr
036911 –7 REC 1015-1100 TTh, VinH 113, 5 cr
836912 –8 REC 1015-1100 TTh, MechE 212, 5 cr

R1531H **Honors Calculus III** (§1231, 1331, 1621; prereq 1521H)
★LECT 0915-1000 MWF, VinH 207
611865 –80 REC 0915-1000 TTh, VinH 207, 5 cr

R3066 **Elementary Differential Equations** (§3213, 3221, 3521; prereq grade of C or better in 1231 or equiv)
724316 1215-1300 MWF, VinH 207, 4 cr

R3142 **Introduction to Linear Algebra** (§3213, 3221, 3511; prereq grade of C or better in 1231 or equiv)
426688 –1 1015-1100 MWF, VinH 2, 4 cr
626690 –2 1015-1100 MWF, VinH 1, 4 cr
103499 –3 1115-1200 MWF, VinH 2, 4 cr
018215 –4 1115-1200 MWF, LindH 217, 4 cr

R3211 **Multivariable Calculus** (§3521; prereq grade of C or better in 1231 or equiv)
★LECT 1115-1200 MWF, Phys 133
226692 –1 REC 1115-1200 TTh, VinH 313, 5 cr
926694 –2 REC 1115-1200 TTh, VinH 311, 5 cr
526696 –3 REC 1115-1200 TTh, VinH 301, 5 cr
126698 –4 REC 1115-1200 TTh, VinH 211, 5 cr
326702 –5 REC 1115-1200 TTh, VinH 203, 5 cr
026704 –6 REC 1115-1200 TTh, VinH 209, 5 cr
★LECT 1315-1400 MWF, SciCB 325
826705 –7 REC 1315-1400 TTh, VinH 311, 5 cr
626706 –8 REC 1315-1400 TTh, VinH 211, 5 cr
303503 –9 REC 1315-1400 TTh, VinH 113, 5 cr
810018 –10 REC 1315-1400 TTh, VinH 20, 5 cr
007912 –11 REC 1315-1400 TTh, VinH 6, 5 cr
618217 –12 REC 1315-1400 TTh, VinH 2, 5 cr

R3212 **Vector and Linear Analysis I** (§3231; prereq grade of C or better in 3211 or equiv)
★LECT 1015-1100 MWF, VinH 16
633882 –1 REC 1015-1100 TTh, VinH 313, 5 cr
433883 –2 REC 1015-1100 TTh, VinH 301, 5 cr
233884 –3 REC 1015-1100 TTh, VinH 203, 5 cr
133885 –4 REC 1015-1100 TTh, VinH 364, 5 cr
★LECT 1215-1300 MWF, SmithH 225
733887 –5 REC 1215-1300 TTh, VinH 6, 5 cr
533888 –6 REC 1215-1300 TTh, VinH 20, 5 cr
333889 –7 REC 1215-1300 TTh, VinH 211, 5 cr
733890 –8 REC 1215-1300 TTh, VinH 311, 5 cr

R3213 **Vector and Linear Analysis II** (§3066, 3142, 3221, 3511; prereq grade of C or better in 3212 or equiv)
838997 –1 1015-1100 MWF, VinH 314, 4 cr
638998 –2 1115-1200 MWF, VinH 314, 4 cr
438999 –3 1115-1200 MWF, VinH 364, 4 cr
339000 –4 1215-1300 MWF, VinH 314, 4 cr
139001 –5 1315-1400 MWF, VinH 314, 4 cr
039002 –6 1315-1400 MWF, VinH 364, 4 cr

R3221 **Introduction to Linear Algebra and Linear Differential Equations** (§3066, 3142, 3212, 3511; prereq grade of C or better in 1231 or equiv)
★LECT 0915-1000 MWF, VinH 16
429557 –1 REC 0915-1000 TTh, VinH 203, 5 cr
229558 –2 REC 0915-1000 TTh, VinH 313, 5 cr
129559 –3 REC 0915-1000 TTh, VinH 301, 5 cr
429560 –4 REC 0915-1000 TTh, VinH 6, 5 cr
★LECT 1215-1300 MWF, VinH 16
229561 –5 REC 1215-1300 TTh, VinH 113, 5 cr
129562 –6 REC 1215-1300 TTh, VinH 207, 5 cr
929563 –7 REC 1215-1300 TTh, VinH 301, 5 cr
729564 –8 REC 1215-1300 TTh, VinH 313, 5 cr
★LECT 1315-1400 MWF, MechE 102
139161 –9 REC 1315-1400 TTh, MechE 102, 5 cr

R3231 **Vector Analysis** (§3212, 3531; prereq grade of C or better in 3211 or equiv)
126717 –1 0915-1000 MWF, VinH 6, 4 cr
026718 –2 1315-1400 MWF, VinH 311, 4 cr

R3511 **Linear Analysis I** (§3142, 3213, 3221; prereq grade of B or better in 1231 or equiv)
★LECT 1215-1300 MWF, SmithH 325
403511 –1 REC 1215-1300 TTh, VinH 203, 5 cr
103535 –2 REC 1215-1300 TTh, VinH 209, 5 cr
010020 –3 REC 1215-1300 TTh, VinH 206, 5 cr
610022 –4 REC 1215-1300 TTh, VinH 364, 5 cr

R3531 **Linear Analysis III** (prereq grade of C or better in 3521)
★LECT 1315-1400 MWF, SmithH 325
826722 –1 REC 1315-1400 TTh, VinH 203, 5 cr
426724 –2 REC 1315-1400 TTh, VinH 313, 5 cr
210024 –3 REC 1315-1400 TTh, VinH 301, 5 cr
910026 –4 REC 1315-1400 TTh, VinH 207, 5 cr

R3675 **Introductory Mathematics** (prereq 1231)
524317 1315-1400 MWF, SmithH 315, 4 cr

R5058 **Actuarial Science Principles-Life Contingencies II** (prereq 5057) (A-N only)
807913 0815-0930 TTh, BlegH 110, 4 cr

R5083 **Fundamentals of Geometry** (prereq 3511 or 3211, 3221 or 3142 or equiv) (A-N only)
618248 1610-1725 MW, VinH 113, 4 cr

R5152 **Elementary Mathematical Logic** (§5162; prereq 3211 or #)
510028 0915-1000 MWF, VinH 301, 4 cr

R5164 **Mathematical Logic** (prereq 5163)
324318 1415-1500 MWF, VinH 211, 4 cr

R5209 **Theory of Numbers** (prereq 3211 or #)
124319 0915-1000 MWF, VinH 211, 4 cr

R5233 **Computer Oriented Linear Algebra** (prereq 5232)
524320 1415-1500 MWF, VinH 113, 4 cr

R5243 **Linear Algebra with Applications** (§5232-5233, 5262, 5282, 5264, 5284; prereq 5242)
324321 1015-1100 MWF, VinH 211, 4 cr

R5244 **Group Theory** (§5262, 5282; prereq 3142 or 3221 or #)
124322 1215-1300 MWF, VinH 211, 4 cr

R5284 **Fundamental Structures of Algebra** (prereq 5283)
024323 1115-1200 MWF, VinH 20, 4 cr

R5342 **Introduction to Topology** (prereq 5341)
824324 1015-1100 MWF, VinH 6, 4 cr

R5343 **Introduction to Algebraic Topology** (prereq 5342)
424326 1415-1500 MWF, VinH 20, 4 cr

R5377 **Differential Geometry** (prereq 5376)
710030 0915-1000 MWF, VinH 113, 4 cr

R5428 **Mathematical Models in Economics, the Social Management Sciences** (prereq 3211, 3221 or 3511, 3521, 3531)
418249 1115-1200 MWF, VinH 311, 4 cr

R5459 **Methods of Applied Mathematics** (prereq 5458)
124328 1015-1100 MWF, VinH 20, 4 cr

R5475 **Analysis of Numerical Methods** (prereq 3211, 3221 or 3211, 3142, 3066 or equiv) (A-N only)
433902 0915-1000 MWF, VinH 311, 4 cr

R5478 **Applied Numerical Analysis of Partial Differential Equations** (prereq 5477)
437092 1015-1100 MWF, VinH 311, 4 cr

R5513 **Differential Equations with Applications II** (prereq 5512)
224330 1315-1400 MWF, VinH 207, 4 cr

R5521 **Introduction to Ordinary Differential Equations** (prereq one sophomore sequence or #...some previous abstract math rec) (A-N only)
924332 1115-1200 MWF, VinH 207, 4 cr

R5523 **Introduction to Ordinary Differential Equations** (prereq 5522) (A-N only)
724333 1315-1400 MWF, VinH 20, 4 cr

R5567 **Fourier Series and Boundary Values Problems** (§5571; prereq 3211, 3066 or 3211, 3221 or equiv or #)
310032 1215-1300 MWF, VinH 301, 4 cr

R5568 **Elementary Theory of Complex Variables** (§5572; prereq 3231 or 5602 or equiv vector analysis course)
124336 1415-1500 MWF, VinH 207, 4 cr

R5569 **Operational Mathematics** (§5573; prereq 5568)
824338 1315-1400 MWF, VinH 211, 4 cr

R5573 **Elementary Partial Differential Equations** (prereq 5572)
024340 0915-1000 MWF, VinH 313, 4 cr

R5602 **Advanced Calculus** (prereq 5601)
326750 1115-1200 MWF, VinH 211, 4 cr

R5603 **Advanced Calculus** (prereq 5602)
826753 –1 1015-1100 MWF, VinH 113, 4 cr
418252 –2 1115-1200 MWF, VinH 6, 4 cr

R5614 **Introduction to Analysis** (prereq 5613)
424343 –1 1115-1200 MWF, VinH 113, 4 cr
233903 –2 1315-1400 MWF, VinH 113, 4 cr

R5679 **Probability** (§5681; prereq 3211 or #)
124345 1315-1400 MWF, VinH 6, 4 cr

R5683 **Introduction to Probability** (prereq 5682)
724347 1415-1500 MWF, VinH 203, 4 cr

R5701 **Enumerative Combinatorics** (prereq 3211 or equiv, 3rd yr standing...sophomore level linear algebra is helpful)
324349 1215-1300 MWF, VinH 209, 4 cr

R5703 **Constructive Combinatorics** (prereq 5701 or equiv, some knowl of a programming language)
724350 1315-1400 MWF, VinH 313, 4 cr

R8142 **Applied Logic: Model Theory** (prereq 8141)
133904 0915-1000 MWF, VinH 364, 3 cr

R8152 **Axiomatic Set Theory** (prereq 8151)
138995 1415-1500 MWF, VinH 364, 3 cr

R8202 **General Algebra** (prereq 8201)
524351 1115-1200 MWF, VinH 301, 3 cr

R8261 **Topics in Number Theory and Algebraic Geometry** (prereq 8260)
933905 1015-1100 MWF, VinH 313, 1-3 cr

R8272 **Lie Groups, Algebras** (prereq 8271)
733906 1415-1500 MWF, VinH 313, 3 cr

R8292 **Topics in Algebra** (prereq 8291)
533907 1315-1400 MWF, VinH 301, 3 cr

R8308 **Algebraic Topology** (prereq 8307)
124353 1015-1100 MWF, VinH 301, 3 cr

R8367 **Riemannian Geometry** (prereq 8366)
707919 1115-1200 MWF, VinH 203, 3 cr

R8376 **Topics in Algebraic Geometry** (prereq 8375)
907921 0915-1000 MWF, VinH 203, 3 cr

R8408 **Advanced Methods of Applied Mathematics** (prereq 8407)
636913 1415-1500 MWF, VinH 301, 3 cr

R8447 **Numerical Analysis of Ordinary and Partial Differential Equations** (prereq 8446) (A-N only)
218253 1215-1300 MWF, VinH 364, 1-3 cr

R8472 **Topics in the Mathematical Theory of Continuum Mechanics** (prereq 8471)
139413 1515-1730 M, VinH 209, 1-3 cr

R8502 **Theory of Ordinary Differential Equations** (prereq 8501)
624356 1315-1400 MWF, VinH 203, 3 cr

R8542 **Topics: Differential, Difference Equations** (prereq 8541)
333908 1015-1100 MWF, VinH 203, 3 cr

R8552 **Theory of Partial Differential Equations** (prereq 8551)
224358 1015-1100 MWF, VinH 207, 3 cr

R8602 **Real Analysis** (prereq 8601)
124362 1215-1300 MWF, VinH 313, 3 cr

R8642 **Topics in Real Analysis** (prereq 8641)
133909 1515-1600 MWF, VinH 314, 3 cr

R8652 **Theory of Probability** (prereq 8651)
533910 1015-1100 MWF, VinH 206, 3 cr

R8658 **Measure Theory and Probability** (prereq 8657)
924363 1015-1100 MWF, VinH 364, 3 cr

R8674 **Topics in Combinatorial Theory** (prereq #)
333911 1415-1500 MWF, VinH 314, 3 cr

R8692 **Topics in the Theory of Probability** (prereq 8691)
807930 1415-1500 MWF, VinH 209, 1-3 cr

R8702 **Complex Analysis** (prereq 8701)
724364 1315-1400 MWF, VinH 209, 3 cr

R8791 **Topics in the Theory of Analytic Functions** (prereq 8790)
133912 1115-1200 MWF, VinH 313, 3 cr

R8802 **Functional Analysis** (prereq 8801)
324366 0915-1000 MWF, VinH 206, 3 cr

R8992 **Reading and Research** (prereq 8991)
939221 ar cr

MATHEMATICS EDUCATION (MthE)
Curriculum And Instruction Education

5083 **Teaching Geometry** (prereq math educ maj or min, Math 5083 or ¶ or #) (S-N only)
739575 1500-1600 MW, PeikH 375, 2 cr

5355 **Mathematics for Slow Learning Children** (prereq 5311 or Elem 3391 or #) (A-N only)
206653 1615-1900 Th, PeikH 375, Jackson, 3 cr

5680 **Practicum in Mathematics Education** (max 9 cr; prereq #) (A-N only)
522146 3-9 cr

5980 **Directed Studies** (max 9 cr; prereq #) (A-N only)
122148 3-9 cr

8500 **Theory and Classical Research in Mathematics Education** (prereq 5311 or 5312 or #)
434189 1615-1900 T, PeikH 375, Post, 3 cr

8680 **Internship: Mathematics Education**
322150 ar cr

8980 **Problems: Mathematics Education** (prereq 8500 or 8570)
122151 ar cr

MECHANICAL ENGINEERING (ME)
Mechanical Engineering Institute of Technology

R1025 **Engineering Graphics** (prereq ¶Math 1211 or equiv, IT stu)
503435 -1 LECT 1015-1100 MTWThF, Arch 10, 4 cr
103446 -2 LECT 1315-1400 MTWThF, Arch 10, 4 cr
★LAB open hrs, MechE 314

R3201 **Mechanical Engineering Systems Analysis** (§AEM 3401; prereq AEM 3036, mech engr or aerospace engr maj)
★LECT 0815-0900 MWF, Arch 10
406876 -1 LAB 1315-1500 M, MechE 221, 4 cr
206877 -2 LAB 1415-1600 W, MechE 221, 4 cr

R3203 **Analysis of Mechanism Systems** (prereq AEM 3036 or equiv, upper division mech engr maj)
★LECT 1015-1100 MWF, Arch 35
026797 -1 REC 1415-1600 M, Arch 45, 4 cr
626799 -2 REC 1015-1200 T, Arch 30, 4 cr
126801 -3 REC 1415-1600 W, Arch 45, 4 cr
110047 -4 REC 1415-1600 Th, Arch 20, 4 cr

R3205 **Engineering Systems Design** (prereq AEM 3016, upper division mech engr maj)
★LECT 1315-1400 MWF, Arch 5
426805 -1 REC 1415-1600 M, MechE 321, 4 cr
226806 -2 REC 0915-1100 T, MechE 221, 4 cr
126807 -3 REC 1415-1600 T, MechE 321, 4 cr
726809 -4 REC 1415-1600 W, AkerH 211, 4 cr
313674 -5 REC 1415-1600 Th, AkerH 211, 4 cr

R3301 **Thermodynamics** (prereq Chem 1014 or Phys 1281, Math 3221 or equiv, IT stu)
126810 -1 0815-0900 MTWThF, Arch 55, 4 cr
726812 -2 1015-1100 MTWThF, Arch 55, 4 cr

R3303 **Applied Thermodynamics** (§3305; prereq 3301 or equiv, upper division mech engr or aerospace engr maj)
124412 -1 0815-0900 MTWThF, Arch 40, 4 cr
829538 -2 0915-1000 MTWThF, Arch 10, 4 cr

R3701 **Basic Measurements Laboratory I** (prereq 3301 or ¶, upper division mech engr maj)
806888 1215-1300 T, Arch 50, 2 cr (Open lab ar, MechE 370-388)

R3702 **Basic Measurements Laboratory II** (prereq 3701, upper division mech engr maj)
606889 1215-1300 Th, Arch 50, 2 cr (Open lab ar, MechE 370-388)

R3741 **Industrial Assignment** (prereq regis in intern program)
410054 2 cr

R3742 **Industrial Assignment** (prereq 3741)
110056 2 cr

R3743 **Industrial Assignment** (prereq 3742)
113675 2 cr

R3900 **Introduction to Engineering Statistics** (prereq Math 1231 or equiv, IT stu)
024418 1315-1400 MWThF, MechE 212, 4 cr

R5190 **Advanced Engineering Problems** (prereq submission of approved departmental permission form)
124420 2-4 cr

R5203 **Advanced Analysis and Synthesis of Mechanical Systems** (prereq 3203 or equiv, IT stu or grad...computer programming desirable)
024421 0915-1000 MWF, MechE 302, 3-4 cr

R5209 **Friction and Lubrication** (prereq CE 3400, AEM 3200 or equiv, IT stu or grad)
824422 1215-1300 MWF, Arch 55, 3-4 cr

R5221 **Computer Graphics in Design** (prereq 5220 or #, IT stu or grad)
629539 1015-1100 MWThF, MechE 221, 4 cr (lab ar)

R5225 **Finite Elements in Mechanical Design** (prereq 3205, 5342, programming, IT stu or grad) (A-N only)
130002 -1 1515-1800 M, MechE 221, 4 cr
138821 -2 1415-1545 TTh, AkerH 317, 4 cr

R5254 **Design Morphology with Applications** (prereq completion of sequences 3201/3203/3205, 3303/5342 or #, upper div mech engr maj)
★LECT 1315-1400 TTh, Arch 50
526827 -1 LAB 1415-1700 TTh, MechE 314, 4 cr
126829 -2 LAB 1415-1700 TTh, MechE 321, 4 cr
326831 -3 LAB 1415-1700 TTh, MechE 327, 4 cr
403458 -4 LAB 1415-1700 TTh, MechE 221, 4 cr
203462 -5 LAB 1415-1700 TTh, Arch 15, 4 cr

R5255 **Engineering Design Project** (prereq 5254, upper division mech engr maj)
★LECT 1315-1400 TTh, MechE 302, 4 cr
728916 -1 LAB 1415-1700 TTh, MechE 358

R5260 **Engineering Materials and Processing** (prereq Phys 1291, Chem 1004, 1st yr calculus, upper division mech engr maj)
★LECT 1315-1400 MWF, CivMinE 212
226837 -1 REC 1415-1700 M, MechE 50, 4 cr
926839 -2 REC 0815-1100 T, MechE 50, 4 cr
126841 -3 REC 1415-1700 T, MechE 50, 4 cr
810049 -4 REC 1415-1700 W, MechE 50, 4 cr
713672 -5 REC 1415-1700 Th, MechE 50, 4 cr

R5270 **Materials-Design Requirements** (prereq 5260, IT stu or grad)
106886 0915-1100 TTh, LindH 315, 4 cr

R5272 **Computer Aided Manufacturing: Automation** (prereq 5271 or equiv)
906879 1215-1300 MWThF, MechE 302, 4 cr

R5285 **Control Systems Laboratory** (prereq 5283 or equiv, IT or grad IT maj)
934262 0815-1000 Th, MechE 359, 2 cr

R5288 **Modelling and Simulation of Dynamic Systems** (prereq 5283 or equiv, IT stu or grad)
★LECT 1115-1200 MWF, Arch 15, 4 cr
325744 -1 LAB 1115-1200 Th, Arch 15

R5342 **Heat Transfer** (prereq 3301, CE 3400 or AEM 3200, IT upper division or grad)
326845 -1 0915-1000 MTWThF, Arch 55, 4 cr
026847 -2 1115-1200 MTWThF, MechE 302, 4 cr

R5344 **Thermodynamics of Fluid Flow** (prereq CE 3400 or AEM 3200, IT stu or grad)
724428 1115-1200 MWThF, MechE 221, 4 cr

R5443 **Turbomachinery** (prereq 3301, IT stu or grad)
810052 0815-0900 MWF, Arch 30, 3-5 cr

R5455 **Rocket Propulsion** (prereq 3303, IT stu or grad)
610053 1315-1400 MWF, AkerH 215, 3-5 cr

R5460 **Internal Combustion Engines** (prereq 3301, IT stu or grad)
524429 1015-1100 MWThF, MechE 321, 4 cr

R5461 **Advanced Internal Combustion Engines** (prereq 5460, IT stu or grad)
924430 0915-1000 MWF, AmundH 162, 3-5 cr

R5480 **Biological Fluid Flow** (prereq CE 3400, AEM 3200 or equiv, IT stu or grad)
724431 1215-1300 MWF, MechE 321, 3-4 cr

R5616 **Aerosol Measurement** (prereq 5613, 5614 or #, IT or grad stu)
038822 0815-1000 T, Arch 30, 2 cr

R5703 **Advanced Mechanical Engineering Laboratory** (prereq 3702, sr)
806891 1415-1500 M or W or F, 2 cr (Obtain experiment cards from MechE 121 prior to registering)

R5704 **Advanced Mechanical Engineering Laboratory** (prereq 5703)
208371 1415-1500 M or W or F, 2 cr (Obtain experiment cards from MechE 121 prior to registering)

R5705 **Advanced Mechanical Engineering Laboratory** (prereq 5704)
908373 1415-1500 M or W or F, 2 cr (Obtain experiment cards from MechE 121 prior to registering)

R5712 **Solar Energy Utilization** (prereq 5342 or #, IT stu or grad)
024435 0815-0900 MTWF, MechE 221, 4 cr

R5721 **Propulsive Systems for Surface Transportation** (prereq IT stu or grad...3301 rec)
824436 1415-1500 MWF, Arch 20, 4 cr

R5741 **Industrial Assignment and Design Project** (5741-5742†; prereq 3742)
906882 4 cr

R5742 **Industrial Assignment and Design Project** (5741-5742†; prereq 5741)
706883 4 cr

R8221 **Advanced Computer Graphics Topics** (prereq 5221 or equiv)
506884 1315-1400 MWF, AkerH 313, 4 cr

R8326 **Boiling Heat Transfer, Multiphase Flow** (prereq 5342 or #)
734263 1015-1100 MWF, MechE 202, 3 cr

8332 **Radiation** (prereq 8331)
624437 0915-1000 MWF, MechE 321, 3 cr

R8353 **Computation of Boundary Layer Flows** (prereq 8351 or #)
034267 1415-1545 TTh, AkerH 215, 3 cr

8362 **Introduction to Plasma Technology** (prereq 8360 or 8361 or #)
334265 0915-1000 MWF, MechE 351, 3 cr

8445 **Thermodynamics and Chemical Kinetics of Combustion** (prereq 8444)
134266 Fletcher, 3 cr

8485 **Biomedical-Engineering Seminar** (§Surg 8785)
424438 1515-1630 T, MoosT 2620, 1-3 cr

8486 **Biomedical-Engineering Seminar** (§Surg 8785; prereq 8485)
224439 1515-1630 T, MoosT 2620, 1-3 cr

8487 **Biomedical-Engineering Seminar** (§Surg 8785; prereq 8486)
624440 1515-1630 T, MoosT 2620, 1-3 cr

8770 **Mechanical Engineering Research** (prereq △)
424441 ar cr

8771 Mechanical Engineering Research (prereq 8770, △)
224442 ar cr

8772 Mechanical Engineering Research (prereq 8771, △)
124443 ar cr

8773 Graduate Seminar (S-N only)
924444 1515-1700 W, MechE 108, 1 cr

8774 Graduate Seminar (prereq 8773) (S-N only)
724445 1515-1700 W, MechE 108, 1 cr

R8775 Graduate Seminar (prereq 8774) (S-N only)
124451 –1 1515-1700 W, MechE 108, 1 cr

MEDICAL TECHNOLOGY (MedT)
Medical School

1032 Introduction to Clinical Medicine (prereq soph) (S-N only)
223761 1215-1300 T, MoosT 2520, Rausch, 1 cr

5066 Introduction to Clinical Immunohematology (prereq MicB 5233)
★LECT 0815-0900 MWF, MoosT 2520, Carter, 5 cr
628830 –1 LAB 1315-1600 TTh, MoosT 3331

5076 Principles of Clinical Hematology II (prereq 5075)
★LECT 0815-0900 T, MoosT 2580, 0815-0900 Th, MoosT 2690, Lofsness, 2 cr
428831 –1 LAB 0915-1200 TTh, MoosT 3337

5082 Applied Clinical Chemistry (prereq 5111) (S-N only)
923763 4 cr

5085 Applied Clinical Hematology (prereq 5067, 5076) (S-N only)
523765 4 cr

5086 Applied Clinical Immunohematology (prereq 5066) (S-N only)
123767 4 cr

5088 Applied Diagnostic Microbiology (prereq 5102) (S-N only)
823769 4 cr

5090 Special Laboratory Methods (prereq #)
023771 2 cr

5092 Honors Program: Laboratory Methods (prereq #)
823772 5 cr

5111 Principles of Clinical Chemistry (prereq 5110)
★LECT 1315-1400 MWF, 1215-1300 T, OwreH 2210, Stewart, 6 cr
503001 –1 LAB 0915-1200 MWF, MoosT 2191

5120 Seminar
623773 1-3 cr

5125 Practicum: Teaching (max 3 cr)
223775 ar cr

5128 Elements of Laboratory Administration (prereq △)
834075 1730-1945 MW, MoosT 3317, Karni, 3 cr

5130 Practicum in Laboratory Administration (prereq #)
923777 3 cr

5135 Advanced Clinical Microbiology (prereq #)
923780 5 cr

5136 Anaerobic Bacteriology (prereq biochemistry, medical microbiology, diagnostic microbiology or #)
★LECT 1315-1400 TTh, MoosT 2580, Wells, 3 cr
434077 –1 LAB 1415-1700 TTh, MoosT 2262

5138 Seminar: Clinical Microbiology
523782 ar cr

5145 Development of Medical Technology
323783 3 cr

5155 Advanced Clinical Hematology (prereq #)
023785 5 cr

5165 Advanced Clinical Immunohematology (prereq #)
423788 5 cr

5175 Advanced Clinical Chemistry (prereq #)
623790 5 cr

5179 Chemistry Seminar (prereq #)
223792 1 cr

MEDICINAL CHEMISTRY (MedC)
Pharmacy

5320 Therapeutic Agents (prereq Phar 5440)
624261 Holmes, 3 cr

8100 Medicinal Chemistry Seminar
424262 1615-1800 T, MoosT 2520, Hanna, ar cr

8700 Advanced Concepts in Drug Design (prereq 5600 or #) (A-N only)
534054 Johnson, 2 cr

8800 Laboratory Techniques (prereq Chem 3303 or #)
124264 ar cr

MEDICINE (Med)
Medical School

5500 Advanced Internal Medicine (prereq 5502)
023804 Ferris, 9 cr

5501 Medical Oncology Externship in Medicine
623806 Kennedy, 9 cr

5502 Medicine Externship I
123809 Ferris, 9 cr

5504 Medicine Externship
423810 Wang, 9 cr

5505 Infectious Disease Research at the University Hospital
223811 Sabath, 9 cr

5507 Medicine Subinternship in Hematology (prereq 5502, regis med student)
806132 Ferris, 9 cr

5509 Research in Rheumatology
123812 Messner, 9 cr

5511 Research in Gastroenterology
923813 Levitt, 9 cr

5512 Research in Hematology
723814 Jacob, 9 cr

5518 Research in Endocrinology (prereq regis med student)
523815 Oppenheimer, 9 cr

5520 Infectious Diseases, Allergy, Clinical Immunology
323816 Sabath, 9 cr

5521 Infectious Diseases, Clinical Aspects at the University Hospitals
023818 Sabath, 9 cr

5522 Medical Gastroenterology
123820 Olson, 9 cr

5523 Endocrinology, Metabolism, Clinical Pharmacology
823822 1515-1700 Th, MoosT 2520, Barbosa, 9 cr

5525 Cardiovascular Medicine
423824 Bache, 9 cr

5527 Contemporary Problems in Investigative Cardiology
223825 Bache, 9 cr

5528 Clinical Hematology
923827 Howe, 9 cr

5531 Clinical Rheumatology
523829 Hathaway, 4.5-9 cr

5532 Pulmonary Disease
723831 Kronenberg, 9 cr

5533 Clinical Allergy at University Hospitals
323833 Blumenthal, 4.5-9 cr

5542 Research in Pulmonary Disease
123834 Kronenberg, 9 cr

5548 Clinical Genetics
023835 King, 9 cr

5554 Fluid Electrolyte, Acid-Base Metabolism
823836 Ma, 9 cr

5556 Renal Diseases
623837 Ferris, 4.5-9 cr

5557 Research in Nephrology
423838 Ferris, ar cr

5562 Medical Nephrology
223839 Rao, 9 cr

5570 Clinical Medicine on the General Clinical Research Center
623840 Bantle, 9 cr

5572 Ambulatory Adult, Geriatric Medicine at St. Paul Ramsey Hospital
423841 Spilane, 9 cr

5573 Externship in Geriatric Medicine at St. Paul-Ramsey Medical Center (prereq regis med)
223842 Irvine, 9 cr

5574 Critical Care in Internal Medicine at Hennepin County Medical Center (prereq 5502)
125745 Schultz, 9 cr

5575 Ambulatory Care Medicine at Hennepin County Medical Center (prereq 5502)
025746 Bloss, 9 cr

5576 Externship in Geriatrics (prereq 5502)
616662 Miles, 9 cr

5583 Diagnosis, Evaluation, and Care of Adults and Children with Cancer
123843 Ramsey, 9 cr

5589 Medicine Externship II at St. Luke's Hospital, Duluth (prereq 5502)
923844 Goldish, 9 cr

5590 Preceptorships in Internal Medicine
723845 Murray, 9 cr

5591 Internal Medicine for the Ambulatory Outpatient (prereq 5502, regis med student)
216664 Howe, 9 cr

5592 Rural Physician Associate Program in Internal Medicine
523846 Howe, ar cr

5594 Psychiatry in Medicine: Consultation-Liason
323847 Popkin, 9 cr

5597 Research in Occupational Health
123848 Johnson, 9 cr

8201 Clinical Medicine
323850 Ferris, ar cr

8202 Clinical Conference
023852 Ferris, 1 cr

8203 Clinical Radiology Conference
823853 Ferris, 1 cr

8204 Pathology Conference
623854 Ferris, 1 cr

8205 Electrocardiographic Conference
423855 Tuna, 1 cr

8206 Nephrology Seminar
123857 Ferris, 3 cr

8209 Tumor Clinical Conference
923858 Kennedy, 1 cr

8210 Infectious Disease Seminar
723859 Sabath, ar cr

8211 Diseases of the Cardiovascular System
123860 Cohn, ar cr

8212 Diseases of the Chest
923861 Kronenberg, ar cr

8213 Diseases of the Kidney
723862 Ferris, ar cr

8214 Diseases of Diabetes, Endocrinology, Metabolism
323864 Oppenheimer, ar cr

8215 Diseases of Hematology
023866 Jacob, ar cr

8216 Diseases of Gastroenterology
623868 Wilson, ar cr

8217 Diseases of Oncology
823870 Kennedy, ar cr

8220 Research in Medicine
623871 Ferris, ar cr

8221 Topics in Medicine
423872 Ferris, ar cr

8223 Topics in Related Basic Science
223873 Ferris, ar cr

METALLURGICAL ENGINEERING (MetE)
Chem Engr, Materials Sci, Civil, Mineral Engr
Institute of Technology

5102 Chemical Metallurgy III (prereq 5101 or MatS 5101 or #)
609906 1115-1200 MTWF, CivMinE 2J2, Iwasaki, 4 cr

R5503 Metallurgical Engineering Design III (prereq IT student)
014276 Smith, 4 cr

R5901 Principles of Metals Extraction (prereq 5102 or #)
105634 0915-1000 MTWF, MRRC 211, Moore, 4 cr

R5903 Hydrometallurgy (prereq 5100, 5101, 5102 or #)
★LECT 0815-0900 MWF, MRRC 211, Smith, 4 cr
228832 –1 LAB 1315-1700 Th, MRRC 211

R5942 Special Problems in Extractive Metallurgical Engineering (prereq grad student)
114275 Smith, 1-6 cr

R8839 Optimization and Control Techniques in Mineral Processing II (prereq 8838 or #)
825747 1315-1400 MW, MRRC 211, Reid, 3 cr

R8923 **Research in Extractive Metallurgical Engineering** (prereq #) (A-N only)
625748 Bitsianes, ar cr

R8934 **Physical Chemistry of High Temperature Metallurgical Reactions III** (prereq 8932)
425749 1115-1230 TTh, CivMinE 213, Bitsianes, 3 cr

MICROBIOLOGY (MicB)
Medical School

R5106 **Advanced General Microbiology Laboratory** (prereq 5105 or equiv)
825750 1315-1630 TTh, MoosT 2252, Dworkin, 3 cr

5125 **Laboratory in Recombinant DNA Technology** (§Biol 5125; prereq #)
836828 1200-1700 TTh, MoosT 2252, Faras, Messing, others, 4 cr

5206 **Microbiology for Medical Students** (prereq ¶5205, regis med fr, all others #)
★LECT 0915-1000 MTWThF, PWB 2470, Brand, 5 cr
016853 –1 LAB 1415-1600 W, MoosT 2252
616855 –2 LAB 1015-1200 W, MoosT 2252

5226 **Microbiology for Medical Students** (prereq microbiology grad student or #)
416890 0915-1000 MTWThF, PWB 2470, Brand, 3 cr

5232 **Medical Microbiology** (prereq 5216 or 5218, 5105 or 3103 or 8110 or Biol 5013)
138740 0945-1100 TTh, MoosT 2530, Cleary, 3 cr

R5234 **Medical Microbiology Laboratory** (prereq 5232 or ¶)
038741 1315-1500 TTh, MoosT 2252, Cleary, 2 cr

5351 **Industrial Microbiology** (prereq 5321 or #)
929501 1330-1500 MW, MoosT 2580, Hanson, 3 cr

5355 **Genetic and Molecular Aspects of Biotechnology** (prereq 5105 or equiv or 5321)
034270 0815-0930 TTh, MoosT 2520, Faras, 3 cr

R5424 **Biology of Viruses** (prereq 5321 or Biol 5001 or #)
★LECT 1015-1100 MWF, MoosT 2530, Plagemann, 4 cr
428649 –1 LAB 1115-1300 F, MoosT 2252

5900 **Topics in Microbiology** (S-N only)
623370 1515-1600 W, Mayo 1050, Rogers, 1 cr

5970 **Directed Studies** (prereq #, △)
206264 Rogers, ar cr

5990 **Directed Research** (prereq #, △)
123364 Rogers, ar cr

5992 **Practicum: Teaching** (prereq #)
812724 1 cr

R8112 **Microbial Genetics** (prereq #)
523376 1215-1330 TTh, MoosT 18211, Zissler, 3 cr

8242 **Diagnostic Microbiology** (prereq grad student in microbiology, #)
123378 Wells, ar cr

R8320 **Immunogenetics** (§Path 8320; prereq 5216 or #)
429512 1415-1700 F, MoosT 2620, Fan, 3 cr

R8910 **Seminar** (prereq #)
323380 1215-1300 W, MoosT 2520, Faras, 1 cr

8911 **Colloquium in Microbiology** (prereq #)
823383 1 cr

8990 **Research in Microbiology** (prereq #)
423385 Plagemann, ar cr

MIDDLE EASTERN AND SOUTH ASIAN STUDIES (MESA)
South And Southwest Asian Studies
Liberal Arts

1506 **Introduction to Contemporary South Asia** (§MESA 3506)
538721 1315-1400 MWF, BlegH 205, Schwartzberg, 5 cr

3412 **Hinduism** (some background in indian civilization is helpful but not required)
339353 1015-1100 MWF, FolH 302, Junghare, 4 cr

3502 **The Heritage of India** (§Hum 3212)
138723 1415-1530 TTh, BlegH 120, Lelyveld, 5 cr

3506 **Introduction to Contemporary South Asia** (§MESA 1506)
038724 1315-1400 MWF, BlegH 205, Schwartzberg, 5 cr

3544 **The Arab World in Recent Times** (§Hist 3544)
838725 0915-1000 MWF, BlegH 105, Farah, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
638726 ar cr

5990 **Directed Research** (prereq #, △, CLA approval)
438727 ar cr

8990 **Research** (prereq #)
238728 ar cr

MILITARY SCIENCE (Mil)

R1013 **World Military History** (prereq △) (A-N only)
921513 0815-0900 TTh, Armory 116, Westhaus, 2 cr

R1023 **U.S. International Perspectives: Analysis of the U.S. Military Role** (A-N only)
221511 –1 0815-0900 TTh, Armory 116A, Heffelfinger, 2 cr
138861 –2 1315-1400 TTh, Armory 116A, Heffelfinger, 2 cr

R3133 **Small Unit Tactics** (prereq △, Leadership Lab) (A-N only)
901200 –1 0945-1100 TTh, Armory 116A, Deca, 3 cr
501202 –2 1130-1245 TTh, Armory 116A, Deca, 3 cr

R3143 **Military Law, Service Orientation** (prereq △, Leadership Lab) (A-N only)
101204 –1 0815-0930 TTh, Armory 103, Pearson, 3 cr
801206 –2 1415-1530 TTh, Armory 116A, Pearson, 3 cr

3970 **Directed Studies** (prereq #, △) (A-N only)
121512 1-3 cr

MINING ENGINEERING (MinE)
Civil And Mineral Engineering
Institute of Technology

5620 **Underground Mining Methods** (prereq 5600, IT stu or grad IT) (A-N only)
933788 0815-1000 MTWF, CivMinE 202, Brady, 4 cr

5652 **Mineral Engineering Design II** (prereq 5650 or #, IT stu or grad IT maj) (A-N only)
024399 1315-1700 MWF, 4 cr

5660 **Special Mineral Engineering Problems** (prereq IT stu or grad IT maj) (A-N only)
724400 ar cr

5710 **Environmental Aspects of Mineral Engineering** (prereq 5613, 5820 or #, IT stu or grad IT maj) (A-N only)
524401 1015-1100 MTWF, MRRC 211, Schulz, 4 cr

8603 **Seminar: Mineral Engineering** (prereq #) (S-N only)
204482 ar cr

MORTUARY SCIENCE (Mort)
Health Sciences

R3010 **Mortuary Law** (A-N only)
924119 1315-1500 MF, JOAd 2125, Grayson, 3 cr

R3030 **Embalming Chemistry** (prereq introductory course in general chemistry, regis in mortuary science) (A-N only)
224120 1115-1200 MTWThF, JacH 2135, Mathews, 4 cr

R3073 **Funeral Management** (prereq regis in mortuary science, 3070) (A-N only)
216857 0915-1100 TTh, JOAd 2125, Slater, 3 cr

R3080 **Practicum in Funeral Service** (prereq have completed all requirements for graduation, with the exception of 3080) (S-N only)
124121 Stroud, Burger, others, 15 cr

R3090 **Independent Study** (prereq sr)
524124 Burger, Mathews, others, 1 cr

MUSIC (Mus)
Music
Liberal Arts

R1001 **Fundamentals of Music** (prereq nonmus maj)
227034 –1 0815-0900 MWF, WullH 320, Byrne, 4 cr
927036 –2 1115-1200 MWF, WullH 320, 4 cr
527038 –3 1315-1400 MWF, WullH 320, 4 cr

R1051 **Piano Class for Non-Music Majors**
415450 1515-1600 MW, MusEd 200, 2 cr

R1052 **Piano Class for Non-Music Majors** (prereq 1051 or #)
715454 1415-1500 MW, MusEd 200, 2 cr

R1053 **Piano Class for Non-Music Majors** (prereq 1051 or #)
315456 1315-1400 MW, MusEd 200, 2 cr

R1153 **Piano: Class Lessons** (prereq 1152)
127043 –1 0815-0900 MW, MusEd 200, Arrau, 2 cr (written permission required)
827045 –2 1015-1100 MW, MusEd 200, Arrau, 2 cr
427047 –3 1115-1200 MW, MusEd 200, Arrau, 2 cr

R1160 **Voice: Class Lessons**
422883 –1 1215-1300 MW, ScottH 19, 2 cr
505248 –2 1315-1400 MW, ScottH 19, 2 cr
905246 –3 1415-1500 MW, ScottH 19, 2 cr
305249 –4 1215-1300 TTh, ScottH 19, 2 cr
933127 –5 1315-1400 TTh, ScottH 19, 2 cr

1330 **Jazz Improvisation** (max 12 cr; prereq audition, #)
509042 –1 1215-1300 TTh, NMA 5, Buckner, 2 cr
733128 –2 1315-1400 TTh, NMA 5, Buckner, 2 cr

1340 **Jazz Ensemble** (max 6 cr; prereq audition, #)
309091 –1 1315-1400 MW, NMA 4, Bencriscutto, 1 cr
009093 –2 1115-1300 TTh, NMA 4, Bencriscutto, 1 cr
609095 –3 1315-1400 TTh, NMA 4, Bencriscutto, 1 cr
918059 –4 1715-1800 TTh, NMA 4, Bencriscutto, 1 cr

1410 **Band** (prereq #)
122885 1515-1700 MTWThF, NMA 4, 5, Bencriscutto, Sanford, 1 cr

1420 **Orchestra** (prereq #)
922886 1515-1700 MTTh, WullH 320, Massmann, 1 cr

1430 **University Chorus, Concert Choir, Women's Chorus, Men's Chorus, St. Paul Campus Chorus** (prereq #)
127052 –1 1115-1200 MWF, NMA 5, 1900-2130 T, SciCB 325, Jorgenson, 1 cr
727054 –2 1315-1400 MWF, NMA 5, 1900-2130 T, SciCB 325, Jorgenson, 1 cr
327056 –3 1215-1300 MWF, NMA 5, Jorgenson, 1 cr (Men's chorus)

1440 **Ensemble** (prereq #)
722887 –1 1 cr (Guitar)
933130 –2 Miller, 1 cr (Harp)
733131 –3 1 cr (Piano)
533132 –4 1 cr (Strings)
333133 –5 Massmann, 1 cr (Chamber Orchestra)
133134 –6 1 cr

R1503 **Theory III** (prereq 1502)
♦127060 –1 LECT 1215-1300 TTh, WullH 30, Lubet, 3 cr
♦827062 –2 LECT 1215-1300 WF, WullH 30, Lubet, 3 cr
427064 –1 REC 0815-0900 WF, ScottH 2
127066 –2 REC 1115-1200 WF, ScottH 2
727068 –3 REC 1215-1300 WF, ScottH 2
927070 –4 REC 1415-1500 WF, ScottH 2

R1513 **Ear-Training and Sight-Singing I** (prereq 1512)
327073 –1 0815-0900 TTh, ScottH 2, 1 cr
027075 –2 0915-1000 TTh, ScottH 2, 1 cr
627077 –3 1015-1100 TTh, ScottH 2, 1 cr
227079 –4 1115-1200 TTh, ScottH 2, 1 cr
427081 –5 1215-1300 TTh, ScottH 2, 1 cr

R1516 **Ear-Training and Sight-Singing II** (prereq 1515)
127083 –1 0815-0900 TTh, ScottH 3, 1 cr
727085 –2 0815-0900 TTh, WullH 7A, 1 cr
327087 –3 1115-1200 TTh, ScottH 103, 1 cr
027089 –4 1215-1300 TTh, ScottH 103, 1 cr

1603 **History of Western Music** (prereq 1502)
522888 0915-1100 MW, ScottH 108, Laudon, 4 cr

1606 **History of Western Music** (prereq 1605)
322889 0915-1100 TTh, WullH 320, Jackson, 4 cr

R3021 **Introduction to Music** (§1021)
105253 1215-1300 MTWThF, ScottH 108, Sutton, 5 cr

3027 **Lyric Song in Medieval and Renaissance Culture** (prereq non-music maj)
035693 1015-1200 MW, ScottH 19, Jackson, 4 cr

3440 Ensemble (prereq #)
722890 –1 1 cr (Guitar)
033135 –2 Miller, 1 cr (Harp)
833136 –3 1 cr (Piano)
633137 –4 1 cr (Strings)
433138 –5 Massmann, 1 cr (Chamber Orchestra)
233139 –6 1 cr

R3503 Theory VI (prereq 3502)
♦127097 –1 LECT 1115-1200 TTh, WullH 30, Damschroder, 3 cr
♦727099 –2 LECT 1115-1200 WF, WullH 30, Damschroder, 3 cr
227101 –1 REC 0815-0900 WF, ScottH 103
927103 –2 REC 0915-1000 WF, ScottH 103
727104 –3 REC 1015-1100 WF, ScottH 2
527105 –4 REC 1215-1300 WF, ScottH 103

3506 Theory IX (prereq 3505)
522891 0915-1100 T, 0915-1000 Th, WullH 30, Stokes, 3 cr

R3550 Composition (max 12 cr; prereq 1506, #)
327106 –1 Argento, 2 cr
127107 –2 Fetler, 2 cr
027108 –3 0915-1200 F, ScottH 108, Stokes, 2 cr
309026 –4 Ultan, 2 cr

3708 Black Music Prior to WW I (§Afro 3105)
805255 0945-1100 TTh, BlegH 135, Southall, 5 cr

3970 Directed Studies (prereq #, △, college approval)
322892 1-15 cr

3980 Directed Teaching (prereq #, △, college approval)
122893 1-4 cr

5330 Jazz Improvisation (max 12 cr; prereq 12 cr of 1330 or audition)
509087 –1 1215-1300 TTh, NMA 5, Buckner, 2 cr
533129 –2 1315-1400 TTh, NMA 5, Buckner, 2 cr

5340 Jazz Ensemble (prereq 6 cr of 1340 or audition by instructor)
209097 –1 1315-1400 MW, NMA 4, Bencriscutto, 1 cr
909099 –2 1115-1300 TTh, NMA 4, Bencriscutto, 1 cr
409101 –3 1315-1400 TTh, NMA 4, Bencriscutto, 1 cr
118061 –4 1715-1800 TTh, NMA 4, Bencriscutto, 1 cr

5353 Piano Pedagogy I (prereq 5352)
022894 0915-1100 T, MusEd 200, Arrau, 2 cr

5359 Graduate Piano Seminar (prereq #)
633140 1515-1700 T, ScottH 4, McNab, 2 cr

5360 Woodwind Ensemble (prereq audition)
109030 1115-1300 F, ScottH 19, Anderson, 1 cr

R5373 Diction for Singers (prereq 5372)
505251 1515-1700 Th, ScottH 4, Weller, 2 cr

R5375 Vocal Pedagogy (prereq 18 cr applied voice, MuEd 3431 or #)
433141 1515-1700 T, MusEd 4, Ware, 4 cr

R5380 Brass Choir (prereq #)
827109 –1 1115-1300 TTh, WullH 320, Baldwin, 1 cr
127110 –2 0915-1100 F, WullH 320, Baldwin, 1 cr

5390 Percussion Ensemble (prereq #)
313898 1315-1500 MW, ScottH 108, Schultz, 1 cr

5399 Performance in Conducting (prereq 5388 or 5385, #)
822895 Lancaster, 4 cr

5410 Band (prereq #)
622896 1515-1700 MTWThF, NMA 4, 5, Bencriscutto, Sanford, 1 cr

5420 Orchestra (prereq #)
422897 1515-1700 MTTh, WullH 320, Massmann, 1 cr

5430 University Chorus, Concert Choir, Women's Chorus, Men's Chorus, St. Paul Campus Chorus (prereq #)
827112 –1 1115-1200 MWF, NMA 5, 1900-2130 T, SciCB 325, Jorgenson, 1 cr
627113 –2 1315-1400 MWF, SciCB 325, 1900-2130 T, NMA 5, Jorgenson, 1 cr
427114 –3 1215-1300 MWF, NMA 5, Jorgenson, 1 cr (Men's Chorus)

R5440 Ensemble (prereq #)
809032 –1 1 cr (Guitar)
409034 –2 Miller, 1 cr (Harp)
233142 –3 1 cr (Piano)
133143 –4 1 cr (Strings)
933144 –5 Massmann, 1 cr (Chamber Orchestra)
733145 –6 Ware, 1 cr (Minnesingers)
533146 –7 1 cr

5450 Collegium Musicum (prereq #) (A-N only)
222898 McClary, 1 cr

5470 Opera Workshop (prereq #)
122899 0915-1100 MWF, Sutton, 3 cr 429 Ontario SE,

5490 Chamber Singers (prereq audition)
822900 1515-1700 MWF, WullH 30, Lancaster, 1 cr

5512 Advanced Ear Training II (prereq 1516 or #)
505265 1315-1400 MWF, ScottH 2, Fetler, 3 cr

5523 Keyboard Harmony (prereq 1506, sr or grad)
622901 1215-1300 TTh, MusEd 200, Billmeyer, 2 cr

5532 Analysis II (prereq 5531)
333147 1515-1700 T, 1515-1600 Th, WullH 7A, Lubet, 3 cr

5540 Jazz Composition, Arranging (prereq 1506, #)
709105 Bencriscutto, 2 cr

R5550 Composition I (max 12 cr; prereq 1506, #)
227115 –1 Argento, 2 cr
127116 –2 Fetler, 2 cr
927117 –3 0915-1200 F, ScottH 108, Stokes, 2 cr
727118 –4 Ultan, 2 cr

R5560 Electronic Music Laboratory (prereq 3791 or #)
422902 1415-1700 M, ScottH 20, Stokes, 2 cr

R5563 Orchestration (prereq 5562)
222903 1415-1500 MW, ScottH 3, Argento, 2 cr

5643 Romantic Concert Music (prereq 1606 or #)
133148 1315-1500 MW, ScottH 103, Laudon, 4 cr

5662 Heinrich Schutz: Life and Works (prereq 8 cr in music or art history or German literature or political history to 1700 or #)
033149 1015-1200 TTh, WullH 7A, McClary, 4 cr

5667 Chamber Music of Beethoven (prereq 1506, 1606)
333150 0915-1100 MW, WullH 7A, McClary, 4 cr

R5810 Asian Music: Performance (prereq #)
922905 Kagan, 2 cr

5811 Traditional Indian Music: The Sacred and the Profane
133151 1515-1700 MW, ScottH 19, Kagan, 5 cr

5861 Introduction to Ethnomusicology (prereq #)
033152 1315-1500 TTh, ScottH 103, Kagan, 5 cr

R8550 Composition (max 18 cr;prereq compl undergrad maj seq in mus theory, comp incl 3543,5503,5553,5563 or #)
327123 –1 Argento, 3 cr
027125 –2 Fetler, 3 cr
627127 –3 0915-1200 F, ScottH 108, Stokes, 3 cr
227129 –4 Ultan, 3 cr

8755 Choral Literature: Classical Era Through the Twentieth Century (prereq grad student, #)
912701 1230-1400 MWF, WullH 7A, Lancaster, 4 cr

8990 Special Problems (prereq △)
722906 2-12 cr

MUSIC APPLIED (MusA)
Music
Liberal Arts

See Section 4, Course Fees, for MusA course fees. **These fees are in addition to tuition and are assessed at registration.**

1101 Piano, Elective (prereq audition, △)
124675 2-4 cr

1102 Harpsichord, Elective (prereq audition, △)
824677 2-4 cr

1103 Organ, Elective (prereq audition, △)
424679 2-4 cr

1104 Voice, Elective (prereq audition, △)
624681 2-4 cr

1105 Violin, Elective (prereq audition, △)
224683 2-4 cr

1106 Viola, Elective (prereq audition, △)
924685 2-4 cr

1107 Cello, Elective (prereq audition, △)
724686 2-4 cr

1108 Double Bass, Elective (prereq audition, △)
524687 2-4 cr

1109 Flute, Elective (prereq audition, △)
324688 2-4 cr

1111 Oboe, Elective (prereq audition, △)
124689 2-4 cr

1112 Clarinet, Elective (prereq audition, △)
524690 2-4 cr

1113 Saxophone, Elective (prereq audition, △)
324691 2-4 cr

1114 Bassoon, Elective (prereq audition, △)
124692 2-4 cr

1115 French Horn, Elective (prereq audition, △)
024693 2-4 cr

1116 Trumpet, Elective (prereq audition, △)
824694 2-4 cr

1117 Trombone, Elective (prereq audition, △)
224716 2-4 cr

1118 Baritone, Elective (prereq audition, △)
124720 2-4 cr

1119 Tuba, Elective (prereq audition, △)
524723 2-4 cr

1121 Percussion, Elective (prereq audition, △)
024726 2-4 cr

1122 Harp, Elective (prereq audition, △)
824730 2-4 cr

1123 Guitar, Elective (prereq audition, △)
424732 2-4 cr

1124 Accordion, Elective (prereq audition, △)
724736 2-4 cr

1125 Sitar, Elective (prereq audition, △)
524740 2-4 cr

1201 Piano, Principal (prereq audition, △)
824744 2-4 cr

1202 Harpsichord, Principal (prereq audition, △)
124748 2-4 cr

1203 Organ, Principal (prereq audition, △)
224750 2-4 cr

1204 Voice, Principal (prereq audition, △)
124756 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

1205 Violin, Principal (prereq audition, △)
424780 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1206 Viola, Principal (prereq audition, △)
224781 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1207 Cello, Principal (prereq audition, △)
124782 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1208 Double Bass, Principal (prereq audition, △)
924783 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1209 Flute, Principal (prereq audition, △)
724784 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1211 Oboe, Principal (prereq audition, △)
524785 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1212 Clarinet, Principal (prereq audition, △)
324786 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1213 Saxophone, Principal (prereq audition, △)
124787 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1214 Bassoon, Principal (prereq audition, △)
024788 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1215 French Horn, Principal (prereq audition, △)
824789 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1216 Trumpet, Principal (prereq audition, △)
124790 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1217 Trombone, Principal (prereq audition, △)
024791 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1218 Baritone, Principal (prereq audition, △)
824792 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1219 Tuba, Principal (prereq audition, △)
624793 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1221 Percussion, Principal (prereq audition, △)
424794 2-4 cr

1222 Harp, Principal (prereq audition, △)
224795 2-4 cr

1223 Guitar, Principal (prereq audition, △)
124796 2-4 cr

1301 Piano, Major (prereq audition, △)
924797 2-4 cr

1302 Harpsichord, Major (prereq audition, △)
724798 2-4 cr

1303 Organ, Major (prereq audition, △)
524799 2-4 cr

1304 Voice, Major (prereq audition, △)
224800 1415-1500 T, ScotH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

1305 Violin, Major (prereq audition, △)
124801 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1306 Viola, Major (prereq audition, △)
924802 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1307 Cello, Major (prereq audition, △)
724803 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1308 Double Bass, Major (prereq audition, △)
524804 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

1309 Flute, Major (prereq audition, △)
324805 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1311 Oboe, Major (prereq audition, △)
124806 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1312 Clarinet, Major (prereq audition, △)
824808 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1313 Saxophone, Major (prereq audition, △)
824811 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1314 Bassoon, Major (prereq audition, △)
124815 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

1315 French Horn, Major (prereq audition, △)
324819 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1316 Trumpet, Major (prereq audition, △)
124823 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1317 Trombone, Major (prereq audition, △)
124829 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1318 Baritone, Major (prereq audition, △)
924833 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1319 Tuba, Major (prereq audition, △)
124837 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

