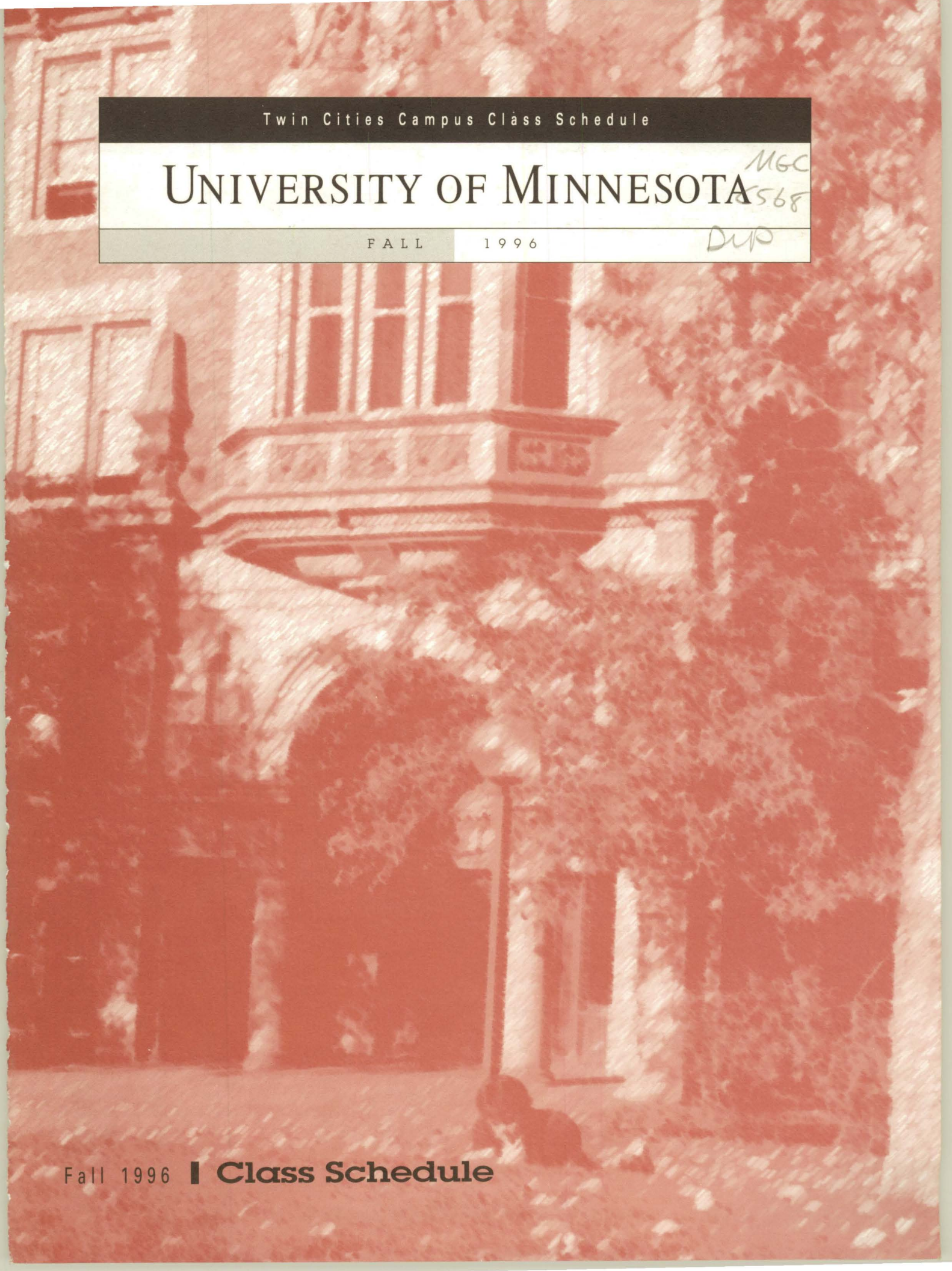


Twin Cities Campus Class Schedule

UNIVERSITY OF MINNESOTA

FALL 1996

MGC
568
DUP

Fall 1996 | Class Schedule

registration services

REGISTRATION CENTERS

202 Fraser Hall, Minneapolis
130 Coffey Hall, St. Paul
Monday 9 a.m.-4 p.m.; Tuesday-Friday 8-4
(September 26, 27, 30: 8 a.m.-5:30 p.m. Mondays during registration queues: 8 a.m.-5:30 p.m., Fraser Hall only.)

For turning in scholarships and obtaining duplicate fee statements; processing in-person registrations, cancel/adds, and payroll deductions; resetting passwords; obtaining unofficial copies of student records.

STUDENT SERVICES

150 Williamson Hall, Minneapolis
Transcript Service, 624-4115
Student Relations, 625-5333
Monday 9 a.m.-5:30 p.m.; Tuesday-Friday 8-4
(September 26, 27, 30: 8 a.m.-5:30 p.m.)
130 Coffey Hall, St. Paul
624-3731
Monday 9 a.m.-4 p.m.; Tuesday-Friday 8-4
(September 26, 27, 30: 8 a.m.-5:30 p.m.)

Transcript Service—For regular service for official transcripts ($4 charge), rush service for official transcripts ($8 charge), and for unofficial copies of student records (limit one copy per day—no charge).

Student Relations—For assistance with individual student record problems, questions; registration services for students with mobility impairments; address changes; certification letters; Veterans certification (Minneapolis only); student loan deferments; turning in Application for Degree forms and Application for Change of College or Status forms. For obtaining maps and miscellaneous publications and information.

COURSES ON WORLD WIDE WEB

The Office of the Registrar has developed an extensive World Wide Web home page on the internet. The address is: **http://www.umn.edu/registrar**. The following are available at the registrar's web site: *Class Schedule* information, *Course Guide* information, textbook information, section status reports, Liberal Education requirements, building location maps, and an interactive course planner (all linked).

Also available at the site are final exam schedules, the registration queue, self registration instructions, ties to the Students Access System, and a GPA computer.

There are forms for your use and other information as well. Several new features are under construction.

STUDENT ACCESS SYSTEM

You may view your academic record using the on-line Student Access System on the Gopher Information Server (see page 4 for various ways you can get connected to this system). The Student Access System consists of the following screens that retrieve information from the Student Data Base, the source of information on your transcript:

- The *Basic Student Record Information* screen contains information on your address, college, major and adviser, total credits earned, and GPA. Any holds on your record are also displayed, along with addresses for clearance of those holds.
- The *University Day Coursework and Grades* screen contains information on your day school registrations, including your grades, on a quarter by quarter basis.
- The *CEE and Transfer Coursework and Grades* screen contains information on your CEE registrations and on work transferred to the University from other institutions.
- The *Display Course Enrollment Counts and Status* screen allows you to check the current status (open/closed) of day courses.
- The *Registration* screens allow you to change your current mailing address and certain other demographic information, and to register yourself. See page 5 for self registration instructions.
- The *Financial Aid Main Menu* allows you to display some information on the status of your financial aid awards and holds.

Only use the system to access your own record. Accessing the records of other students is a violation of University policy and state and federal law.

To use the system, you will need to enter your student ID number or your social security number, and your birthdate (if you have not previously changed it) as your password. If your password is still set as your birthdate, you will immediately be sent to the password screen and required to enter a new password before you can proceed. Continue to change your password periodically as you use the system. (If needed, you can have your password reset at a registration center or by calling 626-HELP.) The system is available Monday-Thursday, 7 a.m.-12 a.m., Friday, 7 a.m.-10 p.m., and Saturday, 8 a.m.-6 p.m *except* official University holidays.

PUBLICATION INFORMATION

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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, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

In adhering to this policy, the University abides by the Minnesota Human Rights Act, Minnesota Statute Ch. 363; by the Federal Civil Rights Act, 42 U.S.C. 2000e; by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by the Americans With Disabilities Act of 1990; by Executive Order 11246, as amended; by 38 U.S.C. 2012, the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Stephanie Lieberman, Office of Equal Opportunity and Affirmative Action, University of Minnesota, 419 Morrill Hall, 100 Church Street S.E., Minneapolis, MN 55455, (612) 624-9547.

ALTERNATIVE FORMATS

This publication is available in alternative formats upon request. Please call the Office of the Registrar, 625-5333, for assistance.

UNIVERSITY CALENDAR
Twin Cities Campus

Fall Quarter 1996

MAY 1996

6 Fall *Class Schedules* available.

13 Early registration for fall begins.

JUNE 1996

14 Early registration for fall ends.

SEPTEMBER 1996

2 Labor Day, holiday. University offices closed.

3 Registration for fall reopens.
Fall Quarter Updates available.

25 Last day to register for fall without paying late registration fee.

26 ***Fall quarter classes begin.***

OCTOBER 1996

1 Last day for Graduate School students who want to participate in fall commencement ceremony to apply for graduation.

2 Last day for most undergraduates and students in professional degree programs to apply for fall quarter graduation (see Graduation in Section 7).

5 Last day to cancel with 100% refund.

12 Last day to cancel individual course without transcript record.
Last day financial aid recipients can register for fall and have registrations count towards financial aid eligibility. (Students in units that do not follow the regular quarterly schedule should contact their college office for deadlines.)

25 Graduate School application deadline for winter quarter.

NOVEMBER 1996

11 Winter *Class Schedules* available.

18 Winter quarter registration begins.

28-29 Thanksgiving holiday. Classes excused and University offices closed.

DECEMBER 1996

6 Last day of instruction.

7 Study day.

9-14 Final examinations.

14 *End of fall quarter.*
Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information

15 Graduate School application deadline for spring quarter.

24-25 Christmas holiday. University offices closed.

Winter Quarter 1997

JANUARY 1997

1 New Year's Day, holiday. University offices closed.

4 Last day to register for winter without paying late registration fee.

6 ***Winter quarter classes begin.***
1997-98 financial aid application packets available.

11 Last day to cancel with 100% refund.

13 Last day for most undergraduates and students in professional degree programs to apply for winter quarter graduation (see Graduation in Section 7).

18 Last day to cancel individual course without transcript record.
Last day financial aid recipients can register for winter and have registrations count towards financial aid eligibility. (Students in units that do not follow the regular quarterly schedule should contact their college office for deadlines.)

20 Martin Luther King's Birthday observed. Classes excused and University offices closed.

FEBRUARY 1997

19 Spring *Class Schedules* available.

26 Spring quarter registration begins.

MARCH 1997

14 Last day of instruction.

15 Study day.

17-22 Final examinations.

22 *End of winter quarter.*
Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information.

Spring Quarter 1997

MARCH 1997

28 Floating holiday. University offices closed.

29 Last day to register for spring without paying late registration fee.

31 ***Spring quarter classes begin.***

APRIL 1997

1 Last day for Graduate School students who want to participate in spring commencement ceremony to apply for graduation.

5 Last day to cancel with 100% refund.

11 Last day for most undergraduates and students in professional degree programs to apply for spring quarter graduation (see Graduation in Section 7).

12 Last day to cancel individual course without transcript record.
Last day financial aid recipients can register for spring and have registrations count towards financial aid eligibility. (Students in units that do not follow the regular quarterly schedule should contact their college office for deadlines.)

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

MAY 1997

12 Fall *Class Schedules* available.

15 Summer registration begins for currently enrolled students.
Graduate school application deadline for second term of summer session.

19 Early registration for fall 1997 begins.
26 Memorial Day, holiday. Classes excused and University offices closed.

JUNE 1997
6 Last day of instruction.
7 Study day.
9-14 Final examinations.
14 *End of spring quarter.*
Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information.

Summer Session—First Term 1997

JUNE 1997
17 ***First term classes begin.***
20 Early registration for fall 1997 ends.
23 Last day for most undergraduates and students in professional degree programs to apply for first term graduation (see Graduation in Section 7).

JULY 1997
4 Independence Day, holiday observed. Classes excused and University offices closed.
15 Graduate School application deadline for fall quarter.
22 *End of first term.*
Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information.

Summer Session—Second Term 1997

JULY 1997
24 ***Second term classes begin.***
30 Last day for most undergraduates and students in professional degree programs to apply for second term graduation (see Graduation in Section 7).

AUGUST 1997
27 *End of second term.*
Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information.

SEPTEMBER 1997
2 Registration for fall 1997 reopens.

1996

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					

OCTOBER

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NOVEMBER

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DECEMBER

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22	23	(24)	(25)	26	27	28
29	30	31				

1997

JANUARY

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12	13	14	15	16	17	18
19	(20)	21	22	23	24	25
26	27	28	29	30	31	

FEBRUARY

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MARCH

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16	□17	□18	□19	□20	□21	□22
23	24	25	26	27	(28)	29
30	■31					

APRIL

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MAY

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25	(26)	27	28	29	30	31

JUNE

S	M	T	W	T	F	S
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15	16	■17	18	19	20	21
22	23	24	25	26	27	28
29	30					

JULY

S	M	T	W	T	F	S
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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

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						

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

getting connected

CONNECTING TO THE STUDENT ACCESS SYSTEM

The Student Access System is menu item 13 on the Administrative Information Services (AIS) Public Information Menu. There are several ways you can get to that menu.

Directly Connected Terminals—A number of terminals around campus are directly connected to the AIS mainframe and are available for student use. These include terminals in the registration centers (202 Fraser Hall and 130 Coffey Hall), in 150 Williamson Hall, and LUMINA terminals in the campus libraries. (The libraries would like you to use only certain designated terminals for the Student Access System, in order to keep other terminals free for library use.)

Gopher—You can attach via Gopher. From the Home Gopher select *University of Minnesota Campus Information* and then select *Office of the Registrar.* Finally, choose *Student Access System.*

Dial Up—You can dial up from home, using a modem and communication software. Follow either of the procedures outlined below.

① **Dial 626-1920 using slip software.** Once you are connected to the University's modem pool:

- The system will return a long message asking, at the end, for your *user name.*
- Type your complete **e-mail address** and press **Enter** (type vonm0001@gold.tc.umn.edu, for example).
- The system will prompt you to enter your *password.*
- Type your **e-mail password** and press **Enter**.
- The system will prompt you to enter a *slipserver.*
- Type **tn3270 pubinfo.ais.umn.edu** and press **Enter**.
- The system will connect you to the AIS Public Information Menu.

② **Or dial 625-6009 using terminal emulation software** such as Crosstalk, SmartCom, ProComm, TinCan, or MacTerminal to connect directly to the computer at AIS. (If you have a high speed async V32/V42 class modem, dial 624-7539.) Additional parameters include:

data bits: 8
parity: ..... none
stop bits: 1
duplex: ..... full

Once you are connected to the computer at AIS, follow this log-on procedure:

- Press the **Enter** (or **Return**) key. You may need to press the key more than once before you receive a response.
- The system will return a message: *Enter terminal type.*
- Type **vt100** and press **Enter** (or **Return**).
- The system will return a message: *Please type in pa and press enter.*
- Type **pa** and press **Enter** (or **Return**).

Internet—If you have access to the internet, either using a computer connected via ethernet—such as the computers in the Computer and Information Services (CIS) microcomputer labs (see below for a list of labs)—or dialing in using SLIP software, you can connect to the system without going through Gopher. The address of the AIS computer is pubinfo.ais.umn.edu (or 128.101.109.1). If you are using TN3270, choose one of the items identified as "PubInfo" in the TN3270 Settings folder. If you are using Telnet, enter 63 when you are prompted to enter a terminal type.

Telnet users note: Access through the internet works better using TN3270 than using Telnet software. If you use Telnet, your function key will probably not work. Instead, you can use the command field in the lower right hand corner of each registration screen to key in a function type (e.g., F1) and then press Enter. The function type number is listed on the screen (F1-F9 for PF1-PF9, F0 for PF 10, FA for PF11, and FB for PF12). Also check to make sure that the Line Wrap setting is Yes and that the keyboard layout that you are using allows use of the Tab key to move from field to field. You may be able to view the keyboard map by keying #help and pressing Enter.

CIS Lab Locations—You can use any of the following CIS microcomputer and network terminal facilities to connect to the Student Access System:

East bank: DiehlH 278; EE/CSci 3-166 (IT students have priority use); EltH 121; FolH 14; LindH 1, 26 (LindH 26 frequently scheduled for classes); MechE 308; NichH 1; Phys 130 (IT students have priority use); WaLib 9.

West bank: HHHCtr 50; BlegH 455.

St. Paul: CentLib B40, B50; ClaOff 17, 135; McNH 305 (frequently scheduled for classes).

For information on hours and availability of the above facilities, call the E-Mail/Internet Help Line, 626-7676, 9-4 Monday-Friday.

Getting Software—TN3270, Telnet, Gopher, TinCan, ProComm (and other communication software), and SLIP software are available from CIS. TN3270, Telnet, and Gopher for both Macintosh and DOS computers, and SLIP software for DOS, are available on the CIS file servers. SLIP software for the Macintosh and communications software such as TinCan and ProComm must be obtained in person at a CIS Micro Helpline office—be sure to bring 5 high density or 6 double density disks for the software.

Questions?—For help with the Student Access System, call 626-4357, Monday, 9 a.m.-4 p.m., and Tuesday-Friday, 8-4.

section 1 registering yourself

GENERAL INFORMATION FOR SELF REGISTRATION

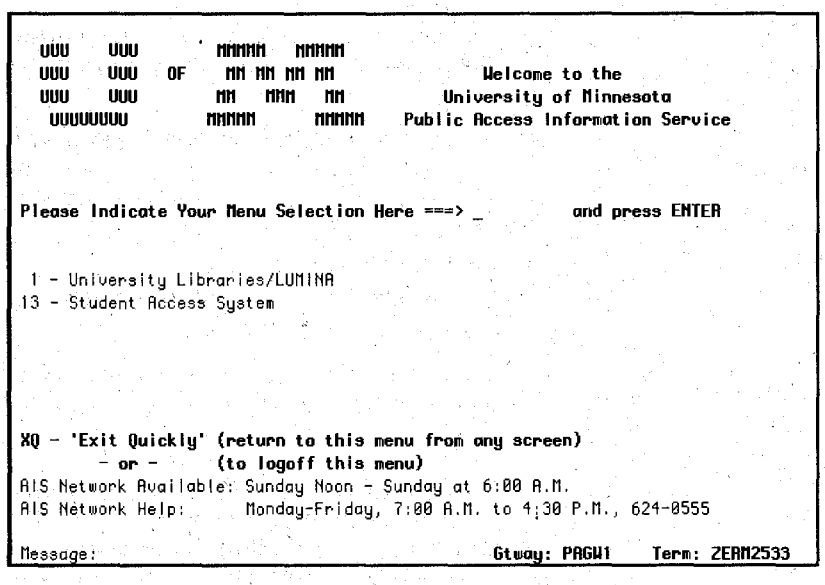
Registration is available on the Student Access System, an option on the Administrative Information Services (AIS) Public Access Information Menu. The system is available Monday-Thursday from 7 a.m.-12:00 a.m., Friday from 7 a.m.-10 p.m., and on Saturday from 8 a.m.-6 p.m. *except* on official University holidays. In-person registration is also available at the registration centers—see page 13 for more information.

You are responsible for the accuracy of your course enrollment and fee information. When you register yourself you are still subject to all University and college regulations. You must register by September 25 to avoid a late registration fee. Students who register from September 26-October 12 will be charged a $20 late registration fee. Students who are permitted to register on or after October 13 will be charged a $40 late registration fee. Read the registration information on pages 13-18 in Section 2 of this *Class Schedule* before you begin registration. You may also find it helpful to complete a registration form (page 165) before your start.

You must either complete each registration transaction, by reaching the Event Completion screen, *or* you must back out of the transaction to undo any changes. These instructions and the screens themselves provide the basic information for updating, proceeding to the next screen, or exiting. **READ THEM CAREFULLY.** For additional help, refer to the section General Instructions for the Student Access System beginning on page 12, or call 626-HELP (626-4357), Monday, 9 a.m. to 4 p.m., and Tuesday through Friday , 8-4, to talk to staff from the Office of the Registrar.

NOTE: If you do not create any activity within a five minute period, you will be logged off the system. Activity is generated when you press **Enter** or a function key. For more information about PF keys, F keys, and using the command fields, refer to the section Entering Data and Moving Between Screens on page 12. For best results, use the **Tab** key on your keyboard (instead of the arrows) to move from field to field. After making changes on any screen press **Enter** to finalize those changes.

Your fee statement will be sent to your e-mail address. If you would like a paper copy, refer to the section Selecting a Printer on page 10 for information on selecting an alternate print location.



STARTING OUT

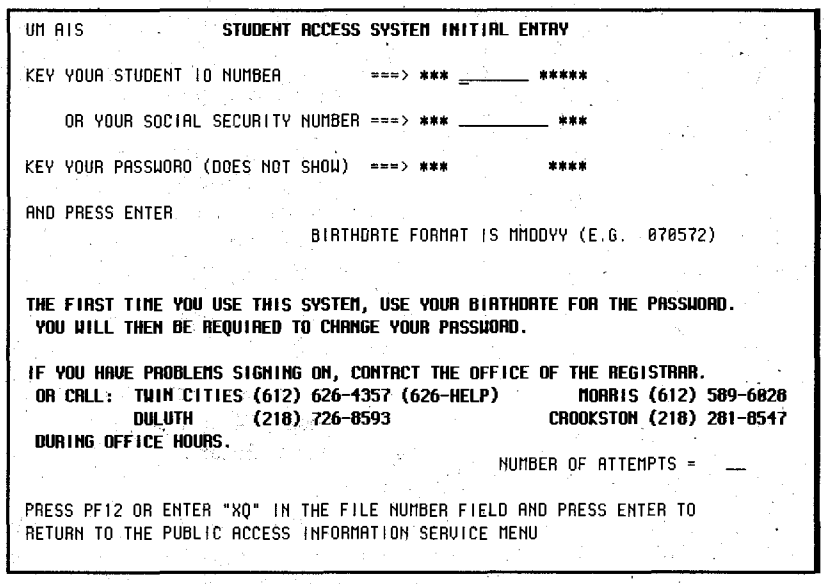
There are a number of ways you can get to the system. See Getting Connected on page 4.

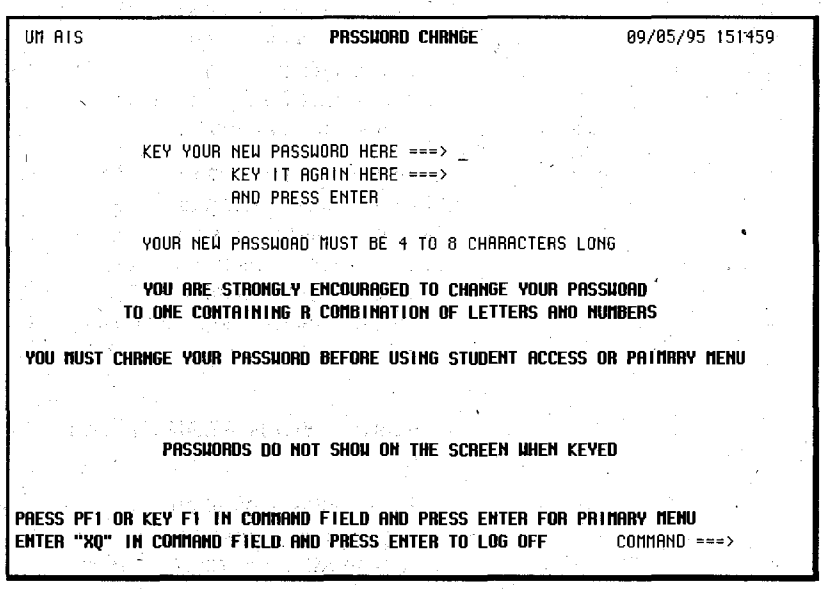
You will see a screen including the message PLEASE TYPE PA AND PRESS ENTER FOR PUBLIC ACCESS (LIBRARIES AND STUDENT ACCESS):

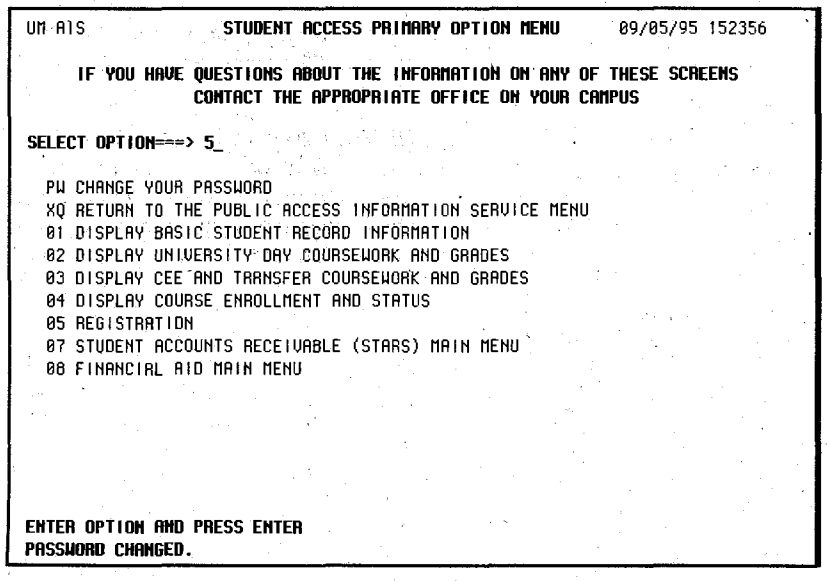
Type **pa** and press **Enter.**

Once you reach the public access screen:

Type **13** and press **Enter.**







ENTERING STUDENT ACCESS

Type:

your **student ID number,**
or your **social security number,**

and your **password.**

Press **Enter.**

NOTE: Your password is originally set to your birthdate, using the MMDDYY format (e.g., 070572). Do not enter dashes or slashes.

CHANGING YOUR PASSWORD

If you have not yet changed your password (originally set to your birth date), you will automatically go to the Password Change screen.

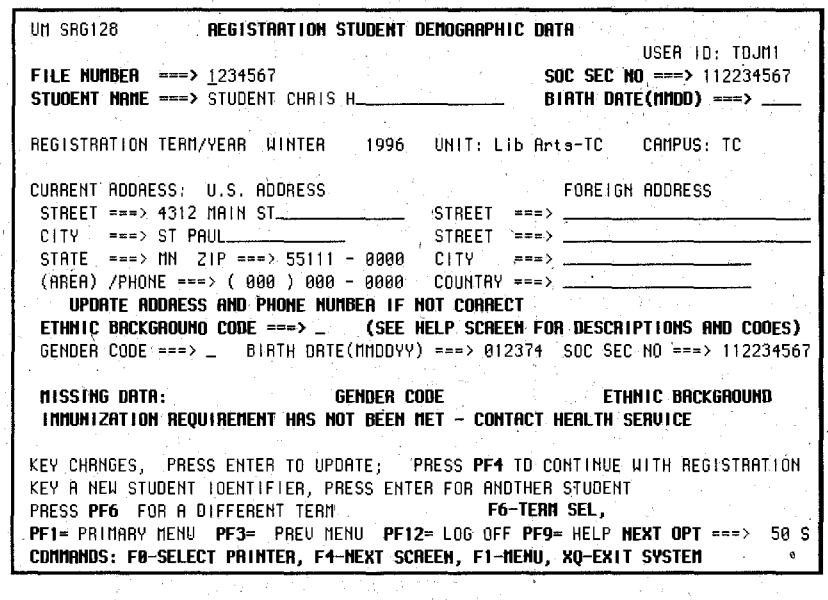
Type:

your new password (4-8 characters long),
press **Tab** if necessary to move to the next field, and
type your new password again.
Press **Enter.**

A successful change will send you to the next screen.

SELECTING REGISTRATION ON THE STUDENT ACCESS MENU

Type **05** and press **Enter** to register.



VERIFYING STUDENT DEMOGRAPHIC DATA

Examine the information on this screen closely:

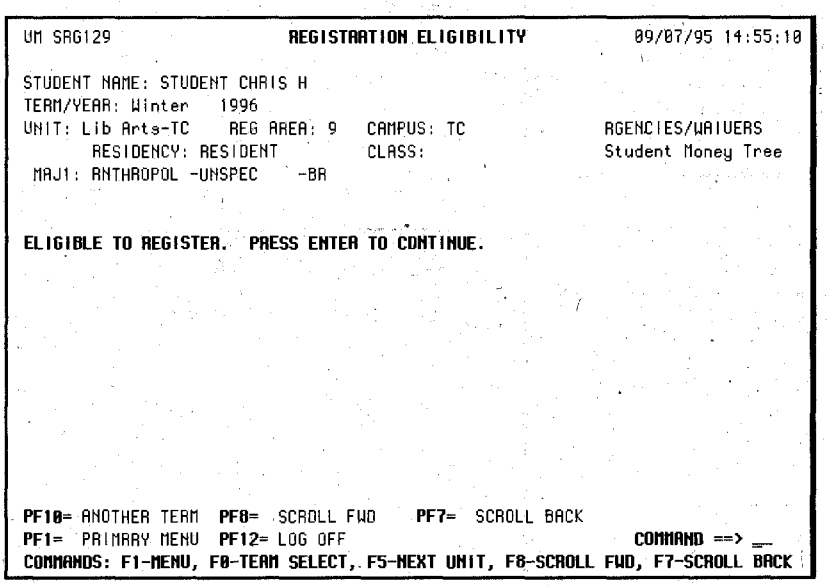
- confirm your registration term/year, unit (college), and campus,
- check your address and update as necessary, and
- check for missing data and update.

If you have made changes to the screen, press **Enter.**

When you are satisfied that the information is correct, press **PF4,** or type the **F4** command and press **Enter,** to continue with registration.

OPTIONAL: If you wish to send your fee statement to a location other than e-mail, press **PF10** or type the **F0** command to go to the printer selection screen (see Selecting a Printer, page 10). If you have been admitted to a new college, you may have to press **PF5** or type the **F5** command to change your unit (college).

Proper Format for Dorm Addresses— When you enter a dorm address, you must enter the *street address* of the dorm along with your room number. For example, if you live in room #999 in Sanford Hall, enter 1122 University Avenue, #999, Minneapolis, MN 55455.



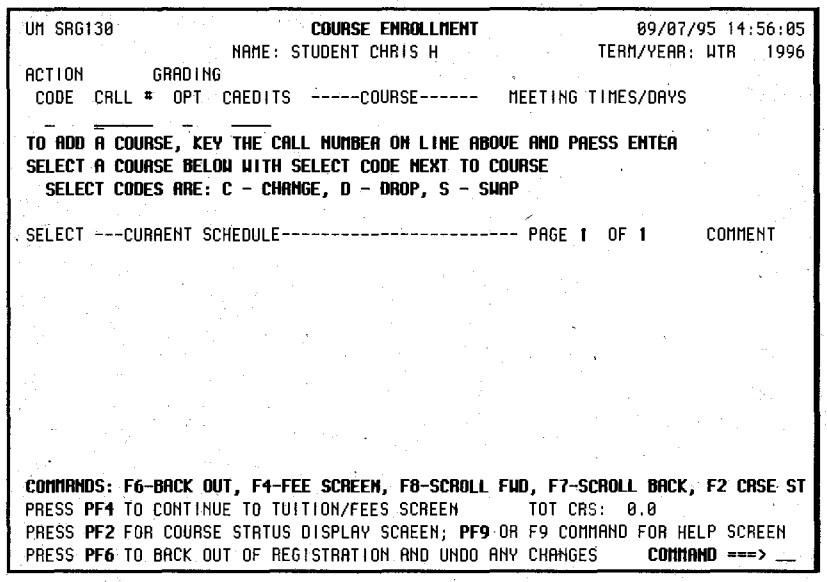
CHECKING YOUR REGISTRATION ELIGIBILITY

Check for holds or other approvals required for registration. (If you need to exit at this point, type **XQ** in the command field.)

Press **Enter.**

Or, if you changed your college, press **PF2** or type the **F2** command to continue with registration.

NOTE: You will not be allowed to continue if you have any holds, if you are required to see your adviser, or if you are attempting to register in advance of your queue time. Note the hold codes and clearance addresses.

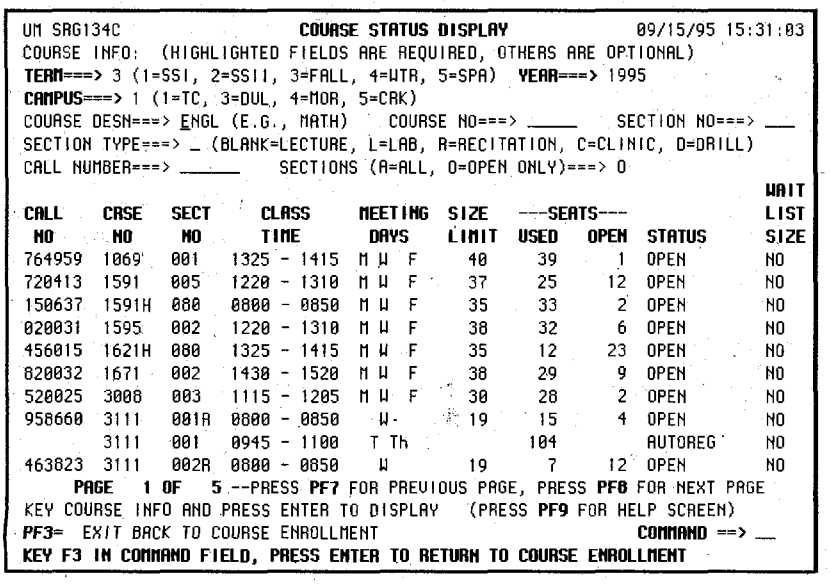


```
UM SRG130                    COURSE ENROLLMENT                  09/07/95 14:56:05
                        NAME: STUDENT CHRIS H                  TERM/YEAR: WTR   1996
ACTION       GRADING
 CODE  CALL #  OPT  CREDITS  -----COURSE------   MEETING TIMES/DAYS
  _    ______   _    ____
TO ADD A COURSE, KEY THE CALL NUMBER ON LINE ABOVE AND PRESS ENTER
SELECT A COURSE BELOW WITH SELECT CODE NEXT TO COURSE
  SELECT CODES ARE: C - CHANGE, D - DROP, S - SWAP

SELECT ---CURRENT SCHEDULE------------------------ PAGE 1  OF 1      COMMENT




COMMANDS: F6-BACK OUT, F4-FEE SCREEN, F8-SCROLL FWD, F7-SCROLL BACK, F2 CRSE ST
PRESS PF4 TO CONTINUE TO TUITION/FEES SCREEN       TOT CRS:  0.0
PRESS PF2 FOR COURSE STATUS DISPLAY SCREEN; PF9 OR F9 COMMAND FOR HELP SCREEN
PRESS PF6 TO BACK OUT OF REGISTRATION AND UNDO ANY CHANGES      COMMAND ===> __
```



```
UM SRG134C                   COURSE STATUS DISPLAY              09/15/95 15:31:03
COURSE INFO:  (HIGHLIGHTED FIELDS ARE REQUIRED, OTHERS ARE OPTIONAL)
TERM===> 3 (1=SSI, 2=SSII, 3=FALL, 4=WTR, 5=SPR)  YEAR===> 1995
CAMPUS===> 1 (1=TC, 3=DUL, 4=MOR, 5=CRK)
COURSE DESN===> ENGL (E.G., MATH)    COURSE NO===> _____    SECTION NO===> ___
SECTION TYPE===> _ (BLANK=LECTURE, L=LAB, R=RECITATION, C=CLINIC, D=DRILL)
CALL NUMBER===> ______    SECTIONS (A=ALL, O=OPEN ONLY)===> O

                                                                        WAIT
CALL    CRSE   SECT     CLASS      MEETING  SIZE   ---SEATS---          LIST
 NO      NO     NO       TIME        DAYS   LIMIT  USED   OPEN STATUS   SIZE
764959  1069   001   1325 - 1415   M W  F     40     39      1  OPEN       NO
720413  1591   005   1220 - 1310   M W  F     37     25     12  OPEN       NO
150637  1591H  080   0800 - 0850   M W  F     35     33      2  OPEN       NO
020031  1595   002   1220 - 1310   M W  F     38     32      6  OPEN       NO
456015  1621H  080   1325 - 1415   M W  F     35     12     23  OPEN       NO
020032  1671   002   1430 - 1520   M W  F     38     29      9  OPEN       NO
520025  3008   003   1115 - 1205   M W  F     30     28      2  OPEN       NO
958660  3111   001R  0800 - 0850     W-       19     15      4  OPEN       NO
        3111   001   0945 - 1100    T Th             104         AUTOREG    NO
463823  3111   002R  0800 - 0850     W        19      7     12  OPEN       NO
     PAGE   1 OF   5 --PRESS PF7 FOR PREVIOUS PAGE, PRESS PF8 FOR NEXT PAGE
KEY COURSE INFO AND PRESS ENTER TO DISPLAY   (PRESS PF9 FOR HELP SCREEN)
PF3=  EXIT BACK TO COURSE ENROLLMENT                        COMMAND ==> __
KEY F3 IN COMMAND FIELD, PRESS ENTER TO RETURN TO COURSE ENROLLMENT
```

ENROLLING IN COURSES

To add a course, type the **6-digit call number** and press **Enter** for each course. In choosing grading options, use **A** for A-F or **S** for S-N (pass/fail). When a course has variable credits, type the number of credits you want (type 4, for example, if you want to register for 4 credits).

If the course requires special approval and you have received a magic number, type it in the *Magic Number* field, when it appears, and press **Enter.** If you do not have a magic number, and want to add another course, tab to the call # field and type over the previous call number.

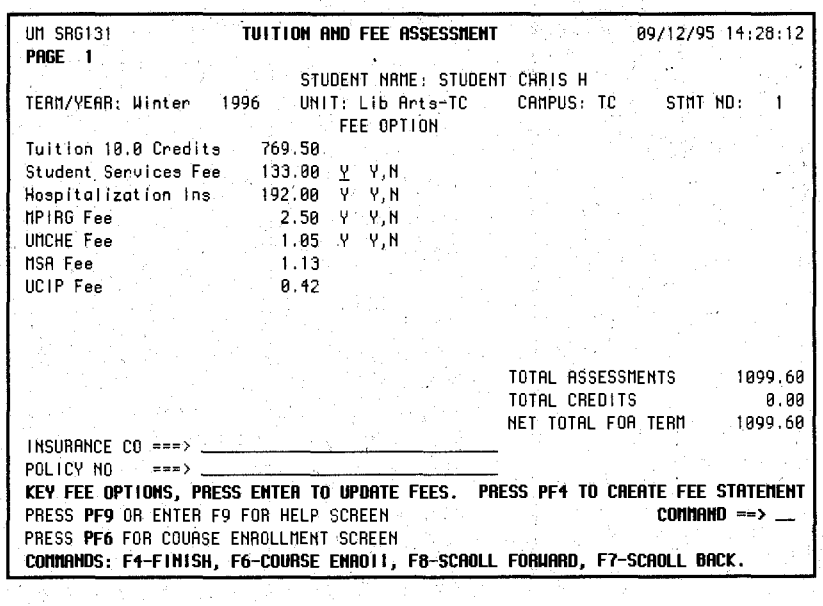
Check your coursework under the current schedule section carefully.

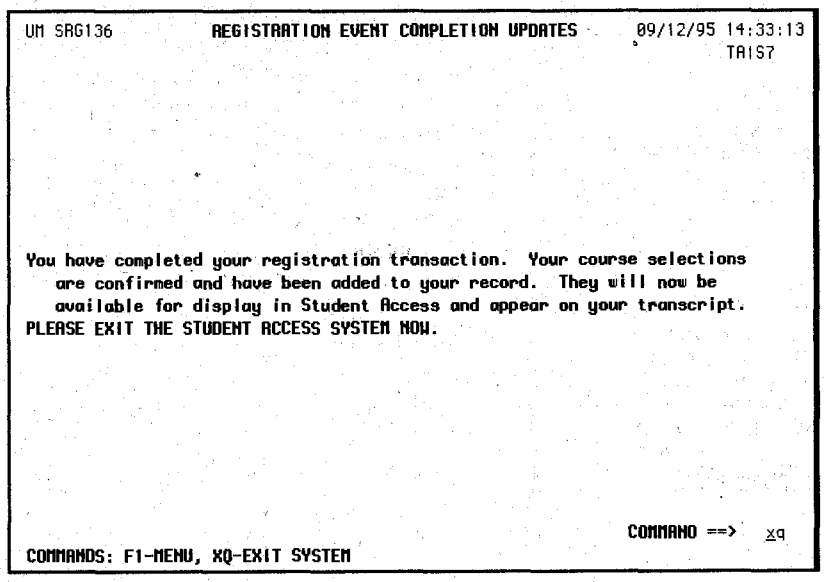
NOTE: Add all your coursework, then proceed by pressing PF4 or type the F4 command to continue with registration and compute your tuition and fees. If you instead press PF6, you will undo all your transactions!

Refer to the section Changing Your Schedule on page 10 if you need to make changes to your current schedule.

USING THE COURSE STATUS DISPLAY

If a course is not available to you (e.g., a closed section or a course for which you do not meet entry requirements), you will get a message requesting a magic number. You may choose an alternate section by viewing the course status display screen. To see this screen press **PF2** or type the **F2** command from the course enrollment screen. Find a section that fits your schedule and note the call number; then return to the course enrollment screen by pressing **PF3** or type the **F3** command. **Tab** to the *Call #* field and type the new call number.





ASSESSING YOUR TUITION AND FEES

Adjust any optional fees by typing **N** or **Y** over the fee option next to the dollar amount. See page 164 for an explanation of the MPIRG and UMCHE fees.

NEW FOR FALL: Hospitalization insurance information that was entered for a previous quarter will automatically carry over to the next quarter. A message will appear asking you for verification of your insurance information. You will need to enter a **Y** in the command field to confirm. When you enter an **N**, the previous information will be removed—you can then type in new insurance information, or leave the field blank and have University-sponsored hospitalization insurance assessed. To remove an assessment for hospitalization insurance you must provide insurance company *and* policy number information.

Press **Enter** to activate any changes to your fees.

When finished, you *must* press PF4 or type the F4 command to create your fee statement and finish your registration transaction.

NOTE: With 6 or more credits (or equivalent) you are *required* to take the student services fee.

EXITING REGISTRATION

Congratulations! You have completed your registration. The message on the screen indicates whether your courses will be posted to your record immediately or at the end of the day.

Return to the Student Access menu by pressing **PF1** or typing the **F1** command.

To exit the system, type **xq** in the command field and press **Enter**.

```
UM SRG126              REGISTRATION PRINTER SELECTION          09/05/95 15:27:35
PAGE 01

SELECT PRINTER (OR NO PRINTING) WITH "X"

SEL  PRINTER LOCATION                    SEL  PRINTER LOCATION
 _   NO PRINTED DOCUMENT                  _   SEND VIA E-MAIL
 _   CLA, Premajor B18 JohnH              _   CLA, Premajor 30 JohnH
 _   GC Students Only                     _   CLA, Honors Program
 _   202 Fraser Lobby                     _   130 Coffey, Registration
 _   CNR                                 _   Lind Hall 26 Lab
 _   Walter Library 9 Lab                _   HHH 50 Lab
 _   COB 17 Lab                          _   CLA, MLK Program
 _   305 MCNEAL LAB                      _   Dul 1: Pick up Info Desk
 _   Dul 3: Mail Out                     _   Crookston Printer



PRESS ENTER TO CONTINUE AFTER MAKING SELECTION
PF7= PREV PAGE     PF8=  NEXT PAGE
PF1= PRIMARY MENU  PF12= LOG OFF                          COMMAND ===> __
COMMANDS: F1-MENU, F8-NEXT PAGE, F7-PREVIOUS PAGE, XQ-EXIT SYSTEM
```

SELECTING A PRINTER

This screen will appear only if your e-mail address has not yet been assigned or is not yet on your student record.

New students: your e-mail address will be assigned in a few days following your initial registration. Call 626-7676 for more information on e-mail.

To choose an alternate printing location, you must press **PF10** or type the **F0** command from the Student Demographic Screen. To then select a printer other than your e-mail address, simply **Tab** to the alternate *Select* (i.e., Sel) field, type **x** and press **Enter.** This new location will be used on this transaction only.