1321 Percussion, Major (prereq audition, △)
824839 2-4 cr

1322 Harp, Major (prereq audition, △)
624843 2-4 cr

1323 Guitar, Major (prereq audition, △)
224845 2-4 cr

1401 Piano, Secondary Required (max 12 cr; prereq mus maj, △)
924847 2-4 cr

1402 Harpsichord, Secondary Required (max 12 cr; prereq mus maj, △)
524849 2-4 cr

1403 Organ, Secondary Required (max 12 cr; prereq mus maj, △)
724851 2-4 cr

1404 Voice, Secondary Required (max 12 cr; prereq mus maj, △)
524852 2-4 cr

1405 Violin, Secondary Required (max 12 cr; prereq mus maj, △)
424861 2-4 cr

1406 Viola, Secondary Required (max 12 cr; prereq mus maj, △)
224862 2-4 cr

1407 Cello, Secondary Required (max 12 cr; prereq mus maj, △)
124863 2-4 cr

1408 Double Bass, Secondary Required (max 12 cr; prereq mus maj, △)
104998 2-4 cr

1409 Flute, Secondary Required (max 12 cr; prereq mus maj, △)
924864 2-4 cr

1411 Oboe, Secondary Required (max 12 cr; prereq mus maj, △)
724865 2-4 cr

1412 Clarinet, Secondary Required (max 12 cr; prereq mus maj, △)
524866 2-4 cr

1413 Saxophone, Secondary Required (max 12 cr; prereq mus maj, △)
324867 2-4 cr

1414 Bassoon, Secondary Required (max 12 cr; prereq mus maj, △)
124868 2-4 cr

1415 French Horn, Secondary Required (max 12 cr; prereq mus maj, △)
024869 2-4 cr

1416 Trumpet, Secondary Required (max 12 cr; prereq mus maj, △)
324870 2-4 cr

1417 Trombone, Secondary Required (max 12 cr; prereq mus maj, △)
124871 2-4 cr

1418 Baritone, Secondary Required (max 12 cr; prereq mus maj, △)
024872 2-4 cr

1419 Tuba, Secondary Required (max 12 cr; prereq mus maj, △)
624874 2-4 cr

1421 Percussion, Secondary Required (max 12 cr; prereq mus maj, △)
424875 2-4 cr

1422 Harp, Secondary Required (max 12 cr; prereq mus maj, △)
224876 2-4 cr

1423 Guitar, Secondary Required (max 12 cr; prereq mus maj, △)
124877 2-4 cr

1501 Piano, Secondary Elective (max 12 cr; prereq mus maj, △)
924878 2-4 cr

1502 Harpsichord, Secondary Elective (max 12 cr; prereq mus maj, △)
724879 2-4 cr

1503 Organ, Secondary Elective (max 12 cr; prereq mus maj, △)
124880 2-4 cr

1504 Voice, Secondary Elective (max 12 cr; prereq mus maj, △)
924881 2-4 cr

1505 Violin, Secondary Elective (max 12 cr; prereq mus maj, △)
724882 2-4 cr

1506 Viola, Secondary Elective (max 12 cr; prereq mus maj, △)
524883 2-4 cr

1507 Cello, Secondary Elective (max 12 cr; prereq mus maj, △)
324884 2-4 cr

1508 Double Bass, Secondary Elective (max 12 cr; prereq mus maj, △)
124885 2-4 cr

1509 Flute, Secondary Elective (max 12 cr; prereq mus maj, △)
024886 2-4 cr

1511 Oboe, Secondary Elective (max 12 cr; prereq mus maj, △)
824887 2-4 cr

1512 Clarinet, Secondary Elective (max 12 cr; prereq mus maj, △)
424889 2-4 cr

1513 Saxophone, Secondary Elective (max 12 cr; prereq mus maj, △)
824890 2-4 cr

1514 Bassoon, Secondary Elective (max 12 cr; prereq mus maj, △)
624891 2-4 cr

1515 French Horn, Secondary Elective (max 12 cr; prereq mus maj, △)
224893 2-4 cr

1516 Trumpet, Secondary Elective (max 12 cr; prereq mus maj, △)
124894 2-4 cr

1517 Trombone, Secondary Elective (max 12 cr; prereq mus maj, △)
724896 2-4 cr

1518 Baritone, Secondary Elective (max 12 cr; prereq mus maj, △)
324898 2-4 cr

1519 Tuba, Secondary Elective (max 12 cr; prereq mus maj, △)
524897 2-4 cr

1521 Percussion, Secondary Elective (max 12 cr; prereq mus maj, △)
124899 2-4 cr

1522 Harp, Secondary Elective (max 12 cr; prereq mus maj, △)
924900 2-4 cr

1523 Guitar, Secondary Elective (max 12 cr; prereq mus maj, △)
724901 2-4 cr

1601 Piano, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
324903 2-4 cr

1602 Harpsichord, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
124904 2-4 cr

1603 Organ, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
824906 2-4 cr

1604 Voice, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
624907 2-4 cr

1605 Violin, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
424908 2-4 cr

1606 Viola, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
224909 2-4 cr

1607 Cello, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
624910 2-4 cr

1608 Double Bass, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
424911 2-4 cr

1609 Flute, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
224912 2-4 cr

1611 Oboe, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
124913 2-4 cr

1612 Clarinet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
924914 2-4 cr

1613 Saxophone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
724915 2-4 cr

1614 Bassoon, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
524916 2-4 cr

1615 French Horn, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
124918 2-4 cr

1616 Trumpet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
024919 2-4 cr

1617 Trombone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
324920 2-4 cr

1618 Baritone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
124921 2-4 cr

1619 Tuba, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
024922 2-4 cr

1621 Percussion, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
824923 2-4 cr

1622 Harp, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
624924 2-4 cr

1623 Guitar, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
424925 2-4 cr

1701 Piano, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
224926 2-4 cr

1702 Harpsichord, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
125003 2-4 cr

1703 Organ, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
125009 2-4 cr

1704 Voice, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
225011 2-4 cr

1705 Violin, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
125012 2-4 cr

1706 Viola, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
725014 2-4 cr

1707 Cello, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
525015 2-4 cr

1708 Double Bass, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
325016 2-4 cr

1709 Flute, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
025018 2-4 cr

1711 Oboe, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
825019 2-4 cr

1712 Clarinet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
125026 2-4 cr

1713 Saxophone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
425024 2-4 cr

1714 Bassoon, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
825022 2-4 cr

1715 French Horn, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
925030 2-4 cr

1716 Trumpet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
325033 2-4 cr

1717 Trombone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
025035 2-4 cr

1718 Baritone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
825036 2-4 cr

1719 Tuba, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
425038 2-4 cr

1721 Percussion, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
625040 2-4 cr

1722 Harp, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
125043 2-4 cr

1723 Guitar, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
725045 2-4 cr

3101 Piano, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
025049 2-4 cr

3102 Harpsichord, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
825053 2-4 cr

3103 Organ, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
125057 2-4 cr

3104 Voice, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
125060 2-4 cr

3105 Violin, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
725062 2-4 cr

3106 Viola, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
325064 2-4 cr

3107 Cello, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
025066 2-4 cr

3108 Double Bass, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
625068 2-4 cr

3109 Flute, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
825070 2-4 cr

3111 Oboe, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
425072 2-4 cr

3112 Clarinet, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
125074 2-4 cr

3113 Saxophone, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
725076 2-4 cr

3114 Bassoon, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
325078 2-4 cr

3115 French Horn, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
525080 2-4 cr

3116 Trumpet, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
025083 2-4 cr

3117 Trombone, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
825084 2-4 cr

3118 Baritone, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
625085 2-4 cr

3119 Tuba, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
225087 2-4 cr

3121 Percussion, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
225090 2-4 cr

3122 Harp, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
525094 2-4 cr

3123 Guitar, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
825098 2-4 cr

3124 Accordion, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
125101 2-4 cr

3125 Sitar, Elective (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
825103 2-4 cr

3201 Piano, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
425105 2-4 cr

3202 Harpsichord, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
125107 2-4 cr

3203 Organ, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
925108 2-4 cr

3204 Voice, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
825165 1415-1500 T, ScottH 108, 1415-1600 Th, ScottH 19, 2-4 cr (addnl hrs ar)

3205 Violin, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
625166 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3206 Viola, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
425167 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3207 Cello, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
225168 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3208 Double Bass, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
125169 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3209 Flute, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
425170 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3211 Oboe, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
225171 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3212 Clarinet, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
125172 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3213 Saxophone, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
925173 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3214 Bassoon, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
725174 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3215 French Horn, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
525175 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3216 Trumpet, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
325176 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3217 Trombone, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
125177 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3218 Baritone, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
025178 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3219 Tuba, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
825179 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3221 Percussion, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
125180 2-4 cr

3222 Harp, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
025181 2-4 cr

3223 Guitar, Principal (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
825182 2-4 cr

3301 Piano, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
625183 2-4 cr

3302 Harpsichord, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
425184 2-4 cr

3303 Organ, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
225185 2-4 cr

3304 Voice, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
125186 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

3305 Violin, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
925187 1415-1500 Th, WullH 30, 2-4 cr (addnl hrs ar)

3306 Voila, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
725188 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3307 Cello, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
525189 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3308 Double Bass, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
925190 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

3309 Flute, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
725191 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3311 Oboe, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
525192 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3312 Clarinet, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
325193 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3313 Saxophone, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
125194 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3314 Bassoon, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
025195 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

3315 French Horn, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
825196 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3316 Trumpet, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
625197 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3317 Trombone, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
425198 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3318 Baritone, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
225199 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3319 Tuba, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
025200 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

3321 Percussion, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
825201 2-4 cr

3322 Harp, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
625202 2-4 cr

3323 Guitar, Major (prereq 12 cr in corresponding 1xxx course, qualifying exam, △)
925271 2-4 cr

3401 Piano, Secondary Required (max 12 cr; prereq mus maj, △)
325274 2-4 cr

3402 Harpsichord, Secondary Required (max 12 cr; prereq mus maj, △)
025276 2-4 cr

3403 Organ, Secondary Required (max 12 cr; prereq mus maj, △)
625278 2-4 cr

3404 Voice, Secondary Required (max 12 cr; prereq mus maj, △)
425279 2-4 cr

3405 Violin, Secondary Required (max 12 cr; prereq mus maj, △)
625281 2-4 cr

3406 Viola, Secondary Required (max 12 cr; prereq mus maj, △)
225283 2-4 cr

3407 Cello, Secondary Required (max 12 cr; prereq mus maj, △)
925285 2-4 cr

3408 Double Bass, Secondary Required (max 12 cr; prereq mus maj, △)
725286 2-4 cr

3409 Flute, Secondary Required (max 12 cr; prereq mus maj, △)
525287 2-4 cr

3411 Oboe, Secondary Required (max 12 cr; prereq mus maj, △)
325288 2-4 cr

3412 Clarinet, Secondary Required (max 12 cr; prereq mus maj, △)
125289 2-4 cr

3413 Saxophone, Secondary Required (max 12 cr; prereq mus maj, △)
325291 2-4 cr

3414 Bassoon, Secondary Required (max 12 cr; prereq mus maj, △)
025293 2-4 cr

3415 French Horn, Secondary Required (max 12 cr; prereq mus maj, △)
825294 2-4 cr

3416 Trumpet, Secondary Required (max 12 cr; prereq mus maj, △)
625295 2-4 cr

3417 Trombone, Secondary Required (max 12 cr; prereq mus maj, △)
425296 2-4 cr

3418 Baritone, Secondary Required (max 12 cr; prereq mus maj, △)
225297 2-4 cr

3419 Tuba, Secondary Required (max 12 cr; prereq mus maj, △)
125298 2-4 cr

3421 Percussion, Secondary Required (max 12 cr; prereq mus maj, △)
925299 2-4 cr

3422 Harp, Secondary Required (max 12 cr; prereq mus maj, △)
625300 2-4 cr

3423 Guitar, Secondary Required (max 12 cr; prereq mus maj, △)
425301 2-4 cr

3501 Piano, Secondary Elective (max 12 cr; prereq mus maj, △)
225302 2-4 cr

3502 Harpsichord, Secondary Elective (max 12 cr; prereq mus maj, △)
125303 2-4 cr

3503 Organ, Secondary Elective (max 12 cr; prereq mus maj, △)
925304 2-4 cr

3504 Voice, Secondary Elective (max 12 cr; prereq mus maj, △)
725305 2-4 cr

3505 Violin, Secondary Elective (max 12 cr; prereq mus maj, △)
525306 2-4 cr

3506 Viola, Secondary Elective (max 12 cr; prereq mus maj, △)
325307 2-4 cr

3507 Cello, Secondary Elective (max 12 cr; prereq mus maj, △)
125308 2-4 cr

3508 Double Bass, Secondary Elective (max 12 cr; prereq mus maj, △)
025309 2-4 cr

3509 Flute, Secondary Elective (max 12 cr; prereq mus maj, △)
325310 2-4 cr

3511 Oboe, Secondary Elective (max 12 cr; prereq mus maj, △)
125311 2-4 cr

3512 Clarinet, Secondary Elective (max 12 cr; prereq mus maj, △)
025312 2-4 cr

3513 Saxophone, Secondary Elective (max 12 cr; prereq mus maj, △)
825313 2-4 cr

3514 Bassoon, Secondary Elective (max 12 cr; prereq mus maj, △)
625314 2-4 cr

3515 French Horn, Secondary Elective (max 12 cr; prereq mus maj, △)
425315 2-4 cr

3516 Trumpet, Secondary Elective (max 12 cr; prereq mus maj, △)
225316 2-4 cr

3517 Trombone, Secondary Elective (max 12 cr; prereq mus maj, △)
125317 2-4 cr

3518 Baritone, Secondary Elective (max 12 cr; prereq mus maj, △)
925318 2-4 cr

3519 Tuba, Secondary Elective (max 12 cr; prereq mus maj, △)
725319 2-4 cr

3521 Percussion, Secondary Elective (max 12 cr; prereq mus maj, △)
125320 2-4 cr

3522 Harp, Secondary Elective (max 12 cr; prereq mus maj, △)
725322 2-4 cr

3523 Guitar, Secondary Elective (max 12 cr; prereq mus maj, △)
325324 2-4 cr

3601 Piano, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
125325 2-4 cr

3602 Harpsichord, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
025326 2-4 cr

3603 Organ, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
125334 2-4 cr

3604 Voice, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
925335 2-4 cr

3605 Violin, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
525337 2-4 cr

3606 Viola, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
325338 2-4 cr

3607 Cello, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
125339 2-4 cr

3608 Double Bass, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
525340 2-4 cr

3609 Flute, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
125342 2-4 cr

3611 Oboe, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
825344 2-4 cr

3612 Clarinet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
425346 2-4 cr

3613 Saxophone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
225347 2-4 cr

3614 Bassoon, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
925349 2-4 cr

3615 French Horn, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
324917 2-4 cr

3616 Trumpet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
125351 2-4 cr

3617 Trombone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
725353 2-4 cr

3618 Baritone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
325355 2-4 cr

3619 Tuba, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
025357 2-4 cr

3621 Percussion, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
825358 2-4 cr

3622 Harp, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
625359 2-4 cr

3623 Guitar, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
025360 2-4 cr

3701 Piano, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
825361 2-4 cr

3702 Harpsichord, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
625362 2-4 cr

3703 Organ, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
425363 2-4 cr

3704 Voice, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
725367 2-4 cr

3705 Violin, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
325369 2-4 cr

3706 Viola, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
525371 2-4 cr

3707 Cello, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
325372 2-4 cr

3708 Double Bass, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
125373 2-4 cr

3709 Flute, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
825375 2-4 cr

3711 Oboe, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
425377 2-4 cr

3712 Clarinet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
225378 2-4 cr

3713 Saxophone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
525385 2-4 cr

3714 Bassoon, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
025388 2-4 cr

3715 French Horn, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
825389 2-4 cr

3716 Trumpet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
325386 2-4 cr

3717 Trombone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
125390 2-4 cr

3718 Baritone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
025391 2-4 cr

3719 Tuba, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
825392 2-4 cr

3721 Percussion, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
625393 2-4 cr

3722 Harp, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
425394 2-4 cr

3723 Guitar, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
225395 2-4 cr

3801 Piano, Minor (prereq audition, △)
405176 2-4 cr

3802 Harpsichord, Minor (prereq audition, △)
205177 2-4 cr

3803 Organ, Minor (prereq audition, △)
905179 2-4 cr

3804 Voice, Minor (prereq audition, △)
205180 2-4 cr

3805 Violin, Minor (prereq audition, △)
905182 2-4 cr

3806 Viola, Minor (prereq audition, △)
705183 2-4 cr

3807 Cello, Minor (prereq audition, △)
305185 2-4 cr

3808 Double Bass, Minor (prereq audition, △)
005187 2-4 cr

3809 Flute, Minor (prereq audition, △)
605189 2-4 cr

3811 Oboe, Minor (prereq audition, △)
005190 2-4 cr

3812 Clarinet, Minor (prereq audition, △)
605192 2-4 cr

3813 Saxophone, Minor (prereq audition, △)
405193 2-4 cr

3814 Bassoon, Minor (prereq audition, △)
105195 2-4 cr

3815 French Horn, Minor (prereq audition, △)
905196 2-4 cr

3816 Trumpet, Minor (prereq audition, △)
705197 2-4 cr

3817 Trombone, Minor (prereq audition, △)
305199 2-4 cr

3818 Baritone, Minor (prereq audition, △)
105200 2-4 cr

3819 Tuba, Minor (prereq audition, △)
905201 2-4 cr

3821 Percussion, Minor (prereq audition, △)
505203 2-4 cr

3822 Harp, Minor (prereq audition, △)
105205 2-4 cr

3823 Guitar, Minor (prereq audition, △)
805207 2-4 cr

5101 Piano (prereq audition, △)
313982 2-4 cr

5102 Harpsichord (prereq audition, △)
013984 2-4 cr

5103 Organ (prereq audition, △)
613986 2-4 cr

5104 Voice (prereq audition, △)
213988 2-4 cr

5105 Violin (prereq audition, △)
413990 2-4 cr

5106 Viola (prereq audition, △)
113992 2-4 cr

5107 Cello (prereq audition, △)
713994 2-4 cr

5108 Double Bass (prereq audition, △)
313996 2-4 cr

5109 Flute (prereq audition, △)
013998 2-4 cr

5111 Oboe (prereq audition, △)
714000 2-4 cr

5112 Clarinet (prereq audition, △)
314002 2-4 cr

5113 Saxophone (prereq audition, △)
014004 2-4 cr

5114 Bassoon (prereq audition, △)
614006 2-4 cr

5115 French Horn (prereq audition, △)
214008 2-4 cr

5116 Trumpet (prereq audition, △)
414010 2-4 cr

5117 Trombone (prereq audition, △)
114012 2-4 cr

5118 Baritone Horn (prereq audition, △)
714014 2-4 cr

5119 Tuba (prereq audition, △)
314016 2-4 cr

5121 Percussion (prereq audition, △)
114017 2-4 cr

5122 Harp (prereq audition, △)
014018 2-4 cr

5123 Guitar (prereq audition, △)
814019 2-4 cr

5124 Accordian (prereq audition, △)
014021 2-4 cr

5125 Sitar (prereq audition, △)
814022 2-4 cr

8201 Piano, Principal (prereq audition, △)
425203 2-4 cr

8202 Harpsichord, Principal (prereq audition, △)
225204 2-4 cr

8203 Organ, Principal (prereq audition, △)
125205 2-4 cr

8204 Voice, Principal (prereq audition, △)
925206 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

8205 Violin, Principal (prereq audition, △)
725207 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8206 Viola, Principal (prereq audition, △)
525208 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8207 Cello, Principal (prereq audition, △)
325209 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8208 Double Bass, Principal (prereq audition, △)
725210 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8209 Flute, Principal (prereq audition, △)
525211 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8211 Oboe, Principal (prereq audition, △)
925237 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8212 Clarinet, Principal (prereq audition, △)
525239 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8213 Saxophone, Principal (prereq audition, △)
925240 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8214 Bassoon, Principal (prereq audition, △)
725241 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8215 French Horn, Principal (prereq audition, △)
525242 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8216 Trumpet, Principal (prereq audition, △)
325243 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8217 Trombone, Principal (prereq audition, △)
125244 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8218 Baritone, Principal (prereq audition, △)
025245 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8219 Tuba, Principal (prereq audition, △)
825246 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8221 Percussion, Principal (prereq audition, △)
625247 2-4 cr

8222 Harp, Principal (prereq audition, △)
425248 2-4 cr

8223 Guitar, Principal (prereq audition, △)
225249 2-4 cr

8301 Piano, Major (prereq audition, △)
625250 2-4 cr

8302 Harpsichord, Major (prereq audition, △)
425251 2-4 cr

8303 Organ, Major (prereq audition, △)
225252 2-4 cr

8304 Voice, Major (prereq audition, △)
825327 1415-1500 T, ScottH 108, 1415-1500 Th, ScottH 19, 2-4 cr (addnl hrs ar)

8305 Violin, Major (prereq audition, △)
125253 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8306 Viola, Major (prereq audition, △)
925254 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8307 Cello, Major (prereq audition, △)
725255 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8308 Double Bass, Major (prereq audition, △)
525256 1415-1500 Th, WullH 330, 2-4 cr (addnl hrs ar)

8309 Flute, Major (prereq audition, △)
325257 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8311 Oboe, Major (prereq audition, △)
025259 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8312 Clarinet, Major (prereq audition, △)
125261 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8313 Saxophone, Major (prereq audition, △)
025262 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8314 Bassoon, Major (prereq audition, △)
825263 1415-1500 T, ScottH 19, 2-4 cr (addnl hrs ar)

8315 French Horn, Major (prereq audition, △)
625264 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8316 Trumpet, Major (prereq audition, △)
029358 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8317 Trombone, Major (prereq audition, △)
425265 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8318 Baritone, Major (prereq audition, △)
225266 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8319 Tuba, Major (prereq audition, △)
125267 1415-1500 T, WullH 30, 2-4 cr (addnl hrs ar)

8321 Percussion, Major (prereq audition, △)
925268 2-4 cr

8322 Harp, Major (prereq audition, △)
725269 2-4 cr

8323 Guitar, Major (prereq audition, △)
125270 2-4 cr

8401 Piano, Secondary Required (max 12 cr; prereq mus maj, △)
725272 2-4 cr

8402 Harpsichord, Secondary Required (max 12 cr; prereq mus maj, △)
125275 2-4 cr

8403 Organ, Secondary Required (max 12 cr; prereq mus maj, △)
525273 2-4 cr

8404 Voice, Secondary Required (max 12 cr; prereq mus maj, △)
825277 2-4 cr

8405 Violin, Secondary Required (max 12 cr; prereq mus maj, △)
825280 2-4 cr

8406 Viola, Secondary Required (max 12 cr; prereq mus maj, △)
425282 2-4 cr

8407 Cello, Secondary Required (max 12 cr; prereq mus maj, △)
125284 2-4 cr

8408 Double Bass, Secondary Required (max 12 cr; prereq mus maj, △)
525290 2-4 cr

8409 Flute, Secondary Required (max 12 cr; prereq mus maj, △)
125292 2-4 cr

8411 Oboe, Secondary Required (max 12 cr; prereq mus maj, △)
225400 2-4 cr

8412 Clarinet, Secondary Required (max 12 cr; prereq mus maj, △)
125401 2-4 cr

8413 Saxophone, Secondary Required (max 12 cr; prereq mus maj, △)
925402 2-4 cr

8414 Bassoon, Secondary Required (max 12 cr; prereq mus maj, △)
725403 2-4 cr

8415 French Horn, Secondary Required (max 12 cr; prereq mus maj, △)
525404 2-4 cr

8416 Trumpet, Secondary Required (max 12 cr; prereq mus maj, △)
325405 2-4 cr

8417 Trombone, Secondary Required (max 12 cr; prereq mus maj, △)
125406 2-4 cr

8418 Baritone, Secondary Required (max 12 cr; prereq mus maj, △)
025407 2-4 cr

8419 Tuba, Secondary Required (max 12 cr; prereq mus maj, △)
825408 2-4 cr

8421 Percussion, Secondary Required (max 12 cr; prereq mus maj, △)
625409 2-4 cr

8422 Harp, Secondary Required (max 12 cr; prereq mus maj, △)
025410 2-4 cr

8423 Guitar, Secondary Required (max 12 cr; prereq mus maj, △)
625412 2-4 cr

8501 Piano, Secondary Elective (max 12 cr; prereq mus maj, △)
225414 2-4 cr

8502 Harpsichord, Secondary Elective (max 12 cr; prereq mus maj, △)
925416 2-4 cr

8503 Organ, Secondary Elective (max 12 cr; prereq mus maj, △)
525418 2-4 cr

8504 Voice, Secondary Elective (max 12 cr; prereq mus maj, △)
125423 2-4 cr

8505 Violin, Secondary Elective (max 12 cr; prereq mus maj, △)
825425 2-4 cr

8506 Viola, Secondary Elective (max 12 cr; prereq mus maj, △)
425427 2-4 cr

8507 Cello, Secondary Elective (max 12 cr; prereq mus maj, △)
125429 2-4 cr

8508 Double Bass, Secondary Elective (max 12 cr; prereq mus maj, △)
225431 2-4 cr

8509 Flute, Secondary Elective (max 12 cr; prereq mus maj, △)
925433 2-4 cr

8511 Oboe, Secondary Elective (max 12 cr; prereq mus maj, △)
525435 2-4 cr

8512 Clarinet, Secondary Elective (max 12 cr; prereq mus maj, △)
125437 2-4 cr

8513 Saxophone, Secondary Elective (max 12 cr; prereq mus maj, △)
825439 2-4 cr

8514 Bassoon, Secondary Elective (max 12 cr; prereq mus maj, △)
025441 2-4 cr

8515 French Horn, Secondary Elective (max 12 cr; prereq mus maj, △)
225445 2-4 cr

8516 Trumpet, Secondary Elective (max 12 cr; prereq mus maj, △)
625443 2-4 cr

8517 Trombone, Secondary Elective (max 12 cr; prereq mus maj, △)
125446 2-4 cr

8518 Baritone, Secondary Elective (max 12 cr; prereq mus maj, △)
925447 2-4 cr

8519 Tuba, Secondary Elective (max 12 cr; prereq mus maj, △)
525449 2-4 cr

8521 Percussion, Secondary Elective (max 12 cr; prereq mus maj, △)
225476 2-4 cr

8522 Harp, Secondary Elective (max 12 cr; prereq mus maj, △)
125480 2-4 cr

8523 Guitar, Secondary Elective (max 12 cr; prereq mus maj, △)
725482 2-4 cr

8601 Piano, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
525483 2-4 cr

8602 Harpsichord, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
825487 2-4 cr

8603 Organ, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
425489 2-4 cr

8604 Voice, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
425492 2-4 cr

8605 Violin, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
925495 2-4 cr

8606 Viola, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
525497 2-4 cr

8607 Cello, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
125499 2-4 cr

8608 Double Bass, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
725501 2-4 cr

8609 Flute, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
525502 2-4 cr

8611 Oboe, Principle Beyond Requirement (max 12 cr; prereq mus maj, △)
125504 2-4 cr

8612 Clarinet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
825506 2-4 cr

8613 Saxophone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
625507 2-4 cr

8614 Bassoon, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
325467 2-4 cr

8615 French Horn, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
125468 2-4 cr

8616 Trumpet, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
025469 2-4 cr

8617 Trombone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
728642 2-4 cr

8618 Baritone, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
325470 2-4 cr

8619 Tuba, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
125471 2-4 cr

8621 Percussion, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
025472 2-4 cr

8622 Harp, Principle Beyond Requirement (max 12 cr; prereq mus maj, △)
825473 2-4 cr

8623 Guitar, Principal Beyond Requirement (max 12 cr; prereq mus maj, △)
625474 2-4 cr

8701 Piano, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
925478 2-4 cr

8702 Harpsichord, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
125485 2-4 cr

8703 Organ, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
625491 2-4 cr

8704 Voice, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
225493 2-4 cr

8705 Violin, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
325498 2-4 cr

8706 Viola, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
925500 2-4 cr

8707 Cello, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
425508 2-4 cr

8708 Double Bass, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
225509 2-4 cr

8709 Flute, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
625510 2-4 cr

8711 Oboe, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
425511 2-4 cr

8712 Clarinet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
225512 2-4 cr

8713 Saxophone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
125513 2-4 cr

8714 Bassoon, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
925514 2-4 cr

8715 French Horn, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
725515 2-4 cr

8716 Trumpet, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
525516 2-4 cr

8717 Trombone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
125518 2-4 cr

8718 Baritone, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
325520 2-4 cr

8719 Tuba, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
025522 2-4 cr

8721 Percussion, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
825523 2-4 cr

8722 Harp, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
625524 2-4 cr

8723 Guitar, Major Beyond Requirement (max 12 cr; prereq mus maj, △)
425525 2-4 cr

MUSIC EDUCATION (MuEd)

Education

1201 Introduction to Music Education (A-N only)
022152 1115-1200 M, ScottH 4, Borg, 1 cr

1801 Introduction to Music Therapy (A-N only)
822153 0915-1000 F, 1411 University Ave SE, Nolteriek, 1 cr

R3011 Teaching Music in the Elementary School (prereq Mus 1001, elementary educ maj) (A-N only)
727135 –1 0915-1000 MWF, ScottH 4, Borg, 4 cr
327137 –2 1315-1400 MWF, ScottH 4, 4 cr

3302 Teaching Vocal and General Music Grades 5-12 (prereq music education maj or #) (A-N only)
622154 1015-1100 MTWThF, ScottH 4, Borg, 4 cr

3331 Practicum: Music Education (prereq music education maj or #) (A-N only)
222156 0815-1000 T, ScottH 4, Borg, Caswell, 2 cr

R3501 String Techniques II (prereq music education maj or #) (A-N only)
534071 1115-1200 MWF, WullH 330, Remenikova, 3 cr

R3505 Percussion Techniques (prereq music education maj) (A-N only)
922158 0815-0900 MTWTh, NMA 4, Dahlgren, 4 cr

3650 Student Teaching in Music (prereq #) (A-N only)
627144 –1 1415-1600 M, ScottH 2, Schultz, 3-12 cr
227146 –2 1615-1800 W, ScottH 2, Borg, Buckner, 3-12 cr

3802 Psychology of Music II (prereq 3801) (A-N only)
122160 1015-1100 MTWTh, ScottH 3, Turrentine, 4 cr

3806 Music Therapy Techniques III (3805-3806†; prereq 3805) (A-N only)
722162 1115-1300 T, 1115-1200 Th, 1411 University Ave SE, Nolteriek, 3 cr

3850 Field Experiences: Music Therapy (max 10 cr; prereq 3800, 3804) (S-N only)
127150 1215-1300 Th, 1411 University Ave SE, Nolteriek, 1-2 cr

3851 Internship: Music Therapy (prereq #) (S-N only)
322164 Nolteriek, 6 cr

3852 Internship: Music Therapy (prereq 3852) (S-N only)
022166 Nolteriek, 6 cr

5631 Techniques and Materials: Choral Conducting (§5421; prereq #) (A-N only)
334072 1615-1800 W, ScottH 103, Caswell, 3 cr

5655 New Dimensions in Music Education (A-N only)
236123 1615-1800 M, ScottH 103, Schultz, 3 cr

5970 Independent Study (prereq educ or grad stu) (A-N only)
822170 1-4 cr

8283 Seminar: Historical, Philosophical, and Psychological Issues (8281-8282-8283†; prereq 8282)
622168 1615-1800 T, ScottH 103, Caswell, 2 cr

8990 Research Problems (prereq knowledge of elementary statistics)
422172 1-12 cr



It's pretty hard not to like an Army ROTC Scholarship.

Just look at what it covers: full tuition, books, lab fees. Plus, it pays you up to $1,000 each school year it's in effect.

But what we think you'll like best about our scholarship is the commitment. Because it leads to a commission in the Army Nurse Corps (ANC) after graduation.

As an Army nurse, you'll belong to one of the largest, most comprehensive health care teams in the world. Training on state-of-the-art equipment. And using the latest techniques.

An Army nurse is an Army officer, too. So along with professional recognition, you'll also receive all the prestige, privileges and respect that go with being a leader in today's Army.

And don't forget, the Army Nurse Corps is part of a worldwide organization. Which means you'll have the opportunity to work in different cities around the country. And different countries around the world. Without losing seniority or benefits.

So make your commitment to nursing really pay off. Begin your future in the Army Nurse Corps. And that begins with Army ROTC.

For more information about scholarship opportunities,contact the Army ROTC Professor of Military Science on your campus. Or write: Army ROTC, Dept. KA, P.O. Box 9000, Clifton, N.J. 07015.

ARMY ROTC.
BE ALL YOU CAN BE.

NAVAL SCIENCE (Nav)

R0204 Professional Training in Naval Science (prereq #) (S-N only)
927165 0715-0900 W, Armory 116A, Conrad, 0 cr

R1102 Naval Ships Systems II (prereq #)
104443 –1 0915-1000 TTh, Armory 202, May, 2 cr
127172 –2 1215-1300 TTh, Armory 202, May, 2 cr

R1104 Science and Technology in the Design, Construction, and Use of Modern Weapons Systems (prereq 1103, #)
438744 –1 0915-1000 MW, Armory 202, Wilson, 2 cr
238745 –2 1115-1200 MW, Armory 202, Wilson, 2 cr

R3301 Advanced Naval Operations (prereq #)
404447 –1 1115-1200 TWTh, Armory 12A, Currie, 3 cr
804445 –2 1215-1300 TWTh, Armory 12A, Currie, 3 cr

R3304 Celestial and Electronic Navigation (prereq #) (A-N only)
★LECT 0915-1100 TTh, Armory 12A, Graening, 4 cr
938828 –1 LAB 0915-1100 M, Armory 12A, Graening

R3406 Principles of Naval Management III (prereq #) (A-N only)
427176 –1 1115-1200 TTh, Armory 205, Chauncey, 2 cr
127178 –2 1215-1300 TTh, Armory 205, Chauncey, 2 cr

R3454 Amphibious Warfare III (prereq 3453) (A-N only)
833461 0915-1000 MW, Armory 205, Conrad, 2 cr

NEUROLOGY (Neur)
Medical School

5120 Selected Problems in Neurology (prereq regis med)
123387 Klassen, ar cr

5122 Pediatric Neurology: Health Care Psychology Interns (prereq #)
923388 Greenberg, ar cr

5510 Externship in Clinical Neurology (prereq regis med)
723389 Klassen, ar cr

5541 Pediatric Neurology: Neurochemistry (prereq regis med)
123390 Swaiman, ar cr

5542 Pediatric Neurology (prereq regis med)
923391 Swaiman, ar cr

5544 Clinical Electroencephalography (prereq regis med)
723392 Torres, ar cr

5545 Electromyography (prereq regis med)
323394 Kennedy, ar cr

5570 Immunology-Veterans Administration Hospital (prereq regis med)
123395 Ansari, ar cr

8200 Clinical Neurology
823397 Klassen, ar cr

8201 Clinical Pediatric Neurology
423399 Swaiman, ar cr

8202 Research in Neurology
123400 Klassen, ar cr

8203 Applied Electroencephalography
023401 Torres, ar cr

8204 Applied Electromyography
823402 Kennedy, ar cr

8205 Applied Neuropathology
623403 Sung, ar cr

8233 Neurological Clinical Pathological Conference
423404 Klassen, 1 cr

8234 Neuropsychology Conference
223405 Meier, 1 cr

8236 Research in Neuropathology
123406 Sung, ar cr

8704 Survey of Neuropathology (§Path 8702)
923407 Sung, 1 cr

8705 Neurological-Neurosurgical Conference (§Surg 8318, Rad 0124)
723408 1 cr

NEUROSURGERY (NSu)
Medical School

5500 Externship at the University Hospitals (prereq regis med)
923410 Chou, others, 4.5-9 cr

5510 Externship at Veterans Hospital (prereq regis med)
523412 Maxwell, 4.5-9 cr

5511 Externship at Hennepin County Medical Center (prereq regis med)
123414 Rockswold, 4.5-9 cr

5512 Externship at St. Paul Ramsey Hospital (prereq regis med)
623417 Thienprasit, 4.5-9 cr

5520 Neurosurgical Investigation (prereq regis med)
623420 Bloedel, 9 cr

5530 Neuropsychology
223422 Meier, 3 cr

5550 Neurophysiological Literature Seminar (prereq medical school course in physiology, #)
323427 Bloedel, 1 cr

8305 Neurosurgical Diagnosis
123428 Chou, others, 4 cr

8308 Neurosurgical Problems and Management
023429 Chou, others, 4 cr

8311 Operative Neurosurgery
123431 Chou, others, 4 cr

8316 Neurosurgical Research
023432 Bloedel, 6 cr

8318 Neuroradiological Conference
823433 1300-1400 F, Mayo C231, Chou, others, 1 cr (Todd Amph)

8320 Neurosurgical Conference
623434 0800-1100 S, Mayo B507, Chou, Bloedel, others, 2 cr

8324 Readings in Neurobiology (prereq 8104, consent of Medical School)
216860 Bloedel, 1 cr

8330 Neurosurgery Literature Seminar
423435 2000-2200 Th, Mayo B507, Chou, others, 2 cr

NORWEGIAN (Nor)
Scandinavian Languages
Liberal Arts

R1103 Beginning Norwegian (prereq 1102)
727216 –1 0815-0900 MTWThF, FolH 204, 5 cr
327218 –2 1315-1400 MTWThF, Arch 20, 5 cr

3101 Advanced Norwegian (prereq 1105)
123123 1015-1100 MWF, FolH 205, Mishler, 4 cr

3670 Readings in Norwegian Literary Texts (max 28 cr; prereq 3101)
023124 0915-1000 MWF, FolH 52, Simpson, 4 cr

NURSING, SCHOOL OF (Nurs)

R5204 Helping Relationships I (prereq 5200 or 5201, psychology, growth and development or ¶)
027223 –1 1015-1200 TTh, HSUnitF, 2 cr
627225 –2 1015-1200 TTh, HSUnitF, 2 cr
227227 –3 1215-1400 TTh, HSUnitF, 2 cr
927229 –4 1215-1400 TTh, HSUnitF, 2 cr
534670 –5 1215-1400 TTh, HSUnitF, 2 cr

R5205 Tools I (prereq admission to nurs, 5200 or 5201, microbiology, physiology or ¶)
210380 –1 LAB 1015-1200 T, HSUnitF 4120, 1 cr
910382 –2 LAB 1215-1400 T, HSUnitF 4120, 1 cr
510384 –3 LAB 1415-1600 T, HSUnitF 4120, 1 cr

R5206 Tools I (prereq 5205, anatomy or ¶)
110386 –1 LAB 1215-1400 T, HSUnitF 4120, 1 cr
810388 –2 LAB 1415-1600 T, HSUnitF 4120, 1 cr
010390 –3 LAB 1415-1600 Th, HSUnitF 4120, 1 cr

R5207 Synthesis (prereq 5202, 5203 or 5200, 5204, growth and development, 5206 or ¶)
625751 –1 CLN 0815-1130 WF, 2 cr (1st 5 weeks)
425752 –2 CLN 0815-1130 WF, 2 cr (1st 5 weeks)
225753 –3 CLN 0815-1130 WF, 2 cr (2nd 5 weeks)
125754 –4 CLN 0815-1130 WF, 2 cr (2nd 5 weeks)
925755 –5 CLN 0815-1130 WF, 2 cr (1st 5 weeks)
528917 –6 CLN 1315-1630 WF, 2 cr (2nd 5 weeks)

R5208 Small Group Analysis, Nursing Practice
★LECT 0915-1000 T, HSUnitF 2110, 2140
103088 –1 LAB 1015-1200 TTh, MoosT 2146, 3 cr
103096 –2 LAB 1015-1200 TTh, MoosT 2680, 3 cr
003102 –3 LAB 1015-1200 TTh, MoosT 2672, 3 cr
203106 –4 LAB 1015-1200 TTh, MoosT 2639, 3 cr
103110 –5 LAB 1015-1200 TTh, MoosT 2629, 3 cr
303114 –6 LAB 1015-1200 TTh, MoosT 2585, 3 cr
003116 –7 LAB 1015-1200 TTh, MoosT 2113, 3 cr
803117 –8 LAB 1015-1200 TTh, MoosT 2188, 3 cr

R5209 Clinical Application of Nursing Tools: Level I (prereq 5202, 5203 or 5200, 5204, 5205, 5206 or ¶5206)
328918 –1 CLN 1 cr (1st 5 weeks)
128919 –2 CLN 1 cr (1st 5 weeks)
528920 –3 CLN 1 cr (2nd 5 weeks)
328921 –4 CLN 1 cr (2nd 5 weeks)

R5405 Tools II (prereq 5404, LaMP 5171 or ¶)
210394 –1 LAB 0815-1000 M, HSUnitF 4120, 1 cr
910396 –2 LAB 1015-1200 M, HSUnitF 4120, 1 cr
510398 –3 LAB 1215-1400 W, HSUnitF 4120, 1 cr
110400 –4 LAB 1215-1400 F, HSUnitF 4120, 1 cr
337098 –5 LAB 1 cr

5407 Systematic Process II (prereq 5207)
137099 1015-1200 F, 2 cr

R5611 Synthesis Incorporating Concepts of Chronicity (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1500 T, MoosT 2530, 4 cr
916862 –1 CLN
716863 –2 CLN
316865 –3 CLN
116866 –4 CLN
816868 –5 CLN
616869 –6 CLN
816871 –7 CLN
616872 –8 CLN
216874 –9 CLN

R5612 Synthesis Incorporating Concepts of Stress and Crisis (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1500 T, MoosT 2650, 4 cr
916876 –1 CLN
716877 –2 CLN
316879 –3 CLN
516881 –4 CLN
116883 –5 CLN
816885 –6 CLN
616886 –7 CLN
216888 –8 CLN

R5613 Synthesis Incorporating Concepts of Loss (prereq 5407, 5408, 5409, 5404, 5405 or ¶5405, abnormal psy, Phcl 1009, LaMP 5171 or ¶LaMP)
★LECT 1315-1500 Th, MoosT 2530, 4 cr
116942 –1 CLN
716944 –2 CLN
316946 –3 CLN
016948 –4 CLN
116950 –5 CLN
816952 –6 CLN
416954 –7 CLN
116956 –8 CLN
716958 –9 CLN

R5614 Synthesis Incorporating Concepts of Health (prereq 5404, 5405 or ¶5405, 5407, 5408, 5409, abnormal psy, Phcl 1009, LaMP 5171 or ¶5171)
★LECT 1315-1500 Th, MoosT 2650, 3 cr
916960 –1 CLN
716961 –2 CLN
316963 –3 CLN
016965 –4 CLN
816966 –5 CLN
416968 –6 CLN

R5615 Synthesis in Complex Nursing Situations I (prereq 5611, 5612, 5613, 5614, FScN 3602)
★LECT 1315-1500 W, 5 cr
834674 –1 CLN

R5616 Synthesis in Complex Nursing Situations II (prereq 5611, 5612, 5613, 5614, FScN 3602)
★LECT 5 cr
916991 –1 CLN

R5704 Human Sexuality: Significance for Nursing (prereq 2 level II synthesis courses...S.A.R. weekend rec)
934682 1015-1200 F, MoosT 2571, 3 cr

5714 Nursing History and Physical Assessment (prereq sr, 2 level II synthesis courses, grad student in nursing or RN, #)
324142 3 cr

R5722 An Introduction to The Nurse as a Leader for Change Through Participation in the Legislative Process (prereq any two of the following: 5611, 5612, 5613, 5614 or # or grad)
734683 1615-1800 W, 5 cr

R5725 Legal Parameters of Nursing Practice (prereq any two of the following: 5611, 5612, 5613, 5614, or RN with abnormal psych, 5409)
534684 1015-1100 M, 2 cr

5799 Self-Directed Study as a Means of Accomplishing Nursing Electives (prereq any two of the following: 5611, 5612, 5613, 5614)
905649 ar cr

R5801 Gerontological Nursing Seminar (prereq #)
513589 1415-1600 W, MoosT 2146, Taylor, 2 cr

R5816 Leadership/Management (prereq 5611, 5612, 5613, 5614, 5615 or 5616, FScN 3602)
★LECT 1015-1200 M, HSUnitF 2120, 2130, 6 cr
916974 –1 CLN
716975 –2 CLN
316977 –3 CLN
116978 –4 CLN
316980 –5 CLN
139394 –6 CLN

5901 Financial Management of Nursing Services (prereq #)
334671 1615-2000 M, Edwardson, 3 cr

R5999 Clinical Study (prereq any two of the following: 5611, 5612, 5613, 5614)
727314 0815-1000 M, HSUnitF 2120, 2130, 1 cr

8001 Special Educational Experiences in Nursing (prereq △)
224151 ar cr

8009 Special Topics (prereq #)
924153 ar cr

R8010 Structure of the Discipline of Nursing (prereq △)
027318 1215-1500 TTh, MoosT 2571, Sodergren, 3 cr (1st 5 weeks)

R8011 Moral and Ethical Positions in Nursing (prereq △)
127320 1615-1900 W, Weise, 3 cr

R8012 Conceptual Framework for Nursing Practice (prereq 8010)
227325 –1 1215-1500 TTh, MoosT 2571, Sodergren, 3 cr (2nd 5 weeks)
038769 –2 0915-1200 W, Egan, 3 cr

R8014 Research in Nursing (prereq inferential statistics, △)
127326 –1 1615-1900 T, PWB 5206, Feldman, 3 cr
727328 –2 King, 3 cr (Rochester)

R8030 Nursing Intervention Models (8 cr must be completed before any cr is given; prereq 8011, 8012 or ¶8011, #)
527329 –1 0915-1100 W, 1215-1400 W, MoosT 2113, Snyder, 8 cr (cln ar) (Med-Surg)
927330 –2 1315-1500 TTh, 1615-1800 Th, Taylor, 8 cr (cln ar) (CCFN)

8050 Problems in Nursing (prereq #)
324156 1-9 cr

8051 Special Topics in Nursing Research
024158 1-9 cr

8060 Advanced Clinical Nursing (prereq △, #)
824159 3-9 cr

8063 Nursing Consultation
024161 3 cr

8314 Nurse-Midwifery Management During Childbearing (prereq #)
205650 0915-1300 W, HSUnitF 2110, Dineen, 6-10 cr (cln ar)

R8411 Knowledge Development Underlying Nursing Therapy (prereq 8030, advanced physiology)
513592 1615-1800 W, HSUnitF 2163, Sime, 4-6 cr (cln ar)

8421 Psychiatric-Mental Health Nursing: Group Dynamics and Leadership Skills (prereq 8030, Psych-Mental health section, a course in psychopathology)
824162 1015-1200 Th, HSUnitF 2163, Kjervik, 3 cr (cln ar)

8425 Psychiatric-Mental Health Nursing: Role Development (prereq 8422)
424164 0915-1100 T, HSUnitF 2163, Mansfield, 6 cr (cln ar)

8435 Childbearing-Childrearing Family Nursing II (prereq 8431 or #)
124166 0915-1800 W, Rode, 6-9 cr (cln ar)

8451 Teaching-Learning Process in Nursing (prereq 8030, ¶course in learning theory, #)
318180 1315-1600 TTh, MoosT 2154, Gustafson, 4 cr (lab ar)

R8455 Nurse Educator in Higher Education (prereq 8451, ¶course in educational measurement, #)
103138 1015-1200 TTh, PWB 5258, Weise, 6 cr (cln ar)

8509 Special Topics: Nursing Education (prereq #)
724168 ar cr

8601 Clinical Nursing Leadership I (prereq 8600)
324173 6 cr (cln ar)

8609 Special Topics in Nursing Supervision (prereq #)
924170 ar cr

NUTRITION (Nutr)
Agriculture & Home Econ

8745 Seminar (prereq #)
621716 1600-1645 T, FScN 15, Phinney, 1 cr

8990 Graduate Research (prereq #)
421717 2-5 cr

OBSTETRICS AND GYNECOLOGY (Obst)
Medical School

5500 Externship in Obstetrics and Gynecology (prereq regis med)
223436 Foreman, others, 9 cr

5520 Obstetrics and Gynecology Externship in Clinical Practice (prereq regis med)
123437 Foreman, others, 4.5 cr

5540 Advanced Externship in Obstetrics and Gynecology (prereq 5500)
923438 Foreman, others, ar cr

5560 Research in Reproduction (prereq regis med)
723439 Foreman, others, ar cr

5575 Gynecological Pathology and Diagnostic Cytology (prereq 5500)
123440 Okagaki, Brooker, others, 9 cr

5590 Preceptorship in Obstetrics and Gynecology (prereq 5500)
923441 Foreman, others, 9 cr

8201 Advanced Obstetrics and Gynecology I
723442 Prem, others, ar cr

8202 Advanced Obstetrics and Gynecology I (prereq 8201)
523443 Prem, others, ar cr

8203 Advanced Obstetrics and Gynecology I (prereq 8202)
323444 Prem, others, ar cr

8204 Advanced Obstetrics and Gynecology I (prereq 8203)
123445 Prem, others, ar cr

8205 Advanced Obstetrics and Gynecology II
023446 Prem, others, ar cr

8206 Advanced Obstetrics and Gynecology II (prereq 8205)
823447 Prem, others, ar cr

8207 Advanced Obstetrics, Gynecology II (prereq 8206)
623448 Prem, others, ar cr

8208 Advanced Obstetrics, Gynecology II (prereq 8207)
723523 Prem, others, ar cr

8209 Advanced Obstetrics and Gynecology III
323525 Prem, others, ar cr

8210 Advanced Obstetrics and Gynecology III (prereq 8209)
023527 Prem, others, ar cr

8211 Advanced Obstetrics and Gynecology III (prereq 8210)
823528 Prem, others, ar cr

8212 Advanced Obstetrics and Gynecology III (prereq 8211)
823531 Prem, others, ar cr

8213 Advanced Obstetrics and Gynecology IV (prereq 8212)
423533 Prem, others, ar cr

8214 Advanced Obstetrics and Gynecology (prereq 8213)
123535 Prem, others, ar cr

8215 Advanced Obstetrics and Gynecology IV (prereq 8214)
923536 Prem, others, ar cr

8216 Advanced Obstetrics and Gynecology IV (prereq 8215)
723537 Prem, others, ar cr

8217 Seminar: Obstetrics and Gynecology IV (prereq 8216)
523538 Prem, others, ar cr

8218 Seminar: Obstetrics and Gynecology (prereq 8217)
323539 Prem, others, ar cr

8219 Seminar: Obstetrics and Gynecology (prereq 8218)
523541 Prem, others, ar cr

8221 Seminar: Obstetrics and Gynecology (prereq 8219)
123543 Prem, others, ar cr

8222 Gynecological Oncology (prereq 8221)
023544 Prem, ar cr

8223 Gynecological Oncology (prereq 8222)
823545 Prem, others, ar cr

8224 Gynecological Endocrinology I (prereq 8223)
623546 Prem, others, ar cr

8225 Gynecological Endocrinology II (prereq 8224)
123549 Prem, others, ar cr

8226 Obstetrical Physiology and Anesthesiology (prereq 8225)
923553 Prem, others, ar cr

8227 Preceptorship in Clinical Practice (prereq 8226)
523555 Prem, others, ar cr

8228 Selected Aspects of Radiation Therapy (prereq 8227)
123557 Prem, others, ar cr

8229 Selected Aspects of Medical Oncology (prereq 8228)
823559 Prem, others, ar cr

8230 Research in Reproduction (prereq 8229)
023561 ar cr

OPERATIONS MANAGEMENT (OM)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for OM courses.

R3000 Introduction to Operations Management (A-N only)
536709 –1 1215-1400 MW, AndH 210, Treleven, 4 cr
936710 –2 1215-1400 TTh, AndH 270, Daniels, 4 cr
736711 –3 1415-1600 TTh, AndH 270, Daniels, 4 cr

R3041 Project Management (prereq 3000 or #) (A-N only)
239488 1115-1230 TTh, BlegH 120, 4 cr

R8058 Operations Strategy (§5058; prereq 8056, 8057, grad mgmt/IR student or grad SMgt approval) (A-N only)
525760 1730-2050 T, Law 35, Schroeder, 4 cr

8990 Readings in Operations Management (prereq consent of adviser, #, 2nd yr grad stu, requisite intro courses, grad SMgt approval) (A-N only)
323329 ar cr

8995 Graduate Research in Operations Management (prereq consent of adviser, #, 2nd yr grad stu, requisite intro courses, grad SMgt approval) (A-N only)
723330 ar cr

OPHTHALMOLOGY (Oph)
Medical School

5100 Introduction to Anatomy, Histology, and Embryology (prereq physician or vet med student)
823576 0715-0830 Th, PWB 9335, Cameron, 1 cr

5180 Externship (prereq regis med)
333262 ar cr

5190 Research Problems (prereq regis med)
133263 ar cr

8101 Clinical Opthalmology
623577 0800-1700 MTWThF, PWB 9100, Doughman, others, 8 cr (Eye Clinic)

8106 Strabismus Management (prereq grad physician or grad in veterinary science)
816675 0800-0900 M, PWB 9339, Letson, 1 cr

8116 Glaucoma, Lens and Anterior Segment Trauma (prereq grad physican or grad in veterinary science)
033264 1500-1600 F, PWB 9339, Pederson, 3 cr

8119 Clinical Pathological Correlations in Ophthalmology (prereq grad physician or grad in veterinary sci)
516671 1600-1800 F, PWB 9339, Cameron, 1 cr

8120 Scope of Ophthalmic Pathology (prereq grad physician or grad in veterinary science)
116673 1400-1500 F, PWB 9339, Cameron, 2 cr

8131 Practical Ocular Surgery
623580 0800-1200 MTWThF, Doughman, others, 3 cr (Mayo OR)

8142 Ophthalmic Pathology Laboratory
523586 1330-1530 T, PWB 9335, Cameron, 2 cr

8152 Ophthalmology Laboratory
023589 15 cr

8155 Special Topics in Ophthalmology (prereq #)
323590 1-3 cr

ORAL AND MAXILLOFACIAL SURGERY (OSur)
Dentistry

5257 Ambulatory General Anesthesia
522003 Waite, others, 1 cr

5260 Oral Surgery Clinic
818359 10 cr

5265 Oral Surgery Colloquia
018361 5 cr

5270 Oral and Maxillofacial Radiology Review
538718 Waite, 1 cr

5275 Oral Pathology Review
338719 Waite, 1 cr

8250 Advanced Oral Surgery
322004 Waite, others, ar cr

8251 Seminar: Oral Surgery (max 1 cr)
122005 Waite, others, ar cr

8252 Research in Oral Surgery
022006 Eldeeb, others, ar cr

8253 Problems in Oral Surgery
822007 Waite, others, ar cr

8255 General Surgery
622008 Thompson, others, ar cr

8258 Anesthesia II Seminar
422009 Waite, others, 1 cr

ORAL BIOLOGY (OBio)
Dentistry

8001 Research in Oral Biology
821990 Shapiro, ar cr

8002 Tutorial in Oral Biology
621991 Shapiro, ar cr

8023 Topics in Oral Biology (prereq #)
604608 Shapiro, 1-3 cr

8024 Topics in Oral Biology (prereq #)
405453 Shapiro, 1-3 cr

8030 Seminar
421992 Smith, 1 cr

ORAL PATHOLOGY (OPat)
Dentistry

5017 Oral Pathology Clinic
221993 Sedano, ar cr

8001 Research in Oral Pathology
121994 Gorlin, Vickers, ar cr

8003 Oral Pathology (prereq 5251, 5252)
921995 Gorlin, Vickers, ar cr

8004 Histopathology
721996 Vickers, 1 cr

8006 Current Literature Review
729502 Gorlin, 1 cr

8008 Clinical Oral Pathology
521997 Gorlin, Vickers, 1 cr

8010 Current Literature Review
529503 Gorlin, 1 cr

8011 Surgical Oral Pathology
321998 Vickers, ar cr

8015 Methods of Genetic Counseling and Treatment
121999 Cervenka, 1 cr

8302 Seminar: Human Developmental Genetics
122000 Witkop, ar cr

ORAL RADIOLOGY (ORad)
Dentistry

8100 Oral Radiology Seminar (max 3 cr)
412421 Kuba, ar cr

8900 Oral Radiology Research (prereq #)
722002 Kuba, ar cr

ORTHODONTICS (Otho)
Dentistry

5003 Clinical Orthodontics
622011 Speidel, others, ar cr

8001 Research in Orthodontics
222013 Speidel, others, ar cr

8202 Growth and Development
328885 Speidel, others, ar cr

8206 Orthodontic Diagnosis and Treatment Planning
122014 Speidel, others, ar cr

8210 Orthodontic Seminar
722016 Speidel, others, ar cr

8218 Topic in Orthodontics
322018 Speidel, others, ar cr

ORTHOPAEDIC SURGERY (OrSu)
Medical School

5180 Orthopaedics I (prereq regis med)
423595 Thompson, others, ar cr

5185 Orthopaedics II: Externship in Orthopaedic Surgery (prereq regis med)
223596 Thompson, others, ar cr

5186 Research Problems in Orthopaedic Surgery (prereq regis med)
123597 Thompson, others, ar cr

5187 Externship in Orthopaedic Surgery and Fractures-St. Paul Ramsey Hopsital (prereq regis med)
923598 Comfort, ar cr

5188 Externship in Orthopaedic Surgery and Fractures-Gillette Children's Hospital (prereq regis med)
423600 Vanden Brink, ar cr

5189 Externship in Orthopaedic Surgery and Fractures-St. Luke's Hospital, Duluth (prereq regis med)
123602 ar cr

5190 Externship in Orthopaedic Surgery and Fractures-Veterans Hospital (prereq regis med)
723604 Premer, 4.5-9 cr

5191 Orthopaedic Externship at Hennepin County Medical Center (prereq regis med)
323606 Gustilo, ar cr

8401 Orthopaedic Conference
023608 Thompson, others, 3 cr

8403 Fractures
823612 Gustilo, 5 cr

8404 Fractures
923617 Comfort, 5 cr

8405 Orthopaedic Diagnosis
523619 Thompson, others, 3 cr

8407 Pediatric Orthopaedics
923620 Vanden Brink, 5 cr

8408 Orthopaedic Problems and Management
523622 Thompson, others, 5 cr

8409 Orthopaedic Problems and Management
123624 Winter, 5 cr

8410 Orthopaedic Pathology
023625 Thompson, others, 2 cr

8411 Orthopaedic Operative Surgery
423628 Thompson, others, 5 cr

8412 Orthopaedic Anatomy
623630 House, 2 cr

8416 Orthopaedic Research
223632 Bradford, 5 cr

OTOLARYNGOLOGY (Otol)
Medical School

5500 General ENT Elective
423645 4.5 cr

5501 Acting Internship-ENT Elective
723649 9 cr

5503 Research Basic Science (prereq regis med student)
923651 ar cr

8220 Research
323654 Paparella, 18 cr

8230 Clinical Otorhinolaryngology
623658 Adams, Duvall, others, 6 cr

8231 Surgery of Ear, Nose, and Throat
423659 Paparella, Duvall, 4 cr

8232 Maxillofacial Surgery
823660 Hilger, Paparella, 1 cr

8233 Plastic and Reconstructive Surgery of the Head and Neck
623661 Adams, Duvall, 1 cr

8234 Anatomy of the Head and Neck and Temporal Bone Dissection
423662 Jung, 2 cr

8235 Roentgenology of the Head and Neck
223663 Adams, 2 cr

8236 Pharmacology in ENT
123664 2 cr

8237 Endoscopy
923665 Duvall, 2 cr

8238 Pathology of the Ear, Nose, and Throat
723666 Duvall, Paparella, 2 cr

8239 Otoneurology
523667 Paparella, Duvall, 2 cr

8240 Allergy
323668 Berlinger, 2 cr

8241 Tumor Clinic
123669 Adams, Duvall, 1 cr

8242 Audiology of Speech Pathology
523670 Lassman, Harford, 2 cr

8243 Introduction to Research Methodology
323671 Paparella, Ward, 2 cr

8244 Seminar: Current Literature
123672 Paparella, Adams, others, 1 cr

8245 Master's Thesis Research
023673 ar cr

8246 Ph.D. Thesis Research
823674 ar cr

8248 Readings in Auditory Physiology (prereq #)
623675 1-3 cr

PATHOBIOLOGY (Path)
Laboratory Medicine And Pathology
Medical School

5101 General Pathology (prereq pathobiology grad or #)
★LECT 1015-1100 MW, 1315-1500 W, PWB 2470
818068 –1 LAB 1015-1200 W, 1415-1600 W, MoosT 3331, ar cr
018070 –2 LAB 1015-1200 W, 1415-1600 W, MoosT 3331, ar cr

5104 Autopsies (prereq regis grad med or #)
123638 Burke, ar cr

5109 Seminar: Selected Topics in Pathobiology (prereq #)
117167 Benson, 1 cr

5110 Seminar: Pathology (prereq #)
023656 1200-1300 M, Mayo C231, O'Leary, 1 cr (Todd Amph)

5113 Surgical Pathology (prereq regis grad med or #)
023639 Dehner, Rosai, ar cr

5128 Experimental Immunopathology (prereq regis med or grad med)
323640 Kersey, 4 cr

5140 Seminar: Experimental Chronobiology
123641 Halberg, 1 cr

5141 Problems in Experimental and Clinical Chronobiology
023642 Halberg, ar cr

5169 Research in Human Genetics (prereq #)
123650 Eaton, ar cr

5170 Advanced Problems: Medical Genetics (prereq #)
723652 Eaton, ar cr

5179 Seminar: Chemistry (prereq #)
023737 Steffes, 1 cr

5180 Advanced Chemistry (prereq #)
823741 Benson, ar cr

5417 Mathematical Models in Pathobiology III: Information Theory, Genetics and Population Models (prereq knowledge of biomedical computing, calculus, pathobiology)
034379 1415-1530 TTh, MoosT 2690, Ackerman, 3 cr

5865 Departmental Seminar (prereq #)
423743 0800-0900 W, Mayo D230, Sibley, 1 cr (Eustis Amph)

8110 Pathobiology III (prereq 8108, 8109)
723750 0915-1000 MWF, JacH 3145, Ahmed, 3 cr

8200 Advanced Problems (prereq #)
523751 ar cr

8201 Research
323752 ar cr

8207 Research in Experimental and Clinical Chronobiology
123753 Halberg, ar cr

8237 Laboratory in Optical Transforms of Electron Micrographs (prereq Anat 8135, 8136, 8137 or equiv, plus #...BioC 5523 or Chem 5574 or equiv desirable)
106332 Runge, ar cr

8272 Immunobiology (prereq #)
334377 Azar, 2 cr

8273 Advanced Immunology (prereq #)
023754 Azar, 6 cr

8274 Molecular Aspects of Immunology (prereq #)
134378 0815-1100 Th, JacH 3145, Dalmasso, Clark, 3 cr

8702 Survey of Neuropathology (§Neur 8704)
506075 Sung, Mastri, 1 cr

PEDIATRIC DENTISTRY (Pedo)
Dentistry

5414 Advanced Clinical Pedodontics (prereq #)
522020 Till, ar cr

8001 Research (prereq #)
122022 Till, ar cr

8290 Hospital Pedodontics I (prereq #)
822024 Till, ar cr

8291 Hospital Pedodontics II (prereq #)
422026 Till, ar cr

8292 Pedodontic Literature (prereq #)
122028 Feigal, ar cr

8294 Pedodontic Diagnosis and Treatment Planning (prereq #)
222030 Feigal, ar cr

8295 Independent Pedodontic Study (prereq #)
922032 Till, ar cr

PEDIATRICS (Ped)
Medical School

5501 Pediatric Clerkship
423676 Satran, ar cr

5503 Pediatric Clerkship with Outstate Clinicians
223677 Satran, ar cr

5504 Clinical Aspects of Pediatric Psychology (prereq #)
116679 Chang, ar cr

5512 Pediatric Acting Internship
123678 Satran, 9-18 cr

5515 Child Development at St. Paul Ramsey Hospital
923679 Davis, ar cr

5520 Pediatric Out-Patient
223680 Satran, ar cr

5522 Ambulatory Pediatrics at Hennepin County Medical Center (prereq 5501)
123681 Tobin, 9 cr

5523 Outpatient Externship at Community University Health Care Center
923682 Smelker, ar cr

5532 Clinical Allergy and Immunology at University Hospitals
723683 Page, ar cr

5534 Pediatric Cardiology at the University Hospital
523684 Moller, ar cr

5535 Infectious Diseases
323685 Ferrieri, ar cr

5536 Pediatric Hematology/Oncology at the University Hospitals
123686 Krivit, ar cr

5537 Pediatric Endocrinology and Metabolism at the University
023687 Seelig, ar cr

5538 Pediatric Gastroenterology
823688 Sharp, ar cr

5539 Neonatal Medicine Externship
623689 Boros, ar cr

5540 Pediatric Neurology
023690 Swaiman, ar cr

5542 Clinical Pharmacology at the University
823691 Mirkin, ar cr

5543 Nephrology at the University
623692 Michael, Vernier, ar cr

5544 Pediatric Pulmonary Disease
423693 Warwick, ar cr

5545 Diagnosis, Evaluation, and Care of Adults and Children with Cancer
223694 Ramsey, ar cr

5547 Topics in Maternal and Child Care (prereq 5500, 5501 or 5502, #)
123695 tenBensel, ar cr

5548 Pediatric Genetics at the University
923696 Pierpont, 9 cr

5553 Adolescent Medicine
512359 Blum, 9 cr

5555 Neonatal Clerkship (prereq 5501 or 5512)
713719 Opitz, ar cr

5556 Clinical Pediatrics Clerkship (prereq 5501 or 5512)
113720 Blau, ar cr

8204 Residency in Pediatrics (prereq #)
723697 ar cr

8206 Pediatric Special Interest (prereq #)
416677 ar cr

PERIODONTICS (Pero)
Dentistry

8000 Advanced Clinical Periodontology
722033 Pihlstrom, 5 cr

8100 Research in Periodontology
522034 Herzberg, Pihlstrom, ar cr

8200 Lectures
122036 Pihlstrom, Schaffer, 1 cr

8250 Supporting Structures of the Teeth
836697 Pihlstrom, Schaffer, ar cr

8300 Seminar: Periodontology
822038 Pihlstrom, 2 cr

8450 Bacteriology and Immunology of Periodontal Diseases
512426 Wolff, 1 cr

PERSIAN (Per)
South And Southwest Asian Studies
Liberal Arts

1103 Beginning Persian (prereq 1102)
333293 1315-1500 MW, 1315-1400 F, KlaCt 158, Tavakoli, 5 cr

3013 Intermediate Persian (prereq 3012)
133294 1615-1800 MW, FolH 108, Alvi, 4 cr

5970 Directed Readings (prereq 3013, #, △, CLA approval)
723179 ar cr

PERSONAL ORIENTATION (PO)
Liberal Arts

R**1001 How to Study** (cannot be applied toward any CLA degree)
527475 –1 0915-1000 MWF, JonesH 2, 2 cr
127477 –2 1115-1200 MWF, JonesH 2, 2 cr
827479 –3 1215-1300 MWF, JonesH 2, 2 cr
027481 –4 1315-1400 MWF, JonesH 2, 2 cr
827482 –5 0800-0845 MWF, CofH 120, 2 cr (StP)

PHARMACEUTICS (Phm)
Pharmacy

8100 Seminar: Pharmaceutics
924265 Rippie, 1 cr

8101 Readings in Pharmaceutics (prereq #)
724266 Rippie, 1 cr

8200 Research Problems (prereq #)
912293 ar cr

8421 Pharmacokinetics (prereq 5680, Math 1231 or #)
438758 Zimmerman, 3 cr

PHARMACOGNOSY (Phcg)
Pharmacy

5810 Medicinal Plants (prereq #)
805451 Staba, 2 cr

5830 Introductory Pharmacognosy (prereq MicB 3103, Phar 5440 or #)
524267 Staba, 2 cr

5880 Pharmaceutical Immunology (prereq #)
104547 1315-1500 M, HSUnitF 2110, Shier, 2 cr

5899 Special Problems in Pharmacognosy (prereq #)
324268 ar cr

8400 Selected Topics
124269 3 cr

8500 Pharmacognosy Seminar
439277 1 cr

8600 Readings in Pharmacognosy (prereq #)
138746 1 cr

8900 Research in Pharmacognosy (prereq #)
324271 ar cr

PHARMACOLOGY (Phcl)
Medical School

5106 Dental Therapeutics (prereq 5104)
523698 Holte, 1 cr

5109 Problems in Pharmacology (prereq #)
323699 Shideman, ar cr

8203 Research in Pharmacology (prereq #)
123700 ar cr

8204 Seminar: Selected Topics in Pharmacology (max 3 cr; prereq 5110 or #)
923701 1215-1300 W, MlrdH 3257, Sladek, Wilcox, 1 cr

8205 Problems in Investigative Pharmacology (prereq MdBc 5100 or equiv, PhsI 8111 or ¶ or equiv or #) (A-N only)
634191 O'Dea, 3 cr

8207 Seminar: Psychopharmacology (max 3 cr; prereq #)
723702 Sparber, 1 cr

8214 Toxicology (prereq MdBc 5101 or #)
434192 3 cr

PHARMACY (Phar)
Pharmacy

5007 Biology of Aging (§Dent 5070, HSU 5031)
739477 Gale, 2 cr

5008 Humanities and Aging (§HSU 5030)
539478 1615-1800 W, JacH 2135, Galle, 2 cr

5210 Terminology of Health Sciences
224246 Bast, 2 cr

5232 Drugs and Prison Health
124247 Kingston, 2 cr

5237 Introduction to Computers (A-N only)
516931 1415-1500 F, PWB 2470, Anderson, 1 cr

5245 Financial Management (A-N only)
606343 0815-0900 MWF, OwreH 2210, Hadsall, 3 cr

5255 Social and Psychological Aspects of Death and Dying (prereq 5201 or #)
724249 1800-1930 T, HSUnitF, Benson, 2 cr

5280 Contemporary Pharmacy (prereq 2nd or 3rd yr pharmacy student, #)
124250 Wertheimer, 2 cr

5286 Drugs and Society (prereq 5285 or #)
924251 Gallo, 1-3 cr

5290 Specialty Clerkships
724252 Cloyd, ar cr

5295 Clinical Research Methods and Biostatistics (A-N only)
629511 0915-1000 MW, 1315-1400 F, MMA 125, Anderson, 3 cr

5306 Clinical Toxicology (prereq sr pharmacy student or PharmD candidate or #)
634871 1515-1700 T, MoosT 2650, 2 cr

5307 Clinical Conferences (prereq PharmD candidate) (S-N only)
434872 1615-1800 W, OwreH 2210, Bast, 2 cr

5320 Therapeutic Agents I (prereq 5440 or #) (A-N only)
524253 0915-1000 MWF, MoosT 2620, Holmes, 3 cr

5350 Therapeutic Agents IV (prereq 5330 or #) (A-N only)
324254 1115-1200 MWF, MoosT 2530, Staba, Vince, 3 cr

5360 Pharmaceutical Microbiology and Immunology (prereq VPB 3103) (A-N only)
206345 1015-1100 MW, 0915-1100 F, MMA 100, Shier, 4 cr

5390 Community Practice Clerkship (prereq 3rd yr pharmacy student) (S-N only)
325761 Benson, 12 cr

5392 Hospital Practice Clerkship (prereq 3rd yr pharmacy student) (S-N only)
125762 Mann, 12 cr

5396 Pharm.D. IV Clerkship (prereq 5312 or #) (S-N only)
025763 Cloyd, 12 cr

5445 Human Nutrition and Drug Therapy (prereq 5440) (A-N only)
124255 1015-1100 MWF, MoosT 2620, Abul-Hajj, 3 cr

5494 Instrumentation (prereq Chem 3303 or #)
024256 Abdel-Monem, 3 cr

5501 Pathophysiology and Therapeutics of Pulmonary Diseases (prereq PharmD candidate) (A-N only)
838904 1015-1200 MWF, MoosT 2520, 4 cr

5502 Pathophysiology and Therapeutics of the Nervous System and Muscle Disorders (prereq PharmD candidate or #) (A-N only)
434869 1515-1700 MW, PWB 2470, Graves, 3 cr

5509 Pathophysiology and Therapeutics of Psychiatric Diseases (prereq PharmD candidate) (A-N only)
318275 1315-1500 TTh, MoosT 2520, 4 cr

5511 Pathophysiology and Therapeutics of Reproduction (prereq PharmD candidate) (A-N only)
018277 1315-1500 MW, MoosT 2530, Fish, 1 cr

5512 Pathophysiology and Therapeutics of Eye, Ear, Nose, Throat and Skin Diseases (prereq PharmD candidate) (A-N only)
638905 0815-0900 F, MMA 100, Larson, 1 cr

5513 Pathophysiology and Therapeutics of Bones, Joints and Connective Tissue Diseases (prereq PharmD candidate) (A-N only)
618282 0815-1000 TTh, MMA 100, Lake, 2 cr

5515 Neuroanatomy (prereq PharmD candidate) (A-N only)
438906 Cloyd, 1 cr

5620 Principles of Drug Delivery II (prereq 5610) (A-N only)
007005 1115-1200 MWF, MoosT 2620, Rippie, 3 cr

R5621 Fundamental Principles and Processes Laboratory (prereq ¶5620) (A-N only)
305929 –1 LAB 1315-1600 T, HSUnitF 3150, Miller, 1 cr
705930 –2 LAB 1315-1600 Th, HSUnitF 3150, Miller, 1 cr

5650 Dispencing Pharmacy (prereq 5605, 5630) (A-N only)
824257 1115-1200 TTh, MoosT 2530, Miller, 2 cr

R5651 Dispensing Pharmacy Laboratory (prereq 5605, 5603, ¶5650) (A-N only)
839163 –1 LAB 0815-1100 TTh, HSUnitF 2160, Carlson, 2 cr
805935 –2 LAB 1315-1600 TTh, HSUnitF 2160, Carlson, 2 cr

5670 Drug Information Retrieval and Evaluation (A-N only)
238907 Gallo, 2 cr

5880 Pharmaceutical Immunology (prereq PharmD candidate or #)
138908 1015-1100 MW, 0915-1100 F, MMA 125, Shier, 2 cr (1st 5 weeks)

5970 Directed Studies (prereq #)
824260 1-5 cr

5999 Special Problems (prereq #)
607007 ar cr

PHILOSOPHY (Phil)
Liberal Arts

R1001 Introduction to Logic
★LECT 0915-1000 MWF, NichH 45, Earman
527525 –1 REC 0915-1000 T, MMA 125, 5 cr
127527 –2 REC 0915-1000 T, Arch 25, 5 cr
827529 –3 REC 0915-1000 T, FordH 115, 5 cr
027531 –4 REC 1015-1100 T, Phys 170, 5 cr
427534 –5 REC 1015-1100 T, OwreH 2210, 5 cr
127536 –6 REC 1015-1100 T, FordH 60, 5 cr
727538 –7 REC 0915-1000 Th, Arch 25, 5 cr
927540 –8 REC 0915-1000 Th, Arch 5, 5 cr
527542 –9 REC 0915-1000 Th, FordH 115, 5 cr
★LECT 1315-1400 MWF, Botany B6, Scheman
602406 –10 REC 1315-1400 T, FordH 349, 5 cr
202411 –11 REC 1315-1400 T, FordH 120, 5 cr
102417 –12 REC 1415-1500 T, Arch 60, 5 cr
928932 –13 REC 1315-1400 Th, AkerH 225, 5 cr
728933 –14 REC 1315-1400 Th, FordH 55, 5 cr
528934 –15 REC 1415-1500 Th, Arch 30, 5 cr

R1002 Introduction to Philosophy
★LECT 1015-1100 MWF, FordH 55, Eaton
127544 –1 REC 0915-1000 T, SciCB 375, 5 cr
027545 –2 REC 1015-1100 T, FordH 70, 5 cr
427548 –3 REC 1015-1100 Th, FordH 40, 5 cr
★LECT 1315-1400 MWF, MoosT 2650, Anderson
227549 –4 REC 1215-1300 T, FordH 150, 5 cr
427551 –5 REC 1315-1400 T, FordH 150, 5 cr
927554 –6 REC 1315-1400 Th, FordH 349, 5 cr

R1003 Introduction to Ethics
322908 1115-1200 MTWF, FordH 120, Mason, 5 cr

R1004 Introduction to Political Philosophy
122909 0945-1100 TTh, FordH 120, Sartorius, 5 cr

R1004H Introduction to Political Philosophy (prereq honors regis or #)
★LECT 0945-1100 TTh, FordH 120, Sartorius
634501 –80 REC 1115-1200 T, FordH 60, 5 cr

R1103 Ethics with Emphasis on Writing (§1003)
434502 1215-1300 MTWF, FordH 170, Peterson, 5 cr

R3003 General History of Western Philosophy
★LECT 1015-1100 MWF, WullH 230, Lewis
027559 –1 REC 1015-1100 T, FordH 115, 5 cr
127561 –2 REC 1015-1100 Th, FordH 115, 5 cr

R3003H Honors Course: General History of Western Philosophy (prereq honors regis or #)
★LECT 1015-1100 MWF, WullH 230, Lewis
717088 –80 REC 1015-1100 T, FordH 40, 5 cr

R3105 Introduction to the Theory of Knowledge (prereq 1001 or 3201 or #)
234503 0915-1000 MWF, FordH 150, Root, 4 cr

3234 Philosophy of Feminism (prereq #)
934505 1115-1200 MWF, FordH 170, Scheman, 4 cr

R3304 Law and Morality
810259 1245-1400 TTh, FordH 130, Sartorius, 5 cr

R3304H Honors Course: Law and Morality
936948 1245-1400 TTh, FordH 130, Sartorius, 5 cr

R3305 Medical Ethics (§PubH 5623)
534507 0945-1100 TTh, FordH 130, J Zita, 5 cr

3502 Introduction to Aesthetics
134509 1115-1230 TTh, FordH 130, Gunderson, 4 cr

3970 Directed Studies (prereq #, △, college approval)
522910 1-5 cr

3980 Directed Instruction (prereq #, △, college approval)
322911 1-5 cr

5004 Socratic Dialogues (prereq 3001 or #)
137256 1015-1100 MWF, FordH 150, Dahl, 4 cr

5052 Brentano (prereq 3003 or #)
334511 1115-1200 MWF, FordH 160, Terrell, 4 cr

5105 Theory of Knowledge (prereq 1001 or 3201 or #)
134512 1415-1500 MWF, FordH 150, Anderson, 4 cr

5221 Philosophy of Logic (prereq 3202 or 5202 or Math 5162 or #)
834514 1015-1100 MWF, FordH 130, Hanson, 4 cr

5232 Topics in the Philosophy of Language (prereq 3231 or 5231 or #)
138990 1415-1530 TTh, FordH 175, Owens, 4 cr

5301 History of Ethics: British Moralists (prereq 1003 or one qtr history of philosophy or #)
634515 1315-1400 MWF, FordH 130, Terrell, 4 cr

5321 Theories of Justice (prereq 1003 or 1004 or 5311 or #)
434516 0915-1000 MWF, FordH 130, Mason, 4 cr

5601 Philosophy of Science: Confirmation and Theory-Testing (prereq 1001 or 3601 or #)
934519 1115-1200 MWF, FordH 130, Earman, 4 cr

5701 Survey of Contemporary Philosophy (prereq 3003 or #)
937551 1245-1400 TTh, FordH 70, Lewis, 4 cr

5760 Selected Topics in Philosophy: Schopenhauer (prereq 4 3xxx-5xxx cr in philosophy or #)
606729 1415-1530 TTh, FordH 70, Gunderson, 4 cr

5970 Directed Studies and Research (prereq #, △, CLA approval)
022913 1-5 cr

5990 Directed Studies and Research (prereq #, △, CLA approval)
822914 1-5 cr

8090 Seminar in History of Philosophy (prereq #)
937257 1515-1700 T, FordH 359, Kitcher, 4 cr

8510 Seminar: Studies in Aesthetics (prereq #)
134521 1515-1700 W, FordH 359, Eaton, 4 cr

8690 Research in Philosophy of Science (prereq #)
734523 1515-1700 Th, FordH 325, Savage, 4 cr

8970 Directed Study and Research (prereq passing grade on written prelim exam for PhD in philosophy)
622915 1-4 cr

8990 Directed Study and Research (prereq passing grade on written prelim exam for PhD in philosophy)
422916 1-4 cr

PHYSICAL EDUCATION (PE)
School of Physical Ed, Rec, School Health Ed
Education

For Facility Fee, see section 4
Courses listed below are ranked numerically according to activity level, i.e., the level of skill required. The activity level of each course is indicated by the second digit in the course number, 0 = first level, 1 = second level, and so on. Thus 1007 is a second-level course. In most cases, the lower level course is prerequisite for the higher; however, students who can demonstrate sufficient skill in an activity may usually register for the most advanced course without completing the prerequisite(s).
Most of the courses are considered high intensity; that is, they require a high level of physical exertion. Thus students are encouraged to consider carefully any limits on their health or physical fitness and to consult a physician if they have any questions about their health or about their ability to participate safely in the physical activities involved in any course for which they wish to register.

Open to ALL Students

R1004 Diving, Springboard (prereq 1007 or #)
338915 0815-0910 TTh, CookeH 15, Lincoln, 1 cr

R1007 Swimming
138916 –1 0815-0900 MWF, CookeH 10, Wu, 1 cr
038917 –2 0915-1000 MWF, CookeH 10, Wu, 1 cr
238924 –3 0915-1010 TTh, CookeH 10, Aarrestad, 1 cr
438923 –4 1015-1110 TTh, NorrisH 58, Reddock, 1 cr

R1014 Conditioning
127589 –1 0815-0900 MWF, FieldHse, StadS 264, Stad, 1 cr
327591 –2 1015-1100 MWF, FieldHse, StadS 264, Stad, 1 cr
127592 –3 1115-1200 MWF, FieldHse, StadS 264, Stad, Berseth, 1 cr
827594 –4 1415-1500 MWF, FieldHse, StadS 264, Stad, Wu, 1 cr
427596 –5 0915-1010 TTh, FieldHse, StadS 264, Stad, 1 cr
227597 –6 1015-1110 TTh, FieldHse, StadS 264, Stad, Davis, 1 cr
328949 –7 1115-1210 TTh, FieldHse, StadS 264, Stad, Schneider, 1 cr
138925 –8 0900-0945 MWF, Gym, Berseth, 1 cr (StP)

R1015 Weight Training
927599 –1 0915-1000 MWF, StadN 202, Davis, 1 cr
627600 –2 1015-1100 MWF, StadN 202, Davis, 1 cr
427601 –3 0815-0910 TTh, StadN 202, Helmerson, 1 cr
938926 –4 0915-1010 TTh, StadN 202, Dixon, 1 cr

R1016 Posture and Individual Excercise (moderate intensity)
738927 0915-1000 MWF, StadS 264, Stube, 1 cr

R1032 Badminton
538928 0815-0910 TTh, CookeH 325, Rattigan, 1 cr

R1033 Foil Fencing
622235 0915-1010 TTh, NorrisH 60, Jacobson, 1 cr

R1034 Judo
727605 –1 1315-1410 TTh, StadN 207, Holm, 1 cr
527606 –2 1415-1510 TTh, StadN 207, Holm, 1 cr

R1035 Karate
004668 –1 0915-1010 MW, PeikG G100, Fusaro, 1 cr
404660 –2 1015-1110 MW, PeikG G100, Fusaro, 1 cr

R1036 Racquetball
327607 –1 0815-0910 MW, StadN 208, Santiago, 1 cr
127608 –2 0915-1010 MW, StadN 208, Larson, 1 cr
338929 –3 1015-1110 MW, StadN 208, Wu, 1 cr
738930 –4 0915-1010 TTh, StadN 208, Helmerson, 1 cr

R1038 Tennis
027612 –1 0815-0900 MWF, BFAB 101, TCts, Smith, 1 cr
627614 –2 0915-1000 MWF, BFAB 101, TCts, Smith, 1 cr
227616 –3 1015-1100 MWF, BFAB 101, TCts, Griffith, 1 cr
127617 –4 1115-1200 MWF, BFAB 101, TCts, Griffith, 1 cr
727619 –5 1315-1400 MWF, NorrisH 60, TCts, DeDeyn, 1 cr
927621 –6 1415-1510 MW, NorrisH 60, TCts, Reddock, 1 cr
527623 –7 0815-0910 TTh, NorrisH 60, TCts, DeDeyn, 1 cr
327624 –8 0915-1010 TTh, NorrisH 60, TCts, DeDeyn, 1 cr
538931 –9 1015-1110 TTh, NorrisH M153A, M153, TCts, Lee, 1 cr
338932 –10 1215-1310 TTh, NorrisH 60, TCts, Lee, 1 cr
138933 –11 1415-1510 TTh, CookeH 325, TCts, Dixon, 1 cr
038934 –12 1000-1055 MW, Gym, TCts, Ainsworth, 1 cr (StP)
838935 –13 1300-1355 MW, Gym, TCts, Griffith, 1 cr (StP)
638936 –14 1400-1455 MW, Gym, TCts, Griffith, 1 cr (StP)

R1041 Cycling (supply own bicycle)
227633 1015-1110 TTh, CookeH 420, Ainsworth, 1 cr

R1042 Orienteering
422236 1315-1410 TTh, JonesH 1, Coons, 1 cr (May 1-31) (addnl hrs ar)

R1043 Beginning Horsemanship
727636 –1 1600-1800 M, CookeH 420, Bryant Lake Stables, Krotee, 1 cr
527637 –2 1600-1800 T, CookeH 420, Bryant Lake Stables, Krotee, 1 cr
127639 –3 1600-1800 Th, CookeH 420, Bryant Lake Stables, Krotee, 1 cr

R1044 Self Defense
801741 –1 1015-1110 TTh, PeikG G100, Bendickson, Brandl, 1 cr
136938 –2 1115-1210 TTh, StadN 207, Holm, 1 cr

R1050 Golf (moderate intensity)
327641 –1 0915-1000 MWF, StadS 267, Golf Course, Schneider, 1 cr
027643 –2 1015-1100 MWF, StadS 267, Golf Course, Schneider, 1 cr
627645 –3 1215-1300 MWF, StadS 267, Golf Course, Schneider, 1 cr
238938 –4 0815-0910 TTh, StadS 267, Golf Course, Larson, 1 cr
138939 –5 1115-1210 TTh, StadS 267, Golf Course, Larson, 1 cr

R1059 Track and Field
438940 1015-1110 TTh, FieldHse, BFAB Track, Helmerson, 1 cr

R1067 Basketball
238941 1415-1500 MWF, CookeH 325, Dixon, 1 cr

R1072 Soccer
727653 –1 0915-1010 MW, FieldHse, Stad, Lee, 1 cr
527654 –2 1015-1110 MW, FieldHse, Stad, Lee, 1 cr
138942 –3 1115-1210 TTh, FieldHse, Stad, Rattigan, 1 cr

R1073 Softball
127656 –1 0915-1010 MW, NorrisH 60, BFAB Fld, Wells, 1 cr
827658 –2 1015-1110 MW, FieldHse, BFAB Fld, Wells, 1 cr
938943 –3 1115-1210 MW, FieldHse, BFAB Fld, Wells, 1 cr
738944 –4 1415-1510 TTh, NorrisH 60, BFAB Fld, Berseth, 1 cr
538945 –5 1100-1155 TTh, Gym, Wells, 1 cr (StP)

R1074 Volleyball
127665 –1 0815-0900 MWF, CookeH 325, Rattigan, 1 cr
138947 –2 0915-1000 MWF, CookeH 325, Rattigan, 1 cr
038948 –3 1315-1400 MWF, CookeH 325, 1 cr
338946 –4 1115-1210 TTh, CookeH 325, Davis, 1 cr

R1107 Swimming (prereq 1007)
838949 1115-1200 MWF, NorrisH 58, Aarrestad, 1 cr

R1133 Fencing (prereq 1033)
138950 1015-1110 TTh, NorrisH 60, Jacobson, 1 cr

R1134 Judo (prereq 1034)
036939 1215-1310 TTh, StadN 207, Holm, 1 cr

R1138 Tennis (prereq 1038)
127679 –1 0815-0910 TTh, BFAB 101, TCts, Reddock, 1 cr
038951 –2 1115-1210 TTh, BFAB 101, TCts, Reddock, 1 cr

R1143 Intermediate Horsemanship (prereq 1043 or #)
122246 1600-1800 W, CookeH 420, Bryant Lake Stables, Krotee, 1 cr

R1160 Tumbling, Floor Exercise, and Trampoline (prereq 1060 or equiv)
013693 0915-1010 MW, CookeH 302, Roethlisberger, 1 cr

R1205 Scuba and Skin Diving (prereq 1107)
822248 1015-1200 TTh, CookeH 15, BFAB 285, Aubineau, 1 cr

R1274 Volleyball (prereq 1174 or #)
838952 1315-1410 TTh, CookeH 325, Dedeyn, 1 cr

R1306 Advanced Lifesaving (prereq ability to swim 440 yds)
127687 –1 1215-1300 MWF, CookeH 10, Aarrestad, 1 cr
638953 –2 1015-1200 TTh, CookeH 10, Aarrestad, 1 cr

R1410 Water Safety Instructor (prereq curr ARC adv Lifesaving Cert, have or concurrently acquire ARC First Aid, CPR Cert)
827689 1015-1200 MW, CookeH 10, Freeman, 2 cr

R1497 Directed Study (prereq 3 cr in physical education, △)
022250 Krotee, 1-6 cr

Professional Courses

R1522 Gymnastics (prereq 1521) (A-N only)
627693 –1 0815-0930 TTh, CookeH 308, 1 cr (women's events)
227695 –2 0815-0930 TTh, CookeH 302, Roethlisberger, 1 cr (men's events)

R1654 Track and Field (prereq 1059, physical education maj) (A-N only)
622252 0915-1000 MWF, CookeH 215, Helmerson, 1 cr BFAB Track,

R1871 Introduction to Physical Education (prereq physical education maj) (A-N only)
222254 0930-1100 TTh, CookeH 214, 325, Shick, 3 cr

R1875 Orientation to Teaching Physical Education (prereq physical education maj) (A-N only)
534300 0800-0900 MWF, CookeH 214, Winters, 4 cr

R1990 Directed Study (prereq △) (A-N only)
922256 Stoner, 1-6 cr

R3100 Adapted Physical Education (A-N only)
522258 1315-1400 MWF, CookeH 215, Breihan, 3 cr

R3111 Mechanics of Movement (prereq Anat 1027) (A-N only)
722260 0815-0900 MWF, CookeH 215, Stoner, 3 cr

R3113 Motor Learning and Motor Development (A-N only)
022264 1015-1200 TTh, CookeH 215, Plack, 4 cr

R3114 Prevention and Care of Injuries (prereq 3110 or Anat 1027) (A-N only)
622266 0915-1000 MWF, BFAB 285, Monroe, 3 cr

R3115 Physiological Application to Sports (§PubH 3385, 3386; prereq Phsl 3051 or #) (A-N only)
422267 1615-1730 TTh, CookeH 214, Alexander, 3 cr

R3126 Psychological and Sociological Dimensions of Physical Activity (A-N only)
706995 1215-1400 TTh, CookeH 215, Krotee, 3 cr

R3131 History and Philosophy of Physical Education and Sport (S-N optional)
238955 0800-0900 MWF, CookeH 206, Anderson, 4 cr

R3174 Gymnastics Coaching (A-N only)
222271 1015-1100 MWF, CookeH 302, 420, Roethlisberger, 2 cr

R3310 Athletic Training Laboratory (prereq 3114) (A-N only)
922273 0915-1000 T, BFAB Trng Rm, Marshall, 1 cr

R3322 Teaching Physical Education: Elementary School (prereq 1871, 1875) (A-N only)
104662 1115-1300 MWF, NorrisH M153A, M153, 3, Lampe, 5 cr

R3323 Teaching Physical Education: Secondary School (prereq all required activity courses) (A-N only)
522275 1015-1200 MWF, CookeH 215, 325, Anderson, 5 cr

R3327 Teaching Physical Education in the Elementary School (prereq elementary education maj) (A-N only)
627712 –1 1315-1400 MWF, NorrisH M153A, M153, 3, Plack, 3 cr
336940 –2 1415-1500 MWF, NorrisH M153A, M153, 3, Lampe, 3 cr

R3607 Student Teaching: College (prereq physical education maj, 3323) (A-N only)
438954 Anderson, 1 cr

R3621 Student Teaching: Elementary (prereq 3322, 3323, SeEd 3150, 3155 or Elem 3100, PubH 3385, 3386) (S-N optional)
022278 1615-1800 W, CookeH 214, Lampe, Stube, 6 cr (addnl hrs ar)

R3622 Student Teaching: Secondary (prereq 3322, 3323, SeEd 3150, 3155 or Elem 3100, PubH 3385, 3386) (S-N optional)
822279 1615-1800 W, CookeH 214, Anderson, Winters, 6 cr (addnl hrs ar)

R3624 Student Teaching: Coaching (S-N only)
122280 1815-1930 W, CookeH 206, Winters, 3 cr

R3625 Supervised Practical Experience (max 6 cr; prereq △) (S-N only)
022281 Stoner, 1-6 cr

R3900 Directed Study (prereq △) (A-N only)
622283 Stoner, 1-9 cr

5102 Practicum: Physical Education for Handicapped in an Adapted Setting (max 3 cr; prereq 5100, 5101 or #) (S-N only)
222285 1800-2000 M, CookeH 214, Breihan, 3 cr (1 hr ar)

5111 Physical Education Facilities (A-N only)
034303 1615-1815 W, NorrisH 4, Jaeger, 3 cr (1 hr ar)

5126 Advanced Psychological and Sociological Dimensions: Physical Activity (prereq #) (A-N only)
834304 1600-1800 Th, CookeH 215, Krotee, 3 cr (1 hr ar)

5140 Biomechanics of Sport Safety (prereq undergrad kinesiology) (A-N only)
634305 1600-1800 M, CookeH 215, Stoner, 3 cr (1 hr ar)

R5151 Curriculum (prereq sr, 3322, 3323 or #) (A-N only)
134302 0915-1000 MWF, CookeH 214, Young, 3 cr

5351 Seminar: Teaching Physical Education in Colleges and Universities (max 3 cr, §Rec 5351, Hlth 5351; prereq △) (A-N only)
707001 1 cr

5388 Exercise Testing, Conditioning, and Cardiac Rehabilitation (§PubH 5388; prereq PubH 5387 or PE 5387, #) (A-N only)
322293 1615-1800 MW, CookeH 206, Serfass, 4 cr

5720 Topics in Physical Education (prereq #) (A-N only)
434306 1800-2000 T, CookeH 215, Alexander, Serfass, others, 3 cr (1 hr ar)

5981 Problems (prereq MEd candidate, #) (A-N only)
722288 ar cr

5983 Readings: Physical Education (max 9 cr; prereq educ or grad stu) (A-N only)
522289 ar cr

5985 Application of Research (A-N only)
722291 1800-2000 T, CookeH 214, Shick, 3 cr (1 hr ar)

8113 College Physical Education Administration (prereq 8110)
234307 1600-1800 T, NorrisH 4, Jaeger, 3 cr (1 hr ar)

8980 Research Problems (max 2 cr; prereq 5980, PsyF 5110 or #) (S-N only)
122294 1600-1800 W, CookeH 226, Alexander, 1 cr

8981 Research Problems (prereq 8980 or #) (S-N only)
822296 ar cr

PHYSICAL MEDICINE AND REHABILITATION (PMed)
Medical School

R1003 Orientation to Occupational Therapy (S-N only)
323704 1215-1300 T, ChRC R208, Arndts, 1 cr

5135 Pathokinesiology (prereq #) (A-N only)
016934 Pohtilla, 3 cr

5150 Kinesiological Electromyography and Nerve Conduction (prereq #) (A-N only)
316932 Allison, 3 cr

5161 Theory of Physical Medicine, Rehabilitation Applied to Medical Sciences Lectures
123705 1515-1600 MTThF, 1515-1700 W, MoosT 2530, Huss, Arndts, others, 5 cr

5222 Therapeutic and Evaluation Procedures (prereq regis PT)
023706 0915-1100 M, 1315-1500 TThF, ChRC R220, Carey, Gardner, others, 4 cr

5281 Theory of Therapeutic Exercise (prereq regis PT)
823707 1215-1300 MF, 1115-1300 W, ChRC R208, Kottke, 4 cr

5283 Techniques of Therapeutic Exercise (prereq regis PT)
623708 0915-1100 TWF, 1315-1500 M, ChRC R220, Scudder, 4 cr

5292 Introduction to Research (prereq regis PT)
423709 1215-1300 TTh, Mayo C368, Amundsen, 2 cr

5294 Independent Study in Physical Therapy (prereq #) (A-N only)
634398 Ellingham, ar cr

5295 Clinical Education in Physical Therapy (prereq regis PT)
823710 Ellingham, 15 cr

5312 Wood Processing (prereq regis OT)
623711 0815-1100 WF, ChRC R255, Sicard, 3 cr

5342 Theory II: Psychocial Dysfunction (prereq regis OT)
423712 1315-1500 MWF, ChRC R208, Eliason, Zschokke, 6 cr

5343 Theory: Physical Dysfunction I (prereq regis OT) (A-N only)
223713 0815-0900 MWF, 0915-1200 TTh, ChRC R262, Dahlstrom, 7 cr

5360 Group Process Seminar (prereq regis OT)
123714 0915-1100 MWF, ChRC R262, Eliason, 3 cr

5393 Evaluation Techniques (prereq 5330)
923715 1115-1200 MWF, 0815-0900 TTh, ChRC R220, Esch, Lepley, 3 cr

5396 Field Work Education in Occupational Therapy (prereq regis OT) (S-N only)
723716 Eliason, ar cr

5841 Instrumentation and Analysis Techniques (prereq Phys 1031, 1032 or equiv)
818071 Patterson, 3 cr

8103 Clinic (prereq regis PT)
523717 Pauley, ar cr

8130 Seminar: Current Literature in Physical Therapy
323718 Amundsen, Scudder, 1 cr

8135 Advanced Kinesiology (prereq kinesiology course)
505864 Pohtilla, 3 cr

8140 Physiological Assessment in Physical Therapy
105883 Amundsen, Allison, 1 cr

8150 Research Methodology: Physical Therapy in Electromyography and Nerve Conduction (prereq #)
825764 Allison, 3 cr

8170 Special Topics in Physical Therapy (prereq #)
123719 Amundsen, 1 cr

8172 Educational Administration (prereq #)
523720 Allison, ar cr

8180 Physiological Bases for Therapeutic Exercise
305865 Kottke, 3 cr

8185 Problems in Physical Therapy (prereq regis PT)
323721 Amundsen, ar cr

8188 Teaching Practicum (max 8 cr; prereq #)
123722 Ellingham, ar cr

8192 Research Design in Physical Therapy (prereq #)
134400 Amundsen, 3 cr

8193 Research Problems in Physical Therapy (prereq 8192 or #)
023723 Amundsen, ar cr

8195 Research in Physical Therapy (prereq #)
005867 Amundsen, ar cr

8200 Physical Medicine and Rehabilitation Service
734392 Magness, ar cr

8205 Readings in Physical Medicine and Rehabilitation (max 2 cr)
334394 0900-1000 M, ChRC R208, Kottke, 2 cr

8206 Conference on Physical Medicine and Rehabilitation
423726 0800-0900 F, ChRC R208, Magness, 2 cr

8207 Basic and Applied Physiatry
223727 0800-0900 M, ChRC R208, Magness, 2 cr

8210 Research in Physical Medicine
123728 ar cr

8212 Electromyography (prereq #)
034396 1300-1700 MTWThF, ChRC R311, Magness, ar cr

8220 Seminar: Physical Medicine and Rehabilitation
223730 0800-0900 W, ChRC, Magness, 2 cr

PHYSICS (Phys)
Institute of Technology

R1001 The Physical World (§any physics courses other than 1061, no cr for IT stu; prereq one yr high school algebra)
209908 0800-0845 MTWF, ClaOff B45, Ruddick, 4 cr (StP) (Companion lab is 1005)

R1002 The Physical World in Transition (§any other introductory physics courses except 1001, 1061, no cr for IT stu; prereq 1001)
607086 1115-1200 MTWF, Phys 150, Jones, 4 cr

R1005 Physics Laboratory (no cr for IT students; prereq 1001 or ¶) (S-N only)
310483 1 cr (StP) (Lab time assigned first 2 days of class)

R1041 Introductory Physics (§other intro phys crse, no cr IT ex arch, pre-arch, env des; prereq hs alg, plane geometry)
807099 1415-1500 MTWF, Phys 166, Jones, 4 cr (Companion lab is 1045)

R1042 Introductory Physics (§other intro physics course, no cr IT except arch, pre-arch, env design; prereq 1041)
307101 1415-1500 MTWF, Phys 150, Waddington, 4 cr (Companion lab is 1046)

R1045 Introductory Physics Laboratory (no cr IT except arch, pre-arch, environmental design; prereq 1041 or ¶) (S-N only)
110484 1 cr (Lab time assigned first 2 days of class)

R1046 Introductory Physics Laboratory (no cr IT except arch, pre-arch, environmental design; prereq 1042 or ¶) (S-N only)
410488 1 cr (Lab time assigned first 2 days of class)

R1106 General Physics (no cr for IT students; prereq 1105)
224490 1115-1200 MTWThF, Phys 166, Mauersberger, 4 cr (Companion lab is 1109)

R1109 General Physics Laboratory (no cr for IT students; prereq 1108, 1106 or ¶) (S-N only)
910494 1 cr (Lab time assigned first 2 days of class)

R1271 General Physics (prereq Math 1221 or 1321 or 1621 or ¶) (Companion lab is 1275)
127754 -1 0915-1000 MTWThF, Phys 166, Cahill, 4 cr
027755 -2 1315-1400 MTWThF, Phys 150, 4 cr

R1275 General Physics Laboratory (prereq 1271 or 1311 or ¶) (S-N only)
510496 1 cr (Lab time assigned first 2 days of class)

R1281 General Physics (prereq 1271, completion of or ¶Math 1231, 1331, 1621) (Companion lab is 1285)
427758 -1 0815-0900 MTWThF, Phys 166, Winckler, 4 cr
627760 -2 1015-1100 MTWThF, Phys 150, Greenlees, 4 cr
303386 -3 1315-1400 MTWThF, Phys 166, Marquit, 4 cr

R1285 General Physics Laboratory (prereq 1275, 1281 or 1331 or ¶) (S-N only)
310497 1 cr (Lab time assigned first 2 days of class)

R1291 General Physics (prereq 1281) (Companion lab is 1295)
227762 -1 0815-0900 MTWThF, Phys 150, P Freier, 4 cr
927764 -2 1215-1300 MTWThF, Phys 166, Mantis, 4 cr

R1295 General Physics Laboratory (prereq 1285, 1291 or 1341 or ¶) (S-N only)
010499 1 cr (Lab time assigned first 2 days of class)

R1331 Comprehensive Introductory Physics with Calculus (prereq 1321, ¶Math 1231 or 1531 or 1621 or equiv)
937095 1015-1100 MTWF, Phys 133, Johnson, 4 cr

R3015 Laboratory in Oscillations and Waves (prereq 3011 or ¶)
110629 -1 LAB 1415-1700 T, Phys 215, Blair, 1 cr
510630 -2 LAB 0815-1100 Th, Phys 215, Blair, 1 cr
110632 -3 LAB 1415-1700 Th, Phys 215, Blair, 1 cr

R3201 Thermodynamics (prereq 1281)
924492 0915-1000 MTWF, Phys 131, Weyhmann, 4 cr

R3513 Modern Physics (prereq 3512)
724493 1015-1100 MTWF, Phys 131, Peterson, 4 cr

R3801 Introduction to the Physics of Photography (prereq high school algebra, some photographic experience)
133935 1415-1500 MTWF, Phys 133, Hintz, 5 cr

R3970 Directed Study (prereq #, △)
524494 1-5 cr

R5024 Introduction to Electric and Magnetic Fields (prereq 5023)
324495 1115-1200 MTWF, Phys 210, Kellogg, 4 cr

R5033 Topics in Mathematical Physics (prereq 5032)
124496 0915-1000 MTWF, Phys 143, Suura, 4 cr

R5053 Classical Physics (prereq 5052)
024497 0800-0900 MWF, Phys 210, Lysak, 4 cr

R5061 Numerical Methods in Physics (prereq 5021, 5023)
139483 1150-1200 MW, Phys 157, Marshak, 4 cr (lab ar)

R5123 Methods of Experimental Physics III (prereq 5122 or #)
624499 1215-1300 TTh, Phys 170, Zimmermann, Heller, 4 cr (lab ar)

R5124 Experimental Project (prereq 5123, #)
205826 Zimmermann, Heller, ar cr

R5153 Quantum Mechanics (prereq 5152)
124501 0800-0910 T, 0800-0950 Th, Phys 143, Valls, 4 cr

R5211 Introductory Solid State Physics (prereq 5101, 5202 or equiv)
407087 1015-1100 MTWF, Phys 143, Giese, 4 cr



The Outdoor Store. . .

can help you in your search for the great outdoors. We carry a wide selection of outdoor clothing and equipment. As a non-profit organization we can offer you great prices on first quality merchandise. So stop in and let us help you start an adventure!

OUTDOOR STORE

In the St. Paul
Student Center
373-1404
M-F 8-5 Wed 8-8
Sat 9-4

THE EARLY BIRD...



MCAT

- Permanent Centers open days, evenings and weekends.
- Low hourly cost. Dedicated full-time staff.
- Complete TEST-n-TAPE℠ facilities for review of class lessons and supplementary materials.
- Small classes taught by skilled instructors.
- Opportunity to make up missed lessons.
- Voluminous home-study materials constantly updated by researchers expert in their field.
- Opportunity to transfer to and continue study at any of our over 85 centers.

Stanley H. KAPLAN
Educational Center
TEST PREPARATION SPECIALISTS SINCE 1938

Call Days Evenings & Weekends
378-9191
328 East Hennepin Ave.
Near U of M

Men's Intercollegiate Athletics
UNIVERSITY OF MINNESOTA

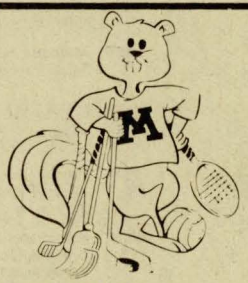
Follow the Gophers



STUDENT AND GUEST SEASON TICKET

REDUCED PRICES FOR
FOOTBALL—BASKETBALL—HOCKEY
PLUS—TRACK, WRESTLING
BASEBALL, GYMNASTICS, SWIMMING,

For information and schedule call or write:
ATHLETIC TICKET OFFICE
205 Bierman Field Athletic Building
516 15th Avenue S.E.
University of Minnesota
Minneapolis, MN 55455 Phone (612) 373-3181



JOIN REC SPORTS FOR SPRING '84

INTRAMURALS
The U of M has one of the largest I-M programs in the country. Male, female and co-rec (men and women combined) teams. Sign-up for spring quarter: **Wrestling meet, tennis, softball, soccer, co-rec volleyball, baseball, golf stroke play tournament** and the **track and field meet.**

CLUBS
Over 50 clubs exist in the Rec Sports program and chances are — whatever your interests — you'll find a club just for you. All clubs are open to fees-paid students and some clubs have provisions for non-University members . . . and clubs are always looking for beginners. The club office: 106-107 Norris, 376-9250.

FITNESS AND OPEN RECREATION
Chose from aerobic dance, action aerobics, or aerobic workout; or from self-motivated programs in swimming and running. Or use gyms, pools, weight rooms and other activity areas during "open" times.

JOBS TOO
Rec Sports annually hires 500 students — and you could be one of them. Check out the several types of student employment at 107 Cooke Hall. Good money, flexible scheduling and good work experience. Call Rec Sports Student Personnel at 373-4200.