CHANGING YOUR SCHEDULE

On the Course Enrollment Screen you can add, change, drop, or swap your courses. You can stop the process and reset the screen for your next transaction by removing the code in the *Action* field and pressing **Enter**. You can also undo any of the changes you have made by backing out of registration *before* you create your fee statement. To back out of registration, press **PF6** or type **F6** in the command field. Then, at the prompt, press **PF6** again.

NOTE: To confirm your change, drop, or swap, you *must* proceed to the tuition and fees screen using PF4 and create a new fee statement even if there is no change in your fees.

```
UM SRG130                    COURSE ENROLLMENT                  09/12/95 14:19:27
                        NAME: STUDENT CHRIS H                TERM/YEAR: WTR   1996
ACTION       GRADING
 CODE  CALL #  OPT  CREDITS  -----COURSE------   MEETING TIMES/DAYS
  C    625553   A     2.0    ENGL  5970  001        -       ARRANGED



SELECT ---CURRENT SCHEDULE------------------------ PAGE 1  OF 1      COMMENT
  _    938472  A/F    4.0    ANTH  5118  001    0905-0955  MTW  F
  c    625553  A/F    2.0    ENGL  5970  001               ARRANGED
  _    129970  A/F    4.0    HOST  5300  001    1115-1230   T TH
  _    546462  A/F    0.0    ANTH  5960  002    1010-1200  M



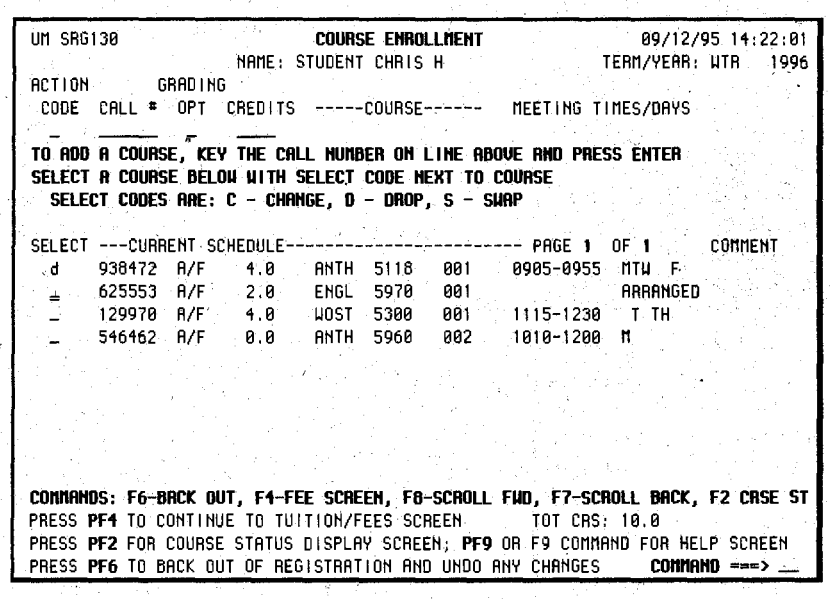
COMMANDS: F6-BACK OUT, F4-FEE SCREEN, F8-SCROLL FWD, F7-SCROLL BACK, F2 CRSE ST
PRESS PF4 TO CONTINUE TO TUITION/FEES SCREEN       TOT CRS: 10.0
PRESS PF2 FOR COURSE STATUS DISPLAY SCREEN; PF9 OR F9 COMMAND FOR HELP SCREEN
PRESS PF6 TO BACK OUT OF REGISTRATION AND UNDO ANY CHANGES      COMMAND ===> __
```

CHANGING A COURSE

To change the credits or the grading option on a course already on your schedule, type **c** in the *Select* field next to the course and press **Enter.** (Do *not* type course information in the top line.) The course will be brought to the top of the screen. Then type the change(s) and press **Enter** to finalize the change.

In choosing grading options, use **A** for A-F or **S** for S-N (pass/fail). When a course has variable credits, type the number of credits you want (type 4, for example, if you want to register for 4 credits). An error message will appear on the bottom of the screen if the grading option or the credits are invalid.

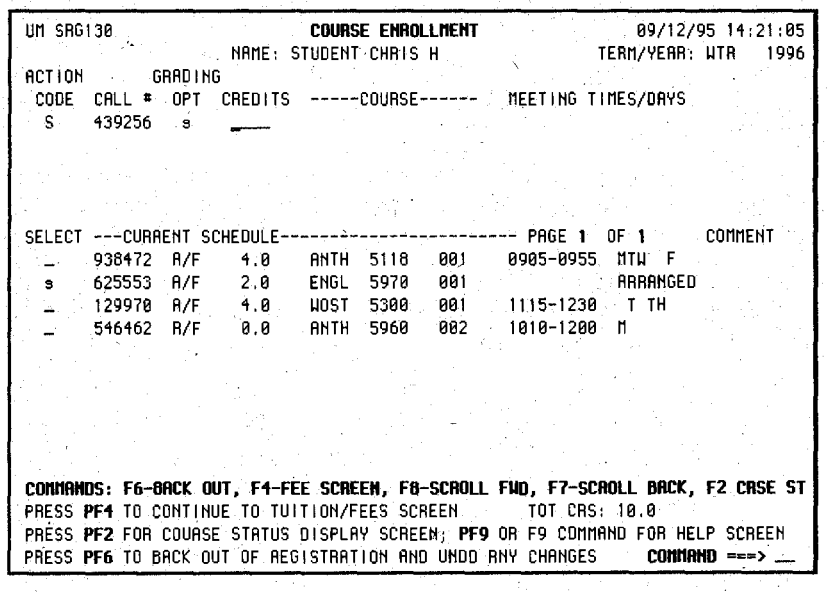
NOTE: To confirm your change you *must* proceed to the tuition and fees screen using PF4 and create a new fee statement even if there is no change in your fees.



```
UM SRG130                    COURSE ENROLLMENT                  09/12/95 14:22:01
                        NAME: STUDENT CHRIS H                TERM/YEAR: WTR   1996
ACTION       GRADING
 CODE  CALL #  OPT  CREDITS  -----COURSE------   MEETING TIMES/DAYS
  _    ______   F    ___
TO ADD A COURSE, KEY THE CALL NUMBER ON LINE ABOVE AND PRESS ENTER
SELECT A COURSE BELOW WITH SELECT CODE NEXT TO COURSE
  SELECT CODES ARE: C - CHANGE, D - DROP, S - SWAP

SELECT ---CURRENT SCHEDULE---------------------- PAGE 1  OF 1      COMMENT
  d    938472  A/F    4.0    ANTH  5118   001    0905-0955  MTW  F
  _    625553  A/F    2.0    ENGL  5970   001               ARRANGED
  _    129970  A/F    4.0    WOST  5300   001    1115-1230   T TH
  _    546462  A/F    0.0    ANTH  5960   002    1010-1200  M

COMMANDS: F6-BACK OUT, F4-FEE SCREEN, F8-SCROLL FWD, F7-SCROLL BACK, F2 CASE ST
PRESS PF4 TO CONTINUE TO TUITION/FEES SCREEN       TOT CRS: 10.0
PRESS PF2 FOR COURSE STATUS DISPLAY SCREEN; PF9 OR F9 COMMAND FOR HELP SCREEN
PRESS PF6 TO BACK OUT OF REGISTRATION AND UNDO ANY CHANGES     COMMAND ===> __
```



```
UM SRG130                    COURSE ENROLLMENT                  09/12/95 14:21:05
                        NAME: STUDENT CHRIS H                TERM/YEAR: WTR   1996
ACTION       GRADING
 CODE  CALL #  OPT  CREDITS  -----COURSE------   MEETING TIMES/DAYS
  S    439256   s    ____

SELECT ---CURRENT SCHEDULE---------------------- PAGE 1  OF 1      COMMENT
  _    938472  A/F    4.0    ANTH  5118   001    0905-0955  MTW  F
  s    625553  A/F    2.0    ENGL  5970   001               ARRANGED
  _    129970  A/F    4.0    WOST  5300   001    1115-1230   T TH
  _    546462  A/F    0.0    ANTH  5960   002    1010-1200  M

COMMANDS: F6-BACK OUT, F4-FEE SCREEN, F8-SCROLL FWD, F7-SCROLL BACK, F2 CASE ST
PRESS PF4 TO CONTINUE TO TUITION/FEES SCREEN       TOT CRS: 10.0
PRESS PF2 FOR COURSE STATUS DISPLAY SCREEN; PF9 OR F9 COMMAND FOR HELP SCREEN
PRESS PF6 TO BACK OUT OF REGISTRATION AND UNDO ANY CHANGES     COMMAND ===> __
```

DROPPING A COURSE

To drop (cancel) a course, type **d** in the *Select* field next to the course and press **Enter.** (Do *not* type course information in the top line.)

NOTE: The course will be dropped immediately if you qualify for a 100% refund of tuition. If you will not receive a 100% refund, a message will give the percentage to be refunded. Press **Enter** again to drop the course at this refund rate.

NOTE: To confirm your drop you *must* proceed to the tuition and fees screen using PF4 and create a new fee statement even if there is no change in your fees.

SWAPPING A COURSE

To swap one course for another, type **s** in the *Select* field of the course you want to cancel and press **Enter. S** will appear in the action field. Next, type the call number of the course you want to add and press **Enter** (with grading option or credits typed if necessary).

The courses will cancel/add together. If something prevents the add, the cancel will not be processed.

NOTE: To confirm your swap you *must* proceed to the tuition and fees screen using PF4 and create a new fee statement even if there is no change in your fees.

GENERAL INSTRUCTIONS FOR THE STUDENT ACCESS SYSTEM

Entering Data and Moving Between Screens—To enter data (change your address, add a course, etc.), type the appropriate data and press **Enter** (or **Return**). After entry, the screen will return, showing the change or giving a confirmation message. The most common confirmation message is TRANSACTION COMPLETED. If there are several items to enter or change on a screen, you can type all of the data, then press **Enter** once.

To move from one screen to another, press **Enter** or a function type. Function keys are usually referred to as **PF** or **F** keys, with a number associated (such as **F1** or **PF1**). Screen instructions will indicate the keys to press on each screen. Since the location and combination of keys required for function keys varies with different hardware and software, another means of specifying a function type is provided. Every screen contains a **COMMAND** field in the lower right corner. To enter a function type command, type **F**, followed by the function type number or letter (**F1-F9** for PF1-PF9, **F0** for PF10, **FA** for PF 11, **FB** for PF12) in the **COMMAND** field, then press **Enter.**

Exiting and Timing Out—It is extremely important to exit the student access system when you are done using it (whether registering or viewing your record). To exit, type **XQ** and press **Enter.** When registering, you must first complete your transaction by creating your fee statement (see above) *or* back out of your changes by pressing **F6** or using the **F6** command from the Course Enrollment screen. You can then enter **XQ.** Unless you exit the system, your record can be accessed by someone else when you leave the terminal. **Protect yourself by always exiting the system when you finish!**

If you do not create any activity within a five minute period, you will be logged off the system. Activity is generated when you press **Enter** or a function type.

SCREEN-SPECIFIC INSTRUCTIONS

Registration Screens (Student Access Menu Option 5)

Problems with Adding Courses—If the system is unable to process your transaction, explanatory messages will appear in the top portion of the screen. Some of the messages you may see include:

- SECTION CLOSED, PRESS PF2 TO DISPLAY OPEN ALTERNATE SECTIONS *or* SECTION CLOSED, NO OPEN ALTERNATE SECTION EXISTS—If you are trying to register for a closed course, the system will determine if there are other sections of the course that are still open and reflect that in the message. If you have been given a magic number by the instructor or department, enter that code in the magic number field (under your name) and press **Enter.** Press **F2** or use the **F2** command and press **Enter** to access alternate sections on the Course Status Display screen.
- TIME CONFLICT WITH OTHER COURSE: USE ACTION OF T TO ADD THIS SECTION ANYWAY—If you are trying to register for a course that overlaps with another course already on your schedule (or comes within 10 minutes of overlapping), the overlapping course will be highlighted. If you still want to register for the course, type **T** over the **A** in the action field (not in the magic number field) and press **Enter.**
- COURSE ENTRY REQUIRES APPROVAL OF (followed by INSTRUCTOR, DEPARTMENT, COLLEGE, or GRAD SCHOOL)—You do not meet the entry requirements for the course, or all students need permission to register for the course. College approval is obtained from the college that *offers* the course, not necessarily the college in which you are enrolled. If you have been given a magic number for the section, enter that code in the magic number field (under your name) and press **Enter.**

Duplicate Fee Statement Screen—This screen allows you to print a copy of a fee statement that has already been created or send a copy to yourself via e-mail. To print, you will need go to the Printer Selection screen using **F10** or **F0** and select a printer. Then, from the Student Demographic Data Screen, use **F2** to move to the Duplicate Fee Statement screen.

TROUBLESHOOTING

The Student Access system rarely goes down, but if the system goes down while you are registering (or you accidently end your connection), you must log back on to complete your registration. Your course selections will be held to give you a chance to complete your registration. Access the system and complete your registration as soon as possible. Wait five minutes, then attempt to log back on. If successful, select registration and proceed to the point at which you lost your connection and complete your registration. You will also be logged off if you are in registration when the system is taken down at the end of the day. If the system has shut down for the day, complete your registration the next day.

If you continue to have problems accessing registration or the Student Access system, contact the Office of the Registrar in one of the following ways:

- By phone: 626-HELP (8 a.m.-4 p.m. weekdays).
- Visit one of the registration centers (202 Fraser Hall or 130 Coffey Hall) to have a staff member help you or to complete your registration.
- E-mail a message to registrar@gold.tc.umn.edu. If you send e-mail, send your name, file number (student ID number), phone number (and a suggested time to reach you), and a thorough explanation of the problem, including the name of the screen on which the problem occurs and any messages on that screen. If your problem seems easy enough to correct with written instructions, you will receive a reply via e-mail.

section 2 registration info

USING THE REGISTRATION CENTER

Step 1 **Complete the registration check list on the next page.**

Step 2 **Bring your Course Request form and this *Class Schedule* to any registration center.** You may register in 202 Fraser Hall or 130 Coffey Hall, whichever is more convenient for you. Students with mobility restrictions (including temporary problems) can also register at 150 Williamson Hall.

Step 3 **Review all information on your fee statement for accuracy before you leave the registration center—name, address, course information, and fees.** See pages 28-30 for complete information on paying your fees.

LATE REGISTRATION FEE

You must register by September 25 to avoid a late registration fee. Students who register from September 26-October 12 will be charged a $20 late registration fee. Students who are permitted to register on or after October 13 will be charged a $40 late registration fee.

STUDENT RESPONSIBILITY

The policies in this *Class Schedule* directly affect your registration. You are responsible for all the information contained in this book: avoid potential problems by reading carefully through the various sections of this schedule and by checking the prerequisites of all your courses. You can receive credit only for those courses for which you are properly registered. Likewise, you must pay for any course for which you register unless you officially cancel on-line (your cancellation is not complete until you create a fee statement) or at your registration center. In addition, if you attend a class without registering for it, you will be considered an auditor in the course and will be billed for full tuition and fees.

The general registration instructions in this book apply to all students. Students in the College of Liberal Arts, the College of Education, the Carlson School of Management, and the Graduate School, and *all* international students have specific registration instructions printed on pages 14-18. In addition, your course of study falls under policies established by your college. These policies are contained in your college bulletin and in other publications issued by your college. You are also responsible for knowing and following the policies of your college.

To prevent misunderstandings and errors in registration, you should register yourself. If you cannot register yourself, you can have someone register at a registration center for you with your written permission and student ID card.

REGISTRATION CHECK LIST

☑ **A Registration Check List**—Run through this check list before you register on-line or before you go to your registration center. You will be able to avoid frustrating delays by following these hints:

☐ **Fill out a Course Request form completely.** (A Course Request form can be found on page 165.) Be sure to list a new address on the form if you have moved or have a new local address. List alternate courses in case your first choices are not available. Obtain on-line instructor or college approval as required.

☐ **Do you know the name and policy number of your hospitalization insurance company or HMO?** Unless you provide this information on the Student Hospitalization Insurance Form (on page 165), or provide or verify this information on the tuition and fee assessment screen when registering yourself, you will **automatically** be charged for University-sponsored hospitalization insurance if you take 6 or more credits. See Health Service and Hospitalization Charges, page 23, for more information.

☐ **Have you checked the Section Status Report?** Check the report (available on the Student Access System—see page 4—and posted outside of 101 Fraser Hall, B18 and 16 Johnston Hall, 4 Mechanical Engineering, 170 Anderson Hall, and 130 Coffey Hall) to see if space is available in limited enrollment **(R)** courses. 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.

☐ **Do you need any Magic Numbers?** Is there a # or Δ or ❑ in the prerequisite statement of your course? Are you trying to register in a closed course? After the first week of classes? Remember: You must have a magic number to register in these courses.

☐ **Do you have any holds you need to clear?** You will not be able to register if you have any holds on your record. Clear your holds as soon as possible. See Holds, page 14, for further information.

☐ **Do you have specific college instructions to review?** Students in the College of Liberal Arts, the College of Education, the Carlson School of Management, and the Graduate School, and *all* international students have specific registration instructions printed on pages 14-18.

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:

Insurance information now carries over . . . . . page 9
Microscope rental fees 25
Tuition benefits for graduate assistants 33

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.

Because this *Class Schedule* was prepared in April, scheduling changes may also occur before or during registration. Registration terminals always contain the most current and accurate information. Hour and day changes are published in the Official Daily Bulletin, a column in the *Minnesota Daily,* and on the World Wide Web at http://www.umn.edu/registrar. Room changes are posted on classroom doors.

CREDIT LIMITS

Many units restrict the number of credits students may take each quarter without special permission. The table below lists all such restrictions. Contact your college office for informations on approvals required to take more than the maximum number of credits. If your unit is *not* on the table below (i.e., Health Science units), there is no limit to the number of credits you may take each quarter.

CREDIT LIMITS FOR COLLEGES

UNIT	CREDIT LIMITS
General College; University College; Graduate School	18 credits
Architecture and Landscape Architecture; Biological Sciences; Institute of Technology	19 credits
Education and Human Development; Liberal Arts; Management	20 credits
Agricultural, Food, and Environmental Sciences; Human Ecology; Natural Resources	21 credits

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 tuition or fees, unpaid library fines, 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 the Student Access System (see page 4).

To remove a hold from your record, you must first pay the debt owed, correct the scholastic deficiency, or be cleared by Student Judicial Affairs. 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, the unit imposing the hold will electronically remove the hold from your record. (In some cases, you may be given a paper release. You must then take this release to a registration center.) Units may, on occasion, issue *temporary hold releases.* Temporary releases will allow you to either receive one transcript or to register during the quarter in progress.

If, in order to register, you pay a Student Accounts Receivable hold for a previous quarter with a personal check, and that check does not clear the bank, you will be sent a notice by Student Accounts Receivable. Your current registration may be cancelled if you fail to respond to this notice and pay your debt.

DISABILITY SERVICES

Disability Services can assist disabled students in accessing campus employment, courses, programs, facilities, services, and activities by providing services such as disability documentation, information, referral, and reasonable accommodations (i.e., interpreters, document conversion, readers, exam modifications). For more information, contact Disability Services at 30 Nicholson Hall, 626-1333 (V/TDD).

These procedures should be followed for classroom or registration accessibility:

- *Classroom Changes*—Requests for room changes for courses scheduled in inaccessible locations should be made directly to the department offering the course.
- *Early Registration*—If you need to schedule clustered classes, sign language interpreters, or arrange for taped textbooks, you must contact your college office for permission to register early.
- *Registration*—Students with disabilities that prevent them from standing in lines or who find Fraser Hall inaccessible may register on-line or at Student Relations, 150 Williamson Hall. (130 Coffey Hall on the St. Paul campus is also accessible.)

REGISTRATION INSTRUCTIONS FOR COLLEGE OF LIBERAL ARTS STUDENTS

Before Registering—Check the Student Access System for holds or required registration approvals. To clear CLA holds or receive authorization to register, follow these steps:

ADVISER APPROVAL Get your adviser's approval at least 24 hours before you register.

PROBATION 1, FINAL QTR, *or* SUSPENSION A scholastic committee action. Contact your college office.

MAJ PROG	You must bring an approved program from your major department to your college office.
ORIENT MTG	Contact 49 Johnston Hall.
UD MAJ MTG	Contact your college office, make an appointment, and attend this orientation.
REASSIGN	Students will be asked to confirm or change their intended major. Contact 49 Johnston Hall.

Read official CLA communications, including *The Clarion*—you are responsible for knowing their contents.

Registration Deadlines—CLA strictly enforces registration deadlines. See the cancel/add procedures on pages 18-19. For late registrations, follow procedures for adding a class. If circumstances prevent you from meeting a deadline, you must contact your college advising office *before* the deadline.

Program Approval—Registrations for *independent study, extra credit, directed study, directed research, and directed instruction* require the approval of the instructor, department, and college. Obtain a special permission slip for independent and directed study from the department, get approval of the instructor and department, and bring the form to 49 Johnston Hall for college approval.

Courses not listed in the *CLA Bulletin* may not be applicable towards a CLA degree. Consult your college advising office before registering for courses not listed in the *CLA Bulletin.*

S-N Registration—Changes to or from S-N registration may be made through the first two weeks of the quarter. Follow the cancel/add procedures outlined on pages 18-19.

The number of S-N credits that can be applied 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. Freshmen may take no more than *half* of a quarter's credits S-N.

Ask in your college office about restrictions on the use of S-N credits in premedicine, predentistry, prepharmacy, and all interdepartmental programs (such as American Studies, International Relations, and Urban Studies). If you are in a preprofessional program, you should follow the requirements of the college that you plan to enter.

Leave of Absence—CLA students must submit to their college office a written request for a leave of absence if they plan to either withdraw from all courses or not enroll in a subsequent quarter. Students who withdraw without receiving an approved leave of absence may be required to reapply for admission.

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT REGISTRATION INSTRUCTIONS

New Students—If you are a *newly admitted student who has never attended the University of Minnesota* and have received official notification of your admission, you must go to 40 Coffman Union to obtain your student ID—the U Card. Students who are newly admitted but who have taken classes at the University of Minnesota before fall 1995 must also go to 40 Coffman Union for their U Card.

Program Approval—*Newly admitted adult special students* must obtain college approval to register by going to Student & Professional Services (SPS), 110 Wulling Hall, or by calling SPS at (612) 625-5815.

Registration Options—There are now three ways to register: (1) self registration by computer either in one of the computer labs on campus or from home following the instructions on pages 5-12; (2) in-person at the registration centers (202 Fraser Hall in Minneapolis or 130 Coffey Hall in St. Paul); and (3) mail registration if you cannot do either of the above.

Mail Registration—Mail registration is available and processed from May 13-30 and from September 3-16 for those students who are admitted M.Ed., M.Ed. initial licensure (postbaccalaureate), or adult special students in the College of Education and Human Development. Mail registrations are processed according to your spot in the registration queue (see pages 20-21) and according to the availability of space if enrollments are limited. Mail registration does not guarantee that you will be registered for the class(es) you are requesting. It is not possible to register for 8000-level courses by mail without the necessary approvals. For specific information and instructions on registering for 8000-level courses, contact the department offering the course. You are responsible for choosing the courses for which you register: you are encouraged to contact your faculty adviser before you register.

Follow the steps below to register by mail:

1. Complete a Course Request form. (See page 165.) Before you submit your Course Request form, be sure you include magic numbers when a course has a prerequisite that requires instructor (#) or department (Δ) approval. When college approval (❑) is required, that approval can be obtained from SPS. Any holds on your record must be cleared or temporarily removed before your registration can be processed.
2. Complete the Student Hospitalization Insurance form. (See page 165.)
3. Mail your completed forms to the following address: Registration, Student & Professional Services, 110 Wulling Hall, 86 Pleasant Street S.E., Minneapolis, MN 55455,. DO NOT send any payment with your registration materials. Any incomplete or inaccurate registration materials will be returned to you; you may then have to register in person or register on line by computer.

Early fall mail registrations will be processed from May 13-30. Registration materials received after May 30 will *not* be processed and will be returned to you. You may register in person from May 31-June 14.

Late fall mail registrations will be processed from September 3-16 (August 19-30 for new students). Registration materials received after September 16 will *not* be processed and will be returned to you.

After your registration is processed, you will receive a course confirmation form/fee statement by mail. You may change your registration by mail only if your original registration was processed by mail. All registration changes must be received by October 4; if they are not, you *must* cancel/add in person.

If you have questions about registration, visit SPS in 110 Wulling Hall or call the registration specialist at (612) 625-5815.

Class Schedules—You may pick up a *Class Schedule* in the east bank, west bank, or St. Paul bookstores. If you are not able to come to campus, you may send your name and address, the quarter requested (fall, winter, or spring), and 8-32¢ postage stamps for each schedule to Student & Professional Services (see address above). (Summer session bulletins can be requested by calling 624-2345.)

Courses—Courses offered by the College of Education and Human Development are found under a number of different designators. See *Education*, in the course sections, for a complete list.

REGISTRATION INSTRUCTIONS FOR CARLSON SCHOOL OF MANAGEMENT COURSES

UNDERGRADUATE COURSES

Degree-seeking Students in Approved Majors—If you are a student in an approved unit with 90 or more credits and your GPA is 2.8 or higher, you may register for all 3000- and 5000-level general management courses (excluding practicum, honors, and special sections). You may register for these courses on-line during queued registration or you can go directly to a registration center. Your college office can provide you with a detailed list of general management courses.

Other non-Carlson School of Management Students—Any non-Carlson School student with 90 or more credits and a cumulative GPA of 2.8 or higher may be able to register for open 3000- and 5000-level Carlson School courses during open registration by coming to 290 Humphrey Center for permission.

GRADUATE COURSES

Carlson School of Management and IR Graduate Students—Graduate students enrolled in the Carlson School or the Industrial Relations program may register for most Carlson School courses on or after their queue time. M.B.A. courses are restricted to students enrolled in the M.B.A. program.

Non-Carlson School of Management Graduate Students—Non-Carlson School graduate students may request approval to register for Carlson School graduate courses by completing a petition for entry form. Approval will be given just prior to the first class meeting based on availability of space in courses. Forms and additional information will be available in 295 Humphrey Center beginning September 3. Approval for IR graduate courses must be obtained from the director of graduate studies in Industrial Relations, 537 Management/Economics.

GRADUATE SCHOOL REGISTRATION INSTRUCTIONS

New Students—If you are registering for the first time in the Graduate School, contact your department to make an appointment to see your adviser.

Active Students—If you have registered in the Graduate School at least once in the last two years, follow the steps below to clear any Graduate School holds:

MAST PROG	Take signed master's program to 316 Johnston Hall.
DOCT PROG	Take signed doctoral program to 316 Johnston Hall.
SPEC PROG	Take signed specialist program to 316 Johnston Hall.
THES TITLE	Take signed thesis title to 316 Johnston Hall.
BACH DEGREE	Take bachelor's transcript, showing degree awarded, to 316 Johnston Hall.
GPA	Take letter releasing hold from major field director of graduate studies to 316 Johnston Hall.
INCOMPLETE	Take letter releasing hold from major field director of graduate studies to 316 Johnston Hall.
DEAN'S HLD	Go to 316 Johnston Hall for explanation and instructions for clearing.
GS DEG AWD	Go to 309 Johnston Hall for change of status or readmission information.

Inactive Students—Graduate School policy stipulates that students must register at least once every two years in order to maintain their active status as graduate students. Those who do not register within a consecutive two year period are considered to have withdrawn, and must seek readmission—and if readmitted, must register—in order to resume work toward degrees, take examinations, file for graduation, or otherwise participate as Graduate School students.

Thesis Credits—All students are required to register for thesis credits before receiving a Plan A master's or a professional master of engineering degree (at least 16 credits of 8777 required), or a Ph.D. or Ed.D. degree (at least 36 credits of 8888 required). D.M.A. students should consult their department or the Graduate School to determine their requirement. Doctoral students may not register for thesis credits until the quarter after they have passed their preliminary oral examinations. If you are taking your preliminary oral within the first two weeks of the quarter, contact the Graduate School for registration instructions. You must register for all thesis credits under your major field course designator. Consult the course listings in Section 5 for the proper designator and current call numbers.

If you have any questions about registering for thesis credits, contact your director of graduate studies or the Graduate School, 316 Johnston Hall (625-3490).

Doctoral Residency Requirement—Doctoral students are required to complete a residency requirement of 7 quarters full-time registration. Full-time registration during the academic year is defined as 7 or more credits per quarter. For more information, contact 316 Johnston Hall (625-3490).

Graduation—Graduate School degrees are awarded monthly. To graduate at the end of any given month you must:

- *submit your Graduate School Application for Degree form* in 150 Williamson Hall or 130 Coffey Hall on or before the first workday of the month.
- *complete all other requirements* by the last workday of the month.

Graduating before the end of the quarter may affect your eligibility for student loans, housing, etc. Check with the appropriate office if you have questions on eligibility.

Graduate School students obtain the Application for Degree form and detailed graduation instructions from 316 Johnston Hall.

Fall Commencement Ceremony—The fall commencement ceremony will be held on Monday, December 9, 1996. If you wish to attend, submit a completed Commencement Attendance Approval Form (signed by your adviser and Director of Graduate Studies indicating your eligibility to attend the ceremony) to 316 Johnston Hall by October 1, 1996. Forms are available in your program office and in the Graduate School.

INTERNATIONAL STUDENTS

If you hold a non-immigrant visa of any type, have been formally admitted to the University of Minnesota, and are registering for the first time, three holds have been placed on your record—AI (check of non-immigrant status documents), ME (health clearance), and AZ (English proficiency). Please read the following information carefully.

Preregistration Program and Document Check (AI Hold)—Go to International Student and Scholar Services (ISSS), 20 Nicholson Hall. You must sign up for a mandatory Preregistration Program for International Students. During this program, you will receive information about living and studying in the U.S. and at the University. You will also have your non-immigrant status documents checked and your AI and AZ holds released. You must bring your passport and non-immigrant status documents (your I-94 form, and your IAP-66 *or* pages 3-4 of your I-20AB). Sponsored students must also provide documentation of their financial support. If you are a permanent resident, you must present documented evidence of your status.

Mantoux Test (ME Hold)—Noncitizens of the United States registering for the first time at the University of Minnesota must have a Mantoux test, a test for tuberculosis, after which their ME holds will be released. Go directly to Boynton Health Service for this.

If you have had a Mantoux test within the past 12 months and bring proof in English of your testing, this test will not be required. A positive reaction indicates that you have been exposed to tuberculosis but it does not necessarily mean that you have contracted the disease. If your test is positive, you will be allowed to register for classes, but you will be required to have a chest x-ray and to return for the results. Be sure to tell the nurse if you have been recently immunized for tuberculosis, since this could cause a reaction to the Mantoux test.

Other Immunization Requirements—Minnesota law requires that all students provide in writing the month and year when they were immunized against measles, mumps, rubella, tetanus, and diphtheria. You must complete and sign the Student Immunization Form you received with your admission letter. See Immunization Clearance, page 23.

Mandatory Health/Hospitalization Insurance—All international students must carry hospitalization insurance for themselves and their dependents. Insurance coverage must be continuous from the date of arrival in the U.S. through the final date of departure from the U.S. This means that international students must have insurance coverage even if they are registered for fewer than 6 credits or are away from campus for the summer or an academic quarter. See Health Service and Hospitalization Charges, page 23.

English Proficiency (AZ Hold)—New international students who have not met the University's English proficiency requirement have a hold placed on their records. The AZ hold will be released by the Minnesota English Center (MEC) as part of the mandatory Preregistration Program for International Students (see above).

Students with a TOEFL score lower than that required by their college, or for whom the TOEFL was waived at the time of admission, may be required to take the Minnesota Battery English Language Proficiency test. You must pay a $25 testing fee when you register for the test. You can receive information about the test at the Preregistration Program.

If you have not met the English requirements for your college, you will be required to register for 1-3 noncredit English classes each quarter until you achieve the required test score.

If you have questions about the English language requirement, contact the Minnesota English Center, 320 16th Avenue S.E., phone 624-1503.

Full Course of Study—All international students holding F-1 and J-1 visas are required by the Immigration and Naturalization Service (INS) to register for a full course of study each academic quarter. To meet INS requirements, graduate students and adult specials are required to take a minimum of 7 credits per quarter; undergraduates must take a minimum of 12 credits per quarter. (NOTE: Certain academic programs or University offices, as well as exchange and scholarship program sponsors and other private educational funding agencies, may use a different credit requirement for their students. If this credit requirement is higher than that of the INS, it takes precedence over the INS requirement.) Exceptions to this rule are possible only in a limited number of circumstances. In such instances an Application for Exception from the Full Course of Study Requirement must be completed, signed by your adviser, and submitted to International Student and Scholar Services, 20 Nicholson Hall, by the

first day of each quarter for undergraduates and adult specials, and by the end of the second week of each quarter for graduate students. (Forms are available at 20 Nicholson Hall or 130 Coffey Hall.) If you have questions about this requirement, call 626-7100.

THE FIRST WEEK OF CLASS

Fall quarter classes begin Thursday, September 26.

Mandatory Attendance—You must attend the first class meeting of every course in which you are registered, unless you obtain approval for your intended absence before the first meeting. Without this prior approval, you may lose your place in class to another student. If you wish to remain in a course from which you have been absent the first day without prior approval, contact your instructor as soon as possible. Instructors have the right to deny you admission if the course is full. You must *officially* cancel any course to which you are denied admission.

Gaining Admission to a Closed Course—In general, you should first go to the department offering the course, where you may be put on a waiting list or be referred to the instructor for permission to register. Attend the first class meeting if you are on a waiting list or need the instructor's permission, to see if more students will be admitted. To register in a closed course you must have a magic number from the instructor.

Senior Citizen Education Program—If you are 62 or older and a Minnesota resident, you may audit courses free of charge or take courses for credit at $6 per credit whenever space is available after the first day of class. (The Section Status Reports located outside of 101 Fraser Hall, B18 and 16 Johnston, 4 Mechanical Engineering, 170 Anderson Hall, and 130 Coffey Hall, can tell you if a course with limited enrollment—**R** before the course number—is open or closed. If a course is not on the report, it has no limit on enrollment and space will be available.) Under this plan, you will not pay the student services fee, but must pay any required laboratory or materials fees.

Registration for the Senior Citizen Education Program is on the second day of class (Friday, September 27, for fall quarter). Attend the *first* day of class, however, to see if space is available and to receive information about class procedures. To register, go to 202 Fraser Hall (150 Williamson Hall for those with mobility impairments) or 130 Coffey Hall with your registration forms and identification to verify age and Minnesota residency. Call 625-5333 for more information.

CHANGE OF REGISTRATION

All-University Policies on Cancel/Adds—All-University policies on cancel/adds apply to all students in all colleges. See the box at the bottom of this page for requirements and dates. Contact your college office for information about committee requirements and procedures when scholastic committee approval is required. NOTE: Such approvals are not routinely given.

Transcript Record of Cancelled Courses—When you cancel an individual course during the first two weeks of the quarter there is no transcript record of that course. If you cancel *all* courses during the first two weeks, a notation of cancellation will appear on your record, although no Ws will be recorded. Cancellation of any course after the second week of the quarter will result in a W on your record.

Change of Grading Option—You may *not* change your grading option after the second week of classes. See page 60 for more information on grading options.

When to Cancel Courses—If you decide before the quarter begins not to attend, cancel before the first day of classes. If you stop attending class for any reason, cancel immediately. On occasion, a course may be cancelled by the department offering the course. Contact the department immediately to see if other arrangements have been made. If no arrange-

UNIFORM CANCEL/ADD REQUIREMENTS FALL QUARTER 1996

Week of Class	Required to Cancel	Required to Add
Week 1: September 26-October 5	Nothing required	Nothing required
Week 2: October 6-12	Nothing required	Instructor approval
Weeks 3-6: October 13-November 9	Nothing required	Instructor approval and college scholastic committee approval
Weeks 7-10: Nov. 10-December 6	College scholastic committee approval	Instructor approval and college scholastic committee approval

Self registration is available Monday-Thursday from 7 a.m. to 12 a.m., on Friday from 7 a.m. to 10 p.m., and on Saturday from 8 a.m. to 6 p.m. In-person registration is available at the registration centers Monday 9 a.m. to 4 p.m. (8 a.m. to 5:30 p.m. in Fraser Hall during registration queues) and Tuesday-Friday from 8 to 4.

ments exist, it is then your responsibility to remove the course from your record by changing your registration.

Cancellations are effective the day you *officially* cancel (either by cancelling on-line *or* by taking a completed Course Request form to either registration center—130 Coffey Hall or 202 Fraser Hall) *not* on the date you stopped attending class. If you fail to cancel any course for which you have registered but not paid, you will receive billing statements from Student Accounts Receivable for your tuition and fees, including additional billing charges and late payment fees. If you fail to pay by the due date on your billing statement, a hold will be placed on your record.

Tuition Charges and Refunds for Course Additions and Cancellations—Full 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 15-20 credit undergraduate or 7-15 credit graduate plateaus. For example, if you are an undergraduate and add a 4-credit course, increasing your credit load from 13 to 17 credits, you will be charged only for your 14th and 15th credits because your 16th and 17th credits fall within the undergraduate plateau.

No additional tuition is charged when any course addition is balanced *at the same time* by a course cancellation, i.e., a cancellation equal to the number of credits being added *or* a cancellation and course addition that keeps the total number of credits within the undergraduate or graduate plateaus.

Refunds are issued on a per-credit basis according to the refund rate that applies to the date of cancellation. (In a very limited number of circumstances, retroactive cancellations and refunds may be authorized.) For more information on refunds, see page 30. There is no refund for those credits that fall within the undergraduate or graduate plateaus. For example, if you are an undergraduate registered for 15 credits and you cancel a three credit course within the refund period, lowering your credit load to 12, you will receive a refund for 3 credits. If you are registered for 18 credits, however, and cancel 3 credits, you will not be issued a refund because your credit total remains within the plateau.

How to Change Your Registration—To change your course load or grading system, you should:

1. Fill out a Course Request form if cancelling in person. 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.
2. Obtain instructor or college scholastic committee approval if required.
3. Cancel on-line (your cancellation is not complete until you create a fee statement—see page 10) *or* turn in your Course Request form (and all required magic numbers) at either registration center, where you will receive a revised fee statement. Any assessment or credit amount that results from a change in registration is posted to your account at Student Accounts Receivable. New assessments will appear on your next billing statement. See Payment of Fees, pages 28-30, for more information.

CHANGE OF COLLEGE

Any student who wishes to transfer from one college of the University to another should submit a completed Application for Change of College or Status to the Office of the Registrar (150 Williamson Hall or 130 Coffey Hall) according to the following schedule for admitting colleges. Applications and general information are available from the Office of the Registrar. College offices can provide information on admission requirements.

NOTE: These dates are *not* applicable to programs in the Graduate School.

CHANGE OF COLLEGE DEADLINES

College:	Fall 1996	Winter 1997
Agricultural, Food, and Environmental Sciences	June 3	October 15
Biological Sciences	June 3	October 15
Education and Human Development:		
Master of Education	July 1	October 1
Postbaccalaureate (Agricultural, Business & Marketing, Industry, Early Childhood, and Family Education)	July 1	October 1
Undergraduates (except Elementary and Mathematics Education)	----	October 15
Human Ecology	June 3	October 15
Institute of Technology:		
Undergradutes	----	October 15
Adult Specials	September 26	January 2
Liberal Arts	June 3	October 15
Management:		
Undergraduates	June 3	----
Adult Specials	July 15	----
Medical Technology	May 31	----
Mortuary Science	July 15	November 15
Natural Resources	June 3	October 15

EARLY REGISTRATION QUEUE—FALL QUARTER 1996

The registration queue on this page and the next has three parts—stage 1 for graduate, pharmacy, and public health students, and seniors (135 or more credits completed or in progress); stage 2 for juniors, sophomores, and freshmen; and stage 3 for adult and high school 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 Strack, Hej—Sweeny, Cha in stage 2, and you may register at or after 9 a.m. on May 28.