UM REC SPORTS

GENERAL	373-4200
107 Cooke	373-4200
101A Bierman	373-1917
104 St. Paul Gym	373-0956

R5233 Introduction to Solid State Physics (prereq 5232)
824503 0915-1000 MTWF, Phys 210, Dahlberg, 4 cr

R5301 Introduction to Nuclear Physics (prereq 5102 or equiv)
424505 1315-1400 MTWF, Phys 236A, Bayman, 4 cr

R5371 Introduction to Elementary Particle Physics (prereq 5102 or equiv)
124507 1215-1300 MTWF, Phys 236A, Shupe, 4 cr

R5452 Cloud Systems (prereq Math 3211 or equiv, 1 yr general physics)
724509 1215-1300 MWF, Phys 131, G Freier, 3 cr

R5950 Seminar (prereq △)
924511 1600-1730 W, Phys 131, ar cr

R5970 Directed Studies (prereq #, △)
524513 1-5 cr

R5990 Directed Research (prereq 3rd yr, △)
624535 ar cr

R8123 Relativistic Quantum Field Theory (prereq 8122 or #)
124586 1315-1400 MWF, Phys 157, Rudaz, 3 cr

R8200 Seminar: Solid-State and Low-Temperature Physics
724610 1415-1600 Th, Phys 236A, Campbell, ar cr

R8216 Many-Body Theory (prereq 8121 or #)
307096 1015-1100 MWF, Phys 157, Kapusta, 3 cr

R8223 Solid-State Physics (prereq 8222)
905831 1115-1200 MWF, Phys 143, Huang, 3 cr

R8233 Superconductivity (prereq #)
136843 0915-1000 MWF, Phys 157, Goldman, 3 cr

R8300 Seminar: Nuclear Physics
524611 1415-1600 W, Phys 236A, Kapusta, ar cr

R8313 Nuclear Physics (prereq 8312)
333939 1415-1500 MTF, Phys 236A, Ellis, 3 cr

R8360 Seminar: Mass Spectroscopy
324612 1515-1700 F, Phys 236A, Pepin, ar cr

R8370 Seminar: Elementary Particle Physics
124613 1515-1700 T, Phys 210, Rudaz, ar cr

R8373 Elementary Particle Physics (prereq 8372)
305834 1415-1500 MWF, Phys 157, Gasiorowicz, 3 cr

R8380 Advanced Topics in Elementary Particle Physics (prereq #, 1105 or ¶)
036844 1315-1430 TTh, Phys 143, Walsh, ar cr

R8400 Seminar: Cosmic-Ray and Space Physics
024614 1515-1700 Th, Phys 143, P Freier, ar cr

R8420 Seminar: Magnetospheric Physics (max 3 cr)
824615 1515-1700 F, Phys 157, Cahill, 1-3 cr

R8421 Solar and Magnetospheric Physics (prereq #)
533941 0915-1000 MWF, Phys 236A, 3 cr

R8440 Seminar: Atmospheric Physics
624616 1215-1300 T, Phys 157, Mantis, ar cr

R8500 Plan B Project (no cr toward PhD; prereq #) (S-N only)
424617 4 cr

R8950 Seminar: Problems of Physics Teaching and Higher Education (prereq grad standing in physics or #)
224618 1615-1700 T, Phys 236A, Heller, 1 cr

R8990 Research in Physics (prereq #)
124619 ar cr

PHYSIOLOGY (Phsl)
Medical School

3091H Readings (prereq honors candidates in physiology)
311875 Poppele, ar cr

3092H Problems (prereq honors candidates in physiology)
011877 Poppele, ar cr

5100 Neuroscience for Dental Students (prereq ¶Anat 5110, courses in biochemistry, human anatomy)
★LECT 1315-1400 TWTh, MoosT 2620, 2 cr
528951 –1 LAB 1415-1700 W, MoosT 3110

5107 Alimentary Physiology (prereq #)
437996 Grim, 3 cr

5111 Human Physiology (prereq 5110)
★LECT 0815-0900 MTWThF, PWB 2470, Grim, 6 cr
427789 –1 LAB 1315-1700 Th, MoosT 3110
827790 –2 LAB 1215-1600 F, MoosT 3110
627791 –3 LAB 1315-1700 T, MoosT 3110

5113 Problems in Physiology (prereq #)
123731 ar cr

5116 Biophysical Approaches (prereq 3055 or #)
723733 Kepner, 4 cr

5444 Muscle Contraction (§MdBc 5444; prereq undergrad courses in biochemistry or physiology)
538752 Poppele, 3 cr

5551 Literature Seminar
623739 1215-1300 M, MlrdH 5276, 1-2 cr

5552 Readings in Physiology
723747 ar cr

5553 Research in Physiology
423757 ar cr

5567 Properties of Receptor Systems (prereq #)
934889 Poppele, 3 cr

5577 Methods in Physiology (prereq #)
123759 Stish, 3 cr

8107 Alimentary Physiology (prereq #)
237997 Grim, 3 cr

8111 Human Physiology (prereq 8110, anatomy, biochemistry)
★LECT 0815-0900 MTWThF, PWB 2470, Grim, 6 cr
327798 –1 LAB 1315-1700 Th, MoosT 3110
127799 –2 LAB 1215-1600 F, MoosT 3110
927800 –3 LAB 1315-1700 T, MoosT 3110

8113 Problems in Physiology (prereq #)
923732 ar cr

8116 Biophysical Approaches to Physiology (prereq 3055 or #)
323735 Kepner, 4 cr

8201 Literature Seminar
123745 1215-1300 M, MlrdH 5276, 1 cr

8202 Readings in Physiology
323749 ar cr

8203 Research in Physiology
823755 ar cr

8217 Properties of Receptor Systems (prereq #)
934892 Poppele, 3 cr

8227 Methods in Physiology (prereq #)
623756 Stish, 3 cr

PLANT PATHOLOGY (PlPa)
Agriculture

3090 Research in Plant Pathology (prereq 1001 or equiv or #)
821679 ar cr

R5007 Nematodes and Abiotic Agents in Plant Disease (prereq 20 cr hrs in biology, including botany, biochemistry, plant physiology)
★LECT 0800-0845 TTh, StakH 103, Krupa, MacDonald, 4 cr
228930 –1 LAB 1300-1545 TTh, StakH 103, 105, Krupa, MacDonald

R5050 Forest Pathology (prereq Biol 1103 or equiv)
★LECT 0830-0945 TTh, HodsonH 495, Blanchette
727815 –1 LAB 0800-0945 MW, StakH 103, 105, Blanchette, 4 cr
327817 –2 LAB 1000-1145 MW, StakH 103, 105, Blanchette, 4 cr
027819 –3 LAB 1300-1445 MW, StakH 103, 105, Blanchette, 4 cr

R5107 Mycology: Basidiomycetes (prereq 5105 or MicB 3103 or #)
★LECT 0900-0945 TTh, StakH 103, Stewart, 4 cr
634644 –1 LAB 1000-1145 TTh, StakH 105, Stewart

5200 Poisonous Plants (prereq Biol 1011, 3 cr botany)
621683 1600-1745 Th, StakH 103, Kommedahl, 2 cr

5700 Contemporary Chemical Control of Plant Diseases (prereq 1001, 5005, 5006, BioC 1301)
110171 1100-1145 MWF, AlderH 415, Percich, 4 cr

8003 Plant Disease Theory III: Populations (prereq 5005, 5006, 5007 or #, 8001, 8002)
625765 1400-1530 TTh, StakH 401, Groth, Zeyen, others, 3 cr

8090 Advanced Procedures and Research in Plant Pathology
005092 ar cr

8095 Advanced Procedures and Research in Mycology
617245 Stewart, 1-6 cr

PLANT PHYSIOLOGY (PlPh)
Agriculture

3131 Survey of Plant Physiology (§5131, Bot 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 3021 or BioC 5001)
221718 1200-1245 MTWF, ClaOff B35, Gleason, Dale, 4 cr

5131 Survey of Plant Physiology (§3131, Bot 3131, 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶ or Biol 3021 or BioC 5001)
121719 1200-1245 MTWF, ClaOff B35, 1200-1245 Th, BioSci 115, Frenkel, Gleason, others, 4 cr

R5168 Experimental Protoplasmatology (prereq #)
533468 Stadelmann, 3 cr

5182 Plant Metabolism (§Bot 5182; prereq 5131)
421720 0800-0915 TTh, BioSci 18, Soulen, 3 cr

R5188 Research Perspectives in Plant Physiology (prereq Chem 3100, 3101, 8 cr biochemistry, #)
221721 ar cr

R5725 Plant Nucleic Acids (prereq Chem 3100, 3101, 8 cr biochemistry, #)
733467 Li, ar cr

R5970 Special Problems in Plant Physiology
121722 ar cr

R8281 Growth and Differentiation of Plants (prereq 5184)
138956 Brenner, 3 cr

POLISH (Plsh)
Russian And East European Studies
Liberal Arts

R1103 Beginning Polish (prereq 1102)
133465 1115-1200 MTWThF, ChDev 216, Polakiewicz, 5 cr

5900 Topics
937226 1330-1500 TTh, FolH 107, Wierzewski, 4 cr

5970 Directed Readings (prereq #, △, CLA approval)
823108 Polakiewicz, 1-4 cr

POLITICAL SCIENCE (Pol)
Liberal Arts

1001 American Government and Politics
410216 –1 0815-0900 MTWThF, AndH 370, Simon, 5 cr
910219 –2 1015-1100 MTWThF, AndH 270, Lind, 5 cr
527847 –3 0915-1100 TTh, AndH 250, Shaw, 5 cr

1025 World Politics
222917 0915-1000 MWF, AndH 210, Job, 4 cr

1026 American Foreign Policy
122918 1115-1200 MWF, AndH 370, Sampson, 4 cr

3051 Introduction to Political Analysis
107013 1215-1300 MTWThF, AndH 230, Schlagheck, 5 cr

3070 Directed Field Studies (prereq #, △)
922919 1-4 cr

3080 Internship (prereq △) (S-N only)
222920 4 cr

3085 Introduction to Political Research (prereq 3051 or #)
139007 1115-1230 TTh, BlegH 250, Sullivan, 4 cr

3110H Honors Course: Selected Fields (max 6 cr; prereq 3109)
111885 3-6 cr

3308 The United States Congress (prereq 1001 or #)
922922 1015-1100 MWF, AndH 330, Simon, 4 cr

3309 Judicial Process (prereq 1001 or #)
534717 0915-1000 MWF, AndH 330, Olson, 4 cr

3310 Topics in American Politics (prereq 1001 or #)
225767 1115-1230 TTh, AndH 250, Backstrom, 4 cr

R3352 **Field Work in the Legislature** (prereq 1001)
136852 1515-1700 TTh, BlegH 135, Backstrom, 4 cr

3659 American Political Thought (prereq 3051 or 9 cr social science or #)
107030 1215-1300 MWF, AndH 330, Shaw, 4 cr

3766 Political Psychology (prereq 1001 or #)
134719 0945-1100 TTh, AndH 230, Sullivan, 4 cr

3796 Mass Media and Politics (§Jour 3796; prereq 1001 or Jour 1001 or #, jour students must have maj status)
334721 1245-1400 TTh, MurH 105, Flanigan, Kline, 4 cr

3835 The International System
512376 1115-1200 MWF, AndH 270, Hopmann, 4 cr

3836 Foreign Policy Decision Making
337585 1245-1400 TTh, AndH 370, Goldman, 4 cr

3970 Directed Studies (prereq #, △, college approval)
722923 1-6 cr

5303 The American Democracy (prereq 1001)
134722 0945-1100 TTh, AndH 330, Flanigan, 4 cr

5315 State Government (prereq 1001 or #)
034723 1820-2050 W, AndH 230, Gray, 4 cr

5441 Western European Government and Politics (prereq 1054 or 3051 or 12 cr in social science or #)
634725 1830-2150 Th, AndH 230, Shively, 5 cr

5443 Government and Politics of Soviet Union (prereq 1054 or 3051 or 12 cr in social science or #)
434726 1115-1230 TTh, AndH 330, Christopherson, 4 cr

R5502 **Principles of the American Constitution II** (§3323; prereq 1001 or equiv, 5501)
234727 1315-1500 MW, AndH 330, Krislov, 5 cr

5656 Development of Political Thought: 19th and 20th Centuries (Burke to the Present) (§5669; 1061 or 9 crs in social science rec)
936853 1315-1400 MWF, BlegH 155, Leyh, 4 cr

5704 Organizational Theory and Behavior (prereq 1001)
934729 1115-1200 MWF, BlegH 155, Walcott, 4 cr

5810 Advanced Topics in International Politics/Foreign Policy: Politics of Nuclear War (prereq 3835 or 3825 or 3836 or 3826)
137586 0915-1000 MWF, BlegH 10, Goldman, 4 cr

8103 Teaching Political Science
134731 1515-1700 M, SocSci 1383, Walcott, 3 cr

8121 Introduction to Quantitative Analysis
934732 1315-1500 M, SocSci 1383, Flanigan, 4 cr

8123 Advanced Topics in Regression Analysis
734733 1315-1500 T, SocSci 1383, Aldrich, 4 cr

8140 Individual Readings and Research in Methodology (prereq #, △)
522924 1-3 cr

8150 Research Seminar: Methodology (prereq #)
322925 3 cr

8211 Linguistic Analysis of Politics (prereq #)
437626 1315-1500 F, SocSci 1383, Ball, 3 cr

8234 Selected Thinkers and Topics in the Development of Political Thought: Feminist Political Theory (prereq #)
334735 1315-1500 W, BlegH 115, Dietz, 3 cr

8240 Individual Reading and Research in Political Thought (prereq #, △)
122926 1-3 cr

8250 Research Seminar: Political Theory (prereq #)
022927 3 cr

8305 Seminar: Interest Groups (prereq #)
134736 1315-1500 W, SocSci 1383, Kvavik, 3 cr

8332 Seminar: Constitutional Law (prereq 5501, 5502 or #)
034737 1515-1700 T, SocSci 1383, Krislov, 3 cr

8337 Seminar: Policy Evaluation (prereq #)
037587 1315-1500 T, Law 3, Ostrom, 3 cr

8340 Individual Reading and Research in American Politics (prereq #, △)
822928 1-3 cr

8350 Research Seminar: American Politics (prereq #)
622929 3 cr

8440 Individual Reading and Research in International Relations (prereq #, △)
022930 1-3 cr

8450 Research Seminar: International Politics and Foreign Policy (prereq #)
822931 3 cr

8601 Government and Politics in Western Europe (prereq 5441)
139354 1515-1700 Th, Law 1, Shively, 3 cr

8640 Individual Readings and Research in Comparative Politics (prereq #, △)
622932 1-3 cr

8643 Comparative Political Organization (prereq #)
634739 1515-1700 Th, SocSci 1383, Holt, 3 cr

8650 Research Seminar: Comparative Politics (prereq #)
422933 3 cr

8660 Seminar: Selected Topics in Comparative Politics (prereq #)
707211 1515-1700 W, SocSci 1383, Duvall, 3 cr

PORTUGUESE (Port)
Spanish And Portuguese
Liberal Arts

R1002 **Beginning Portuguese** (prereq 1001 or #)
023205 0915-1000 MTWThF, FolH 203, 5 cr

R1003 **Beginning Portuguese** (prereq 1002 or #)
823206 1015-1100 MTWThF, JonesH 11, 5 cr

R1005 **Intermediate Portuguese** (prereq 1004 or 1104)
623207 1115-1200 MTWThF, FolH 208, 5 cr

R3014 **Conversation and Composition** (prereq 1005)
633705 1215-1300 MWF, FolH 203, Costa-Lima, 5 cr

3970 Directed Studies (prereq #, △, college approval)
223209 1-5 cr

5523 Literature Expression in Portuguese America (1500-1807) (prereq three 3xxx Port courses or △)
433706 1315-1400 MWF, FolH 203, Costa-Lima, 4 cr

5970 Directed Readings (max 15 cr; prereq #, △, CLA approval)
623210 1-5 cr

5990 Directed Research (prereq #, △, CLA approval)
423211 1-5 cr

PROSTHODONTICS (Pros)
Dentistry

8001 Research in Prosthodontics
822041 Goodkind, ar cr

8003 Advanced Technical Restorative Dentistry
505444 Goodkind, ar cr

8005 Advanced Clinical Prosthodontics I
422043 Goodkind, ar cr

8006 Advanced Clinical Prosthodontics II (prereq #)
122045 Goodkind, ar cr

8017 Seminar: Advanced Prosthodontics (prereq #)
322049 Goodkind, ar cr

8018 Seminar: Advanced Prosthodontics (prereq #)
105446 Goodkind, ar cr

8032 Principles of Maxillofacial Care (prereq #)
722050 Moller, ar cr

PSYCHOEDUCATIONAL STUDIES (PsyS)
Educational Psychology
Education

3106 Exceptional Students in Regular Classes (§5106) (A-N only)
401712 –1 1315-1500 T, BuH 120, Reynolds, 2 cr (elem ed maj only)
101714 –2 1615-1800 W, BuH 120, Walter, 2 cr (secondary ed maj only)

5100 Childhood Language Development: Classroom Implications (§SpEd 5100) (A-N only)
122319 1600-1730 TTh, PtH 102, Walter, 3 cr

5101 Education of Exceptional Children (§SpEd 5101) (A-N only)
834884 1615-1800 TTh, PtH 111, Balow, Lininger, 4 cr

5104 Social and Vocational Development of Handicapped Students (§SpEd 5104; prereq #) (A-N only)
806986 1800-2130 W, PtH 214, W Tennyson, 4 cr

5106 Exceptional Students in Regular Classes (§3106) (A-N only)
701716 –1 1315-1500 T, BuH 120, Reynolds, 2 cr (elem ed maj only)
301718 –2 1615-1800 W, BuH 120, Walter, 2 cr (secondary ed maj only)

5108 Parent and Professional Planning for Handicapped Students (§SpEd 5108) (A-N only)
404724 1615-1800 MW, FolH 50, Reynolds, 3 cr

R5110 **Counseling Procedures** (§CSPP 5110) (A-N only)
704681 –1 1900-2130 M, BuH 125, 3 cr
004671 –2 1315-1545 Th, BuH 120, 3 cr

5120 Introduction to Mental Retardation (§SpEd 5120, CPsy 5315; prereq 5101 or SpEd 5101 or #) (A-N only)
634885 1630-1800 TTh, ChDev 105, Turnure, 4 cr

5145 Teaching Speech to the Hearing Impaired I (§SpEd 5145; prereq #) (A-N only)
134888 1700-1830 TTh, PtH 215, Rose, 3 cr

R5151 **Managing Problem Behavior in the Classroom** (§SpEd 5151) (A-N only)
234890 1630-1900 M, Wood, 3 cr (Richfield High School)

R5153 **Disturbed and Disturbing Students II: Program Selection, Operation, Modification, and Evaluation** (§SpEd 5153; prereq 5152 or SpEd 5152) (A-N only)
134891 1630-1900 W, BioSci 58, Wood, 3 cr (StP)

5155 Psychoeducational Interventions: Psychotic Children (§SpEd 5155; prereq 12 cr in psychology, child psychology or special education) (A-N only)
122322 1630-1900 W, PtH 111, Voeltz, 3 cr

5175 Structure and Function of the Eye: Educational Implications (§SpEd 5175) (A-N only)
534894 1630-1900 T, ChDev 218, Knowlton, 3 cr

5180 Education of the Disadvantaged (§SpEd 5180; prereq 12 cr in psychology, educational psychology or sociology) (A-N only)
922323 1800-2100 M, BuH 120, Baldwin, 3 cr

5181 Methods and Materials for Handicapped Infants and Preschool Children (§SpEd 5181; prereq 12 cr in education or #) (A-N only)
704678 1600-1830 W, ChDev 218, DeBarry, 3 cr

5200 Assessment and Decision Making in Special Education (A-N only)
334895 1630-2000 W, WullH 230, 4 cr

5305 Behavior Analysis Procedures with Mildly and Moderately Handicapped People (§SpEd 5301, 5303; PsyF 5149 or Psy 5017 rec) (A-N only)
722324 1630-1800 TTh, NichH 107, Deno, 4 cr

R5332 **Career Development: Organizational Interventions and Programs** (§CSPP 5332; prereq 5210 or 5331 or #) (A-N only)
522325 1615-1830 T, BuH 120, L Hansen, 3 cr (1 hr ar)

5505 Cross-Cultural Counseling (§CSPP 5505; prereq #) (A-N only)
322326 1315-1500 MW, BuH 125, Snoke, 3 cr

5549 Assessment of the Preschool Child (prereq statistics or measurement course or grad course in assessment) (S-N optional)
638788 0830-1630 S, EltH N647, Weinberg, 3 cr (April 14, 28, May 12, June 2)

5601 Practicum: Special Education (prereq #) (S-N optional)
127911 –1 Wood, ar cr
306983 –2 Walter, ar cr
513169 –3 Voeltz, ar cr
134896 –4 ar cr

5900 Independent Study (max 12 cr; prereq #) (A-N only)
527914 –1 ar cr (special ed maj only)
127916 –2 ar cr (counseling maj only)
027917 –3 Weinberg, ar cr (school psych maj only)

R8150 Psychological Aspects of Counseling Supervision (§CSPP 8150; prereq 8510, 8604 or CSPP 8510, CSPP 8604, #)
122327 Anderson, 3 cr

8301 Behavioral Research with Handicapped Students (max 4 cr; prereq 5101 or SpEd 5101 or Psy 5017 or #)
438789 1530-1800 Th, ChDev 216, Deno, ar cr

R8304 Counseling Theory and Procedures III (§CSPP 8304; prereq 8303, ¶8604, #)
022328 1415-1800 Th, BuH 125, L Hansen, 3 cr

8307 Field Placement in Counseling and Student Personnel Psychology (max 9 cr; prereq MA student in CSPP, ¶8304, ¶8604)
822329 1-3 cr

R8312 Personality Appraisal in Children, Adolescents (§SchP 8312; prereq #)
122330 1600-1800 TTh, EltH N508, Greenberg, 5 cr

8501 Research in Special Education (max 3 cr)
838790 –1 1015-1100 M, BuH 125, Bruininks, 1 cr
638791 –2 1115-1200 M, BuH 125, Bruininks, 1 cr

R8508 Seminar: School Psychology (prereq #)
022331 Lindborg, ar cr

R8512 Seminar: Advanced Counseling Research (§CSPP 8512; prereq PhD student, #)
822332 1015-1200 TTh, BuH 125, Hummel, Shaffer, others, 4 cr

R8515 Theories and Methods of Instructional Intervention (§SchP 8515; prereq 8310, 8311 or SchP 8310, 8311 or #)
513172 1600-1900 M, EltH N534, Voeltz, 3 cr

8520 Seminar: Research in School Psychology (max 6 cr; prereq #)
622333 1300-1500 F, EltH N534, Egeland, 2 cr

R8543 College Student Personnel Work-Discipline, Administration (§CSPP 8543; prereq 8140 or CSPP 8140)
604687 1415-1600 T, BuH 125, Snoke, 2 cr

8561 Seminar: Administration of Special Education (§EdAd 5181; prereq 5160 or SpEd 5160, EdAd 5103 or #)
422334 1615-1800 M, ChDev 105, Weatherman, 3 cr

8600 Clinical Practice in School Psychology (prereq 8310 or SchP 8310)
222335 Egeland, 1-5 cr

8601 Advanced Practicum (prereq #)
122336 ar cr

8604 Counseling Practicum III (§CSPP 8604; prereq ¶8304, 8603, #)
922337 1515-1700 MW, BuH 125, Anderson, 3 cr (2 hrs ar)

8610 Practicum: School Psychological Services (prereq #)
522339 Lindborg, 1-5 cr

8615 Counseling Practicum: Student Counseling Bureau (max 9 cr, §CSPP 8615; prereq 8614)
722341 1415-1600 Th, BuH 123, Fiedler, Loper, others, 3 cr (addnl hrs ar)

8641 Clinical Practice in Diagnosis and Treatment of College Learning Difficulties (§CSPP 8641; prereq 8341 or CSPP 8341)
322343 1415-1600 W, EddyH 202, Baldwin, 3 cr

8700 Internship: School Psychological Services (prereq 8610 or SchP 8610, #)
122344 Egeland, Lindborg, 5-15 cr

8701 Internship: Counseling and Student Personnel Psychology (§CSPP 8701, max 9 cr for MA and specialist students, max 18 cr for PhD students)
022345 Snoke, 0-6 cr

8710 Internship: Instruction and Supervision in School Psychology (§SchP 8710; prereq 8700 or SchP 8700 or #, doctoral candidate in school psychology)
822346 Greenberg, 1-9 cr

8900 Research Problems (prereq #)
227938 –1 ar cr (special ed maj only)
427940 –2 ar cr (counseling maj only)
127942 –3 ar cr (school psych maj only)

8910 Directed Study (prereq #)
727944 –1 ar cr (special ed maj only)
327946 –2 ar cr (counseling maj only)
027948 –3 ar cr (school psych maj only)
206992 –4 1600-1830 T, EltH N534, Erickson, 3 cr

PSYCHOLOGICAL FOUNDATIONS OF EDUCATION (PsyF)
Educational Psychology
Education

R3380 Introduction to Human Relations (prereq education jr or sr) (S-N only)
★LECT 1415-1600 M, SciCB 125, Oden, Maruyama
827952 –1 REC 0815-1000 W, BuH 125, 3 cr
427954 –2 REC 1415-1600 W, BuH 123, 3 cr
127956 –3 REC 1415-1600 W, BuH 120, 3 cr
727958 –4 REC 1900-2045 W, BuH 125, 3 cr
927960 –5 REC 0815-1000 Th, BuH 125, 3 cr
527962 –6 REC 1400-1545 Th, VoTech R370, 3 cr (StP)

R5110 Introductory Statistical Methods (S-N optional)
827966 –1 1015-1200 MW, BuH 123, Welch, 4 cr
427968 –2 1615-1800 MW, FolH 105, Davison, 4 cr

5112 Statistical Methods Computer Laboratory (prereq 5110 or equiv) (S-N only)
012513 0815-1000 T, EltH N647, Anderson, 2 cr

5120 Educational Measurement in the Classroom (S-N optional)
622347 1615-1800 TTh, FolH 50, Kellogg, 4 cr

5121 Basic Principles of Measurement (S-N optional; prereq 5110 or 8110 or Psy 3801 or equiv)
422348 1015-1130 TTh, PeikH 315, Davison, 3 cr

5125 Principles and Methods of Evaluation (S-N optional)
222349 1615-1730 MW, NichH 207, Merwin, 3 cr

5162 Personality and Social Development (prereq 5 cr introductory psychology) (A-N only)
434712 1615-1730 MW, FolH 308, Erickson, 3 cr

5173 Issues in School Desegregation (prereq survey course in social psychology or #) (A-N only)
622350 1800-2045 Th, BuH 120, Maruyama, 4 cr

5182 Psychology of Student Learning (A-N only)
422351 1730-1930 W, PtH 215, Turnure, 3 cr

5183 Adult Learning and Educational Practice (A-N only)
607198 1730-1930 T, WullH 230, Bart, 4 cr

5305 Workshop in Human Relations (§CSPP 5305, Educ 5305) (S-N only)
222352 1630-2130 M, SciCB 125, Maruyama, 6 cr

5333 Introduction to Computer Operations: U of M Systems, SPSS (S-N only)
322360 1515-1600 MTWThF, EltH N647, Anderson, 1 cr (April 2-13)

5520 Evaluation Colloquium (max 6 cr) (A-N only)
022359 1215-1330 F, EltH N647, Kellogg, 1 cr (alt F)

5570 Problem Analysis and Decision Making (A-N only)
039355 1730-2000 Th, EltH N647, Pechtel, 4 cr

5900 Directed Study (prereq #) (S-N optional)
922354 ar cr

8111 Statistical Methods (prereq 8110)
722355 0815-0900 MWF, BuH 123, MacEachern, 3 cr

R8112 Statistical Methods (prereq 8111)
627984 –1 0915-1000 MWF, BuH 123, MacEachern, 3 cr
227986 –2 1415-1530 MW, WullH 230, Terwilliger, 3 cr
927988 –3 1615-1730 MW, FolH 110, Stecklein, 3 cr

8117 Factor Analysis (prereq 8111, 5111 or ¶5111 or #)
522356 1115-1200 MWF, EltH N647, Terwilliger, 3 cr

8120 Methods in Educational Research (prereq PhD student only - spring qtr)
322357 1300-1600 T, PeikH 225, Hummel, 3 cr

8130 Computer Application to Statistical Analyses (prereq 8112)
122358 0815-0900 MWF, EltH N647, Anderson, 3 cr

8510 Analysis of Results from Nonexperimental Research (prereq 8111 or #)
122361 0945-1100 TTh, BuH 123, Maruyama, 4 cr

8525 Seminar: Special Topics in Educational Evaluation (prereq 5125 or #)
022362 1515-1700 T, BuH 330, Corcoran, 3 cr

R8544 Knowledge and Skill (prereq #)
025777 1415-1700 T, BlegH 350, P Johnson, 3 cr

8721 Internship: Evaluation (max 12 cr; prereq #)
222366 1015-1200 F, BuH 330, Welch, 3 cr

8900 Research Problems (prereq #)
210198 ar cr

8910 Problems: Statistics for Students in Education and Psychology
427999 –1 MacEachern, Terwilliger, others, ar cr
128001 –2 1015-1100 MWF, EltH N647, Hummel, ar cr

8920 Problems: Measurement (max 9 cr)
122367 Davison, Merwin, others, 1-3 cr

8921 Problems: Evaluation (prereq 5621 or 8525)
007201 Corcoran, Welch, others, ar cr

8930 Research Problems: Computer Applications (prereq #)
122370 Anderson, ar cr

8940 Research Problems: Learning and Cognition (prereq #)
722372 Bart, ar cr

8960 Research Problems: Personality (max 9 cr; prereq #)
322374 Rest, ar cr

8970 Research Problems: Social Psychology (prereq #)
622378 1930-2100 T, BuH 330, D Johnson, Maruyama, ar cr (alt T)

8980 Research Problems: Instructional Psychology (max 9 cr; prereq #)
022376 Burris, ar cr

PSYCHOLOGY (Psy)
Liberal Arts

1001 Introduction to Psychology
222934 1315-1400 MTWThF, WilleyH 125, 175, Burkhardt, Fox, others, 5 cr

R1005 Introductory Laboratory Psychology (1004-1005†; prereq 1004)
★LECT 0815-0900 T, SciCB 175, Fox, Peterson
128015 –1 LAB 1315-1600 T, EltH 50, 4 cr
828017 –2 LAB 1315-1600 T, EltH 60, 4 cr
428019 –3 LAB 0915-1200 W, EltH 50, 4 cr
828020 –4 LAB 0915-1200 W, EltH 60, 4 cr
628021 –5 LAB 1315-1600 W, EltH 50, 4 cr
228023 –6 LAB 1315-1600 W, EltH 60, 4 cr
928025 –7 LAB 0915-1200 Th, EltH 50, 4 cr
528027 –8 LAB 0915-1200 Th, EltH 60, 4 cr
328028 –9 LAB 1315-1600 Th, EltH 50, 4 cr
528030 –10 LAB 1315-1600 Th, EltH 60, 4 cr
602650 –11 LAB 0915-1200 F, EltH 50, 4 cr
102653 –12 LAB 0915-1200 F, EltH 60, 4 cr

R1011 Career Decision Making (cannot be applied toward any CLA degree)
625779 1215-1400 Th, ChDev 105, Sarkissian, 2 cr

3012 Introduction to Applications of Contemporary Learning Principles (prereq 1001, 3011 or #) (A-N only)
338882 0945-1100 TTh, PtH 214, Thompson, 4 cr

R3031 Sensation and Perception (prereq 1001, 1004)
122935 0945-1100 TTh, AndH 370, 4 cr

3061 Introduction to Physiological Psychology (§5061; prereq 1001, 1005 or Biol 1011 or #)
922936 1215-1300 MWF, SciCB 325, Roberts, 4 cr

3124 Psychology of Individual Differences (prereq 3801)
722937 1245-1400 TTh, MechE 18, Hendel, 4 cr

3206 Applied Social Psychology (prereq 1001, 3201)
612224 1245-1400 TTh, EltH N119, Heath, 4 cr

3604 Introduction to Abnormal Psychology (§5604; prereq 1001)
522938 1115-1200 MWF, WilleyH 175, Butcher, 4 cr

3607 Survey of Clinical Intervention Methods (prereq 3604 or 5604)
538881 1115-1230 TTh, FraserH 102, Hollon, 4 cr

3801 Introduction to Measurement and Statistical Methods (prereq 1001 or equiv)
722940 1415-1530 TTh, SmithH 100, Cudeck, 4 cr

3960 Undergraduate Seminar (prereq 1001, #, △)
522941 1-5 cr

9,280 students have discovered the

hidden UNIVERSITY

Join them for an alternative way of learning.

Take these credit courses at your own pace in your own place:

Comp 1011 and new upper division courses
Span 1101-02-03, 1502
Math 1201-11-21-31
Psy 1001
Phys 1271-81-91

Independent Study offers 365 courses in 81 academic departments. Pick up a bulletin — 45 Wesbrook Hall.

Phone 373-3256. MasterCard VISA

Independent Study, Continuing Education and Extension, University of Minnesota — an equal opportunity educator and employer

Explore the history and future of electronic images . . .

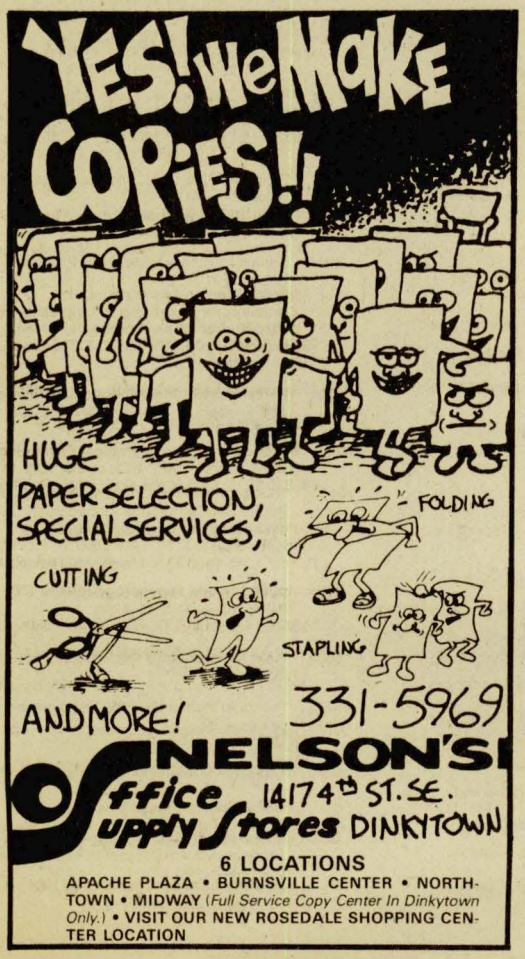
Video Theory and Criticism

This course will explore the variety of video genres – documentary, performance, installation, conceptual and expressive – from a number of critical positions and will examine the relationship of these genres and arts. Fees: Members – $81.

Performance Art

This workshop will give videomakers the opportunity to explore the nature and origins of performance art. Areas to be covered will include actor/director relationships, blocking actors for the camera, exploration of scripts from page to performance, and integration of video with live performers. Prerequisite: Video Primer or Video Production I. (Prerequisite may be waived for qualified students. Inquire at Registration.) Fees: Members – $63.

ucvideo
A Non-Profit Center for Video Arts and Education
425 Ontario Street SE Minneapolis, MN 55414 (612) 376-3333



6 LOCATIONS
APACHE PLAZA • BURNSVILLE CENTER • NORTHTOWN • MIDWAY (*Full Service Copy Center In Dinkytown Only.*) • VISIT OUR NEW ROSEDALE SHOPPING CENTER LOCATION


Stanley H. Kaplan
The Smart MOVE!

PREPARATION FOR:
GMAT • LSAT • GRE

Stanley H. KAPLAN EDUCATIONAL CENTER

Call Days Evenings & Weekends
378-9191
328 East Hennepin Ave.
Near U of M

3970 Directed Studies (prereq #, △, college approval)
322942 1-8 cr

3990 Directed Research (prereq #, △, college approval)
536368 1-8 cr

R5013 Psychology of Learning (prereq 5012)
122943 1015-1100 MWF, EltH N119, Overmier, 4 cr

R5014 Psychology of Human Learning and Memory (prereq 1005 or 3011 or 3051 or # except for student in honors sequence, grad students)
022944 0945-1100 TTh, WullH 230, Fox, 4 cr

5062 Neuropsychology of Motivation and Learning (prereq 5061 or #)
622946 1115-1230 TTh, BuH 123, Roberts, 4 cr

R5126 Differential Psychology (5125-5126†; prereq 5125, honors cand or grad stu)
206958 1115-1230 TTh, EltH N119, Bouchard, 4 cr

R5202 Attitudes and Social Behavior (prereq 1001, 3201 or #)
222948 1315-1400 MWF, EltH N119, Borgida, 4 cr

R5501 Vocational Psychology (prereq 3801 or #)
122949 0945-1100 TTh, EltH N119, Dawis, 4 cr

R5702 Psychology of Individual Behavior in Organizations (prereq 5701 or 8 cr in psychology or #)
422950 0945-1100 TTh, VinH 16, Campbell, 4 cr

5751 Psychology of Advertising (§Jour 5251; prereq 1001)
110252 1215-1300 MWF, MurH 105, Jones, 4 cr

5865 Measurement of Latent Traits (prereq 5862 or #)
734425 Weiss, 4 cr

R5900H Honors Seminar: Psychology (prereq psychology honors maj or #) (S-N only)
313187 1415-1600 W, EltH N257, Peterson, 1 cr

5901H Honors Project (prereq sr, #)
013189 1-8 cr

5960 Topics in Psychology (prereq 1001, #)
222951 1-5 cr

R8005 Seminar: Philosophical Psychology (8004-8005†; prereq 8004)
825781 1515-1700 Th, EltH N423, Meehl, 3 cr

8019 Seminar of the Analysis of Operant Behavior (prereq Psy 5017, 5019 or ¶, #)
339305 1330-1500 Th, EltH N257, Thompson, Overmier, others, 1 cr

8037 Psychophysics and Audition (prereq 8034 or #)
534426 1315-1445 MW, EltH 225, Viemeister, 3 cr

8056 Seminar: Psychology of Language (prereq 5054, #)
917090 1300-1500 TTh, EltH 225, 3 cr

8070 Seminar: Psychopharmacology (prereq #)
522955 Pickens, 1 cr

8121 Achievement Motivation and Women (prereq 8 cr psychology, grad student, #)
022958 Faunce, 3 cr

8206 Seminar: Research in Social Psychology (prereq 8205, #)
822959 1300-1500 T, EltH N305, Berscheid, Snyder, others, 3 cr

8208 Advanced Social Psychology: The Self (prereq #)
425783 Snyder, 3 cr

8215 Marriage and Family Counseling II (§FSoS 8215; prereq #)
422964 1000-1215 T, ClaOff B25, Boss, 3 cr (StP)

8218 Theories of Family Interaction (§FSoS 8518; prereq #)
434421 1230-1345 T, Berry, Bass, 2 cr (StP)

8503 Counseling Psychology III: Interviewing (prereq 8501, 8502, counseling psychology stu or #)
★LECT 1415-1500 MW, EltH N257, Brown, 3 cr
628939 –1 LAB 1315-1500 F, EltH N257, Brown

8516 Practicum in Student Counseling (prereq 8515)
122960 1415-1600 Th, EltH N119, Loper, 3 cr

8519 Practicum in Rehabilitation Counseling (prereq 8503 or #)
022961 1315-1500 TTh, Mayo 796, Athelstan, 3 cr

8520 Fieldwork in Applied Psychology (prereq #)
822962 1-6 cr

8543 Seminar: Practices, Approaches and Issues in Counseling Psychology (prereq grad student in counseling psychology or #)
622963 1515-1645 F, EltH N218, Lofquist, 1 cr (alt F)

8546 Seminar: Research in Counseling Psychology (prereq 8545)
222965 1615-1800 M, EltH N595, Betz, 1 cr (alt M)

8553 Marriage and Family Counseling: Internship III (prereq 8214, 8215, 8216, #)
134423 1500-1630 M, Berry, ar cr (StP)

8560 Internship in Counseling Psychology (prereq #)
122966 1-6 cr

8563 Seminar: Vocational Counseling for Work Adjustment (prereq 8562)
922967 1015-1130 F, EltH N595, Dawis, 2 cr

8566 Advanced Seminar: Vocational Counseling for Work Adjustment (prereq 8565)
722968 1015-1130 M, EltH N218, Lofquist, 2 cr

8574 Seminar: Strong Vocational Interest Blank/Strong-Campbell Interest Inventory (prereq grad or #)
236834 Hansen, 2 cr

8613 Professional Methods in Clincal Psychology I: Assessment (prereq clinical psychology maj or #)
★LECT 1415-1530 TTh, EltH N423, Butcher, others, 4 cr
028940 –1 LAB 1315-1500 W, EltH N423, Butcher, others

8620 Practicum in Clinical Psychology (prereq #)
522969 1-6 cr

8622 Professional Methods: Clinical Psychology II: Behavioral Therapy (prereq PhD candidate in clinical psychology, 8611, 8612, 8613, 8614 or #)
234422 Depue, 2 cr

8640 Seminar: Topics in Clinical Psychology (prereq #)
922970 1-6 cr

8646 Seminar: Advanced Clinical Psychology (prereq 8645)
722971 1 cr

8670 Internship in Clinical Psychology (prereq PhD candidate in clinical psychology, permission of director of training program)
322973 2-4 cr

8883 Seminar: Psychometric Methods (8881-8882-8883†; prereq 8882)
122974 1115-1300 W, EltH N668, Weiss, 1 cr

8970 Seminar: Special Areas of Psychology and Related Sciences (prereq #)
022975 1-6 cr

8980 Directed Teaching in Psychology (prereq #)
822976 1-6 cr

8990 Research Problems (prereq #)
125785 1-6 cr

PUBLIC AFFAIRS (PA)

5132 Leadership and Policy Issues Seminar (prereq 5131, △)
638855 1600-2100 MT, Terry, 3 cr (Rm 137, 2610 University Ave)

5135 Social Ethics in Policy Seminar (prereq 5134, △)
438856 1900-2130 W, Terry, 3 cr (Rm 137, 2610 University Ave)

5162 Technology Planning II (prereq 5161, #)
134428 1115-1300 TTh, BlegH 340, Geesaman, 4 cr

R5301 Multinational Corporation (prereq Econ 1001, 1002)
723098 1315-1500 TTh, BlegH 235, Kudrle, 4 cr

5404 Development and Change (A-N only)
436606 1315-1500 MW, BlegH 255, Fass, 4 cr

5505 Housing Policy (prereq 12 cr social sciences or #)
107223 1315-1500 TTh, BlegH 340, Adams, 4 cr

5506 Topics in Housing Policy
707225 1820-2050 M, BlegH 210, Bradford, 4 cr

R5514 Group Techniques in Public Affairs and Planning (prereq #)
523099 1900-2130 T, Mgmt Econ 128, Bryson, 4 cr (addnl Sat hrs ar)

R5545 Planning Methods
410068 1115-1300 MW, BlegH 360, Lukermann, 4 cr

R5550 Proseminar (prereq #)
410071 –1 1315-1500 W, BlegH 335, Geesaman, T Dewar, 2 cr (Technics and Politics)
034429 –2 1315-1500 F, BlegH 350, Fraser, 2 cr (Women and Social Policy)

R5561 Case Studies in Planning and Plan Making (prereq sr or grad)
134431 1900-2130 Th, BlegH 350, Einsweiler, 3 cr

5991 Directed Study (prereq #)
034432 ar cr

8206 Policy Analysis III (prereq △)
123101 1515-1700 Th, BlegH 255, N Eustis, 3 cr

8211 Administrative Theory and Behavior (prereq 8210, #)
923102 1115-1230 TTh, Law 1, Jernberg, Naftalin, 3 cr

R8253 Workshop (prereq #)
834433 –1 1315-1500 T, Law 3, Ostrom, ar cr
234436 –2 0915-1100 W, Law 3, Abrahamson, ar cr (Global Environmental Policy)
934438 –3 1115-1300 W, BlegH 335, Craig, ar cr (Equity Issues)
134437 –4 1115-1300 W, Law 3, Hoenack, ar cr (Topics in Public Choice)
434435 –5 1900-2130 W, BlegH 255, Cleveland, ar cr (Management of Peace)
134440 –6 1115-1300 F, BlegH 415, Copeland, ar cr (Strategy Development in Human Services)
734439 –7 1315-1500 F, Law 3, Jernberg, ar cr (Local Budgeting)

8311 Legal Environment of Public Administration (prereq #)
934441 1515-1700 TTh, Law 3, Hanson, 3 cr

8511 Law, Urban Affairs
323105 1715-1900 T, Mgmt Econ 160, Hetland, 3 cr

8620 Seminar: Education Policy (prereq #)
534443 1315-1500 M, BlegH 335, Hoenack, 3 cr

8991 Individual Readings, Research in Public Policy Analysis, Administration (prereq #)
023107 ar cr

PUBLIC HEALTH (PubH)

R3001 Personal and Community Health (§3004, GC 3114)
123874 1015-1100 MWF, WilleyH 175, Rothenberger, 3 cr

R3004 Basic Concepts in Personal and Community Health (§3001, 3033, GC 3114)
923875 1015-1100 MTWThF, WilleyH 175, Rothenberger, 5 cr

R3033 Fundamentals of Alcohol and Drug Abuse (§3004)
723876 1015-1100 TTh, WilleyH 175, Rothenberger, 2 cr

3034 Topics in Alcohol and Drug Problems (prereq #)
523877 ar cr

3151 Introduction to Environmental Health
323878 0915-1000 MWF, JacH 2135, Thompson, 3 cr

3301 Perspectives: Interrelationship of People and Animals in Society Today (§5303, 5304, CVM 3100)
928980 1515-1700 TF, JacH 2135, Anderson, Quigley, 2-3 cr

R5001 Philosophical and Conceptual Bases of Public Health Practice (prereq public health grad student or #)
518159 1415-1500 M, 1415-1600 W, HSUnitF 2120, 2130, Schwanke, others, 2 cr

5002 Public Health Issues in Historical Perspective (§HMed 5002)
238759 1315-1430 TTh, PWB 5206, Eyler, 3 cr

5004 Field Instruction in Public Health (prereq #)
523880 ar cr

R5005 Topics in Public Health (prereq advanced proposal, #)
123882 ar cr

5015 Topics in Interdisciplinary Studies (prereq #)
823884 ar cr

5020 Public Health Social Work Integrative Seminar (§SW 5020; prereq beginning level MSW/MPH maj)
423886 1515-1700 T, FordH 60, Bracht, Schwanke, others, 2 cr

R5023 Human Sexuality for Health and Helping Professionals III (prereq completion of PubH 5022 or HSU 5027 or SW 5023 or FSoS 5240 or #)
123888 1715-1930 Th, MoosT 2690, Maddock, Terrell, others, 3 cr

5043 Fundamentals of Alcohol and Drug Problems
037220 1315-1400 T, 1315-1500 Th, HSUnitF 2110, 2140, Kincannon, 3 cr

5044 Topics in Alcohol and Drug Problems (prereq advance proposal, #)
837221 1-4 cr

R5049 Alcohol and Drug Problems: Assessment and Response (prereq 5043, 5045 or #)
637222 1415-1630 T, Mayo A272, Kincannon, 3 cr

R5057 Health Education Issues Arising from Planned and Unplanned Societal Change (prereq 5055, grad student in health sciences or #)
407249 0915-1200 M, PWB 5224, Carlaw, others, 3 cr

R5059 Interpersonal Behavior in Health Organizations
033216 1515-1700 MW, MoosT 2620, Veninga, 4 cr

R5064 The Teaching-Learning Process in the Health Care Setting (§HSU 5011; prereq #)
023897 1515-1800 M, MoosT 2571, 2585, Garloff, 3 cr

R5080 Internship in Patient Education Studies (prereq health education maj)
937212 Carlaw, others, ar cr

R5081 Internship in Family and Community Studies (prereq health education maj)
737213 Carlaw, others, ar cr

R5082 Internship in Occupational Health Education Studies (prereq health education maj)
537214 Carlaw, others, 10 cr

R5083 Internship in Health Policies and Planning (prereq health education maj)
337215 Carlaw, others, ar cr

5090 Research Topics in Health Education (prereq health education maj)
833217 4-8 cr

R5093 Seminar: Health Education in the Workplace (prereq 5065 or #)
633218 1315-1500 T, Mayo 1205, Veninga, 2 cr

5097 Topics: Selected Readings (prereq grad student in health sciences)
739396 Carlaw, ar cr

R5098 Topics: Selected Readings (prereq #)
137216 Carlaw, others, ar cr

5150 Topics: Environmental Health (prereq #)
123901 Barber, ar cr

5152 Environmental Health
023902 0815-0900 TTh, JacH 2135, Vesley, 2 cr

5158 Health Risk Evaluation (prereq environmental health maj or #)
639584 1315-1500 M, Mayo 1250, Stevens, 2 cr

5159 Seminar: Environmental Health (prereq environmental health student)
823903 1315-1500 Th, OwreH 2210, 1 cr

5161 Administration of Environmental Health (prereq environmental health student or #)
638760 0815-1000 T, MoosT 2571, 2585, Stauffer, 3 cr

5181 Air Pollution (prereq general chemistry or #)
507260 0815-0900 MWF, JacH 2135, 3 cr

5184 Air Analysis (prereq 5211, #) (S-N only)
718161 Thompson, 3 cr

5194 Occupational Safety
423905 McJilton, 2 cr

5203 Radiation Dosimetry (prereq #)
433219 1115-1200 MWF, Mayo 1210, Barber, 3 cr

5204 Radiation Dosimetry Laboratory (prereq ¶5203)
833220 Barber, 1 cr

5209 Seminar: Health Physics
723909 1615-1700 T, Mayo 1210, Barber, 1 cr

5214 Agricultural Occupational Health
923911 McJilton, 3 cr

5215 Applied Occupational Toxicology (prereq 5261 or #)
206295 1415-1700 F, Mayo 1220, Stevens, 3 cr

5218 Field Problems in Occupational Health (prereq 5211, 5212, #)
523913 0815-1100 F, Mayo 1210, McJilton, 3 cr

5242 Environmental Health Aspects of Groundwater Systems
124054 1015-1100 TTh, PWB 5224, Singer, 2 cr

5253 Introduction to Hazardous Waste Management
318163 1545-1700 MW, Mayo 1220, Thompson, 3 cr

5265 Applied Environmental Toxicology (prereq 5261 or #)
610196 0915-1200 Th, Mayo 1205, Stevens, 3 cr

5269 Seminar: Environmental and Occupational Toxicology (prereq 5261 or #)
410197 1115-1200 T, Mayo 1210, Stevens, 1 cr

5301 Perspectives: Interrelationships of People and Animals in Society Today (§5303, 5304, CVM 5100)
528979 1515-1700 TF, JacH 2135, Anderson, Quigley, 2-3 cr

R5315 Problems in Disease Control and Eradication (prereq VPH maj or #)
724056 1015-1200 TTh, MoosT 1108, Anderson, Pullen, ar cr

5317 Problems in Veterinary Medical Administration and Supervision (prereq VPH maj or #)
524057 Anderson, 3 cr

5326 Research in Animal/Human Health (prereq VPH maj or #)
324058 ar cr

R5342 Public Health Bacteriology (prereq MicB 5216, 5232, 5234, #)
024063 1215-1400 MWF, Stickle, ar cr (MN State Health Dept)

5362 Epidemiology of Occupational Hazards (prereq basic course in epidemiology, statistics)
124059 1115-1200 MWF, MoosT 2580, Mandel, 3 cr

5370 Applied Epidemiology (prereq 5330 or 5333, basic course in biostatistics or #)
524060 Anderson, 1-5 cr

5379 Topics in Epidemiology (prereq epidemiology student or #) (S-N only)
324061 1315-1500 Th, Dean, 2 cr (MN State Health Dept)

R5388 Exercise Testing, Conditioning and Rehabilitation (prereq 5387)
824064 1600-1800 MW, CookeH 206, Leon, Crow, others, 4 cr

5393 Evaluation of Community Health Behavior Interventions (prereq grad or #...statistical courses covering regression or analysis of variance rec)
037217 3 cr

5400 Introduction to Quantitative Methods in the Biologic and Health Sciences (prereq Biol 1009, Chem 1004-1005, Math 1111 or 1201 or #)
212775 1115-1300 TTh, Mayo 1220, Jeffries, 4 cr

5403 Computer Applications in Health Services Administration (prereq non-biometry maj, health science regis or #)
624065 1315-1400 MWF, MoosT 2520, Finkelstein, 4 cr

5432 Biomedical Computing III (prereq 5431 or #)
424066 0915-1000 MTWTh, MoosT 2580, Ellis, 4 cr

5435 Computer Methodology in the Delivery of Health Care III: Development of Clincal Information Systems (§LMed 5198; prereq 5432 or #)
224067 1115-1230 TTh, PWB 9222, Gatewood, 3 cr

5454 Biometry III (prereq 5452, #)
124068 1015-1100 MWF, MoosT 2690, Goldman, 3 cr

5455 Biometry Laboratory III (prereq 5452)
924069 1015-1100 TTh, MoosT 2520, Le, 2 cr

R5456 Biometry Consulting Seminar (prereq biometry maj)
912777 1315-1430 TTh, MoosT 2639, Boen, ar cr

5461 Biometric Topics in Epidemiology (prereq biometry or epidemiology student, #)
124071 0815-0900 MWF, Mayo 1220, Kjelsberg, 3 cr

5470 Topics in Biometry (prereq #)
924072 ar cr

5471 Biometry Literature Seminar (prereq B-HIS grad student or #) (S-N only)
307258 1415-1600 T, Mayo 1220, McHugh, 2 cr

5513 Topics: Adult Health (prereq #) (S-N only)
837218 Ostwald, 1-3 cr

5522 Public Health Nursing: Education II (prereq 5509, 5521) (A-N only)
133224 1315-1515 W, Mayo 1205, Aroskar, 3 cr

5529 Public Health Nursing Seminar: Leadership Roles in Public Health Nursing (prereq public health nursing grad) (S-N only)
712750 1115-1300 Th, MoosT 2676, Ostwald, 1 cr

5530 Public Health Nursing Practicum (prereq #) (S-N only)
312752 Aroskar, 1-6 cr

5531 Public Health Nursing Practicum (prereq #) (S-N only)
724073 1315-1500 F, MoosT 2580, Aroskar, 1-6 cr

5547 Topics: Public Health Nursing of Child Populations (prereq #) (S-N only)
418168 1115-1200 T, MoosT 2676, Berkseth, 1-3 cr

5552 Nursing Administration Seminar III
733226 1215-1500 M, Mayo 1205, Spradley, 3 cr

5575 Topics: Public Health Nursing (prereq #)
524074 ar cr

5576 The Political Process in Public Health (prereq public health grad or #)
324075 0915-1100 TTh, HSUnitF 2120, 2130, Lentsch, 3 cr

5597 Topics: Injury Prevention in the Workplace, Community and Home (prereq basic course in epidemiology)
217135 Gerberich, 1-3 cr

5614 Field Experience in Maternal and Child Health (prereq MCH grad student) (S-N only)
124085 ten Bensel, Splett, ar cr

R5616 The Rights of Children and Youth: Abuse and Neglect
924086 1615-1800 MW, MoosT 2650, ten Bensel, 4 cr

5621 Maternal and Child Health Student/Faculty Seminar (prereq MCH student)
324089 1315-1500 Th, Mayo A387, ten Bensel, others, 1-3 cr (MCH Reading Room)

5623 Maternal Health (prereq #)
238762 0915-1200 F, Mayo 1205, Lia-Hoagberg, 3 cr

R5629 Psychosocial Aspects of Chronic Illness and Handicapping Conditions in School-Age Children and Adolescents (prereq 5613, 5620 or #)
229589 1015-1200 Th, PWB 9224, Leonard, 3 cr

5649 Topics: Maternal and Child Health (prereq #)
324092 -1 ten Bensel, others, ar cr
539397 -2 ten Bensel, others, ar cr

5654 Topics: Dental Public Health (prereq student in dental public health or #)
024094 ar cr

5657 Independent Study: Dental Public Health (prereq student in dental public health or #)
824095 ar cr

5660 Field Experience: Dental Public Health (prereq student in dental public health or #)
624096 ar cr

5663 Administrative Residency in Dental Public Health (prereq #)
424097 4 cr

5702 Public Health Administration III (prereq 5701, student in public health administration or #) (S-N only)
133229 1315-1500 Th, Block, 1 cr (MN State Hlth Dept)

5703 Public Health Administration Clerkship (prereq student in public health administration or #)
224098 Block, ar cr

5704 Field Experience: Public Health Administration (prereq student in public health administration or #)
124099 ar cr

5707 Independent Study: Public Health Administration (prereq student in public health administration or #) (S-N only)
325789 1-12 cr

R5711 Public Health Law (prereq student in public health administration or #)
924105 1615-1800 MW, MoosT 2520, McInerney, 4 cr

5723 Administrative Residency (prereq student in public health administration or #)
417134 ar cr

5731 Administrative Aspects of Planning Disease Prevention/Health Promotion Programs (prereq public health administration student or #)
637219 1615-1800 T, 1715-1900 Th, MoosT 2530, Gunderson, Mills, 4 cr

5739 Public Health Administration (prereq student in public health administration or #)
915338 ar cr

R5744 Principles of Problem Solving in Health Services Organizations (A-N only)
917137 0815-1000 MTWTh, 0815-1000 F (March 30, April 6, May 11), Mayo 1250, Dornblaser, 3 cr (MHA students only)

5749 Administration of Services to an Aging Clientele (prereq MHA student or #)
410183 1015-1200 MW, Mayo 1250, Stryker-Gordon, 4 cr

R5752 Planning for Health Care Organizations (prereq MHA student or #)
107271 1015-1200 TTh, Mayo 1250, Bieter, Sweetland, 3 cr

R5757 Managerial Accounting in Health Services Organizations (prereq 5756, MHA student or #)
717141 1415-1600 MW, PWB 5254, 5258, Tranter, 4 cr

5761 Quantitative Methods Applied to Health Administration Problems (prereq basic statistics)
825795 1315-1500 TTh, Mayo 1250, Weckwerth, 4 cr

R5768 Applied Field Research III (prereq 5767) (A-N only)
407266 1315-1500 W, Mayo 1250, Litman, Weckwerth, 3 cr

R5771 Financial Management in Health Services Organizations (prereq one prior college level 3 cr accounting course)
518176 1700-1830 TTh, Mayo 1250, Sattler, 4 cr

5790 Sociology of Medicine and Health Care: An Introduction to Medical Sociology (§Soc 5855)
210203 1115-1200 MWF, MMA 100, Litman, 4 cr

R5793 Economic Aspects of Health Care (prereq #)
712781 1015-1200 T, 1015-1100 Th, MoosT 2580, Feldman, 3 cr

R5796 Legal Considerations in Health Services Organizations (prereq MHA student or #)
907269 1645-1845 W, MoosT 2580, McInerney, 3 cr

5800 Research Project in Health Psychology
824100 1-6 cr

5801 Directed Study in Health Psychology
624101 1-4 cr

5802 Special Topics in Health Psychology (prereq health psych maj or #)
424102 ar cr

5803 Mental Health Promotion and Mental Illness Prevention (prereq grad student in public health, health sciences, social, behavioral sciences)
033541 1515-1700 T, Mayo 1250, Williams, 3 cr

5806 Principles of Public Health Research (prereq #)
317143 1515-1700 M, 1515-1600 W, Mayo 1250, Garrard, 3 cr

5810 Professional Seminar in Health Psychology (prereq MPH student) (S-N only)
138763 Petzel, 1 cr

5850 Health Sciences Education in the 20th Century (§HSU 5022; prereq #)
624115 1615-1800 W, MoosT 2571, 2585, Garrard, others, 3 cr

5851 Human Interaction Laboratory (§HSU 5024; prereq #)
424116 1615-1800 W, PWB 5224, Ayers, 4 cr

5853 Behavioral Medicine I: Theory, Research and Practice (prereq psy grad student or public hlth student or professional in hlth related diiscipline)
106306 1630-1815 M, PWB 5224, Hung, 3 cr

5854 Behavioral Medicine II: Selected Topics (prereq 5853, #)
033233 Hung, 3 cr

5855 Psychosocial Problems of Human Development: Prevention and Treatment
924122 1215-1300 MWF, Mayo 1210, 4 cr

5869 Clerkship in Psychological Assessment (prereq grad students in clinical psychology, school psychology or #)
311956 1-4 cr

5870 Clerkship in Neuropsychological Assessment (prereq health psychology maj or #)
011958 Meier, 1-4 cr

5871 Fieldwork Experience in Health Psychology (prereq health psychology maj or #) (S-N only)
811959 1-4 cr

5872 Case Conference in Health Psychology (prereq health psychology maj or #) (S-N only)
011961 1 cr

5873 Case Conference in Neuropsychology (prereq health psychology maj or #) (S-N only)
811962 Meier, 1 cr

5877 Internship in Clinical Psychology (prereq PhD candidate and 400 hrs clerkship experience) (S-N only)
411964 1-4 cr

5878 Health Psychology Clinic Internship (prereq health psychology maj or #) (S-N only)
211965 Petzel, others, 1-4 cr

5879 Medical Consultation for Health Psychology Interns (prereq health psychology maj or #) (S-N only)
111966 Brantner, 1-4 cr

5880 Health Psychology Internship at the Boynton Health Service (prereq health psychology maj or #) (S-N only)
711968 Bugge, Heiberg, 1-4 cr

5881 Health Psychology for the Physically Handicapped Child (prereq health psychology maj or #) (S-N only)
511969 Blackburn, 1-4 cr

5882 Introduction to Neuropsychological Assessment (prereq health psychology maj or #) (S-N only)
711971 Meier, 1-4 cr

5883 Advanced Neuropsychological Assessment (prereq health psychology maj or #) (S-N only)
311973 Meier, 1-4 cr

5884 Rural Community Mental Health Internship for Psychologists (prereq health psychology maj or #) (S-N only)
011975 Kollmorgen, Moorman, others, 1-4 cr

5885 Community Child Guidance Center Psychology Internship (prereq health psychology maj or #) (S-N only)
611977 Hanvik, Reed, others, 1-4 cr

5886 Student Counseling Bureau Psychology Internship (prereq health psychology maj or #) (S-N only)
211979 Loper, others, 1-4 cr

5888 Behavioral Medicine (prereq PhD candidate and 400 hrs clerkship experience or #) (S-N only)
111983 Hung, 1-4 cr

5889 Case Seminar in Health Psychology (prereq health psychology maj or #) (S-N only)
711985 Petzel, Schofield, 2 cr

5890 Supervised Psychological Therapy (prereq health psychology maj or #) (S-N only)
311987 1-4 cr

5891 Health Psychology Laboratory (prereq Psy 8611, 8612, 8613, 8614)
312217 2 cr

5892 Clinical Psychopathology (prereq #)
112218 1515-1730 Th, Mayo C608, Sines, 3-4 cr

5893 Professional Problems in Applied Psychology (prereq health psychology maj or #)
012219 1 cr

5896 Group Supervision of Psychotherapy (prereq health psychology maj or #, psychiatry resident)
012785 Schofield, 2 cr

5900 Field Course I: Public Health Nutrition (prereq public health nutrition student)
507274 Splett, 1-4 cr

5901 Seminar: Public Health Nutrition (prereq public health nutrition maj)
107276 1115-1200 T, HSUnitF 2120, Brown, others, 1-6 cr

5904 Factors Affecting Nutrition Behavior (prereq Soc 3201 or equiv or #)
807278 0915-1100 T, Mayo 1220, Fleming, 2 cr

5906 Field Course II: Public Health Nutrition (prereq public health nutrition maj)
607282 Splett, 1-8 cr

5909 Topics in Public Health Nutrition (prereq public health nutrition student or #)
107285 Splett, 1-12 cr

8150 Research: Environmental Health (prereq #)
324125 1-6 cr

8211 Health Survey of Manufacturing Processes (prereq 5211, #)
024127 McJilton, 2 cr

8330 Research in Epidemiology (prereq epidemiology maj)
624132 1-8 cr

8331 Field Practice in Epidemiologic Investigations (prereq epidemiology maj) (S-N only)
224134 1-8 cr

8340 Chronic Disease Epidemiology (prereq 5330, basic statistics, #)
924136 1215-1300 MWF, MoosT 2580, Luepker, 3 cr

8378 Advanced Seminar in Epidemiology (prereq epidemiology maj)
524138 Mandel, 2 cr

8379 Seminar in Epidemiology (prereq epidemiology student or #)
028159 –1 1115-1300 T, MoosT 1108, Mandel, 2 cr (1st yr students)
128161 –2 1515-1700 M, MoosT 1108, Mandel, 2 cr (2nd yr students)

8385 Seminar: Physiological Hygiene (prereq physiological hygiene maj, #)
207253 1 cr

8386 Readings in Physiological Hygiene (prereq physiological hygiene maj, #)
218172 ar cr

8387 Research in Physiological Hygiene and Related Areas (prereq physiological hygiene maj, #)
918174 ar cr

8389 Seminar: Topics in Health Behavior Science (prereq physiological hygiene maj, #)
907255 3 cr

8400 Seminar: Biometry
724140 ar cr

8422 Advanced Biometric Methods III (prereq 5455, 5459, FORTRAN)
024144 1315-1400 MWF, Mayo 1210, 3 cr

8449 Topics in Biometry (prereq 5450, #)
624146 ar cr

8450 Research in Biometry
124149 ar cr

8597 Research: Injury Prevention in the Workplace, Community and Home (prereq basic courses in epidemiology, statistics, PubH 5594)
830012 Gerberich, 3-6 cr

8760 Topics in Hospital and Health Care Administration (prereq PhD student in hospital administration)
629590 Weckwerth, 3 cr

8761 Readings in Theory and Principles of Hospital and Health Care Administration (prereq 8760)
124160 Weckwerth, 3 cr

8770 Seminar: Health and Human Behavior (prereq 5795 or Soc 5855)
633235 1115-1300 Th, Mayo 1210, Litman, 3 cr

QUANTITATIVE ANALYSIS (QA)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for QA courses.

R1050 Elementary Managerial Statistics (prereq Math 1111 or 1131) (A-N only)
★LECT 1515-1630 MW, WilleyH 125, Benson
701456 –1 LAB 0945-1100 T, BlegH 155, 4 cr
301458 –2 LAB 1115-1230 T, BlegH 155, 4 cr
101462 –3 LAB 1245-1400 T, BlegH 155, 4 cr
801464 –4 LAB 1415-1530 T, BlegH 155, 4 cr
101468 –5 LAB 1545-1700 T, BlegH 155, 4 cr
901469 –6 LAB 0815-0930 W, BlegH 255, 4 cr
208516 –7 LAB 0945-1100 W, BlegH 255, 4 cr

R1050H Honors Course: Elementary Managerial Statistics (prereq Math 1111 or equiv, registered CLA pre-management honors student or SMgt approval) (A-N only)
★LECT 1515-1630 MW, WilleyH 125, Benson
638841 –80 LAB 0815-0930 T, BlegH 260, 4 cr

R3053 Quantitative Methods for Administration (prereq 1050) (A-N only)
323332 1730-2050 W, BlegH 420, 4 cr

R3055 Introduction to Management Sciences (prereq 1050, Math 1142 or equiv) (A-N only)
★LECT 1115-1230 TTh, AndH 310, Feiring
901472 –1 LAB 1315-1430 Th, BlegH 155, 4 cr
501474 –2 LAB 1445-1600 Th, BlegH 155, 4 cr
001477 –3 LAB 0915-1030 F, AndH 230, 4 cr

R5000 Basic Methods of Management Science (prereq 3055) (A-N only)
806339 1730-2050 T, BlegH 245, Fox, 4 cr

R8219 Simulation Techniques (prereq 5000, MIS 3099, grad mgmt/IR student or grad SMgt approval) (A-N only)
423337 0945-1100 TTh, BlegH 420, Fox, 4 cr

R8240 Applying Management Science: Problem Formulation and Implementation (prereq 5000, MIS 8302 or #, grad mgmt/IR student or grad SMgt approval) (A-N only)
223338 1730-2050 Th, Law 1, Adams, 4 cr

R8850 Topics: Quantitative Analysis (prereq 3055, grad mgmt/IR student or grad SMgt approval) (A-N only)
701487 1415-1700 T, BlegH 350, Johnson, ar cr

8990 Readings in Quantitative Analysis (prereq #, grad SMgt approval) (A-N only)
123339 ar cr

8995 Research in Quantitative Analysis (prereq #, grad SMgt approval) (A-N only)
423340 ar cr

RADIOLOGY (Rad)
Medical School

0120 X-Ray Conference (prereq #)
423936 1600-1800 T, Mayo C231, Gedgaudas, 0 cr (Todd Amph)

0121 Medical Roentgenologic Conference
223937 1130-1300 T, Mayo C231, Gedgaudas, 0 cr (Todd Amph)

0123 Surgical Roentgenologic Conference
123938 0900-1100 S, Mayo C231, Gedgaudas, 0 cr (Todd Amph)

0124 Neurosurgical-Roentgenologic Conference
923939 1300-1430 F, Mayo C231, Gold, 0 cr (Todd Amph)

0125 Cardiovascular Roentgenologic Conference
223940 1200-1300 Th, Mayo B167, Amplatz, 0 cr (Rigler Lib)

0126 Roentgenologic Conference on Chest Diseases
123941 1200-1300 M, Mayo B167, Gedgaudas, 0 cr (Rigler Lib)

0220 Nuclear Medicine: Clinical Conference
923942 1700-1800 T, Mayo C231, Loken, 0 cr (Todd Amph)

5101 Externship: Diagnostic Radiology-University Hospitals (prereq regis med)
723943 Gedgaudas, ar cr

5102 Externship: Diagnostic Radiology-Veterans Administration Hospital (prereq regis med)
523944 Reinke, ar cr

5103 Externship: Diagnostic Radiology-Hennepin County General Hospital (prereq regis med)
323945 Tsai, ar cr

5104 Externship: Diagnostic Radiology-St. Paul Ramsey Hospital (prereq regis med)
123946 L'Heureux, ar cr

5105 Externship: Diagnostic Radiology-St. Luke's Hospital, Duluth (prereq regis med)
023947 Ahrens, ar cr

5140 Special Problems: Roentgenology (prereq regis med)
823948 Gedgaudas, ar cr

5172 Radiation Biology (§BPhy 5172, TRad 5172; prereq 5170 or #)
716622 1600-1730 W, Mayo B167, Morin, 3 cr (Rigler Lib)

5240 Special Problems: Nuclear Medicine (prereq regis med)
623949 Loken, ar cr

5511 Roentgen Technique
023950 1700-1800 M, Mayo C231, Morin, 1 cr (Todd Amph)

5530 Externship in Nuclear Medicine At University Hospital (prereq regis med)
823951 Loken, ar cr

5540 Special Problems: Radiological Physics (prereq regis med)
623952 Morin, ar cr

8100 Gastrointestinal Roentgenology
423953 Frick, ar cr

8101 Urologic Roentgenology
223954 Goldberg, ar cr

8102 Neurological Roentgenology
123955 Gold, ar cr

8103 Cardiovascular Roentgenology
923956 Amplatz, ar cr

8104 Pediatric Roentgenology
723957 Day, ar cr

8105 Pulmonary Roentgenology
323959 Gedgaudas, ar cr

8150 Research: Roentgenology
723960 Gedgaudas, ar cr

8200 Nuclear Medicine
523961 Loken, ar cr

8210 Fundamentals of Nuclear Medicine (prereq 1st yr resident)
123963 1600-1700 M, Mayo C231, Loken, 1 cr (Todd Amph)

8250 Research: Nuclear Medicine
323962 Loken, ar cr

8450 Research: Radiation Biology
023964 Morin, Song, ar cr

8550 Research: Radiological Physics
823965 Morin, ar cr

RECREATION, PARK, AND LEISURE STUDIES (Rec)
School of Physical Ed, Rec, School Health Ed
Education

R1520 Orientation to Leisure and Recreation (A-N only)
422298 1315-1500 TTh, CookeH 206, Cain, 5 cr

R1540 Camp Counseling (A-N only)
804509 0915-1100 TTh, CookeH 206, Simpson, 4 cr

R3150 Leadership in Outdoor Recreation (prereq recreation maj, 1520) (A-N only)
022300 1315-1600 F, CookeH 214, McAvoy, 3 cr

R3540 Recreation Programming (prereq 1520, recreation maj or △) (A-N only)
933757 1115-1300 TTh, CookeH 206, Fredrickson, 5 cr

3700 Senior Internship (prereq sr, recreation maj or minor, △) (S-N only)
415352 Schleien, Tuckner, 1-15 cr

3900 Directed Study (max 9 cr; prereq recreation maj only, △) (S-N optional)
128928 3 cr

R5170 Camp Administration (prereq 1540 or #) (A-N only)
822301 0915-1030 MW, CookeH 206, Schultz, 3 cr

R5235 Leisure and Mental Health (prereq Psy 3604 or 5604, Rec 5210 or #, △) (A-N only)
116687 1115-1300 TTh, CookeH 214, Weiss, 4 cr

R5240 Recreation for the Aging (prereq 3540 or 5100 or △) (A-N only)
733758 1315-1500 MW, CookeH 206, Weiss, 3 cr

R5250 Financing Leisure Services (prereq 3550 or △) (A-N only)
622302 0800-0900 TTh, CookeH 214, Schultz, 3 cr

5630 Practicum: Therapeutic Recreation (prereq recreation M.Ed. or grad) (A-N only)
115354 Weiss, Schleien, 3-9 cr

5640 Practicum: Public Recreation and Parks (prereq recreation M.Ed. or grad) (A-N only)
715356 McAvoy, Schultz, 3-9 cr

R5900 Workshop: Contemporary Issues in Leisure Services (max 12 cr; prereq △) (A-N only)
507162 –1 1315-1430 TTh, CookeH 214, Schleien, 3 cr
336341 –2 1800-2100 Th (April 5-May 3), 0830-1700 SSun (April 28, 29), Fondrick, 3 cr (Woodlake Nature Center, 735 W Lake Shore Dr, Richfield)

5981 Problems (prereq MEd candidate, #) (A-N only)
422303 ar cr

5983 Readings: Recreation (prereq MEd, grad or △) (A-N only)
122305 1-3 cr

8310 Seminar: Recreation and Park Administration (prereq △)
538900 1-9 cr

8370 Seminar: Administrative Problems in Therapeutic Recreation (prereq 5220 or #)
438842 1500-1700 T, CookeH 226, Schleien, 3 cr

R8380 Seminar: Administrative Problems in Recreation and Parks (prereq 3550)
604513 1615-1830 M, CookeH 226, Schultz, 3 cr

8980 Research Problems (prereq 5980, PsyF 5110 or #) (S-N only)
522308 1 cr

8981 Research Problems (prereq 8980 or #) (S-N only)
722307 ar cr

RELIGIOUS STUDIES (RelS)
Liberal Arts

1032 Religions of East Asia (§EAS 1032)
533745 1415-1500 MWF, FolH 50, Mather, 4 cr

R1035 Introduction to Christianity
206507 1015-1100 MWF, FordH 120, Tapp, 4 cr

R3103 Religions of the American People
928929 0915-1000 MWF, FordH 55, Ross, 4 cr

3970 Directed Studies (prereq #, △, college approval)
906509 3-5 cr

5001 Approaches to the Study of Religion
333746 0945-1100 TTh, FordH 160, Lincoln, 4 cr

R5960 Topics in Religious Studies (prereq #)
133747 –1 1245-1400 TTh, FolH 203, Grottanelli, 4 cr (Social Dynamics and the Structure of Mythic Narrative) (§CLit 5910, sec 2)
033748 –2 1415-1530 TTh, FolH 108, Grottanelli, 4 cr (Creation, Destruction, Salvation: Themes in the History of Religions)

8970 Directed Studies (prereq △)
106511 2-5 cr

RESOURCE AND COMMUNITY DEVELOPMENT (RCD)
Agriculture

1010 Issues in the Environment
233464 Adams, 3 cr

3010 The Minnesota Community: Analysis of its Organization, Change, and Development (prereq one social science course, #)
721724 1000-1145 TTh, ClaOff 23, Donohue, 4 cr

5110 Special Problems (max 12 cr; prereq RCD sr, #)
121727 1-4 cr

RHETORIC (Rhet)
Agriculture

R1101 Writing to Inform and Persuade (§Comp 1011; prereq ¶1104 required)
833993 –1 0900-0945 MWF, HckrH 302, 4 cr
633994 –2 1000-1045 MWF, HckrH 302, 4 cr
433995 –3 1100-1145 MWF, HckrH 100, 4 cr

R1104 Library Laboratory (S-N only)
233996 –1 LAB 1000-1045 M, CentLib 8, 1 cr
133997 –2 LAB 0930-1015 T, CentLib 8, 1 cr
933998 –3 LAB 1200-1245 W, CentLib 268, 1 cr
038853 –4 LAB 1100-1145 Th, CentLib 4, 1 cr

R1147 Efficient Reading
328207 0930-1045 TTh, HckrH 210, Bennett, 4 cr

R1151 Writing in Your Major (prereq completion of freshman communication requirement, soph status)
733999 –1 0900-0945 MWF, HckrH 209, Kantar, 4 cr
634000 –2 1000-1045 MWF, HckrH 209, Kantar, 4 cr
434001 –3 1230-1345 TTh, HckrH 312, Bennett, 4 cr

R1222 **Public Speaking** (prereq completion of freshman communication requirement)
028209 –1 0800-0845 MTWTh, HckrH 222, Wendt, 4 cr
328210 –2 0900-0945 MTWTh, HckrH 222, Wendt, 4 cr
028212 –3 0900-0945 MTWTh, CentLib 4, Gore, 4 cr
628214 –4 1000-1045 MTWTh, CentLib 4, Eyo, 4 cr
428215 –5 1100-1145 MTWTh, HckrH 222, Hayes, 4 cr
228216 –6 1200-1245 MTWTh, CentLib 4, Eyo, 4 cr
128217 –7 1200-1245 MTWTh, HckrH 222, McBride, 4 cr
728219 –8 1300-1345 MTWTh, HckrH 222, McBride, 4 cr
128220 –9 0800-0915 TTh, CentLib 6, Hardesty, 4 cr
928221 –10 0930-1045 TTh, CentLib 6, Hardesty, 4 cr

R1301 **Humanities: Modern Thought and the Enlightenment**
307180 –1 1000-1045 MWF, HckrH 312, Marchand, 4 cr
007182 –2 1100-1145 MWF, HckrH 312, Marchand, 4 cr

R1302 **Humanities: Modern Thought and the Industrial Revolution**
837087 1100-1145 MWF, HckrH 302, Walzer, 4 cr

R1303 **Humanities: Modern Thought and the Impact of Evolution**
421684 1300-1345 MWF, HckrH 312, Marchand, 4 cr

R1310 **Humanities: The Land in American Experience**
607184 1200-1245 MWF, HckrH 312, Scanlan, 4 cr

R1500 **Introduction to Word Processing** (prereq #) (S–N only)
134003 1400-1600 MWF, HckrH 329, Winkler, 2 cr

R3254 **Advanced Public Speaking** (prereq 1222)
521689 1300-1345 MTWTh, CentLib 4, Hayes, 4 cr

R3266 **Communication, Discussion, in Small Group Decision Making** (prereq completion of freshman communication requirement)
921690 1000-1045 MTWTh, HckrH 222, Hayes, 4 cr

3270 **Speech: Special Problems** (prereq #)
721691 Connolly, Ferguson, others, 1–5 cr

R3370 **American Humanities**
934004 1200-1245 MWF, HckrH 100, Horberg, 4 cr

3374 **Special Problems in Humanities** (prereq #)
734005 Savage, Walzer, others, 1–2 cr

R3562 **Writing in Your Profession** (prereq completion of freshman communication requirement, 1151, jr status)
628245 –1 0900-0945 MWF, HckrH 312, Somers, 4 cr
228247 –2 0900-0945 MWF, HckrH 111, Johnson, 4 cr
128248 –3 1000-1045 MWF, HckrH 111, Winkler, 4 cr
534006 –4 1000-1045 MWF, HckrH 100, Horberg, 4 cr
334007 –5 1100-1145 MWF, HckrH 111, Somers, 4 cr
134008 –6 1100-1145 MWF, HckrH 209, Johnson, 4 cr
034009 –7 1300-1345 MWF, HckrH 111, Walzer, 4 cr
334010 –8 0930-1045 TTh, HckrH 111, Ferguson, 4 cr
134011 –9 1230-1345 TTh, HckrH 111, Schuelke, 4 cr
034012 –10 1530-1700 T, Agr 202, Pearsall, 2-4 cr (Agronomy students only)

3572 **Grammatical Editing for Technical Writers** (prereq #) (S–N only)
834013 Walzer, 2 cr

R3700 **Rhetorical Theory: Persuasion and the Literature of Science** (prereq completion of freshman communication requirement)
107187 1200-1245 MWF, HckrH 111, Somers, 4 cr

5100 **Technical Communication: Special Problems** (prereq #)
421698 Connolly, McDowell, others, ar cr

R5147 **Efficient Reading**
201274 0930-1045 TTh, HckrH 210, Bennett, 4 cr

5180 **Internship in Technical Communication** (prereq #)
021700 Connolly, McDowell, others, 4–6 cr

R5257 **Scientific and Technical Presentation** (prereq 1222, 3562 or #)
★LECT 0930-1045 TTh, HckrH 224, Connolly, 4 cr
634014 –1 LAB 1100-1145 W, HckrH 224, Connolly
434015 –2 LAB 1300-1345 T, HckrH 224, Connolly
★LECT 1500-1745 T, HckrH 224, Connolly, 4 cr
234016 –3 LAB 1300-1345 W, HckrH 224, Connolly
134017 –4 LAB 1630-1715 W, HckrH 224, Connolly

R5258 **Interviewing: Dynamics of Face-to-Face Communication**
005562 1230-1345 TTh, HckrH 302, McDowell, 4 cr

R5400 **Dissemination and Utilization of Information** (prereq jr, sr or grad standing)
221704 1600-1845 M, HckrH 302, Schuelke, 4 cr

R5500 **Research in Communication Strategies** (§AgJo 5500; prereq #)
121705 1600-1845 Th, HckrH 209, McDowell, 4 cr

R5571 **Writing for Special Purposes** (prereq technical communication maj or minor, freshman commication, 3562 or #)
921706 –1 1600-1715 T, HckrH 209, Ferguson, 2 cr (The Procedures and Policies Manual)
934018 –2 1400-1545 Th, HckrH 317C, Winkler, 2 cr (The Newsletter)

RUSSIAN (Russ)
Russian And East European Studies
Liberal Arts

R1103 **Beginning Russian** (prereq 1102 or equiv)
128256 –1 0815-0900 MTWThF, ChDev 105, 5 cr
828258 –2 1015-1100 MTWThF, WullH 130, Kulesov, 5 cr
028260 –3 1315-1400 MTWThF, WullH 130, Polakiewicz, 5 cr

R1106 **Intermediate Russian** (prereq 1105)
428263 –1 1215-1300 MTWThF, WullH 130, Kulesov, 5 cr
128265 –2 1415-1500 MTWThF, WullH 130, Jahn, 5 cr

R3103 **Third-Year Russian** (prereq 3102)
604477 0915-1000 MTWThF, WullH 130, Prokopov, 5 cr

3106 **The Current Soviet Scene** (prereq 3105)
623109 0915-1000 MTWThF, ChDev 105, Corten, 5 cr

3512 **Russian Culture mid-19th Century to the Present** (prereq 1106 for Russ lang/lit maj)
435701 –1 0815-0900 MWF, WullH 130, Donchenko, 4 cr
235702 –2 0815-0900 MWThF, WullH 130, Donchenko, 4 cr (Russian maj only)

3970 **Directed Readings** (prereq #, △, college approval)
823111 3–5 cr

5211 **Literature Since the Revolution in Translation**
135703 1115-1300 TTh, FolH 103, Corten, 4 cr

5404 **Tolstoy in Translation**
623112 1315-1400 MWF, BuH 123, Jahn, 4 cr

5425 **Pushkin, Lermontov, Gogol**
339479 1215-1300 MWF, FolH 305, Prokopov, 4 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
923116 1–4 cr

SANSKRIT (Skt)
South And Southwest Asian Studies
Liberal Arts

5133 **Beginning Sanskrit** (prereq 5132)
923181 Malandra, 5 cr

5203 **Intermediate Sanskrit** (prereq 5202)
523183 Malandra, 5 cr

5970 **Directed Readings** (prereq #, △, CLA approval)
323184 ar cr

5990 **Directed Research** (prereq #, △, CLA approval)
123185 ar cr

8990 **Research** (prereq #)
023186 ar cr

SCANDINAVIAN (Scan)
Scandinavian Languages
Liberal Arts

3501 **Introduction to Scandinavia** (no cr for Scan maj)
638872 1415-1530 TTh, FolH 110, Houe, 4 cr

3505 **Scandinavian Fiction from 1890 to Present**
316929 1015-1100 MWF, FolH 105, Simpson, 4 cr

3605 **Scandinavian and Finnish Short Stories**
533938 0915-1000 MWF, FolH 204, Vahamaki, 4 cr

3606 **The Expressionist Film in Scandinavia**
736949 1115-1200 MF, 1115-1300 W, FolH 50, Mishler, 4 cr

3612 **Par Lagerkvist** (readings in English for non maj)
438873 1315-1400 MWF, FolH 204, Simpson, 4 cr

3970 **Directed Studies** (max 15 cr; prereq #, △, college approval)
506853 1–5 cr

5502 **The Icelandic Saga**
238874 1415-1530 TTh, FolH 204, Grimstad, 4 cr

5511 **Skaldic Poetry: Its Method** (prereq reading knowledge of Old Icelandic)
733940 1515-1700 W, FolH 205, Liberman, 4 cr

5704 **History of the Scandinavian Languages**
138875 1415-1500 MWF, FolH 204, Eliasson, 4 cr

5711 **Structure of the Scandinavian Languages** (prereq introductory course in linguistics or #)
333942 1115-1200 MWF, FolH 205, Eliasson, 4 cr

5970 **Directed Studies** (prereq #, △, CLA approval)
125812 1–15 cr

8970 **Research: Scandinavian Literature and Language**
025813 1–6 cr

SCHOOL HEALTH EDUCATION (Hlth)
School of Physical Ed, Rec, School Health Ed
Education

R1500 **American Red Cross Standard First Aid and Personal Safety** (A–N only)
328286 –1 1215-1300 MWF, NorrisH 201, Vokaty, 2 cr
028288 –2 1415-1500 MWF, NorrisH 201, Vokaty, 2 cr
128290 –3 1415-1530 TTh, NorrisH 201, Vokaty, 2 cr

R3330 **Teaching Health in the Elementary School** (prereq elementary education maj) (A–N only)
128296 1315-1445 MW, NorrisH 201, Bonstrom, 3 cr

3601 **Student Teaching: Elementary School** (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A–N only)
722310 Cobb, 3 cr

3602 **Student Teaching: Junior High School** (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A–N only)
522311 Cobb, 3–6 cr

3603 **Student Teaching: Senior High School** (prereq 3320, SeEd 3150, 3155, maj or min in school health education) (A–N only)
322312 Cobb, 3–6 cr

3999 **Directed Studies: School Health Education** (max 6 cr; prereq upper division maj or min in school health education, #) (S–N only)
728303 Cobb, Needle, Stull, 1–6 cr

5069 **Community Health Education Practicum for School Health Education Students** (prereq 5072) (A–N only)
122313 Cobb, 6 cr

5140 **Administration of the School Health Program** (A–N only)
022314 1830-2100 T, NorrisH 3, Cobb, 3 cr

5300 **Contemporary Problems in School Health Education** (A–N only)
934407 1600-1830 M, NorrisH 3, Cobb, 3 cr

5302 **Planning and Evaluation of Programs for Youth** (prereq school health education maj)
512295 1615-1830 Th, NorrisH 3, Frisk, 3 cr

5685 School-Based Projects in School Health Education (max 12 cr; prereq school health M.Ed.) (A-N only)
822315 Cobb, Needle, 1-12 cr

5700 Workshop: Contemporary Social Health Problems (max 12 cr; prereq △) (A-N only)
639164 1715-1930 Th, MoosT 2690, Maddock, others, 3 cr

5981 Problems (prereq #) (A-N only)
622316 Cobb, Needle, ar cr

5983 Readings: Health Education (prereq sr honor, grad student, #) (A-N only)
422317 Cobb, Needle, 1-3 cr

8980 Research Problems (prereq 5980, PsyF 5110 or #) (S-N only)
222318 1600-1800 W, CookeH 226, Alexander, 1 cr

8981 Research Problems (prereq 8980 or #) (S-N only)
234405 Cobb, Needle, ar cr

SECONDARY EDUCATION (SeEd)
Curriculum And Instruction
Education

R3150 Introduction to Secondary School Teaching (prereq educ stu, 5 cr introductory psychology) (A-N only)
628309 -1 0815-1000 MWF, PeikH 28, Bruning, 5 cr
028310 -2 1015-1200 MWF, PeikH 28, Bruning, 5 cr

3151 Directed Study (prereq △) (A-N only)
222173 1-9 cr

R3152 Practicum: Secondary Education (max 7 cr; prereq educ stu, △) (S-N only)
428313 -1 1515-1600 TTh, PeikH 375, 385, 1-7 cr (math maj only)
315361 -2 0800-1000 F, PeikH 165, 1-7 cr (social studies maj only)
228314 -3 Gennaro, 1-7 cr (science maj only)

R3155 Psychological Foundations of Secondary Education (prereq educ stu, Psy 1001) (A-N only)
★LECT 0815-0900 MWF, BuH 120, Rest
328319 -1 LAB 0815-1000 T, PeikH 46, 5 cr
528321 -2 LAB 1015-1200 T, PeikH 46, 5 cr
128323 -3 LAB 1015-1200 Th, PeikH 46, 5 cr
828325 -4 LAB 1215-1400 Th, PeikH 46, 5 cr

R3157 The Social Sciences and the Social Studies (max 6 cr; prereq social studies maj, #) (A-N only)
122174 0815-1000 TTh, PeikH 165, Mackey, 3 cr

3325 Instructional Practice in English, Speech, and Theatre Arts (A-N only)
922175 1415-1600 MW, PeikH 225, Beckman, 4 cr

R3350 Teaching Social Studies in the Secondary School (prereq social studies maj) (A-N only)
722176 0815-1000 MW, PeikH 165, Glenn, 3 cr

R3357 Teaching Secondary School Science (prereq science major or minor...for majs, 3356, ¶3152) (A-N only)
522177 1415-1600 MWF, PeikH 365, Gennaro, 4 cr

R3366 Computer Assisted Mathematics Instruction (prereq Math 1231 or one yr of calculus, #) (A-N only)
307227 -1 1100-1300 TTh, PeikH 355, House, Reardon, 4 cr
938957 -2 1300-1500 TTh, PeikH 355, House, Reardon, 4 cr

3600 Student Teaching (prereq △) (S-N only)
322178 Anderson, ar cr

3606 Student Teaching in Library Science (prereq sr, Lib 5102, 5201, 5202, 5205, 5302, 5303 or #) (A-N only)
122179 2-6 cr

R3621 Directed Experiences in Teaching English, Speech, and Theatre Arts (prereq 3325, #) (S-N only)
928333 -1 1615-1800 M, PtH 214, Johnson, Reilly, 9 cr (maj only)
528335 -2 Johnson, Reilly, 6 cr (minors to maj only)

3631 Student Teaching in Second Languages (S-N only)
522180 1615-1800 M, PeikH 215, Jorstad, 3-12 cr

R3641 Student Teaching in Social Studies (max 15 cr; prereq 3350, sr) (S-N only)
322181 1615-1800 M, PeikH 165, Fleener, 3-15 cr

R3651 Student Teaching in Science (prereq sr, 3357, 4 cr in 3152...for minors: 3357, #) (S-N only)
122182 1615-1800 M, PeikH 365, 1-12 cr

3661 Student Teaching in Mathematics (prereq 3365 during same year) (S-N only)
022183 1615-1800 Th, PeikH 325, 385, Bledsoe, Reardon, 3-12 cr

5122 Strategies for Teaching Culture in the Second Language Classroom (A-N only)
622185 1600-1800 TTh, PeikH 215, Jorstad, Paige, 4 cr

5151 School-Based Projects in Social Studies Education (max 12 cr) (A-N only)
422186 Glenn, Mackey, 1-12 cr

R5152 Techniques of Instruction in Social Studies (A-N only)
007229 1615-1800 T, PeikH 165, Mackey, 3 cr

R5167 Economic Education Programs (prereq Econ 1002 or equiv or #) (A-N only)
410006 1615-1800 Th, Mgmt/Econ 1169, Dalgaard, 3 cr

5184 Examination and Assessment of Materials in Second Languages and Cultures (A-N only)
839308 1600-1800 M, PeikH 31, Lange, 2 cr

5185 School and Professional Based Experiences in Second Languages and Cultures (max 12 cr; prereq MEd students) (A-N only)
222187 Jorstad, Lange, Paige, Walker, 1-12 cr

5218 Evaluation and Assessment in Bilingual Education (prereq 5217 or #) (A-N only)
718158 1600-1800 MW, PeikH 315, Walker, 4 cr

5321 Teaching Literature in Secondary Schools (A-N only)
122188 0900-1230 S, PeikH 225, Beach, 3 cr (alt S, begins March 31)

5322 Teaching Composition and Communication in Junior and Senior High Schools (A-N only)
134941 1615-1800 T, PeikH 225, Piche, 3 cr

5326 Teaching Film and Television (A-N only)
934942 1615-1800 Th, EdHAn 64, Beach, 3 cr

5344 Teaching Reading in Content Areas (A-N only)
922189 1615-1800 M, PeikH 225, Prenn, 3 cr

5347 Linguistics and Reading (A-N only)
310001 1615-1800 Th, PeikH 27, Graves, 3 cr

5351 Directed Study (max 6 cr; prereq educ or grad stu) (S-N optional)
222190 ar cr

5382 Second Language Testing, Assessment, and Evaluation (A-N only)
122191 0900-1200 S, PeikH 215, Jorstad, 3 cr

R5395 School-Based Projects in Science Education (max 12 cr; prereq MEd student in science education) (A-N only)
501653 Gennaro, 1-12 cr

5659 School-Related Projects in Language Arts (max 12 cr; prereq MEd student in English education) (A-N only)
722193 Beach, Graves, Piche, 1-12 cr

8362 Research in Social Studies (§Elem 8362; prereq 5152, 8104)
534944 1615-1800 Th, PeikH 165, Glenn, Mackey, 3 cr

8387 Seminar: Second Language Education
522194 1330-1530 F, PeikH 215, Jorstad, Walker, 1-3 cr

8801 Problems: Teaching Social Studies (prereq 5150, 5152, 5156, 8104 or #)
322195 Glenn, Mackey, others, 3-9 cr

8871 Problems: Curriculum Construction (prereq #)
022197 Gennaro, ar cr

8893 Seminar: Advanced Topics in English-Language Arts Education (max 9 cr; prereq #)
334945 1415-1600 Th, PeikH 315, Piche, 1-9 cr

8894 Problems: Second Languages and Cultures Education (max 8 cr)
322200 Lange, Paige, Jorstad, Walker, ar cr

8895 Readings in English Education
122201 Beach, Graves, Piche, 1-3 cr

8896 Problems: Teaching English
022202 Beach, Graves, Piche, ar cr

8898 Readings in Second Languages and Cultures Education
822203 Lange, Paige, Jorstad, Walker, 1-3 cr

SLAVIC (Slav)
Russian And East European Studies
Liberal Arts

5900 Topics in Russian and East European Studies (max 12 cr)
433933 1330-1500 TTh, FolH 107, Wierzewski, 4 cr

SMALL ANIMAL CLINICAL SCIENCES (SACS)
Veterinary Medicine

5170 Small Animal Medicine (prereq #)
924556 0900-0950 MTWTh, VetHos A325, Hardy, others, 4 cr

5256 Diseases of the Liver and Pancreas (prereq regis vet med, 3rd or 4th yr or grad or #)
524558 1300-1450 M, VetHos A325, Hardy, 2 cr

5360 Small Animal Orthopedics (prereq regis vet med, 3rd or 4th yr or grad or #)
724560 1500-1650 M, AnScVM 135, Wallace, 2-3 cr

5454 Roentgenology Bone-Large Animals (prereq regis vet med, 3rd or 4th yr or grad or #)
824565 1300-1450 M, VetHos 282, Hanlon, 1 cr

8180 Advanced Clinical Neurology (prereq #)
624566 Hardy, ar cr

8190 Comparative Cardiovascular Diseases (prereq grad)
424567 Ogburn, 3 cr

8191 Advanced Comparative Electrocardiology (prereq grad, #)
224568 Ogburn, 3 cr

8192 Special Cardiology Clinics (prereq grad, #)
124569 Ogburn, ar cr

8196 Internal Medicine in Small Companion Animals (prereq grad, #)
424570 Osborne, others, 2 cr

8197 Advanced Dermotologic Clinics (prereq grad, #) (A-N only)
224571 McKeever, 4 cr

8198 Problems in Veterinary Comparative Dermatology (prereq grad, #)
124572 McKeever, ar cr

8297 Advanced Clinical Veterinary Ophthalmology (prereq grad or #)
924573 Bistner, 3 cr

8298 Research in Veterinary Ophthalmology (prereq grad or #)
524575 Bistner, 3-5 cr

8299 Research in Veterinary Medicine
124577 Osborne, others, ar cr

8390 Seminar: Veterinary Surgery (prereq 5360, 5365 or equiv, #)
824579 Caywood, Lipowitz, others, ar cr

8391 Advanced Small Animal Surgery (prereq CVM 5350 or equiv, #)
024581 1100-1300 M, VetS 436, Caywood, Lipowitz, others, ar cr

8394 Surgery of the Gastrointestinal System (prereq LACS 5160 or #)
824582 Caywood, Lipowitz, others, ar cr

8396 Advanced Veterinary Anesthesia (prereq LACS 5355, #)
624583 Raffe, Robinson, ar cr

8410 Surgical Physiology (prereq 8391, #)
424584 Caywood, Lipowitz, others, 2 cr

8420 Neurosurgery (prereq 8391, #)
224585 Caywood, Lipowitz, others, 3 cr

8430 Thoracic and Cardiovascular Surgery (prereq 8391, #)
924587 Caywood, Lipowitz, others, 3 cr

8471 Therapeutic Radiology (max 2 cr; prereq 5452, #)
724591 Feeney, G Johnston, others, ar cr

8480 Seminar: Veterinary Radiology (prereq 5452, #)
524589 0800-0850 T, VetHos 282, Feeney, G Johnston, others, 1 cr

8490 Advanced Veterinary Radiology (prereq 5450, 5451, 5452 or equiv, #) (A-N only)
724588 Feeney, G Johnston, others, 1-2 cr

SOCIAL AND ADMINISTRATIVE PHARMACY (SAPh)
Pharmacy

5840 Principles of Health Behavior (prereq PubH 5795 or #)
939378 1615-1800 T, HSUnitF 7189, 2 cr

8100 Seminar
428389 –1 Wertheimer, 1 cr
628391 –2 Daniels, 1 cr

8200 Research Problems
124272 Wertheimer, Martinson, Hodsall, ar cr

8235 Legislative Control (prereq #)
024273 Fredrickson, 3 cr

8280 Administrative Clerkship (prereq △)
824274 ar cr

8290 Clinical Clerkship (prereq 8270)
624275 Cloyd, 2–5 cr

8400 Special Clinical Problems
424276 Wertheimer, Batalden, ar cr

8612 Research Seminar
525922 Martinson, 2 cr

8703 Hospital Pharmacy Administration II (prereq #) (A–N only)
224277 3 cr

8840 Social Measurement (prereq #)
636832 Choi, 3 cr

SOCIAL AND PHILOSOPHICAL FOUNDATIONS OF EDUC (SPFE)
Educational Policy And Administration
Education

R3090 School and Society (prereq sr) (A–N only)
128404 –1 0815-0930 MW, WullH 230, Clark, 3 cr
828406 –2 1415-1600 T, 1415-1500 Th, WullH 230, Dobbert, 3 cr

3099 Directed Study (prereq #) (A–N only)
422379 Bagley, Beck, others, 1–6 cr

5099 Directed Study (max 9 cr; prereq #) (S-N optional)
822380 Bagley, Beck, others, ar cr

5125 Youth in Modern Society (§Soc 5952) (A–N only)
128984 0815-0930 TTh, BuH 123, Clark, 4 cr

5155 History of Western Educational Thought (A–N only)
904484 1615-1800 M, BuH 123, Bagley, 3 cr

5156 History of Ideas in American Education (A–N only)
622381 1615-1800 T, ChDev 216, Bagley, 3 cr

5182 Comparative Philosophies of Education (A–N only)
422382 1615-1800 W, BuH 123, Beck, 3 cr

5211 Social Design and Educational Futures (A–N only)
222383 1830-2030 M, PtH 215, Harkins, 3 cr

8172 Seminar: Topics in Anthropology, Education (prereq 5171 or 5172 or grad student in anthropology)
036343 1515-1730 W, PtH 102, Dobbert, 3–9 cr

8220 Seminar: Social and Educational Futures (max 6 cr; prereq 5209 or 5210 or 5211 or #)
122384 1615-1800 Th, PtH 214, Harkins, 1–6 cr

8241 Problems: History and Philosophy of Education (prereq #)
922385 ar cr

SOCIAL WORK (SW)
Home Economics

R1001 Introduction to Social Welfare and Community Services
010356 1415-1600 MW, BlegH 5, Sullivan, 5 cr

R1004 Community Experience in Social Welfare (prereq 1001, △) (S–N only)
417151 0915-1000 T, FordH 70, Quam, 1 cr

R3005 Social Work: The Art of Helping People (§5401; prereq 1001, 3004)
423130 1015-1200 MW, FordH 285, Stewart, 4 cr

3020H Honors Seminar: Special Topics (prereq 1001, jr, sr honors candidate)
511888 0815-1000 MW, FordH 70, Hagen, 3 cr

3970 Directed Studies (prereq maj, #, △, college approval)
223131 1–15 cr

R3984 Community Organization/Development Practice (§5984; prereq 1001)
123132 1515-1700 MW, FordH 285, Hagen, 4 cr

3990 Directed Research (prereq #, △, college approval)
923133 ar cr

R5010 Seminar: Special Topics
602809 –1 0915-1200 Th, FordH 50, Geis, 3 cr (Social Work in Cross-Cultural Perspective)
802811 –2 1315-1600 Th, FordH 60, Cohn, 3 cr (Self-Help, Mutual Aid and Network Strategies in Health and Family Work)
607329 –3 1615-1900 Th, FordH 175, 3 cr

R5020 Public Health Social Work Integrative Seminar (§PubH 5020; prereq beginning level MSD/MPH maj)
937243 1515-1700 T, FordH 60, Bracht, Schwanke, 2 cr

R5023 Human Sexuality for the Health and Helping Professionals III (§HSU 5028, PubH 5023, FSoS 5240, Hlth 5700)
737244 1715-1930 Th, MoosT 2690, Terrell, Maddock, 3 cr

R5102 The Changing Roles of Men and Women (prereq WoSt 1005 or 1006 or equiv)
434936 0915-1200 Th, FordH 60, Wattenberg, 3 cr

R5111 Contemporary Policy and Programs in Social Welfare (prereq grad standing or 12 cr in social sciences)
136986 1315-1600 M, FordH 60, Battle, 3–4 cr

R5414 Fundamentals of Social Group Work (§8414; prereq 3005)
610361 1415-1700 T, FordH 447, Cohn, 3 cr

R5601 Ethno-Cultural Concepts in Social Work Practice (prereq 1001)
234937 1315-1600 Th, FordH 170, Stewart, 3–4 cr

R8010 Field Instruction I (4 cr or ar cr by #) (S–N only)
723134 –1 1215-1400 Th, FordH 120, Johnston, ar cr
518257 –2 1215-1400 Th, FordH 150, ar cr
318258 –3 1215-1400 Th, FordH 175, ar cr
118259 –4 1600-1800 T, FordH 170, ar cr
318261 –5 1215-1400 Th, FordH 447, ar cr

8020 Field Instruction II (4 cr or ar cr by #; prereq 8010) (S–N only)
523135 Johnston, ar cr

R8102 Policy Issues in Social Welfare
023138 0915-1200 T, FordH 50, Hollister, Schwartz, 3 cr

R8104 Child Welfare and the Law
823139 1415-1700 T, FordH 40, 3 cr

R8111 International Social Welfare (prereq #)
036987 0915-1200 M, FordH 60, Pandey, 3 cr

R8140 Seminar in Social Work Education (max 6 cr; prereq #)
836988 1115-1400 M, FordH 70, Bracht, ar cr

R8180 Social Policy Formulation and Analysis (prereq 5101, 8101, doctoral students only)
217149 1415-1700 T, FordH 160, Carter, 4 cr

R8350 Special Topics: Management, Planning, and Development: MPD Concentration Workshop (prereq MPD concentration or #)
807331 1615-1800 M, FordH 175, Pandey, 1–4 cr (alt M)

R8408 Direct Work with Children (prereq 8400)
938876 0915-1200 M, FordH 175, Weller, Arrowood, 3 cr

R8414 Social Work Methods with Groups (prereq 8400 or #)
710366 0915-1200 M, FordH 40, Cohn, 3 cr

R8450 Special Topics: Practice with Individuals, Families and Groups (prereq 8401 or #)
328451 –1 1215-1500 M, FordH 447, 3 cr (Innovative Models of Intervention with High Risk Families)
028453 –2 1515-1800 M, FordH 447, Wenston, 3 cr (Ethics in Social Work Practice)
934939 –3 1415-1700 T, FordH 150, Edleson, 3 cr (Cognitive-Behavioral Groupwork)

R8903 Program Evaluation (prereq 8901)
738877 1315-1600 Th, MinMet 104, Edleson, 3 cr

8970 Directed Study (prereq #)
123140 ar cr

8990 Research Projects (max 6 cr)
023141 ar cr

R8992 Seminar on Research (prereq MSW, 8991)
207334 0915-1200 Th, FordH 447, AuClaire, 2 cr

SOCIOLOGY (Soc)
Liberal Arts

R1001 Introduction to Sociology
228460 –1 0815-0900 MWF, AndH 210, Galaskiewicz, 4 cr
928462 –2 0915-1000 MWF, BlegH 5, J Clark, 4 cr
728463 –3 1115-1230 TTh, AndH 210, Fine, 4 cr
528464 –4 1030-1145 TTh, McNH 33, Ellenbogen, 4 cr (StP)

R1001H Honors Course: Introduction to Sociology
411897 0945-1100 TTh, BlegH 245, Bradley, 4 cr

R1002 American Community
823142 1245-1400 TTh, BlegH 10, Nelson, 4 cr

R1651 Rural Sociology
623143 0900-0945 MWF, McNH 198, Donohue, 4 cr (StP)

1960 Topics in Sociology: Practice and Application (prereq 1001)
739611 2 cr

R3102 Introduction to Criminal Behavior and Social Control (§3103; prereq 3101)
610134 1115-1230 TTh, BlegH 5, Kruttschnitt, 4 cr

R3315 Latin American Societies in Transition (prereq 8 cr in sociology, economics, anthropology or political science or #)
036875 0815-0900 MWF, BlegH 250, Fiola, 4 cr

R3401 Principles of Social Organization (prereq 1001, 3801)
★LECT 1115-1230 TTh, BlegH 215, Bradley
702834 –1 LAB 1215-1400 M, Mgmt/Econ 130, 5 cr
502835 –2 LAB 1315-1500 T, Mgmt/Econ 128, 5 cr
302836 –3 LAB 1215-1400 W, Mgmt/Econ 130, 5 cr
213523 –4 LAB 1315-1500 Th, Mgmt/Econ 128, 5 cr

R3401H Honors Course: Principles of Social Organizations (prereq sociology honors student, 1001 or 1001H or #)
★LECT 1115-1230 TTh, BlegH 215, Bradley
111899 –80 LAB 1315-1500 Th, SocSci 307, 5 cr

R3405 Inequality: Introduction to Stratification (prereq 1001)
907563 1115-1230 TTh, BlegH 10, Nelson, 4 cr

R3501 The Family System (prereq 1001 or #)
223145 1015-1100 MWF, BlegH 10, Li, 4 cr

R3503 Sex, Romance, and Relationships (prereq 1001)
123146 0945-1100 TTh, BlegH 5, Fischer, 4 cr

R3601 Urban Community (prereq 1001 or 1002)
923147 1115-1200 MWF, AndH 250, Galaskiewicz, 4 cr

R3802 Sociological Methods II: Statistical Inference (prereq 3801)
★LECT 0815-0930 TTh, AndH 350, Fire Dog
728480 –1 LAB 0815-0900 MW, BlegH 410, 5 cr
328482 –2 LAB 1015-1100 TTh, BlegH 410, 5 cr

R3803 Sociological Methods III: Research Methods (prereq 3801, 3802 or #)
★LECT 0915-1000 MWF, BlegH 235, McTavish
128489 –1 LAB 1215-1300 MW, BlegH 410, 5 cr
228491 –2 LAB 0815-0900 TTh, BlegH 410, 5 cr
928493 –3 LAB 1115-1200 TTh, BlegH 410, 5 cr

R3803H Honors Course: Sociology Research Methods (prereq 3802H or #)
★LECT 0915-1000 MWF, BlegH 235, McTavish
211903 –80 LAB 1315-1400 TTh, BlegH 410, 5 cr

R3937 Social Gerontology: Elders in American Society (prereq 1001 or #)
307566 1245-1400 TTh, Law 15, Fischer, 4 cr

R3960 Topics in Sociology: Swedish Social Structure (prereq 1001)
836876 1315-1400 MWF, BlegH 225, Cooperman, 4 cr

3970 Directed Studies (prereq #, △, college approval)
834853 1–15 cr

3990 Sociology Honors Thesis (max 8 cr; prereq jr or sr sociology honors student, #, △, college approval)
634854 Cooperman, 4–8 cr

R5101 Sociology of Law (prereq 3101, 3102 or #...5705 rec)
434855 1245-1400 TTh, BlegH 145, Inverarity, 4 cr

R5148 Criminal Psychopathology (§CJS 5205; prereq sr or grad student)
034866 1515-1700 Th, BlegH 425, Malmquist, 4 cr

R5162 Criminal Procedure in American Society (§CJS 5102)
607587 0945-1100 TTh, Law 20, Samaha, 4 cr

R5205 Symbolic Interaction (prereq 3201 or 5201 or #)
110145 1015-1100 MWF, BlegH 105, Finestone, 4 cr

R5211 Social Processes in Small Group Settings (prereq 3201 or 5201 or #)
234856 1115-1200 MWF, BlegH 210, Spitzer, 4 cr

R5505 Family Development (prereq 1001, 3201 or 5201, CPsy 1301 or #)
523149 1115-1300 TTh, BlegH 205, Leik, 5 cr

R5555 Population Theory (prereq 3551 or #)
134857 1115-1230 TTh, BlegH 245, Kennedy, 4 cr

R5705 Backgrounds of Modern Social Thought (prereq 8 cr in social science or #)
723151 0945-1100 TTh, BlegH 215, Laslett, 4 cr

R5801 Computer Methods in Social Research
934858 0945-1100 TTh, BlegH 350, R Anderson, 4 cr

R5812 Content Analysis Methods (prereq 3803 or equiv or #)
834867 1415-1600 MW, BlegH 260, McTavish, 4 cr

R5821 Evaluation Research (prereq 3801, 3802, 3803 or #)
734859 1515-1700 TF, BlegH 105, N Eustis, 4 cr

R5855 Sociology of Medicine and Health Care: An Introduction to Medical Sociology (§PubH 5790; prereq jr or sr or grad student)
523152 1115-1200 MWF, MMA 100, Litman, 4 cr

R5952 Youth in Modern Society (§SPFE 5125; prereq 1001 or equiv or #)
410152 0815-0930 TTh, BuH 123, S Clark, 4 cr

R5960 Topics in Sociology: Adolescence in the Life Course: A Seminar
739379 1415-1630 Th, BlegH 225, Simmons, 4 cr

5970 Directed Studies (prereq #, △, CLA approval)
134860 1-15 cr

8090 Topics (prereq #)
113529 –1 ar cr
313531 –2 Reynolds, ar cr

R8215 Theories of Social Psychology
323153 1415-1600 Th, SocSci 101, Fine, 3 cr

R8411 Seminar: Research in Large-Scale Organization (prereq 5411)
134865 1415-1600 M, SocSci 101, T Anderson, 3 cr

R8524 Seminar: Sociology of Human Sexuality
934861 1415-1600 W, Law 3, Reiss, 3 cr

R8551 Seminar: Problems in Population Research
734862 1415-1600 Th, Mgmt/Econ 136, Kennedy, 3 cr

R8813 Data Analysis (prereq 8812 or #)
★LECT 1315-1400 TTh, BlegH 205, Jasso, 4 cr
628956 –1 LAB 1415-1600 F, BlegH 205

R8855 Health and Human Behavior (§PubH 8770; prereq 5855 or #)
034852 1115-1300 Th, Mayo 1210, Litman, 3 cr

R8955 Seminar: Teaching Sociology on the College Level (prereq 2nd or 3rd yr sociology grad student or #)
123154 1315-1500 W, SocSci 101, Cooperman, 3 cr

R8956 Death, Grief, Bereavement (prereq #)
139492 1900-2100 T, BlegH 260, Fulton, 3 cr

SOIL SCIENCE (Soil)
Agriculture

R3210 Physical Soil Management and Tillage (prereq 1122, Math 1111, Phys 1041 or #)
★LECT 0900-0945 MWF, PalmC 15, Gaudreau, 4 cr
834545 –1 LAB 1500-1745 M, Soils 120, Gaudreau
434547 –2 LAB 1500-1745 W, Soils 120, Gaudreau

R3220 Soil, Water Management, and Conservation (prereq 3210 or #) (course fee)
721707 0800-0845 MWF, PalmC 12, Gaudreau, 3 cr (Field trips April 14, May 5)

R3419 Fertilizer Technology (prereq 3416 or #)
107044 0800-0845 TTh, Soils 215, Grava, 2 cr

R3518 Seminar: FFA Soil Judging (S-N only)
438792 1300-1430 T, Soils 215, Cooper, 1 cr

R3520 Soil Morphology, Classification, and Genesis (prereq 1122) (course fee)
★LECT 0900-1030 TTh, Soils 215, Cooper, 4 cr
228961 –1 LAB 1300-1700 Th, Soils 215, Cooper, (Field trip May 17, 18)

R3918 Senior Seminar (prereq jr or sr)
607038 1500-1645 T, Soils 215, Cooper, 1 cr

5114 Special Problems in Soils (max 10 cr; prereq 1122 or #)
321709 1-5 cr

5228 Seminar: Climatology, Meteorology, and Agriculture (max 3 cr; prereq #)
721710 Baker, 1 cr

5340 Organic and Pesticidal Residues (prereq 1122 or #)
805580 1100-1145 MTWThF, BioSci 18, Adams, 5 cr

5424 Applied Climatology (§Geog 5424; prereq 5240 or Geog 3421 or #)
312525 1400-1515 TTh, PalmC 15, Baker, 3 cr

R5510 Soil Morphology, Classification and Genesis (§3520; prereq 1122) (course fee)
★LECT 0900-1030 TTh, Soils 215, Cooper, 4 cr
128962 –1 LAB 1300-1700 Th, Soils 1, Cooper, (Field trip May 17-18)

R5540 Soil Resources and Environmental Relationships (prereq 1122 or #)
707158 1500-1645 M, PalmC 12, Hanson, 2 cr (rec ar)

R5560 Uses and Interpretation of Soil Survey Information (prereq 3520 or #)
712523 1300-1430 MW, PalmC 15, Anderson, 3 cr

R5632 Soil Microbiology and Plant Growth (prereq 1122, course in microbiology or #) (A-N only)
★LECT 0900-0945 MWF, PalmC 12, Molina
928963 –1 LAB 1400-1545 Th, Soils 120, Molina, 5 cr

5710 Advanced Forest Soils (prereq 1122 or FR 3220)
521711 1000-1045 MWF, AlderH 310, Grigal, 3-4 cr

8111 Colloquia in Soil Science (prereq maj or min or #)
321712 1-4 cr

8124 Research Problems in Soils
121713 2-5 cr

SPANISH (Span)
Spanish And Portuguese
Liberal Arts

R1101 Beginning Spanish: Oral Approach
528528 –1 0815-0900 MTWThF, FolH 207, 5 cr
328529 –2 0915-1000 MTWThF, PtH 215, 5 cr
728530 –3 1015-1100 MTWThF, PtH 215, 5 cr
528531 –4 1115-1200 MTWThF, MinMet 120, 5 cr
128533 –5 1215-1300 MTWThF, KoltH S134, 5 cr
428568 –7 1115-1200 MTWThF, AkerH 317, 5 cr
628570 –8 1215-1300 MTWThF, LindH 302, 5 cr
228572 –9 1215-1300 MTWThF, LindH 217, 5 cr
928574 –10 1315-1400 MTWThF, AkerH 21, 5 cr