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

	8:00 a.m.	8:30 a.m.	9:00 a.m.	9:30 a.m.	10:00 a.m.	10:30 a.m.	11:00 a.m.
May 13	Chung, Terr- Curry, Susa	Curry, Susb- Dietrich, M	Dietrich, N- Ellefson, M	Ellefson, N- Flaws, Tiff	Flaws, Tifg- Geary, Debo	Geary, Debp- Groves, Der	Groves, Des- Harrison, W
May 14	Kukla, Ands- Lee, Daryl	Lee, Darym- Litwhiler	Litwhiles- Maiser, Pet	Maiser, Peu- McDonough	McDonougi- Miller, Tro	Miller, Trp- Mueller, Ch	Mueller, Ci- Nelson, Ste
May 15	Reimel, Mas- Ross, Benja	Ross, Benjb- Scallen, St	Scallen, Su- Seeland, El	Seeland, Em- Sipprell, R	Sipprell, S- Stamm, Emil	Stamm, Emim- Strong, Lau	Strong, Lav- Tang, Tak H
May 16	Wise, Nicom- Youngblood	Youngblooe- Ahmad, Kamr	Ahmad, Kams- Andriantia	Andriantib- Barkawi, Ta	Barkawi, Tb- Bergmann-P	Bergmann-Q- Bland, Step	Bland, Steq- Boudreaux

Stage 2: Juniors, Sophomores, and Freshmen

	8:00 a.m.	8:30 a.m.	9:00 a.m.	9:30 a.m.	10:00 a.m.	10:30 a.m.	11:00 a.m.
May 20	Chung, Terr- Cook, Melis	Cook, Melit- Cutler, Gre	Cutler, Grf- Dawydenko	Dawydenkp- Diesch, Mag	Diesch, Mah- Downs, Seth	Downs, Seti- Eckblad, Ka	Eckblad, Kb- Engel, Step
May 21	Gipson, Joi- Gray, Chant	Gray, Chanu- Gust, Shann	Gust, Shano- Halvorson	Halvorsoo- Harrison, S	Harrison, T- Hegnauer, S	Hegnauer, T- Herrbach, S	Herrbach, T- Hobot, Jose
May 22	Kalliman, T- Kelso, Kath	Kelso, Kati- Kinsella, T	Kinsella, U- Koenig, Amy	Koenig, Amz- Kreutz, Cha	Kreutz, Chb- Lacey, Carl	Lacey, Carm- Larson, Jen	Larson, Jeo- Lee, Amy Mi
May 23	Maurer, Grf- McIntyre, K	McIntyre, L- Meyer, Joel	Meyer, Joem- Mitchell, C	Mitchell, D- Mortensen	Mortenseo- Nada, Sally	Nada, Sallz- Nelson, Nat	Nelson, Nau- Nguyen, Kat
May 24	Peterson, T- Poisson, De	Poisson, Df- Qualmann, C	Qualmann, D- Rechsteine	Rechsteinf- Ricker, Mat	Ricker, Mau- Romsdahl, N	Romsdahl, O- Russell, Ja	Russell, Jb- Sarne, Stac
May 28	Sohre, Jasp- Standridge	Standridgf- Strack, Hei	Strack, Hej- Sweeny, Cha	Sweeny, Chb- Tendick, Do	Tendick, Dp- Thomson, Br	Thomson, Bs- Towns, Jose	Towns, Josf- Truong, Thy
May 29	Wheeler, Mj- Wilson, Lau	Wilson, Lav- Wright, Law	Wright, Lax- Yu, Hyeon W	Yu, Hyeon X- Abdul-Haqq	Abdul-Haqr- Alonso, Nat	Alonso, Nau- Anderson, L	Anderson, M- Arntzen, Sc
May 30	Bluhm, Chrj- Bosch, Caro	Bosch, Carp- Brick, Mich	Brick, Mici- Buchen, Car	Buchen, Cas- Caine, Heid	Caine, Heie- Casey, Jaim	Casey, Jain- Chapeau, Th	Chapeau, Ti- Chlebeck, J

LATE REGISTRATION QUEUE—FALL QUARTER 1996

	9/3	9/4	9/5	9/6	9/9	9/10	9/11	9/12	9/13	9/16
8:00 a.m.	Chung, Terr- Doz	Fp- Giz	Hf- Jaz	Kp- Lez	Mb- Naz	P- Rdz	Sd- Soz	Wb- Z	Be- Bmz	C- Caz
1:00 p.m.	Dp- Foz	Gj- Hez	Jb- Koz	Lf- Maz	Nb- Oz	Re- Scz	Sp- Waz	A- Bdz	Bn- Bz	Cb- Chung, Terq

NAME ROTATION THROUGH FUTURE QUEUES

	Winter 1997	Spring 1997
Registration Starts:	November 18, 1996	February 26, 1997
Each Stage Queue Begins:	Kuz, Martin	Shima, Ryan

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

	11:30 a.m.	1:00 p.m.	1:30 p.m.	2:00 p.m.	2:30 p.m.	3:00 p.m.	3:30 p.m.
May 13	Harrison, X- Hoang, Minh	Hoang, Mini- Hunt, Jenni	Hunt, Jennj- Jin, Hua	Jin, Hub- Kaebnick, G	Kaebnick, H- Kim, Robert	Kim, Roberu- Kolodny, Go	Kolodny, Gp- Kukla, Andr
May 14	Nelson, Stf- Nunneley, R	Nunneley, S- Olson, Timo	Olson, Timp- Parkhill, K	Parkhill, L- Peterson, C	Peterson, D- Pockat, Deb	Pockat, Dec- Raatz, Abig	Raatz, Abih- Reimel, Mar
May 15	Tang, Tak I- Timbo, Aaro	Timbo, Aarp- Tsang, Kenn	Tsang, Keno- Vasoli, Vin	Vasoli, Vio- Waldoch, Ju	Waldoch, Jv- Wehrman, Je	Wehrman, Jf- Whybrow, Ka	Whybrow, Kb- Wise, Nicol
May 16	Boudreauy- Brixiova, Z	Brixiovb, A- Bucki, Adam	Bucki, Adan- Butler, Joh	Butler, Joi- Carlson, Er	Carlson, Es- Chacon, Enr	Chacon, Ens- Chenoweth	Chenoweti- Chung, Terq

Stage 2: Juniors, Sophomores, and Freshmen

	11:30 a.m.	1:00 p.m.	1:30 p.m.	2:00 p.m.	2:30 p.m.	3:00 p.m.	3:30 p.m.
May 20	Engel, Steq- Fagerlie, B	Fagerlie, C- Finstad, Br	Finstad, Bs- Ford, Ryan	Ford, Ryao- Friede, And	Friede, Ane- Garcia, Jua	Garcia, Jub- Gentz, Andr	Gentz, Ands- Gipson, Joh
May 21	Hobot, Josf- Horn, Micha	Horn, Michb- Hursh, Carr	Hursh, Cars- Jackson, Jo	Jackson, Jp- Jepsen, She	Jepsen, Shf- Johnson, Je	Johnson, Jf- Jones, Dare	Jones, Darf- Kalliman, S
May 22	Lee, Amy Mj- Lev, Gennad	Lev, Gennae- Lipstein, A	Lipstein, B- Lovell, Val	Lovell, Vam- Macaskill	Macaskilm- Manly, Coll	Manly, Colm- Martinek, R	Martinek, S- Maurer, Gre
May 23	Nguyen, Kau- Niskanen, J	Niskanen, K- O'Connor, M	O'Connor, N- Olson, Jacq	Olson, Jacr- Overby, Jen	Overby, Jeo- Patronas, L	Patronas, M- Pepin, Lari	Pepin, Larj- Peterson, S
May 24	Sarne, Stad- Schmidkamp	Schmidkamq- Schuessler	Schuessles- Seah, Adria	Seah, Adrib- Sheer, Kim	Sheer, Kin- Sindelar, J	Sindelar, K- Smith, Andr	Smith, Ands- Sohre, Jaso
May 28	Truong, Thz- Van De Loo	Van De Lop- Vaughn, Son	Vaughn, Soo- Vosika, Lar	Vosika, Las- Walsh, Just	Walsh, Jusu- Weaver, Ste	Weaver, Stf- Welken, Rya	Welken, Ryb- Wheeler, Mi
May 29	Arntzen, Sd- Baimbridge	Baimbridgf- Barnhart, R	Barnhart, S- Bazan, Cynt	Bazan, Cynu- Bellin, Sar	Bellin, Sas- Berry, Mich	Berry, Mici- Bistodeau	Bistodeav- Bluhm, Chri
May 30	Chelbeck, K- Chung, Terq						

Stage 3: Adult and High School Specials

		1:00 p.m.	1:30 p.m.	2:00 p.m.	2:30 p.m.	3:00 p.m.	3:30 p.m.
May 30		Chung, Terr- Hathaway, T	Hathaway, U- Losey, Mich	Losey, Mici- Rassbach, S	Rassbach, T- Truax, Todd	Truax, Tode- Anderson, A	Anderson, B- Chung, Terq

section 3 tuition & fees

TWIN CITIES CAMPUS TUITION SCHEDULE 1995-96[1]

1996-97 Undergraduate, Graduate, and Professional School Tuition Rates—Tuition rates for the 1996-97 academic year had not been set when this *Class Schedule* was published. Complete tuition information will be published in August in the *Fall Quarter Update.* If you register in May or June, you will recieve a copy of the Update in the mail. Copies will also be available beginning September 3 in the University Bookstores.

STUDENT SERVICES FEE

All students registered for 6 or more credits must pay a $156.71[2]-per-quarter ($235.07[2]-per-semester) student services fee in addition to tuition. Courses that carry no degree credit (Comp 0011, GC 0401, 0402, 0419, 0611, 0615, 0616, 0617, 0618, 0621, 0623, 0625, 0631, 0643, and all courses in which you register as an auditor) count in the determination of the credit total for the student services fee on a one class hour = one credit basis. The fee is distributed among the following programs:

Africana Student Cultural Center	$ .39
American Indian Student Cultural Center	.38
Asian American Student Cultural Center	.41
Association of Gay/Lesbian/Bisexual Students	.24
Boynton Health Service	62.03
Child Care Consortium	.69
Crisis Point	.30
Disabled Student Cultural Center	.45
International Study and Travel Center	1.58
La Raza Student Cultural Center	.48
Minneapolis Student Union Capitol Fund	8.85
Minneapolis Student Union Operating Fund	19.56
Minnesota Daily	4.89
Minnesota International Student Association	.58
Radio KUOM	1.05
Recreational Sports Building Fund	5.00
Recreational Sports Capitol Fund	2.70
Recreational Sports Operating Fund	17.44
Recreational Sports St. Paul Gym	5.29
St. Paul Board of Colleges	.24
St. Paul Student Center Capitol Fund	4.34
St. Paul Student Center Operating Fund	10.98
Student Activities	1.51
Student Dispute Resolution Center	.89
University Student Legal Service	6.13
University YW	.32
TOTAL	**$156.71**

Students who are registered only for research or other independent work do not need to pay the student services fee if the work is done exclusively outside the 9-county metro area (Hennepin, Ramsey, Dakota, Washington, Scott, Anoka, Carver, Wright, and Chisago). Students meeting the exemption criteria may elect to pay the fee if they wish to use or support the services covered by the fee.

ADDITIONAL FEE INFORMATION

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[1]Fees are subject to change without notice.
[2]Subject to approval by the Board of Regents.

STUDENT ID CARD REPLACEMENT

The University of Minnesota student ID card is called the U Card. The U Card is an all purpose access and identification card with optional banking and calling card features. The University's libraries, check cashing services, recreational sports facilities, secured buildings, and residence hall dining and laundry facilities are all currently accessible with the U Card, while computer labs and a variety of other campus services will function with the U Card soon. The U Card can also be used for purchases at all five campus bookstores, at Boynton Health Service, in campus vending and copy machines, and at several campus restaurants; with more merchants, both on and off campus, accepting this method of payment by the end of the year.

U Cards are free. To get one, go to the U Card Office, 40 Coffman Union, and take a photo ID. You will need a driver's license or passport to sign up for the checking account. U Card Office hours are 8:30 a.m. to 4 p.m. Monday through Friday. Extended hours are available at the University Recreational Center. Call 626-9900 for information on those hours.

If your U Card is lost, stolen, or damaged due to negligence, there is a $10 replacement fee. To report a lost or stolen card, call:

- the U Card Office, (612) 626-9900;
- TCF, (612) 823-2265 during business hours or (612) 661-6985 after hours, if you have a U Card checking account; and
- AT&T, 1-800-445-6063, if you are signed up for the U Card calling feature.

Lost U Cards that are turned in are destroyed for your protection. You will not be charged a replacement fee if you request a legal name change. Name changes are made

through the Office of the Registrar (150 Williamson Hall or 130 Coffey Hall); once you make your name change you will be given a form to present to the U Card Office.

HEALTH SERVICE AND HOSPITALIZATION CHARGES

General Information—All students who take 6 or more day school credits must pay the student services fee. By paying the fee, you become eligible to receive most outpatient services at Boynton Health Service at no additional charge and others at reduced cost. Coverage for fall quarter begins Monday, September 9. (Students whose programs do not follow the regular quarterly calendar are usually covered on their first day of class. Call 624-1471 for further information.) If you do not pay the student services fee, you may be eligible to purchase outpatient health coverage through the Extended Coverage Benefits plan available at the cashier's window, third floor, Boynton Health Service. Call 624-1471 to determine your eligibility. Students who are not required to pay the student services fee and spouses and children of students may use Boynton Health Service on a fee-for-service basis.

Boynton Health Service is open 8 a.m.-6 p.m. Monday and 8 a.m.-4:30 p.m. Tuesday through Friday. Prepaid medical care at Boynton includes general medical services, urgent care, internal medicine, orthopedics, chest clinic, women's clinic, laboratory procedures, and eye refractions. Partial fees are charged for routine physical exams, mental health clinic visits, annual dental exams, and some specialty care. Charges for x-rays, minor surgical procedures, and charges remaining after patient copayment for mental health visits must be submitted by you to your hospitalization insurance company; your student services fee will cover the costs that your hospitalization insurance does not. Students without hospitalization insurance will be responsible for full payment of these charges. Full fees are charged for prescriptions, contact lenses, eyeglasses, and most dental care.

During the hours that Boynton is closed, emergency care is available at the University Hospital emergency department.

For detailed information, see *Welcome to Boynton,* a brochure available at Boynton Health Service. General information and a copy of the brochure may be obtained by calling 625-8400.

Hospitalization Insurance—The University requires all students taking 6 or more day school credits per quarter to carry hospitalization insurance. International students must carry hospitalization insurance for themselves and their dependents for the entire time they are in the U.S. If you already have insurance, fill in the name of your insurance company and your policy number on the hospitalization insurance form in the back of this *Class Schedule* and bring the form with you when you register or enter (or verify) the information on-line when you register yourself. For most students if you do not provide your insurance information when you register and you register for 6 or more day school credits, you will automatically be charged for University-sponsored hospitalization insurance. To cancel this assessment and receive a full refund, you must return to your registration center with your insurance information by the end of the *first* week of classes.

Only students who take 6 or more credits and who are degree seeking may purchase hospitalization insurance. Coverage may be purchased at registration or at the cashier's window, third floor, Boynton Health Service. You must pay either the student services fee or the extended coverage benefit fee to be eligible to purchase this insurance. Coverage must be purchased by the end of the second full week of classes (October 11 for fall quarter).

For more information on insurance or an insurance booklet, contact the Student Insurance Office at Boynton (624-0627).

Summer Insurance Coverage—If you enroll in the University-sponsored hospitalization insurance plan during spring quarter, you may purchase summer coverage, even if you do not take summer classes. It is important to maintain insurance coverage through the summer so that you are protected in case of a summer accident or illness. You may also purchase Boynton's Extended Coverage Benefits plan for summer 1996. (See General Information, above, for details.)

For information about purchasing summer insurance coverage, contact the Student Insurance Office at Boynton Health Service (624-0627).

Permanent Residents—If you hold an immigrant visa, have been formally admitted to the University of Minnesota, and are registering for the first time, an ME (health clearance) hold has been placed on your record. To clear the hold, you must show proof of tuberculosis testing before registering for classes. This requirement can be met either by having a tuberculosis test or by showing proof that you have taken tuberculosis medication in the past. If your tuberculosis test shows that you have been exposed to tuberculosis, you will be allowed to register, but you will be expected to receive follow-up care as recommended. To get a Tuberculin Screening Record sent to you, call 625-3222, or stop at the main check-in desk, 3rd floor Boynton, with your written proof of tuberculosis testing.

Immunization Clearance—The University requires all students born after December 31, 1956, to provide documentation of two immunizations for measles, mumps, and rubella, and a tetanus-diphtheria immunization within the last 10 years. This documentation must be entered on a Student Immunization Record and must include the month and year each immunization was given. Forms are available at your registration center and at the Boynton Health Service information desk.

Check your medical or high school immunization records. All students are legally required to provide information on immunizations or exemptions; students who fail to provide the required information will have a hold placed on their records and will not be allowed to register for classes. (The law does allow for an exception based on age, or documented medical or conscientious exemptions.) If you need any of the required immunizations, call your family doctor or the Boynton Immunization Clinic (625-3222) for an appointment. Boynton charges for these required immunizations.

GRADUATE ASSISTANT HEALTH-CARE PLAN

University-subsidized health insurance is available to graduate and professional school students who:

- hold appointments of 25% or more (12.5% or more during summer) as teaching assistant, research assistant, or administrative fellow, *or*
- hold appointments in class titles 9561 (Graduate School fellow), 9562 (Graduate School trainee), 9564 (professional school fellow), or 9565 (professional school trainee), and receive a stipend during the academic year (fall, winter, and spring quarters) at least equal to a 9-month 50% graduate assistantship ($8437.50 for 1996-97), provided their college or department agrees to pay the full insurance premium during the academic year.

For graduate assistants, the University pays a portion of the health insurance premium equal to twice their appointment percentage (e.g., 50% for an assistant with a 25% appointment). Eligible fellows and trainees receive 100% subsidies, but during the academic year *only*.

When departments pay for the health care plan as a non-service benefit, that payment is considered taxable income. The amount of the direct departmental contribution is reported as income, and taxes are withheld on that amount.

To receive this coverage you must apply for it during the first quarter of your assistantship, traineeship, or fellowship, and by the enrollment deadline. For most students, this deadline is the end of the second full week of classes (October 11 for fall quarter). Plan members are billed quarterly for any portion of the premium they owe. Those on hourly appointments who work less than the estimated number of hours are billed for their portion of the premium.

Students who pay the student services fee and select Boynton Health Service or University Family Practice as their primary clinic for the entire quarter, will receive a $21 credit to their account at Student Accounts Receivable *after* the end of the quarter.

Once enrolled, you remain a plan member until your appointment ends or drops below the qualifying level. You can elect to continue coverage for a period of time at your own expense; you are then responsible for the full amount of the health insurance premium. Students receiving continuation coverage who become eligible again *must* contact the GAIO and ask to be reinstated; otherwise they will continue to be billed.

Students enrolled in the plan spring quarter remain eligible for summer but may have to pay some or all of the summer premium. The University will pay a portion of the summer premium based on the quarters during the academic year in which students were enrolled in the plan and the percentage of their appointments. Fellows and trainees enrolled in the plan are responsible for the entire summer premium unless their college or department wishes to pay it for them. Departments wishing to do so must contact the GAIO by the end of spring quarter.

Coverage for dependents of eligible students is available. The cost of dependent coverage is not subsidized by the University.

For further information, contact the GAIO, Boynton Health Service, 625-6936.

TRANSCRIPT FEES

There are three types of service for *official* transcripts: regular service, rush service and FAX service. (Official transcripts are certified and signed by the University Registrar.) Regular service is available for $4 a copy. Processing time for regular service is 2-3 workdays; after processing, your transcripts will be mailed to the places you have specified. Rush service on your official transcript requests is available for $8 a copy. Rush service guarantees your transcript will either be issued to you in person or put in the mail on the same day it is requested. You must have a picture ID (U of M student ID card, driver's license, or current passport) to receive over-the-counter rush service. FAX service is available for $8 a copy ($10 a copy beginning July 1). FAX service guarantees your transcript will be sent to the FAX number you specify on the same day it is requested. Prepaid courier service may also be requested for both regular and rush service. Visit the transcript service (150 Williamson Hall, Minneapolis, or 130 Coffey Hall, St. Paul) for more information or call 625-5333.

Requests for official transcripts can be submitted by mail or FAX, or dropped off at the locations below. No telephone requests are accepted. Requests should include your full name and signature, a daytime phone number, your student ID number, college, dates of enrollment, and complete address(es) for mailing the transcript(s). You can send your requests to Transcript Service, 150 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455 or to Office of the Registrar—St. Paul, 130 Coffey Hall, 1420 Eckles Avenue, St. Paul, MN 55108. FAX requests can be sent to either (612) 625-4351 (Minneapolis) or (612) 624-4943 (St. Paul).

Payment options for in-person requests include payment by check, money order, cash, or major credit card (Visa, MasterCard, or Discover). Mail requests can be paid by check, money order, or credit card. FAX requests *must* be paid by credit card. Make your check or money order payable to the University of Minnesota for $4 or $8 per transcript. Include the following credit card information for *all* FAX requests or when paying for mail requests by credit card: the type of card you are using, the credit card number, expiration date, your signature, and the signature of the card holder if different. Scanned or computer generated signatures are not accepted. Remember: FAX requests increase to $10 per copy beginning July 1.

You may pick up an *unofficial* copy of your record by presenting a picture ID at 150 Williamson Hall, 202 Fraser Hall, or 130 Coffey Hall. There is no charge for an unofficial copy of your record; there is, however, a limit of one copy per day. *Unofficial transcripts are never available the first three days of winter or spring quarters.*

Students are advised that disciplinary action will be taken if academic records are forged or altered.

COURSE FEES[1]

All fees are per quarter unless otherwise indicated. Students taking the following courses will pay course fees as follows:

ARCHITECTURE
$20—3091, 3092, 3093, 5111, 5112, 5113, 5121, 5122, 5123, 5250, 5281, 5282, 5283, 5292, 5381, 5382, 5383, 8250, 8251, 8252, 8253, 8254, 8255, 8256, 8261, 8262, 8263, 8271, 8272, 8273, 8777—Design studio fee

ART
Materials fees[2]:
$5—1101, 1102, 1404, 5190
$20—1702, 3720
$25—1602, 1701, 3602, 3710, 5710, 5790
$30—3430, 5430, 8360
$35—1510, 1520, 1530, 1540, 3306, 5360
$40—3510, 3520, 3530, 3540, 3550, 5510, 5520, 5530, 5540, 5550, 5590
$45—3830
$50—1301, 1302, 1811, 1812, 3301, 3302, 3303, 3304, 3305, 3307, 5310, 5320, 5330, 5340, 5350, 5370, 8310, 8320, 8330, 8340, 8350, 8370
$55—5830
$60—1802, 3810, 5390
$66—5890
$70—5810
$80—3820, 5821
$95—5820
$225—8810
Arranged (amount adjusted to individual needs of students or particular class project)—3420, 3970, 3980, 5420, 5970, all other 8000-level courses

CELL BIOLOGY AND NEUROANATOMY
$18—5103—Microscope rental fee

CHEMISTRY
Materials and technical services fees:

$24.35—1052H	$24.71—3101
$24.73—1051	$25.17—1052
$25.28—1001	$25.84—1003
$26.26—3306	$27.08—1051H
$27.23—1002	$29.04—5538
$29.96—3305	$36.04—5126
$37.17—5540	$37.69—5131
$39.54—5613	$43.87—5740
$44.49—5140	$45.00—3336
$49.22—3335H, 3336H	$57.46—5127

CLINICAL LABORATORY SCIENCE
$12—5765—Microscope rental fee

DESIGN, HOUSING, AND APPAREL
$8—1641,1642, 3611, 3643, 5644, 5645, 5646—Materials fee for studio courses
$45—1331, 3331, 5331—Materials and dyes fee

ECOLOGY, EVOLUTION, AND BEHAVIOR
$15—5014, 5016, 5132, 5134—Transportation fee

FOREST PRODUCTS
$50—ForP 3300—Wood Industries Tour

GENERAL COLLEGE
Preparatory Mathematics and Composition:
$318[3]—0623, 0643
$397.50[3]—0401, 0402, 0419, 0611, 0615, 0616, 0617, 0618, 0621, 0625, 0631

GEOLOGY AND GEOPHYSICS
Transportation fees:
$10—3201, 5452, 5651, 5655
$20—3402, 5613, 5641
$30—5201, 5251, 5261, sec 2
$100—5010, sec 1, 5252
Field camp fees:
$450—3111, 5111
$600—5112

LANDSCAPE ARCHITECTURE
$20—5200, 5211, 5212, 5213, 8111, 8221, 8222, 8223, 8231, 8232, 8233, 8234, 8777—Design studio fee
$35—5073, 5107

MATERIALS SCIENCE
Materials and technical services fee:
$38.39—5613

MEDICAL TECHNOLOGY
$6—5011, 5077, 5102—Microscope rental fee

MICROBIOLOGY
$10—3103, 5013, 5105, 5234, 5322, 5424—Microscope rental fee

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: $50 per 2 credits
Majors taking extra credits (beyond requirement) or taking lessons on a second instrument: $65 per 2 credits
Students taking lessons for minor in music: $65 per 2 credits
Non-majors, elective credit: $125 (0-2 credits)

NATURAL RESOURCES AND ENVIRONMENTAL STUDIES
$150—3051—Food and lodging fee

PATHOBIOLOGY
Microscope rental fee:
$6—5102, 5103, 5104
$12—5101

PLANT BIOLOGY
$20—1009—Transportation fee

SOIL SCIENCE
$6—3220—Field course
$19—3520, 5510—Transportation fee
$35—5515—Transportation fee

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[1]Fees are subject to change without notice.
[2]Materials fees—assessed at the time of registration. Arranged fees are collected by department. 1995-96 amounts listed. 1996-97 amounts not set at time of publication.
[3]In lieu of tuition. Subject to approval by the Board of Regents.

SPECIAL FEES[1]

BILLING CHARGE
$7.50 per billing cycle for a maximum of $15 per quarter.

COLLEGE OF EDUCATION—PLACEMENT SERVICE FEE
$48—Registration fee for graduate students, alumni, and others (annual fee).
$30—College of Education students completing a teacher licensing program (annual fee—assessed with graduation fee)
Bachelor of Science degree candidates in the teacher licensing program areas from the College of Education are required to register with the placement section of Student and Professional Services or to secure an official exemption from that office. Graduate students and alumni seeking employment in education positions may also use the placement services.

COUNCIL OF GRADUATE STUDENTS (COGS)
$1.61[2]—Required of *all* students in the Graduate School. (Fee not refundable.)

CREDIT BY SPECIAL EXAMINATION
$30—Check with your college office for further information.

DENTISTRY—INSTRUMENT USAGE FEE
$220—Instrument usage fee for postdoctoral students enrolled in periodontics.
$230—Instrument usage fee for dental hygiene students.
$265—Instrument usage fee for postdoctoral students enrolled in pedodontics.
$275—Instrument usage fee for postdoctoral students enrolled in endodontics and prosthodontics.
$525—Instrument usage fee for predoctoral dental students.

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—replacement fee for most diplomas.
$25—replacement fee for School of Dentistry or Medical School diplomas.

ENGLISH FOR INTERNATIONAL STUDENTS
For international students who are required to take English as a Second Language courses—a fee ranging from $687 (5 hours per week) to $1,719 (25 hours per week) is charged separate from tuition and fees charged for academic classes.

FIELD STUDIES HEALTH SERVICE FEE
$62.03[2] per quarter—Required of students on University field studies such as Anthropology, Geology, etc. (covers outpatient medical care for emergency illness at nearest facility on approval of the person in charge of the group. Eligible charges which are not collectible from a student's insurance carrier will be paid by Boynton Health Service up to a maximum of $100 per visit).

GRADUATE AND PROFESSIONAL STUDENT ASSEMBLY (GAPSA)
$2.71[2]—Assessed quarterly to students in most professional schools and students in the Graduate School. (Fee not refundable.)

HOSPITALIZATION INSURANCE, UNIVERSITY SPONSORED
$192[3] per quarter—Available only to students who pay the student services fee or the extended coverage fee.

INTERNATIONAL STUDENT AID FEE
$4 per quarter—Required of *all* students who hold nonimmigrant visas.

I.T. BOARD OF PUBLICATIONS
$4.47[2]—Required of all Institute of Technology students who pay the student services fee—assessed at registration.

LATE PAYMENT FEE
$15-20 per billing cycle for a maximum of $50 per quarter.

LATE REGISTRATION FEE
$20 through the first two weeks of classes and $40 thereafter. (Fee not refundable.)

MINNESOTA PUBLIC INTEREST RESEARCH GROUP (MPIRG)
$2.50[2] (refusable/refundable)—Assessed with student services fee. 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 $2.50. A statewide advocacy group, MPIRG gives the 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.

MINNESOTA STUDENT ASSOCIATION (MSA)
$2.70[2]—Assessed to *all* undergraduates, adult special students, and departmental masters. (Fee not refundable.)

MUSIC PRACTICE ROOMS
Rooms with upright or grand piano, harp, harpsichord, organ, or percussion as well as rooms with no instrument are available on a quarterly basis. Check in 100 Ferguson Hall for rental information and rates.

ORIENTATION FEE
$39—Required of all new students *except:* high school and adult specials; graduate students who attended the University as undergraduates; students in law, medicine, veterinary medicine, dentistry, public health, and mortuary science; graduate Management students (MBA, Executive MBA, or Business Administration Ph.D. programs); and students in post-baccalaureate education, master of education, and master of agriculture programs. (Fee not refundable.)

RECREATIONAL SPORTS PARTICIPATION FEE/LOCKER RENTALS
NOTE: All individuals must present necessary indentification each time they enter Recreational Sports facilities.
Currently enrolled students who have been assessed the student services fee will need to provide proof of that assessment (usually by presenting the U Card).
Currently enrolled students who are *not* assessed the student services fee must purchase a quarterly permit to become eligible to use recreational facilities and programs. Similar permits (at different costs) are available for faculty and staff.
A variety of activities are available, including aquatics, intramurals, fitness programs, aerobic dance, open recreation, sports clubs, plus numerous other activities.
Sports lockers and towels can be rented at the equipment rooms in the University Recreation Center and the St. Paul Gym.
For further information, including the current fee rates, call or visit one of the Recreational Sports offices: University Recreation Center, Minneapolis (625-6800), or 104 St. Paul Gym (625-8283).

SERVICE FEE, INTERNATIONAL PROGRAMS
$250-$400 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.

STUDENT EMERGENCY LOAN FUND (SELF)
$.23[2]—Assessed to *all* students.

UNIVERSITY COALITION FOR HIGHER EDUCATION (UMCHE)
$1.81[2] (refusable/refundable)—Assessed with student services fee. University of Minnesota Coalition for Higher Education (UMCHE) lobbies to express student views on University quality, affordability, and accessibility.

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[2]Subject to approval by the Board of Regents.
[3]1995-96 fee. 1996-97 fee not set at time of publication.

INSTITUTE OF TECHNOLOGY COMPUTER FEE

A computer fee of $100 per quarter is charged to most students in the Institute of Technology and some students in other colleges. The fee will be assessed at registration to the following groups of students:

- All IT upper division, UNITE, and adult special students who are required to pay the student services fee;
- Upper division CLA students majoring in astronomy, chemistry, computer science, geology, mathematics, or physics who are required to pay the student services fee;
- All graduate students in IT graduate programs taking one or more courses who are required to pay the student services fee, except those who have completed 36 credits in graduate school, exclusive of thesis credits. (These programs are aerospace engineering, astrophysics, biomedical engineering, chemical engineering, chemical physics, chemistry, civil engineering, computer and information sciences, control science and dynamical systems, electrical engineering, fluid mechanics, geological engineering, geology, geophysics, industrial engineering, materials science and engineering, mathematics, mechanical engineering, mechanics, mineral engineering, and physics); *and*
- Students (including those in other colleges) who are taking one or more courses that require use of the IT public labs. Most of these courses are indicated in the course sections of this *Class Schedule*.

IT undergraduate or graduate students who have not been required to pay the fee may sign up for a Unix account in the computer lab. They will then be billed the $100 fee through Student Accounts Receivable.

CARLSON SCHOOL OF MANAGEMENT COMPUTER FEE

A computer/technology fee of $25 per quarter is assessed at registration to all Carlson School of Management undergraduates, adult specials, and EMBA students.

Ph.D. students in Carlson School graduate programs, day MBA students, and IR graduate students are assessed a $50 per quarter fee.

FACILITY FEES[1]

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.

Animal Science 1601 (Horse Equitation): $60
Physical Education 1034 (Judo): $18 maximum
Physical Education 1035 (Karate): $23 maximum
Physical Education 1048 (Bowling): $25 maximum
Physical Education 1057, 1157, 1257 (Skiing): each $75 maximum
Physical Education 1205 (Scuba and Skin Diving): $35 maximum

[1]Fees are subject to change without notice.

PAYMENT OF FEES

BILLING AND PAYMENT DATES FOR FALL QUARTER			
STATEMENT	**BILLING DATE**	**PAYMENT DATE**	**BALANCE DUE**
Billing Statement #1	September 27, 1996	October 22, 1996	30%
Billing Statement #2	October 25, 1996	November 19, 1996	60%
Billing Statement #3	November 22, 1996	December 17, 1996	100%

Student Accounts Receivable Billing System for Tuition and Fees—Every student has an account at Student Accounts Receivable and receives a bill for tuition and fees at the beginning of each quarter. Each time you register for, cancel, or add courses, your tuition and fees will be charged to your account. This account, unlike individual fee statements, will reflect your *total* charges for tuition and fees.

You will receive fee statements, but they will not carry payment due dates. Instead, your tuition due dates will be on your billing statements.

This billing system allows installment payments, with three payments possible over the quarter. Your first billing statement will list both your total tuition charges *and* a minimum payment amount. To make installment payments you need only pay the minimum payment listed. You will receive up to two additional billing statements during the quarter, each indicating a minimum amount due. There is a nominal billing charge ($7.50) for each installment. If you choose to pay less than the *full* amount, you will be assessed this $7.50 billing charge on your next statement. Every time you pay less than the *minimum* amount due, you will be charged $15-20 in late payment fees in addition to the $7.50 billing charge and a hold will be placed on your record. (Billing charges and late payment fees will appear under Charges and Debits on your bill.) Any bill can be paid *in full* by the due date to avoid billing charges.

Installment payments may not be suitable for certain 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, 150 Williamson Hall, for more information.

You can make installment payments only for charges for the current quarter—balances or transactions from previous quarters are always due in full. You will be assessed billing charges for the current quarter if you have a previous balance outstanding. Any payments that you make will *always* be applied to the oldest charge on your account.

The chart on the previous page lists the billing dates and the payment dates for the quarter. For this quarter, your first billing statement will be issued on September 27 and your first payment must be received by October 22. **(NOTE: Allow approximately one week for your billing statements to reach you by mail.)** This first billing statement will list a minimum payment of 30% of all *unpaid* charges for the quarter plus 100% of any previous charges. Your second bill will be issued on October 25 and due by November 19. The minimum payment for the second bill is 60% of your unpaid balance for the quarter (plus 100% of any charges for previous quarters or terms). The final bill for the quarter will be issued on November 22 and due by December 17. With the final bill you will be expected to pay any amount not yet paid. For example, if the unpaid balance of your tuition and fees total $900, the minimum payment on your *first* bill would be $270 (30% of your balance) and this amount would be due by October 22. After you make your first payment of $270, your *second* bill would list a minimum payment of $385.50 (60% of the balance of the $630 remaining on your account plus the $7.50 billing charge) and would be due by November 19. Your final bill would be for $259.50 (your balance of $252 plus a $7.50 billing charge); payment would be due by December 17.

NOTE: Paying more than the minimum payment due on your statements or paying before you receive your statements does *not* reduce the percentage required on your next billing statement—you will still be required to pay the standard percentage of the balance.

Students in units that do not follow the regular quarterly calendar (e.g., Dentistry, Medicine, Law) may have billing and due dates that differ from the above schedule. Contact Student Accounts Receivable, 625-8500, for information on billing schedules for your unit.

It is your responsibility to report any change in address to the University. When you register on-line verify your address on the student demographic data screen or, if you register in person, verify that the address printed on your course confirmation form is correct. (You may report an address change to Student Accounts Receivable by calling 625-8500.) If you do not receive any billing statement, you *must* obtain a payment voucher on or before the payment due dates listed on the chart at the top of this page. Payment vouchers are available at Student Accounts Receivable, 20 Fraser Hall, or the Bursar's Office (145 Williamson Hall on the east bank, 101a Anderson Hall on the west bank in Minneapolis, or 107 Coffey

Hall in St. Paul). If you want to pay your balance *before* you receive your billing statement, go to the Bursar's Office or Student Accounts Receivable where a payment voucher will be prepared for you.

Billing Errors—If you suspect there is an error in your billing statement, contact Student Accounts Receivable as soon as you receive your statement.

When to Pay—For students who register through September 27, the first payment is due by October 22. Students whose registrations occur after the first billing date will be billed in the next billing cycle (October 25) and will have a November 19 due date. Always pay by the due date listed on your bill.

REMEMBER: Initial registrations that occur after September 25 are subject to late registration fees.

Mailing Your Payment—Your billing statement and a check or money order may be mailed, using the envelope enclosed with your billing statement, to the Bursar's Office, PO Box 88, Minneapolis, MN 55440-0088. Write your student ID number on your check or money order and enclose all copies of your statement. Your mailed payment must be received by the billing statement due date, or you will be billed for additional charges on the following statement. Your cancelled check is your receipt.

Where to Pay on Campus—Pay your tuition and fees at the Bursar's Office (145 Williamson Hall on the east bank, 101a Anderson Hall on the west bank in Minneapolis, or 107 Coffey Hall in St. Paul). Credit cards are not accepted. Your billing statement (or fee statement) and a check or money order may also be dropped in any of the fee deposit boxes on campus: in the Fraser Hall lobby; 107 Coffey Hall; both concourses of Williamson Hall; Anderson Hall; and Coffman Union Service Center. Payments are picked up at 8 a.m. and are credited to the previous day.

Collection Procedures and Costs—Past due accounts may be subject to handling charges and collection procedures. Collection can include court action or referral to outside collection agencies. You are responsible for any and all costs necessary for the collection of any amount not paid when due.

Fee Statements, Course Confirmation Forms—Do not destroy or throw away any fee statements. Although your tuition is billed by Student Accounts Receivable, you may use your fee statements to pay at the Bursar's Office prior to receiving your billing statement.

The bottom half of your fee statement—your course confirmation form—is your proof of enrollment. Keep all copies for the quarter together with your student ID card. Many University facilities such as the libraries, Boynton Health Service, and athletic facilities require your course confirmation form as proof of enrollment.

Duplicate Fee Statements—Duplicate unreceipted fee statements for the current quarter may be obtained at your registration center or you may print one yourself from the self-registration system. If your fees are paid, Student Accounts Receivable can issue a payment verification letter or validate your unreceipted copy at 20 Fraser Hall (150 Williamson Hall for students with mobility impairments). **Save all your fee statements and billing statements: you will be charged for duplication of account information.**

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 *in full,* you may obtain a refund by presenting the credit balance fee statement to Student Accounts Receivable. (See also Refunds, on page 30.) If all of your fees have not been paid and the amount on the credit balance fee statement is less than what you owe, this credit will be reflected on your next bill from Student Accounts Receivable. This credit could also lower the minimum amount due on your current billing: for information on your current billing, call Student Accounts Receivable at 625-8500. If all of your fees have not been paid and the credit amount is *more* than the amount that you owe, go to Student Accounts Receivable for further information or call 625-8500.

Zero Balance Fee Statements—Zero balance fee statements have zeros printed in the "Amount Due" box on the fee statement. This means that no *additional* tuition and fees have been charged to your account at Student Accounts Receivable. All previous amounts owed remain unchanged. If you have questions about your balance, call 625-8500 for more information.

Credit for Tuition Deposit—If you are registering for the first time at the University and you paid a tuition deposit, you will receive credit for that deposit on your first billing statement from Student Accounts Receivable.

Paying Tuition Holds—After the due date, you must pay the current amount due on your account to receive a hold release. If, in order to register, you pay a Student Accounts Receivable hold for a previous quarter with a personal check and that check does not clear the bank, you will be sent a notice by Student Accounts Receivable. Your current registration may be cancelled if you fail to respond to this notice and pay your debt.

NOTE: If you pay a hold by check, it will be two weeks before you can obtain a transcript. For an immediate transcript release, pay with cash.

Financial Aid Recipients—You must register by March 23, even though you will have not yet received your financial aid. If you register after March 23, you will be charged a late registration fee.

An interface with the Financial Aid system allows most financial aid payments to be credited directly to your account at Student Accounts Receivable. Some students will, however, continue to receive financial aid checks.

If the total of all your financial aid awards is less than the amount due on your account, or if your award is less than 100% of the amount due, you can make installment payments on the remaining balance. 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 installment payments if your financial aid awards or check are 100% or more of your tuition and fees. Call Student Accounts Receivable (625-8500) for further information.

REMEMBER: If, for any reason, you do not receive your financial aid, you are still responsible for paying your tuition and fees by the due dates listed on page 28.

Tuition and Fees Paid by Various Agencies—If you have authorization for the University to bill a sponsor for your tuition and fees, you should bring your authorization *before the beginning of registration* to a registration center (202 Fraser Hall or 130 Coffey Hall, 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. International students should bring their billing information to the Preregistration Program for International Students.

NOTE: You will have a hold placed on your record if your sponsoring agency falls behind in payment for more than one quarter. You will be held responsible for all unpaid tuition and fees if your sponsoring agency does not fulfill its obligations. It is your responsibility to monitor payments made to your account by your sponsor.

Regents' Scholarships—If you are registering for a course with a Regents' Scholarship, you should bring your authorization to your registration center when you register. If you receive your authorization after you have registered, you must return to your registration center for an adjusted fee statement. If you plan to register on-line, you can mail your form to your registration center (202 Fraser Hall or 130 Coffey Hall). However, forms should *never* be mailed to the Bursar. If you fail to receive authorization by the due date on your first billing statement from Student Accounts Receivable, you will be liable for billing charges and late payment fees. Regents' Scholarships cover only tuition for approved courses. You are responsible for all course fees and special fees. If you fail to pay these fees by the due dates on your billing statements, you will be liable for billing charges and late payment fees.

Payroll Deduction for Graduate Assistants—To be eligible for payroll deduction, you must be enrolled in the Graduate School or in a professional post-baccalaureate degree program and hold at least a 25% graduate assistant appointment for the 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 deductible fees must total at least $150. (MPIRG and UMCHE are not deductible fees.) 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).

Application for payroll deduction is *never* possible after the fifth day of the quarter. Request payroll deduction when you register. After you fill out a payroll deduction authorization card, you will be credited directly on your billing statement for the amount to be deducted.

All students must pay all fees not covered by payroll deduction (e.g., MPIRG and UMCHE) by the due dates on their billing statements to avoid billing charges and late payment fees.

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), a billing statement with a new due date will be sent to you. This bill must be paid by the due date to avoid billing charges and late payment fees.

If you cancel/add anytime through the first week of the quarter, go to Student Accounts Receivable (20 Fraser Hall) to have your payroll deduction application adjusted. If you cancel or add courses after the first week, call Student Accounts Receivable (625-8500) for instructions.

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 $400, this amount will be withheld from your last four paychecks in equal installments of $100. To be eligible for payroll deduction, you must net at least $120 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 20 Fraser Hall (625-8500) for a new fee statement. If you are ineligible for payroll deduction, you can make installment payments by paying the minimum amount due on your billing statements.

REFUNDS

Tuition and Course Fees—There are two refund schedules: one for new students (students attending the University for the first time) and one for continuing students. Refer to the schedules on the next page for the dates for this quarter.

For *new* students, tuition and course fees are refunded on the following general schedule: if you cancel during the first week of the quarter or before, you will receive a 100% refund; 80% during the second week; 70% during the third week; 60% during the fourth week; 50% during the fifth week; 40% during the sixth week; and 0% thereafter. NOTE: These refund rates apply to your first quarter of enrollment only. After your first quarter, rates for continuing students apply.

For *continuing* students, tuition and course fees are refunded on the following general schedule: if you cancel during the first week of the quarter or before, you will receive a 100% refund; 50% during the second week and the first half of the third week; 25% during the last half of the third week and the fourth and fifth weeks; and 0% thereafter.

Special length courses that begin after the first week of the quarter may be cancelled for a 100% refund through the first day of the course at the registration centers only. Cancellations after the first day of the course but during the second through fifth weeks of the quarter (second through sixth weeks for new students) follow the refund schedule above. After the fifth week of the quarter (sixth week of the quarter for new students), no refund is available if the course is cancelled after the first day.

Remember: Cancellations are effective the day they are processed and strictly follow the dates listed below (exceptions are *not* made for classes that have not yet met for the week). Your refund will be based on the date you *officially* cancel (by cancelling on-line *or* by taking a completed Course Request form to your registration center) not on the date you stopped attending class. Cancel immediately if you stop attending class for any reason.

Retroactive cancellations may be possible in a limited number of circumstances (e.g., active military duty, scholastic drop). If you petition for a retroactive cancellation, you may be eligible for a retroactive tuition refund. Petitions for retroactive refunds should be submitted within one quarter of the term in question. In no case will a refund be granted for fall, winter, or spring quarter later than June 30 of that year. Refunds for summer session will not be granted after August 31.

Check with the Student Relations staff in 150 Williamson Hall (625-5333) or 130 Coffey Hall (624-3731) for details.

If your tuition and fees are not paid in full, any refund you receive will be a monetary credit applied to your unpaid balance. Read Payment of Fees, pages 28-30.

Student Services Fee and University-Sponsored Hospitalization Insurance Fee—If you drop your credit load to below 6 credits, you can request a refund of the student services fee and the University-sponsored hospitalization insurance fee when you process your cancellation. All refunds of these fees are based on the date that the cancellation is processed (see table below for deadlines) and are not affected by retroactive cancellation. If you wish to continue your hospitalization insurance, you cannot receive a refund of the student services fee.

If you receive a refund of the student services fee, you can no longer use the services provided by the fee. To continue using these services, you must continue to be registered and not be issued any refund.

If you cancel *all* courses and qualify for a tuition refund, you must also accept a prorated refund of the student services fee unless you retain University-sponsored hospitalization insurance.

Special Fees—The orientation fee, the late registration fee, and the COGS, GAPSA, MSA, and SELF fees are generally not refunded (the GAPSA and MSA fees are refunded with a 100% refund). MPIRG and UMCHE are not refunded through the registration system—refund instructions are published every quarter in the *Minnesota Daily*. All other special fees assessed at registration are refunded through the fifth week of the quarter (sixth week of the quarter for new students) at the same rate as tuition and course fees. There is no refund of special fees after the refund schedule has ended, even if retroactive cancellation is authorized.

How to Obtain Your Refund—If you have paid your fees in full, you may obtain a refund by presenting your credit balance fee statement and picture ID to Student Accounts Receivable, 20 Fraser Hall, Minneapolis, or the Bursar's Office, 107 Coffey Hall, St. Paul. There is a two week waiting period for your refund beyond the last date any payment was receipted, unless your fees were paid only with cash or a University of Minnesota check. You can request a refund be sent to you by mail by calling Student Accounts Receivable, 625-8500. Allow an additional three to four weeks, beyond the two week waiting period, for a refund by mail.

If you have *not* paid your fees in full, any refund you receive will be a monetary credit applied to your unpaid balance. Read Payment of Fees, pages 28-30.