R1102 Beginning Spanish: Oral Approach (prereq 1101 or 1 yr high school Spanish)
734957 –1 0815-0900 MTWThF, Arch 20, 5 cr
128542 –2 0915-1000 MTWThF, LindH 217, 5 cr
728544 –3 1015-1100 MTWThF, MinMet 120, 5 cr
328546 –4 1115-1200 MTWThF, MinMet 124, 5 cr
028548 –5 1215-1300 MTWThF, KoltH S132, 5 cr

R1103 Beginning Spanish: Oral Approach (prereq 1102 or 2 yrs high school Spanish)
928557 –1 0815-0900 MTWThF, FolH 208, 5 cr
528559 –2 0815-0900 MTWThF, FolH 209, 5 cr
728561 –3 0915-1000 MTWThF, VinH 209, 5 cr
528562 –4 0915-1000 MTWThF, VinH 314, 5 cr
128564 –5 1015-1100 MTWThF, JonesH 10, 5 cr
828566 –6 1015-1100 MTWThF, AkerH 215, 5 cr

R1104 Intermediate Spanish, Oral Approach: Interpretation of Modern Problems (prereq 1103 or 3 yrs high school Spanish)
328577 –1 1015-1100 MTWF, AmundH 162, 4 cr
028579 –2 1215-1300 MTWF, KoltH S135, 4 cr

R1105 Intermediate Spanish, Oral Approach: Discussions of Modern Literature and the Press (prereq 1104 or 4 yrs high school Spanish)
128581 –1 1115-1200 MTWF, LindH 302, 4 cr
828583 –2 1315-1400 MTWF, KoltH S136, 4 cr

R1503 Culture, Civilization of Modern Latin America: Societies in Change
307423 1215-1300 MWF, FordH 155, Vidal, 4 cr

R3002 Reading for Speed and Comprehension (prereq 1105)
223212 1015-1100 TTh, FolH 303, Jones, 3 cr

R3003 Advanced Grammar Workshop (prereq 1105)
123213 0915-1000 TTh, FolH 305, 3 cr

R3004 Written Communication: Formal and Informal (prereq 1105)
007425 1115-1300 T, 1115-1200 Th, FolH 104, Mantini, 4 cr

R3005 Oral Communication: Speaking and Listening (prereq 1105)
923214 1015-1100 MWF, FolH 110, Madrid, 4 cr

R3021 Advanced Communication Skills (prereq 10 cr from 3001-3005 series or #)
723215 1115-1200 MWF, FolH 406, Madrid, 5 cr

R3104 The Art of Reading Literary Texts (prereq 3002)
523216 1115-1200 MWF, FolH 105, Ramos, 4 cr

R3512 Spanish-American Civilization: Modern Latin America (prereq 3002)
034950 1215-1300 MWF, FolH 105, Jara, 5 cr

R3602 The Picaresque Way of Life in Spain and Europe: Literature and the Delinquent
834951 1215-1300 T, 1215-1400 Th, FolH 110, Spadaccini, 4 cr

R3910 Topics in Spanish Peninsular Literature (max 12 cr; prereq 3104 or #)
210170 0915-1100 T, 1015-1100 Th, FolH 208, Spadaccini, 4 cr

R3910H Topics in Spanish Peninsular Literature (max 12 cr; prereq 3104 or #)
111909 0915-1100 T, 1015-1100 Th, FolH 208, Spadaccini, 4 cr

3970 Directed Studies (prereq #, △, college approval)
323217 1-5 cr

5529 National Affirmation and Transnationalization (prereq 3xxx or 5xxx Span or Port lit courses or △)
234954 1315-1400 MWF, FolH 52, Jara, 4 cr

5732 Spanish Dialectology: Regional and Social Dialect of Modern Spanish America (prereq 5729 or #)
134955 1315-1400 T, 1315-1500 Th, FolH 305, Mantini, 4 cr

5970 Directed Readings (max 15 cr; prereq #, △, CLA approval)
023219 1-5 cr

5990 Directed Research (prereq #, △, CLA approval)
123221 1-5 cr

8300 Research in the Historiography of the Spanish Literature
307437 1415-1500 W, 1415-1600 F, FolH 304, Ramos, 4 cr

8970 Directed Readings in Romance Languages (prereq △)
823223 ar cr

SPANISH-PORTUGUESE (SpPt)
Spanish And Portuguese
Liberal Arts

3980 Directed Instruction (max 8 cr; prereq #, △, college approval) (S-N only)
623224 1-4 cr

SPEECH-COMMUNICATION (Spch)
Liberal Arts

R1101 Fundamentals of Speech-Communication: Oral Communication (§1441)
928610 –1 0815-1000 MW, FolH 406, 4 cr
528612 –2 0815-1000 MF, JonesH 4, 4 cr
128614 –3 1015-1200 MW, FolH 307, 4 cr
828616 –4 1015-1200 MW, FolH 306, 4 cr
428618 –5 1215-1400 MW, FolH 307, 4 cr
628620 –6 0815-1000 TTh, JonesH 4, 4 cr
228622 –7 0815-1000 TTh, FolH 306, 4 cr
928624 –8 0815-1000 TTh, FolH 307, 4 cr
528626 –9 1015-1200 TTh, JonesH 4, 4 cr
128628 –10 1215-1400 TTh, FolH 307, 4 cr
328630 –11 1215-1400 TTh, FolH 406, 4 cr
028632 –12 0815-1000 W, JonesH 4, 0815-1000 F, FolH 307, 4 cr
828633 –13 1015-1200 WF, JonesH 4, 4 cr

R1102 Fundamentals of Speech-Communication: Communication Process
423225 1015-1100 MWF, NichH 45, Petronio, 4 cr •

R1313 Analysis of Oral Argument
013547 –1 1015-1200 M, JonesH 4, 1015-1200 F, FolH 306, 4 cr
613549 –2 1215-1400 M JonesH 4, , 1215-1400 F, FolH 306, 4 cr
813551 –3 1315-1400 MWF, FolH 305, 4 cr
613552 –4 0815-1000 TTh, FolH 406, 4 cr
034785 –5 1015-1200 TTh, FolH 406, 4 cr
834786 –6 1215-1400 W, FolH 406, 1215-1400 F, FolH 307, 4 cr

3193H Honors Course: Tutorial Seminar in Speech (prereq honors candidate in speech-communication, △, #)
011913 4 cr

R3201 Introduction to Broadcasting Production
928641 –1 0815-1000 MW, RarigC 610, 4 cr (spch-comm and jour majs only)
528643 –2 1015-1200 MW, RarigC 610, 4 cr (spch-comm and jour majs only)
328644 –3 1415-1600 MW, RarigC 610, 4 cr (spch-comm and jour majs only)
128645 –4 0815-1000 TTh, RarigC 610, 4 cr (spch-comm and jour majs only)
028646 –5 1015-1200 TTh, RarigC 610, 4 cr (spch-comm and jour majs only)
829569 –6 0815-1000 MW, RarigC 610, 4 cr
129570 –7 1015-1200 MW, RarigC 610, 4 cr
029571 –8 1415-1600 MW, RarigC 610, 4 cr
829572 –9 0815-1000 TTh, RarigC 610, 4 cr
629573 –10 1015-1200 TTh, RarigC 610, 4 cr

R3202 Producing Videotape in the Field (prereq 3201)
628648 –1 0815-1200 F, RarigC 610, 4 cr (spch-comm and jour majs only)
429574 –2 0815-1200 F, RarigC 610, 4 cr

R3203 Radio Production (prereq 3201)
009997 –1 1015-1200 TTh, EddyH 28, 4 cr (spch-comm and jour majs only)
503208 –2 1015-1200 TTh, EddyH 28, 4 cr

R3204 Studio Television Production (prereq 3201)
223226 –1 1215-1400 TTh, RarigC 616, Bart, 4 cr (spch-comm and jour majs only)
229575 –2 1215-1400 TTh, RarigC 616, Bart, 4 cr

R3211 Determinants of Broadcast Programming
408272 1315-1400 MWF, FolH 308, Rarick, 4 cr

R3401 Theories of Interpersonal Communication (prereq 1102 or #, Psy 1001)
123227 1115-1200 MWF, FraserH 102, Sykes, 4 cr

R3431 The Role of Persuasion in the Modern World (soph standing rec)
923228 –1 1115-1200 MWF, FolH 308, Lapakko, 4 cr (spch-comm maj only)
129576 –2 1115-1200 MWF, FolH 308, Lapakko, 4 cr

R3441 Communicating in Organizations (prereq 1102 or 1101 or equiv)
038058 –1 1115-1200 MWF, FolH 209, Morris, 4 cr (spch-comm maj only)
838059 –2 1115-1200 MWF, FolH 209, Morris, 4 cr

R3451 Intercultural Communication: Theory and Practice (§UC 3701; prereq planning an intercultural experience)
409776 0915-1100 WF, FolH 304, 4 cr

R3452 Communication and the Intercultural Reentry (§UC 3703; prereq return from an intercultural experience)
209780 –1 1415-1600 WF, FolH 104, Martin, 4 cr (spch-comm maj only)
934777 –2 1415-1600 WF, FolH 104, Martin, 4 cr

R3601 Approaches to Public Discourse (prereq 1101)
514208 0815-0900 MWF, FolH 308, Scott, 4 cr

R3601H Honors Course: Approaches to Public Discourse (prereq 1101, honors registration or #)
538959 1415-1500 MWF, FolH 305, Scott, 4 cr

R3605 Public Speaking (prereq 1101)
228653 –1 0815-1000 MW, FolH 307, 4 cr (spch-comm maj only)
128654 –2 1215-1400 MF, FolH 406, 4 cr (spch-comm maj only)
728656 –3 1015-1200 TTh, FolH 307, 4 cr (spch-comm maj only)
929577 –4 0815-1000 MW, FolH 307, 4 cr
729578 –5 1215-1400 MF, FolH 406, 4 cr
529579 –6 1015-1200 TTh, FolH 307, 4 cr

R3641 Discussion and Conference Methods (prereq 1101 or 1101H or #)
528657 –1 0815-1000 MW, FolH 306, 4 cr (spch-comm maj only)
328658 –2 1215-1400 MW, FolH 306, 4 cr (spch-comm maj only)
528660 –3 1415-1600 MW, FolH 307, 4 cr (spch-comm maj only)
128662 –4 1415-1600 MW, FolH 306, 4 cr (spch-comm maj only)
929580 –5 1015-1200 TTh, FolH 306, 4 cr (spch-comm maj only)
729581 –6 1215-1400 TTh, FolH 306, 4 cr (spch-comm maj only)
529582 –7 1415-1600 TTh, FolH 307, 4 cr (spch-comm maj only)
329583 –8 0815-1000 MW, FolH 306, 4 cr
300357 –9 1215-1400 MW, FolH 306, 4 cr
000359 –10 1415-1600 MW, FolH 307, 4 cr
100361 –11 1415-1600 MW, FolH 306, 4 cr
000362 –12 1015-1200 TTh, FolH 306, 4 cr
638063 –13 1215-1400 TTh, FolH 306, 4 cr
438064 –14 1415-1600 TTh, FolH 307, 4 cr
238065 –15 0815-1000 MW, FolH 306, 4 cr (SMgt, pre-bus maj only)
138066 –16 1215-1400 MW, FolH 306, 4 cr (SMgt, pre-bus maj only)
938067 –17 1415-1600 MW, FolH 307, 4 cr (SMgt, pre-bus maj only)
738068 –18 1415-1600 MW, FolH 306, 4 cr (SMgt, pre-bus maj only)
538069 –19 1015-1200 TTh, FolH 306, 4 cr (SMgt, pre-bus maj only)
938070 –20 1215-1400 TTh, FolH 306, 4 cr (SMgt, pre-bus maj only)
738071 –21 1415-1600 TTh, FolH 307, 4 cr (SMgt, pre-bus maj only)

3970 Directed Studies (no cr for spch-comm maj; prereq at least one spch-comm course, #, △, college approval)
723229 ar cr

3980 Directed Instruction (max 8 cr, no cr for speech-communication maj; prereq #, △, college approval) (S-N only)
123230 1–4 cr

R5202 Advanced Television Production (prereq 3204, #)
923231 1315-1500 MWF, RarigC 616, Bart, 4 cr

R5222 Educational Television Programming and Administration (prereq 3211 or #)
634787 –1 1615-1800 MW, RarigC 610, Goldstein, 4 cr (spch-comm maj only)
434788 –2 1615-1800 MW, RarigC 610, Goldstein, 4 cr

R5261 Communicative Processes of Television (prereq 3211 or #)
139385 –1 1115-1300 WF, FolH 302, Cohen, 4 cr (spch-comm maj only)
039386 –2 1115-1300 WF, FolH 302, Cohen, 4 cr

R5281 Broadcasting Audience Analysis and Programming (prereq 3211)
234789 –1 1015-1100 MWF, FolH 406, Rarick, 4 cr (spch-comm maj only)
634790 –2 1015-1100 MWF, FolH 406, Rarick, 4 cr

R5401 Advanced Process of Interpersonal Communication
008283 1015-1200 MW, FolH 305, G Miller, 4 cr

R5402 Problems in Interpersonal Communication (prereq 3401 or #)
523233 –1 1315-1500 MWF, FolH 209, Shapiro, 4 cr (spch-comm maj only)
129584 –2 1315-1500 MWF, FolH 209, Shapiro, 4 cr

R5405 Nonverbal Communication: Theory and Research
234792 –1 1615-1800 MW, FolH 406, Sykes, 4 cr (spch-comm maj only)
134793 –2 1615-1800 MW, FolH 406, Sykes, 4 cr

R5412 Group and Organizational Communication (prereq 5411) (S-N only)
323234 –1 1515-1600 MTWTh, FolH 406, Bormann, 4 cr (spch-comm maj only)
029585 –2 1515-1600 MTWTh, FolH 406, Bormann, 4 cr

R5421 Quantitative Research in Communication (prereq 3401 or 5403 or #)
934794 –1 1615-1800 MW, FolH 306, Petronio, 4 cr (spch-comm maj only)
534796 –2 1615-1800 MW, FolH 306, Petronio, 4 cr

R5422 Interview and Communication (prereq 1101, 6 cr in social science or #)
123235 –1 1615-1800 TTh, FolH 306, H Miller, 4 cr (spch-comm maj only)
228958 –2 1615-1800 TTh, FolH 306, H Miller, 4 cr
536631 –3 1615-1800 TTh, FolH 306, H Miller, 4 cr (SMgt stu, pre-bus majs only)

R5452 Workshop in Intercultural Communication (prereq #...5451 rec) (S-N only)
023236 Howell, 4 cr

R5613 Explorations Into Argumentation (prereq 1101 or 1313 or #)
336114 0915-1000 MWF, FolH 305, Jensen, 4 cr

5970 Directed Readings (prereq nine 3xxx-5xxx speech-communication cr, #, △, CLA approval)
823237 ar cr

8110 Seminar: Advanced Speech Problems (prereq undergrad maj in speech or equiv, #)
908292 1415-1600 T, FolH 305, G Miller, 3 cr

8130 Seminar: Advanced Speech Problems (prereq 8120)
308295 1315-1500 TTh, FolH 103, Martin, 3 cr

8201 Introduction to Survey Research in Speech-Communication (prereq 8101 or Jour 8001 or #)
108296 1615-1800 MW, FolH 307, Rarick, 3 cr

8411 Seminar: Small Group Communication (prereq 1101, 5411)
134798 1615-1800 W, FolH 304, Bormann, 3 cr

R8441 Seminar: Organizational Communication (prereq 5441 or #)
423239 1615-1800 W, FolH 305, Shapiro, 3 cr

8990 Research (prereq #, △)
623238 ar cr

STATISTICS (Stat)
Liberal Arts

R1051 Introduction to Ideas of Statistics (prereq high school higher algebra)
★LECT 0900-0945 MWF, ClaOff B35, C Chen, (StP)
428683 –1 REC 0900-0945 T, ClaOff B42, 4 cr (StP)
128685 –2 REC 0900-0945 Th, ClaOff B42, 4 cr (StP)
★LECT 1015-1100 MWF, MechE 18, Cohen
728687 –3 REC 1015-1100 T, Arch 15, 4 cr
328689 –4 REC 1015-1100 T, VinH 207, 4 cr
728690 –5 REC 1015-1100 Th, VinH 207, 4 cr
528691 –6 REC 1115-1200 Th, VinH 207, 4 cr
★LECT 1115-1200 MWF, MechE 212, Eaton
934973 –7 REC 1115-1200 Th, Arch 30, 4 cr
734974 –8 REC 1115-1200 Th, MinMet 116, 4 cr

R3081 Experimental Techniques and Statistical Inference (prereq agri, biological science, forestry or home economics student)
★LECT 1300-1345 MWF, ClaOff B35, C Chen, (StP)
128693 –1 LAB 1000-1045 TTh, ClaOff B42, 5 cr (StP)
828695 –2 LAB 1300-1345 TTh, ClaOff B30, 5 cr (StP)
128959 –3 LAB 1400-1445 TTh, ClaOff B30, 5 cr

R3091 Probability and Statistics (§5121, 5131; prereq differential, integral calculus)
★LECT 0815-0900 MWF, MechE 212, Polansky
428697 –1 REC 0815-0900 T, VinH 2, 4 cr
128699 –2 REC 0815-0900 Th, VinH 2, 4 cr
★LECT 0915-1000 MWF, Armory 116, Cohen, (IT majs)
228703 –3 REC 0915-1000 T, VinH 2, 4 cr
928705 –4 REC 0915-1000 Th, VinH 2, 4 cr
★LECT 1015-1100 MWF, MechE 212, Conaway, (IT majs)
128709 –5 REC 1015-1100 T, VinH 2, 4 cr
328711 –6 REC 1015-1100 Th, VinH 2, 4 cr
★LECT 1115-1200 MWF, Arch 55, Das Gupta, (IT majs)
828714 –7 REC 1115-1200 T, VinH 2, 4 cr
428716 –8 REC 1115-1200 Th, VinH 2, 4 cr
★LECT 1215-1300 MWF, Phys 210, Buehler, (IT majs)
907966 –9 REC 1215-1300 T, VinH 2, 4 cr
507968 –10 REC 1215-1300 Th, VinH 2, 4 cr

The Global Campus



Explore the University of Minnesota's global campus with a study abroad program through the Extension Classes Office of Study Abroad (ECOSA).

Spanish in Cuernavaca, winter quarter
Anthropology in Mexico, winter quarter
Literature in London, spring quarter
Swedish in Växjö, spring quarter
French in Montpellier, spring quarter
Hebrew Ulpan in Israel, summer
Forestry Seminar in Scandinavia, summer
German and Austrian Studies in Graz, fall quarter
Summer Term in Poland
Art Education Seminar in Europe, summer
Family Issues Seminar in Scandinavia, summer
Minnesota Studies in International Development
International Program in Toledo, Spain

For more information, contact
Extension Classes
Office of Study Abroad
University of Minnesota
202 Wesbrook Hall
77 Pleasant Street S.E.
Minneapolis, Minnesota 55455
(612) 373-1855

University of Minnesota
Continuing Education and Extension
An equal opportunity educator and employer

Invest in your professional development . . .

Video Primer

- 3 short workshops – 3 consecutive weekends
- basic production skills – black & white camera, color camera, editing
- lecture, demonstration and hands-on experience

Video Production I

- 10 weeks of lecture, demonstration and hands-on experience
- how to use cameras, microphones, and video recorders
- techniques of lighting, audio, and editing
- theory and technique

Video Production II

- 10 weeks to plan and prepare a videotape
- expand basic knowledge – extension of Production I
- color cameras, processing and monitoring equipment
- conceptual skills in storyboarding, scripting, budgeting, and pre-production

ucvideo
A Non-Profit Center for Video Arts and Education
425 Ontario Street SE Minneapolis, MN 55414 (612) 376-3333

ARTISTS, DRAFTING ENGINEERING & ARCHITECTS SUPPLIES

ART MATERIALS
INCORPORATED

315 14th Ave. S.E. 331-6864
3018 Lyndale Ave. S.E. 827-5301

SEE EUROPE THIS SUMMER . . .

TRAVEL, STUDY, WORK ABROAD

ISTC and ISTAgency, your on-campus, international experts, can help you get experience . . . INTERNATIONALLY

ISTAgency
ISTCenter

University of Minnesota
44 Coffman Memorial Union
300 Washington Avenue S.E.
Minneapolis, MN 55455
(612) 373-0180

DON'T GO ABROAD WITHOUT US

SCHEDULE WORKSHEET

TIMETABLE

PERIOD OR TIME	MON	TUES	WED	THURS	FRI	SAT

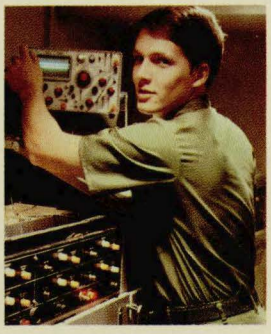
COURSES

COURSE NO.	TITLE	INSTRUCTOR









When you graduate to the Air Guard, your future's looking up.

And so is our country's. Because the professional men and women of the Air National Guard do more than provide the major portion of our national air defense. They provide aid in state and community emergencies as well.

Great benefits. Now and for your future.

By joining the Air Guard now, you'll be doing more than helping protect your community, state and home town. You'll be helping yourself.

Because the Air Guard is a part-time military job, you'll have plenty of time to pursue a civilian career. Or further your education which we may help you pay for.

What's more, we'll provide valuable technical training. The kind of training you could probably use to get a good civilian job or to advance in your chosen career.

Of course, you'll also receive low-cost life insurance, a retirement plan, base exchange privileges, and more. All for your part-time work in the Air Guard.

If you're ready to move ahead with your future, learn valuable job skills and earn extra income, call your Air Guard recruiter, toll-free, today. **800/638-0936.** (In Maryland, call 301/981-6716. Outside the continental U.S., consult your local directory under state government.)

You'll find out why we say, "In the Air Guard, the sky isn't the limit."

We Guard America's Skies.

AIR NATIONAL GUARD

A2UCGR**123NP



Fiero, America's first mid-engine production car.
Only from Pontiac.

PONTIAC WE BUILD EXCITEMENT

GM

Use this card for DIRECTORY OF CLASSES™

Free Information from advertisers.

Advertisers listed below will provide you with free additional information about their products and services. Please circle the number of those that interest you.

1. AIR FORCE
2. AIR NATIONAL GUARD
3. AMERICAN COLLEGIATE MARKETING
4. ARMY RESERVE
5. ARMY ROTC OPPORTUNITIES
6. CANON
7. CAREER PLANNING TODAY
8. CHEVROLET-CAMARO Z28
9. DELCO-GM/BOSE
10. FORD/EXP TURBO
11. INSTITUTE FOR PARALEGAL TRAINING
12. MARINE CORPS
13. MAYBELLINE COSMETICS
14. NEW YORK CITY HEALTH & HOSPITAL CORP.
15. PANASONIC
16. PONTIAC FIERO
17. SHARP
18. TECHNICS
19. U.S. COAST GUARD
20. U.S. NAVY

UNIVERSITY COMMUNICATIONS DIRECTORY OF CLASSES

NAME _____ AGE _____

ADDRESS _____ CITY _____ STATE _____ ZIP _____

SCHOOL _____

CLASS A ☐ FRESHMAN
B ☐ SOPHOMORE
C ☐ JUNIOR
D ☐ SENIOR
E ☐ GRADUATE LEVEL

MAJOR F ☐ ENGINEERING
G ☐ SCIENCE/TECHNICAL
H ☐ BUSINESS/FINANCE
I ☐ NURSING/ALLIED HEALTH
J ☐ COMPUTER SCIENCES
K ☐ LIBERAL ARTS
L ☐ OTHER _____

This Card Expires September 30, 1984

DOC 1183

Use this card for DIRECTORY OF CLASSES™

Free Information from advertisers.

Advertisers listed below will provide you with free additional information about their products and services. Please circle the number of those that interest you.

1. AIR FORCE
2. AIR NATIONAL GUARD
3. AMERICAN COLLEGIATE MARKETING
4. ARMY RESERVE
5. ARMY ROTC OPPORTUNITIES
6. CANON
7. CAREER PLANNING TODAY
8. CHEVROLET-CAMARO Z28
9. DELCO-GM/BOSE
10. FORD/EXP TURBO
11. INSTITUTE FOR PARALEGAL TRAINING
12. MARINE CORPS
13. MAYBELLINE COSMETICS
14. NEW YORK CITY HEALTH & HOSPITAL CORP.
15. PANASONIC
16. PONTIAC FIERO
17. SHARP
18. TECHNICS
19. U.S. COAST GUARD
20. U.S. NAVY

UNIVERSITY COMMUNICATIONS DIRECTORY OF CLASSES

NAME _____ AGE _____

ADDRESS _____ CITY _____ STATE _____ ZIP _____

SCHOOL _____

CLASS A ☐ FRESHMAN
B ☐ SOPHOMORE
C ☐ JUNIOR
D ☐ SENIOR
E ☐ GRADUATE LEVEL

MAJOR F ☐ ENGINEERING
G ☐ SCIENCE/TECHNICAL
H ☐ BUSINESS/FINANCE
I ☐ NURSING/ALLIED HEALTH
J ☐ COMPUTER SCIENCES
K ☐ LIBERAL ARTS
L ☐ OTHER _____

This Card Expires September 30, 1984

DOC 1183

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 27346 PHILADELPHIA, PA

POSTAGE WILL BE PAID BY—

UNIVERSITY COMMUNICATIONS
DIRECTORY OF CLASSES
P.O. BOX 13871
PHILADELPHIA, PA 19101

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO. 27346 PHILADELPHIA, PA

POSTAGE WILL BE PAID BY—

UNIVERSITY COMMUNICATIONS
DIRECTORY OF CLASSES
P.O. BOX 13871
PHILADELPHIA, PA 19101

R5021 Statistical Analysis I (prereq college algebra or #)
★LECT 1400-1445 MWF, ClaOff B35, Bingham, (StP)
228720 –1 LAB 0900-1045 T, BioSci 6, 5 cr (StP)
928722 –2 LAB 1300-1445 T, AgEng 105, 5 cr (StP)
528724 –3 LAB 0900-1045 Th, ClaOff B36, 5 cr (StP)

R5022 Statistical Analysis II (prereq 5021 or #)
★LECT 1000-1045 MWF, McNH 33, Martin, (StP)
828728 –1 LAB 1100-1245 T, ClaOff B30, 5 cr (StP)
028730 –2 LAB 0900-1045 Th, BioSci 6, 5 cr (StP)
628732 –3 LAB 1300-1445 Th, BioSci 6, 5 cr (StP)

R5122 Theory of Statistics (prereq 5121)
★LECT 1315-1400 MWF, VinH 2, Tierney
307972 –1 REC 1315-1400 T, VinH 209, 4 cr
807975 –2 REC 1315-1400 Th, VinH 209, 4 cr

R5133 Theory of Statistics (prereq 5132)
228734 –1 1015-1100 MWF, VinH 209, Sudderth, 4 cr
928736 –2 1115-1200 MWF, VinH 209, K Chen, 4 cr

5301 Designing Experiments (prereq 5022 or 5122 or 5133 or #)
823240 1130-1230 MWF, ClaOff B25, Brant, 4 cr (StP)

5302 Applied Regression Analysis (prereq 5022 or 5122 or 5133 or #)
623241 1500-1600 MWF, AgEng 108, Weisberg, 4 cr (StP)

5401 Introduction to Multivariate Methods (prereq 5022 or 5122 or #)
423242 0900-1000 MWF, VinH 20, Lahiff, 4 cr

5890 Senior Paper (prereq sr in statistics) (A–N only)
639309 2 cr

5900 Tutorial Course (prereq #)
223243 Berry, ar cr

5912 Topics in Statistics: Survival Analysis (prereq 5301 and either 5122 or 5133, #)
336968 1600-1715 MW, VinH 213, Tierney, 3 cr

8153 Mathematical Statistics (prereq 8152)
123244 1115-1215 MWF, VinH 206, Lindgren, 4 cr

8161 Applied Statistical Methods (prereq 8312 or #)
923245 1300-1400 MWF, ClaOff B36, Chaloner, 4 cr (StP)

8173 Theory of Inference (prereq 8172)
534975 1315-1430 TTh, VinH 206, Geisser, 3 cr

8412 Multivariate Analysis (prereq 8411)
334976 1515-1630 MW, VinH 206, Eaton, 3 cr

8611 Nonparametric Inference (prereq 8153 or #)
136969 Das Gupta, 3 cr

8801 Statistical Consulting (prereq #)
523247 1–3 cr

8900 Seminar in Statistical Literature (prereq #)
323248 1–3 cr

8933 Advanced Topics in Statistics: Sequential Allocation (prereq #)
109934 1345-1500 MW, VinH 206, Berry, 3 cr

SURGERY (Surg)
Medical School

5500 Externship: Surgery at the University and Affiliated Hospitals (prereq regis med)
623966 Cerra, ar cr

5501 Emergency Room Externship
423967 Cerra, 9 cr

5523 Externship in Colon and Rectal Surgery: Veterans Administration Hospital (prereq regis med)
123969 Goldberg, ar cr

8200 Clinical Surgical Problems in Management
223971 Najarian, 5 cr

8201 Surgical-Roentgenological Conference
123980 0900-1300 S, Mayo B139, Najarian, 1 cr (Todd Amph)

8202 Surgical Research
923973 Najarian, 5 cr

8203 Surgery Complications and Research Conference
723974 1600-1800 T, PWB 11157, Najarian, 1 cr

8206 Biomedical Engineering Seminar (prereq 8205)
323976 Blackshear, 1–3 cr

8207 Transplantation, Bone Marrow Conference
023978 1630-1730 W, PWB 11157, Najarian, 1 cr

SWEDISH (Swed)
Scandinavian Languages
Liberal Arts

R1103 Beginning Swedish (prereq 1102)
128757 –1 0815-0900 MTWThF, FolH 205, 5 cr
828759 –2 1315-1400 MTWThF, FolH 303, 5 cr

3101 Advanced Swedish (prereq 1105)
823125 1215-1300 MWF, FolH 103, Johansson, 4 cr

3670 Readings of Swedish Literary Texts (max 28 cr; prereq 3101)
623126 1245-1400 TTh, FolH 204, Grimstad, 4 cr

TEXTILES AND CLOTHING (TexC)
Design, Housing And Apparel
Home Economics

R1602 Fitting the Human Subject (prereq △)
★LECT 0900-0945 T, McNH 475, Hethorn, 2 cr
728964 –1 LAB 1000-1145 T, McNH 475, Hethorn

R1603 Advanced Principles of Apparel Production (prereq 1602 or ¶)
★LECT 0900-0945 Th, McNH 475, Fiori, 2 cr
201761 –1 LAB 1000-1145 Th, McNH 475, Fiori
236882 –2 LAB 1000-1145 Th, McNH 480, Hethorn

R1641 Introduction to Merchandising (prereq ¶1642)
906185 1000-1045 MWF, ClaOff B25, Abeln, 3 cr

R1642 Seminar: Orientation to Retail Merchandising (prereq ¶1641) (S–N only)
922631 1500-1545 W, ClaOff B25, Abeln, 1 cr

R1643 Apparel Industries (prereq Econ 1002 or AgEc 1030)
722632 1000-1045 MWThF, McNH 69, Badenoch, 4 cr

3003 Cooperative Education Program (prereq soph, HE 1003, #) (S–N only)
522633 1–3 cr

R3601 Tailoring (prereq 1603 or #)
136883 0900-1145 MWF, McNH 475, S Johnson, 4 cr

R3603 Ready-to-Wear Analysis (prereq 3621)
322634 –1 1000-1145 TTh, McNH 470, Sieben, 3 cr
338879 –2 1300-1445 TTh, McNH 475, Sieben, 3 cr

R3605 Draping Design and Construction (prereq soph, 1603, 3662 or Dsgn 1525 or △)
534278 1300-1445 MWF, McNH 480, DeLong, 3 cr

R3621 Textiles (prereq soph, Chem 1002, 1003 or 1005 or #)
★LECT 0900-0945 MWF, McNH 33, Franzen, (1 hr ar)
128774 –1 LAB 0800-0945 TTh, McNH 322, 5 cr
828776 –2 LAB 1000-1145 TTh, McNH 322, 5 cr
428778 –3 LAB 1300-1445 TTh, McNH 322, 5 cr

R3622 Textiles for Interiors (prereq 3621, #)
628780 –1 1000-1145 MWF, McNH 340, Franzen, 3 cr
428781 –2 1300-1445 MWF, McNH 340, Franzen, 3 cr

R3641 Field Study in Textiles and Clothing (prereq soph, △) (S–N only)
122635 1 cr

R3643 Retail Merchandising (prereq 1641, Mktg 3065)
022636 1300-1445 MWF, McNH 470, Druy, 5 cr

R3645 Retail Experience Seminar II (prereq 3643 or ¶, 3644, additional 200 hours or ¶200 hours approved selling experience) (S–N only)
822637 1500-1645 W, McNH 470, Badenoch, 2 cr

R3662 Aesthetics of Clothing (prereq Psy 1001, Dsgn 1501 or #)
★LECT 1200-1245 TTh, McNH 470, DeLong
328787 –1 LAB 1300-1445 T, McNH 470, 3 cr (Retail merchandising/textiles and clothing/costume design students)
028789 –2 LAB 1300-1445 Th, McNH 470, 3 cr

3664 Fashion Trend Analysis (prereq jr or sr, Soc 1001, Psy 1001)
912049 1300-1445 MW, McNH 198, Grindereng, 4 cr

5003 Cooperative Education Program (5003-5004†; prereq sr, ¶5004, #, minimum GPA of 2.50) (S–N only)
622638 –1 Druy, 4–8 cr (Retail merchandising students)
429638 –2 4–8 cr (Textiles and clothing students)

5004 Cooperative Education Integrative Paper (5003-5004†; prereq sr, ¶5003, #) (A–N only)
422639 –1 Druy, 4 cr (Retail merchandising students)
229639 –2 4 cr (Textiles and clothing students)

R5622 Issues and Trends in Textile Consumer Protection
822640 1000-1115 TTh, McNH 198, R Johnson, 3 cr

R5630 Principles of Textile Metrology (prereq #)
334279 1130-1300 TTh, McNH 340, Brown, 3 cr

R5662 Clothing Consumption Problems (prereq 3621, AgEc 1030 or Econ 1002, Soc 1001, Psy 1001 or #)
734280 1300-1415 TTh, McNH 198, Williams, 3 cr

R5685 International Developments in Textiles and Clothing (prereq #)
738880 1500-1645 TTh, McNH 198, Grindereng, 4 cr

8621 Readings in Textiles (prereq #)
422642 Brown, R Johnson, 1–3 cr

8625 Problems: Textiles and Clothing (max 9 cr; prereq #)
222643 Brown, R Johnson, 3–9 cr

8661 Readings in Clothing (prereq min 12 cr in textiles and clothing courses, #)
122644 DeLong, Williams, others, 1–3 cr

8663 Problems: Clothing and Textiles (max 9 cr; prereq #)
922645 DeLong, Williams, others, 3–9 cr

THEATRE ARTS (Th)
Liberal Arts

R1101 Introduction to the Theatre
428800 –1 1015-1200 MW, RarigC 190, Ballet, 4 cr
128802 –2 1015-1200 TTh, RarigC 190, Ballet, 4 cr

R1301 Beginning Acting for Non-Theatre Majors (prereq 1101 or ¶)
507971 –1 1015-1100 MWF, RarigC 90, 4 cr
007974 –2 1015-1100 TThF, RarigC 90, 4 cr

R1321 Beginning Acting: Creative Approach (prereq 1101, 1504, 3rd qtr freshman or above)
728804 –1 1515-1700 MW, RarigC 210, 4 cr
528805 –2 1015-1200 TTh, RarigC 10, Berry, 4 cr
212727 –3 1515-1700 TTh, RarigC 210, 4 cr

R1326 Beginning Acting: Technique (prereq 1321)
902847 1515-1600 MTWThF, RarigC 10, 4 cr

R1502 Makeup for the Actor (prereq 1504, clean-shaven face)
323251 0815-1000 TTh, RarigC 45, 2 cr

R1504 Elements of Technical Theatre (prereq 1101 or ¶)
202862 0915-1000 TTh, RarigC 190, Brockman, 4 cr (lab ar)

R1804 Oral Traditions, Myth to Modern
834576 1015-1200 TTh, RarigC 210, Congdon, 4 cr

R3101 Senior Seminar (prereq sr theatre maj) (A–N only)
935704 0915-1000 TTh, RarigC 275, Thompson, 4 cr

R3311 Beginning Voice Production for the Theatre (prereq 1321 or ¶1321) (A–N only)
407994 0915-1000 MTWTh, RarigC 20, Nash, 4 cr

R3322 Advanced Acting, Period Plays and Styles (prereq 3311, 3321, 3326)
123261 1015-1200 MW, RarigC 210, Reid, 4 cr

R3326 **Theatre Dance** (prereq 1326)
434578 1015-1100 MWF, RarigC 10, Moulton, 2 cr

R3328 **Mime and the Mask II** (prereq 1321, 1328)
723263 1315-1500 MW, RarigC 10, Berry, 2 cr

3412H **Honors Course: Tutorial Seminar in Theatre Arts** (prereq candidate for honors in theatre arts, △)
111918 0-3 cr

R3711 **Stage Direction** (§3708, 5711; prereq 1321, jr or sr)
902850 1015-1200 TTh, RarigC 185, Hamilton, 4 cr

R3801 **Oral Interpretation of Fiction** (prereq 1504 or 1804 or Spch 1101)
628813 –1 1015-1200 MW, RarigC 185, Congdon, 4 cr
228815 –2 1315-1500 TTh, RarigC 20, Congdon, 4 cr

R3950 **Topics in Theatre: Platform Performance** (prereq SMgt maj)
138987 –1 1315-1500 MW, BlegH 350, 4 cr
938988 –2 1415-1600 MW, BlegH 135, 4 cr
139380 –3 0815-1000 TTh, RarigC 616, 4 cr
939381 –4 1315-1500 TTh, BlegH 230, 4 cr

R3980 **Directed Instruction** (max 8 cr; prereq compl of course in which teaching will be done, #, △, college approval)
523264 1-3 cr

R5100 **Theatre Practicum** (prereq written permission, #, △) (A-N only)
323265 Gadberry, others, 1-6 cr

R5110 **Theatre Performance** (max 9 cr; prereq written permission after casting and/or assignment to a production) (S-N only)
823268 Montgomery, 1 cr

5172 **History of Theatre** (prereq sr or grad student)
234579 1315-1430 TTh, BlegH 220, Nolte, 4 cr

R5313 **Intermediate Voice Production for the Theatre** (prereq #, written permission) (A-N only)
634580 1015-1100 MTWTh, RarigC 20, Nash, 4 cr

R5315 **Stage Combat: Armed** (prereq 5314)
909541 1315-1500 TTh, RarigC 10, Berry, 2 cr

R5321 **Problems in Professional Acting** (prereq 3321 or grad student)
123275 1315-1500 TTh, RarigC 90, Reid, 4 cr

R5336 **Acting for Music-Theatre** (prereq 5335, written permission)
302853 0815-1000 MW, 0915-1000 F, RarigC 185, Goldstein, 4 cr

R5510 **Drawing and Rendering for Theatre Designers** (prereq 3513 or 3515 or grad student, #)
923276 1015-1200 TTh, RarigC 275, Brockman, 2 cr

R5516 **Advanced Problems in Stage Lighting Design** (prereq 3515, 3711 or #)
909524 1315-1500 MW, RarigC 275, Montgomery, 4 cr (lab ar)

R5519 **Sound for the Theatre** (prereq 1504, #)
234582 1515-1700 MW, RarigC 275, Montgomery, 2 cr (lab ar)

R5711 **Stage Direction** (§3708, 3711; prereq 1321, sr or grad student)
307986 1315-1500 TTh, RarigC 185, Adey, 4 cr

R5712 **Stage Direction** (prereq 3708 or 3711 or 5711, 3513, 3515, 3801)
723277 1315-1500 MW, RarigC 185, Adey, 4 cr

R5718 **Theatre Management and Promotion** (prereq 1504, sr or grad student or #)
109531 1015-1200 MW, RarigC 75, Neely, 4 cr

R5720 **Plays in Production and Performance** (max 6 cr for undergrads; prereq 5712, written permission)
523278 2-4 cr

R5760 **Advanced Stage Management** (max 6 cr for undergrads; prereq 5716 or ¶, written permission)
809533 Montgomery, 1-3 cr

R5802 **Oral Interpretation of Poetry** (prereq 1504, 3801 or grad student)
134583 1515-1700 MW, RarigC 20, Fredricks, 4 cr

R5811 **History of Acting and Interpretation** (prereq 3321 or 3322, 3801 or grad student)
734585 1315-1500 TTh, RarigC 275, Thompson, 4 cr

R5823 **Oral Interpretation of Shakespeare** (prereq 1504, 3801 or grad student)
534586 1315-1500 MW, RarigC 90, Thompson, 4 cr

R5940 **Topics in Theatre: Advanced Make-Up** (prereq 1504 or grad, clean-shaven face)
136642 1515-1700 TTh, RarigC 45, Crellin, 2 cr

R5950 **Topics in Theatre: Composition in Design** (max 12 cr)
107996 1015-1200 MW, RarigC 275, Brockman, 4 cr

5970 **Directed Readings** (prereq 9 cr in theatre, #, △, CLA approval)
323279 1-6 cr

R8101 **Introduction to Research** (prereq theatre maj or #)
723280 1515-1700 TTh, RarigC 275, Gadberry, 4 cr

R8174 **Seminar: European Theatre History** (prereq 5171, 5172, 5173 or #) (A-N only)
034589 1315-1500 F, RarigC 75, Hamilton, 4 cr

R8313 **Advanced Voice Production for the Theatre** (prereq 8312, written permission) (A-N only)
334590 1115-1200 MTWTh, RarigC 20, Nash, 4 cr

R8323 **Problems in Acting** (prereq 8322, written permission)
134591 1315-1500 MW, RarigC 210, Reid, 4 cr

R8328 **History and Technique of Stage Movement** (prereq 8327, written permission)
909538 0915-1000 MTWThF, RarigC 10, Moulton, 4 cr

R8540 **Seminar: Scene Design** (prereq 5514 or #)
034592 0915-1200 F, RarigC 275, Josal, 4 cr

R8713 **Seminar: Stage Direction** (prereq 5712 or equiv)
834593 0915-1200 F, RarigC 75, Adey, 4 cr

8980 **Directed Instruction** (prereq △)
523281 1-3 cr

8990 **Research** (prereq #, △)
323282 ar cr

THERAPEUTIC RADIOLOGY (TRad)
Medical School

5172 **Radiation Biology** (§Rad 5172, BPhy 5172; prereq 5170 or #)
023981 1615-1745 WF, HSUnitF 2130, Song, others, 3 cr

5174 **Physics of Diagnostic Radiology** (§Rad 5174, BPhy 5174; prereq 5170 or #)
623983 1600-1700 M, MoosT 2107, Khan, others, 3 cr

5340 **Special Problems in Radiation Therapy**
223985 ar cr

5505 **Externship in Radiation Therapy** (prereq regis med)
123986 Levitt, others, ar cr

5506 **Cancer Diagnosis and Treatment** (prereq regis med)
723988 Levitt, others, ar cr

5507 **Advanced Externship in Radiation Therapy** (prereq regis med)
923990 ar cr

5508 **Special Problems in Radiation Biology**
523992 ar cr

5512 **Dosimetry of Internal and External Radiation Emitters**
123994 0700-0830 W, Mayo B141, Khan, others, 1 cr

5540 **Special Problems in Radiological Physics** (prereq regis med)
823996 Khan, others, ar cr

5583 **Diagnosis, Evaluation, and Care of Adults, Children with Cancer**
423998 Kim, Ramsay, others, 9 cr

5800 **Radiation Oncology-Pathology**
124000 ar cr

8300 **Radiation Therapy**
824002 ar cr

8310 **Fundamentals of Radiation Therapy**
724011 1600-1730 M, MoosT 2580, 1 cr (Except 1st M of month, 1700-1800)

8315 **Radiation Therapy Pathology**
424004 1 cr

8320 **Radiation Therapy Treatment Planning Problems**
124006 1 cr

8325 **Radiation Therapy Pediatrics Oncology**
924007 1 cr

8350 **Research in Radiation Therapy**
724008 ar cr

8410 **Seminar: Radiation Biology**
524009 Song, others, 1 cr

8450 **Research in Radiation Biology**
324013 Song, others, ar cr

8550 **Research of Radiation Physics**
024015 Khan, others, ar cr

TRANSPORTATION (Tran)
Management

Non-SMgt students should refer to section 1, Registration Instructions for School of Management Courses, before attempting to register for Tran courses.

R3064 **Business Logistics** (§8264; prereq 3054) (A-N only)
123342 0915-1030 MWF, BlegH 435, Harper, 5 cr

R3084 **Carrier Management** (§8284; prereq 3054) (A-N only)
723344 1015-1200 TTh, BlegH 425, Beier, 5 cr

R5134 **Transportation and Business Logistics Topics** (prereq 3054 or 8154, #, SMgt approval) (A-N only)
125947 1315-1500 TTh, BlegH 425, Beier, 4 cr

R5194 **Government Promotion and Subsidy of Transportation** (prereq 3054 or 8154 or #) (A-N only)
523345 1045-1200 MW, BlegH 435, Harper, 4 cr

R8284 **Carrier Management** (§3084; prereq 3054 or 8154, grad/IR student or grad SMgt approval) (A-N only)
323346 1015-1200 TTh, BlegH 425, Beier, 5 cr

R8990 **Readings in Transportation and Business Logistics** (prereq consent of adviser, #, grad SMgt approval) (A-N only)
929353 ar cr

R8995 **Graduate Research in Transportation and Business Logistics** (prereq grad SMgt approval) (A-N only)
729354 ar cr

UNIVERSITY COLLEGE (UC)

R3075 **Independent Study** (prereq △)
521515 ar cr

3200 **Introductory Period** (prereq UWW student, △) (S-N only)
121517 ar cr

3201 **Directed Studies** (prereq UWW student, △) (S-N only)
821519 8 cr

3211 **Degree Planning** (prereq University Without Walls student, △) (S-N only)
612613 7 cr

3212 **Degree Planning** (prereq University Without Walls student, △) (S-N only)
212615 7 cr

3213 **Degree Planning** (prereq University Without Walls student, △)
912617 7 cr

3291 **Graduation Dossier Preparation** (max 21 cr; prereq University Without Walls student, △) (S-N only)
512619 7 cr

3292 **Graduation Dossier Preparation** (max 21 cr; prereq University Without Walls student, △) (S-N only)
712621 7 cr

3293 **Graduation Dossier Preparation** (max 21 cr; prereq University Without Walls student, △)
312623 7 cr

3299 **Graduation Dossier Examination** (prereq University Without Walls student, prior submission of dossier for examination, △) (S-N only)
012611 7 cr

3401 **Directed Studies** (prereq University Scholars student, △)
021521 ar cr

URBAN STUDIES (UrbS)
Liberal Arts

R3103 **Urban Studies Colloquia** (prereq △) (S-N only)
928851 1315-1500 T, SocSci 307, Karasov, 2 cr

R3104 **Introduction to Urban Studies**
123292 0945-1100 TTh, BlegH 225, Martin, 3 cr

R3500 **Workshops** (prereq jr or sr, #)
128855 –1 1500-1630 TTh, BlegH 220, Anding, 4 cr
828857 –2 1615-1900 W, SocSci 101, Bellus, 4 cr

R3900 **Internship** (max 12 cr; prereq jr, sr, △)
923293 1800-2000 M, Mgmt/Econ 130, Hickey, 1–6 cr

R3970 **Directed Studies** (prereq #, △, college approval)
723294 ar cr

URDU (Urdu)
South And Southwest Asian Studies
Liberal Arts

1103 Beginning Urdu (§Hndi 1103, 5103; prereq 1102)
323198 1315-1400 MTWThF, JonesH 10, Staneslow, 5 cr

5133 Intermediate Urdu (§3033; prereq 5132)
923200 Lingen, 5 cr

5970 Directed Readings (prereq #, △, CLA approval)
523202 ar cr

5990 Directed Research (prereq #, △, CLA approval)
323203 Alvi, ar cr

8990 Research (prereq #)
123204 Alvi, ar cr

UROLOGIC SURGERY (Urol)
Medical School

8250 Urological Surgery
724025 0800-1200 MWF, Fraley, 4 cr (Mayo OR Room H)

8251 Cystoscopy and Urological Diagnosis
324027 0800-1200 MTWThF, Fraley, 4 cr (Cysto Suite)

8252 Urological Conference
024029 0800-0900 S, Fraley, 4 cr (Sta 57 Conf Room)

8253 Research in Urology
124023 Fraley, 4 cr

8254 Urological Seminar
424021 1300-1400 MWF, Mayo A503, Fraley, 3 cr

8255 Urological Radiological Conference
224019 1300-1400 MTWThF, Mayo A503, Fraley, 3 cr

8256 Urological Pathological Conference
624017 1600-1700 W, Mayo A503, 3 cr

8257 Selected Topics on the Genitourinary System (prereq MD or PhD degree, PhD with #)
516685 0900-1000 S, Mayo A503, Li, Bronson, 2 cr

VETERINARY BIOLOGY (VB)
Veterinary Medicine

5110 Cytogenetic Evaluation of Animal Diseases (prereq regis vet med, 3rd or 4th yr or grad student or #)
324593 1300-1450 M, AnScVM 111, Weber, 1 cr

5126 Veterinary Anatomy II (prereq 5100 or #)
★LECT 1300-1350 TW, AnScVM 135, Cox, Fletcher, others, 5 cr
328966 –1 LAB 1400-1650 TW, 1300-1550 Th, AnScVM 40

5149 Topics of Organology (prereq 5104, #)
024595 1–5 cr

5308 Animal Physiology (prereq regis vet med or #)
★LECT 0800-0850 MF, 1000-1050 W, AnScVM 125, Duke, Dziuk, 5 cr
825960 –1 LAB 1000-1150 F, AnScVM 125, 1300-1650 W, AnScVM 161, 164, 165, 168, AnScVM 125, Dziuk, Duke, others, 5 cr

5402 Veterinary Pharmacology (prereq 5401 or #) (A–N only)
624597 0800-0850 TF, 1100-1150 T, VetHos A325, Stowe, 3 cr

5920 Independent Research in Veterinary Biology (prereq #)
424598 ar cr

5950 Directed Studies (prereq #, △)
224599 1–5 cr

8110 Morphology of Animal Cells and Intercellular Substances (prereq 5106, #)
024600 Weber, 3 cr

8112 Research Propositions in Morphology (prereq #)
824601 2 cr

8113 Research Propositions in Morphology (prereq #)
624602 2 cr

8114 Research Propositions in Morphology (prereq #)
424603 2 cr

8134 Comparative Veterinary Neurology (prereq 5100, #)
224604 4 cr

8135 Comparative Veterinary Neurology (prereq 5100, #)
124605 4 cr

8136 Experimental Comparative Veterinary Neurology (prereq 8135, #)
924606 3 cr

8148 Seminar: Veterinary Anatomy (prereq 5100, 5104 or #)
128967 1 cr

8330 Seminar: Physiology and/or Pharmacology (prereq #)
724607 ar cr

8349 Research in Physiology (prereq #)
524608 ar cr

8448 Problems in Veterinary Pharmacology (prereq 5401, #)
324609 A Larson, ar cr

VETERINARY DIAGNOSTIC INVESTIGATION (VDI)
Veterinary Medicine

5503 Diagnostic Pathology (prereq VPB 5502 or #) (A–N only)
938814 1000-1050 TWTh, AnScVM 135, Werdin, others, 3 cr

5521 Surgical Pathology (prereq #) (A–N only)
738815 D Barnes, 3 cr

5522 Diagnostic Pathology (prereq #) (A–N only)
538816 D Barnes, 5 cr

8503 Advanced Diagnostic Pathology (prereq VPB 8501 or Path 5101, #)
039159 1000-1050 TWTh, AnScVM 135, Werdin, others, 4 cr

VETERINARY MEDICINE (CVM)
Veterinary Medicine

3100 Perspectives: Interrelationship of People and Animals in Society Today
528965 1515-1700 TF, JacH 2135, Quigley, Anderson, 2–3 cr (Mpls)

5260 Animal Behavior (prereq #) (A–N only)
138813 1000-1050 T, 1100-1150 W, VetHos A325, 2 cr

5763 Clinics (prereq #)
724476 0800-1200 M, 0800-1700 TWThFS, 16 cr

VETERINARY PATHOBIOLOGY (VPB)
Veterinary Medicine

3103 General Microbiology (not open to vet med students; prereq 10 cr chemistry, 4 cr biological sciences)
★LECT 1300-1350 MWF, AnScVM 125, Maheswaran, 5 cr
028968 –1 LAB 1400-1550 MWF, VetS 325

5180 Applied Immunology (prereq regis vet med, grad or #) (A–N only)
738989 0900-0950 T, VetS 145, Shope, 1 cr

5501 Basic Veterinary Pathology (prereq #)
★LECT 1000-1050 M, 1300-1350 TTh, VetS 145, Hayden, K H Johnson, Walser, 5 cr
828969 –1 LAB 1400-1650 TTh, VetS 215

5524 Pathology of Spontaneous Diseases of Poultry (prereq #)
136972 Walser, 3 cr

5533 Directed Studies in Veterinary Pathobiology (prereq regis vet med, 4th yr, #)
124630 K H Johnson, Hayden, others, ar cr

5604 Diseases of Wildlife
134194 1000-1050 MWF, ClaOff B36, Loken, 3 cr

5701 Advanced Veterinary Microbiology, Immunology (prereq 3103, 1st year vet med, #) (A–N only)
024631 0900-0950 MWF, AnScVM 125, Bey, Loken, 3 cr

5748 Problems in Veterinary Microbiology and Public Health (prereq 5703 or equiv, #)
824632 ar cr

8501 Advanced Veterinary Basic Pathology (prereq #)
★LECT 1000-1050 M, 1300-1450 TTh, VetS 145, Hayden, K H Johnson, Walser
128970 –1 LAB 1400-1650 TTh, VetS 225, 4–6 cr

8504 Seminar: Advanced Veterinary Histopathology (prereq 5502, 5503, #)
224635 1600-1700 M, VetS 215, Hayden, 1 cr

8531 Veterinary Necropsy (max 6 cr; prereq 5501, 5502, 5503, #)
424634 O'Leary, Leininger, others, 1–2 cr

8533 Problems: Pathology (prereq #)
624633 K H Johnson, Hayden, others, ar cr

8534 Problems: Clinical Pathology (prereq #)
124636 Perman, others, ar cr

8648 Problems in Veterinary Parasitology (prereq 5602, #)
924637 Bemrick, ar cr

8720 Advanced Veterinary Microbiology (prereq #)
724638 ar cr

8721 Advanced Poultry Diseases (prereq 5704, #)
524639 Newman, ar cr

VOCATIONAL EDUCATION (VoEd)
Vocational And Technical Education
Education

R5760 **Organization Development in Industry and Business** (A–N only)
107388 1800-2100 T, VoTech R385, McLean, 4 cr

5780 Internship: Training and Development (max 15 cr; prereq 5750) (S-N optional)
325985 McLean, R Swanson, ar cr

5800 Working with Special Needs Students (A–N only)
022491 1600-1830 W, VoTech R385, Brown, 3 cr

8100 Vocational Education Tutorial (prereq #)
822492 0800-1030 T, VoTech R370, G Swanson, 3–18 cr

8500 Seminar: General Education Aspects of the Vocational Fields (prereq #)
622493 1600-1830 M, VoTech R380, Plihal, 3 cr

WOMEN'S STUDIES (WoSt)
Liberal Arts

R3333 **Women in Liberation Struggles**
233237 1115-1230 TTh, FordH 160, Geiger, 4 cr

R3349 **Feminist Approaches to History**
133238 1115-1345 F, FordH 349, Maynes, 4 cr

R3501 **Women and Literature** (prereq introductory work in literature)
608450 0945-1100 TTh, FordH 150, Yates, 4 cr

R3900 **Seminar: Feminist Methodologies in the Behavioral/Social Sciences** (prereq △)
123283 1330-1515 W, FordH 70, Faunce, 4 cr

R3910 **Topics in Women's Studies** (max 12 cr)
207169 –1 0945-1100 TTh, FordH 130, Zita, 4 cr (Medical Ethics)
536998 –2 1615-1730 TTh, ArtB 120, Brooks, 4 cr (Feminist Perspectives in the Visual Arts)
939574 –3 1615-1745 TTh, FordH 285, Holland, 4 cr (Black Women Playwrights)

R3960 **Field Learning in Women's Studies** (max 8 cr; prereq 1005, 1006, one 3000 level course, △)
207172 Truax, 4 cr

3970 Directed Studies (prereq #, △, college approval)
023284 1–15 cr

3980 Directed Instruction (prereq #, △, college approval)
823285 1–5 cr

3990 Directed Research (prereq #, △, college approval)
623286 1–5 cr

R5311 Women and the Law
933239 1215-1330 MW, FordH 150, Chalmers, Breen, 4 cr

R5910 Topics in Women's Studies (max 12 cr)
133241 –1 1415-1545 M, FordH 50, Geiger, 4 cr (Feminist Pedagogy)
233240 –2 1415-1530 TTh, FordH 349, Fraser, Evans, 4 cr (Organized Women and Public Policy in America)

5970 Directed Studies (max 12 cr; prereq #, △, CLA approval)
423287 1-5 cr

YOUTH DEVELOPMENT AND RESEARCH (YoSt)
Home Economics

R5120 Independent Study in Youth Studies (max 12 cr; prereq #)
722646 ar cr

5132 Experiential Learning (prereq CPsy 5303 or #)
122649 1600-1800 T, McNH 386A, Hedin, 3 cr

5200 Working with Youth Through Adults (max 9 cr; prereq BA degree, consent of faculty)
101521 1000-1600 F, McNH 386A, 1-3 cr

R5203 Practicum (prereq 5202)
522647 1000-1200 T, McNH 386, Seltzer, 4 cr

5331 Youth Agencies, Organizations and Youth Service Systems (prereq two courses in sociology/anthropology, work exper in a youth agency or organization)
239281 1600-1830 Th, McNH 386A, 3 cr

5501 Youth and Work (prereq Soc 1001, Econ 1001, CPsy 3303 or #)
836974 1500-1700 Th, McNH 386A, Seltzer, 3 cr

5601 International Development Practicum (prereq participation in international development collateral)
537178 Seltzer, ar cr

5711 Introduction to Consultation in Youthwork (prereq at least two courses in soc or anth, maj in human serv prof, exp in human serv org)
337179 1600-1830 M, McNH 197, Baizerman, 3 cr

8003 Advanced Seminar in Youth Studies (prereq #)
306496 Baizerman, Beker, others, 3 cr

ZOOLOGY (Zool)
Biological Sciences

8970 Seminar
821813 0 cr

8980 Special Research
621814 ar cr

8990 Research
421815 ar cr

Don't let 'em knock your block off!



Call your local police, and learn how to help protect your neighborhood.
Help me, McGruff™

TAKE A BITE OUT OF CRIME™

© 1981 The Advertising Council, Inc.

Ad Council
A message from the Crime Prevention Coalition, this publication and The Ad Council.

UM USLS

University Student
LEGAL SERVICE

Any student enrolled at U of M, Twin Cities campus and paying the student service fee is eligible for our services. **USLS** provides **legal advice** and **representation** by a staff of licensed attorneys without charge to fee-paying students for a wide range of legal problems including landlord-tenant, consumer, divorce, DWI and immigration. We also provide **referral** to other resources.

USLS
160 West Bank Union Skyway
376-5237
Call for an appointment

COURSES OPEN THROUGH EXTENSION CLASSES

The following list indicates those day school courses, scheduled before 4 p.m., which are open to Extension students. (If you are a currently enrolled day school student, you may not register through Extension for the following day school courses.) You should use this list in conjunction with the Schedule of Classes (Section 2 of this *Class Schedule*) to determine which courses and sections you are eligible to register for. Occasionally, courses not on the following list are also open to Extension students with written permission from the instructor and departmental office. **No 8000-level courses are available under this program.**

All courses which have **R** preceding the course number have limited enrollment. Of the total number of spaces available in these courses, only a very few are open to Extension students. You must register early to avoid disappointment. If a department is marked with an * on the list below, written permission is required from both the instructor and the departmental office for all limited-enrollment (**R**) courses. This written permission must contain specific permission for all parts of the course (e.g., LECT, LAB, REC), and the section numbers for those parts must be clearly identified (for example, LECT 1, LAB 12). For limited-enrollment (**R**) courses in departments without the *, no written permission is required. Written permission is never required for the non-limited courses (no **R** before the course number) listed below.

As an Extension student, you are subject to the same requirements as day school students. You must meet prerequisites in order to register for a class and you must obtain an authorized and signed Registration Override Permit from the instructor before registering for any course in which the symbol # appears as part of the prerequisite statement. (See Section 2 for an explanation of this and other symbols used in the Schedule of Classes.) Usually, you need only call and request that the form be sent out to you. In some instances, however, you may have to come to campus to obtain permission.

Check your 1983-84 *Extension Classes Bulletin* for instructions on how, when, and where to register. Call 376-3000 for a bulletin, registration forms, and a brochure with more complete information on registration and tuition rates.

Afro-American Studies: All courses

American Indian Studies: All courses

Ancient Near Eastern and Jewish Studies: All courses

Animal Science: All courses

Anthropology: All courses

Architecture: All courses *except* 3083, 3093, 5113, 5123

Art History: All courses *except* 3011, 3465

Art Studio*: All courses *except* 1701, 3160, 3710, 5710

Astronomy: 1011, 1015, 1201

Biochemistry*: All courses

Biology*: All courses *except* 1008

Botany: All courses

Chicano Studies: All courses

Child Psychology: All courses

Civil Engineering*: All courses

Classics*: All courses

Communication Disorders: All courses

Danish: All courses

Dutch: All courses

East Asian Studies: All courses

Ecology and Behavioral Biology*: All courses

Educational Administration: All courses

English Language and Literature: All courses *except* 1009, 1016, 1018, 3241, 3242, 3851, 3852

Family Social Science: All courses *except* 1401, 3260, 5200

Finnish: All courses

Forest Products: All courses

Forest Resources: 1102, 1203, 3104, 3114, 3115, 5253, 5265

French: All courses

French and Italian: All courses

General College*: All courses

Genetics and Cell Biology: All courses *except* 3008

Geography: All courses

German: All courses

Greek: All courses

Higher Education: All courses

History: All courses *except* 5519 thru 5990

History of Medicine: All courses

Horticulture: All courses

Humanities*: All courses

Industrial Engineering/Operations Research*: All courses available after regular registration period with permission of instructor.

Insurance: 3200

Interdepartmental Studies: 3101

Italian: All courses

Journalism*: 1001, 1002, 3008, 3201, 3776, 3796, 5251, 5501, 5601, 5721, 5801, 5826

Landscape Architecture*: 1023, 3003

Latin: All courses

Latin American Studies: All courses

Linguistics: All courses *except* 5722

Mathematics: All courses

Mechanical Engineering*: All courses available after regular registration period with permission of instructor.

Microbiology: All courses

Military Science: All courses

Music: All courses *except* 1001, 1051, 3550, 5550

Norwegian: All courses

Pharmacy: All courses

Philosophy: All courses *except* 1001, 1002, 1003

Polish*: All courses

Political Science: All courses *except* 1001, 3308, 3659

Portuguese*: 1002 thru 5523

Psychology*: All courses *except* 1005 and Honors courses.

Public Affairs: All courses *except* 5506, 5561

Public Health*: 3001, 3004, 3033, 5002, 5004, 5005, 5015, 5020, 5043, 5057, 5059, 5064, 5152, 5184, 5253, 5362, 5379, 5623, 5629, 5649, 5800, 5801, 5802, 5810

Religious Studies*: All courses

Russian*: All courses

Russian and East European Studies*: All courses

Scandinavian: All courses

Social and Philosophical Foundations of Education: All courses

Social Work: All courses

Sociology: All courses

South and Southwest Asian Studies: All courses

Spanish*: 1101 thru 3910 *except* 3005

Speech-Communication*: All courses except 3431, 3202 sec 2, 3204 sec 2, 3641 sec 15-21, 5402 sec 1, 5412 sec 1, 5422 sec 1 & 2

Statistics*: All courses

Swedish: All courses

Theatre Arts*: 1101, 1301, 1504, 5172, 5510, 5718

Urban Studies*: All courses

Women's Studies: All courses

COURSE DESIGNATORS
(Twin Cities)

Acct	Accounting
AdPy	Adult Psychiatry
AEM	Aerospace Engineering and Mechanics
Afro	Afro-American Studies
AgEc	Agricultural and Applied Economics
AgEd	Agricultural Education
AgEn	Agricultural Engineering
AgET	Agricultural Engineering Technology
AgJo	Agricultural Journalism
Agri	Agriculture
Agro	Agronomy and Plant Genetics
Air	Aerospace Studies
Akka	Akkadian
Alb	Albanian
AmIn	American Indian Studies
AmSt	American Studies
Anat	Anatomy
ANEJ	Ancient Near Eastern and Jewish Studies
Anes	Anesthesiology
AnSc	Animal Science
AnSt	Ancient Studies
Anth	Anthropology
Arab	Arabic
Arch	Architecture
ArEd	Art Education
Arm	Aramaic
ArtH	Art History
ArtS	Art Studio
Ast	Astronomy
BA	Business Administration
Ben	Bengali
BFin	Finance
BGS	Business, Government and Society
BioC	Biochemistry (Biol Sci)
Biol	Biology
BLaw	Business Law
BME	Business and Marketing Education
Bot	Botany
BPhy	Biophysical Sciences
CAPy	Child and Adolescent Psychiatry
CDis	Communication Disorders
CE	Civil Engineering
Chem	Chemistry
ChEn	Chemical Engineering
Chic	Chicano Studies
Chn	Chinese
CHS	College Honors Seminar
CISy	Curriculum and Instructional Systems
Clas	Classics
ClCv	Classical Civilization
CLit	Comparative Literature
Comp	Composition and Communication
CPsy	Child Psychology
CSci	Computer Science
CVM	Veterinary Medicine
Dan	Danish
Dent	Dentistry
Derm	Dermatology
DH	Dental Hygiene
Dnce	Dance
Dsgn	Design
Dtch	Dutch
EAS	East Asian Studies
EBB	Ecology and Behavioral Biology
Econ	Economics
EdAd	Educational Administration
Educ	Adult and Teacher Education
EE	Electrical Engineering
Elem	Elementary Education
Endo	Endodontics
Engl	English Language and Literature
Ent	Entomology
ESL	English as a Second Language
Fin	Finnish
ForP	Forest Products
FoSt	Foreign Study
FPAd	Family Planning Administration
FPCH	Family Practice and Community Health
FR	Forest Resources
Fren	French
FrIt	French and Italian
FScN	Food Science and Nutrition
FSoS	Family Social Science
FW	Fisheries and Wildlife
GC	General College
GCB	Genetics and Cell Biology
Geo	Geology and Geophysics
GeoE	Geo-Engineering
Geog	Geography
Ger	German
Grad	Graduate School
Grk	Greek
HCol	Freshman-Sophomore Colloquia
HE	Home Economics
Hebr	Hebrew
HEEd	Home Economics Education
HiEd	Higher Education
Hist	History
Hlth	School Health Education
HMed	History of Medicine
Hndi	Hindi
Hort	Horticultural Science
HSci	History of Science and Technology
HSU	Health Science Units
Hum	Humanities
ID	Interdepartmental Study
IEOR	Industrial Engineering/Operations Research
Ind	Industrial Education
InMd	Interdisciplinary Medicine
Ins	Insurance
IntR	International Relations
IofT	Institute of Technology
IR	Industrial Relations
Ital	Italian
Jour	Journalism and Mass Communication
Jpn	Japanese
JwSt	Jewish Studies
LA	Landscape Architecture
LACS	Large Animal Clinical Sciences

LaMP	Laboratory Medicine and Pathology
LAS	Latin American Studies
Lat	Latin
Law	Law
Lib	Library School
Ling	Linguistics
LMed	Laboratory Medicine
Mar	Marathi
Math	Mathematics
MatS	Materials Science
MBA	Master of Business Administration
MdBc	Biochemistry (Medical)
MdGk	Modern Greek
ME	Mechanical Engineering
Med	Medicine
MedC	Medicinal Chemistry
MedT	Medical Technology
MESA	Middle Eastern and South Asian Studies
MetE	Metallurgical Engineering
Mgmt	Management
MicB	Microbiology
Mil	Military Science
MinE	Mining Engineering
MIS	Management Information Systems
Mktg	Marketing
Mort	Mortuary Science
MthE	Mathematics Education
MuEd	Music Education
Mus	Music
MusA	Music Applied
Nav	Naval Science
Neur	Neurology
Nor	Norwegian
NSu	Neurosurgery
Nurs	School of Nursing
Nutr	Nutrition
OBio	Oral Biology
Obst	Obstetrics and Gynecology
OM	Operations Management
OPat	Oral Pathology
Oph	Ophthalmology
ORad	Oral Radiology
OrSu	Orthopaedic Surgery
OSur	Oral and Maxillofacial Surgery
Otho	Orthodontics
Otol	Otolaryngology
PA	Public Affairs
Path	Pathobiology
PE	Physical Education
Ped	Pediatrics
Pedo	Pediatric Dentistry
Per	Persian
Pero	Periodontics
Phar	Pharmacy
Phcg	Pharmacognosy
Phcl	Pharmacology
Phil	Philosophy
Phm	Pharmaceutics
Phsl	Physiology
Phys	Physics
PlPa	Plant Pathology
PlPh	Plant Physiology
Plsh	Polish
PMed	Physical Medicine and Rehabilitation
PO	Personal Orientation
Pol	Political Science
Port	Portuguese
Pros	Prosthodontics
Psy	Psychology
PsyF	Psychological Foundations of Education
PsyS	Psychoeducational Studies
PubH	Public Health
QA	Quantitative Analysis
Rad	Radiology
RCD	Resources and Community Development
Rec	Recreation, Park, and Leisure Studies
RelS	Religious Studies
Rhet	Rhetoric
Russ	Russian
SACS	Small Animal Clinical Sciences
SAPh	Social and Administrative Pharmacy
Scan	Scandinavian
SeEd	Secondary Education
Serb	Serbo-Croatian
Skt	Sanskrit
Slav	Slavic
Soc	Sociology
Soil	Soil Science
Span	Spanish
Spch	Speech-Communication
SPFE	Social and Philosophical Foundations of Education
SpPt	Spanish-Portuguese
Stat	Statistics
Sum	Sumerian
Surg	Surgery
SW	Social Work
Swed	Swedish
TexC	Textiles and Clothing
Th	Theatre Arts
TRad	Therapeutic Radiology
Tran	Transportation
Turk	Turkish
UC	University College
UrbS	Urban Studies
Urdu	Urdu
Urol	Urologic Surgery
VB	Veterinary Biology
VDI	Veterinary Diagnostic Investigation
VoEd	Vocational Education
VPB	Veterinary Pathobiology
WoSt	Women's Studies
YoSt	Youth Development and Research
Zool	Zoology

DIRECTORY FOR DEPARTMENT OFFICES

Adult and Teacher Education ..... PeikH 175
Aerospace Engineering and Mechanics ..... AkerH 107
Aerospace Studies ..... Armory 3
Afro-American Studies ..... SocSci 214
Agricultural and Applied Economics ..... ClaOff 231
Agricultural Education ..... VoTech 320
Agricultural Engineering (Agri) ..... AgEng 213
Agricultural Engineering (IT) ..... AgEng 213
Agricultural Journalism ..... HckrH 326
Agronomy and Plant Genetics ..... Agr 303
American Indian Studies ..... FordH 489
American Studies ..... LindH 225
Anatomy ..... JacH 4-135
Ancient Near Eastern & Jewish Studies ..... KlaCt 178
Anesthesiology ..... Mayo B515
Animal Science ..... PetH 120
Anthropology ..... FordH 215
Architecture ..... Arch 110
Art Education ..... WullH 135
Art History ..... JonesH 107
Art, Studio ..... ArtB 208
Astronomy ..... Phys 356

Biochemistry (BioC) ..... GorL 140
Biochemistry (Med) ..... MlrdH 4-225
Biological Sciences ..... SnH 123
Biology ..... SnH 223
Biophysical Sciences ..... TNCE 200
Botany ..... BioSci 220
Business and Marketing Education ..... VoTech 420

Chemical Engineering and Materials Science ..... AmundH 151
Chemistry ..... SmithH 139
Chicano Studies ..... FordH 489
Child Psychology ..... ChDev 158
Civil and Mineral Engineering ..... CivMinE 122
Classics ..... FolH 310
Communication Disorders ..... ShevH 115
Comparative Literature ..... FolH 301
Computer Science ..... LindH 136
Counseling, Student Personnel Psychology ..... BuH 139
Curriculum and Instructional Systems ..... PeikH 130

Dance ..... NorrisH 101
Dental Hygiene ..... MoosT 5-164
Dentistry ..... MoosT 15-209
Dermatology ..... PWB 4-240
Design ..... McNH 240

East Asian Studies ..... FolH 113
Ecology and Behavioral Biology ..... Zoology 109
Economics ..... Mgmt/Econ 1035
Educational Administration ..... PeikH 275
Electrical Engineering ..... ElectE 139
Elementary Education ..... PeikH 125
English ..... LindH 207
Entomology ..... HodsonH 219

Family Practice, Community Health ..... PWB 6-240
Family Social Science ..... McNH 290
Fisheries and Wildlife ..... HodsonH 219
Food Sciences, Nutrition ..... FScN 225
Forest Products ..... KaufL 203
Forest Resources ..... GrnH 110
French and Italian ..... FolH 200

General College ..... NichH 106
Genetics and Cell Biology ..... BioSci 250
Geography ..... SocSci 414
Geology and Geophysics ..... PillsH 106
German ..... FolH 219

Higher Education ..... BuH 105
History ..... SocSci 614
History of Science & Technology ..... Phys 428
Home Economics ..... McNH 32
Home Economics Education ..... VoTech 325
Horticultural Science ..... AlderH 305
Humanities ..... FordH 314

Industrial Education ..... VoTech 425
Interdepartmental Study (CLA) ..... JohH 220

Journalism, Mass Communication ..... MurH 111

Laboratory Medicine ..... Mayo D242
Large Animal Clinical Sciences ..... VetTchHos 225
Law School ..... Law 285
Library School ..... WaLib 419
Linguistics ..... KlaCt 142

Management, School of ..... Mgmt/Econ 225
Mathematics ..... VinH 127
Mathematics Education ..... PeikH 125
Mechanical Engineering ..... MechE 125
Medical Technology ..... PWB 15-170
Medicine ..... PWB 14-110
Microbiology ..... Mayo 1460
Military Science ..... Armory 108
Mining Engineering ..... CivMinE 122
Mortuary Science ..... Botany 400
Music ..... ScottH 106
Music Education ..... ScottH 104

Naval Science ..... Armory 203
Neurology ..... PWB 12-100
Nursing ..... HSUnitF 5-140

Obstetrics and Gynecology ..... MoosT 12-211
Ophthalmology ..... PWB 9th floor
Otolaryngology ..... PWB 8-240

Pediatrics ..... PWB 13-112
Pharmacology ..... MlrdH 3-260
Pharmacy ..... HSUnitF 5-110
Philosophy ..... FordH 355
Physical Education ..... CookeH 224
Physical Medicine and Rehabilitation ..... Mayo 860
Physics ..... Phys 148
Physiology ..... MlrdH 6-255
Plant Pathology ..... StakH 304
Plant Physiology ..... BioSci 220
Political Science ..... SocSci 1414
Psychiatry ..... Mayo A605
Psychoeducational Studies ..... BuH 204
Psychological Foundations ..... BuH 204
Psychology ..... EltH N218
Public Affairs ..... SocSci 909
Public Health ..... Mayo 1360

Radiology ..... Mayo B238
Recreation, Park, and Leisure Studies ..... CookeH 203
Rhetoric ..... HckrH 202
Russian & East European Studies ..... EltH 253

Scandinavian Languages ..... FolH 210
School Health Education ..... CookeH 110
Secondary Education ..... PeikH 145
Small Animal Clinical Sciences ..... VetTchHos C339
Social, Philosophical Foundations of Educ ..... PeikH 275
Social Work ..... FordH 400
Sociology ..... SocSci 1114
Soil Science ..... Soils 125
South and Southwest Asian Studies ..... KlaCt 192
Spanish and Portuguese ..... FolH 34
Special Education ..... BuH 206
Speech-Communication ..... FolH 317
Statistics ..... VinH 270
Surgery ..... PWB 11-100

Textiles and Clothing ..... McNH 364
Theatre Arts ..... MdbH 208

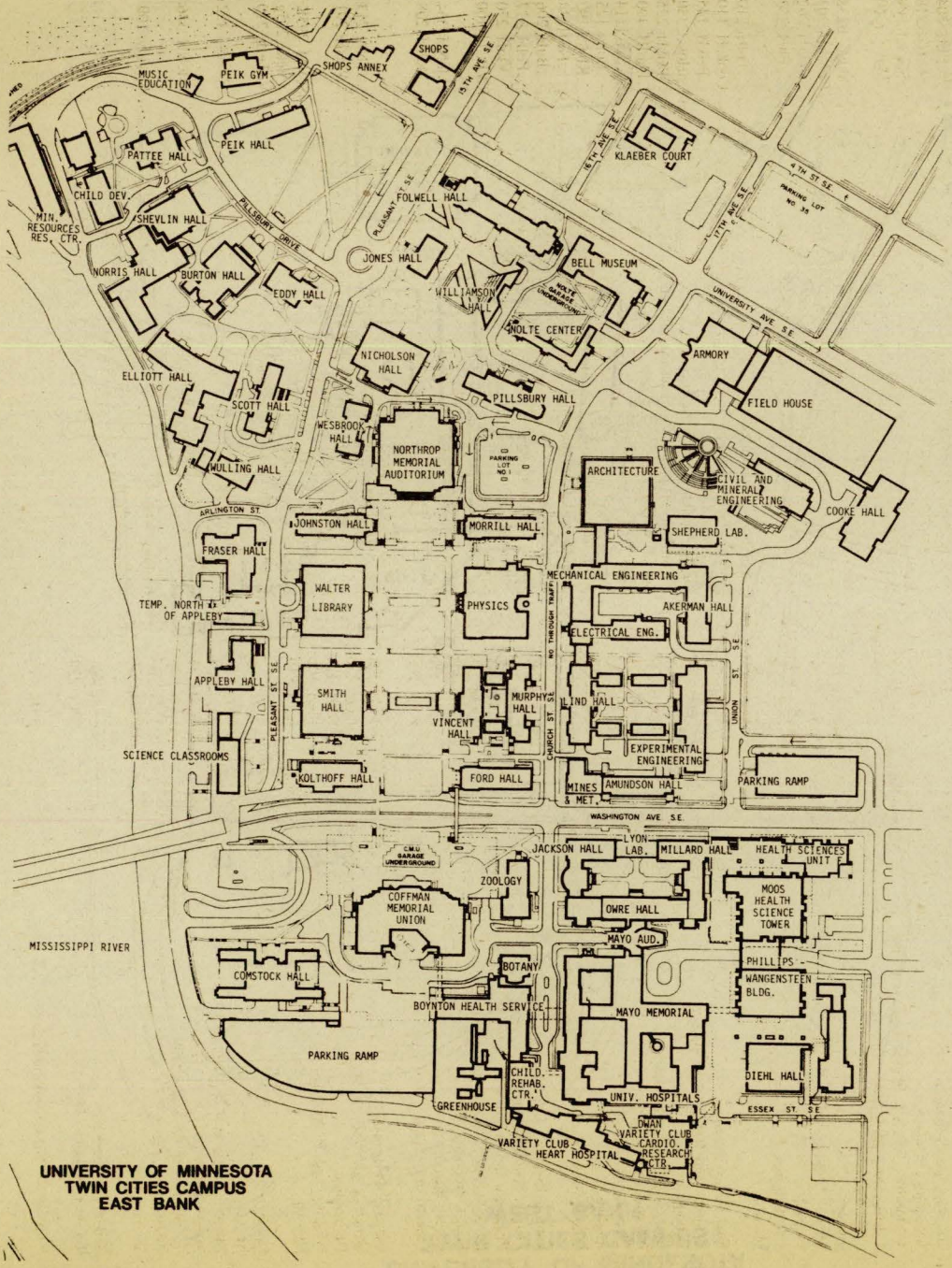
University College:
Intercollege Program (ICP) ..... TNA 213
University Without Walls (UWW) ..... WesH 201

Veterinary Biology ..... AnScVM 295K
Veterinary Pathobiology ..... VetS 205g
Vocational and Technical Education ..... VoTech 210

Women's Studies ..... FordH 492

Youth Development and Research ..... McNH 386

Zoology ..... Zoology 109



UNIVERSITY OF MINNESOTA
TWIN CITIES CAMPUS
EAST BANK

BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

MINNEAPOLIS

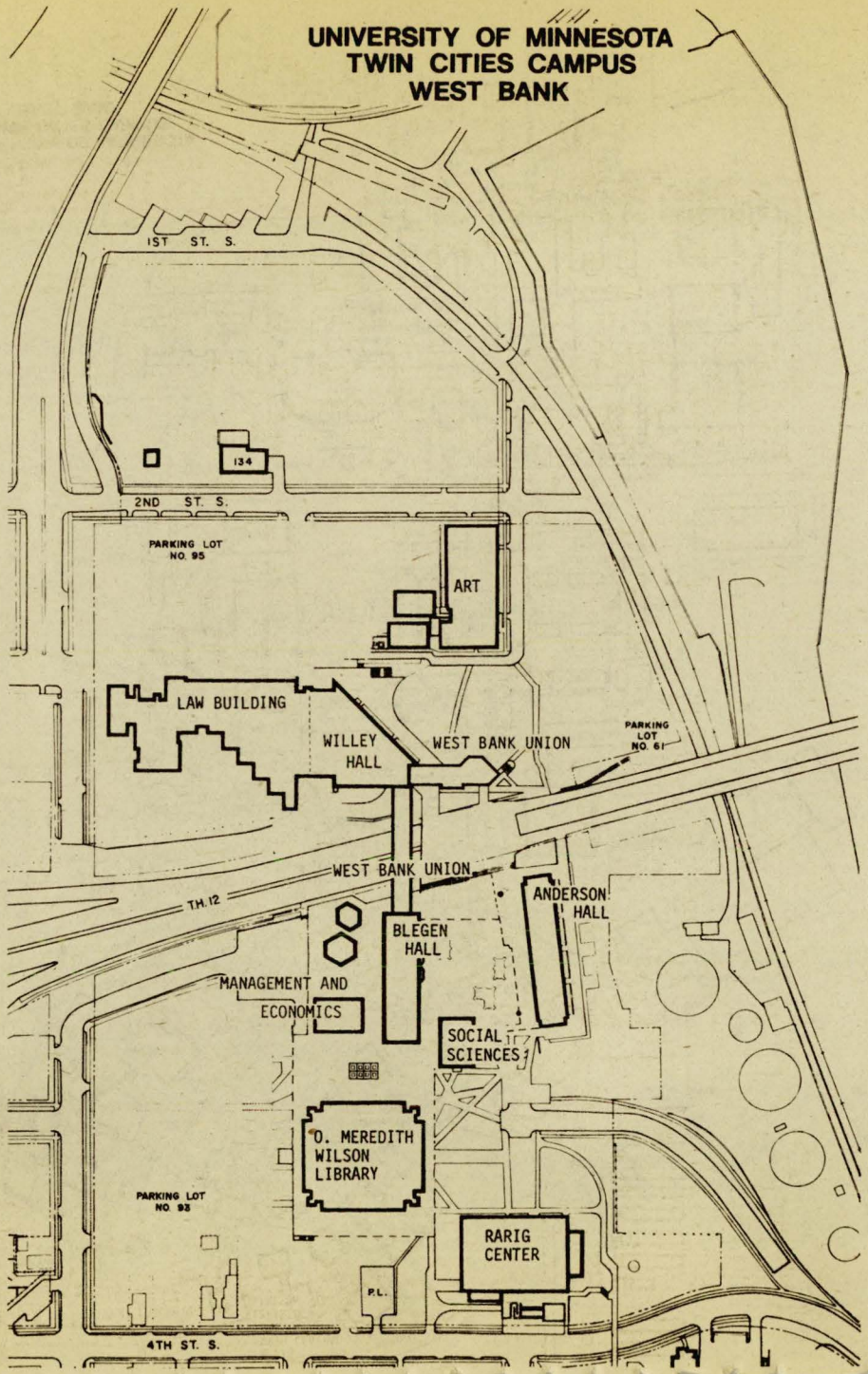
East Bank

AkerH, Akerman Hall ⊡
AmundH, Amundson Hall ♿ * L
ApH, Appleby Hall ■ *
Arch, Architecture ♿ * L
Armory ⊡
BellMus, Museum of Natural History ♿ * L
BFAB, Bierman Field Athletic Building ⊡ * L
Botany ⊡
BoynHS, Boynton Health Service ♿ * L
BuH, Burton Hall ♿ * L
CenH, Centennial Hall
ChDev, Child Development ♿ *
ChRC, Children's Rehabilitation Center ♿ * L
CivMinE, Civil and Mineral Engineering ♿ * L
CMU, Coffman Memorial Union ♿ * L
CookeH, Cooke Hall ■
DiehlH, Diehl Hall ♿ *
DVCCRC, Dwan Variety Club Cardiovascular Research Center ♿ * L
EddyH, Eddy Hall ■
EdHAn, Eddy Hall Annex
ElectE, Electrical Engineering ⊡
EltH, Elliott Hall ♿ * L
ExpE, Experimental Engineering ■
FieldHse, University Field House
FolH, Folwell Hall ♿ * L
FordH, Ford Hall ♿ * L
FraserH, Fraser Hall ⊡
FronH, Frontier Hall ♿ *
HL, St. Anthony Falls Hydraulic Laboratory (Hennepin Island)
HSUnitF, Health Sciences Unit F ♿ * L
JacH, Jackson Hall ♿ *
JOAd, Jackson-Owre Addition ♿ *
JohH, Johnston Hall ♿ * L
JonesH, Jones Hall ■
KlaCt, Klaeber Court ⊡
KoltH, Kolthoff Hall ♿ * L
LindH, Lind Hall ♿ * L
LyonL, Lyon Laboratories
Mayo, Mayo Memorial ♿ * L
MechE, Mechanical Engineering ♿ * L
MinMet, Mines and Metallurgy ♿ *
MlrdH, Millard Hall ♿ *
MMA, Mayo Memorial Auditorium ⊡
MoosT, Moos Health Sciences Tower ♿ * L
MorH, Morrill Hall ♿ * L
MRRC, Mineral Resources Research Center ■
MurH, Murphy Hall ■
MusEd, Music Education ■
NichH, Nicholson Hall ♿ * L
NMA, Northrop Memorial Auditorium ♿ * L
NorrisH, Norris Hall ⊡ L
OwreH, Owre Hall ♿ * L
PeikG, Peik Gym ⊡
PeikH, Peik Hall ⊡ *
Phys, Tate Laboratory of Physics ⊡ *
PiH, Pioneer Hall ⊡
PillsH, Pillsbury Hall ■
PtH, Pattee ⊡
PWB, Phillips Wangensteen Building ♿ * L
SaH, Sanford Hall ■
SciCB, Science Classroom Building ⊡ *
ScottH, Scott Hall ■
ShepLab, Shepherd Laboratories ♿ *
ShevH, Shevlin Hall ■
SmithH, Smith Hall ♿ *
Stad, Stadium ⊡ L
TerH, Territorial Hall ■
TNA, Temporary, North of Appleby ■
TNCE, Temporary, North Court of Engineering ■
VFWCRC, VFW Cancer Research Center
VinH, Vincent Hall ♿ *
WaLib, Walter Library ♿ * L
WesH, Wesbrook Hall ■
WmsA, Williams Arena ⊡ L
WmsonH, Williamson Hall ♿ * L
WullH, Wulling Hall ⊡ *
Zoology ♿ * L

CODES:

♿ = accessible building
⊡ = partially accessible
■ = inaccessible building
* = elevator
L = adapted restroom

For a map, *Guide for the Handicapped*, and further information, contact Physical Planning at 373-5765 or Office for Students with Disabilities at 376-2716.



BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

MINNEAPOLIS

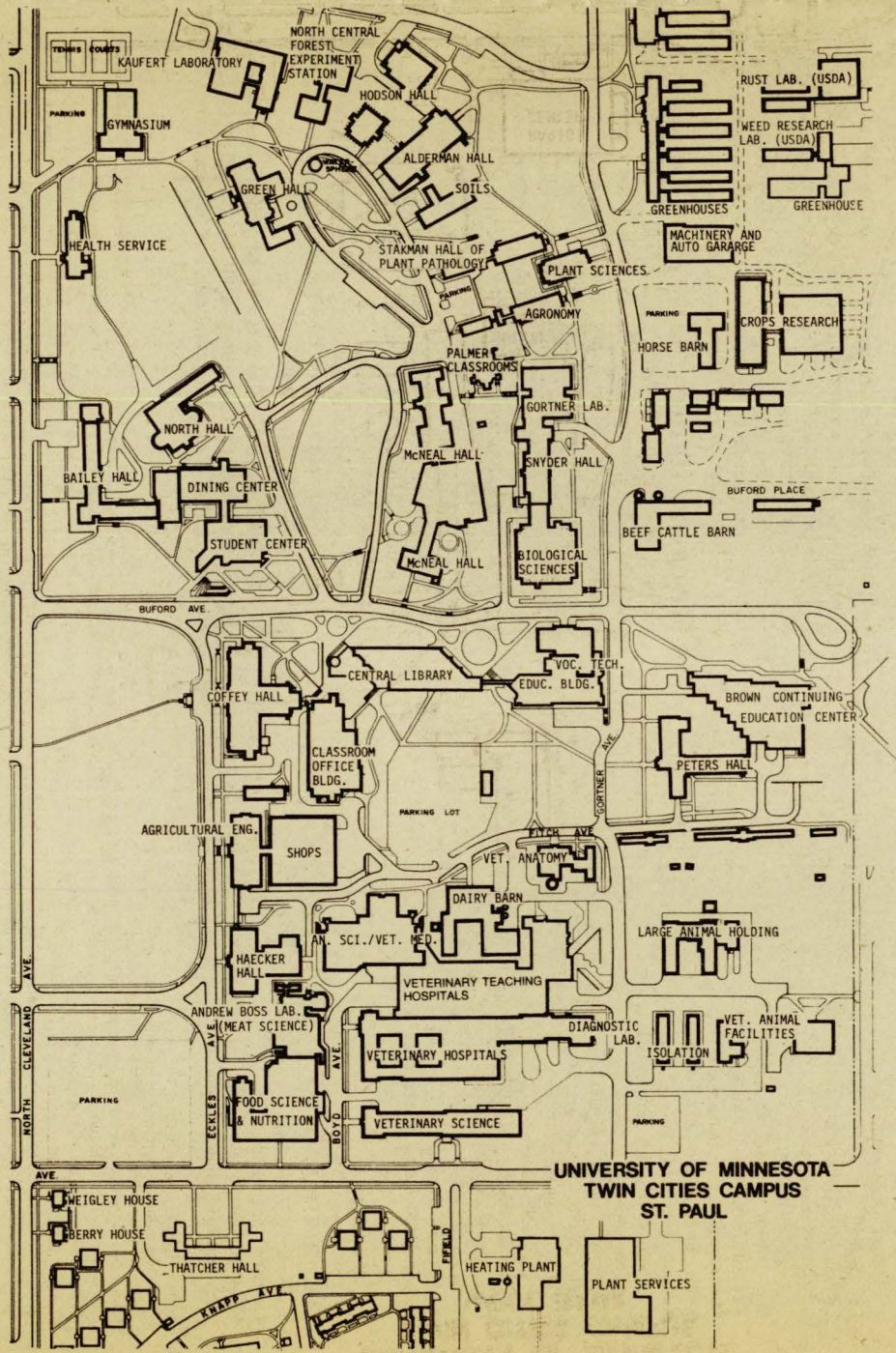
West Bank

AndH, Anderson Hall ♿ *
ArtB, Art Building (2020 Washington Ave S) ⊡
BlegH, Blegen Hall ♿ * L
Law, Law Building ♿ * L
MdbH, Middlebrook Hall ♿ * L
Mgmt/Econ, Management/Economics Building ♿ *
OMWL, O. Meredith Wilson Library ♿ * L
RarigC, Rarig Center ♿ * L
SocSci, Social Sciences Building ♿ *
WBU, West Bank Union ♿ L
WilleyH, Willey Hall ♿ * L

CODES:

♿ = accessible building
⊡ = partially accessible
■ = inaccessible building
* = elevator
L = adapted restroom

For a map, *Guide for the Handicapped*, and further information, contact Physical Planning at 373-5765 or Office for Students with Disabilities at 376-2716.



BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

ST. PAUL

ABLMS, Andrew Boss Laboratory-Meat Science ♿ *
AgEng, Agricultural Engineering ⊡ *
Agr, Agronomy ■
AgrPGGh, Agronomy/Plant Genetics Greenhouse
AlderH, Alderman Hall ♿ *
AnAren, Animal Arena
AnScVM, Animal Science, Veterinary Medicine ⊡ *
Berry, Berry House (1304 Cleveland Ave N) ⊡
BioSci, Biological Sciences Center ⊡ *
CentLib, St. Paul Campus Central Library ♿ *
ClaOff, Classroom Office Bldg ♿ *
CofH, Coffey Hall ♿ *
DinC, Dining Center ♿ *
EBCEC, Earle Brown Continuing Education Center ♿ * **L**
FScN, Food Science and Nutrition ♿ *
GorL, Gortner Laboratory of Biochemistry ♿ *
GrnH, Green Hall ♿ * **L**
Gym, Gymnasium ■
HckrH, Haecker Hall ⊡
HodsonH, Hodson Hall ♿ *
KaufL, Kaufert Laboratory ♿ *
McNH, McNeal Hall ♿ * **L**
NorH, North Hall ■
PalmC, Palmer Classroom Building ⊡
PetH, Peters Hall ⊡
PlSci, Plant Sciences ■
SnH, Snyder Hall
Soils ♿ *
StakH, Stakman Hall of Plant Pathology ■
StCen, Student Center ♿ * **L**
VetA, Veterinary Anatomy ⊡
VetDL, Veterinary Diagnostic Laboratories ■
VetS, Veterinary Science ■
VetTchHos, Veterinary Teaching Hospitals ⊡
VoTech, Vocational-Technical Education ♿ * **L**
Weigley, Weigley House (1316 Cleveland Ave N)

CODES:

♿ = accessible building
⊡ = partially accessible
■ = inaccessible building
* = elevator
L = adapted restroom

For a map, *Guide for the Handicapped*, and further information, contact Physical Planning at 373-5765 or Office for Students with Disabilities at 376-2716.

tuition & fees

TWIN CITIES CAMPUS TUITION SCHEDULE 1983-84

PER-CREDIT TUITION RATES	RESIDENT	NON-RESIDENT
Students registering in:		
Agriculture, College of*		
Lower Division	$ 33.67	$ 92.59
Upper Division	41.38	113.79
Biological Sciences, College of*	41.71	114.70
Dental Hygiene*		
Lower Division	33.67	92.59
Upper Division	38.99	107.22
Baccalaureate Program	38.99	107.22
Dentistry, School of	110.91	221.82
Education, College of*		
Lower Division	33.67	92.59
Upper Division	41.16	113.19
Forestry, College of*		
Lower Division	33.67	92.59
Upper Division	44.96	123.64
General College*		
Lower Division	33.67	92.59
Upper Division	33.95	93.36
Graduate School	70.89	141.78
Thesis credits	70.89	70.89
Dentistry, clinical fields in	110.91	221.82
Law	91.94	183.88
M.B.A., day program	98.00	141.78
M.B.A., evening program	98.00	98.00
Veterinary Medicine, clinical fields in	98.83	197.66
Home Economics, College of*		
Lower Division	33.67	92.59
Upper Division	40.79	112.17
Law School	91.94	183.88
Liberal Arts, College of*		
Lower Division	33.67	92.59
Upper Division	34.64	95.26
Management, School of*	39.40	108.35
Medical Technology, Program in*	52.92	145.53
Mortuary Science, Department of*	45.02	123.80
Nurse Anesthetist (Medical School)*	52.92	145.53
Nursing, School of*	50.29	100.58
Occupational Therapy, Physical Therapy, Programs in*	54.52	149.93
Pharmacy, College of*	45.00	90.00
Public Health, School of*	44.38	88.76
Technology, Institute of*		
Lower Division	33.67	92.59
Upper Division	40.99	112.72
University College*		
Lower Division	33.67	92.59
Upper Division	35.22	96.85
Veterinary Medicine, College of	98.83	197.66

TERM TUITION RATES**	RESIDENT	NON-RESIDENT
Students registering in:		
Dentistry, School of	$1331.00	$2662.00
Graduate School		
Dentistry, clinical fields in	1331.00	2662.00
Medicine, clinical fields in		
1-5 credits	375.00	750.00
6-10 credits	749.00	1498.00
11-15 credits	1124.00	2248.00
16 or more credits	1498.00	2996.00
Veterinary Medicine, clinical fields in	1186.00	2372.00
Law School (semester rate)	1103.00	2206.00
Medical School		
1-5 credits	375.00	750.00
6-10 credits	749.00	1498.00
11-15 credits	1124.00	2248.00
16 or more credits	1498.00	2996.00
Veterinary Medicine, College of	1186.00	2372.00

SPECIAL FEE CATEGORIES (PER TERM)	RESIDENT	NON-RESIDENT
Dental fellow specialists	$ 121.00	$ 121.00
Graduate students in minimum fee classifications:[1]		
Doctoral candidates in final quarter	165.00	165.00
Continuous registration[2]	65.00	65.00
Student status[3]	70.89	70.89
Graduate medical or dental fellows[4]	749.00	749.00
Medical fellow specialists, post M.D.	121.00	121.00
Pharmacy externs	121.00	121.00
Pharmacy fellow specialists	121.00	121.00
Psychology fellow specialists	121.00	121.00
Preparatory instruction	$100.00 per course	
Managers M.B.A. program	$4950.00 per year	
SUMMER SESSION (per credit)[5]***	by college of enrollment	
CONTINUING EDUCATION AND EXTENSION[6] AND INDEPENDENT STUDY[7]*** (per credit)		
1000-level courses	$34.00	
3000-level courses	by college of course	
5000-level courses	by college of course	
8000-level courses	$68.00	

PER-CREDIT TUITION—The first section of the tuition schedule lists per-credit tuition rates. Tuition will be assessed on a per-credit basis for most colleges and schools of the University. For undergraduates, tuition will vary according to class standing and college of registration. If you are a lower division student (with 90 or fewer credits) in the Colleges of Agriculture, Education, Forestry, Home Economics, Liberal Arts, General College, University College, or Institute of Technology, you will pay the lower division rate. If you are an upper division student (with 91 or more completed credits) *or if you have been admitted to an upper division college or program* (i.e., College of Biological Sciences, College of Pharmacy, School of Management, School of Nursing, Medical Technology, Mortuary Science, Occupational Therapy, Physical Therapy, and the baccalaureate program in Dental Hygiene), you will pay the per-credit rate listed for the college, school, or progam in which you are registering.

TUITION PLATEAU—There is a 14-18 credit tuition plateau for undergraduates. For 1-14 credits you will be charged for each credit according to the per-credit tuition rate that applies to you. If you

*14-18 credit tuition plateau.
**For 12 credits or more except as indicated.
***Rates are the same for residents and nonresidents.
[1]Graduate students registered for credit pay either the minimum fee indicated or the per-credit rate, whichever is higher.
[2]Open only to doctoral students admitted before fall 1983 who have passed their preliminary oral examinations.
[3]For students enrolled in the Graduate School who are required to register (e.g., to satisfy requirements of an assistantship or fellowship) but who are not enrolled in courses and are not eligible for continuous registration.
[4]Medical and dental fellows who have completed course work and preliminary examinations for the Ph.D. degree may pay the continuous registration tuition rate. Those who have completed course work and language requirements but not the preliminary examinations may pay the student status tuition rate.
[5]For 1983 summer terms, tuition was the same as the academic year rate. Rates for 1984 not available.
[6]Effective fall quarter 1983.
[7]Effective July 1, 1983.

register for 15 or 16 or 17 or 18 credits you will be charged the same amount of tuition and fees (excluding course fees) as you would be charged for taking 14 credits. Each credit above 18 will be charged for on a per-credit basis. All colleges, schools, and programs that have a plateau (including lower division) are marked with an * in the per-credit tuition section.

TERM TUITION—Certain professional schools and colleges and certain Graduate School programs have term tuition rates for 12 or more credits (except where indicated). Use the second section of the tuition schedule to determine if term tuition applies to your registration. If you are registering for fewer than 12 credits in any of the areas listed (excluding Medicine) you will pay at the per-credit tuition rate listed in the first section of the tuition schedule.

STUDENT SERVICES FEE

All students registered for 6 or more credits must pay a $79.40-per-quarter ($119.10-per-semester) student services fee in addition to tuition. Courses that carry no degree credit (Comp 0011, Math 0005, 0006, 0007, & 0009, and all courses in which the student registers as an auditor) count in the determination of the credit total for the student services fee on a one class hour = one credit basis. For example, registration in Math 0009, which meets for 5 class hours per week, counts as 5 credits towards assessment of the fee.

Certain students, including those registered in minimum fee classifications, are exempted from the student services fee requirement. Such students may elect to pay the fee if they wish to use the services covered by the fee.

Twin Cities campus students who have paid the student services fee may request a refund of the portion of the fee allocated to the Board of Publications. Refunds will be available at the Bursar's Office (145 Williamson Hall, West Bank Bursar, 107 Coffey Hall) during the first two weeks *only* of the appropriate quarter. Students must present original receipts of paid fee statements to obtain a refund.

Distribution of student services fee—

$ 2.81	—Board of Publications *(Daily)*
39.85	—Boynton Health Service
.18	—Child Care Consortium
.20	—Council of College Boards
.41	—Cultural Programs
.095	—Elections Commission
.05	—Intercollegiate Debate and Forensics Program
.145	—International Reciprocal Student Exchange Program
.05	—International Student Exchange Program
.439	—International Study and Travel Center
.32	—Minnesota International Student Association
4.00	—Minnesota Union Expansion
16.95	—Minnesota Union Operations
.98	—MSA Forum
.583	—Music Programs
.085	—National Student Exchange
5.874	—Recreational Sports
1.78	—Recreational Sports Facilities Planning
.11	—St. Paul Board of Colleges
.076	—Student Advocate Service
.25	—Student Emergency Loan Fund
2.99	—Student Legal Service
.143	—Student Ombudsman Service
1.00	—University Community Video
.03	—WMMR Radio
$79.40	—TOTAL

HEALTH SERVICE AND HOSPITALIZATION CHARGES

Students who pay the student services fee, of which the Health Service fee is a part, become eligible for prepaid outpatient health care at Boynton Health Service. Eligibility for care begins one week before the first day of classes of the quarter for which the fee is paid. Students who do not pay the student services fee may purchase outpatient health coverage through the Extended Outpatient Benefits Plan available at the Boynton Cashier's Office, room W220.

Boynton Health Service is open and available throughout the calendar year. Prepaid benefits include both emergency and general care as well as consultation with specialists on physical or mental health problems. Specialty services include gynecology (including contraceptive services, pregnancy testing, and counseling), allergy, orthopaedics, ophthalmology, dermatology, ear-nose-throat, chest diseases, internal medicine, neurology, neurosurgery, proctology, surgery, and urology.

The Health Service fee does not cover surgical procedures, hospitalization, services related to hospitalization, prescriptions, eye glasses, dental care, or certain other procedures. Students are required to carry hospitalization insurance coverage. A University-sponsored hospitalization insurance policy is available and may be purchased from the Bursar when tuition and fees are paid or purchased at the Health Service, room W227A. Only students who pay the Health Service fee are eligible for this coverage. Dependent insurance coverage is also available, but may only be purchased at Boynton Health Service, room W227A.

Partial Exemption From Health Service Fee—If you are a member of a health maintenance organization such as Coordinated Health Care, Group Health, MedCenter, Physician's Health Plan, SHARE, or HMO Minnesota, or if you have health insurance which duplicates Boynton Health Service prepaid benefits, you may apply for a partial exemption of the Health Service fee *no later than the end of the second week of classes*. To apply, show proof of coverage to the Boynton Health Service Cashier, room W220, who will certify a Health Service Fee Adjustment Request form. You must present this form to the registration clerk in order to receive the partial deduction from your Health Service fee assessment.

Students who do not pay the full Health Service fee waive all prepaid benefits but may use the Health Service on a fee-for-service basis. For detailed information about health coverage and fee exemptions, contact the Boynton Cashier's Office (373-3780) or see *Welcome to Boynton Health Service*, a booklet available at the Health Service. General information and a copy of the booklet may be obtained by calling 373-3141.

STUDENT ID CARD REPLACEMENT

Student ID cards are required in many areas of the University to process student services. *If you have registered within the last two years and need a replacement ID card for any reason* (excluding normal wear of the embossing surface), you must purchase an authorization card for $5 at the Bursar's Office, 145 Williamson Hall (or from the cashier in 107 Coffey Hall, St. Paul). Bring this authorization card to the Student Relations Unit, 150 Williamson Hall (or 130 Coffey Hall), where staff will enter your name and file number as they appear on your official record. Finally, you must bring this completed authorization to the ID card office, 248 Williamson Hall, where you will be issued a new card. (Note: lost ID cards that have been turned in are kept at the Information Booth in Williamson Hall for six months.) *If you have **not** registered within the last two years and have lost or never been issued an ID card*, you may receive an authorization from the Registration Center, 202 Fraser Hall (130 Coffey Hall for St. Paul-based students) or from the Student Relations Unit, 150 Williamson Hall. To receive your new card, bring the authorization to the ID card office, 248 Williamson Hall.

Installment Payment Chart—

IF YOU:	THEN YOU ALSO PAY: $10 Late Payment Fee	$10 Installment Payment Fee	$20 Late Payment Fee	Total
Pay 100% by due date(s).				$ 0
Pay less than 100% by due date(s). Pay balance by April 6.	✓			$10
Pay 50% by due date(s). Pay balance by April 27.		✓		$10
Pay less than 50% by due date(s). Pay balance after April 6 but by April 27.	✓	✓		$20
Pay 50% by due date(s). Do *not* pay balance by April 27.		✓	✓	$30
Pay less than 50% by due date(s). Do *not* pay balance by April 27.	✓	✓	✓	$40

Installment Payment Plan—You have the option of paying 50% of your tuition and fees by the due date(s) on your fee statement(s). If you pay the 50% installment amount, a bill will be mailed to you for the balance plus a $10 installment payment fee. This balance, including the $10 installment payment fee, will be due on the Friday of the fifth week of the quarter—April 27 for spring 1984. For example, if your tuition and fees are $500, you may choose to pay $250 by the due date. You will be billed for the balance—the remaining $250 plus the $10 installment payment fee—and this amount ($260) will be due April 27.

You may choose this option for one, some, all, or none of your fee statements. For each fee statement, you should either make a payment of 50% by the due date—and thereby choose the installment plan—or pay the amount in full by the due date. You will be charged only one $10 installment payment fee per quarter, even if you choose the installment payment plan for more than one fee statement.

When you choose this option, you have two fee payment dates for each fee statement: the original due date for the 50% installment amount and April 27 for the balance. You will be charged a $10 late payment fee for each original due date you miss. If you have made *no* payment on your tuition and fees by April 6, you will be placed on the Installment Payment plan: you will be billed for your tuition and fees, plus a $10 late payment fee and the $10 installment payment fee. In all cases, if you miss the April 27 payment date, you will be charged a $20 late payment fee and a hold will be placed on your record. Use the table at the top of the page for those fees you will be assessed if you pay in installments and/or pay late. For more information call Student Accounts Receivable (376-8057) or go to B1 Fraser Hall or 130 Coffey Hall.

The Installment Payment plan may not be suitable for veterans and certain other students who need to be certified as having paid tuition and fees in full by the beginning of the quarter. Check with the Certifications Unit, 155 Williamson Hall, for more information.

Where to Pay—Pay your tuition and fees at the Bursar's Office (145 Williamson Hall on the East Bank, ground floor of Blegen Hall on the West Bank in Minneapolis, or the Cashier's Office in 107 Coffey Hall in St. Paul). Your fee statement and a check or money order may be dropped in the fee deposit box in Fraser Hall or Coffey Hall or the lower concourse of Williamson Hall next to the Bursar's Office. The receipted fee statement may be picked up after ten working days at the East Bank Bursar's Office, 145 Williamson Hall, in Minneapolis or at the Cashier's Office in 107 Coffey Hall in St. Paul.

Mailing Your Payment—The fee statement and a check or money order may be mailed to the Bursar's Office in Minneapolis (145 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455) or to the cashier in St. Paul (107 Coffey Hall, 1420 Eckles Avenue, St. Paul, MN 55108). When mailing your payment for tuition and fees, you must enclose all copies of your fee statement. *Do not remove the student copy before sending in payment but do remove the lower portion—your course confirmation document.* If you want your receipted fee statement returned to you by mail, you must enclose a self-addressed, stamped envelope. If you do not include this return envelope, you can pick up your receipted copy after ten working days at the Bursar's Office to which you mailed your payment.

Fee Statement Due Dates—Each fee statement you receive has its own due date. Later fee statements do not extend the due date(s) on earlier fee statements. A $10 late payment fee can be charged for any fee statement that is paid after the due date printed on it. If you mail your fee statement and payment to the Bursar's Office, the postmark date must be the same as or earlier than the due date printed on the fee statement, or you will be billed for a $10 late payment fee by Students Accounts Receivable.

When to Pay—For students who register through March 23, tuition and fees are due within 10 working days following the date of registration. (If you register on Tuesday, February 21, for example, you must pay tuition and fees on or before Tuesday, March 6.) For students who register from March 26 through April 4, fees are due April 6. Fees for students who register on or after April 5 are due within two working days following the date of registration.

Financial Aid Recipients—You must turn in your Course Request form and receive your fee statement by March 23, even if you have not yet received your financial aid check. If you register after March 23, you will be charged a late registration fee.

If you present a restrictively endorsed financial aid check in payment of tuition and fees, it will be applied in full toward the total amount of tuition and fees assessed. You are not eligible for the Installment Payment plan if your financial aid check is 100% or more of your tuition and fees. If your check is less than 100% but at least 50% of our tuition and fees, you can participate in the Installment Payment plan—your check, *in full*, would be your first payment, and your balance would be due Friday of the fifth week of the quarter. If your financial aid check is less than 50% of your tuition and fees, you can participate in the installment plan by using other funds to complete the first (50%) payment.

Late Payment Fees—You must pay 50-100% of your tuition and fees by the due date(s) on your fee statement(s) to avoid late payment fees. The late payment fee is $10 through the fifth week of the quarter. You must pay your account in full by Friday of the fifth week of the quarter or you will be charged an additional $20 late payment fee. Use the table on the preceding page for a breakdown of the fees you will be charged if you pay late.

Fee Statements—Do not destroy or throw away any fee statements you receive from the Registration Center. All copies of unpaid fee statements must be turned in to the Bursar's Office. You should keep all fee statements for the quarter together with your student ID card; many University facilities such as the libraries, Boynton Health Service, the Bursar's check cashing service, and athletic facilities require fee statement(s) as proof of enrollment.

Duplicate Fee Statements—Duplicate unreceipted fee statements for the current quarter may be obtained at your Registration Center until registration for the next quarter begins. If your fees are paid, Student Accounts Receivable can issue a payment verification letter or validate your unreceipted copy at B1 Fraser Hall or 130 Coffey Hall (150 Williamson Hall for students with mobility impairments). Duplicate fee statements for any quarter prior to spring quarter 1982 may be obtained at the Certifications Unit in 155 Williamson Hall or the registration windows in 130 Coffey Hall.

Credit Balance Fee Statements—Credit balance fee statements have a dollar amount in the "Amount Due" box that is followed by "CR," which means that your obligation to the University has been reduced by that amount. If you have already paid your fees, you may obtain a refund voucher by presenting the credit balance fee statement to Student Accounts Receivable. (See also Refunds, on the following page.) If all of your fees have not been paid and the amount on the credit balance fee statement is less than what you owe on your other fee statements, take all fee statements to the Bursar's Office and pay the difference. If the credit amount is more than the amount that you owe, go to Student Accounts Receivable for further information.