REFUND SCHEDULE FOR FALL QUARTER 1996

Continuing Students		New Students	
For refund of:	**Cancel by:**	**For refund of:**	**Cancel by:**
100%	October 5	100%	October 5
50%	October 16	80%	October 12
25%	November 2	70%	October 19
0%	on or after November 3	60%	October 26
		50%	November 2
		40%	November 9
		0%	on or after November 10

Self registration is available Monday-Thursday from 7 a.m. to 12 a.m., on Friday from 7 a.m. to 10 p.m., and on Saturday from 8 a.m. to 6 p.m. In-person registration is available at the registration centers Monday 9 a.m. to 4 p.m. (8 a.m. to 5:30 p.m. in Fraser Hall during registration queues) and Tuesday-Friday from 8 to 4.

Refunds for Students on Payroll Deduction—If you cancel courses, call Student Accounts Receivable (625-8500) for refund instructions.

Tuition Refunds for Students on Financial Aid—Financial aid recipients must maintain the same number of credits throughout the quarter. If you cancel courses and are eligible for a tuition refund, federal regulations require that your refund be returned directly to the financial aid account from which you received aid and/or sent to the lender of your student loan to reduce the principal on that loan. If you cancel courses at the 100% refund rate during a quarter, you must repay *all* financial aid received during that quarter. If the amount of your tuition refund is insufficient to repay the appropriate financial aid fund(s), you will be billed for the difference by Student Accounts Receivable, 20 Fraser Hall, and/or the Student Loan Office, 140 Williamson Hall. If you fail to pay these bills by the due dates, you will be liable for billing charges and late payment fees, and a hold will be placed on your record. You will not receive further financial aid until your bill is paid in full. You will be notified by mail of the disposition of your refund.

RESIDENCE REGULATIONS

Because the University is a state institution, residents of Minnesota pay lower tuition than nonresidents, and, in many programs, receive priority consideration for admission. To qualify for resident status, you must reside in Minnesota for at least one calendar year *prior* to the first day of class attendance. During that one year waiting period, your primary reason for living in Minnesota must be something other than school attendance. There are few exceptions to this rule, and these generally apply to veterans, migrant workers, specific federal employees, refugees, and faculty at Minnesota colleges. Students holding temporary international visas (F-1, J-1, H-1, etc.) *do not* qualify for resident tuition.

If you have moved here from another state, resident status is not automatically granted; you must apply and present evidence that: you have abandoned your former domicile; you have made Minnesota your *permanent* home; you are not a tax dependent of a parent or spouse living out-of-state; and you have taken reasonable steps to substantiate your desire to remain in Minnesota. Although acceptance of employment, registration of automobiles, payment of local taxes, etc. may support an application for resident status, these actions, by themselves, do not constitute sufficient evidence of residence.

You may apply for or appeal your resident status by obtaining an application in 240 Williamson Hall or 130 Coffey Hall. An administrative classification will follow a review of the application. You should appeal a nonresident classification that you believe to be incorrect as soon as possible. If the Review Board determines that the nonresident classification was not appropriate, you will receive a refund for the appropriate period and amount of overpayment, if any. No more than one year's retroactive refund will be granted.

RECIPROCITY

The University has reciprocity agreements with Wisconsin, North Dakota, South Dakota, and Manitoba. The University also participates in a reciprocity program with Kansas, Michigan, Missouri, and Nebraska for students in the following undergraduate colleges: Agricultural, Food, and Environmental Sciences; Architecture and Landscape Architecture; Biological Sciences; Education and Human Development; Human Ecology; Natural Resources; Carlson School of Management; Dental Hygiene; School of Nursing; and Institute of Technology. If you are a resident of any of these states or provinces, you may qualify for reciprocity tuition rates, which are lower than nonresident tuition rates and, in some cases, comparable to resident rates. There are some exceptions:

- Wisconsin students enrolled in the School of Dentistry, the Medical School, or the College of Veterinary Medicine are not eligible for reciprocity.
- **Students participating in off-campus study or study abroad for an academic year or more must reapply for reciprocity.**

You must apply for reciprocity prior to the quarter in which you wish your reciprocity to begin. **As soon as you receive an approval letter from your home state, take that letter to your registration center and obtain an adjusted fee statement.** After your first year, *provided you have earned credits,* your reciprocity will automatically be renewed.

Delays in your reciprocity eligibility will not exempt you from billing charges or late payment fees. For information and application forms, check with your home state reciprocity office. You can also obtain application forms and information in 240 Williamson Hall or 130 Coffey Hall.

CERTIFICATION FOR FULL-TIME OR HALF-TIME STATUS

Occasionally you may be required to have your attendance at the University certified as full time or half time in order to defer payment of your student loan. This certification is especially required of transfer students who received loans at their previous institutions.

For students in undergraduate and professional units (law, dentistry, medicine, and veterinary medicine) full-time status is defined as 12 or more credits per quarter; half-time status is 6-11 credits per quarter.

For students in the Graduate School, master's programs in agriculture and education, and dental and psychology fellow specialist programs, full-time status is defined as 7 or more credits per quarter; half-time status is 3-6 credits per quarter. For students in master's programs in public health, full-time status is 9 credits; half-time status is 4 credits.

Audit registrations are not applicable for certification purposes. To have your attendance certified, bring your loan deferment form to 150 Williamson Hall or 130 Coffey Hall.

Minnesota law allows a student who takes at least 60% of a full-time credit load to qualify as a full time student for purposes of continued insurance coverage on a family policy

if the reduced credit load is due to illness, injury, or mental or physical disability and with appropriate documentation from a physician. Insurance companies are responsible for informing you of this option if it applies to you. You can receive certification of your credit load and the number of credits required for a 60% credit load in 150 Williamson Hall or 130 Coffey Hall. Your physician should then forward your certification with the appropriate medical documentation to your insurance company.

More information about deferments and other exceptions to the definitions of full-time and half-time status is available at 150 Williamson Hall or 130 Coffey Hall.

VETERANS CERTIFICATION

Students under Chapters 30, 32, 35, 106, and 901—The following is a summary of University and Department of Veteran Affairs (V.A.) procedures and does not include all the information you may need. You can contact the following offices for further information:

- Veterans Certification Office
  150 Williamson Hall, Minneapolis
  625-8076
- Department of Extension Classes
  101 Wesbrook Hall, Minneapolis
  624-3341
- Department of Independent Study
  45 Wesbrook Hall, Minneapolis
  624-0000
- Continuing Education and Extension
  314 Nolte Center, Minneapolis
  625-2500

Only the V.A. can determine an applicant's eligibility for educational assistance. Because eligibility criteria are different for the several educational assistance programs and the benefits for the programs vary, students with specific questions about eligibility should contact the V.A.

If you plan on attending fall, winter, and spring quarters, you can request certification for the entire academic year by going in person to one of the offices listed above. If you enroll for (or drop to) less than half time, you can be certified only for the current term; when you register for the next term you will have to reapply for certification.

You can request continuous enrollment/payment during fall, winter, or spring quarters for the next quarter if you did not initially sign up for the academic year. Continuous enrollment/payment *cannot* be requested in the following instances:

- if you are attending less than half time, are on active duty, or are receiving chapter 901 benefits, *or*
- if you withdrew from all courses in the preceding term.

If you will be enrolling at a half-time rate or more when you enter school initially or reenter, but are not eligible for continuous payment, you may elect to be paid in advance for the first partial (or full) month of training plus the following full month. Payment for the next month, however, will not be available until the very end of that month. This means that if you receive advance payments for September and October for fall, you will not receive your November check until the first week in December. Advance payment for fall can be requested from June 18–August 22, 1996 (advance payment for winter can be requested from September 30–December 2, 1996; advance payment for spring can be requested from December 23, 1996–February 24, 1997). Delays in your VA benefit payments will not exempt you from billing charges or late payment fees.

If you do not participate in advance payment or if you are not eligible for continuous pay, you must be officially registered before requesting certification. Certification cannot be sent to the V.A. until the first day of the quarter. You should receive your first check 6-8 weeks after the certification is sent to the V.A.

Whenever you register for extension courses you are required to show a paid fee statement by the first day of each quarter to be certified. If you requested certification for the academic year, you must be officially registered by the first day of each quarter. Failure to register by the first day of the quarter will result in notification of the V.A. and cancellation of payments.

If you cancel any or all of your courses, notify one of the offices listed above. Your reduction in credits will be reported to the V.A. The V.A. will adjust your benefits retroactive to the first day of the quarter and may require you to repay all money paid to you for any courses that you cancel.

Any grade of N will be reported to the V.A. The V.A. will adjust your benefits retroactive to the first day of the quarter and require that you repay all money paid to you for that course. Likewise, any grade of I will be reported to the V.A. However, the V.A. will allow one year for completion of the course before repayment is required. You are responsible for notifying the Certifications Office, 150 Williamson Hall, once you receive a grade to replace the I.

Whenever you claim mitigating circumstances for reductions in your credit load, you should present written evidence to the Certifications Office to be included with the report submitted to the V.A.

Chapter 31 Veterans—If you receive vocational rehabilitation assistance, you can refer questions to the scholarship terminal at 202 Fraser Hall. Bring your fee statement and course list to the appropriate bookstore to obtain books and supplies.

TUITION BENEFITS FOR GRADUATE ASSISTANTS

NOTE: At the time of publication of this *Class Schedule*, the University was considering changes to the payroll system and well as changes to graduate assistant employment requirements. Changes to the following policies and practices were *not* under consideration. Should any changes to these or other rules occur, however, they will be distributed to departments and students as soon as available.

Important Notice for Graduate Assistants—Students who work *any* number of hours on an assistantship fall, winter, or spring quarters must be registered for those quarters. Regis-

tration of one or more credits taken either A-F or S-N (or thesis credits if eligible) will fulfill this requirement. Audit (V) registration by itself is not sufficient to hold an assistantship. **If you do not register for credit or if you cancel all credits, your graduate assistantship will be terminated and you will be billed for all tuition for that quarter.**

To be excluded from FICA withholding, graduate assistants must meet the following exclusion tests:

1. You must be enrolled for a minimum of 6 credits for the quarter or semester, or enrolled for a minimum of 1 credit if you are a doctoral candidate (who has passed the preliminary oral examination for the Ph.D.) *and*
2. You must be employed for no more than 50% time or twenty hours per week.

Graduate students who are paid more than 50% on regular payroll, or more than 40 hours in a biweekly pay period, or any combination of payments and appointments exceeding half-time, and/or who have not met the registration requirements will have taxes withheld at the rate of 6.2% for Social Security and 1.45% for Medicare on total gross salary. Your employing department will be required to pay an equal amount.

Deadlines to meet the registration requirement for student exclusion from FICA for fall quarter 1996 will be published and distributed as soon as available.

Tuition Benefits—Currently, graduate assistants who hold a minimum 25% appointment for an entire 13 week quarter or 19.5 week semester become eligible for tuition benefits equal to twice the percentage of their appointment. (Hourly equivalents to the minimum percent time are 130 hours per quarter or 195 hours per semester. Tuition benefits for a 25% appointment equal 50%, a 30% appointment equals 60%, and so on. The maximum tuition benefit is 100%. These benefits provide for tuition only (including the $30 base tuition fee) and do not cover the student services fee or course fees. **NOTE: The official quarter dates used in past years will probably change beginning fall 1996. The minimum hourly or percentage requirement may change as well.**

Official quarter dates are used to determine benefits. *Appointments which begin after the quarter has started will be prorated,* but must be the equivalent of the minimum requirement for reaching tuition benefit eligibility. Under the 1995-96 system, a 50% appointment for half the quarter would be adjusted to a 25% appointment for benefit purposes, and a 50% tuition benefit would be awarded.

Procedures for Tuition Benefits—Fall tuition benefits will be credited to Student Accounts Receivable in mid to late September.

If you are taking out student loans, you should contact the GAO one week before financial aid checks are issued to ensure that your tuition benefit has been processed.

*If you are **not** taking out student loans for fall,* you should wait until you receive your first billing statement from Student Accounts Receivable (not your fee statement) before questioning your account (see page 28 for billing dates).

The Tuition Benefit Information form is no longer required. A new form, "Application for Extension Classes Tuition Benefit," is needed for all courses taken through Continuing Education and Extension (CEE). Copies of this new form were distributed to departments August, 1995, or are available in the GAO.

Payment of Fees—You must pay your fees (or installment payments), or have your account properly credited by the payment due date to avoid a late payment fee. If you hold an assistantship but the tuition benefit has not been adjusted by the time you receive your bill, you must contact the GAO prior to the payment due date or be assessed late payment fees. You are responsible for all late payment and installment fees if your accounts have not been adjusted by the payment due date. **Do not ignore your bill or assume the adjustments will be made for you automatically.** Graduate assistants whose remaining tuition and fees total $150 or more may qualify for payroll deduction. See page 30 for application procedures.

If you have paid in full and subsequently receive a graduate assistantship, contact the GAO, 625-5001, for instructions.

Tuition Benefit Reversal—If you do not complete your appointment (i.e., leave in the middle of the quarter, graduate early, or work less than the estimated number of hours), you will be billed for *all or a portion of your tuition.* (Nonresidents would be charged the nonresident tuition rate.)

Information—For more information on graduate assistant benefits, procedures, and policies, refer to *The Handbook for Graduate Assistants,* or contact your department or the Graduate Assistant Office, Suite 200 (Suite 1-41 for in-person assistance), Donhowe Building, 319 15th Ave. SE, Minneapolis, MN 55414; phone (612) 625-5001 or FAX (612) 625-9801; e-mail: gaoinfo@gold.tc.umn.edu. Office hours are 8-4:30 Monday-Friday.

Graduate Assistant Health-Care Plan—See page 24 for information.

RESIDENT TUITION PRIVILEGES

Graduate Assistants and Immediate Family Members—Non-resident students enrolled in the Graduate School or in another post-baccalaureate degree program who hold at least a 25% time appointment as a teaching assistant, research assistant, or administrative fellow are eligible for resident tuition rates. This eligibility extends also to a parent, spouse, child, or ward.

If you hold such an appointment, and your appointment has cleared the personnel system, you will automatically be charged the resident tuition rate when you register. If you are charged the nonresident tuition rate, you should contact the Graduate Assistant Office (GAO), 200 Donhowe Building, 319 15th Ave. SE, Minneapolis, 625-5001 (Suite 1-41 for in-person assistance).

If you hold such an appointment and you want your family member to receive resident tuition rates, you must contact the GAO quarterly.

Any changes to this policy will be distributed as soon as available.

Graduate School Fellows/Trainees (9561, 9562) and Immediate Family Members—Graduate students who hold fellowships or traineeships are eligible for resident tuition rates, provided the award is administered by the University and the stipend is at least equal to a 25% time graduate assistantship. This eligibility also extends to members of the *immediate* family (i.e., parent, spouse, child, or ward).

If you hold a fellowship or traineeship, codes for resident tuition have, most likely, already been entered into the computerized registration system. If, for some reason, you are charged the nonresident tuition rate when you register, you should contact the Graduate Fellowship Office, 321 Johnston Hall, 625-7579.

Any changes to this policy will be distributed as soon as available.

If you hold a qualifying fellowship or traineeship and you want your family member to receive resident tuition rates, contact the Graduate Fellowship Office for more information.

Professional School Fellows/Trainees (9564, 9565) and Immediate Family Members—Professional school fellows/trainees and immediate family members are also eligible for resident tuition rates, provided the fellowship/traineeship is at least equal to a 25% graduate assistantship. If, for some reason, you are charged the nonresident tuition rate when you register, first contact your department payroll personnel and then the Graduate Assistant Office, 200 Donhowe Building, 319 15th Ave. SE, Minneapolis, 625-5001 (Suite 1-41 for in-person assistance).

Any changes to this policy will be distributed as soon as available.

Former Graduate Assistants, Professional School Trainees/Fellows and Immediate Family Members—If you no longer hold a graduate assistantship or professional school fellowship/traineeship, but *have* held qualifying appointments for three or more quarters, you and your immediate family members may still be eligible for up to six more quarters of resident tuition. (Benefits must be used within 3 years of the last qualifying appointment.) Contact the Graduate Assistant Office, 200 Donhowe Building, 319 15th Ave. SE, Minneapolis, 625-5001 (Suite 1-41 for in-person assistance) for more information.

Academic Appointees and Immediate Families—Academic appointees at the University of Minnesota and their immediate family members are eligible to pay resident tuition rates subject to the following rules concerning class title and percentage of appointment.

Appointees (and their immediate family members) who hold 75% appointments for an entire quarter in the following classes are eligible to pay resident rates during that quarter: 93xx, 94xx, 96xx, 97xx, 9540, 9546, 9548, 9551, 9554, 9556, and 9563.

Appointees (and their immediate family members) who hold at least a 25% appointment in the following classes, with a level of support equal to or greater than that provided by a 25% graduate assistantship, are eligible to pay resident tuition rates during the quarter of their appointment: 9538, 9539, 9545, 9553, 9558, 9561, 9562, 9564, and 9565.

To claim the resident tuition benefit, appointees or immediate family members from both groups listed above should have the appointee's employing department complete a Verification of Appointment for Resident Tuition form. A separate form will be needed for each individual appointee or immediate family member for each quarter in which resident tuition is requested. Completed forms should be taken to a registration center (202 Fraser Hall or 130 Coffey Hall); resident rates will then be assessed. If you are registering on-line, you may mail your form to your registration center.

Appointees to the above class titles do not accrue extended resident tuition credit. Resident tuition privileges are available to appointees and their immediate family members *only* during quarters of qualifying appointment.

Civil Service Employees—Civil service employees of the University of Minnesota who work 75% time or more during an entire quarter and their immediate family members are eligible to pay resident tuition rates. These resident tuition privileges are available *only* during quarters of qualifying employment.

To claim the resident tuition benefit, *employees on regular payroll* or their immediate family members should have the employee's department complete a Verification of Appointment for Resident Tuition form. Every quarter a separate form is needed for each employee and family member. Completed forms should be taken by the student to a registration center (202 Fraser Hall or 130 Coffey Hall); resident rates will then be assessed. If you are registering on-line, you may mail your form to your registration center. *Employees on miscellaneous payroll* and their immediate family members must initially pay nonresident tuition and be reimbursed after the quarter ends. The employment department must certify that the employee worked at least 390 hours during the quarter.

section 4 liberal education

The University of Minnesota—Twin Cities liberal education requirements apply to all students entering a baccalaureate degree program fall 1996 and later. If you entered a degree program before fall 1996 and are uncertain whether the liberal education requirements apply to you, check with your academic adviser.

LIBERAL EDUCATION REQUIREMENTS

Overview—A liberal education introduces you to the modes of inquiry and subject matter of the major branches of knowledge, including the factual information and theoretical or artistic constructs that form their foundations; the "ways of knowing"—the kinds of questions asked and how insight, knowledge, and data are acquired and used; the changes over time of their central ideas or expressive forms; and the interrelationships among them and with human society in general. To these ends, study by all undergraduate students on the Twin Cities campus is guided by a common framework.

THE DIVERSIFIED CORE CURRICULUM

Physical and Biological Sciences—Comprehension of physical and biological principles; understanding of and ability to use the methods of scientific inquiry—the ways in which scientists investigate physical and biological phenomena; and appreciation of the importance of science and the value of a scientific perspective.

Requirement: A minimum of 3 courses totaling at least 12 credits, including 1 course with laboratory or field experience in the physical sciences and 1 course with laboratory or field experience in the biological sciences.

History and Social Sciences—Knowledge of how historians and social scientists describe and analyze human experiences and behavior; study of the interrelationships among individuals, institutions, structures, events, and ideas; understanding of the roles individuals play in their historical, cultural, social, economic, and political worlds.

Requirement: A minimum of 3 courses totaling at least 12 credits, including one course with historical perspective.

Arts and Humanities—Understanding of approaches to the human condition through works of art, literature, and philosophy; knowledge of how artists create and humanistic scholars think; ability to make aesthetic judgments.

Requirement: A minimum of 3 courses totaling at least 12 credits, including courses in two of the following: literature, philosophical perspective, and visual or performing arts.

Mathematical Thinking—Acquisition of mathematical modes of thinking; ability to evaluate arguments, detect fallacious reasoning, and evaluate complex reasoning chains; appreciation of the breadth of applications of mathematics and its foundations.

Requirement: A minimum of 1 course totaling at least 4 credits.

THE DESIGNATED THEMES OF LIBERAL EDUCATION

The designated themes of liberal education offer a dimension to liberal learning that complements the diversified core curriculum. Each of the themes focuses on an issue of compelling importance to the nation and the world, the understanding of which is informed by many disciplines and interdisciplinary fields of knowledge.

Requirement: A minimum of 6 courses (or 5 courses if one includes an approved practicum), including one course in each of the following:

Cultural Diversity—Understanding of the roles gender, ethnicity, and race play in structuring the human experience in and developing the social and cultural fabric of the United States.

International Perspectives—Comprehension of the ways in which you are part of a rapidly changing global environment dominated by the internationalization of most human endeavors.

Environment—Knowledge of the interaction and interdependence of the biophysical systems of the natural environment and human social and cultural systems.

Citizenship and Public Ethics—Reflection on and determination of a clearer sense of your present and future civic relationships and your obligations to the community.

You may satisfy liberal education requirements with a variety of courses and credits because some courses serve multiple goals in the curriculum. For example, some courses will satisfy a diversified core requirement and a designated theme requirement, and other courses will satisfy the requirements for each of two designated themes. Thus, you may satisfy the designated theme requirements with a smaller number of courses than is stated in the requirement.

Guide to Courses—The following charts list the courses that fulfill each of the diversified core curriculum and designated theme areas and the probable quarters that each is offered. Listings for winter and spring quarters are tentative. The winter and spring *Class Schedules* will contain updated lists.

COURSES THAT SATISFY REQUIREMENTS FOR DIVERSIFIED CORE CURRICULUM

Physical and Biological Sciences

Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
AgET 3025	Engineering Principles and Applications	Phys/NL			x	
Agro 1007	Biology of Plant Food Systems & the Environment	Biol/L	Envt	p. 64		x
AnPl 3010	Environment and World Food Production	Biol/NL	Envt		x	
AnSc 3510	Intro to Human and Animal Growth & Development	Biol/NL			x	
Anth 1101	Human Origins	Biol/L	Envt	p. 66	x	x
Ast 1019	Our Changing Planet	Phys/L	Envt			x
Ast 1021H	Introduction to Astronomy	Phys/L	Envt	p. 70		
Ast 1031	Exploring the Universe: A	Phys/NL	Envt	p. 70	x	x
Ast 1032	Exploring the Universe: L	Phys/L	Envt	p. 70	x	x
BioC 1401	Elementary Biochemistry	Biol/NL			x	x
Biol 1009	General Biology	Biol/L		p. 71	x	x
Biol 1051	Environmental Studies	Biol/NL	Envt		x	
Biol 1101	Heredity and Human Society	Biol/NL	C/PE	p. 71	x	
Biol 1106	General Zoology	Biol/L		p. 71	x	x
Biol 1201	Evolutionary and Ecological Perspectives	Biol/L		p. 71	x	x
Biol 3051	Environmental Studies	Biol/NL	Envt			
CDis 1304	The Physics and Biology of Spoken Language	Phys/L			x	
Chem 1001	General Principles of Chemistry	Phys/L		p. 74	x	
Chem 1002	Basic Organic Chemistry	Phys/L				x
Chem 1003	Physical World, Chemistry	Phys/L	Envt			x
Chem 1008	Physical World, Chemistry	Phys/NL	Envt			x
Chem 1051	Chemical Principles I	Phys/L	Envt	p. 75	x	x
Chem 1052	Chemical Principles II	Phys/L	Envt	p. 75	x	x
EEB 1019	Our Changing Planet	Phys/L	Envt			x
EEB 3001	Introduction to Ecology	Biol/NL	Envt		x	x
Ent 1005	Economic Entomology	Biol/L	Envt	p. 94		
Ent 3005	Insect Biology	Biol/NL				x
Ent 3200	Social Insects	Biol/NL			x	
FR 3103	Meteorology and Climatology for Natural Resource Managers	Phys/NL	Envt	p. 97		
FR 3104	Forest Ecology	Biol/NL	Envt	p. 97		
FScN 1020	Introductory Microbiology	Biol/L		p. 96		
FScN 1612	Principles of Nutrition	Biol/NL		p. 96	x	x
GC 1111	Science in Context: Weather and Climate	Phys/NL		p. 98	x	x
GC 1112	Ecological Evaluation of Environmental Problems	Biol/NL	Envt	p. 98	x	x
GC 1131	Biological Science: Principles	Biol/L		p. 99	x	x
GC 1132	Biological Science: The Human Body	Biol/NL		p. 99	x	x
GC 1137	Biological Sciences Laboratory: The Human Body	Biol/L		p. 99	x	x
GC 1166	Principles of Chemistry	Phys/NL		p. 99	x	x
GC 1171	Physical Geology	Phys/L		p. 99		
GC 1172	Historical Geology	Phys/L			x	
GC 1173	Geology of the National Parks	Phys/L				x
Geo 1001	The Dynamic Earth: An Introduction to Geology	Phys/L	Envt	p. 101	x	x
Geo 1002	Historical Geology	Phys/L			x	x

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

Abbreviations:

AH	Arts and Humanities
Biol/L	Biological Science with Laboratory
Biol/NL	Biological Science without Laboratory
CD	Cultural Diversity
C/PE	Citizenship and Public Ethics
Envt	Environment
Hist	Historical Perspective
IP	International Perspective
Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
*	Course listings for winter and spring quarters are tentative and subject to change.

Physical and Biological Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
Geo 1003	Intro to the Mesozoic: Evolution, Ecology, and Extinction of Dinosaurs	Phys/NL			x	
Geo 1005	Geologic Perspectives on Energy	Phys/NL	Envt		x	
Geo 1011	Volcanoes of the Earth	Phys/NL				x
Geo 1012	Planet Earth	Phys/NL	Envt	p. 101		x
Geo 1019	Our Changing Planet	Phys/L	Envt			x
Geo 1601	Oceanography	Phys/NL			x	
Geo 1701	Faces of the Earth	Phys/NL	IP			
Geog 1402	Geography of Environmental Systems	Phys/NL	Envt		x	
Geog 1425	Introduction to Meteorology	Phys/L		p. 100		x
Hort 1036	Plant Propagation	Biol/L		p. 105	x	
Hort 3003	Plant Genetics and Improvement	Biol/L		p. 105		
MdBc 1030	Elementary Biochemistry	Biol/NL		p. 71		
NRES 3020	Plant Resource Management & the Environment	Biol/L	Envt		x	
NRES 3060	Water Quality in Natural Resource Management	Biol/NL	Envt			x
Phys 1001	The Physical World	Phys/NL		p. 130	x	x
Phys 1001 & Phys 1005	The Physical World; Physics Laboratory	Phys/L		p. 130	x	x
Phys 1041	Introductory Physics	Phys/L		p. 130	x	
Phys 1042	Introductory Physics	Phys/L			x	x
Phys 1104	General Physics	Phys/NL		p. 130		
Phys 1104 & Phys 1107	General Physics; General Physics Laboratory	Phys/L		p. 130		
Phys 1105	General Physics	Phys/NL			x	
Phys 1105 & Phys 1108	General Physics; General Physics Laboratory	Phys/L			x	
Phys 1106	General Physics	Phys/NL				x
Phys 1106 & Phys 1109	General Physics; General Physics Laboratory	Phys/L				x
Phys 1251	General Physics I	Phys/L		p. 130	x	x
Phys 1252	General Physics II	Phys/L		p. 131	x	x
Phys 1253	General Physics III	Phys/L		p. 131	x	x
Phys 1254	General Physics IV	Phys/L		p. 131	x	
Phys 1451H	Honors Physics I	Phys/L		p. 131		
Phys 1452H	Honors Physics II	Phys/L			x	
Phys 1453H	Honors Physics III	Phys/L				x
Phys 1454H	Honors Physics IV	Phys/L		p. 131		
Phys 1911	Laboratory Based Physics for Teachers	Phys/L			x	
Phys 1912	Laboratory Based Physics for Teachers	Phys/L				x
Psy 3031	Sensation and Perception	Biol/NL		p. 133		
Psy 3061	Introduction to Biological Psychology	Biol/NL				
Soil 1020	The Soil Resource	Phys/L	Envt			
Soil 1425	Introduction to Meteorology	Phys/L		p. 142		x
Soil 3125	Basic Soil Science	Phys/L	Envt	p. 142	x	
VPB 3103	General Microbiology	Biol/NL		p. 147		x
History and Social Sciences						
Afro 1021	Introduction to Africa	SSci	IP	p. 64		
Afro 3001	Intro: West African History: Early Times to 1800	Hist	IP			
Afro 3061	The Black Family	SSci	CD			x
Afro 3072	Racism: Social and Psychological Consequences for Black Americans	SSci	CD			
Afro 3432	History of Africa: 1800 to Present	Hist	IP		x	
AmIn 1771	Introduction to American Indian Studies	SSci	CD	p. 65	x	x
AmIn 3026	Ojibwe Culture and History	Hist	CD		x	x
AmIn 3036	Dakota Culture and History	SSci	CD	p. 65		x
AmSt 1001	American Cultures	SSci	CD	p. 65		

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History and Social Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
AmSt 1002	American Cultures	SSci	CD		x	
AmSt 1003	American Cultures	SSci	CD			x
Anth 1102	Understanding Cultures	SSci	IP	p. 66	x	x
Anth 3003	The Rise of Civilization	SSci	IP		x	
Anth 3116	Ecological Anthropology	SSci	Envt			x
Anth 3303	Women: Anthropological Perspectives	SSci				
ApEc 1101	Principles of Microeconomics	SSci		p. 66	x	
ApEc 1102	Principles of Macroecomonics	SSci			x	x
ApEc 3040	Economic Development of American Agriculture	Hist		p. 66		
CAS 3512	Modern Iran	Hist	IP			
CAS 3531	Central Asian Culture	Hist	IP	p. 74		
CAS 3532	Russia and Central Asia	Hist	IP		x	
Chic 3105	Introduction to Chicano Studies: The Beginnings	Hist	IP			x
Chic 3106	Intro to Chicano Studies: Mexico and the U.S.	Hist	CD	p. 76		
Chic 3107	Introduction to Chicano Studies: The Chicano in Contemporary Society	Hist	CD		x	
Chic 3427	History of Cuba and Puerto Rico	Hist	IP			
Chic 3428	History of Relations Between the United States and Mexico: 1821-Present	Hist	IP			
Chic 3441	Chicano History to 1900	Hist	CD		x	
Chic 3442	Chicano History Since 1990	Hist	CD			x
Clas 1001	Age of Homer	Hist		p. 78		
Clas 1002	Age of Pericles	Hist				
Clas 1003	Age of Alexander	Hist			x	
Clas 1004	Age of Caesar	Hist				
Clas 1005	Age of Augustus	Hist				
Clas 1006	Age of Nero	Hist				x
Clas 1043	Introduction to Greek and Roman Archaeology	Hist		p. 78		
Clas 1082	Jesus in History	Hist		p. 78		
Clas 3071	Greek and Hellenistic Religions	Hist				
Clas 3072	The New Testament	Hist			x	
Clas 3073	Roman Religion and Early Christianity	Hist				
CPsy 1301	Introductory Child Psychology	SSci		p. 76	x	x
CPsy 3309	Intro Child Psychology for the Social Sciences	SSci		p. 76	x	x
CPsy 3331	Introduction to Social Development	SSci			x	
CSCL 1302	Discourse and Society II: Meaning and History	Hist		p. 82	x	x
CSCL 3421	Culture and the Production of Modern Identity, I: 1600-1750	Hist				
CSCL 3422	Culture and the Production of Modern Identity, II: 1750-1850	Hist				
CSCL 3472	Gay Men and Homophobia in American Culture	Hist	CD			
EAS 3465	China's Response to the West	Hist	IP			
Econ 1101	Principles of Microeconomics	SSci		p. 87	x	x
Econ 1102	Principles of Macroeconomics	SSci		p. 88	x	x
Econ 1104	Principles of Microeconomics	SSci		p. 88	x	x
Econ 1105	Principles of Macroeconomics	SSci			x	x
EdPA 3120	Childhood Education: Western Civilization	Hist			x	
Engl 3851	The English Language	SSci		p. 93	x	x
Engl 3853	Gender and the English Language	SSci	CD	p. 93		x
EPsy 3119	Learning and Cognitive Bases of Education	SSci		p. 89	x	

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

Abbreviations:

AH	Arts and Humanities
Biol/L	Biological Science with Laboratory
Biol/NL	Biological Science without Laboratory
CD	Cultural Diversity
C/PE	Citizenship and Public Ethics
Envt	Environment
Hist	Historical Perspective
IP	International Perspective
Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
*	Course listings for winter and spring quarters are tentative and subject to change.

History and Social Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
EPsy 3132	Psychology of Multiculturalism in Education	SSci	CD	p. 89	x	
EPsy 3139	Social and Developmental Psychology in Education	SSci	CD		x	
EPsy 5119	Learning and Cognitive Foundations of Education	SSci		p. 89	x	
EPsy 5139	Building a Learning Community	SSci	CD	p. 89	x	
FScN 3472	Food Selection Princliples	SSci		p. 96		
FSoS 3600	Family Issues Across the Lifespan	SSci	CD			
GC 1211	People and Problems	SSci	CD	p. 99	x	x
GC 1221	Minnesota History	Hist			x	x
GC 1231	United States: Growth of National Power	Hist			x	x
GC 1233	United States: Government and Politics	SSci		p. 99	x	x
GC 1235	United States: Law in Society	SSci	C/PE	p. 99	x	x
GC 1281	Psychology in Modern Society	SSci		p. 99	x	x
GC 1285	Cultural Anthropology	SSci	IP	p. 99	x	x
GC 1511	Introduction to Business and Society	SSci		p. 100	x	x
Geog 1302	The World Around Us	SSci	IP	p. 100		x
Geog 3101	Geography of United States and Canada	SSci	CD	p. 100		x
Geog 3102	Geographic Issues in the United States, Canada	SSci				
Geog 3141	Africa	SSci	IP		x	
Geog 3161	Europe	SSci	IP			x
Geog 3331	Economic Geography	SSci	IP	p. 100	x	
Geog 3371	Introduction to Urban Geography	SSci		p. 100		x
Geog 3381	Population in an Interacting World	SSci	IP	p. 100		
Hist 1011	Introduction to World History	Hist	IP	p. 103		
Hist 1012	Introduction to World History	Hist	IP		x	
Hist 1013	Introduction to World History	Hist	IP			x
Hist 1017	Introduction to World History	Hist	IP			
Hist 1018	Introduction to World History	Hist	IP			
Hist 1021	Western Civilization	Hist	IP			
Hist 1031	Introduction to European Civilization: The Medieval Centuries	Hist	IP	p. 103		
Hist 1032	Introduction to European Civilization: Early Modern Europe, 1350-1750	Hist	IP		x	
Hist 1033	Introduction to European Civilization: 1750 to Present	Hist	IP			x
Hist 1301	American History	Hist	CD	p. 103		
Hist 1302	American History	Hist	CD		x	x
Hist 1307	American History	Hist	CD			
Hist 1308	American History	Hist	CD			
Hist 3151	History of the British Isles	Hist	C/PE	p. 103		
Hist 3152	History of the British Isles	Hist	C/PE		x	
Hist 3357	Topics in the Social History of the U.S.: 19th-Century Minnesota	Hist	C/PE			
Hist 3401	Survey of Latin American History: Colonial Period to 1800	Hist	IP	p. 103		
Hist 3402	Survey of Latin American History: 1800-1929	Hist	IP		x	
Hist 3403	Survey of Latin American History: 1929 to Present	Hist	IP			x
Hist 3431	History of Africa to 1800	Hist	IP	p. 103		
Hist 3432	History of Africa, 1800 to Present	Hist	IP		x	
Hist 3462	Introduction to East Asia: The Imperial Age	Hist	IP	p. 103		
Hist 3463	Introduction to East Asia in Modern Times	Hist	IP			x
Hist 3465	China's Response to the West	Hist	IP			
Hist 3615	Women in European History, 1500 to Present	Hist		p. 103		
Hist 3636	Russian History from the Origins to Peter the Great	Hist	IP			x
Hist 3704	Daily Life in Europe, 1348-1750	Hist	IP			
HMed 3040	Human Disease and the Environment in History	Hist	Envt	p. 104		
HMed 3401	Early History of Medicine: The Classical Tradition	Hist		p. 104		
HMed 3402	Health Care in Modern History	Hist			x	
HMed 3403	Health Care in Modern History	Hist				x

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History and Social Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
HSci 1711	Technology & Western Civilization: Ancient & Medieval	Hist	IP	p. 104		
HSci 1712	Technology & Western Civilization: Renaissance to Industrial Revolution	Hist	IP		x	
HSci 1713	Technology & Western Civilization: 19th, 20th Centuries	Hist	IP			x
HSci 1811	Introduction to the History of Science: Ancient	Hist	IP	p. 104		
HSci 1812	Introduction to History of Science: The Scientific Revolution	Hist	IP		x	
HSci 1813	Introduction to History of Science: Modern Science	Hist	IP			x
HSci 3331	Technology and American Culture	Hist	CD	p. 104		
HSci 3332	Science and American Culture	Hist	CD		x	
HSci 3402	Science, Ethics, and Values	Hist	C/PE			
HSci 3711	Technology & Western Civilization: Ancient & Medieval	Hist	IP	p. 104		
HSci 3712	Technology & Western Civilization: Renaissance to Industrial Revolution	Hist	IP		x	
HSci 3713	Technology & Western Civilization: 19th, 20th Centuries	Hist	IP			x
HSci 3811	Introduction to the History of Science: Ancient	Hist	IP	p. 104		
HSci 3812	Introduction to History of Science: The Scientific Revolution	Hist	IP		x	
HSci 3813	Introduction to History of Science: Modern Science	Hist	IP			x
HSci 3825	The Nuclear Age	Hist	IP			
Jour 1001	Introduction to Mass Communication	SSci		p. 108	x	x
Jour 3614	History of Mass Communication Technology	Hist				
Jour 3796	Mass Media and Politics	SSci		p. 108		
LAS 3401	Survey of Latin American History: Colonial Period to 1800	Hist	IP	p. 111		
LAS 3402	Survey of Latin American History: 1800-1929	Hist	IP		x	
LAS 3403	Survey of Latin American History: 1929 to Present	Hist	IP			x
Ling 3001	Introduction to Linguistics	SSci		p. 111	x	x
MELC 3511	Ancient Iran	Hist	IP			x
MELC 3512	Modern Iran	Hist	IP			
MELC 3532	Russia and Central Asia	Hist	IP		x	
Nurs 1010	History of the United States Health Care System	Hist				
Pol 1001	American Government and Politics	SSci	C/PE	p. 132	x	x
Pol 1025	World Politics	SSci	IP	p. 132	x	x
Pol 1041	Contemporary Political Ideologies	SSci	C/PE		x	x
Pol 1054	Government and Politics in a Changing World	SSci	IP	p. 132		x
Pol 3051	Introduction to Political Analysis	SSci		p. 132	x	x
Pol 3835	International Relations	SSci	IP	p. 133	x	x
Psy 1001	Introduction to Psychology	SSci		p. 133	x	x
Psy 1004	Introductory Laboratory Psychology	SSci		p. 133	x	
Psy 1005	Introductory Laboratory Psychology	SSci			x	x
Psy 3011	Introduction to Psychology of Learning	SSci			x	
Psy 3051	Introduction to Cognitive Psychology	SSci			x	
Psy 3101	Introduction to Personality	SSci				x
RelA 1082	Jesus in History	Hist		p. 138		
RelA 3071	Greek and Hellenistic Religions	Hist				
RelA 3072	The New Testament	Hist			x	
RelA 3073	Roman Religion and Early Christianity	Hist				
Rhet 1303	Humanities: Science, Religion, and the Search for Human Nature	Hist		p. 139	x	x
Soc 1001	Introduction to Sociology	SSci	CD	p. 142	x	x
Soc 3101	Introduction to American Criminal Justice	SSci	C/PE	p. 142	x	

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History and Social Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
Soc 3481	Modern Japanese Society	SSci	IP		x	
Soc 3501	The Family	SSci	CD			
Soc 3524	America's Sexual Crisis	SSci		p. 142		
Soc 3601	Urban Community	SSci	IP			
Spch 3211	Introduction to Electronic Media in America	SSci		p. 144	x	
Spch 3401	Introduction to Communication Theory	SSci			x	x
Spch 3601	Introduction to Rhetorical Theory	Hist	C/PE	p. 144		x
SW 3202	Interventions in Community and Social Policy	SSci	C/PE			x
WoSt 1002	Introduction to Women's Studies	SSci	CD			
WoSt 1003	Women in World Cultures	SSci	IP			
WoSt 3103	Feminist Approaches to History	Hist				
WoSt 3405	Latin American Women's Lives	SSci				
WoSt 3406	Women, Race, and Class in the U.S.	SSci	CD			
Arts and Humanities						
Afro 3591	Introduction to Afro-American Literature	Lit	CD	p. 64		
Afro 3601	Introduction to African Literature	Lit	IP	p. 64		
Afro 3654	African Cinema	Vis	IP		x	
AmIn 3116	American Indian Literature	Lit	CD	p. 65	x	
AmIn 3211	American Indian Philosophies	Phil	CD	p. 65	x	x
Arch 1301	Introduction to Architectural Drawing	Vis		p. 67	x	x
Arch 1401	The Designed Environment	AH	Envt	p. 67	x	
Arch 3411	History of Architecture to 1750	Vis	IP	p. 67		
Arch 3412	History of Architecture Since 1750	Vis	IP		x	
Arch 3413	Landscape Architectural History	Vis				
ArtH 1016	Introduction to Asian Art	Vis	IP	p. 70		
ArtH 3014	Art of India	Vis	IP			x
ArtH 3015	Art of Islam	Vis	IP	p. 70		
ArtH 3017	Islamic Culture	AH	IP		x	
ArtH 3142	Arts of Egypt and the Near East	Vis	IP			
ArtH 3411	History of Architecture to 1750	Vis	IP	p. 70		
ArtH 3412	History of Architecture Since 1750	Vis	IP		x	
ArtS 1101	Drawing I	Vis		p. 68	x	x
ArtS 1301	Sculpture	Vis		p. 68	x	x
ArtS 1302	Sculpture	Vis		p. 68	x	x
ArtS 1401	Introduction to Studio Arts	Vis	IP	p. 68	x	x
ArtS 1510	Printmaking: Intaglio	Vis		p. 68	x	x
ArtS 1520	Printmaking: Lithography	Vis		p. 68	x	x
ArtS 1530	Printmaking: Relief	Vis		p. 68	x	
ArtS 1540	Printmaking: Screen	Vis				x
ArtS 1602	Electronic Art	Vis		p. 68	x	x
ArtS 1701	Photo Medium	Vis		p. 68	x	x
ArtS 1811	Ceramics: Handbuilding	Vis		p. 69	x	x
ArtS 1812	Ceramics: Wheel Throwing	Vis		p. 69	x	x
Chic 3212	La Chicana	Lit	CD	p. 76		x
Chic 3213	Chicano Music and Art	Vis	CD			x
Chic 3507	Introduction to Chicano Literature	Lit		p. 76		
Chic 3508	Introduction to Chicano Literature: Text, Context	Lit			x	
Chn 3091	Filmic Construction of Modern Identity in China	Vis	IP			
Chn 3171	Introduction to Chinese Literature in Translation I	Lit	IP			
Chn 3172	Introduction to Chinese Literature in Translation II	Lit	IP	p. 76		
Clas 1042	Greek and Roman Mythology	AH		p. 78	x	x
Clas 3001	Greek, Roman Lyric Poetry in Translation	Lit				

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

Arts and Humanities--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
Clas 3035	Mythology in Western Art	AH				
Clas 3081	Classical Epic in Translation	Lit		p. 78		x
Clas 3082	Greek Tragedy in Translation	Lit			x	
Clas 3142	Art of Egypt	Vis	IP			
CSCL 1001	Introduction to Cultural Studies: Rhetoric, Power, Desire	AH		p. 82	x	
CSCL 1301	Discourse and Society I: Reading Culture	AH		p. 82	x	x
CSCL 1303	Discourse and Society III: Knowledge, Persuasion, Power	AH		p. 82	x	x
CSCL 3115	Cinema and Ideology	Vis				
CSCL 3132	The Modern Novel in a Comparative Perspective	Lit				
CSCL 3172	Music as Discourse	Vis		p. 82		
CSCL 3175	Comedy: Text and Theory	AH				x
CSCL 3176	Oppositional Cinemas	Vis	IP			
CSCL 3321	Theories of Culture	AH				x
CSCL 3331	Science and the Humanities	Phil			x	
CSCL 3458	The Body and the Politics of Representation	AH		p. 82		
DHA 1101	Introduction to the Designed Environment	AH		p. 86		
DHA 1300	Introduction to Design	AH		p. 86	x	
Dnce 1101	Introduction to Dance	Vis	IP	p. 84		
Dnce 3401	Dance History I	Vis	IP		x	
Dnce 3402	Dance History II	Vis	IP			x
Dnce 3486	Ethnic Dance Traditions in American Society	Vis	CD	p. 84		
Dnce 3666	Dance Philosophy and Esthetics	Vis	IP	p. 84		
Dnce 5487	World Dance Studies	Vis	IP		x	
Engl 1005	Introduction to Literature	Lit		p. 92	x	x
Engl 1016	Introduction to American Literature	Lit	CD		x	
Engl 1017	Introduction to Modern Poetry	Lit				x
Engl 1018	Introduction to Modern Fiction	Lit		p. 92	x	x
Engl 1019	Introduction to Modern Drama	Lit				x
Engl 1241	Introduction to Shakespeare	Lit		p. 92	x	x
Engl 1591	Literature of American Minorities	Lit	CD	p. 92	x	x
Engl 1595	Introduction to "Third World" Literatures in English	Lit	IP	p. 92	x	x
Engl 3111	Survey of English Literature	Lit		p. 92		
Engl 3112	Survey of English Literature	Lit			x	
Engl 3113	Survey of English Literature	Lit				x
Engl 3241	Shakespeare	Lit		p. 92	x	x
Engl 3242	Shakespeare	Lit		p. 92	x	x
Engl 3411	Survey of American Literature to 1850	Lit		p. 93		
Engl 3412	Survey of American Literature, 1850-1900	Lit			x	
Engl 3413	Survey of American Literature, 1900-1945	Lit				x
Engl 3455	American Short Story	Lit		p. 93		x
Engl 3591	Introduction to Afro-American Literature	Lit	CD	p. 93		
Engl 3651	Poetry	Lit			x	
Engl 3671	The Novel	Lit				x
EngW 1101	Introduction to Creative Writing	Lit		p. 93		x
Fren 3101	Introduction to French Literary Texts: Poetry	Lit	IP	p. 98	x	x
Fren 3103	French Literary Texts: Novel	Lit	IP	p. 98	x	x

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Abbreviations:

AH	Arts and Humanities
Biol/L	Biological Science with Laboratory
Biol/NL	Biological Science without Laboratory
CD	Cultural Diversity
C/PE	Citizenship and Public Ethics
Envt	Environment
Hist	Historical Perspective
IP	International Perspective
Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts

* Course listings for winter and spring quarters are tentative and subject to change.