Billing Statement for Installment Payment Plan—If you pay tuition and fees on the Installment Payment plan, you should receive, during the third or fourth week of the quarter, a billing statement for the balance of your tuition plus the $10 installment payment fee. **If you do not receive this billing statement, you *must* obtain a payment voucher on or before April 27 from Student Accounts Receivable** at B1 Fraser Hall (Bursar's departmental window, 145 Williamson Hall, for students with mobility impairments) in Minneapolis or 130 Coffey Hall in St. Paul. If you do not obtain this payment voucher and pay the balance of your tuition and fees by April 27, you will be charged a $20 late payment fee, and a hold will be placed on your record. If you want to pay your balance *before* you receive your billing statement, go to Student Accounts Receivable where a payment voucher for the balance plus the $10 installment payment fee will be prepared for you.

Tuition and Fees Paid by Various Agencies—If you have authorization for the University to bill a donor for your tuition and fees, you should bring your authorization *before the beginning of registration* to the Registration Center (202 Fraser Hall, 130 Coffey Hall for St. Paul-based undergraduates and adult specials, or 150 Williamson Hall for students with mobility impairments). If you are unable to present your authorization before the beginning of registration, bring it with you when you register.

Note: you will have a hold placed on your record if your sponsoring agency falls behind in payment for more than two quarters. You will ultimately be held responsible for all unpaid tuition and fees if your sponsoring agency does not fulfill its obligations.

Regents' Scholarships—If you are registering for a course with a Regents' Scholarship, you should bring your authorization to the Registration Center when you register. You must return to the Registration Center for an adjusted fee statement *if you receive your authorization after you have registered.* **(Regents' Scholarship authorizations should *never* be mailed to the Bursar.)** If you fail to receive authorization by the due date on your first (or 01) fee statement, you will be assessed a $10.00 late payment fee. Regents' Scholarships cover only tuition for approved courses. You are responsible for all course fees and special fees. Failure to pay these fees by the due date on your first (or 01) fee statement will make you liable for a $10.00 late payment fee.

Payroll Deduction for Graduate Students—To be eligible for payroll deduction, you must be a graduate student holding at least a 25% graduate assistant appointment for an entire quarter. Those students holding only hourly graduate assistant appointments, including those teaching classes in Continuing Education and Extension, are not eligible. Your tuition and student services fee must total at least $150. (The student services fee is the only deductible fee.) In addition, you must earn enough in your last four pay periods to cover your tuition and fees in four equal installments (see Note, below).

You must apply for payroll deduction by the due date on your first fee statement to avoid a late payment fee. However, application for payroll deduction is *never* possible after Friday of the first week of the quarter.

Procedures for applying for payroll deduction vary by campus. *Minneapolis-based students*—after you register take your fee statement to Student Accounts Receivable, B1 Fraser Hall, and fill out a payroll deduction authorization card. You will be then given a form to take to the Certifications window in 202 Fraser Hall, where you will be issued a credit balance fee statement. Take your credit balance fee statement and your original fee statement to the Bursar's Office to be receipted. (Failure to do so by the due date on your fee statement will result in a late payment fee.) *St. Paul-based students*—when you register, request payroll deduction. After you fill out a payroll deduction authorization card, you will be credited directly on your original fee statement for the amount to be deducted.

All students must pay all fees not covered by payroll deduction (e.g., MPIRG, hospitalization, course fees) by the due date(s) on their original fee statement(s) to avoid late payment fee(s).

If upon review Student Accounts Receivable denies your application for any reason (e.g., temporary or incorrect Social Security Number, insufficient income to cover deducted amount in four payments), they will send you a bill for tuition and fees with a new due date. This bill must be paid by the new due date to avoid a late payment fee.

If you cancel/add anytime through the first week of the quarter, return to Student Accounts Receivable to have your payroll deduction application adjusted. After the first week of the quarter, tuition and fees for added courses cannot be put on your payroll deduction and must be paid by the due date(s) on the new fee statement(s). If you cancel courses after the first week of the quarter, you cannot receive a refund for credited tuition and fees until the last of the four payroll deductions has been made.

Note: tuition and fees are withheld in four equal installments from the last four pay periods of the quarter. For example, if your tuition and deductible fees total $800, this amount will be withheld from your last four paychecks in equal installments of $200. To be eligible for payroll deduction, you must *net* at least $220 per paycheck (the extra $20 is added because no payroll check can be issued for less than $20). If you discover, after you have applied, that your net pay will not cover your deductions, contact Student Accounts Receivable in B1 Fraser Hall for a new fee statement. If you are ineligible for payroll deduction, you can use the Installment Payment plan available to all students (see preceding page).

Further information on payroll deduction procedures is available from the Graduate Assistants Office, 411 Johnston Hall (376-3644).

VETERANS CERTIFICATION

Ch. 34 and Ch. 35 Veterans—Veterans must register and pay fees like every other student. If you are a veteran, you must conduct your business with the Veterans Administration separately from your business at the University; proper application is your own responsibility. Late payment fees will not be waived because you are waiting to receive your check(s) from the Veterans Administration. The University assists you by certifying as required. You initiate this certification at the Certifications Unit, 155 Williamson Hall.

Do the following:

Apply at the Certifications Unit, 155 Williamson Hall, for benefits on or before your first day of class. You will not get paid unless you do apply. You must present your receipted fee statement *in person* every quarter. If you are returning for another quarter, your previous period of education under the law having been officially interrupted, you must fill out a re-entrance form at the Certifications Unit, 155 Williamson Hall, notifying the Veterans Administration that you wish to resume training status.

New and returning veterans—you must provide a certified copy of the birth certificate for each child claimed as dependent and a certified copy of your marriage certificate if you claim your spouse as a dependent. (Certified copies have the Clerk of Courts stamp attached—notarized copies are *not* acceptable.) **If you do not provide these documents you will be paid at the single rate of pay.**

Ch. 31 Veterans (veterans approved for Rehabilitation Program)—When you have received your fee statement, have it approved at the Certifications Unit, 155 Williamson Hall, and then receipted by the Bursar's Office. Bring the receipted statement and your course list to the Certifications Unit, 155 Williamson Hall, to obtain an order for books and supplies.

Additional information concerning University attendance under the above designated laws may be obtained at the Certifications Unit in 155 Williamson Hall or in the Official Daily Bulletin printed in the *Minnesota Daily* and posted on campus bulletin boards.

REFUNDS

Tuition and Course Fees—To be entitled to a refund, you should file for official cancellation at the Registration Center as soon as you decide to withdraw from a class or classes. If you officially cancel all courses before classes begin, you are entitled to a 100% refund. After classes begin, tuition and course fees are refunded on the following basis: if you cancel within the first week, you get 90%; within the second, 80%; third, 70%; fourth, 60%; fifth, 50%; sixth, 40%. After the sixth week of class, there is *no* refund unless retroactive cancellation has been authorized. A complete or partial refund of tuition and course fees through retroactive cancellation is only possible for one calendar year after the end of the quarter. After this calendar year, retroactive cancellation is still possible, but you will not receive any refund of paid tuition and fees and will *not* be released from your obligation for any unpaid tuition and fees. Appeals to this policy should be directed to the Student Relations Unit, 150 Williamson Hall.

Retroactive cancellation must always be authorized and must be accompanied by a Final Attendance Verification form for each course (signed by the instructor) or by a signed statement, from the instructor for each course, verifying that you never attended class or stating the day you stopped attending class (note: these statements *must* be written on official University stationery).

Student Services Fee—Usually, if you cancel below 6 credits *before the end of the sixth week of class*, you can request, when you process your cancellation, a refund for tuition and fees (see above). If you have been assessed the University-sponsored hospitalization at registration, however, any refund of your student services fee must be requested at and authorized by Boynton Health Service, room W227. If you receive a refund of the student services fee, you may no longer use the services provided by the fee. To continue using these services, you must continue to be enrolled and not be issued any refund. If you completely cancel out of the University and qualify for a tuition refund, you must also accept a prorated refund of the student services fee unless you retain University-sponsored hospitalization (see below). However, *all* refunds of the student services fee are based on the date that the cancellation is processed and are not effected by retroactive cancellation.

University-Sponsored Hospitalization—Refunds of the University-sponsored hospitalization insurance fee will be issued *only through the end of the second week of classes* and must be processed at Boynton Health Service, room W227. If you cancel completely during this refund period, you may opt to retain your hospitalization, but will not then be given any refund of the student services fee.

Special Fees—The orientation fee and the record service fee are never refunded. **MPIRG is not refunded through the Registration Centers**—refund instructions are published every quarter in the Official Daily Bulletin, a column printed in the *Minnesota Daily* and posted on campus bulletin boards. All other special fees assessed at registration are refunded through the sixth week of class at the same rate as tuition and course fees (see above). There is *no* refund of special fees after the sixth week of class, even if retroactive cancellation is authorized.

Refunds for Students on Payroll Deduction—If you cancel courses, you cannot receive a refund for tuition and fees that are being deducted until after all four payments have been deducted from your check. To receive a refund voucher, bring your *last* pay check stub to Student Accounts Receivable at B1 Fraser Hall (Bursar's departmental window, 145 Williamson Hall, for students with mobility impairments) in Minneapolis or 130 Coffey Hall in St. Paul.

Financial Aid Refund Policy—If you receive financial aid, you must maintain full-time status (a minimum of 12 credits for undergraduates, 8 credits for graduate students). If you cancel courses and your credit total falls below full-time status, you may not qualify for a tuition refund. Federal regulations require that all or a portion of your tuition refund must be credited to the financial aid funds from which you received assistance. Refunds may also be sent to the lender of a student loan to reduce the principal on that loan. **Repayment of financial aid is calculated according to the date on which your cancellation is effective. If you cancel courses at the 100% refund rate during a quarter—including retroactive cancellation—you must repay *all* financial aid received during that quarter.** If the refund amount is insufficient to repay the appropriate financial aid fund, you will be billed for the difference by Student Accounts Receivable. You will be notified by mail of the disposition of your refund.

COURSE FEES[1]

All fees are per quarter unless otherwise indicated.
Students taking the following courses will pay course fees as follows:

ARTS, STUDIO[2]
Materials fees:
$10—1101, 1102, 1105, 1404, 3140
$15—3110, 3120, 3160
$20—5110, 5120, 5160, 5190
$25—1701, 1702, 3430, 3710, 3720, 5430, 5710, 5790
$30—1510, 1520, 1530, 1811, 1812, 3510, 3520, 3530, 5510, 5520, 5530, 5590
$40—1301, 1302, 3301, 3302, 3304, 3305, 3810, 5310, 5320, 5340, 5350, 5390
$45—5810
$50—3303, 5330
$70—3820, 5820
Arranged (amount adjusted to individual needs of students or particular class project)—3830, 3970, 3980, 5830, 5970, 8000-level courses

COMPOSITION AND COMMUNICATION
$100[3]—0011 Preparatory Composition

ECOLOGY AND BEHAVIORIAL BIOLOGY
$15—5014, 5016, 5132, 5134 Transportation Fee

FORESTRY
$50—ForP 3300 Wood Industries Tour

HEALTH SERVICE (Field Trips and Foreign Study)
$39.85 per quarter—Required of students on University field trips such as Anthropology, Geology, Mines,

etc. (covers outpatient medical care for emergency illness at nearest facility on approval of the person in charge of the group, up to a maximum of $50 per visit).
Students in University-sponsored foreign travel groups must rely on private insurance coverage while traveling.

LANDSCAPE ARCHITECTURE
$15—3073
$20—5017

MATHEMATICS (Arts)
$100[3]—0005, 0006, 0007, 0009 Preparatory Mathematics

MUSIC, APPLIED
Applied lessons—1 half-hour lesson per week for 2 credits; 2 half-hour lessons or 1 hour lesson per week for 4 credits.
Music majors who have passed the entrance exam: $0 per 2 credits
Majors taking extra credits (beyond requirement) or taking lessons on a second instrument: $32 per 2 credits
Non-majors, elective credit: $96 (0-2 credits)

PUBLIC HEALTH
$200—5755 Administrative Residency

SOIL SCIENCE
$5—3220 Field Course
$15—3520, 5510 Transportation Fee
$25—5565 (SS) Field Course

[1]Fees are subject to change.
[2]Materials fees—assessed at the time of registration. Arranged fees are collected by department.
[3]In lieu of tuition

SERVICE FEE, INTERNATIONAL PROGRAMS
$100-$250 per quarter according to services provided—for international students supported under contractual arrangements with sponsoring agencies or entities requiring special administrative or management services beyond those normally provided.

SPEECH AND HEARING CLINIC
U of M students, staff, and faculty are not charged for clinical services provided in the Speech and Hearing Clinic.
Outpatients:
Speech Pathology, Clinical Management—$2 per session
Audiologic Evaluation—$25
Audiologic Evaluation for Senior Citizens—$15
Audiology Screening—$2
Audiology Screening Follow-up—$5

[1]Fees are subject to change.

TECHNOLOG
$1.80 required of all Institute of Technology students who pay the student services fee—assessed at registration

IOK REVIEW
$1.20 required of all School of Management students who pay the student services fee—assessed at registration

SPECIAL FEES[1]

COGS (COUNCIL OF GRADUATE STUDENTS)
$.55 required of all graduate students who register for one or more credits—assessed at registration.

COLLEGE OF EDUCATION—PLACEMENT SERVICE FEE
$30—Registration fee for graduate students, alumni, and others (annual fee)
$20—College of Education seniors (annual fee—assessed with graduation fee)
$5—Bulletin service fee for non-seniors (quarterly fee)
Bachelor of science degree candidates from College of Education (except Recreation, Park, and Leisure Studies students) are required to register with placement section of the Education Career Development Office or to secure an official exemption from that office. Graduate students and alumni seeking employment in education positions may also use placement services.

CREDIT BY SPECIAL EXAMINATION
$30—Check with your college office for further information.

DIPLOMA, OVERSEAS MAILING
$5—for sending a diploma *air mail* to address outside the United States, Canada, or Mexico (Fee optional)

DIPLOMA REPLACEMENT FEE
$15

ENGLISH FOR INTERNATIONAL STUDENTS
For international students needing instruction in English—$93.50 per quarter administrative fee plus instructional and materials fee ranging from $290.75-$888.75.

GRADUATION FEE (each degree)
$15—including diploma

HOSPITALIZATION INSURANCE, UNIVERSITY SPONSORED
$53 per quarter—available only to students who pay the student service fee or the separate health service fee.

INTERNATIONAL STUDENT AID FEE
$4 per quarter required of **all** non-immigrant students who have temporary visa status.

LATE PAYMENT FEE
$10 through fifth week of quarter
$20 sixth week of quarter and after

LATE REGISTRATION FEE
$10 through the first two weeks of classes and $20 thereafter.

MINNESOTA PUBLIC INTEREST RESEARCH GROUP (MPIRG)
$2 (refusable/refundable)—assessed with student services fee.

MUSIC PRACTICE ROOM
$1 per qtr for one, $2 for two, 50 cents for each addtl hr per week—all instruments except organ.
.25 per hr—small organ
.50 per hr—large organ

ORIENTATION FEE
$15 required of all new students *except* new graduate students who attended the University as undergraduates and *except* students in law, medicine, veterinary medicine, dentistry, and public health, and in master of education and master of agriculture programs.

RECORD SERVICE FEE
$6 required of all new students. This fee provides students with unofficial copies of student records.

RECREATIONAL SPORTS PARTICIPATION FEE
$15 per quarter to cover use of recreational and athletic facilities; $30 for 2 quarters, $45 for 3 quarters. $60 for a whole year—for faculty and staff only. Guest ticket—$2 per visit.

TRANSCRIPT FEE

There is a $2 charge for each *official* certified copy of your student record. These official transcripts, which are specially certified and embossed with the University's seal, cannot be distributed over the counter but are sent by mail either to you (stamped "Issued to Student") or to the institutions or individuals you have requested the transcripts for.

Official transcripts can be requested by mail. Requests can also be dropped off at the locations below. No phone requests will be accepted. Requests should include your full name, your student ID number, college, dates of enrollment, and complete address(es) to send the transcript(s) to. Minneapolis-based students should send their requests to the Certifications Unit, 155 Williamson Hall, 231 Pillsbury Drive Southeast, Minneapolis, Minnesota 55455. St. Paul-based students should send their requests to the Office of Admissions and Records, 130 Coffey Hall, 1420 Eckles Avenue, St. Paul, Minnesota 55108. *All Extension records must be requested at the Certifications Unit in Minneapolis.* A $2 check or money order (payable to the University of Minnesota) or a $2 Bursar card must be included for each request. Please do not send cash.

The $6 record service fee, paid by all students their first quarter of enrollment, continues to cover *unofficial* copies of student records. You may pick up an unofficial copy of your record by presenting your student ID card from 9 a.m. to 2:30 p.m. Monday through Friday at the quick-service window in 155 Williamson Hall or at 190 Coffey Hall. There is no charge for the quick service; there is, however, a limit of one copy per visit.

FACILITY FEES

Facility fees—Students registered in the following courses must pay the amount indicated to the appropriate facility operator for the use of the facility and/or equipment.

AnSc 1601 Horse Equitation	$60
PE 1034 Judo	$18 (maximum)
PE 1035 Karate	$23 (maximum)
PE 1048, 1148 Bowling	each $15 (maximum)
PE 1052 Riflemanship	$8 (maximum)
PE 1057, 1157, 1257 Skiing	each $60 (maximum)
PE 1205 Scuba and Skin Diving	$20 (maximum)
PE 1043 Beginning Horsemanship	$60
PE 1143 Intermediate Horsemanship	$60

DEPOSIT CARDS AND RENTAL CARDS

Deposit cards may be purchased from the east bank Bursar's Office, 145 Williamson Hall. Chemistry cards are $20; pharmacy cards are $10; art cards are $5. Chapter 31 veterans (veterans on vocational rehabilitation) should obtain a voucher from the Certifications Unit, 155 Williamson Hall, and present this voucher at the Bursar's Office when they purchase a card.

Chemistry and pharmacy cards MUST be presented for admittance to the first meeting of laboratory class. One card may serve for more than one class. Partially depleted cards are acceptable for admittance to class, provided that the unused portion is not less than the minimum stipulated for that course. The deposit card requirement is waived for graduate teaching assistants.

Laboratory material and breakage will be charged against your deposit card. Any unused balance will be refunded at the end of the course.

You must present your deposit card to be assigned a laboratory desk. If you are disabled, you should speak with your instructor about any special arrangements that are necessary.

Microscope rental cards—Students enrolling in the following courses who do not provide their own microscopes must purchase a microscope rental card: Biology 3013, Microbiology 1101, 3103, 5105, 5233, 5234. The non-refundable card is $3 and may be purchased from the Bursar's Offices.

PE Locker-Towel Rental Cards

Cooke Hall

Locker-Towel rental—$.50 per day, $9 per quarter, $27 for 3 quarters, $36 yearly. Gym clothing—$10 per quarter, $30 for 3 quarters, $40 yearly.

Norris Hall, St. Paul Gymnasium

Locker-Towel rental—$9 per quarter, $27 for 3 quarters, $36 yearly.

The cards for Cooke Hall and the St. Paul Gymnasium are purchased in those facilities.

The cards for Norris Hall are purchased at the Bursar's Offices.

TUITION RATES FOR STAFF MEMBERS

Graduate Assistants—Students registered in the Graduate School and holding appointments as graduate assistants at 25% time or more are privileged to pay resident tuition rates, regardless of source of fund, resident status, or curriculum pursued. Members of the immediate families of qualified graduate students are eligible to pay resident tuition rates in the college in which they are registered. The University defines "immediate family" as spouse, children, parents, or legal guardian or ward living in the same household as the graduate assistant.

Resident tuition rate privileges are extended beyond the term of qualifying appointment, subject to the following rules:

The qualifying appointee must have held one of the above appointments for a minimum of 3 academic quarters, at 25% time or more, after September 15, 1969. Two summer sessions will count as one academic-year quarter. The use of the privileges is extended, after completion of the qualifying 3 quarters of appointment, on a quarter-for-quarter basis up to a maximum of 6 quarters of use. Appointment for 3 quarters entitles extension of the privilege for 3 additional quarters, and appointment for more than 3 quarters entitles extension (on a quarter-for-quarter basis) for not more than 6 quarters. The entitlement of the qualifying appointee and members of his or her immediate family to this privilege will not extend beyond 3 years from the termination of the last or most recent qualifying appointment.

This privilege does not apply to those holding appointments as instructors.

If you are a nonresident Graduate School student holding a current qualifying appointment as a graduate assistant, your eligibility for resident tuition will be authorized automatically when your employing department processes the documents necessary to put you on the payroll. Follow Graduate School Registration Instructions in Section 1 of this *Class Schedule* and proceed to the Registration Center in 202 Fraser Hall or 130 Coffey Hall (150 Williamson Hall for students with mobility impairments). Resident fees will automatically be assessed. **If nonresident fees are assessed, contact the Graduate Assistants Office, 411 Johnston Hall, 376-3644, for information on the status of your appointment or for separate resident certification.**

If you are a nonresident Graduate School student who formerly held a graduate assistantship, or if you are a member of the immediate family of a graduate assistant holding either a current or a former appointment as a graduate assistant, contact the Graduate Assistants Office, 376-3644, for information on procedures to claim the resident tuition privilege.

Students with bachelor's degrees who are in postbaccalaureate professional degree programs (including doctor of pharmacy, master of public health, master of hospital administration, master of agriculture, master of education) and who are teaching assistants paid on the General Operations and Maintenance Fund and appointed 25% time or more are eligible to pay at the resident rate of their college of enrollment.

Graduate and Professional School Fellows/Trainees—Effective fall quarter 1983 graduate students and students seeking professional degrees (e.g., M.D., J.D., D.V.M.) who hold fellowships and traineeships are eligible to pay resident tuition rates under the following conditions: their award must be administered by the University and their stipend must at least equal the minimum quarter-time graduate assistantship rate ($3,420 for nine months in 1983-84).

Fellows and trainees who meet the above qualifications can begin accumulating *extended* resident tuition eligibility for all award periods that start on or after fall quarter 1983. (There is no credit for award periods that occurred prior to fall 1983.) These extension privileges are the same as those privileges provided for graduate assistants (see Graduate Assistants, above).

Members of the immediate families of qualifying fellows and trainees are also eligible to pay resident rates in the college in which they are registered.

If you are a graduate student who qualifies for resident tuition, have your department forward your full name, student ID number, a copy of your award letter, and a copy of your University appointment to the Graduate Fellowship Office, 422 Johnston Hall. For further information on procedures to claim the resident tuition privileges for yourself or immediate family members, contact the Graduate School Fellowship Office, 373-2833.

If you are a student seeking a professional degree who qualifies for resident tuition, request that your Dean's office forward your name and student ID number to the Graduate Assistants Office, 411 Johnston Hall. Contact the Graduate Assistants Office at 376-3644 for further information and for procedures for resident privileges for family members.

Others—Medical and dental fellows and University of Minnesota civil service appointees who are working 75% time or more and who are registered in the Graduate School may pay fees at the resident rate. This privilege does not extend to members of the immediate families of such appointees.

Residence counselors with bachelor's degrees are privileged to pay tuition at the resident rate of the college in which they are enrolled.

Full-time faculty members who hold the Ph.D. degree may informally audit courses (with permission of the instructor and on a space-available basis) without registration or payment of fees. Should the need arise, official authorization may be obtained from the Graduate School.

If you are a nonresident entitled to resident fee privileges under these regulations, show the registration clerk your certification of appointment card when you turn in your approved Course Enrollment Request form at the Registration Center in 202 Fraser Hall or 130 Coffey Hall (150 Williamson Hall for students with mobility impairments).

Full-time faculty members with the rank of instructor or above, civil service personnel eligible for faculty group insurance, certain accredited foreign diplomatic officials, and their immediate families may pay resident fees in all colleges. Similar provision is made, one year after their arrival, for military personnel on duty in Minnesota for reasons other than college attendance. Full-time faculty on the staff of accredited Minnesota colleges (not their families) have the same privilege as provided for University faculty. Persons to whom these provisions apply should contact the Registration, Student Records, and Scheduling Office, 150 Williamson Hall, to make appropriate arrangements.

FINAL EXAMINATION SCHEDULE

The time of the examination for a class is based on the hours and days the class is regularly scheduled. This final examination schedule does not apply to courses offered primarily to students registered in the School of Dentistry, Law School, Medical School, College of Pharmacy, and College of Veterinary Medicine, or to courses numbered over 8000 that have no regularly scheduled classrooms.

To determine the time of a final examination, use the schedules on this page and the next according to the following instructions:

- Find the exam schedule for the college offering the course. To determine the college, see the last line under the department heading in the Schedule of Classes. (Because Schedules A and B can apply to either Minneapolis or St. Paul note the choice of class starting times.)
- Find the class hour and days in the Class Hours column of the schedule, and read across to find the time and date of the examination.
  - Go by the lecture hours rather than the laboratory or recitation hours.
  - Follow the MWF schedule if your class meets more than three days per week.
  - If a course meets on unusual days, follow the MWF exam time. (For example, a class meeting 0815 MTTh or 0815 TF would follow the 0815 MWF exam time.)
  - Courses meeting at irregular times should follow the exam schedule for the meeting time of the day earliest in the week. (For example, a course meeting 0915-1100 T, 0815-0900 Th would follow the 0915 TTh exam time.)
  - Except for split-hour classes, use the first full class hour if your class meets for more than one continuous hour. (For example, a class meeting 1315-1500 MWF would follow the 1315 MWF examination time schedule.)
  - For split-hour classes in Minneapolis, use the following arrangement: 0815-0930 TTh use 0815 TTh; 0945-1100 TTh use 0915 TTh; 1115-1230 TTh use 1115 TTh; 1245-1400 TTh use 1215 TTh; 1415-1530 TTh use 1415 TTh; 1545-1630 use 1515 TTh.
  - For split-hour classes in St. Paul, use the following arrangement: 0800-0915 TTh use 0800 TTh; 0930-1045 TTh use 0900 TTh; 1100-1215 TTh use 1100 TTh; 1230-1345 TTh use 1200 TTh; 1400-1515 TTh use 1400 TTh; 1530-1615 TTh use 1500 TTh.
- If your course is listed under the Common Examinations, use the common examination hour instead of the hour from Schedule A or Schedule B.
- Classes meeting four or more days a week may give 3-hour examinations provided the instructor notifies the Scheduling Office of his/her intention to do so on an A123 form. Three-hour examinations will be scheduled on the respective morning or afternoon the examinations would be given: June 5 (0830-1130; 1330-1630), June 6 (0830-1130; 1330-1630), June 7 (1330-1630), June 8 (0830-1130), June 9 (0830-1130; 1330-1630).

Special Note: Examination times for classes meeting at 0715 and 1615 will be arranged by the instructor, who must file Form A123 with the Scheduling Office.

FINAL EXAM SCHEDULES

Schedule A
Courses Offered in Colleges of Education and Liberal Arts, †Health Sciences, †Dentistry, and Public Affairs

Class Hours				Class Hours			
0800 *or* 0815 MWF	0800-1000	S	June 9	1200 *or* 1215 TTh	1600-1800	W	June 6
0800 *or* 0815 TTh	1030-1230	S	June 9	1300 *or* 1315 MWF	1600-1800	S	June 9
0900 *or* 0915 MWF	1030-1230	W	June 6	1300 *or* 1315 TTh	1030-1230	Th	June 7
0900 *or* 0915 TTh	1330-1530	F	June 8	1400 *or* 1415 MWF	1030-1230	T	June 5
1000 *or* 1015 MWF	1600-1800	Th	June 7	1400 *or* 1415 TTh	0800-1000	T	June 5
1000 *or* 1015 TTh	0800-1000	Th	June 7	1500 *or* 1515 MWF	1600-1800	T	June 5
1100 *or* 1115 MWF	1030-1230	F	June 8	1500 *or* 1515 TTh	1330-1530	T	June 5
1100 *or* 1115 TTh	1600-1800	F	June 8	0815-1000 S	0800-1000	S	June 9
1200 *or* 1215 MWF	1330-1530	W	June 6	1015-1200 S	1030-1230	S	June 9

†Courses offered primarily to students other than medical or dental students.

Rooms for 1615-1700 and 1715-1800 hour classes will not be scheduled unless they are requested on Form A123.

Courses beginning at 1730 or 1800 will start at 1815 during exam week.

Schedule B

Courses Offered in Colleges of Agriculture, Biological Sciences, Forestry, and Home Economics, General College, School of Management, and Institute of Technology

Class Hours			
0800 *or* 0815 MWF	0800-1000	S	June 9
0800 *or* 0815 TTh	1030-1230	S	June 9
0900 *or* 0915 MWF	0800-1000	W	June 6
0900 *or* 0915 TTh	1330-1530	F	June 8
1000 *or* 1015 MWF	1330-1530	Th	June 7
1000 *or* 1015 TTh	0800-1000	Th	June 7
1100 *or* 1115 MWF	0800-1000	F	June 8
1100 *or* 1115 TTh	1600-1800	F	June 8
1200 *or* 1215 MWF	1330-1530	W	June 6

Class Hours			
1200 *or* 1215 TTh	1600-1800	W	June 6
1300 *or* 1315 MWF	1330-1530	S	June 9
1300 *or* 1315 TTh	1030-1230	Th	June 7
1400 *or* 1415 MWF	1030-1230	T	June 5
1400 *or* 1415 TTh	0800-1000	T	June 5
1500 *or* 1515 MWF	1600-1800	T	June 5
1500 *or* 1515 TTh	1330-1530	T	June 5
0815-1000 S	0800-1000	S	June 9
1015-1200 S	1030-1230	S	June 9

Rooms for 1615-1700 and 1715-1800 hour classes will not be scheduled unless they are requested on Form A123.
Courses beginning at 1730 or 1800 will start at 1815 during exam week.

Common Examinations—All sections of the following courses are examined together at the time indicated.

Monday, June 4

Acct 1024, 1025—1030-1230
Biol 1009, 1009H, 1101—1030-1230
BLaw 3058—0800-1000
Math 1008—1330-1530
Math 0009, 1111, 1131, 1142, 1201, 1211, 1221, 1231, 1621, 3211, 3221—1330-1630
Psy 1001—1900-2100
PubH 3001, 3004, 3033—1830-2130
QA 1050—0800-1000

Tuesday, June 5

CSci 3101, 3102—1830-2130
Econ 1001, 1001H—1830-2130

Wednesday, June 6

Econ 1002, 1002H—1830-2130
Ger 1103—1830-2130
QA 3055—1830-2130

Rooms—Examinations except common examinations are given in the regularly scheduled classroom unless your instructor arranges for and announces a different room. Note to instructors: requests for special final examination rooms must be submitted to the Scheduling Office by your department office on Form A123 on or before April 27. Notification of room assignments for all A123 forms received in the Scheduling Office by April 27 will be sent to departments on or before May 24.

Examination Scheduling Conflicts—Students are required to take final examinations at the times shown. However, if you have examination conflicts or three exams within a 16-hour period, you may request adjustment with your college office and with your instructor. Such a request must be presented at least two weeks before the examination period begins.

If you miss a final, an I or an N is recorded, depending upon your standing at the time. To make up the exam, you must obtain the instructor's permission.

SCHEDULE COMMITTEE REGULATIONS REGARDING EXAMINATIONS

1. There shall be no variations from the University final examination schedule except by concurrence of the dean of the college and the Director of Scheduling. **This prohibition also precludes moving a final examination from a scheduled time to study day or to the last or earlier meetings of the class, except laboratory final examinations** which cannot be held in accordance with the regular final examination schedule.

   All department requests for adjustment of final examination hours should be made on Form A163 by May 11 to permit publication of the change and orderly consideration of hardships. Additional common examinations may be requested on the same form, which is available in department offices.
2. Instructors requesting any variation from the official examination schedule must agree to give a special make-up examination to any student having examination conflicts or three examinations in one calendar day because of the change in hours.
3. Arranged examinations and authorized variations in published hours shall conform with the hour-periods shown in the examination schedules.
4. **No variations from the University final examination schedule will be considered official** until published in the Official Daily Bulletin printed in the *Minnesota Daily* and posted on campus bulletin boards.
5. Each college shall assume responsibility for making arrangements to spread out examinations for students who have more than two examinations scheduled in one day.
6. Since providing adequate seating for final examinations is a continuing and growing problem:
   a. departments are encouraged to limit final examinations to 2 hours;
   b. alternate seating should be requested only when it is deemed necessary for proper administration of the exam.

SPRING QUARTER GRADES

Academic Staff—Grades are due in the Office of Registration, Student Records, and Scheduling (150 Williamson Hall) within 72 hours after the examination. Grades for this quarter are due beginning Thursday, June 7; the grades for the last examinations are due on Wednesday, June 13 by 8:30 a.m. Messenger service is provided. Please call 373-2153 when grades are ready. *Do not send grades by mail.*

Students—Spring quarter grades (in transcript form) are mailed in late June-early July to all students. Included in this annual transcript mailing will be registration instructions for fall quarter 1984.

GRADING POLICIES AND PRACTICES

1. There shall be two grading systems, A-B-C-D-N and S-N. Each college (meaning also each separate school or institute) will determine to what extent and under what conditions each system may be available to its students and faculty. Any college may specify what courses or what proportion of courses taken by its students or by its prospective students must be on a particular grading system.

2. The S-N system represents a self-contained alternative to the A-B-C-D-N system, and the two may not be combined for a particular student in a particular course. Students may receive symbols only from the grading system under which they are registered.

3. When the two grading systems are available to a student, he or she should declare a choice of systems as part of the initial registration. The choice may not be changed after the end of the second week of classes (first week in summer session).

4. The following symbols, as defined, may be used on the University's official transcript, the chronological quarterly record of the student's registrations after the end of the second week of classes (end of first five days of classes for summer sessions). The official transcript is released by the University only at the student's request, with the official seal imprinted.

Grade of A— Represents achievement that is outstanding relative to the level necessary to meet course requirements.

Grade of B— Represents achievement that is significantly above the level necessary to meet course requirements.

Grade of C— Represents achievement that meets the basic course requirements in every respect.

Grade of D— Represents achievement that is worthy of credit even though it does not fully meet the basic course requirements in every respect.

Grade of S— Represents achievement that is deemed by the instructor to be satisfactory for the course in which the student is registered. This definition is intended to imply that the standards for S may vary from one course to another.

Symbol of W— Entered by the Registration, Student Records, and Scheduling Office when a student officially withdraws from a course, in accordance with procedures established by the student's college.

Symbol of I— Assigned by an instructor to indicate **Incomplete**, in accordance with provisions announced in class at the beginning of the quarter, when in the instructor's opinion there is a reasonable expectation that the student can complete successfully the work of the course. An **I** that is not made up by the end of the next quarter of residence becomes an **N**; instructors may set dates within the quarter for make-up examinations. (In the Graduate School, in master's degree programs in undergraduate colleges, and in the doctor of medicine programs, an **I** remains until changed by the instructor.) When an **I** is changed to another symbol, the **I** is removed from the record.

Symbol of N— Assigned when the student does not earn an **S** or a **D** or higher and is not assigned an **I.** It stands for **no credit.**

Symbol of X— Reported to indicate that a student may continue in a sequence course in which a grade cannot be determined until the full sequence of quarters is completed. The instructor will submit a grade for each **X** when the student has completed the sequence.

In connection with all achievement symbols, but especially in connection with S, the instructor is obligated to define to a class as explicitly as possible in its early meetings the performance that will be necessary to earn each.

Symbol of V— Indicates registration as an auditor or visitor, a non-credit, non-grade registration.

Symbol of T— Posted as a supplement in front of the original grade to indicate credits transferred from another institution or from one college or campus to another within the University when re-evaluation is required.

In the doctor of medicine program, O (Outstanding) and E (Excellent) may be used with S-N. In the doctor of veterinary medicine program, O (Outstanding) may be used with S-N.

5. If a student is permitted by the college to repeat a course, all grades are reported on the official transcript.

6. Any college may set special scholastic or other standards for registration in a particular course, for scholastic probation, for admission, for honors, for continued residence, for degrees, etc.

7. **The grading system described here became effective fall quarter 1977, thereby replacing all previous University systems, but its definitions and provisions may not be applied retroactively to any grades or symbols recorded before that time.**

8. Each transcript will be clearly identified as to the procedures under which it was produced and will be maintained and released under policies in effect during the time of registration.

9. The Assembly Committee on Student Academic Services has authority to grant to individual colleges permission to use experimental grading methods outside the provisions of this official University system, for a specified period, provided that the proposals do not interfere significantly with the registration options of students from other colleges and programs. Such experimental systems shall be reported for information to the Twin Cities Campus Assembly as soon as permitted and, after the specified period, shall be re-evaluated, to be either extended, discontinued, or, with Assembly approval, made a regular system for the unit concerned.

10. The Assembly Committee on Student Academic Services is charged with resolving disputes between and among colleges should procedures developed under this grading system result in unacceptable complications for students registering across college lines. The committee may bring to the Assembly issues it is unable to resolve informally through negotiation, with recommendations for resolution.

15th & University S.E.

DINKYTOWN'S DOME CITY

Presents

15th & University S.E.

SELF-SERVICE

4½¢

kinko's copies

GREAT COPIES EVERY DAY OF THE WEEK

4¢ AFTER 6 PM

ADDITIONAL SELF-SERVICE COPIERS AT BOTH CAMPUS STORES

DINKYTOWN
306 15th Ave S.E.
379-0454

STADIUM VILLAGE
612 Washington Ave S.E.
379-2452

Mon-Thurs 7:30-10
Fri 7:30-7
Sat 9-5
Sun 1-7



DEBOURKWAY

Debourkway Hair Company is a casual yet professional hair salon conveniently located in Dinkytown. Our goal is to work with you to find the look that suits your needs and lifestyle best. Clip this ad and save **$2.00** off styles and **$5.00** off a perm with cut.

$2.00 off styles *Expires 5-20-84*

DEBOURKWAY HAIR CO.

1501 University Avenue **623-4302** Above B. Dalton

---

kinko's copies ®

THESIS EXPERTS

NOW FEATURING—

W.O.R.D.S.℠

When Ordinary Reports Demand Style

Professional Typing At Affordable Prices

Fast Service • Quality Guaranteed

10% OFF any papers with this ad

Expires 5-31-84

Dinkytown **379-4649** • Stadium Village **379-3199**

J. Hartby Ltd

• OUTRAGEOUS CARDS •
• UNUSUAL GIFTS •
• STYLISH JEWELRY •
• UNIQUE T-SHIRTS •
• GIFT WRAP •

1501 UNIVERSITY AVE. S.E. • 379-2323

Located in the Dinkytown Dome, next to Marty's



Blue Serge

alterations & dressmaking

room 304 • the dinkytown dome

tues.-fri. 10-6 • thurs. 10-8 • sat. 12-4 • closed sun.-mon

$2.00 OFF

orders of $15.00 or more with this ad

Expires June 2, 1984

FREE ESTIMATE & 20% off labor

CRAIG stereo repair

with this ad

CRAIG'S STEREO & AUDIO REPAIR SERVICE

SUITE #306 DINKYTOWN DOME

Above B. Dalton

379-7884

Expires 5-21-84

STUDENT SHOPPER'S GUIDE

AIR FORCE

MINNEAPOLIS, MN:
Col Robert B. Patrick
AFROTC Dept. 415
University of Minnesota
(612) 373-2205

TWIN CITIES, MN:
Officer Training School
SSgt Bruce Trickel
Rm 586, Bishop Henry Whipple Bldg.

AIR NATIONAL GUARD

ST. PAUL, MN:
MSG Gregory C. Beckwith
TSG Timothy R. Egan
SSG John O. Raymond
HQ 133rd Tac Airlift Wing
Mpls.-St. Paul Intl. Airport
(612) 725-5622

ARMY RESERVE

ST. PAUL, MN:
1457 University Avenue
(612) 644-5688
Or call toll free 1-800-USA-Army

CANON

Contact your nearest local Canon Dealer.

CHEVROLET CAMARO Z-28

Hotter than Texas chili. Camaro Z-28. Available at your local Chevrolet Dealer.

DELCO GM/BOSE

Experience a totally new class of automotive music systems from DELCO at your local General Motors Dealer.

FORD EXP TURBO

The all-new 1984 EXP Turbo. Available at your local Ford Dealer.

MARINE CORPS

MINNEAPOLIS, MN:
Officer Selection Officer
Room B34, FOB
210 Third Avenue S.

PANASONIC

See your Local Authorized Panasonic Dealer.

PIONEER

"Call this number for your local dealer" 1-800-447-4700.

PONTIAC FIERO

America's first mid-engine production car. Available only from your local Pontiac Dealer.

SHARP

See your College Bookstore or your local Sharp Dealer.

TECHNICS

Technics is available wherever fine audio equipment is sold.

OTHER LOCAL MERCHANTS

See Display Ad For More Information

MINNEAPOLIS, MN:
DeBourke Hair Co.
1501 University Ave.
Call 623-4302

Kinko's Copies
306 15th Ave. S.E.
Call 379-0454

W.O.R.D.S.
Call 379-4649/379-3199

J. Hartby Ltd.
1501 University Ave. S.E.
Call 379-2323

Blue Serge
Room 304, Dinkytown Dome
Call 623-7927

Craig Stereo Repair
Dinkytown Dome above B. Dalton
Call 379-7884

Men's Intercollegiate Athletics
205 Bierman Field Athletic Building
Call 373-3181

U.S. Air Force ROTC-Det 415
Room 3, Armory
Call 373-2205

Extension Classes
202 Westbrook Hall
Call 373-1855

Nelson's Office Supply Store
1417 4th St. S.E.
Call 331-5969

University Community Video
425 Ontario St. S.E.
Call 376-3333

Campus Typing
800 Washington Ave. S.E.
Call 378-2210

The B'nai B'rith Hill Foundation
1521 University Ave. S.E.
Call 379-4026

Independent Study
45 Westbrook Hall
Call 373-3256

Rec Sports
107 Cooke Hall
Call 373-4200

University Student Legal Services
160 West Bank Union Skyway
Call 376-5237

MSA Store
Ground Floor Coffman

Team Electronics
(See Ad for Nearest Location)

International Study & Travel
44 Coffman Union
Call 373-0180

The Artery, Inc.
413 Cedar Ave.
Call 333-2558

Art Materials, Inc.
315 14th Ave. S.E.
Call 331-6864

Peking Garden Retaurant
2324 University Ave. S.E.
Call 623-3989

Stanley H. Kaplan
328 East Hennepin Ave.
Call 378-9191

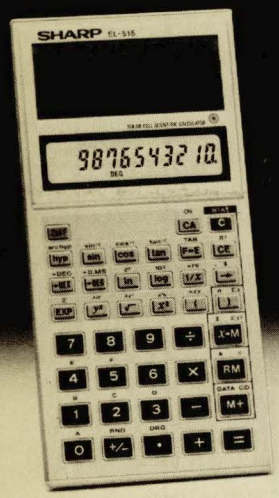
University Bindery
2818 Como Ave.
Call 373-2884

ST. PAUL, MN:
Outdoor Store
St. Paul Student Center
Call 373-1404

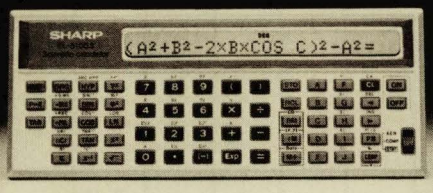
Minnesota Army National Guard
(See Ad for Details)
Call 1-800-652-9032

ANOTHER TECHNOLOGICAL ADVANCE FROM SHARP.

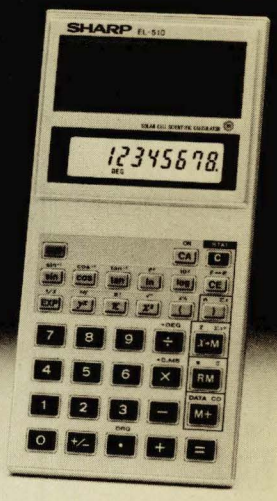
EVERY STUDENT BODY WANTS A SHARP MIND.



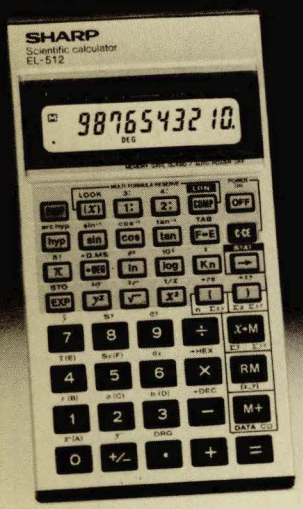
EL-515 T. Solar powered. Never needs batteries. With 50 scientific and statistical functions. 10-digit display. With wallet.



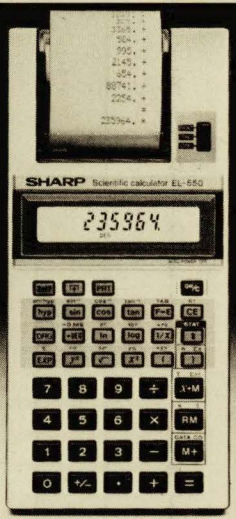
EL-5100 ST. Full-formula display. Stores up to 80 program steps. 10 data memories with memory retention. And 24-digit dot matrix alphanumeric display. With wallet.



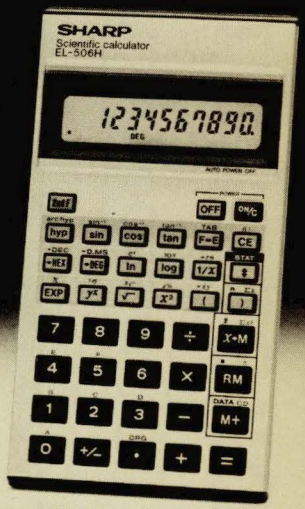
EL-510 T. Solar powered. Batteries never required. With 35 scientific and statistical functions. 8-digit display. Wallet included.



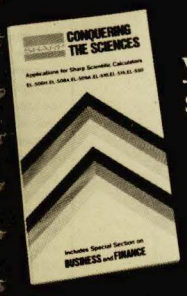
EL-512 T. Programmable calculator with 61 scientific functions. Stores up to 128 program steps. With wallet.



EL-550. Hand-held 10-digit scientific calculator/printer. 46 scientific functions. Complete with wallet and paper rolls.



EL-506 HT. Highly featured calculator with 48 scientific and statistical functions. 10-digit LCD readout. With wallet.



It's no wonder today's student body is Sharp-minded. Because Sharp offers you a wide range of scientific calculators that fit every student need. And every student budget.

There are economical Sharp scientifics with 25 functions. And others with as many as 61. There are Sharp solar-powered calculators that never need batteries. And Sharp pocket-printers that keep records. Plus a Sharp scientific with full-formula display.

This year, Sharp adds still another unique feature to its line of scientific calculators: The Sharp "Applications Textbook." It's an easy-to-understand instruction manual that keeps student and calculator in top form. Student body. Sharp mind. Look out world.

SHARP

FROM SHARP MINDS COME SHARP PRODUCTS

Sharp Electronics Corp., 10 Sharp Plaza, Paramus, NJ 07652

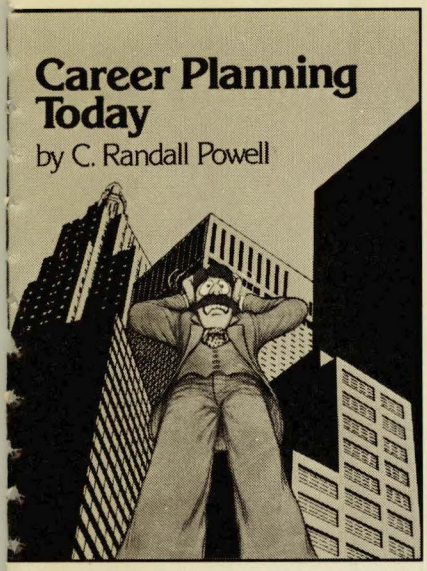
BOOKSTORE CHECKLIST

COURSE	TEXTBOOK TITLE	AUTHOR
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

SUPPLIES

☐ _____	☐ _____	☐ _____
☐ _____	☐ _____	☐ _____
☐ _____	☐ _____	☐ _____

HELP WANTED



COMMENTS

Light reading style... Practical... Fun... Logically organized... Useful graphics...

Action oriented book... Involvement with exercises and projects... Helpful samples... Clever use of cartoons... Full of tools, strategies and techniques...

Ideas are effective in todays employment climate... Market oriented... Turns the educational investment into a positive return...

Removes job search stress by substituting proven concepts... Creates a needed element of confidence... Avoids shallow gimmics... Shows exactly how to plan ahead.

HIRE ME!

A satisfying career is more than a job. A career is more than earning a living. It involves enjoying the work that you have chosen.

A career is an integration of values, interests, personal qualities, and skills with a professional work assignment.

Freshmen, graduate students, and experienced professionals can benefit from career planning. It is never too late or too early to plan your career.

Career planning is a continuous process that periodically interfaces with a serious job search activity.

The approaches recommended in this book remove chance luck and substitute a planned activity.

CONTENTS

- Goal Setting
- Self-Assessment
- Exploring Options
- Employment Correspondence
- Search Strategies
- Traditional Searches
- Creative Searches
- Cover Letters
- Resume Preparation
- Interview Presentations
- Interview Techniques
- Salary Negotiations
- Job Decisions
- Job Networking

A NEW RESOURCE

Career Planning Today is not just another job hunting book. It takes a meaningful look at both the individual and the range of work options.

Career Planning Today is designed for the individual seeking a managerial, technical or professional position. It builds upon the sound career planning concepts of assessment, exploration, and job search.

Career Planning Today is used in hundreds of college career planning courses and job search seminars and workshops.

The author, Dr. C. Randall Powell, is a nationally recognized expert, and Director of Placement at Indiana University.

FORMAT

8-1/2 X 11 Paperback
308 Pages
$11.95 including postage
To: Career Communications
P.O. Box 1481
Bloomington, IN 47402

Please send_____copies
of **Career Planning Today** at
$11.95 per copy N-WTR83
Enclosed is $ _____

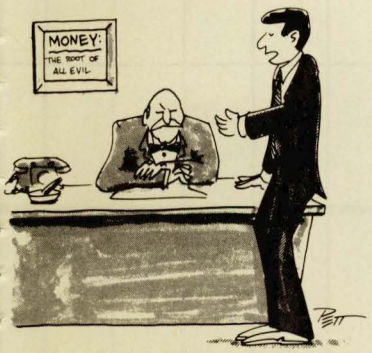
Name . . . . . .

Address . . . . . .

City . . . . . .

State, Zip . . . . . .

Indiana residents add 5% sales tax



"LET ME PUT IT ANOTHER WAY... JUST HOW EVIL CAN I EXPECT TO GET WHILE WORKING HERE?"



"I'VE HAD A LOT OF LUCK WITH MY CAREER... I'VE ALWAYS JUST FALLEN INTO SOMETHING."



SCHEDULE WORKSHEET

TIMETABLE

PERIOD OR TIME	MON	TUES	WED	THURS	FRI	SAT

COURSES

COURSE NO.	TITLE	INSTRUCTOR



Before you work anywhere, take a look at the tools we work with.

NASA's space shuttle. For Air Force officers working as electrical or aerospace engineers, the challenge is just beginning. In fact, from laboratories to lasers to launch pads, we have exciting projects and management opportunities very few employers can offer.

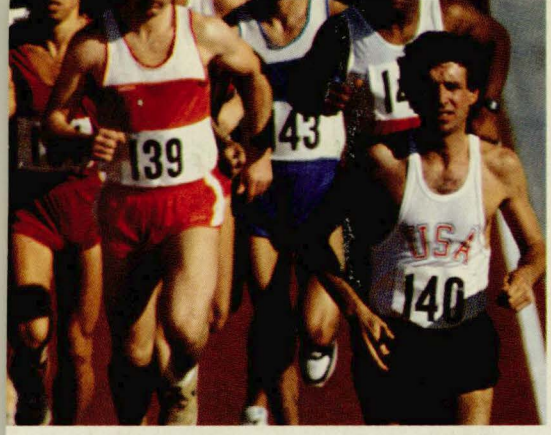
For example, we are developing experiments that will be an important part of the space shuttle's cargo in the years to come. Experienced Air Force engineers will work as shuttle mission planners and as astronaut flight controllers.

If you have an electrical or aerospace engineering degree, or soon will have, we may have a challenging future for you as an Air Force officer. It's a future that demands the vision and commitment of people like you. And it's vital to our country.

For more information about Air Force engineering opportunities, mail the card. Or call our toll-free Engineer Hotline 1-800-531-5826 (in Texas 1-800-292-5366). Better yet, send your resume to HRS/RSAANE, Randolph AFB, TX 78150. There's no obligation.

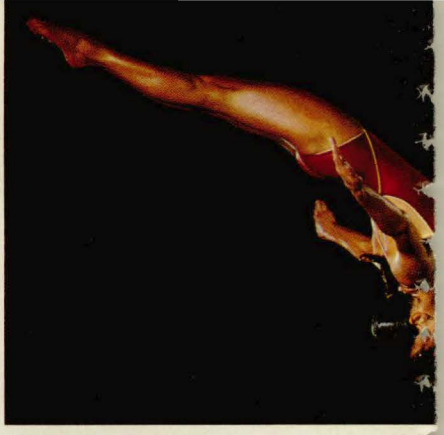
AIR FORCE

A great place for engineers.



© 1980 L.A. Olympic Committee TM

The Official 35mm Camera of the 1984 Olympic Games



Go for the Gold,™ with Canon.

Official 35mm Camera of the 1984 Olympic Games

Perhaps more so than all other human endeavors, the energy and enthusiasm of Olympic competition produces an extra dimension of excitement for athlete and spectator alike. Every Olympian is already a champion, but their former successes only heighten their desire to win it all. To go for the gold.

As the Official 35mm Camera of the 1984 Olympic Games, we know that the only people who will be called upon to perform as consistently as the athletes, with equal precision and dedication to excellence—day in and day out at the peak of their performance—are the professional sports photographers whose job it is to capture the spirit of the games on film. They, too, are judged by their performance at the finish line. And they often only get one shot.

Canon is the world's leader in 35mm photography, with a wide variety of SLR models and over fifty interchangeable wide-angle, telephoto, zoom and macro lenses that can be used with them.

The New F-1 is the Canon choice for professionals, featuring an incredible system of interchangeable components that allow the photographer to custom-tailor the camera to meet his needs.

The A-1 is the most advanced Canon automatic SLR camera, featuring six exposure control modes including programmed automation for focus-and-shoot convenience, shutter-priority, aperture-priority and stopped-down automation for creative control, auto flash and manual.

The AE-1 PROGRAM is so advanced, it's simple, providing both programmed and shutter-priority automation, plus auto flash and manual.

The new Canon T-50 provides all the sophistication of other Canon SLR's in an incredibly compact, affordable package complete with built-in Power Winder. Like all Canon 35mm SLR cameras, it accepts the entire line of over fifty interchangeable Canon FD lenses.

Whether you shoot sports, vacation or just fun family photos, do the very best you can. Go for the gold,™ with Canon.

Contributor to the U.S. Olympic Team

Canon®

Canon USA, Inc., One Canon Plaza, Lake Success, New York 11042
Canon USA, Inc., 140 Industrial Drive, Elmhurst, Illinois 60126
Canon USA, Inc., 6380 Peachtree Industrial Blvd., Norcross, Georgia 3007
Canon USA, Inc., 123 Paularino Avenue East, Costa Mesa, California 92
Canon USA, Inc., 2035 Royal Lane, Suite 290, Dallas, Texas 75229
Canon USA, Inc., Bldg. B-2, 1050 Ala Moana Blvd., Honolulu, Hawaii 9681
Canon Canada, Inc., Ontario
© 1983 Canon U.S.A., Inc.

Canon T50
Our simplest SLR ever—just focus and shoot for automatic pictures indoors or out, day or night! A built-in Power Winder even provides automatic loading!

Canon A-1
Six exposure control modes—including programmed automation, electronic digital readout in viewfinder, up to 5 fps. shooting with Motor Drive MA.

Canon New F-1
For professionals and advanced amateurs, w/speeds from 8 seconds to 1/2000th sec., 32 interchangeable focusing screens, 5 viewfinders, 3 metering patterns, choice of backs and motorized transport systems. And more.

Canon AE-1 PROGRAM
Programmed automation plus Shutter-Priority automation. 8 user-interchangeable focusing screens, choice of Power Winders or the Mot Drive MA for up to 4 fps. action shooting.