Arts and Humanities--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
Fren 3606	Quebec: Literature and Film in Translation	Lit	IP	p. 98		
GC 1311	Art: General Arts	Vis	IP	p. 99	x	x
GC 1331	Musical Heritage	Vis	IP		x	x
GC 1357	World Religious Beliefs	Phil	IP	p. 99		
GC 1365	Literatures of the United States	Lit	CD	p. 99	x	x
GC 1366	Images of Women in Literature	Lit	CD			
GC 1367	Contemporary Literature: International Perspectives	Lit	IP	p. 99	x	
GC 1371	Literature: Reading Short Stories	Lit		p. 99	x	x
GC 1374	The Movies: An Introductory Course	Vis		p. 99	x	
GC 1375	Film and Society	Vis	CD			x
GC 1481	Creativity: Art Laboratory: Experiences in the Media	Vis		p. 100	x	x
GC 1816	African-American Literature	Lit	CD	p. 100	x	x
GC 1836	Asian-American Literature	Lit	CD			x
Ger 3105	Reading and Analysis of Drama and Poetry	Lit		p. 102 (honors)	x	x
Ger 3604	Literature, History, and the German Film	Vis	IP	p. 102		
Hum 1004	Humanities in the Modern West IV	AH	IP	p. 106		
Hum 1005	Humanities in the Modern West V	AH	IP		x	
Hum 3004	Humanities in the Modern West IV	AH	IP	p. 106		
Hum 3005	Humanities in the Modern West V	AH	IP		x	
Ital 3201	Italian Literary Tradition	Lit				
Ital 3209	Medieval Italian Literature	Lit		p. 108		
Ital 3219	Renaissance and Baroque Italian Literature	Lit				
Ital 3289	Modern Italian Literature	Lit				
Ital 3301	Italian Lyric Poetry	Lit				
Ital 3303	Italian Drama	Lit				
Ital 3305	Italian Novel	Lit				
Ital 3501	Italian Civilization and Culture	AH	IP	p. 108		
Ital 3502	Italian Civilization and Culture	AH	IP		x	
LA 1301	Introduction to Landscape Architecture Drawing	Vis		p. 110	x	x
LA 1401	The Designed Environment	AH	Envt	p. 110	x	
LA 3411	History of Architecture to 1750	Vis	IP	p. 110		
LA 3412	History of Architecture Since 1750	Vis	IP		x	
LA 3413	History of Landscape Architecture	Vis				x
Mus 1001	Fundamentals of Music	Vis		p. 119	x	x
Mus 1021	Introduction to Music	Vis	IP			
Mus 1051	Piano Class for Non-Music Majors	Vis		p. 119	x	x
Mus 1052	Piano Class for Non-Music Majors	Vis			x	x
Mus 1053	Piano Class for Non-Music Majors	Vis				
Mus 3021	Introduction to Music	Vis	IP		x	
Mus 3029	Music in the 20th Century	Vis	IP		x	
Phil 1002	Introduction to Philosophy	Phil		p. 128	x	x
Phil 1003	Introduction to Ethics	Phil		p. 128	x	
Phil 1004	Introduction to Political Philosophy	Phil	C/PE	p. 128	x	x
Phil 1004 & Phil 1007	Introduction to Political Philosophy & Practicum (1007 must be taken concurrently with 1004)	Phil	C/PE (practicum)	p. 128	x	x
Phil 1005	Scientific Reasoning	Phil		p. 128		
Phil 1006	Philosophy and Cultural Diversity	Phil	CD		x	
Phil 3001	General History of Western Philosophy	Phil		p. 128		
Phil 3002	General History of Western Philosophy	Phil			x	
Phil 3003	General History of Western Philosophy	Phil				x
Phil 3004	General History of Western Philosophy	Phil				x
Phil 3302	Moral Problems of Contemporary Society	Phil	C/PE	p. 128	x	x

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Arts and Humanities--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
Phil 3307	Social Justice and Community Service: Basic Political Values	Phil	C/PE (practicum)	p. 128		
Phil 3308	Social Justice and Community Service: Power and Democracy	Phil	CD (practicum)		x	
Phil 3502	Introduction to Aesthetics	AH			x	
Phil 3601	Scientific Thought	AH		p. 128		
RelA 1001	Introduction to Religious Studies	AH				x
Rhet 1310	Humanities: The Land in American Experience (see page 55)	AH	CD	p. 139	x	x
Rhet 1380	Fictional History: Twentieth Century Through the Eyes of Novelists	Lit	IP	p. 139		x
Rhet 3381	Humanities: 20th Century Culture	AH	IP	p. 139	x	x
Rhet 3382	Humanities: Ethics of Total War	AH	C/PE		x	
Rhet 3395	In Search of Nature	AH	CD	p. 139		x
Rhet 3690	Scientific Controversy	AH	C/PE			
Russ 1304	Intro to Literature: 19th Century Russian Fiction	Lit	IP			
Russ 3421	Literature: Middle Ages: Dostoevsky in Translation	Lit	IP	p. 140		
Russ 3422	Literature: Tolstoy to the Present in Translation	Lit	IP		x	
Russ 3512	Russian Art and Culture from Peter I to the Present	Vis	IP			x
Th 1101	Introduction to the Theatre	Vis	CD	p. 146	x	x
Th 1102	Drama and Media	Vis		p. 146	x	x
WoSt 1001	Introduction to Women's Studies	AH	CD	p. 148		
WoSt 3102	Feminist Thought and Theory	Phil	C/PE	p. 148		
WoSt 3303	Women and Literature	Lit	CD			
WoSt 3304	Women and the Arts	Vis	CD			
WoSt 3306	U.S. Minority Women Writers	Lit	CD			
WoSt 3307	Modern Feminist Novel	Lit	CD			
WoSt 3308	Women Writers of Africa and Latin America	Lit	IP			
Mathematical Thinking						
Ast 1040	Mathematics and Our Universe	Math			x	
EPsy 3260	Basic and Applied Statistics	Math		p. 89	x	
GC 1454	Statistics	Math		p. 100	x	x
GC 1456	Functions and Problems of Logic	Math		p. 100	x	x
Math 1001	Excursions in Mathematics	Math		p. 113	x	x
Math 1005	Introduction to Elementary Mathematics	Math				
Math 1031	College Algebra and Probability	Math		p. 113	x	x
Math 1105	Topics in Elementary Mathematics	Math				
Math 1106	Topics in Elementary Mathematics	Math				
Math 1131	Finite Mathematics	Math		p. 113	x	x
Math 1142	Short Calculus	Math		p. 113	x	x
Math 1151	Precalculus II	Math		p. 113	x	x
Math 1251 or Math 1551H	One-Variable Differential and Integral Calculus I	Math		p. 113-114	x	x
Math 1351	Calculus: Concepts, Explorations, and Applications	Math		p. 114		
Phil 1001	Introduction to Logic	Math		p. 128	x	x
Psy 3801	Introduction to Statistical Methods	Math		p. 134		
Stat 1001	Introduction to Ideas of Statistics	Math		p. 144	x	x
Stat 3011	Statistical Analysis	Math		p. 144	x	x

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Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
*	Course listings for winter and spring quarters are tentative and subject to change.

COURSES THAT SATISFY REQUIREMENTS FOR DESIGNATED THEMES

Citizenship and Public Ethics

Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
AmSt 3302 & AmSt 3303	Proseminar: American Studies		C/PE; CD		x	x
Anth 5117	Natural Resources Anthropology		C/PE; Envt			
ApEc 3920	Agricultural Law		C/PE			x
ApEc 5640	Financing State and Local Governments		C/PE			x
Arch 1601	Design Professions and Society		C/PE	p. 67		x
BGS 3002	Business and Society		C/PE			
Biol 1101	Heredity and Human Society	Biol/NL	C/PE	p. 71	x	
CPsy 5334	Children and Youth in Society		C/PE	p. 76		x
CSCL 3979	Issues in Cultural Pluralism		C/PE; CD	p. 82		x
DHA 5485	Homelessness		C/PE			
EEB 3006	Visions of Nature: The Natural World and Political Thought		C/PE			x
Engl 3854	American Literacy and Cultural Diversity		C/PE; CD (practicum)		x	
FScN 1102	Food: Safety, Risks, and Technology		C/PE	p. 96		x
GC 1235	United States: Law in Society	SSci	C/PE	p. 99	x	x
GC 1294	Economics in Contemporary Society		C/PE	p. 99		
Geog 5605	Geographical Perspectives on Urban Planning I		C/PE; IP			x
Hist 3151	History of the British Isles	Hist	C/PE	p. 103		
Hist 3152	History of the British Isles	Hist	C/PE		x	
Hist 3348	Women in Modern America, 1890-1980		C/PE		x	
Hist 3357	Topics in the Social History of the U.S.: 19th-Century Minnesota	Hist	C/PE			
Hist 5337	Criminal Justice in American History		C/PE	p. 104		
HSci 3401	Engineering Ethics in Historical Perspective		C/PE	p. 104		
HSci 3402	Science, Ethics, and Values	Hist	C/PE			
HSci 5401	Engineering Ethics in Historical Perspective		C/PE	p. 104		
ID 3205	Community, Service, and Self		C/PE; CD (practicum)	p. 107		
ID 3206	Community, Service, and Self		C/PE; CD (practicum)		x	
ID 3207	Community, Service, and Self		C/PE; CD (practicum)			x
Jour 5274	Advertising in Society		C/PE	p. 108		x
NRES 3010	Ethics and Values in Resource Management		C/PE			x
Nurs	(Successful completion of Nursing program)		C/PE			
Phil 1004	Introduction to Political Philosophy	Phil	C/PE	p. 128	x	x
Phil 1004 & Phil 1007	Introduction to Political Philosophy & Practicum (1007 must be taken concurrently with 1004)	Phil	C/PE (practicum)	p. 128	x	x
Phil 3302	Moral Problems of Contemporary Society	Phil	C/PE	p. 128	x	x
Phil 3307	Social Justice and Community Service: Basic Political Values	Phil	C/PE (practicum)			
Pol 1001	American Government and Politics*	SSci	C/PE	p. 132	x	x
Pol 1041	Contemporary Political Ideologies	SSci	C/PE		x	x
Pol 1057	Citizenship in Britain (see page 55)		C/PE (practicum)			
Pol 3308	The United States Congress		C/PE	p. 132		
Pol 3309	Judicial Process		C/PE		x	
Pol 3323	Civil Liberties in America		C/PE; CD		x	
Pol 3331	Minnesota Government and Politics		C/PE	p. 133		
Pol 3352	Fieldwork in the Legislature		C/PE (practicum)		x	
Pol 3661	Democratic Theory		C/PE		x	
Pol 3873	Global Citizenship and International Ethics		C/PE; IP	p. 133		
Pol 5303	The American Democracy		C/PE			
Pol 5737	American Political Parties		C/PE			

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Citizenship and Public Ethics--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
Pol 5738	American Political Campaigns and Elections		C/PE	p. 133		
Pol 5766	American Political Culture and Values		C/PE		x	
Rhet 3266	Communication, Discussion in Small Group Decision Making		C/PE	p. 139	x	x
Rhet 3382	Humanities: Ethics of Total War	AH	C/PE		x	
Rhet 3690	Scientific Controversy	AH	C/PE			
Soc 3101	Introduction to American Criminal Justice	SSci	C/PE	p. 142	x	
Spch 1313	Analysis of Oral Argument		C/PE	p. 144	x	x
Spch 3411	Small Group Communication Processes		C/PE	p. 144	x	x
Spch 3431	The Role of Persuation in the Modern World		C/PE	p. 144		x
Spch 3601	Introduction to Rhetorical Theory	Hist	C/PE	p. 144		x
Spch 3625	Ethical Standards in Modern Communication		C/PE			x
Spch 5431	The Process of Persuasion		C/PE	p. 144		
SW 3202	Interventions in Community and Social Policy	SSci	C/PE			x
WCFE 5010	Technology and Responsible Citizenship		C/PE			x
WoSt 3102	Feminist Thought and Theory	Phil	C/PE	p. 148		
Cultural Diversity						
Afro 3061	The Black Family	SSci	CD			x
Afro 3072	Racism: Social and Psychological Consequences for Black Americans	SSci	CD			
Afro 3591	Introduction to Afro-American Literature	Lit	CD	p. 64		
AmIn 1771	Introduction to American Indian Studies	SSci	CD	p. 65	x	x
AmIn 3026	Ojibwe Culture and History	Hist	CD		x	x
AmIn 3036	Dakota Culture and History	SSci	CD	p. 65		x
AmIn 3111	American Indian History from Mid-15th Century to 1850		CD	p. 65		
AmIn 3116	American Indian Literature	Lit	CD	p. 65	x	
AmIn 3211	American Indian Philosophies	Phil	CD	p. 65	x	x
AmIn 3242	Survey of American Indian Arts		CD	p. 65		
AmSt 1001	American Cultures	SSci	CD	p. 65		
AmSt 1002	American Cultures	SSci	CD		x	
AmSt 1003	American Cultures	SSci	CD			x
AmSt 3302 & AmSt 3303	Proseminar: American Studies		CD; C/PE		x	x
Anth 3211	Native Peoples of North America		CD		x	
Anth 3212	Indians of the Greater Southwest		CD			x
CDis 5103	Communication Disorders and Cultural Diversity		CD			x
Chic 3106	Introduction to Chicano Studies: Mexico and the U.S.	Hist	CD	p. 76		
Chic 3107	Introduction to Chicano Studies: Chicano in Contemporary Society	Hist	CD		x	
Chic 3212	La Chicana	Lit	CD	p. 76		x
Chic 3213	Chicano Music and Art	Vis	CD			x
Chic 3375	Folklore of Greater Mexico		CD; IP		x	
Chic 3441	Chicano History to 1900	Hist	CD		x	
Chic 3442	Chicano History Since 1900	Hist	CD			x
Comp 1014	Writing Practice I and Cultural Diversity		CD	p. 81	x	x
CPsy 5332	Cross-Cultural Child Development		CD		x	
CSCL 3472	Gay Men and Homophobia in American Culture	Hist	CD			
CSCL 3979	Issues in Cultural Pluralism		CD; C/PE	p. 82		x

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Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
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Cultural Diversity--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
Dnce 3486	Ethnic Dance Traditions in American Society	Vis	CD	p. 84		
Engl 1016	Introduction to American Literature	Lit	CD		x	
Engl 1591	Literature of American Minorities	Lit	CD	p. 92	x	x
Engl 1621	Introduction to Women Writers		CD			
Engl 3591	Introduction to Afro-American Literature	Lit	CD	p. 93		
Engl 3853	Gender and the English Language	SSci	CD	p. 93		x
Engl 3854	American Literacy and Cultural Diversity		CD; C/PE (practicum)		x	
Engl 5482	Folklore		CD; IP			x
Engl 5483	Folklore		CD; IP			
EPsy 3132	Psychology of Multiculturalism in Education	SSci	CD	p. 89	x	
EPsy 3139	Social and Developmental Psychology in Education	SSci	CD		x	
EPsy 5139	Building a Learning Community	SSci	CD	p. 89	x	
FScN 3610	Community Nutrition		CD	p. 96		
FSoS 3600	Family Issues Across the Lifespan	SSci	CD			
FSoS 5252	Aging, Family, and Society		CD; IP			x
FSoS 5500	Racial and Ethnic Diversity in Families		CD		x	
GC 1211	People and Problems	SSci	CD	p. 99	x	x
GC 1364	Literature of the American Immigrant Experience		CD	p. 99		
GC 1365	Literatures of the United States	Lit	CD	p. 99	x	x
GC 1366	Images of Women in Literature	Lit	CD			
GC 1375	Film and Society	Vis	CD			x
GC 1463	Multicultural Oral Communication		CD	p. 100	x	x
GC 1816	African-American Literature	Lit	CD	p. 100	x	x
GC 1836	Asian-American Literature	Lit	CD			x
GC 1851	Multicultural Relations		CD	p. 100	x	x
Geog 3101	Geography of the United States and Canada	SSci	CD	p. 100		x
Hist 1301	American History	Hist	CD	p. 103		
Hist 1302	American History	Hist	CD		x	x
Hist 1307	American History	Hist	CD			
Hist 1308	American History	Hist	CD			
Hist 3347	Women in Colonial, Victorian America: 1600-1890		CD	p. 103		
Hist 3801	The People of Early America to 1750		CD		x	
Hist 3861	European Americans: From Immigrants to Ethnics		CD			
Hist 3862	European Americans: From Immigrants to Ethnics		CD			
Hist 3871	American Indian History: Pre-Contact to 1830		CD	p. 104		
Hist 3872	American Indian History: 1830 to the Present		CD		x	
HSci 3331	Technology and American Culture	Hist	CD	p. 104		
HSci 3332	Science and American Culture	Hist	CD		x	
HSci 5331	Technology and American Culture		CD	p. 104		
HSci 5332	Science and American Culture		CD		x	
ID 3205	Community, Service, and Self		CD; C/PE (practicum)	p. 107		
ID 3206	Community, Service, and Self		CD; C/PE (practicum)		x	
ID 3207	Community, Service, and Self		CD; C/PE (practicum)			x
Jour 3741	Racial Minorities and the Mass Media		CD			
Jour 5741	Minorities and Mass Media		CD			
Jpn 3166	Japanese Film		CD; IP			x
Ling 1005	Language and Society		CD; IP	p. 111	x	
Phil 1006	Philosophy and Cultural Diversity	Phil	CD		x	
Phil 3234	Knowledge and Gender		CD			

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Cultural Diversity--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
Phil 3308	Social Justice and Community Service: Power and Democracy	Phil	CD (practicum)		x	
Pol 3323	Civil Liberties in America		CD; C/PE		x	
Pol 3739	Politics of Race, Class, and Ethnicity		CD			x
Rhet 1101	Writing to Inform and Persuade		CD	p. 139	x	x
Rhet 1310	Humanities: The Land In American Experience (see page 55)	AH	CD	p. 139	x	x
Rhet 3395	In Search of Nature	AH	CD	p. 139		x
Rhet 5170	Managerial Communications		CD; IP	p. 139		x
Rhet 5680	Gender and the Rhetoric of Science, Technology		CD			
Soc 1001	Introduction to Sociology	SSci	CD	p. 142	x	x
Soc 3501	The Family	SSci	CD			
Spch 5211	Contemporary Problems in U.S. Electronic Media		CD	p. 144		x
Spch 5452	Intercultural Interaction: Theory and Application		CD (practicum)			x
Th 1101	Introduction to the Theatre	Vis	CD	p. 146	x	x
WoSt 1001	Introduction to Women's Studies	AH	CD	p. 148		
WoSt 1002	Introduction to Women's Studies	SSci	CD			
WoSt 3303	Women and Literature	Lit	CD			
WoSt 3304	Women and the Arts	Vis	CD			
WoSt 3306	U.S. Minority Women Writers	Lit	CD			
WoSt 3307	Modern Feminist Novel	Lit	CD			
WoSt 3406	Women, Race, and Class in the U.S.	SSci	CD			
Environment						
Agro 1007	Biology of Plant Food Systems & the Environment	Biol/L	Envt	p. 64		x
AnPl 3010	Environment and World Food Production	Biol/NL	Envt		x	
Anth 1101	Human Origins	Biol/L	Envt	p. 66	x	x
Anth 3116	Ecological Anthropology	SSci	Envt			x
Anth 5117	Natural Resources Anthropology		Envt; C/PE			
ApEc 3610	Resource Development, Environmental Economics		Envt	p. 67		x
ApEc 5650	Economics of Natural Resource & Environmental Policy		Envt		x	
Arch 1401	The Designed Environment	AH	Envt	p. 67	x	
Ast 1019	Our Changing Planet	Phys/L	Envt			x
Ast 1021H	Introduction to Astronomy	Phys/L	Envt	p. 70		
Ast 1031	Exploring the Universe: A	Phys/NL	Envt	p. 70	x	x
Ast 1032	Exploring the Universe: L	Phys/L	Envt	p. 70	x	x
BGS 3019	Topics in Business, Government, and Society: Comparative Environmental Policies		Envt			
BioC 5301	Ecological Biochemistry		Envt		x	
Biol 1051	Environmental Studies	Biol/NL	Envt		x	
Biol 3051	Environmental Studies	Biol/NL	Envt			
Chem 1003	Physical World, Chemistry	Phys/L	Envt			x
Chem 1008	Physical World, Chemistry	Phys/NL	Envt			x
Chem 1051	Chemical Principles I	Phys/L	Envt	p. 75	x	x
Chem 1052	Chemical Principles II	Phys/L	Envt	p. 75	x	x
CSCL 3366	Landscape and Ideology, 1600-1875		Envt		x	

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Math	Mathematical Thinking
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Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
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Environment--continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
EEB 1019	Our Changing Planet	Phys/L	Envt			x
EEB 3001	Introduction to Ecology	Biol/NL	Envt		x	x
Ent 1005	Economic Entomology	Biol/L	Envt	p. 94		
Ent 5320	Ecology of Agriculture		Envt	p. 94		
ES 1010	Issues in the Environment		Envt			
FR 1203	Introduction to Minnesota's Natural Resources		Envt			
FR 3103	Meteorology and Climatology for Natural Resource Managers	Phys/NL	Envt	p. 97		
FR 3104	Forest Ecology	Biol/NL	Envt	p. 97		
FR 3250	Role of Renewable Natural Resources in Developing Countries		Envt			x
FR 5104	Forest Ecology		Envt	p. 97		
FR 5114	Forest Hydrology		Envt		x	
FR 5226	Forest Economics and Planning		Envt			
FR 5231	Range Management		Envt			x
FR 5232	Management of Recreational Lands		Envt			x
FR 5250	Role of Renewable Natural Resources in Developing Countries		Envt			x
FR 5460	Water Quality: The International Dimension		Envt			x
FW 1002	Wildlife: Ecology, Values, and Human Impact		Envt			x
FW 3052	Introduction to Fisheries and Wildlife Conservation		Envt	p. 96		
FW 5604	Fisheries Ecology and Management		Envt		x	
GC 1112	Ecological Evaluation of Environmental Problems	Biol/NL	Envt	p. 98	x	x
Geo 1001	The Dynamic Earth: An Introduction to Geology	Phys/L	Envt	p. 101	x	x
Geo 1005	Geologic Perspectives on Energy	Phys/NL	Envt		x	
Geo 1012	Planet Earth	Phys/NL	Envt	p. 101		x
Geo 1019	Our Changing Planet	Phys/L	Envt			x
Geog 1402	Geography of Environmental Systems	Phys/NL	Envt			
Geog 5411	Medical Geography		Envt; IP	p. 100		
HMed 3040	Human Disease and the Environment in History	Hist	Envt	p. 104		
Hort 5015	Restoration and Reclamation Ecology		Envt			x
IntR 1301	The Global Environment (see page 55)		Envt			
LA 1401	The Designed Environment	AH	Envt	p. 110	x	
MicB 5611	Microbial Ecology		Envt			x
NRES 1040	Natural Resources as Raw Materials		Envt; IP		x	
NRES 1201	Conservation of Natural Resources		Envt		x	x
NRES 3020	Plant Resource Management & the Environment	Biol/L	Envt		x	
NRES 3060	Water Quality in Natural Resource Management	Biol/NL	Envt			x
NRES 3070	From Local to Global Ecology		Envt; IP		x	
NRES 5020	Plant Resource Management and the Environment		Envt		x	
NRES 5060	Water Quality in Natural Resource Management		Envt			x
NRES 5100	Problem Solving in Natural Resources and Environmental Studies		Envt (practicum)	p. 122		
PlPa 3004	Air Pollution, People, and Plants		Envt		x	
ScAg 1500	Biotechnology, Society, and the Environment		Envt		x	
Soil 1020	The Soil Resource	Phys/L	Envt			
Soil 3125	Basic Soil Science	Phys/L	Envt	p. 142	x	
Soil 5605	Microbial Ecology		Envt			x
International Perspectives						
Afro 1021	Introduction to African Studies	SSci	IP	p. 64		
Afro 3001	Intro: West African History: Early Times to 1800	Hist	IP			
Afro 3432	History of Africa, 1800 to Present	Hist	IP		x	
Afro 3601	Introduction to African Literature	Lit	IP	p. 64		
Afro 3654	African Cinema	Vis	IP		x	
AgET 5027	Appropriate Technology for International Development		IP	p. 64		

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International Perspectives

Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
Agro 5200	World Food Problems		IP	p. 64		
Anth 1102	Understanding Cultures	SSci	IP	p. 66	x	x
Anth 3003	The Rise of Civilization	SSci	IP		x	
Anth 3224	Hispanic Cultures of Latin America		IP			
Anth 3261	Indian Culture and Society		IP			
Anth 3293	Peoples and Cultures of the Pacific Islands		IP	p. 66		
Anth 3294	The Contemporary Pacific		IP			
Anth 5115	Economic Anthropology		IP			
Anth 5118	Political Anthropology		IP			
Anth 5121	Anthropology of Law		IP			
Anth 5325	Gender and Power in South Asia		IP			
ApEc 3007	Applied Macroeconomics: Policy, Trade, and Development		IP			x
ApEc 3070	Agriculture and Economic Growth in Developing Countries		IP			x
ApEc 5730	European Agriculture: Farm, Food, and Environmental Policy		IP			
ApEc 5750	Agricultural Trade and Commercial Policies		IP	p. 67		
ApEc 5790	World Food Problems		IP	p. 67		
Arch 3411	History of Architecture to 1750	Vis	IP	p. 67		
Arch 3412	History of Architecture Since 1750	Vis	IP		x	
Area 1021	Europe Today (see page 55)		IP			
ArtH 1016	Introduction to Asian Art	Vis	IP	p. 70		
ArtH 3014	Art of India	Vis	IP			x
ArtH 3015	Art of Islam	Vis	IP	p. 70		
ArtH 3017	Islamic Culture	AH	IP		x	
ArtH 3142	Arts of Egypt and the Near East	Vis	IP			
ArtH 3411	History of Architecture to 1750	Vis	IP	p. 70		
ArtH 3412	History of Architecture Since 1750	Vis	IP		x	
ArtS 1401	Introduction to Studio Arts	Vis	IP	p. 68	x	x
BGS 3004	International Business		IP	p. 73	x	x
CAPS 5280	World Food Problems		IP	p. 78		
CAS 3512	Modern Iran	Hist	IP			
CAS 3526	Islam and Communism		IP			
CAS 3531	Central Asian Culture	Hist	IP	p. 74		
CAS 3532	Russia and Central Asia	Hist	IP		x	
CAS 5526	Islam and Communism		IP			
CAS 5532	Russia and Central Asia		IP		x	
Chic 3105	Introduction to Chicano Studies: The Beginnings	Hist	IP			x
Chic 3375	Folklore of Greater Mexico		IP; CD		x	
Chic 3427	History of Cuba and Puerto Rico	Hist	IP			
Chic 3428	History of Relations Between the United States & Mexico, 1821-Present	Hist	IP			
Chn 3091	Filmic Construction of Modern Identity in China	Vis	IP			
Chn 3171	Introduction to Chinese Literature in Translation I	Lit	IP			
Chn 3172	Introduction to Chinese Literature in Translation II	Lit	IP	p. 76		
Clas 3142	Art of Egypt	Vis	IP			
CSCL 3176	Oppositional Cinemas	Vis	IP			
DHA 3212	Cultural Perspectives in Dress		IP		x	

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Vis	Visual or Performing Arts
*	Course listings for winter and spring quarters are tentative and subject to change.

International Perspectives--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
DHA 5217	International Trade in Textiles and Apparel		IP	p. 86		
DHA 5465	Housing in World Perspective I		IP			x
Dnce 1101	Introduction to Dance	Vis	IP	p. 84		
Dnce 3401	Dance History I	Vis	IP		x	
Dnce 3402	Dance History II	Vis	IP			x
Dnce 3666	Dance Philosophy and Esthetics	Vis	IP	p. 84		
Dnce 5487	World Dance Studies	Vis	IP		x	
EAS 3465	China's Response to the Weat	Hist	IP			
Econ 5307	Comparative Economic Systems		IP	p. 88		x
Econ 5337	Comparative Economic Systems		IP			
Econ 5401	International Economics		IP	p. 88	x	x
Econ 5421	Economic Integration in the Americas		IP			
Econ 5431	International Trade		IP	p. 88	x	
Econ 5432	International Finance		IP		x	
Engl 1595	Introduction to "Third World" Literatures in English	Lit	IP	p. 92	x	x
Engl 3621	British and American Women Writers		IP			
Engl 5482	Folklore		IP; CD			x
Engl 5483	Folklore		IP; CD			
Fren 3101	Introduction to French Literary Texts: Poetry	Lit	IP	p. 98	x	x
Fren 3103	French Literary Texts: Novel	Lit	IP	p. 98	x	x
Fren 3279	Francophone Writers of the African Diaspora		IP			
Fren 3511	French Civilization and Culture		IP	p. 98		
Fren 3512	French Civilization and Culture		IP		x	
Fren 3513	French Civilization and Culture		IP			x
Fren 3606	Quebec: Literature and Film in Translation	Lit	IP	p. 98		
FScN 5643	World Food Problems		IP	p. 96		
FSoS 5252	Aging, Family, and Society		IP; CD			x
GC 1251	World History		IP			x
GC 1285	Cultural Anthropology	SSci	IP	p. 99	x	x
GC 1311	Art: General Arts	Vis	IP	p. 99	x	x
GC 1331	Musical Heritage	Vis	IP		x	x
GC 1357	World Religious Beliefs	Phil	IP	p. 99		
GC 1367	Contemporary Literature: International Perspectives	Lit	IP	p. 99	x	
Geo 1701	Faces of the Earth	Phys/NL	IP			
Geog 1302	The World Around Us	SSci	IP	p. 100		x
Geog 3141	Africa	SSci	IP		x	
Geog 3161	Europe	SSci	IP			x
Geog 3211	East Asia		IP	p. 100		
Geog 3331	Economic Geography	SSci	IP	p. 100	x	
Geog 3381	Population in an Interacting World	SSci	IP	p. 100		
Geog 5411	Medical Geography		IP; Envt	p. 100		
Geog 5605	Geographical Perspectives on Urban Planning I		IP; C/PE			x
Ger 3604	Literature, History, and the German Film	Vis	IP	p. 102		
Ger 3641	German Folklore		IP			
Hist 1011	Introduction to World History	Hist	IP	p. 103		
Hist 1012	Introduction to World History	Hist	IP		x	
Hist 1013	Introduction to World History	Hist	IP			x
Hist 1017	Introduction to World History	Hist	IP			
Hist 1018	Introduction to World History	Hist	IP			
Hist 1021	Western Civilization	Hist	IP			

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International Perspectives--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter*	spring*
Hist 1031	Introduction to European Civilization: The Medieval Centuries	Hist	IP	p. 103		
Hist 1032	Introduction to European Civilization: Early Modern Europe, 1350-1750	Hist	IP		x	
Hist 1033	Intro to European Civilization: 1750 to Present	Hist	IP			x
Hist 3401	Survey of Latin American History: Colonial Period to 1800	Hist	IP	p. 103		
Hist 3402	Survey of Latin American History: 1800-1929	Hist	IP		x	
Hist 3403	Survey of Latin American History: 1929 to the Present	Hist	IP			x
Hist 3431	History of Africa to 1800	Hist	IP	p. 103		
Hist 3432	History of Africa: 1800 to the Present	Hist	IP		x	
Hist 3462	Introduction to East Asia: The Imperial Age	Hist	IP	p. 103		
Hist 3463	Introduction to East Asia in Modern Times	Hist	IP			x
Hist 3465	China's Response to the West	Hist	IP			
Hist 3471	Twentieth Century Japan		IP	p. 103		
Hist 3474	Rise of Modern Japan, 1853-1914		IP		x	
Hist 3475	Japan and World War II		IP			
Hist 3636	Russian History from the Origins to Peter the Great	Hist	IP			x
Hist 3703	European Cities, 1500-1800		IP			x
Hist 3704	Daily Life in Europe, 1348-1750	Hist	IP			
Hist 3721	Europe in the Era of World War I		IP	p. 103		
Hist 3722	Europe in the Era of World War II		IP		x	
Hist 3881	History of American Foreign Relations		IP			
Hist 3882	History of American Foreign Relations		IP			
Hist 3883	History of American Foreign Relations		IP			x
Hist 5465	China's Response to the West		IP			
HSci 1711	Technology & Western Civilization: Ancient & Medieval	Hist	IP	p. 104		
HSci 1712	Technology & Western Civilization: Renaissance to Industrial Revolution	Hist	IP		x	
HSci 1713	Technology & Western Civilization: 19th, 20th Centuries	Hist	IP			x
HSci 1811	Introduction to the History of Science: Ancient	Hist	IP	p. 104		
HSci 1812	Intro to History of Science: Scientific Revolution	Hist	IP		x	
HSci 1813	Introduction to History of Science: Modern Science	Hist	IP			x
HSci 3711	Technology & Western Civilization: Ancient & Medieval	Hist	IP	p. 104		
HSci 3712	Technology & Western Civilization: Renaissance to Industrial Revolution	Hist	IP		x	
HSci 3713	Technology & Western Civilization: 19th, 20th Centuries	Hist	IP			x
HSci 3811	Introduction to the History of Science: Ancient	Hist	IP	p. 104		
HSci 3812	Introduction to History of Science: Scientific Revolution	Hist	IP		x	
HSci 3813	Introduction to History of Science: Modern Science	Hist	IP			x
HSci 3825	The Nuclear Age	Hist	IP			
HSem 3120	Seeking Solutions to Global Health Issues		IP			x
Hum 1001	Humanities in the Modern West I: The Enlightenment		IP			
Hum 1002	Humanities in the Modern West II: 19th-Century		IP			
Hum 1003	Humanities in the Modern West III: 20th Century		IP			
Hum 1004	Humanities in the Modern West IV	AH	IP	p. 106		
Hum 1005	Humanities in the Modern West V	AH	IP		x	
Hum 1115	European Heritage: Middle Ages		IP			
Hum 1117	European Heritage: Renaissance and Reformation		IP			x
Hum 1119	Age of the Baroque		IP			

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International Perspectives--Continued						
Designator and Title		**Diversified Core**	**Designated Themes**	**Offered**		
				fall	**winter***	**spring***
Hum 3001	Humanities in the Modern West I: The Enlightenment		IP			
Hum 3002	Humanities in the Modern West II: 19th-Century		IP			
Hum 3003	Humanities in the Modern West III: 20th Century		IP			
Hum 3004	Humanities in the Modern West IV	AH	IP	p. 106		
Hum 3005	Humanities in the Modern West V	AH	IP		x	
Hum 3115	European Heritage: Middle Ages		IP		x	
Hum 3117	European Heritage: Renaissance and Reformation		IP			x
Hum 3119	Age of the Baroque		IP			
Ital 3501	Italian Civilization and Culture	AH	IP	p. 108		
Ital 3502	Italian Civilization and Culture	AH	IP		x	
Jour 5801	International Communication		IP		x	
Jpn 3166	Japanese Film		CD; IP			x
LA 3411	History of Architecture to 1750	Vis	IP	p. 110		
LA 3412	History of Architecture Since 1750	Vis	IP		x	
Ling 1005	Language and Society		IP; CD	p. 111	x	
MELC 3511	Ancient Iran	Hist	IP			x
MELC 3512	Modern Iran	Hist	IP			
MELC 3526	Islam and Communism		IP			
MELC 3532	Russia and Central Asia	Hist	IP		x	
MELC 5526	Islam and Communism		IP			
MELC 5532	Russia and Central Asia		IP		x	
Mus 1021	Introduction to Music	Vis	IP			
Mus 3021	Introduction to Music	Vis	IP		x	
Mus 3029	Music in the 20th Century	Vis	IP		x	
Mus 3604	History of Western Music		IP	p. 119		
Mus 3605	History of Western Music		IP		x	
Mus 3606	History of Western Music		IP			x
NRES 1040	Natural Resources as Raw Materials		IP; Envt		x	
NRES 3070	From Local to Global Ecology		IP; Envt		x	
Nurs 5482H	Seeking Solutions to Global Health Issues		IP			x
Pol 1025	World Politics	SSci	IP	p. 132	x	x
Pol 1054	Government & Politics in a Changing World	SSci	IP	p. 132		x
Pol 3835	International Relations	SSci	IP	p. 133	x	x
Pol 3872	International Organizations and the Environment		IP		x	
Pol 3873	Global Citizenship and International Ethics		IP; C/PE	p. 133		
Pol 5410	Advanced Topics in Government and Politics		IP			x
Pol 5461	Western European Government and Politics		IP	p. 133		
Pol 5471	Politics of Russia and the Commonwealth of Independent States		IP		x	
Pol 5473	Chinese Government and Politics		IP			
Pol 5477	Middle Eastern Government and Politics		IP			
Pol 5478	Government and Politics of African Countries		IP		x	
Pol 5479	Latin American Government and Politics		IP	p. 133		
RelA 1031	Introduction to the Religions of South Asia		IP		x	
Rhet 1380	Fictional History: Twentieth Century through the Eyes of Novelists	Lit	IP	p. 139		x
Rhet 3381	Humanities: 20th Century Culture	AH	IP	p. 139	x	x
Rhet 5170	Managerial Communications		IP; CD	p. 139		x
Russ 1304	Introduction to Literature: 19th Century Fiction	Lit	IP			
Russ 3421	Literature: Middle Ages: Dostoevsky in Translation	Lit	IP	p. 140		
Russ 3422	Literature: Tolstoy to the Present in Translation	Lit	IP		x	
Russ 3512	Russian Art and Culture from Peter I to the Present	Vis	IP			x
Soc 3481	Modern Japanese Society	SSci	IP		x	

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International Perspectives--Continued						
Designator and Title		**Diversified Core**	**Designated Themes**	**Offered**		
				fall	**winter***	**spring***
Soc 3601	Urban Community	SSci	IP			
Spch 5231	Comparative Electronic Media Systems		IP	p. 144		
Spch 5232	International Broadcasting		IP			
Spch 5233	Broadcasting, National Development		IP			x
Spch 5451	Intercultural Communication		IP	p. 144	x	
WoSt 1003	Women in World Cultures	SSci	IP			
WoSt 3308	Women Writers of Africa and Latin America	Lit	IP			
WoSt 5301	Women's Autobiographical Narratives		IP			x (honors)

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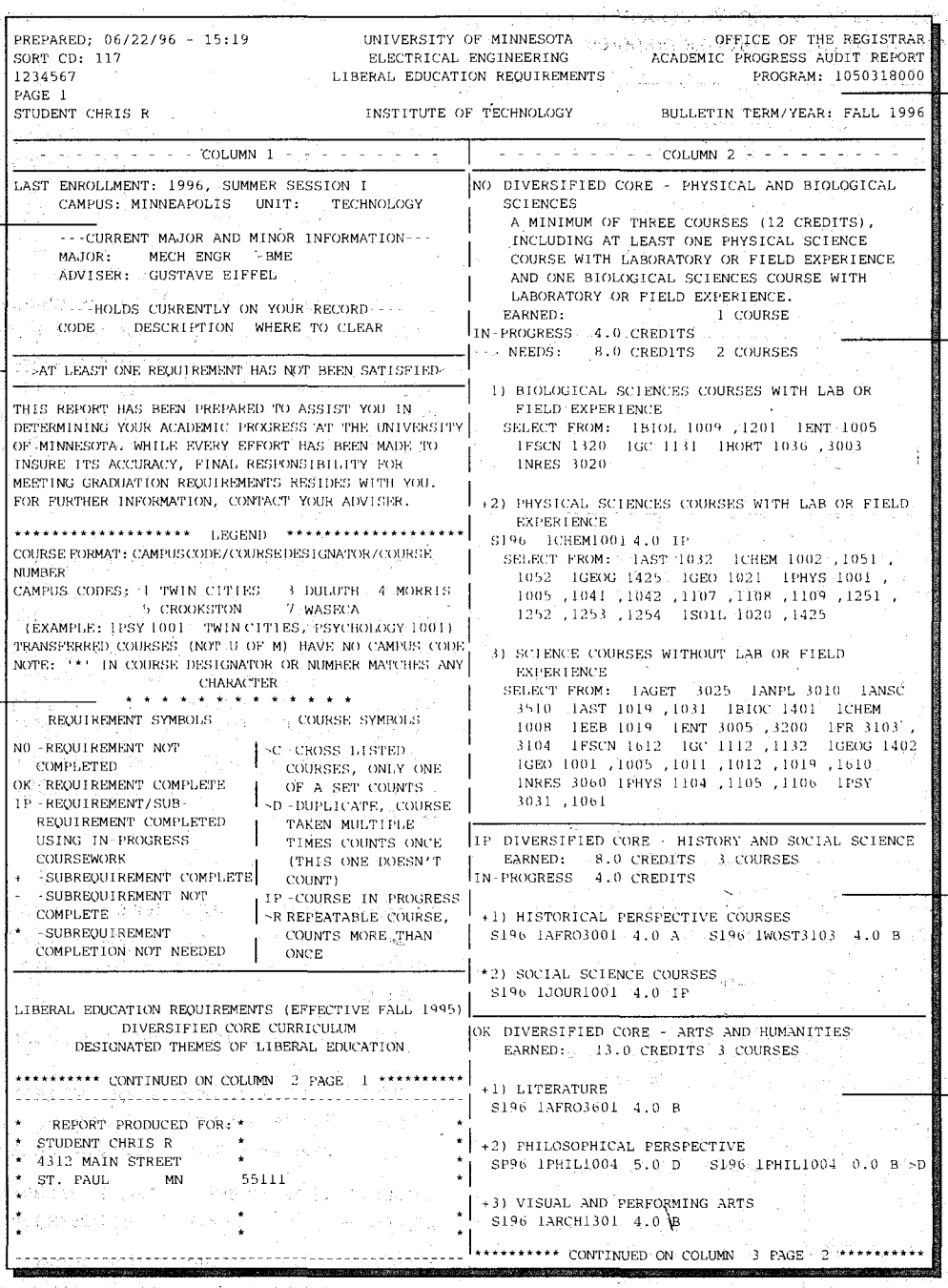
LIBERAL EDUCATION IN ENGLAND: The University offers a 6-week, 10-credit summer study abroad program built around the liberal education requirements. The summer 1997 program will offer Area 1021, IntR 1301, Pol 1057, and Rhet 1310. Successful completion of the program will satisfy five designated theme requirements (in all 4 categories) plus an Arts and Humanities core requirement. Contact the Global Campus office, 106 Nicholson Hall, 625-3379, for further information.

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Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
*	Course listings for winter and spring quarters are tentative and subject to change.

section 5 your apas report

SAMPLE ACADEMIC PROGRESS AUDIT SYSTEM (APAS) REPORT



PREPARED; 06/22/96 - 15:19 UNIVERSITY OF MINNESOTA OFFICE OF THE REGISTRAR
SORT CD: 117 ELECTRICAL ENGINEERING ACADEMIC PROGRESS AUDIT REPORT
1234567 LIBERAL EDUCATION REQUIREMENTS PROGRAM: 1050318000
PAGE 1
STUDENT CHRIS R INSTITUTE OF TECHNOLOGY BULLETIN TERM/YEAR: FALL 1996

- - - - - - - - - COLUMN 1 - - - - - - - - -

LAST ENROLLMENT: 1996, SUMMER SESSION I
CAMPUS: MINNEAPOLIS UNIT: TECHNOLOGY

---CURRENT MAJOR AND MINOR INFORMATION---
MAJOR: MECH ENGR -BME
ADVISER: GUSTAVE EIFFEL

---HOLDS CURRENTLY ON YOUR RECORD---
CODE DESCRIPTION WHERE TO CLEAR

>AT LEAST ONE REQUIREMENT HAS NOT BEEN SATISFIED<

THIS REPORT HAS BEEN PREPARED TO ASSIST YOU IN DETERMINING YOUR ACADEMIC PROGRESS AT THE UNIVERSITY OF MINNESOTA. WHILE EVERY EFFORT HAS BEEN MADE TO INSURE ITS ACCURACY, FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS RESIDES WITH YOU. FOR FURTHER INFORMATION, CONTACT YOUR ADVISER.

********** LEGEND **********
COURSE FORMAT: CAMPUSCODE/COURSEDESIGNATOR/COURSE NUMBER
CAMPUS CODES: 1 TWIN CITIES 3 DULUTH 4 MORRIS
5 CROOKSTON 7 WASECA
(EXAMPLE: 1PSY 1001 TWIN CITIES, PSYCHOLOGY 1001)
TRANSFERRED COURSES (NOT U OF M) HAVE NO CAMPUS CODE
NOTE: '*' IN COURSE DESIGNATOR OR NUMBER MATCHES ANY CHARACTER

REQUIREMENT SYMBOLS
NO -REQUIREMENT NOT COMPLETED
OK -REQUIREMENT COMPLETE
IP -REQUIREMENT/SUB-REQUIREMENT COMPLETED USING IN-PROGRESS COURSEWORK
+ -SUBREQUIREMENT COMPLETE
- -SUBREQUIREMENT NOT COMPLETE
* -SUBREQUIREMENT COMPLETION NOT NEEDED

COURSE SYMBOLS
>C -CROSS LISTED COURSES, ONLY ONE OF A SET COUNTS
>D -DUPLICATE, COURSE TAKEN MULTIPLE TIMES COUNTS ONCE (THIS ONE DOESN'T COUNT)
IP -COURSE IN PROGRESS
>R REPEATABLE COURSE, COUNTS MORE THAN ONCE

LIBERAL EDUCATION REQUIREMENTS (EFFECTIVE FALL 1995)
DIVERSIFIED CORE CURRICULUM
DESIGNATED THEMES OF LIBERAL EDUCATION

********** CONTINUED ON COLUMN 2 PAGE 1 **********

* REPORT PRODUCED FOR: *
* STUDENT CHRIS R *
* 4312 MAIN STREET *
* ST. PAUL MN 55111 *

- - - - - - - - - COLUMN 2 - - - - - - - - -

NO DIVERSIFIED CORE - PHYSICAL AND BIOLOGICAL SCIENCES
A MINIMUM OF THREE COURSES (12 CREDITS), INCLUDING AT LEAST ONE PHYSICAL SCIENCE COURSE WITH LABORATORY OR FIELD EXPERIENCE AND ONE BIOLOGICAL SCIENCES COURSE WITH LABORATORY OR FIELD EXPERIENCE.
EARNED: 1 COURSE
IN-PROGRESS 4.0 CREDITS
NEEDS: 8.0 CREDITS 2 COURSES

1) BIOLOGICAL SCIENCES COURSES WITH LAB OR FIELD EXPERIENCE
SELECT FROM: 1BIOL 1009 ,1201 1ENT 1005 1FSCN 1320 1GC 1141 1HORT 1036 ,3003 1NRES 3020

+2) PHYSICAL SCIENCES COURSES WITH LAB OR FIELD EXPERIENCE
S196 1CHEM1001 4.0 IP
SELECT FROM: 1AST 1032 1CHEM 1002 ,1051 , 1052 1GEOG 1425 1GEO 1021 1PHYS 1001 , 1005 ,1041 ,1042 ,1107 ,1108 ,1109 ,1251 , 1252 ,1253 ,1254 1SOIL 1020 ,1425

3) SCIENCE COURSES WITHOUT LAB OR FIELD EXPERIENCE
SELECT FROM: 1AGET 3025 1ANPL 3010 1ANSC 3510 1AST 1019 ,1031 1BIOC 1401 1CHEM 1008 1EEB 1019 1ENT 3005 ,3200 1FR 3103 , 3104 1FSCN 1612 1GC 1112 ,1132 1GEOG 1402 1GEO 1001 ,1005 ,1011 ,1012 ,1019 ,1610 1NRES 3060 1PHYS 1104 ,1105 ,1106 1PSY 3031 ,1061

IP DIVERSIFIED CORE - HISTORY AND SOCIAL SCIENCE
EARNED: 8.0 CREDITS 3 COURSES
IN-PROGRESS 4.0 CREDITS

+1) HISTORICAL PERSPECTIVE COURSES
S196 1AFRO3001 4.0 A S196 1WOST3103 4.0 B

*2) SOCIAL SCIENCE COURSES
S196 1JOUR1001 4.0 IP

OK DIVERSIFIED CORE - ARTS AND HUMANITIES
EARNED: 13.0 CREDITS 3 COURSES

+1) LITERATURE
S196 1AFRO3601 4.0 B

+2) PHILOSOPHICAL PERSPECTIVE
SP96 1PHIL1004 5.0 D S196 1PHIL1004 0.0 B >D

+3) VISUAL AND PERFORMING ARTS
S196 1ARCH1301 4.0 B

********** CONTINUED ON COLUMN 3 PAGE 2 **********

General student information. See page 57.

Completion status line. See page 57.

Symbols used in the APAS report. See page 57.

Report heading. See page 57.

Liberal Education requirement and subrequirement blocks; courses that can be used to complete requirements; and symbols that indicate whether requirements are partially or totally completed. See page 58.

Your APAS Report—The Academic Progress Audit System (APAS) will provide you and your adviser with accurate, quarterly reports on how well you are meeting all the requirements for your degree. Your APAS report is a individualized, computerized record that compares your past and current coursework with the requirements for your academic program.

Your APAS report is broken down into sections, each addressing a portion of your degree requirement (for example: number of credits to graduate, Liberal Education requirements in each of the categories required, major credits and minor credits, and so on). Some sections will also list courses you can take to complete the requirements for that section. This information can help you and your adviser, plan future quarters by telling you *in detail* just what you need to complete your degree.

See the next two pages for more information on the report.

```
PREPARED; 06/22/96 - 15:19          UNIVERSITY OF MINNESOTA          OFFICE OF THE REGISTRAR
SORT CD: 117                        MECHANICAL ENGINEERING           ACADEMIC PROGRESS AUDIT REPORT
1234567                          LIBERAL EDUCATION REQUIREMENTS      PROGRAM: 1050318000
PAGE 1
STUDENT CHRIS R                     INSTITUTE OF TECHNOLOGY          BULLETIN TERM/YEAR: FALL 1996
```

Report Heading—Information in this heading includes the date and time your APAS report was prepared along with information from your academic record: your name, student ID number, college, and major. The bulletin term/year refers to the degree requirements under which your report was prepared.

```
LAST ENROLLMENT: 1996, SUMMER SESSION I
    CAMPUS: MINNEAPOLIS          UNIT:   TECHNOLOGY

    ---CURRENT MAJOR AND MINOR INFORMATION---
    MAJOR:      MECH ENGR        -BME
    ADVISER:    GUSTAVE EIFFEL

    ----HOLDS CURRENTLY ON YOUR RECORD----
    CODE   DESCRIPTION           WHERE TO CLEAR
```

General Student Information—This section of the APAS report contains general information on your enrollment and information on your major, minor, and adviser. Most freshmen will not have a major or minor indicated on their APAS report. Many students do not declare majors for several quarters and may change their majors several times in the course of their University careers. Once you have declared a major, that information will be added to your report. If you have any holds on your record, they will be listed here along with directions for clearing those holds. See page 14 for more information on holds. Direct any questions about this section or report any inaccuracies to the Office of the Registrar, 150 Williamson Hall or 130 Coffey Hall.

```
-->AT LEAST ONE REQUIREMENT HAS NOT BEEN SATISFIED<--
```

Completion Status Line—This section of your APAS report summarizes at a glance whether you have completed your degree requirements. As long as you have some requirements still unmet, this is the message you will see on your APAS report. When you have courses *in progress* that will complete all requirements, this message will read: PROGRAM COMPLETED IF IN PROGRESS COURSES ARE USED. A final message appears when all requirements have been met: ALL REQUIREMENTS IDENTIFIED BELOW HAVE BEEN MET.

```
******************  LEGEND  ******************
COURSE FORMAT: CAMPUS CODE/COURSE DESIGNATOR/COURSE
NUMBER
CAMPUS CODES: 1-TWIN CITIES  3-DULUTH  4-MORRIS
              5-CROOKSTON    7-WASECA
 (EXAMPLE: 1PSY 1001 = TWIN CITIES, PSYCHOLOGY 1001)
TRANSFERRED COURSES (NOT U OF M) HAVE NO CAMPUS CODE
NOTE: '*' IN COURSE DESIGNATOR OR NUMBER MATCHES ANY
                    CHARACTER
            * * * * * * * * * * * * *

-- REQUIREMENT SYMBOLS --  ---- COURSE SYMBOLS ----
NO -REQUIREMENT NOT        | >C -CROSS-LISTED
   COMPLETED               |    COURSES, ONLY ONE OF
OK -REQUIREMENT COMPLETE   |    A SET COUNTS
IP -REQUIREMENT/SUB-       | >D -DUPLICATE, COURSE
   REQUIREMENT COMPLETED   |    TAKEN MULTIPLE TIMES
   USING IN-PROGRESS       |    COUNTS ONCE (THIS
   COURSEWORK              |    ONE DOESN'T COUNT)
+  -SUBREQUIREMENT         | IP -COURSE IN PROGRESS
   COMPLETE                | >R REPEATABLE COURSE,
-  -SUBREQUIREMENT NOT     |    COUNTS MORE THAN
   COMPLETE                |    ONCE
*  -SUBREQUIREMENT         |
   COMPLETION NOT NEEDED   |
```

Symbols Used in APAS Reports—This example contains the most frequently used symbols in the APAS report. *Requirement* symbols indicate whether your requirements are complete:

- (OK) This requirement (including all subrequirements) is complete
- (NO) This requirement is not complete.
- (IP) This requirement is in progress—it will be complete when current coursework is completed.

Under subrequirements, symbols indicate complete (+), not complete (-), in progress (IP), or not required (*).

Course symbols are attached to some of the courses you have taken and indicate how the course is being counted towards your requirements.

Liberal education requirements are listed on your report, along with subrequirements for each category. See page 56 for a complete explanation of your Liberal Education requirements: the diversified core requirements, the designated themes requirements, and the subrequirements of each. On the next page, a sample of several requirement blocks shows how the symbols appear.

```
LIBERAL EDUCATION REQUIREMENTS (EFFECTIVE FALL 1994)
          DIVERSIFIED CORE CURRICULUM
       DESIGNATED THEMES OF LIBERAL EDUCATION

NO DIVERSIFIED CORE - PHYSICAL AND BIOLOGICAL
   SCIENCES
    A MINIMUM OF THREE COURSES (12 CREDITS),
    INCLUDING AT LEAST ONE PHYSICAL SCIENCE
    COURSE WITH LABORATORY OR FIELD EXPERIENCE
    AND ONE BIOLOGICAL SCIENCES COURSE WITH
    LABORATORY OR FIELD EXPERIENCE.
   EARNED:                    1 COURSE
IN-PROGRESS     4.0 CREDITS
--> NEEDS:      8.0 CREDITS    2 COURSES

 -1) BIOLOGICAL SCIENCES COURSES WITH LAB OR
     FIELD EXPERIENCE
    SELECT FROM:  1BIOL 1009 ,1201  1ENT 1005
     1FSCN 1320  1GC 1131  1HORT 1036 ,3003
     1NRES 3020

 +2) PHYSICAL SCIENCES COURSES WITH LAB OR FIELD
     EXPERIENCE
   S196 1CHEM1001 4.0 IP
    SELECT FROM:  1AST 1032  1CHEM 1002 ,1051 ,
     1052  1GEOG 1425  1GEO 1021  1PHYS 1001 ,
     1005 ,1041 ,1042 ,1107 ,1108 ,1109 ,1251 ,
     1252 ,1253 ,1254  1SOIL 1020 ,1425

   3) SCIENCE COURSES WITHOUT LAB OR FIELD EXPERI-
     ENCE
    SELECT FROM:  1AGET  3025  1ANPL 3010  1ANSC
     3510  1AST 1019 ,1031  1BIOC 1401  1CHEM
     1008  1EEB 1019  1ENT 3005 ,3200  1FR 3103 ,
     3104  1FSCN 1612  1GC 1112 ,1132  1GEOG 1402
     1GEO 1001 ,1005 ,1011 ,1012 ,1019 ,1610
     1NRES 3060 1PHYS 1104 ,1105 ,1106  1PSY
     3031 ,1061

IP DIVERSIFIED CORE - HISTORY AND SOCIAL SCIENCE
   EARNED:      8.0 CREDITS    3 COURSES
IN-PROGRESS     4.0 CREDITS

 +1) HISTORICAL PERSPECTIVE COURSES
  S196 1AFRO3001 4.0 A    S196 1WOST3103 4.0 B

 *2) SOCIAL SCIENCE COURSES
  S196 1JOUR1001 4.0 IP

OK DIVERSIFIED CORE - ARTS AND HUMANITIES
   EARNED:      13.0 CREDITS   3 COURSES

 +1) LITERATURE
  S196 1AFRO3601 4.0 B

 +2) PHILOSOPHICAL PERSPECTIVE
  SP96 1PHIL1004 5.0 D    S196 1PHIL1004 0.0 B >D

 +3) VISUAL AND PERFORMING ARTS
  S196 1ARCH1301 4.0 B

********** CONTINUED ON COLUMN  3 PAGE  2 **********
```

Requirement Blocks—Your APAS report will have a separate block for each of your degree requirements. Each block begins with the name of the requirement and lists subrequirements. To the left of the title, a symbol tells you whether you have completed that requirement (OK for completed, IP [In Progress] for completed with current coursework, and NO for not completed). Subrequirements also have symbols indicating whether or not they are completed (+ for completed, - for not completed, and * indicating that the subrequirement is not mandatory).

All courses that you take to fulfill requirements are listed after the subrequirement with the quarter, the number of credits, and your grade in the course (or IP for any courses in progress). When any subrequirement is not yet complete, SELECT FROM indicates all courses that can be used to complete the subrequirement.

For example, the first block in this sample report is the Liberal Education requirement DIVERSIFIED CORE—PHYSICAL AND BIOLOGICAL SCIENCES. The NO to the left of the title indicates that the student still needs to take courses to complete this requirement. Because this requirement has not been competed, the requirement is summarized after the title.

Although the requirement has not been completed, the subrequirements in this first block are in different stages of completion. The - before 1) Biological Sciences Courses with Lab or Field Experience indicates that this subrequirement has not been completed, and so a list of all courses that can be used to satisfy this subrequirement follows. The next subrequirement, Physical Sciences Courses with Lab or Field Experience, has been completed. Chem 1001 is used to complete this subrequirement: it is listed along with the term it was taken, the number of credits, and the symbol IP (in progress), instead of a grade, showing that the course has not been completed.

The next two requirement blocks show that the requirements are in progress (IP) and completed (OK) respectively. Because the student needs no new courses for these requirements, no courses from which to select are listed under each section.

Who to Contact for Further Information—Your adviser can help you understand the various sections of your APAS report and can help you plan your course of study to satisfy your degree requirements. If you believe your APAS report contains any errors about your program, you should also contact your adviser.

section 6 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 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 0999	noncredit courses
1000 to 1999	introductory courses—primarily for freshmen and sophomores
3000 to 3999	intermediate courses—primarily for juniors and seniors, but sometimes open to others with a C average overall and in prerequisites
5000 to 5999	advanced courses—open to juniors, seniors, and graduate students
8000 to 8999	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.

Class Standing—Your class standing is determined by the number of credits you have completed:

Freshman	1-45 credits
Sophomore	46-90 credits
Junior	91-135 credits
Senior	136 or more credits

Symbols—The following symbols are used throughout this schedule:

- **!** Work for this course will extend past the end of the term. A grade of K will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college 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 you are 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. You must select and register for one of each of the parts of the course.

Duplicate Courses, Registering for—References in prerequisite statements to old courses that had the same course content (e.g., '§PE 1990' or '§1431') are deleted after 2 years. To avoid registering for a course that duplicates work you have previously completed, check with your college office.

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. (Extra credit is sometimes possible, however, through X registration. See below.) 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. You usually may not register for the same course 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 your total registrations in the course may not exceed a maximum total of 12 credits.

Directed or Independent Study—Most colleges permit directed or independent study (X and Y registration) 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 the course 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, place a V in the grading option column for that course.

Grading Option—If either A-F 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-F 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.

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 in the *Minnesota Daily*. Room changes are posted on classroom doors.

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

✦ 873302 —1 LECT 0815-0900 T
✦ 637303 —2 LECT 0914-1000 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

Course Descriptions—Courses are listed in this *Class Schedule* with a minimum of information—title, prerequisites, day and time, location, and sometimes instructor. You should not choose your classes on the basis of title alone. For more information about undergraduate courses (expanded course descriptions, required books, use of class time, workload, grade requirements, and type of exams), pick up a copy of the *Course Guide* for the current quarter at one of the bookstores. College bulletins also provide descriptions of course content. The *Course Guide* is also available on the World Wide Web (at http://www.umn.edu/registrar). College bulletins are available on Gopher. Departments can provide information on recent changes to course content. Department addresses are listed in Section 7.

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 continue for 50 minutes after the start time. Because there is a 15-minute break between classes, start times for classes are staggered throughout the hours. For example, the first class of the day starts at 8:00 a.m. and ends at 8:50; the second class starts at 9:05 and ends at 9:55; the third class starts at 10:10 and ends at 11:00.

Beginning winter quarter, 1996, classes in Minneapolis and St. Paul meet on the same schedule. Standard class periods for both Minneapolis and St. Paul are: 0800-0850, 0905-0955, 1010-1100, 1115-1205, 1220-1310, 1325-1415, 1430-1520, 1535-1625, and 1640-1730.

The University Senate approved the above 50-minute class periods with the understanding that classes may continue for 55 minutes after the starting time whenever students' schedules permit.

There are also standard approved 75-minute Tuesday and Thursday periods for both Minneapolis and St. Paul. Times for these classes are: 0815-0930, 0945-1100, 1115-1230, 1245-1400, 1415-1530, and 1545-1700.

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.

schedule of classes

ACCOUNTING (Acct)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 1050 Introduction to Financial Reporting (§8050; prereq 40 or more credits) (A-F only)
★LECT 0815-0930 TTh, BlegH 5
940627 —1 LAB 0800-0850 WF, BlegH 110, 5 cr
039517 —2 LAB 0905-0955 WF, BlegH 110, 5 cr
236560 —3 LAB 1010-1100 WF, BlegH 110, 5 cr
931748 —4 LAB 1115-1205 WF, BlegH 110, 5 cr
★LECT 1415-1530 TTh, BlegH 10
134056 —5 LAB 1220-1310 WF, BlegH 110, 5 cr
131795 —6 LAB 1325-1415 WF, BlegH 110, 5 cr
231164 —7 LAB 1430-1520 WF, BlegH 110, 5 cr

R 3001 Introduction to Management Accounting (prereq 1050) (A-F only)
★LECT 0815-0930 TTh, AndH 330
530991 —1 LAB 0815-0930 F, BlegH 220, 4 cr
929689 —2 LAB 0945-1100 F, BlegH 220, 4 cr
★LECT 0945-1100 TTh, AndH 330
433124 —3 LAB 0945-1100 F, BlegH 240, 4 cr
631789 —4 LAB 1115-1230 F, BlegH 240, 4 cr
★LECT 1115-1230 TTh, AndH 330
733324 —5 LAB 1115-1230 F, BlegH 220, 4 cr
337571 —6 LAB 1245-1400 F, BlegH 220, 4 cr
★LECT 1245-1400 TTh, AndH 330
031840 —7 LAB 1245-1400 F, BlegH 240, 4 cr
036455 —8 LAB 1415-1530 F, BlegH 240, 4 cr

R 3101 Intermediate Financial Reporting (prereq 1050) (A-F only)
130002 —1 0800-0945 MW, BlegH 240, 4 cr
233108 —2 1010-1155 MW, BlegH 240, 4 cr

3199 Internship in Public Accounting (prereq 5125; for accounting majors only) (S-N only)
332788 3 cr

R 3299 Internship in Management Accounting (prereq 3102; for accounting majors only) (S-N only)
339983 3 cr

R 5101 Corporate Financial Reporting (prereq 1050 or MBA 8030, MBA stu) (A-F only)
134230 1730-2100 Th, BlegH 240, 4 cr

R 5102 Advanced Financial Reporting I (prereq 3101 or 5101, mgmt or grad mgmt student) (A-F only)
234582 —1 1220-1405 MW, BlegH 240, 4 cr
139721 —2 1220-1405 MW, BlegH 240, 4 cr (MBA stu only)

R 5125 Auditing Principles and Procedures (prereq 3101 or 5101, acct maj) (A-F only)
135496 —1 1220-1405 MW, BlegH 230, 4 cr
040599 —2 1220-1405 MW, BlegH 230, 4 cr (MBA stu only)
538430 —3 1430-1615 MW, BlegH 240, 4 cr
638788 —4 1430-1615 MW, BlegH 240, 4 cr (MBA stu only)

R 5126 Internal Auditing (prereq 3101 or 5101; for accounting majors only) (A-F only)
529551 1800-1945 MW, BlegH 220, 4 cr (MBA stu only)

R 5135 Income Tax Accounting (prereq 1025 or 1050) (A-F only)
629797 —1 1430-1615 MW, BlegH 220, 4 cr
535009 —2 1430-1615 MW, BlegH 220, 4 cr (MBA stu only)

R 5236 Taxation II (prereq 5135; for accounting majors only) (A-F only)
430269 —1 1220-1405 MW, BlegH 220, 4 cr
241063 —2 1220-1405 MW, BlegH 220, 4 cr (MBA stu only)

R 8820 Seminar III (prereq PhD student or grad SMgt approval) (A-F only)
930471 1415-1715 Th, BlegH 335, 4 cr

R 8990 Readings in Accounting (prereq #, grad SMgt approval) (A-F only)
535608 ar cr

R 8995 Research in Accounting (prereq PhD student, grad SMgt approval) (A-F only)
836778 1430-1630 F, HHHCtr 20, ar cr

ADULT EDUCATION (AdEd)
Work, Community, and Family Education
Education and Human Development

R 5104 Survey: Human Resource Development and Adult Education (§HRD 5104) (A-F only)
939073 1845-2205 M, VoTech R385, Peterson S, 4 cr

5201 Introduction to the Undereducated Adult (A-F only)
036276 1600-1830 T, VoTech 220, Park R, 3 cr

5205 Field Experience in Adult Education (max 8 cr; prereq #) (A-F only)
631274 4-8 cr

R 5301 Designing the Adult Education Program (A-F only)
631971 1600-1830 T, VoTech R385, Rohde N, 3 cr

R 5411 Strategies for Teaching Adults (A-F only)
630223 1600-1830 Th, VoTech 230, Park R, 3 cr

R 5440 Multidisciplinary Perspectives on Aging (§CPsy 5305, HSU 5009, PA 5414, PubH 5737, Soc 5960, SW 5024) (A-F only)
639861 1640-1825 MW, MoosT 2690, 4 cr

8302 Problems: Adult Education (prereq #)
832388 1-9 cr

ADULT PSYCHIATRY (AdPy)
Medical School

R 5109 Externship in Clinical Psychiatry: Duluth Hospital (prereq regis med)
034415 Olson C R, 9 cr

R 5110 Contemporary Hospital Psychiatry: St. Luke's Hospital, Duluth (prereq regis med)
139265 Cowan G, 9 cr

5500 Psychiatry Externship (prereq regis med)
737843 Eckert E, 9 cr

5501 Elective Rotation in Alcohol Problems Clinics (prereq 3rd or 4th yr med stu)
533857 Willenbring M, 4.5-9 cr

5502 Elective Rotation in Addiction Medicine (prereq 5500, regis med)
331916 Willenbring M, 9 cr

5503 Elective Experience in Research Addiction Medicine (prereq course director permission, regis med stu)
533311 Willenbring M, 4.5-9 cr

5512 Medical-Surgical Psychiatry: Consultation-Liaison (prereq 3rd or 4th yr med stu)
137757 Popkin M, ar cr

R 5514 Substance Abuse and Associated Psychiatric Disorders (prereq regis med)
329924 Halikas J, 9 cr

5515 Neuropsychology: University Hospitals (prereq regis med)
639617 Meier M, 9 cr

R 5516 St. Mary's Extended Care Center, Alcoholic Treatment Unit (prereq regis med)
936786 Hiers D, 4.5-9 cr

R 5518 Community Psychiatry: Braham, MN (prereq regis med)
935489 Walton J L, 9 cr

5530 Independent Study (prereq Δ)
833797 Mackenzie T, ar cr

5602 Clinical Psychopharmacology Seminar (prereq regis med)
730018 Abuzzahab F S, ar cr

5800 Case Conference: Psychiatry in Medicine (prereq MD or #)
136348 1 cr

5801 Consultation-Liaison Psychiatry (prereq MD)
536192 ar cr

5825 Psychiatric Interviewing (prereq MD or #)
436041 Halikas J, 3 cr

5910 Internship: Hennepin County Medical Center Psychiatry (prereq PGY-1 psychiatry resident) (S-N only)
932348 Popkin M, 12-48 cr

5911 Psychiatry PGY-1 Internship at VA Medical Center (prereq PGY-1 psychiatry resident) (S-N only)
629671 Dean C, 12-48 cr

5912 Psychiatry PGY-1 Internship at St. Paul Ramsey Medical Center (prereq PGY-1 psychiatric resident) (S-N only)
640542 Zander J, 12-48 cr

5922 Psychiatric Interviewing Styles (prereq #) (S-N only)
441000 1300-1430 Th, Mayo, Halikas J, Moore M, 3 cr

5923 Physiological Treatments II (prereq 5921, #) (S-N only)
835369 1430-1600 Th, Mayo, Eckert E, 3 cr

5932 Applied Behavioral Analysis (prereq #) (S-N only)
931474 Hatsukami D, 3 cr

5933 Research Methodology and Design (prereq #) (S-N only)
440736 1300-1430 W, Mayo, Mitchell J, 3 cr

5942 Advanced Psychoanalytic Psychotherapy (prereq 5926, 5936, #) (S-N only)
836621 1300-1430 Th, PWB, Dieperink W, 6 cr (3rd Floor Outpatient Conference Rm)

5951 Inpatient Psychiatry (prereq psychiatric resident) (S-N only)
439649 Mackenzie T, 6 cr

5952 VA Medical Center Inpatient Psychiatry (prereq psychiatry resident) (S-N only)
135076 Dean C, 6 cr

5953 Clinical Chemical Dependency (prereq psychiatric resident) (S-N only)
334489 Halikas J, 3-6 cr

5954 Clinical Eating Disorder Treatment (prereq psychiatric resident) (S-N only)
433964 Mitchell J, 3-6 cr

5955 Emergency Psychiatric Management and ECT (prereq psychiatric resident) (S-N only)
537391 Meller W, 3-6 cr

5961 Clinical Child Psychiatry (prereq psychiatry resident) (S-N only)
331947 Jensen J, 6 cr

5962 Clinical Consultation Liaison Psychiatry (prereq psychiatric resident) (S-N only)
335576 Colon E, 6 cr

5963 Clinical Outpatient Psychiatry (prereq psychiatric resident) (S-N only)
631338 Mackenzie T, 6 cr

5971 Consultation Liaison Psychiatric Fellowship (prereq C-L fellow/psychiatric resident) (S-N only)
130847 Jensen J, 6-24 cr

5972 Psychiatric Child Fellowship: Year I (prereq psychiatric resident/fellow) (S-N only)
040974 Jensen J, 6-24 cr

5973 Chemical Dependency Fellowship (prereq psychiatric resident/fellow) (S-N only)
939719 Halikas J, 6-24 cr

5974 Eating Disorder Fellowship (prereq psychiatric resident/fellow) (S-N only)
029523 Mitchell J, 6-24 cr

5975 Advanced Clinical Psychiatry (prereq psychiatry resident/fellow) (S-N only)
032860 Meller W, 6-24 cr

5981 Psychiatric Child Fellowship: Year II (prereq psychiatric resident/fellow) (S-N only)
739818 Jensen J, 6-24 cr

8201 Clinical Psychiatry (prereq MD)
533017 Meller W, ar cr

8203 Advanced Clinical Psychiatry (prereq MD, 8201)
038710 Meller W, ar cr

8205 Special Assignments (prereq MD, 8201, 8203)
036469 Meller W, 1 cr

8206 Research (prereq #)
129505 Meller W, ar cr

8208 Survey: Physiological Treetments (prereq #)
539612 Eckert E, 2 cr

8238 Case Conference in Psychological Medicine (prereq MD or #)
532319 1 cr

8239 Continuous Case Seminar: Psychoanalytically Oriented Psychotherapy (max 3 cr; prereq #)
339997 Dieperink W, 1 cr

8247 Research Topics in Psychophysiology (prereq 8266, #)
129433 Mitchell J, Lykken D, 3 cr

8248 Introduction to Psychopharmacology (prereq grad or #)
537729 Meller W, 1 cr

8264 Presentations on Current, Appropriate Literature Pertaining to all Phases of Medical Health Care (prereq #)
237272 Meller W, 1 cr

8265 Readings in Psychosomatic Medicine, Consultation-Liaison Psychiatry (max 3 cr; prereq MD, #)
239863 Meller W, ar cr

8970 Directed Studies (max 9 cr)
341104 Eckert E, ar cr

AEROSPACE ENGINEERING AND MECHANICS (AEM)
Institute of Technology

An IT computer fee is assessed at the time of registration for AEM 5206, 5244, 5250, 5321, 5329, 5330, 5331, 5516, 5632, and 8251. See page 27 for more information on this fee.

R 1001 Aerospace Engineering Orientation (prereq IT fr or soph) (S-N only)
935010 1325-1415 TTh, AkerH 209, Beavers G, 1 cr

R 1015 Statics (prereq IT stu or pre-BAE maj, Phys 1251, Math 1261) (A-F only)
★LECT 1220-1310 MWF, NichH 211, Fosdick R
941065 —1 REC 1220-1310 TTh, AkerH 225, 4 cr
229804 —2 REC 1220-1310 TTh, AkerH 313, 4 cr
435651 —3 REC 1220-1310 TTh, AkerH 211, 4 cr
334962 —4 REC 1220-1310 TTh, AkerH 317, 4 cr
837476 —5 REC 1220-1310 TTh, AkerH 209, 4 cr
732013 —6 REC 1220-1310 TTh, AkerH 309, 4 cr

R 3005 Introduction to Flight (§1005; prereq IT stu, Math 1252 or equiv, Phys 1252 or equiv) (A-F only)
537133 1535-1730 MW, AkerH 209, Zhao Y, 4 cr

R 3016 Deformable Body Mechanics (prereq IT stu or pre-BAE maj, 1015, ¶Math 3261) (A-F only)
★LECT 1325-1415 MWF, Phys 131, Wilson T A
129593 —1 REC 1325-1415 TTh, AkerH 309, 4 cr
531848 —2 REC 1325-1415 TTh, AkerH 313, 4 cr
139377 —3 REC 1325-1415 TTh, AkerH 317, 4 cr
429204 —4 REC 1325-1415 TTh, AkerH 211, 4 cr

R 3036 Dynamics (prereq IT stu or pre-BAE maj, 1015, ¶Math 3261) (A-F only)
★LECT 1430-1520 MWF, AkerH 319
836053 —1 REC 1430-1520 TTh, AkerH 317, 4 cr
137152 —2 REC 1430-1520 TTh, AkerH 313, 4 cr

R 3401 Introduction to Dynamical Systems (§ME 3201; prereq 3036, IT stu)
939462 1115-1205 MTWThF, AkerH 209, 4 cr

R 5200 Kinematics and Dynamics of Fluid Flow (prereq upper div IT or grad stu, 3036, ¶Math 3252) (A-F only)
030767 1010-1100 MTWF, AkerH 209, Longmire E, 4 cr

R 5204 Shock Waves and Compressible Fluid Flow (prereq 5200, ME 3301, upper div IT stu)
634076 0905-0955 MTWF, AkerH 225, Beavers G, 4 cr

R 5250 Computational Fluid Mechanics (prereq FORTRAN, 5200 or IT or grad IT stu)
930048 1010-1205 TTh, AkerH 225, Johnson A, 4 cr

R 5329 Fundamentals of Aerospace Vehicle Design (prereq AEM sr, 5300 or #)
332600 1220-1520 MW, AkerH 209, Vano A, 4 cr

R 5438 Intermediate Dynamics (prereq 3036)
522891 1115-1310 TTh, AkerH 319, Garrard W L, 4 cr

R 5580 Mechanics of Solids (prereq upper div IT or grad stu, Math 3251)
134776 0905-1100 TTh, AkerH 313, Truskinovsky L, 4 cr

R 5630 Aeromechanics Laboratory I: Fluid Mechanics (prereq IT upper div stu, 3016, 3036, 5200)
★LECT 0800-0850 MW, AkerH 227, Alving A
433351 —1 LAB 0800-1205 T, AkerH 30A, 30B, 30, 4 cr
336131 —2 LAB 1325-1730 T, AkerH 30A, 30B, 30, 4 cr
123034 —3 LAB 1325-1730 Th, AkerH 30A, 30B, 30, 4 cr

5810 Problems in Fluid Mechanics (prereq Δ)
933032 1-4 cr

5821H Aerospace Engineering and Mechanics Honors Thesis I (prereq #, upper div AEM honors program stu) (A-F only)
233125 4 cr

5822H Aerospace Engineering and Mechanics Honors Thesis II (prereq upper div AEM honors program student, #) (A-F only)
322892 4 cr

5840 Industrial Assignment (prereq regis in engineering intern program, Δ)
435648 2 cr

5841 Industrial Assignment (prereq regis in engineering intern program, Δ)
338669 2 cr

5842 Industrial Assignment (prereq regis in engineering intern program, Δ)
836554 2 cr

5843 Industrial Assignment (prereq regis in engineering intern program, Δ)
122893 2 cr

8001 Seminar: Aerospace Engineering and Mechanics (prereq consent of director of graduate studies) (S-N only)
535981 1430-1520 F, AkerH 209, 1 cr

R 8201 Fluid Mechanics I (prereq undergrad fluid mechanics, vector analysis)
135191 0905-0955 MTWF, AkerH 227, Lundgren T, 4 cr

R 8216 Theory of Turbulence I (prereq 8202)
822895 1010-1100 MWF, AkerH 227, Lundgren T, 3 cr

R 8421 Modern Control Theory for Aerospace Systems (prereq 5321, 8410, or #)
022894 1115-1230 TTh, AkerH 227, Balas G, 4 cr

R 8501 Research Seminar in the Mechanics of Materials (A-F only)
133229 1325-1520 T, AkerH 227, Fosdick R, James R, 2-4 cr

R 8510 Continuum Mechanics I (prereq Δ)
533003 1535-1730 MW, AkerH 227, Fosdick R, 4 cr

R 8522 Theory of Plasticity (prereq 8510 or 5580 or #)
622896 1325-1520 MW, AkerH 227, Shield T, 4 cr

R 8589 Mechanics of Crystalline Solids (prereq 8510 or #, grad IT stu)
422897 0905-0955 MWF, AkerH 313, James R, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not yet passed oral prelims)
029652 1-18 cr

8777 Thesis Credits: Masters
134261 1-16 cr

8810 Selected Topics in Fluid Mechanics (prereq Δ)
931376 1-4 cr

8880 Plan B Project (max 4 cr; prereq grad aerospace engineering or mechanics maj, Δ)
440980 1-4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
132431 1-36 cr

AEROSPACE STUDIES (Air)

0100 Leadership Laboratory (prereq Air Force ROTC Cadets only) (S-N only)
832858 1800-1930 W, Armory 100, Johnson C, 0 cr

1104 Introduction to the Air Force (A-F only)
137250 —1 0905-0955 T, Armory 12, Johnson C, 1 cr
940028 —2 1325-1415 T, Armory 12, Johnson C, 1 cr

1204 Written Communication and Air Force Heritage (A-F only)
739172 —1 0905-0955 Th, Armory 12, Lamatsch P, 1 cr
936982 —2 1325-1415 Th, Armory 12, Lamatsch P, 1 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

3301 Air Force Communications and Leadership (A-F only)
130802 —1 0800-0850 MWF, Armory 12, Campbell W, 3 cr
931264 —2 1430-1520 MWF, Armory 12, Campbell W, 3 cr

3401 National Security Policy (prereq all 33XX crses) (A-F only)
432877 —1 0815-0930 TTh, Armory 105, Homan J, 3 cr
936710 —2 1115-1230 TTh, Armory 105, Homan J, 3 cr

AFRO-AMERICAN STUDIES (Afro)

Afro-American & African Studies
Liberal Arts

R 1011 Introduction to Afro-American Studies (§Amst 1011)
529372 0945-1100 TTh, BlegH 250, Brewer R, 4 cr

R 1021 Introduction to African Studies (SSci; IP)
335092 1325-1415 MWF, BlegH 135, Coifman V, 4 cr

R 3002 Introduction to West African History: 1800 to Present
623501 1010-1100 MWF, BlegH 215, Coifman V, 4 cr

R 3110 Study of an African Language
736336 1115-1205 MWF, BlegH 140, Pike C, 4 cr (Swahili)

R 3301 The Music of Black Americans
731265 0905-0955 MWF, FergH 90, McCurdy R, 4 cr

R 3431 History of Africa: 1800 to Present (§Hist 1431, Hist 3431)
★LECT 0945-1100 TTh, BlegH 155, Allman J
123504 —1 REC 1010-1100 M, BlegH 230, 4 cr
923505 —2 REC 1115-1205 T, BlegH 230, 4 cr
723506 —3 REC 0800-0850 Th, BlegH 335, 4 cr

R 3591 Introduction to Afro-American Literature (§5591, Engl 3591) (Lit; CD)
938828 1115-1230 TTh, BlegH 235, Wright J, 4 cr

R 3601 Introduction to African Literature (Lit; IP)
733873 1245-1400 TTh, BlegH 120, Pike C, 4 cr

R 3864 Afro-American History, from 1619 through Reconstruction (§Hist 3864, Hist 3865)
423502 1220-1310 MWF, BlegH 130, Dillard, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
231262 1-15 cr

3991 Senior Project in Afro-American and African Studies (3991-3992-3993†; prereq completed CLA advanced composition requirement, permission of undergrad adviser) (A-F only)
231715 2 cr

3992 Senior Project in Afro-American and African Studies (3991-3992-3993†; prereq 3991) (A-F only)
239412 2 cr

3993 Senior Project in Afro-American and African Studies (3991-3992-3993†; prereq 3992) (A-F only)
629489 2 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
132249 1-6 cr

AGRICULTURAL EDUCATION (AgEd)

Work, Community, and Family Education
Education and Human Development

1001 Introduction to Agricultural Education (A-F only)
739513 1220-1310 W, VoTech R385, Peterson R, 1 cr

1002 Principles of Career Planning in Agriculture (A-F only)
135952 1430-1520 M, VoTech R385, Peterson R, 1 cr

3001 Experiential Learning: Production Agriculture (max 14 cr; no more than 20 cr of 3001, 3002 combined; prereq #) (S-N only)
732223 1-14 cr

3002 Experiential Learning: Agricultural Business (max 14 cr; no more than 20 cr of 3001, 3002 combined; prereq #) (S-N only)
536502 1-14 cr

3041 Practicum: Agricultural Education Technology (max 5 cr) (A-F only)
133134 Peterson R, 1-3 cr

5028 Teaching Methods in Agricultural Education (A-F only)
432930 0905-0955 MTWThF, VoTech R385, Peterson R, 5 cr

5042 Ag Mechanics
233478 1535-1800 MW, VoTech 120, Bracewell E, 1-3 cr

5049 Agricultural Education for Adults (A-F only)
340552 1325-1415 MWF, VoTech R385, Persons E, 3 cr

5090 Independent Study (prereq sr) (A-F only)
834223 1-3 cr

5095 Integrating Paper: Master of Education (prereq MEd student in agricultural education) (A-F only)
238342 3 cr

8001 Research in Agricultural Education (prereq 15 cr educ)
336212 ar cr

8091 Field Problems
234565 3 cr

AGRICULTURAL ENGINEERING TECHNOLOGY (AgET)

Biosystems and Agricultural Engineering
Agricultural, Food, and Environmental Sciences

1090 Directed Studies (prereq #)
334119 ar cr

3091 Special Problems in Agricultural Engineering (prereq #)
733131 2-5 cr

R 5027 Appropriate Technology for International Development (prereq basic understanding of math, chem, phys) (IP)
829748 1730-2000 MW, BioAgEng 308, Goodrich P, 4 cr

5091 Special Problems in Agricultural Engineering (prereq #)
131898 2-5 cr

5092 Special Problems in Agricultural Engineering (prereq 5091)
132171 2-5 cr

AGRICULTURAL INDUSTRIES AND MARKETING (AIM)

Agricultural, Food, and Environmental Sciences

5001 Marketing Practicum I (A-F only)
429588 1430-1630 T, ClaOff B36, Nefstead W, 2 cr

AGRICULTURE (Agri)

Agricultural, Food, and Environmental Sciences

R 1000H Honors Colloquium (prereq honors program registration, ❑) (A-F only)
130430 1430-1610 W, CofH 120, 2 cr

3100H Honors Experience (prereq approved proposal by Coll of Agri Honors Prog Comm) (A-F only)
937081 3-4 cr

AGRONOMY AND PLANT GENETICS (Agro)

Agricultural, Food, and Environmental Sciences

R 1007 Biology of Plant Food Systems and the Environment (Biol/L; Envt)
★LECT 0945-1100 TTh, Arch 40, Brakke M, (Mpls)
123199 —1 LAB 0905-1205 W, BioSci 176, Brakke M, 4 cr
923200 —2 LAB 1325-1625 W, BioSci 176, Brakke M, 4 cr
723201 —3 LAB 0905-1205 F, BioSci 176, Brakke M, 4 cr
724574 —4 LAB 1325-1625 F, BioSci 176, Brakke M, 4 cr

R 1010 Principles of Agronomy (§3010, 3020, 3030)
★LECT 1115-1205 MWThF, BorH 335, Shaeffer C
432359 —1 LAB 0905-1100 T, AgGhCl 103, Shaeffer C, 5 cr
535141 —2 LAB 1325-1520 T, AgGhCl 103, Shaeffer C, 5 cr

1020 Special Problems (prereq 5 cr agronomy, #)
636278 Cardwell V, 1-3 cr

R 3030 Harvest, Storage, and Utilization of Field Crops (§5130; prereq 1007 or Biol 1009, Chem 1002, Chem 1051, or equiv)
★LECT 1010-1100 MWF, BorH 335, Cardwell V
338963 —1 LAB 1010-1205 T, BorH 207, 4 cr
537472 —2 LAB 1325-1520 T, BorH 207, 4 cr

R 3120 Grain Grading and Utilization (¶AgEc 3420 recommended)
930907 0815-0930 TTh, Hayes A104, Cardwell V, 2 cr

5001 Problems in Agronomy for Advanced Students (prereq 20 cr agronomy, #)
634899 1-5 cr

R 5030 Weed Control (prereq 3020, Soil 3125...PBio 3131 rec; or #)
★LECT 1325-1520 TTh, BorH 365, Wyse D
538928 —1 REC 1010-1100 F, AgGhCl 103, Wyse D, 5 cr
629881 —2 REC 1325-1415 F, AgGhCl 103, Wyse D, 5 cr

R 5130 Harvest, Storage, and Utilization of Field Crops (§3030; prereq 1007 or Biol 1009, Chem 1002, Chem 1051, or equiv)
★LECT 1010-1100 MWF, BorH 335
★REC 1325-1415 W, Hayes A408
432197 —1 LAB 0905-1100 T, BorH 207, 4 cr
436606 —2 LAB 1325-1520 T, BorH 207, 4 cr

5200 World Food Problems (§AgEc 5790, FScN 5643, CAPS 5280; prereq sr or grad stu) (IP)
334444 1800-2100 W, ClaOff B35, Hardman L, Peterson W, others, 3 cr

5310 Orientation to Field Crop Breeding (prereq 5020 or #) (S-N only)
933404 Stuthman D, 1 cr

5320 Orientation to Agronomy and Soils Field Research (prereq 5040 or equiv) (S-N only)
936495 Cardwell V, 1 cr

R 8000 Supervised Teaching Experience (§Hort 8000, Soil 8000; prereq #) (S-N only)
837512 1220-1415 M, BorH 491, Simmons S, 2 cr

8010 Research in Agronomy (prereq #)
838627 ar cr

R 8200 Plant Breeding Principles and Methods I (prereq 5020, Stat 5301 or equiv)
523202 0905-0955 MWF, BorH 365, Rasmusson D, 3 cr

R 8220 Application of Quantitative Genetics to Plant Breeding (prereq 8210, 8260, GCB 5042 or #)
323203 0800-0850 MWF, BorH 213, Ehlke, N, 3 cr

8230 Cytogenetics (prereq GCB 5034 or #)
531655 1010-1100 MWF, BorH 306, Phillips R, 4 cr (2 hr lab ar)

8270 Seminar: Plant Breeding
034060 1535-1625 M, BorH 306, Rasmusson D, 1 cr

8330 Research in Plant Genetics
937792 ar cr

8340 Directed Studies for Thesis Research (prereq agronomy or plant breeding PhD stu or #) (S-N only)
031241 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
031675 1-18 cr

8777 Thesis Credits: Masters
039761 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
033085 1-36 cr

Algebra: See General College; Mathematics.

AMERICAN INDIAN STUDIES (AmIn)
Liberal Arts

R 1021 Beginning Ojibwe
832360 1115-1205 MTWThF, WullH 220, Jones D, 5 cr

R 1031 Beginning Dakota
838305 1220-1310 MTWThF, WullH 220, Firesteel F, 5 cr

R 1771 Introduction to American Indian Studies (§AmSt 1771) (SSci; CD)
835291 —1 0905-0955 MWF, ScottH 4, Buffalohead E, 4 cr
535706 —2 1115-1205 MWF, ScottH 4, Buffalohead E, 4 cr
336792 —3 0945-1100 TTh, FolH 306, Danforth R, 4 cr
137712 —4 1415-1530 TTh, WullH 140, Danforth R, 4 cr

3024 Intermediate Ojibwe (prereq 1023)
438131 1325-1415 MTWThF, WullH 220, Jones D, 5 cr

3034 Intermediate Dakota (prereq 1033)
637088 1325-1415 MTWThF, ScottH 24, Firesteel F, 5 cr

R 3036 Dakota Culture and History (SSci; CD)
738295 1430-1520 MWF, WullH 220, Firesteel F, 4 cr

R 3111 American Indian History from Mid-15th Century to 1850 (§Hist 3871) (CD)
337117 —1 1220-1310 MWF, AndH 350, 4 cr
638631 —2 1245-1400 TTh, NichH 213, O'Brien J, 4 cr

R 3116 American Indian Literature (Lit; CD)
933872 —1 0945-1100 TTh, NichH 209, 4 cr
437626 —2 1245-1400 TTh, ChDev 218, 4 cr

R 3211 American Indian Philosophies (Phil; CD)
732898 —1 1220-1310 MWF, ScottH 4, Buckanaga J, 4 cr
536824 —2 1535-1625 MWF, ScottH 4, 4 cr

R 3242 Survey of American Indian Arts (CD)
233397 0815-0930 TTh, ScottH 4, Libertus R, 4 cr

3810 Field Practice: Indian Studies (prereq soph or jr or sr, #)
230239 3-9 cr

3970 Directed Studies (prereq #, Δ, or ❑)
536595 1-15 cr

3980 Directed Instruction (prereq #, Δ, ❑)
129772 5 cr

R 5422 Change and Development in Indian Communities (prereq 3112 or #)
536418 1115-1230 TTh, ChDev 218, Libertus, 4 cr

5990 Directed Research (prereq by petition only, #, Δ, CLA approval)
033877 —1 1-15 cr

AMERICAN STUDIES (AmSt)
Liberal Arts

R 1001 American Cultures (SSci; CD)
★LECT 0945-1100 TTh, NichH 211, Miller C, O'Brien-Kehoe J,
237384 —1 REC 1010-1100 M, ChDev 218, 4 cr
737695 —2 REC 1115-1205 T, NichH 209, 4 cr
732190 —3 REC 1115-1205 T, ChDev 105, 4 cr
140383 —4 REC 1220-1310 T, NichH 209, 4 cr
137233 —6 REC 1010-1100 W, Phys 143, 4 cr
332080 —7 REC 1115-1205 Th, NichH 209, 4 cr
735543 —8 REC 1220-1310 Th, NichH 209, 4 cr

R 1001H American Cultures (prereq honors stu or #)
★LECT 0945-1100 TTh, NichH 211, Miller C, O'Brien-Kehoe J,
138429 —80 REC 1220-1310 T, NichH 209A, 4 cr

R 3111 Creative Americans and Their Worlds
134302 0945-1100 TTh, ScottH 4, 4 cr

R 3112 American Everyday Life
340342 1245-1400 TTh, ScottH 4, 4 cr

R 3113 American Cultural Diversity
130024 1430-1520 MWF, ScottH 4, 4 cr

R 3301 Proseminar: American Studies (prereq American Studies sr)
339787 —1 1325-1555 T, ScottH 2, 4 cr
629735 —2 1820-2050 W, ScottH 2, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
833430 1-15 cr

R 5101 Religion and American Culture: The Search for Spiritual Nourishment (§RelS 5101)
823528 1115-1230 TTh, ScottH 4, Delattre R, 4 cr

R 8201 Historical and Theoretical Foundations of American Studies (prereq admission to AmSt grad program) (A-F only)
233111 1325-1525 M, ScottH 2, Noble D, 4 cr

R 8229 The United States in International Perspective: U.S. Southern and Southern African Women's Literature and Culture (prereq # or Δ) (A-F only)
628529 1325-1525 W, ScottH 2, Yates G, 4 cr

R 8239 Gender, Race, Class, Ethnicity, and Sexuality in America: Race, Gender, Ethnicity in the Media (prereq # or Δ) (A-F only)
540159 1010-1205 M, ScottH 2, Johnson L, 4 cr

R 8290 Religion, Ethics, and Public Life in America (max 12 cr; prereq 8289 or # or Δ) (A-F only)
023530 1430-1630 T, ScottH 103, Delattre R, 4 cr

R 8401 Practicum in American Studies (prereq admission to Ph.D. program in AmSt, #) (A-F only)
940711 1325-1525 M, ChDev 216, Noble G, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
140567 1-18 cr

8777 Thesis Credits: Masters
140982 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
439232 1-36 cr

8970 Readings in American Civilization
931930 ar cr

ANCIENT NEAR EASTERN (ANE)
Classical & Near Eastern Studies
Liberal Arts

3251 Modern Study of the Old Testament (§RelS 3251)
123499 0800-0850 MWF, FolH 50, Reisman D, 4 cr

3501 Ancient Israel: Background of the Bible (§5501, RelS 3501; no knowl of Hebr req)
433625 1115-1205 MWF, FolH 208, Paradise J, 4 cr

5501 Ancient Israel (§3501, RelS 3501; no knowl of Hebr req; prereq grad stu or #)
030462 1115-1205 MWF, FolH 208, Paradise J, 4 cr

5970 Directed Studies (prereq #)
936576 —1 1-4 cr
236610 —2 1-4 cr

ANESTHESIOLOGY (Anes)
Medical School

R 3107 Individual Study in Respiratory Therapy (prereq #)
539853 1415-1500 W, Mayo C559, Larsen R, ar cr

5015 Directed Study, Anesthesia Topics/Project Course Development (prereq CRNA, regis B.S. in nurs anes, #)
436363 ar cr

5181 Externship in Clinical Practice of Anesthesiology (prereq regis med)
029666 Anderson W, 4.5-9 cr

5182 Independent Study, Anesthesiology (prereq regis med)
035452 ar cr

5186 Clinical Practice in Anesthesia (prereq CRNA, regis B.S. in nurs anes, 5086, #)
439523 Palahniuk R, 15 cr

5268 Seminar in Anesthesia (prereq CRNA, regis B.S. in anes)
130808 1500-1700 F, Mayo B580, Palahniuk R, 2 cr

8265 General Anesthesia
729533 12 cr

8266 Regional Anesthesia
731542 Palahniuk R, 4 cr

8267 Pre-Postanesthetic Evaluation
731430 1530-1800 MTWTh, Mayo B580, Palahniuk R, 2 cr

8268 Seminar: Anesthesia
232346 1500-1700 F, Mayo B580, Palahniuk R, 2 cr

8269 Research in Anesthesia
136132 Palahniuk R, ar cr

ANIMAL AND PLANT SYSTEMS (AnPl)
Agricultural, Food, and Environmental Sciences

R 1001 Orientation to Animal and Plant Systems (S-N only)
131092 1430-1520 M, VoTech R385, Peterson R, 1 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† All courses preceding this symbol must be completed before credit will be granted for any quarter of the sequence.
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Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

ANIMAL PHYSIOLOGY (AnPh)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
939428 1-18 cr

8777 Thesis Credits: Masters
734392 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
233402 1-36 cr

ANIMAL SCIENCE (AnSc)
Agricultural, Food, and Environmental Sciences

1100 Introductory Animal Science
637155 0905-0955 MTWThF, PetH 110, Seykora A, others, 5 cr

1110 Dairy Cattle Judging (prereq #)
124572 Seykora A, 2 cr

R 1120 Market Livestock and Carcass Evaluation
★LECT 1325-1525 M, AnAren, 1325-1525 F, ABLMS 125, Christians C
129830 —1 LAB 1325-1415 W, ABLMS 125, Christians C, 4 cr

1301 Management Techniques: Swine (prereq #) (S-N only)
132257 Hawton J, 1 cr

1302 Management Techniques: Sheep (prereq #) (S-N only)
436427 1325-1600 T, SheepR, Christians C, 1 cr

1304 Management Techniques: Dairy (prereq #) (S-N only)
337277 1325-1425 MTWThF, DairyCatB, Otterby D, 1 cr

3130 Beginning Livestock Judging (prereq soph or #...1120 rec)
423208 1430-1715 TTh, AnAren 115, Hawton J, 2 cr

R 3143 Advanced Meats Judging and Grading (prereq 1143 or ¶1143)
223209 1220-1415 TTh, ABLMS 125, Epley R, 2 cr

R 3301 Systemic Physiology (prereq Biol 1011, BioC 1301)
★LECT 1115-1205 MTWThF, PetH 110, Hunter A, El Halawani M
731377 —1 LAB 1430-1730 W, AnScVM 164, 168, Hunter A, El Halawani M, 6 cr
931345 —2 LAB 1325-1625 Th, AnScVM 164, 168, Hunter A, El Halawani M, 6 cr

3401 Principles of Animal Nutrition (prereq Chem 1002 or Chem 3301)
636233 0800-0850 MWThF, ClaOff B25, Pettigrew J, 4 cr

R 5322 Physiology of Reproduction (prereq 6 cr systemic physiology)
636782 1430-1520 MWThF, HckrH 210, 1430-1520 T, AnScVM 168, Crabo B, 5 cr

R 5401 Swine Nutrition and Feeding (prereq 3401)
★LECT 1325-1415 MWF, ClaOff B36, Shurson G
934410 —1 REC 1325-1415 T, ClaOff B36, 4 cr

5605 Poultry Production (prereq 1401 or 3401 ...5405 rec)
532353 1430-1625 TTh, PetH 108, Waibel P, 4 cr

5710 Special Problems (prereq #)
432782 ar cr

5715 Tutorial (prereq #)
436699 ar cr

8210 Genetic Improvement of Animals (prereq #)
924573 1430-1625 TTh, HckrH 209, Seykora A, 4 cr

8603 Graduate Seminar (prereq #)
539366 1220-1310 M, PetH 108, Hunter A, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
132459 1-18 cr

8750 Concepts and Developments in Meat Science and Technology (prereq #)
336470 Dayton W, 1 cr

8777 Thesis Credits: Masters
237160 1-16 cr

8810 Research in Animal Science (prereq #)
536516 ar cr

8820 Research in Animal Genetics (prereq #)
935993 ar cr

8830 Research in Animal Physiology (prereq #)
534510 Hunter A, ar cr

8840 Research in Animal Nutrition (prereq #)
635695 ar cr

8850 Research in Muscle Chemistry and Physiology (prereq #)
533079 Dayton W, ar cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
233982 1-36 cr

ANTHROPOLOGY (Anth)
Liberal Arts

R 1101 Human Origins (Biol/L; Envt)
★LECT 0905-0955 MWF, WilleyH 125, McCorriston J
538847 —1 REC 1010-1100 M, FordH 20, 5 cr
230807 —2 REC 1115-1205 M, FordH 20, 5 cr
132744 —3 REC 1220-1310 M, FordH 20, 5 cr
834531 —4 REC 1325-1415 M, FordH 20, 5 cr
639908 —5 REC 0800-0850 T, FordH 20, 5 cr
831287 —6 REC 0905-0955 T, FordH 20, 5 cr
830799 —7 REC 1010-1100 T, FordH 20, 5 cr
536113 —8 REC 1115-1205 T, FordH 20, 5 cr
233013 —9 REC 1220-1310 T, FordH 20, 5 cr
938120 —10 REC 1010-1100 W, FordH 20, 5 cr
335951 —11 REC 1115-1205 W, FordH 20, 5 cr
932480 —12 REC 1220-1310 W, FordH 20, 5 cr
036813 —13 REC 0800-0850 Th, FordH 20, 5 cr
134655 —14 REC 0905-0955 Th, FordH 20, 5 cr
435732 —15 REC 1010-1100 Th, FordH 20, 5 cr
230337 —16 REC 1115-1205 Th, FordH 20, 5 cr

R 1101H Honors Course: Human Origins (prereq B avg or #)
★LECT 0905-0955 MWF, WilleyH 125, McCorriston J
140780 —80 REC 1325-1415 Th, FordH 20, 5 cr

R 1102 Understanding Cultures (§5102) (SSci; IP)
★LECT 1115-1205 MWF, SciCB 175, Gerlach L
637186 —1 REC 0800-0850 T, FordH 15, 5 cr
535513 —2 REC 0905-0955 T, FordH 15, 5 cr
434421 —3 REC 0905-0955 T, FordH 175, 5 cr
237286 —4 REC 1010-1100 T, FordH 15, 5 cr
634417 —5 REC 1115-1205 T, FordH 15, 5 cr
040537 —6 REC 1115-1205 T, FordH 50, 5 cr
034429 —7 REC 1220-1310 T, FordH 50, 5 cr
734330 —8 REC 0800-0850 Th, FordH 15, 5 cr
430188 —9 REC 0905-0955 Th, FordH 175, 5 cr
331589 —10 REC 0905-0955 Th, FordH 60, 5 cr
336775 —11 REC 1010-1100 Th, FordH 15, 5 cr
940370 —12 REC 1010-1100 Th, FordH 50, 5 cr
232797 —13 REC 1115-1205 Th, FordH 15, 5 cr
238664 —14 REC 1115-1205 Th, FordH 50, 5 cr

R 1102H Honors Course: Understanding Cultures (prereq GPA 3.0 or #)
★LECT 1115-1205 MWF, SciCB 175, Gerlach L
135188 —80 REC 1220-1405 W, FordH 290E, Gerlach L, 5 cr

R 3201 Approaches in Cultural Anthropology (prereq 1102 or #)
323217 0945-1100 TTh, FordH 285, Miller F, 4 cr

R 3293 Peoples and Cultures of the Pacific Islands (IP)
123218 1115-1230 TTh, FordH 285, Lipset D, 4 cr

R 3366 Language and Social Analysis (prereq 1102 or 5102 or #)
538136 1010-1100 MWF, FordH 170, Dunnigan T, 5 cr

R 3371 Archaeology of Prehistoric Europe (§5120, AnSt 5120)
841043 1115-1205 MWF, FordH 285, Wells P, 4 cr

3970 Directed Studies (prereq #, Δ, ⊿)
736059 ar cr

3992H Honors Tutorial (cannot be applied toward any CLA degree; prereq #) (S-N only)
739981 1 cr

R 5120 Archaeology of Prehistoric Europe (§3371, AnSt 5120)
540341 1115-1205 MWF, FordH 285, Wells P, 4 cr

R 5132 Symbolic Anthropology (prereq 1102 or 5102 or #)
023219 1325-1415 MWF, FordH 285, Ingham J, 4 cr

5145 Anthropology and Education (§EdPA 5171; prereq 1102 or 5102 or #)
139418 1535-1735 T, WullH 220, Lundy-Dobbert M, 4 cr

R 5161 Cultural Semantics (prereq #)
535253 1220-1310 MWF, FordH 285, Dunnigan T, 4 cr

R 5305 Studies in Ethnographic Classics
323220 1415-1530 TTh, FordH 285, Penn M, 4 cr

R 5331 Culture Theory: An Introduction (prereq jr, sr, grad or #)
123221 1115-1230 TTh, FordH 130, Penn M, 4 cr

R 5960 Senior Seminar (prereq sr maj)
837381 —1 1415-1530 TTh, FordH 50, Arnold B, 4 cr (Who Owns the Past?)
023222 —2 1325-1520 W, FordH 50, Miller F, 4 cr (Cultural Values in Political Conflicts)

5961 Senior Research Project (prereq sr maj, #) (A-F only)
135670 4 cr

5970 Directed Readings (prereq #, Δ, CLA approval)
240351 2-4 cr

8001 Foundations of Social and Cultural Anthropology I (prereq anth grad student or #)
635373 1430-1700 Th, FordH 70, Gudeman S, 3 cr

R 8510 Seminar: Archaeology
533146 1220-1415 M, FordH 60, Arnold B, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
638449 1-18 cr

8777 Thesis Credits: Masters
735154 1-16 cr

8810 Seminar: Pedagogy (prereq anth grad stu)
339465 1325-1520 Th, FordH 40, Barlow K, 3 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
535642 1-36 cr

8950 Directed Studies (prereq #)
338655 ar cr

APPLIED ECONOMICS (ApEc)
Agricultural, Food, and Environmental Sciences

R 1000 Orientation to Agricultural and Applied Economics (S-N only)
323380 1115-1205 TTh, ClaOff B25, Bultmann M, 1 cr

R 1101 Principles of Microeconomics (§Econ 1101) (SSci)
123381 —1 0905-0955 MTThF, ClaOff B45, 4 cr
023382 —2 1115-1205 MTThF, ClaOff B35, 4 cr

R 1250 Principles of Accounting
★LECT 1220-1310 MWF, McNH 198, Nefstead W
623384 —1 REC 1220-1310 T, McNH 305, Nefstead W, 4 cr
423385 —2 REC 1220-1310 Th, ClaOff B30, Nefstead W, 4 cr

R 3001 Applied Microeconomics: Consumers and Markets (§Econ 3101; prereq 1101 or Econ 1101, Math 1142 or Math 1211, Stat 1001 or IDSc 1010; OMS 1020 or #)
★LECT 0815-0930 TTh, ClaOff B35, Liu D, Senauer B
123387 —1 LAB 1220-1310 M, ClaOff 17, 4 cr
923388 —2 LAB 1220-1310 T, ClaOff 17, 4 cr
723389 —3 LAB 0800-0955 W, ClaOff 17, 4 cr

R 3040 Economic Development of American Agriculture (prereq 1101 or Econ 1101) (Hist)
★LECT 1010-1100 MWF, VoTech R280, Welsch D
923391 —1 REC 0905-1100 T, VoTech R250, Welsch D, 4 cr
723392 —2 REC 1115-1310 T, VoTech R280, Welsch D, 4 cr

R 3400 Markets, Marketing, and Prices (prereq 1101, 1102...Math 1142 recommended)
★LECT 0905-0955 MWF, McNH 197, Hammond J
323394 —1 LAB 1325-1415 T, ClaOff 17, 4 cr
123395 —2 LAB 1325-1415 Th, ClaOff 17, 4 cr

R 3420 Grain Marketing Economics (prereq 1101 or Econ 1101)
023396 1640-1835 TTh, ClaOff B35, Stevens S, 4 cr

R 3430 Dairy Marketing Economics (prereq 1101 or Econ 1101)
823397 1220-1310 MTWTh, ClaOff B36, Hammond J, 4 cr

R 3450 Agricultural Input Marketing Economics (prereq 1101 or Econ 1101)
623398 1115-1205 MTWTh, ClaOff B36, Dahl D, 4 cr

R 3500 Agribusiness Finance (prereq 1250 or Acct 1050 and AgEc 3002 or #)
423399 0800-0850 MTWTh, ClaOff B36, Pederson G, 4 cr

R 3610 Resource Development and Environmental Economics (prereq 1101, 1102, or Econ 1101, Econ 1102 or #) (Envt)
★LECT 1220-1310 MW, ClaOff B35, Welsch D
825036 —1 REC 1325-1520 M, VoTech R280, 4 cr
625037 —2 REC 1325-1520 T, VoTech R280, 4 cr
425038 —3 REC 1325-1520 W, VoTech R280, 4 cr

R 3810 Principles of Farm Management (prereq 1101 or Econ 1101; AgBus, AgEcon, Applied Econ maj excluded)
★LECT 0945-1100 MW, VoTech R285, Olson K
023401 —1 LAB 1430-1630 W, ClaOff 17, Olson K, 4 cr

R 3990 Independent Study in Agricultural and Applied Economics (prereq #)
823402 ar cr

R 5580 Household Economics: Time, Labor, and Human Capital Around the Globe (prereq 3002 or Econ 3101 or #)
623403 1605-1735 MF, ClaOff B36, Kinsey J, 3 cr

R 5620 Regional Economic Analysis (prereq 3006 or Econ 3102 or #)
423404 1640-1800 TTh, ClaOff B30, Morse G, 3 cr

R 5750 Agricultural Trade and Commercial Policies (prereq 3002 or Econ 3101 or #) (IP)
223405 1640-1730 MWF, VoTech R385, Houck J, 3 cr

R 5790 World Food Problems (§Agro 5200, CAPS 5280, FScN 5643; prereq sr or grad stu)
123406 1800-2100 W, ClaOff B35, 3 cr

R 5860 Economics of Agricultural Production (prereq 3002 or Econ 3101 or #)
923407 1430-1520 MW, ClaOff B36, Coggins J S, 3 cr

R 5990 Special Topics and Independent Study in Applied Economics (prereq #)
723408 —1 ar cr
523409 —2 ar cr

R 8110 Master's Paper: Plan B Project (max 9 cr; prereq #) (S-N only)
923410 1-9 cr

R 8200 Advanced Topics in Agricultural and Applied Economics
723411 1-9 cr

R 8270 Applied Welfare Economics and Public Policy (prereq calculus and intermediate economic theory)
523412 1115-1205 MW, ClaOff B30, Runge F, 3 cr

R 8288 Dynamic Production Economics (prereq Econ 5151, Econ 5152 or #)
323413 0905-1020 MW, ClaOff B36, King R, 3 cr

R 8591 Consumption Economics (prereq 5000-level microeconomic theory, basic regression analysis)
123414 0800-0915 MW, ClaOff B30, Senauer B, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
023415 1-18 cr

8777 Thesis Credits: Masters
823416 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
623417 1-36 cr

ARABIC (Arab)
Afro-American & African Studies
Liberal Arts

R 1101 Beginning Arabic
239877 1115-1205 MTWThF, BlegH 260, Kadi S, 5 cr

R 3036 The Religion of Islam (§1536, 5036, MELC 5036, ReIS 3036, ReIS 5036)
540193 1245-1400 TTh, BlegH 215, Farah C, 4 cr

R 3101 Intermediate Arabic (prereq 1103 or #)
136091 1325-1520 MW, BlegH 210, Kadi S, 5 cr

R 3301 Modern Arabic Poetry in Translation (§MidE 3301)
730469 1415-1530 TTh, BlegH 140, AshShareef T, 4 cr

R 3541 History of the Arabs (§Hist 3541)
423211 0945-1100 TTh, BlegH 215, Farah C, 4 cr

R 5101 Advanced Arabic (prereq 3101 or #)
032552 1325-1520 TTh, BlegH 105, Kadi S, 5 cr

R 5501 Modern Arabic Poetry
140116 1415-1530 TTh, BlegH 140, AshShareef T, 4 cr

R 5970 Directed Readings (prereq #, Δ, CLA approval)
136513 ar cr

ARCHITECTURE (Arch)
Architecture and Landscape Architecture

R 1301 Introduction to Architectural Drawing (§1010, 1041, LA 1301) (Vis) (A-F only)
532837 —1 LAB 0905-1205 MW, Arch 40, 4 cr
137158 —2 LAB 0905-1205 MW, Arch 50, 4 cr
731217 —3 LAB 1325-1625 TTh, Arch 40, 4 cr

R 1401 The Designed Environment (AH; Envt) (A-F only)
★LECT 1535-1700 T, SmithH 100, Damon P, 4 cr
737986 —1 LAB 0905-1035 Th, Damon P
735820 —2 LAB 1115-1245 Th, Damon P
433639 —3 LAB 1325-1500 Th, Damon P
924430 —4 LAB 1535-1700 Th, Damon P

R 1601 Design Professions and Society (C/PE)
★LECT 0800-0955 MW, Arch 35
924833 —1 REC 0800-0850 T, Arch 35, 4 cr
724834 —2 REC 0800-0850 T, Arch 15, 4 cr
524835 —3 REC 0800-0850 T, Arch 45, 4 cr
324836 —4 REC 0800-0850 T, Arch 20, 4 cr
124837 —5 REC 0905-0955 T, Arch 45, 4 cr
024838 —6 REC 0800-0850 Th, Arch 35, 4 cr
824839 —7 REC 0800-0850 Th, Arch 15, 4 cr
124840 —8 REC 0800-0850 Th, Arch 20, 4 cr
024841 —9 REC 0800-0850 Th, Arch 45, 4 cr
824842 —10 REC 1220-1310 Th, Arch 60, 4 cr

R 3311 Drawing for Design (§LA 3311; prereq pre-arch or arch or env dsgn or landscape arch maj, Arch/LA 1301, or #) (A-F only)
338820 —1 1220-1520 TTh, Arch 55, 4 cr
029893 —2 1325-1625 TTh, Arch 50, 4 cr

R 3411 History of Architecture to 1750 (Vis; IP) (A-F only)
★LECT 1115-1230 TTh, NichH 45, Satkowski L, 4 cr
131845 —1 REC 0800-0850 M, Arch 45
541103 —2 REC 0800-0850 M, Arch 20
432085 —3 REC 0905-0955 M, Arch 45
540291 —4 REC 1010-1100 M, Arch 35
040375 —5 REC 1535-1625 T, Arch 30
140870 —6 REC 0800-0850 W, Arch 45
238843 —7 REC 0905-0955 W, Arch 45
138083 —8 REC 1010-1100 W, Arch 60
123705 —9 REC 0800-0850 F, Arch 45
023706 —10 REC 0905-0955 F, Arch 45

R 3501 People, Environment, Design (prereq arch maj, 3311, 3412 or #) (A-F only)
323704 1325-1520 TTh, Arch 35, Guzowski M, 4 cr

R 3970 Directed Study (prereq 3081 or #)
635406 —1 Anderson L, ar cr
735123 —2 Clemence R, ar cr
138382 —3 Dittmar G, ar cr
529985 —4 Grebner D, ar cr
130114 —5 Guzowski M, ar cr
132221 —6 Jara C, ar cr
235683 —7 LaVine L, ar cr
639777 —8 Morrish W, ar cr
138715 —9 Mulfinger D, ar cr
133479 —10 Piotrowski A, ar cr
331544 —11 Robinson J, ar cr
137824 —12 Rockcastle G, ar cr
138908 —13 Satkowski L, ar cr
931328 —14 Solomonson K, ar cr
029585 —15 Weeks S, ar cr

R 5121 Architectural Design (prereq 5113, CE 3602, arch maj) (A-F only) (course fee)
★LECT 1325-1730 MWF, Arch 40, 6 cr
831032 —1 LAB 1325-1730 MWF, Arch 210
734943 —2 LAB 1325-1730 MWF, Arch 210

R 5122 Architectural Design (prereq 5121, arch maj) (course fee)
★LECT 1325-1730 MWF, Arch 40, 6 cr
340700 —1 LAB 1325-1730 MWF, Arch 240

R 5123 Architectural Thesis (!; prereq 5122, submit thesis plan qtr prior to wrtg, 800 hrs practical exp, 36 lab hrs, Δ) (A-F only) (course fee)
235196 1325-1730 MTWThF, Arch 220, 230, 12 cr

R 5281 Architecture Studio I: Fundamentals of Space and Form (prereq 3311, 3412, arch maj, or #) (A-F only) (course fee)
★LECT 1325-1730 MWF, Arch 55, 6 cr
140729 —1 LAB 1325-1730 MWF, Arch 230
032986 —2 LAB 1325-1730 MWF, Arch 230
240477 —3 LAB 1325-1730 MWF, Arch 230

R 5282 Architecture Studio II: Structure and Order (prereq 3311, 3412, 5281, arch maj, or #) (A-F only) (course fee)
★LECT 1325-1730 MWF, Arch 30, 6 cr
730665 —1 LAB 1325-1730 MWF, Arch 230

R 5283 Architecture Studio III: Site, Context and Form (prereq 5282, arch maj, or #) (A-F only) (course fee)
★LECT 1325-1730 MWF, Arch 60, 6 cr
433737 —1 LAB 1325-1730 MWF, Arch 230

R 5291 Architectural Design (prereq 5283, arch maj, #) (A-F only)
✦932561 —1 LECT 1325-1730 MWF, Arch 20, 6 cr
630481 —1 LAB 1325-1730 MWF, Arch 220

R 5351 AutoCAD I (prereq arch maj, 3081 or 8251 or #)
736904 1810-2120 W, Arch 145, 4 cr

Symbols

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¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
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Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5352 AutoCAD II (prereq arch maj, 5351 or #)
523703 0900-1210 S, Arch 145, 4 cr

R 5381 Introduction to Computer Aids for Architectural Design (prereq arch or BED or LA maj) (A-F only) (course fee)
★LECT 1325-1520 T, Arch 30, Anderson L, 4 cr
032759 —1 LAB 1325-1520 Th, Arch 145

R 5410 Topics in Architectural History (prereq #)
732660 1010-1205 WF, Arch 25, Solomonson K, 4 cr

R 5434 Contemporary Architecture (§5061, ArtH 5434; prereq arch maj or #)
423709 1010-1205 TTh, Arch 25, Solomonson K, 4 cr

R 5451 Architecture: Theory and Philosophy (§5851; prereq 5401 or #, grad arch maj) (A-F only)
732562 1535-1730 TTh, Arch 45, Dittmar G, 3 cr

R 5521 Building Methods in Architecture (§3062; prereq B Arch or BED or M Arch stu or #) (A-F only)
★LECT 1010-1205 MW, Arch 20, Weeks S
823710 —1 LAB 1010-1205 F, Arch 20, 4 cr
324433 —2 LAB 1010-1205 F, Arch 30, 4 cr

R 5541 Thermal Design in Architecture (§3064; prereq B Arch or BED or M Arch stu or #) (A-F only)
★LECT 1010-1205 WF, Arch 15, LaVine L
833752 —1 LAB 1010-1205 M, Arch 15, 4 cr
623708 —2 LAB 1010-1205 M, Arch 25, 4 cr

R 5550 Topics in Architecture Technology (prereq arch maj or grad arch maj or #)
★LECT 1535-1730 T, Arch 55, Weeks S
833217 —1 LAB 0905-1205 F, Arch 50, Weeks S

R 5574 Architectural Structures II: Concrete and Masonry Construction (prereq 5573) (A-F only)
823707 0800-0955 TTh, Arch 50, 4 cr

R 5645 Real Estate Development in Architecture (§5125; prereq arch maj or #)
429400 1830-2100 Th, Arch 50, Lammers J, 4 cr

R 5650 Topics in Architectural Practice (prereq arch maj or grad arch maj, 5621 or #)
730312 1800-2100 TTh, LindH 203, Thorbeck D, 4 cr

R 5711 Design Principles of the Urban Landscape (§5137; prereq 1601, arch maj or BED or #)
137877 0800-0955 TTh, Arch 25, Morrish W, 4 cr

R 5970 Directed Study (prereq #)
637706 —1 Anderson L, ar cr
839549 —2 Clemence R, ar cr
431695 —3 Dittmar G, ar cr
139838 —4 Grebner D, ar cr
139301 —5 Guzowski M, ar cr
934407 —6 Jara C, ar cr
135353 —7 LaVine L, ar cr
139967 —8 Morrish W, ar cr
131683 —9 Mulfinger D, ar cr
633977 —10 Piotrowski A, ar cr
538802 —11 Rauma J, ar cr
430806 —12 Robinson J, ar cr
532935 —13 Rockcastle G, ar cr
538766 —14 Satkowski L, ar cr
339871 —15 Solomonson K, ar cr
129942 —16 Stageberg J, ar cr
732061 —17 Weeks S, ar cr

R 8251 Graduate Architectural Design I (prereq grad status in architecture) (A-F only) (course fee)
★LECT 1325-1730 MWF, Arch 20, 6 cr
032339 —1 LAB 1325-1730 MWF, Arch 220
340650 —2 LAB 1325-1730 MWF, Arch 220
835713 —3 LAB 1325-1730 MWF, Arch 220
430482 —4 LAB 1325-1730 MWF, Arch 220

R 8254 Graduate Architectural Design II (prereq grad status in architecture) (A-F only) (course fee)
★LECT 1325-1730 MWF, Arch 50, 6 cr
331995 —1 LAB 1325-1730 MWF, Arch 240
930888 —2 LAB 1325-1730 MWF, Arch 240
135630 —3 LAB 1325-1730 MWF, Arch 240

R 8257 Graduate Architectural Design III (prereq grad status in architecture) (A-F only)
★LECT 1325-1730 MWF, Arch 45
024273 —1 LAB 1325-1730 MWF, Arch 210, 6 cr
824274 —2 LAB 1325-1730 MWF, Arch 210, 6 cr
624275 —3 LAB 1325-1730 MWF, Arch 210, 6 cr

R 8258 Graduate Architectural Design III (prereq grad status in architecture) (A-F only)
★LECT 1325-1730 MWF, Arch 45
224277 —1 LAB 1325-1730 MWF, Arch 210, 6 cr

R 8777 Thesis Credits: Masters (course fee)
938392 Robinson J, 1-16 cr

AREA STUDIES (Area)
Liberal Arts

R 3144 Scope and Methods of Area Studies (prereq soph, Area Studies maj or pre-maj or #) (A-F only)
432443 1430-1545 TTh, BlegH 260, Gray S, 4 cr

3910 Topics in East Asian Studies: Modern Social Change in China's Rural Areas (§Soc 3960, sec 1; prereq 1001 or #)
123213 1325-1415 MWF, BlegH 215, Liu Q, 4 cr

3920 Topics in European Studies
039128 —1 1415-1530 TTh, BlegH 210, Hayes N, 4 cr (European Security in the Post Cold War Era)
223212 —2 1415-1530 TTh, BlegH 215, Alapuro R, 4 cr (Nationalism, Democracy, and Civil Society in Northeastern and Northern Europe) (§Soc 3960, sec 2; prereq 1001 or #)

3970 Directed Studies (prereq #, Δ, ⊐)
238356 1-15 cr

3990 Directed Research (prereq #, Δ, ⊐) (A-F only)
630125 1-15 cr

5920 Topics in European Studies: European Security in the Post Cold War Era
233724 1415-1530 TTh, BlegH 210, Hayes N, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
639732 1-15 cr

5990 Directed Research (prereq #, Δ, CLA approval) (A-F only)
331513 1-15 cr

ART (ArtS)
Liberal Arts

Materials fees are assessed at the time of registration for many Art courses. See page 25 for course numbers and fee amounts.

You must be on time for your first class meeting. If you are more than 15 minutes late, your instructor can assign your place in the course to another student.

NOTE: You must have permission from the instructor when you register for an Art course *after* the first class meeting.

R 1101 Drawing I (Vis)
★LECT 0905-1100 MW, ArtB 140, 4 cr
135023 —1 LAB 1100-1205 MW, ArtB 140, (ArtS, premaj ArtS, or MLK stu only)
032969 —2 LAB 1100-1205 MW, ArtB 140
★LECT 0905-1100 MW, ArtB 141, 4 cr
336209 —3 LAB 1100-1205 MW, ArtB 141, (ArtS, premaj ArtS, or MLK stu only)
231567 —4 LAB 1100-1205 MW, ArtB 141
★LECT 0905-1100 MW, ArtB 160, 4 cr
123204 —5 LAB 1100-1205 MW, ArtB 160, (ArtS, premaj ArtS, or MLK stu only)
229432 —6 LAB 1100-1205 MW, ArtB 160
★LECT 0905-1100 TTh, ArtB 140, 4 cr
638421 —7 LAB 1100-1205 TTh, ArtB 140, (ArtS, premaj ArtS, or MLK stu only)
229480 —8 LAB 1100-1205 TTh, ArtB 140
★LECT 0905-1100 TTh, ArtB 150, 4 cr
836635 —9 LAB 1100-1205 TTh, ArtB 150, (ArtS, premaj ArtS, or MLK stu only)
238891 —10 LAB 1100-1205 TTh, ArtB 150
★LECT 1325-1520 TTh, ArtB 160, 4 cr
823206 —11 LAB 1520-1625 TTh, ArtB 160, (ArtS, premaj ArtS, or MLK stu only)
623207 —12 LAB 1520-1625 TTh, ArtB 160
★LECT 1325-1520 TTh, ArtB 150, 4 cr
831239 —13 LAB 1520-1625 TTh, ArtB 150, (ArtS, premaj ArtS, or MLK stu only)
340986 —14 LAB 1520-1625 TTh, ArtB 150

R 1102 Drawing II (prereq 1101)
★LECT 1325-1520 MW, ArtB 150, 4 cr
140956 —1 LAB 1520-1625 MW, ArtB 150, (ArtS, premaj ArtS or MLK stu only)
331799 —2 LAB 1520-1625 MW, ArtB 150
★LECT 0905-1100 TTh, ArtB 141, 4 cr
137094 —5 LAB 1100-1205 TTh, ArtB 141, (ArtS, premaj ArtS or MLK stu only)
632246 —6 LAB 1100-1205 TTh, ArtB 141

R 1301 Sculpture (Vis)
★LECT 0905-1100 MW, ArtB 65, 4 cr
433012 —1 LAB 1100-1205 MW, ArtB 65, (ArtS, premaj ArtS or MLK stu only)
134891 —2 LAB 1100-1205 MW, ArtB 65
★LECT 1325-1520 MW, ArtB 65, Baldwin G, 4 cr
437786 —3 LAB 1520-1625 MW, ArtB 65, Baldwin G, (ArtS, premaj ArtS or MLK stu only)
036133 —4 LAB 1520-1625 MW, ArtB 65, Baldwin G

R 1302 Sculpture (Vis)
★LECT 0905-1100 MW, ArtB 30, Baldwin G, 4 cr
437139 —1 LAB 1100-1205 MW, ArtB 30, Baldwin G, (ArtS, premaj ArtS, or MLK stu only)
539562 —2 LAB 1100-1205 MW, ArtB 30, Baldwin G
★LECT 0905-1100 TTh, ArtB 30, Lucey S, 4 cr
332421 —3 LAB 1100-1205 TTh, ArtB 30, Lucey S, (ArtS, premaj ArtS, or MLK stu only)
038173 —4 LAB 1100-1205 TTh, ArtB 30, Lucey S
★LECT 1325-1520 TTh, ArtB 30, 4 cr
436167 —6 LAB 1520-1625 TTh ArtB 30

R 1401 Introduction to Studio Arts (Vis; IP)
632599 —1 LECT 1430-1625 TTh, WilleyH 125, 4 cr

R 1403 Papermaking: Pulp to Plastic Expression
★LECT 0905-1100 MW, ArtB 35, Krepps J, 4 cr
132632 —1 LAB 1100-1205 MW, ArtB 35, Krepps J, (ArtS or MLK stu only)
830625 —2 LAB 1100-1205 MW, ArtB 35, Krepps J

R 1404 Color (prereq 1101)
★LECT 1325-1520 MW, ArtB 140, 4 cr
833475 —1 LAB 1520-1625 MW, ArtB 140, (ArtS, premaj ArtS, or MLK stu only)
136205 —2 LAB 1520-1625 MW, ArtB 140
★LECT 1325-1520 TTh, ArtB 140, Feinberg D, 4 cr
933483 —3 LAB 1520-1625 TTh, ArtB 140, Feinberg D, (ArtS, premaj ArtS, or MLK stu only)
940837 —4 LAB 1520-1625 TTh, ArtB 140, Feinberg D

R 1510 Printmaking: Intaglio (max 8 cr) (Vis)
★LECT 1325-1520 TTh, ArtB 170, Bethke K, 4 cr
433382 —1 LAB 1520-1625 TTh, ArtB 170, Bethke K, (ArtS, premaj ArtS or MLK stu only)
030753 —2 LAB 1520-1625 TTh, ArtB 170, Bethke K

R 1520 Printmaking: Lithography (max 8 cr) (Vis)
★LECT 1325-1520 MW, ArtB 170, Krepps J, 4 cr
331561 —1 LAB 1520-1625 MW, ArtB 170, Krepps J, (ArtS, premaj ArtS, or MLK stu only)
139774 —2 LAB 1520-1625 MW, ArtB 170, Krepps J

R 1530 Printmaking: Relief (max 8 cr) (Vis)
★LECT 0905-1100 TTh, ArtB 170, Bethke K, 4 cr
338462 —1 LAB 1100-1205 TTh, ArtB 170, Bethke K, (ArtS, premaj ArtS or MLK stu only)
632795 —2 LAB 1100-1205 TTh, ArtB 170, Bethke K

R 1602 Electronic Art (Vis)
★LECT 0905-1100 MW, AndH 250, 4 cr
737793 —2 LAB 1100-1205 MW, AndH 250
★LECT 1325-1520 TTh, AndH 250, 4 cr
723215 —4 LAB 1520-1625 MW, AndH 250

R 1701 Photo Medium (Vis)
★LECT 0905-1100 MW, ArtB 120, 4 cr
338543 —2 LAB 1100-1205 MW, ArtB 120
★LECT 1325-1520 MW, ArtB 120, 4 cr
523216 —3 LAB 1520-1625 MW, ArtB 120, (ArtS, premaj ArtS, or MLK stu only)
034236 —4 LAB 1520-1625 MW, ArtB 120

R 1811 Ceramics: Handbuilding (Vis)
★LECT 0905-1100 MW, ArtB 10, 4 cr
923259 —1 LAB 1100-1205 MW, ArtB 10, (ArtS, premaj ArtS, or MLK stu only)
223260 —2 LAB 1100-1205 MW, ArtB 10

R 1812 Ceramics: Wheel Throwing (Vis)
★LECT 0905-1100 TTh, ArtB 10, Pharis M, 4 cr
140917 —1 LAB 1100-1205 TTh, ArtB 10, Pharis M, (ArtS, premaj ArtS, or MLK stu only)
730763 —2 LAB 1100-1205 TTh, ArtB 10, Pharis M

R 3105 Introduction to Painting (prereq 1101, 1102, 1401, 1404)
★LECT 0905-1100 MW, ArtB 161, Roode W, 4 cr
239829 —1 LAB 1100-1205 MW, ArtB 161, Roode W, (ArtS, premaj ArtS, or MLK stu only)
332175 —2 LAB 1100-1205 MW, ArtB 161, Roode W
★LECT 0905-1100 TTh, ArtB 161, Cowette T, 4 cr
623224 —3 LAB 1100-1205 TTh, ArtB 161, Cowette T, (ArtS, premaj ArtS, or MLK stu only)
423225 —4 LAB 1100-1205 TTh, ArtB 161, Cowette T

R 3110 Drawing (max 12 cr; prereq 1102, 1401)
★LECT 1325-1520 MW, ArtB 141, Roode W, 4 cr
131988 —1 LAB 1520-1625 MW, ArtB 141, Roode W, (ArtS, premaj ArtS, or MLK stu only)
939347 —2 LAB 1520-1625 MW, ArtB 141, Roode W
★LECT 0905-1100 TTh, ArtB 160, Lyon J, 4 cr
123227 —3 LAB 1100-1205 TTh, ArtB 160, Lyon J, (ArtS, premaj ArtS, or MLK stu only)
923228 —4 LAB 1100-1205 TTh, ArtB 160, Lyon J

R 3120 Painting (max 12 cr; prereq 1101, 1102, 1401, 1404, 3105, 4 cr of 3110 or ¶3110)
★LECT 0905-1100 MW, ArtB 151, Morgan C, 4 cr
130775 —1 LAB 1100-1205 MW, ArtB 151, Morgan C, (ArtS, premaj ArtS, or MLK stu only)
132064 —2 LAB 1100-1205 MW, ArtB 151, Morgan C
★LECT 0905-1100 TTh, ArtB 151, Feinberg D, 4 cr
934925 —3 LAB 1100-1205 TTh, ArtB 151, Feinberg D, (ArtS, premaj ArtS, or MLK stu only)
131951 —4 LAB 1100-1205 TTh, ArtB 151, Feinberg D

R 3130 Watercolor (max 12 cr; prereq 1101, 1102, 1401, 1404)
★LECT 1325-1520 TTh, ArtB 141, 4 cr
629959 —1 LAB 1520-1625 TTh, ArtB 141

R 3306 Performance Art (prereq 1401 or #)
★LECT 1325-1520 TTh, ArtB 186B, Lucey S, 4 cr
529629 —1 LAB 1520-1625 TTh, ArtB 186B, Lucey S, (ArtS or MLK stu only)
131960 —2 LAB 1520-1625 TTh, ArtB 186B, Lucey S

3411H Honors: Tutorial (prereq honors program candidate, Δ) (A-F only)
130962 2-4 cr

3412H Honors: Tutorial (prereq honors program candidate, Δ) (A-F only)
434595 2-4 cr

3413H Honors: Cross-Media Project (prereq honors program candidate, Δ) (A-F only)
531106 2-4 cr

3414H Honors: Cross-Media Project (prereq honors program candidate, Δ) (A-F only)
138883 2-4 cr

3415H Honors: Thesis (prereq honors program candidate, Δ) (A-F only)
132350 2 cr

3416H Honors: Thesis (prereq honors program summa candidate, Δ) (A-F only)
539271 2 cr

R 3420 Studio Arts Workshop: Visual Narrative Structures, Byzantium to the Present
★LECT 1325-1520 MW, ArtB 160, Katsiaficas D, 4 cr
733064 —1 LAB 1520-1625 MW, ArtB 160, Katsiaficas D

R 3430 Paper: Pulp to Plastic Expression (max 12 cr; prereq 1401, 1403)
★LECT 0905-1100 MW, ArtB 35, Krepps J, 4 cr
234159 —1 LAB 1100-1205 MW, ArtB 35, Krepps J, (ArtS or MLK stu only)

3444 Senior Project (prereq sr art studio maj, #, Δ) (S-N only)
131148 —1 Baldwin G, 2 cr
330958 —2 Bethke K, 2 cr
735638 —3 Cowette T, 2 cr
340857 —4 Feinberg D, 2 cr
237854 —5 Hallman G, 2 cr
730035 —6 Henkel J, 2 cr
440297 —7 Hoard C, 2 cr
132985 —8 Katsiaficas D, 2 cr
735333 —9 Krepps J, 2 cr
333844 —10 Lane T, 2 cr
731640 —11 Lucey S, 2 cr
240382 —12 Lyon J, 2 cr
534216 —13 Morgan C, 2 cr
138303 —14 Pharis M, 2 cr
640766 —15 Potratz W, 2 cr
138656 —16 Roode W, 2 cr
639276 —17 Rose T, 2 cr
339286 —18 2 cr

R 3510 Printmaking: Intaglio (max 12 cr; prereq 1401, 4 cr of 1510 or #)
★LECT 1325-1520 TTh, ArtB 170, Bethke K
030557 —1 LAB 1520-1625 TTh, ArtB 170, Bethke K, 4 cr

R 3530 Printmaking: Relief (max 12 cr; prereq 1401, 4 cr of 1530 or #)
★LECT 0905-1100 TTh, ArtB 170, Bethke K
139130 —1 LAB 1100-1205 Th, ArtB 170, Bethke K, 4 cr

R 3710 Photography (max 12 cr; prereq 1401, 1701 or Jour 3301 or #)
★LECT 1325-1520 TTh, ArtB 120, Hallman G, 4 cr
131089 —1 LAB 1520-1625 TTh, ArtB 120, Hallman G, (ArtS, premaj ArtS, or MLK stu only)
939641 —2 LAB 1520-1625 TTh, ArtB 120, Hallman G, (CLA students only)

R 3610 Intermediate Ceramics (max 12 cr; prereq 1401, 1811, 1812 or #)
★LECT 1325-1520 TTh, ArtB 10, Pharis M, 4 cr
729516 —1 LAB 1520-1625 TTh, ArtB 10, Pharis M, (ArtS or MLK stu only)
333455 —2 LAB 1520-1625 TTh, ArtB 10, Pharis M

3970 Directed Study (max 8 cr; prereq 24 cr studio arts, #, Δ, ❑)
733923 —1 Baldwin G, 1-5 cr
139492 —2 Bethke K, 1-5 cr
237773 —3 Cowette T, 1-5 cr
938151 —4 Feinberg D, 1-5 cr
840586 —5 Hallman G, 1-5 cr
034155 —6 Henkel J, 1-5 cr
533101 —7 Hoard C, 1-5 cr
834013 —8 Katsiaficas D, 1-5 cr
631503 —9 Krepps J, 1-5 cr
439375 —10 Lane T, 1-5 cr
040022 —11 Lucey S, 1-5 cr
531378 —12 Lyon J, 1-5 cr
731380 —13 Morgan C, 1-5 cr
935539 —14 Pharis M, 1-5 cr
033488 —15 Potratz W, 1-5 cr
036164 —16 Roode W, 1-5 cr
231939 —17 Rose T, 1-5 cr
537634 —18 1-5 cr

3980 Directed Instruction (max 8 cr; prereq #, Δ, ❑)
130985 —1 Baldwin G, 1-5 cr
141024 —2 Bethke K, 1-5 cr
237465 —3 Cowette T, 1-5 cr
134218 —4 Feinberg D, 1-5 cr
340972 —5 Hallman G, 1-5 cr
638855 —7 Hoard C, 1-5 cr
940031 —8 Katsiaficas D, 1-5 cr
034589 —9 Krepps J, 1-5 cr
730844 —11 Lucey S, 1-5 cr
431700 —12 Lyon J, 1-5 cr
337165 —13 Morgan C, 1-5 cr
134025 —14 Pharis M, 1-5 cr
734523 —15 Potratz W, 1-5 cr
537181 —16 Roode W, 1-5 cr
839504 —18 1-5 cr

R 5110 Drawing (max 16 cr; prereq 12 cr of 3110 or #)
524575 1325-1520 MW, ArtB 151, Morgan C, 4 cr

R 5120 Painting (max 16 cr; prereq 12 cr of 3120 or #)
933256 1325-1520 TTh, ArtB 161, Cowette T, 4 cr

R 5130 Watercolor (max 16 cr; prereq 12 cr of 3130)
840412 1325-1520 TTh, ArtB 141, 4 cr

5190 Advanced Entry: Drawing and Painting (max 16 cr; prereq #, Δ)
234520 —3 Cowette T, 4 cr
529758 —4 Feinberg D, 4 cr
723229 —9 Katsiaficas D, 4 cr
123230 —13 Lyon J, 4 cr
923231 —17 Roode W, 4 cr
723232 —19 4 cr

R 5360 Performance Art (max 16 cr; prereq 3306)
734425 1325-1520 TTh, ArtB 186B, Lucey S, 4 cr

5390 Advanced Entry: Sculpture (max 16 cr; prereq #, Δ)
231150 —1 Baldwin G, 4 cr
523233 —12 Lucey S, 4 cr
323234 —16 Potratz W, 4 cr

R 5400 Concepts in Contemporary Art (prereq sr, studio art maj or #)
136938 0905-1310 F, BlegH 210, Katsiaficas D, 4 cr

R 5420 Studio Arts Workshop: Visual Narrative Structures, Byzantium to the Present
223243 1325-1520 MW, ArtB 160, Katsiaficas D, 4 cr

R 5430 Paper: Pulp to Plastic Expression (max 16 cr; prereq 12 cr of 3430 or #)
131030 0905-1100 MW, ArtB 35, Krepps J, 4 cr

R 5510 Printmaking: Intaglio (max 16 cr; prereq 12 cr of 3510 or #)
336937 1325-1520 TTh, ArtB 170, Bethke K, 4 cr

R 5530 Printmaking: Relief (max 16 cr; prereq 12 cr of 3530 or #)
129326 0905-1100 TTh, ArtB 170, Bethke K, 4 cr

5590 Advanced Entry: Printmaking (max 16 cr; prereq #, Δ)
232721 —2 Bethke K, 4 cr
123244 —10 Krepps J, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5710 Photography (max 16 cr; prereq 12 cr of 3710 or #)
529436 1010-1205 TTh, ArtB 120, Hallman G, 4 cr

5790 Advanced Entry: Photography (max 16 cr; prereq #, Δ)
923245 Hallman G, 4 cr

R 5810 Advanced Ceramics (max 16 cr; prereq 12 cr of 3810 or #)
731363 1325-1520 MW, ArtB 10, Hoard C, 4 cr

5890 Advanced Entry: Ceramics/Glass (max 16 cr; prereq #, Δ)
723246 —8 Hoard C, 4 cr
323248 —15 Pharis M, 4 cr

5970 Directed Studies (max 12 cr; prereq 24 cr studio arts, #, Δ, CLA approval)
333181 —1 Baldwin G, 1-5 cr
631873 —2 Bethke K, 1-5 cr
333262 —3 Cowette T, 1-5 cr
737244 —4 Feinberg D, 1-5 cr
937856 —5 Hallman G, 1-5 cr
836151 —6 Henkel J, 1-5 cr
134994 —7 Hoard C, 1-5 cr
033216 —8 Katsiaficas D, 1-5 cr
234047 —9 Krepps J, 1-5 cr
330040 —10 Lane T, 1-5 cr
139595 —11 Lucey S, 1-5 cr
231990 —12 Lyon J, 1-5 cr
332872 —13 Morgan C, 1-5 cr
133806 —14 Pharis M, 1-5 cr
638743 —15 Potratz W, 1-5 cr
232007 —16 Roode W, 1-5 cr
337313 —17 Rose T, 1-5 cr
124278 —18 1-5 cr

8110 Drawing (max 12 cr)
231083 —1 1325-1520 TTh, ArtB 215, Lyon J, 4 cr (Nash Gallery - Seminar Rm)
239975 —3 Cowette T, 4 cr
035130 —4 Feinberg D, 4 cr
023253 —9 Katsiaficas D, 4 cr
129617 —14 Morgan C, 4 cr
823254 —19 4 cr

8120 Painting (max 24 cr)
133876 —3 Cowette T, 4 cr
338428 —4 Feinberg D, 4 cr
623255 —9 Katsiaficas D, 4 cr
123261 —13 Lyon J, 4 cr
140925 —14 Morgan C, 4 cr
423256 —17 Roode W, 4 cr

R 8300 Seminar: 20th-Century Art Theories in Sculpture (prereq MFA candidate in studio arts or #) (A-F only)
638306 1640-1835 T, ArtB 75, Potratz W, 2 cr

8510 Printmaking (max 36 cr)
832827 —2 Bethke K, 4 cr
223257 —10 Krepps J, 4 cr

R 8710 Photography (max 24 cr)
831919 1010-1205 TTh, ArtB 120, Hallman G, 4 cr

R 8810 Ceramics (max 24 cr)
634286 1325-1520 MW, ArtB 10, Hoard C, 4 cr

ART HISTORY (ArtH)
Liberal Arts

R 1016 Introduction to Asian Art (Vis; IP)
132543 1115-1230 TTh, AndH 310, Asher F, 4 cr

R 1921 Introduction to Film Study (§CLit 1921)
133062 1325-1415 MW, 1325-1600 F, AndH 310, Silberman R, 4 cr

R 3005 American Art
124577 0905-0955 MWF, AndH 310, Marling K A, 4 cr

R 3008 History of Ancient Art (§Clas 3008)
523717 1115-1205 MWF, AndH 310, Cooper F, 4 cr

R 3011 History of Renaissance and Baroque Art
323718 1010-1100 MWF, AndH 310, Stoughton M, 4 cr

R 3015 Art of Islam (Vis; IP)
533213 0945-1100 TTh, AndH 310, Asher C, 4 cr

R 3162 Roman Art and Archaeology (§Clas 3162)
123719 1115-1205 MWF, JonesH 207A, McNally S, 5 cr

R 3411 History of Architecture to 1750 (§Arch 3411) (Vis; IP) (A-F only)
★LECT 1115-1230 TTh, NichH 45, Satkowski L, 4 cr
423712 —1 REC 0800-0850 M, Arch 45
540050 —2 REC 0800-0850 M, Arch 20
237899 —3 REC 0905-0955 M, Arch 45
835730 —4 REC 1010-1100 M, Arch 35
533549 —5 REC 1535-1625 T, Arch 30
223713 —6 REC 0800-0850 W, Arch 45
037900 —7 REC 0905-0955 W, Arch 45
123714 —8 REC 1010-1100 W, Arch 60
923715 —9 REC 0800-0850 F, Arch 45
723716 —10 REC 0905-0955 F, Arch 45

3970 Directed Studies (prereq #, Δ, ⊔)
940353 1-5 cr

3971 Major Project (prereq art history maj; #)
440350 1 cr

R 3975 Directed Museum Experience (prereq #, Director of Undergrad Studies) (S-N only)
636751 1-3 cr

R 5108 Greek Architecture (§Clas 5108; prereq jr or sr or #)
523720 1325-1415 MWF, JonesH 207A, Cooper F, 4 cr

R 5346 Baroque Art in Italy and Spain (prereq 3011 or grad student or #)
536886 1220-1310 MWF, JonesH 207B, Stoughton M, 5 cr

R 5785 Art of Islamic Iran
323721 1245-1400 TTh, JonesH 207B, Asher C, 4 cr

5970 Directed Readings (prereq sr, #, Δ, CLA approval)
331155 1-5 cr

5990 Directed Research (prereq sr, #, Δ, CLA approval)
431857 1-5 cr

R 8400 Seminar: Symbolism in 19th-Century Art (prereq #)
123722 1430-1630 M, JonesH 202, Weisberg G, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
937260 1-18 cr

R 8720 Seminar: Text and Object (prereq #)
023723 1430-1630 Th, JonesH 202, Poor R, 4 cr

R 8770 Seminar: Art Without Artists (prereq #)
035323 1415-1600 T, JonesH 202, Asher F, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
631484 1-36 cr

8975 Directed Museum Studies (prereq #)
434533 1-3 cr

ASTRONOMY (Ast)
Institute of Technology

R 1015 Descriptive Astronomy Laboratories (§1025H; prereq high school algebra...high school trigonometry rec)
636619 —1 LAB 1710-1855 M, Phys 450, 1 cr
132999 —2 LAB 2020-2205 M, Phys 450, 1 cr
740709 —3 LAB 1900-2045 T, Phys 450, 1 cr

R 1021H Introduction to Astronomy (§1011; prereq high school trigonometry, physics or chemistry) (Phys/L; Envt)
★LECT 1430-1520 MTW, Phys 131
524303 —80 LAB 1630-1815 Th, Phys 450, 4 cr

R 1031 Exploring the Universe: A (Phys/NL; Envt)
✦538444 —1 LECT 1010-1100 MTW, Phys 150, 4 cr
✦935086 —2 LECT 1115-1205 MTW, Phys 166, 4 cr
✦735705 —3 LECT 1220-1310 MTW, Phys 166, 4 cr
✦122909 —4 LECT 1900-2015 MW, Phys 150, 4 cr
Registration in one of the following REC sections is also required:
140805 —1 REC 1800-1850 M, Phys 49
534720 —2 REC 2025-2115 M, Phys 49
432541 —3 REC 1325-1415 W, Phys 49
530876 —4 REC 1800-1850 W, Phys 49
335626 —5 REC 2025-2115 W, Phys 49
539416 —6 REC 0905-0955 Th, Phys 49
240320 —7 REC 1010-1100 Th, Phys 49
233447 —8 REC 1115-1205 Th, Phys 49
330443 —9 REC 1220-1310 Th, Phys 49
040103 —10 REC 1325-1415 Th, Phys 49
122904 —11 REC 0905-0955 F, Phys 49
922905 —12 REC 1010-1100 F, Phys 49
722906 —13 REC 1115-1205 F, Phys 49
522907 —14 REC 1220-1310 F, Phys 49

R 1032 Exploring the Universe: L (Phys/L; Envt)
✦135085 —1 LECT 1010-1100 MTW, Phys 150, 4 cr
✦237871 —2 LECT 1115-1205 MTW, Phys 166, 4 cr
✦133367 —3 LECT 1220-1310 MTW, Phys 166, 4 cr
✦322908 —4 LECT 1900-2015 MW, Phys 150, 4 cr
Registration in one of the following LAB sections is also required:
139072 —1 LAB 1010-1155 M, Phys 450
838675 —2 LAB 1220-1405 M, Phys 450
734165 —3 LAB 1430-1615 M, Phys 450
738202 —4 LAB 1710-1855 M, Phys 450
732285 —5 LAB 2020-2205 M, Phys 450
933287 —6 LAB 1010-1155 T, Phys 450
936884 —7 LAB 1220-1405 T, Phys 450
941034 —8 LAB 1430-1615 T, Phys 450
431969 —9 LAB 1900-2045 T, Phys 450
231665 —10 LAB 1010-1155 W, Phys 450
336260 —11 LAB 1220-1405 W, Phys 450
431180 —12 LAB 1710-1855 W, Phys 450
422902 —13 LAB 2020-2205 W, Phys 450
122899 —14 LAB 1010-1155 Th, Phys 450
822900 —15 LAB 1220-1405 Th, Phys 450
622901 —16 LAB 1010-1155 F, Phys 450
222903 —17 LAB 1220-1405 F, Phys 450

R 3970 Directed Studies (prereq #, Δ)
336582 1-5 cr

R 5061 Computational Methods in the Physical Sciences I (§Phys 5061; prereq IT/CLA upper div or grad or #)
234128 1115-1300 Th, Phys 210, Woodward P, 4 cr

R 5162 Stars and Stellar Evolution (prereq 3051, Phys 3513 or 3501 or #)
331835 1115-1205 MTWTh, Phys 236A, 4 cr

R 5163 Galactic Astronomy and the Interstellar Medium (prereq 3051 or #)
222898 1430-1520 MTWTh, Phys 143, 4 cr

R 5299H Senior Honors Astrophysics Research Seminar (prereq IT or CLA upper div honors stu, #) (S-N only)
540677 1430-1630 F, Phys 131, 1 cr

R 5970 Directed Studies (prereq #, Δ)
336758 1-5 cr

R 5990 Directed Research (prereq #, Δ)
938960 ar cr

R 8200 Seminar
738510 1430-1630 F, Phys 131, 1-3 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
030283 1-18 cr

R 8777 Thesis Credits: Masters
137354 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
031398 1-36 cr

8990 Research in Astronomy and Astrophysics (prereq #)
936061 ar cr

BIOCHEMISTRY (BioC)
Biological Sciences

R 3021 Biochemistry (§Biol 5001; prereq Biol 1009, 8 cr organic chem)
923262 —1 1220-1325 MWF, ClaOff B45, Woodward C, 4 cr
829586 —2 1730-1910 TTh, McNH 33, Arneson M, 4 cr

3960 Research Topics in Biochemistry (S-N only)
731556 1535-1625 Th, GorL 342, Raftery M, 1 cr

R 5025 Laboratory in Biochemistry (prereq 3021 or ¶3021 or 5331 or ¶5331 or Biol 5001 or ¶Biol 5001)
★LECT 1145-1235 T, GorL 239, Fuchs J, 2 cr
431406 —1 LAB 0800-1140 T, BioSci 192, 198
838546 —2 LAB 1240-1620 T, BioSci 192, 198

5331 Structure, Catalysis, and Metabolism in Biological Systems (§3021, Biol 5001; prereq 2 qtrs organic chem, Biol 1009 or Biol 1202 or #)
936724 1325-1430 MWF, ClaOff B35, Allewell N, Neisestuen G, 4 cr

5401 Metabolism and Its Regulation (prereq 3021 or 5331)
033474 1715-1830 TTh, BioSci 70, Nelsestuen G, 3 cr

5527 Physical Biochemistry: Spectroscopic Methods II (§MdBc 5527, Chem 5527; prereq 2 qtrs physical chemistry, BioC/MdBC 5526)
237563 1535-1705 TTh, MoosT 2571, 2585, Thomas D, Barry B, 4 cr (Mpls)

5970 Directed Studies (max 10 cr may count toward maj req; prereq #, Δ) (S-N only)
429607 ar cr

5990 Directed Research (max 10 cr may count toward maj req; prereq #, Δ) (S-N only)
039758 ar cr

8001 Advanced Biochemistry I: Protein Structure and Function (§5751, MdBc 8001; prereq 3 qtrs org chem, 2 qtrs phys chem, 1 qtr biochem, or #)
335111 —1 LECT 0800-0905 MWF, FordH 285, Ohlendorf D, Wackett L, 4 cr (nonbiochem maj only) (Mpls)
135594 —2 LECT 0800-0905 MWF, FordH 285, Ohlendorf D, Wackett L, 5 cr (Mpls)
★REC 0800-0905 Th, FordH 285, (Mpls)

8094 Research and Literature Reports (S-N only)
333939 1200-1300 F, GorL 239, Bloomfield V, 1 cr

8194 Graduate Seminar (S-N only)
133957 1600-1730 W, BorH 335, Wackett L, 1 cr

8206 Cell Signalling and Metabolic Regulation (§MdBc 8206; prereq 8001-8002-8003 or MdBc 8001-8002-8003 or equiv)
340387 1010-1140 TTh, BioSci 12, Raftery M, others, 3 cr

R 8213 Advanced Molecular Biology I (§MdBc 8213, GCB 8213; prereq 8002 or MdBc 8002 or GCB 8132 or #)
035290 0815-0945 TTh, HSUnitF 2110, 2140, 4 cr (Mpls)

8290 Current Research Techniques (prereq grad maj in biochem) (S-N only)
530974 1-3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
535401 1-18 cr

8777 Thesis Credit: Masters
230970 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
937288 1-36 cr

8990 Graduate Research (prereq #) (S-N only)
234100 1-7 cr

BIOCHEMISTRY, MEDICAL (MdBc)
Medical School

1030 Elementary Biochemistry (§3050; prereq high school chemistry or #) (Biol/NL)
029991 0905-0955 MTWTh, OwreH 2210, 4 cr

3050 Biochemistry for Health Sciences (§1030; prereq college chem or #)
440851 1010-1100 MTWTh, MoosT 2690, 4 cr

5053 Problems in Biochemistry (prereq Δ; biochem grad maj must register S-N)
837350 1-10 cr

5100 Biochemistry, Molecular, and Cellular Biology (§CBN 5104; prereq regis med fr)
★LECT 0800-0955 MTWF, 0800-0850 Th, PWB 2470, 9 cr (Sept 3-Dec 13)
739785 —1 REC 1010-1100 F
037847 —2 REC 1115-1205 F
139332 —3 REC 1220-1310 F

5201 Biochemistry for Dental Students (prereq registered dental stu) (A-F only)
633929 0800-0850 MTWThF, MoosT 2620, Roon R, 4 cr (Sept 3-Dec 6)

5300 Biochemistry (prereq organic chem or #, recommended for med tech stu)
340020 0905-0955 MTWThF, Mayo 125, Roon R, 4 cr

5460 Neurochemical Communication (§NSc 5460, VB 5460; prereq biochemistry)
840958 1010-1100 MTWThF, MoosT 2580, Koerner J, Wilcox G, 4 cr

5527 Physical Biochemistry: Spectroscopic Methods II (§BioC 5527, Chem 5527; prereq 2 qtrs physical chem, #)
137474 1535-1705 TTh, MoosT 2571, 2585, Thomas D, Barry B, 4 cr

R 5531 Macromolecular Crystallography: Fundamentals (prereq 1 qtr org chem, biochem or ¶, 2 qtrs calc, college phys) (S-N only)
037749 1535-1625 F, MoosT 2197, Ohlendorf D, 1 cr

8001 Advanced Biochemistry I: Protein Structure and Function (§5751, BioC 8001; prereq 3 qtrs org chem, 2 qtrs phys chem, 1 qtr biochem, or #)
537200 —1 LECT 0800-0905 MWF, FordH 285, Ohlendorf D, Wackett L, 4 cr (nonbiochem maj only)
929515 —2 LECT 0800-0905 MWF, FordH 285, Ohlendorf D, Wackett L, 5 cr
★REC 0800-0905 Th, FordH 285

8094 Research and Literature Reports (prereq biochem grad stu or #) (S-N only)
740399 1220-1310 T, OwreH 4218, 1 cr

8206 Cell Signalling and Metabolic Regulation I (§BioC 8206; prereq BioC/MdBc 8001, 8002, 8003 or equiv)
131304 1010-1140 TTh, BioSci 12, Louis C, Raftery M, 3 cr (StP)

8213 Advanced Molecular Biology I (§BioC 8213, GCB 8213; prereq BioC/MdBc 8002 or GCB 8132 or #)
432426 0815-0945 TTh, HSUnitF 2110, 2140, Towle H, LaPorte D, others, 4 cr

8290 Current Research Techniques (prereq grad maj in biochem, #) (S-N only)
432720 1-3 cr

BIOLOGY (Biol)
Biological Sciences

R 1009 General Biology (prereq high schl chem recommended) (Biol/L)
★LECT 0800-0850 MWF, WilleyH 175, Anderson J
840622 —1 LAB 0800-0945 TTh, KoltH S160, 5 cr
430191 —2 LAB 0800-0945 TTh, KoltH S167, 5 cr
139919 —3 LAB 0800-0945 TTh, KoltH S170, 5 cr
130159 —4 LAB 1010-1155 TTh, KoltH S160, 5 cr
634465 —5 LAB 1010-1155 TTh, KoltH S167, 5 cr
732058 —6 LAB 1220-1405 TTh, KoltH S167, 5 cr
633459 —7 LAB 1430-1615 TTh, KoltH S167, 5 cr
537827 —8 LAB 1430-1615 TTh, KoltH S170, 5 cr
032227 —9 LAB 1010-1155 WF, KoltH S160, 5 cr
129836 —10 LAB 1010-1155 WF, KoltH S167, 5 cr
231536 —11 LAB 1220-1405 WF, KoltH S160, 5 cr
540954 —12 LAB 1220-1405 WF, KoltH S167, 5 cr
238275 —13 LAB 1220-1405 WF, KoltH S170, 5 cr
★LECT 1220-1310 MWF, MoosT 2650, Anderson J
335268 —14 LAB 0800-0945 TTh, KoltH S177, 5 cr
136437 —15 LAB 1010-1155 TTh, KoltH S170, 5 cr
931006 —16 LAB 1010-1155 TTh, KoltH S177, 5 cr
831290 —17 LAB 1220-1405 TTh, KoltH S170, 5 cr
534278 —18 LAB 1220-1405 TTh, KoltH S177, 5 cr
734456 —19 LAB 1430-1615 TTh, KoltH S177, 5 cr
236302 —20 LAB 0800-0945 WF, KoltH S160, 5 cr
035239 —21 LAB 0800-0945 WF, KoltH S167, 5 cr
337697 —22 LAB 1010-1155 WF, KoltH S177, 5 cr
036018 —23 LAB 1430-1615 WF, KoltH S160, 5 cr
040862 —24 LAB 1430-1615 WF, KoltH S167, 5 cr
★LECT 1800-1915 TTh, MoosT 2650
734375 —25 LAB 1930-2115 TTh, KoltH S160, 5 cr

R 1009H General Biology (prereq honors division or 3-4 yrs high school math, high school chem or Δ)
★LECT 1220-1310 MWF, MoosT 2650, Anderson J
733422 —81 LAB 1220-1405 TTh, KoltH S160, 5 cr
131389 —82 LAB 1430-1615 TTh, KoltH S160, 5 cr

R 1101 Heredity and Human Society (§GCB 3002, no cr if taken after 5003 or GCB 3022) (Biol/NL; C/PE)
131027 1220-1310 MWThF, WilleyH 125, Fan D, 4 cr

R 1106 General Zoology (§1806; prereq 1009 or 1202) (Biol/L)
★LECT 1010-1100 MWF, GrnH 110, (StP)
132820 —1 LAB 0800-1100 T, BioSci 182, 5 cr (StP)
431728 —2 LAB 1220-1520 T, BioSci 182, 5 cr (StP)
339644 —3 LAB 1220-1520 W, BioSci 182, 5 cr (StP)
229446 —4 LAB 0800-1100 Th, BioSci 182, 5 cr (StP) (1st lab meets Oct 3)
038772 —5 LAB 1220-1520 Th, BioSci 182, 5 cr (StP) (1st lab meets Oct 3)

R 1201 Evolutionary and Ecological Perspectives (§1008; no chem background required) (Biol/L)
★LECT 1220-1310 MWF, WilleyH 175, Packer C
936335 —1 LAB 0905-1205 T, KoltH S179, 5 cr
332905 —2 LAB 0905-1205 T, KoltH S183, 5 cr
140321 —3 LAB 0905-1205 T, KoltH S187, 5 cr
534166 —4 LAB 1325-1625 T, KoltH S179, 5 cr
131182 —5 LAB 1325-1625 T, KoltH S183, 5 cr
538203 —6 LAB 1325-1625 T, KoltH S187, 5 cr
337795 —7 LAB 0905-1205 W, KoltH S179, 5 cr
137631 —8 LAB 0905-1205 W, KoltH S183, 5 cr
438601 —9 LAB 0905-1205 W, KoltH S187, 5 cr
338445 —10 LAB 1325-1625 W, KoltH S179, 5 cr
140472 —11 LAB 1325-1625 W, KoltH S183, 5 cr
530280 —12 LAB 1325-1625 W, KoltH S187, 5 cr
037718 —13 LAB 0905-1205 Th, KoltH S179, 5 cr
938358 —14 LAB 0905-1205 Th, KoltH S183, 5 cr
740029 —15 LAB 0905-1205 Th, KoltH S187, 5 cr
439151 —16 LAB 1325-1625 Th, KoltH S179, 5 cr
935878 —17 LAB 1325-1625 Th, KoltH S183, 5 cr
630593 —18 LAB 1325-1625 Th, KoltH S187, 5 cr
636958 —19 LAB 0905-1205 F, KoltH S179, 5 cr
639150 —20 LAB 0905-1205 F, KoltH S183, 5 cr
133697 —21 LAB 0905-1205 F, KoltH S187, 5 cr
734795 —22 LAB 1325-1625 F, KoltH S179, 5 cr
029344 —23 LAB 1325-1625 F, KoltH S183, 5 cr
632618 —24 LAB 1325-1625 F, KoltH S187, 5 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 1202 Molecular and Cellular Perspectives (§1009; prereq 1201, Chem 1051 or equiv)
★LECT 1220-1310 MWF, BioSci 12, (StP)
★REC 1325-1415 F, BioSci 12, (StP)
031515 —1 LAB 0905-1205 MW, BioSci 192, 5 cr (StP)
936173 —2 LAB 1325-1625 MW, BioSci 192, 5 cr (StP)
736644 —3 LAB 1325-1625 MW, BioSci 198, 5 cr (StP)
823772 —4 LAB 1730-2030 MW, BioSci 192, 5 cr

R 1941 Preparation for Graduate Programs in Biology (prereq #) (S-N only)
930695 1600-1800 W, GorL 342, Magee P, Woodward V, 1 cr

R 1951 Biology Colloquium (S-N only)
136043 —1 1535-1730 M, SmithH 231, Hanna K, 1 cr
237191 —2 1430-1625 T, SmithH 231, Hanna K, others, 1 cr
132372 —3 1430-1625 W, BioSci 12, Hanna K, 1 cr (StP)

1960 Biology Colloquium Project (prereq 1951 or 1952 or 1953, ¶1951 or ¶1952 or ¶1953, #) (S-N only)
138097 1 cr

R 3003 Introduction to Computing in Biology (prereq 1009 or 1202 or equiv, declared biosci maj) (S-N only)
938568 —1 1430-1625 Th, BioSci 406, Phillips J, 2 cr (StP)
836800 —2 1430-1625 F, BioSci 406, 2 cr (StP)

R 3008 Ecology and Evolution (§5041, 5841; prereq 1009 or 1201, Math 1142 or Math 1251) (A-F only)
★LECT 0800-0850 MWF, BorH 335, Alstad D, (StP)
324934 —1 LAB 0800-1100 T, BioSci 6, 4 cr (StP)
124935 —2 LAB 1220-1520 T, BioSci 6, 4 cr (StP)
024936 —3 LAB 1220-1520 W, BioSci 6, 4 cr (StP)
824937 —4 LAB 0800-1100 Th, BioSci 6, 4 cr (StP) (1st lab meets Oct 3)
624938 —5 LAB 1220-1520 Th, BioSci 6, 4 cr (StP) (1st lab meets Oct 3)
424939 —6 LAB 1220-1520 F, BioSci 6, 4 cr (StP) (1st lab meets Oct 4)

R 3011 Animal Biology (§1106, 1806; prereq 1009 or 1202, Chem 1052)
★LECT 1730-1845 TTh, ClaOff B45, Herman W, (StP)
431311 —1 LAB 1220-1400 TTh, BioSci 107, 5 cr (StP) (labs begin T, Oct 1)
431471 —2 LAB 1430-1610 TTh, BioSci 107, 5 cr (StP) (labs begin T, Oct 1)
734537 —3 LAB 1430-1610 TTh, BioSci 176, 5 cr (StP) (labs begin T, Oct 1)
733159 —4 LAB 1900-2040 TTh, BioSci 176, 5 cr (StP) (labs begin T, Oct 1)
236204 —5 LAB 1900-2040 TTh, BioSci 107, 5 cr (StP) (labs begin T, Oct 1)
138956 —6 LAB 1010-1150 WF, BioSci 107, 5 cr (StP) (labs begin W, Oct 2)
933418 —7 LAB 1325-1505 WF, BioSci 107, 5 cr (StP) (labs begin W, Oct 2)

R 3012 Plant Biology (§1103, 3812; prereq 1009 or 1202, Chem 1052)
★LECT 1115-1205 MWF, GrnH 110, May G, (StP)
035435 —1 LAB 0905-1100 MW, BioSci 151, 5 cr (StP)
030932 —2 LAB 0905-1100 MW, BioSci 163, 5 cr (StP)
331785 —3 LAB 1220-1415 MW, BioSci 151, 5 cr (StP)
038660 —4 LAB 1430-1625 MW, BioSci 151, 5 cr (StP)

3111 Animal Biology (§3011; prereq 1106 or 1806 and Chem 1052)
539819 1730-1845 TTh, ClaOff B45, 4 cr (StP)

R 3950H Undergraduate Seminar (S-N only)
831080 —81 1430-1600 T, BioSci 756, Rubenstein I, 2 cr (StP) (PBio) (The Blind Watchmaker)
333116 —83 1325-1505 M, BioSci 260, 2 cr (StP) (GCB)
735607 —84 1325-1505 T, BioSci 260, 2 cr (StP) (GCB)
534989 —85 1450-1630 Th, BioSci 12, 2 cr (StP)

3960H Honors Seminar (prereq Δ) (S-N only)
636734 —81 1600-1700 M, Ecology 505, Barnwell F, 1 cr (StP)
332239 —82 1600-1700 T, Ecology 505, Barnwell F, 1 cr (StP)

3980 Directed Instruction (max 8 cr; prereq #) (S-N only)
232816 Hanna K, 1-3 cr

5003 Genetics (§GCB 3022, GCB 5022; prereq 5001 or BioC 3021 or BioC 5331)
537813 1430-1535 MWF, ClaOff B45, Simmons M, 4 cr (StP)

5004 Cell Biology (prereq 5001 or BioC 3021 or BioC 5331, 5003 or BioC 5333)
532367 1115-1220 MWF, HodsonH 495, Silflow C, 4 cr (StP)

R 5013 Microbiology (§MicB 3103, 5105, VPB 3103; prereq 5001 or BioC 3021 or Bioc 5331)
★LECT 0945-1100 TTh, MoosT 2520, Hanson R, 5 cr
135653 —1 REC 1115-1205 T, MoosT 2690, Hanson R
★LAB 1325-1520 TTh, MoosT 2252, Hanson R

BIOMEDICAL ENGINEERING (BMEn)
IT and Medical School

5001 Biomaterials I (§MatS 5481, MatS 5482; prereq IT upper div stu or grad stu or med stu or #) (A-F only)
440414 1430-1630 MW, AkerH 225, Hubel A, 2-4 cr

8002 Internship in Biomedical Engineering (prereq biomed engineering grad stu or Δ) (S-N only)
537598 3 cr

R 8100 Biomedical Engineering Seminar (S-N only)
739527 —1 1535-1635 T, MechE 108, Finkelstein S, 1 cr

R 8200 Biomedical Engineering Seminar (S-N only)
131778 —1 1535-1635 T, MechE 108, Finkelstein S, 1 cr

R 8300 Biomedical Engineering Seminar (S-N only)
737390 —1 1535-1635 T, MechE 108, Finkelstein S, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
138530 1-18 cr

8770 Plan B Project (no cr toward PhD; prereq #) (A-F only)
035242 4 cr

8777 Thesis Credit: Masters
140634 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
731296 1-36 cr

8970 Independent Study (prereq #) (A-F only)
233383 Tirrell M, 1-4 cr

8990 Directed Research (prereq #) (A-F only)
235148 Tirrell M, 1-4 cr

BIOMEDICAL SCIENCE (BMSc)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
135099 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
035659 1-36 cr

8990 Research: Biomedical Science (prereq student enrolled in MD/PhD Program)
430823 ar cr

BIOPHYSICAL SCIENCES (BPhy)
Medical School

5170 Basic Radiological Physics (§Rad 5170, TRad 5170; prereq #)
136088 1600-1715 MF, UHosp 1243, Khan F, 3 cr

R 5174 Physics of Diagnostic Radiology (§Rad 5174, TRad 5174; prereq 5170 or #)
130856 —1 0945-1100 TTh, MoosT 1752, Ritenour E, 3 cr

8204 Research: Biophysics, Radiation Biology
435066 ar cr

8221 Research
235358 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
329499 1-18 cr

8777 Thesis Credits: Masters
133389 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
739544 1-36 cr

BIOSYSTEMS AND AGRICULTURAL ENGINEERING (BAE)
Institute of Technology

1060 Biosystems and Agricultural Engineering Orientation (S-N only)
522910 1430-1625 Th, BioAgEng 308, Morey R, 1 cr

R 3052 Engineering Principles of Soil-Water-Plant Systems (prereq IT stu, 3031, Biol 1009, CE 3400 or AEM 3200)
★LECT 1115-1230 TTh, BioAgEng 308, Clanton C
122912 —1 LAB 1325-1555 T, BioAgEng 315, Clanton C, 4 cr
022913 —2 LAB 1325-1555 W, BioAgEng 315, Clanton C, 4 cr

3970 Directed Studies in Biosystems and Agricultural Engineering (prereq #)
822914 2-5 cr

5050 Intern Reports (prereq IT or CAFES stu in BAE, #) (S-N only)
622915 Chaplin J, 2 cr

R 5074 Microcomputer Interfacing (prereq IT upper div or grad IT, CSci 3101, CSci 3102, or CSci 3113, EE 3009, EE 1400)
★LECT 0800-0850 TTh, BioAgEng 106, Goodrich P
222917 —1 LAB 0905-1100 TTh, BioAgEng 106, 4 cr

5191 Special Problems in Biosystems and Agricultural Engineering (prereq #)
122918 2-5 cr

5192 Special Problems in Biosystems and Agricultural Engineering (prereq 5191, #)
922919 2-5 cr

5350 Agricultural Machinery and Terramechanics (prereq IT upper div or grad IT maj, AEM 3016, AEM 3036)
★LECT 1245-1400 TTh, BioAgEng 308, Chaplin J
122921 —1 LAB 1430-1700 T, BioAgEng 308, Chaplin J, 4 cr

R 5540 Watershed Engineering (prereq 3052 or ¶3052 or CE 3300, CE 3400, IT upper div or grad IT)
★LECT 1220-1310 MWF, BioAgEng 106, Wilson B
722923 —1 LAB 1430-1730 Th, BioAgEng 106, Wilson B, 4 cr

5745 Ventilating Systems for Indoor Air Quality (prereq IT upper div or grad IT maj, ME 3301, CE 3400 or AEM 3200)
522924 1630-1820 MW, AmundH 124, Janni K, 4 cr (Mpls)

R 5751 Biochemical Engineering I (§ChEn 5751; prereq BAE maj or grad stu or ChEn maj or #)
322925 1325-1415 MWF, AmundH 240, Srienc F, 3 cr (Mpls)

5891 Senior Design I (prereq IT upper div , 20 cr BAE or ¶)
122926 1430-1625 MW, BioAgEng 106, Chaplin J, 3 cr

8000 Supervised Teaching Experience (§Agro 8000, Hort 8000, Soil 8000; prereq #) (S-N only)
022927 1220-1415 M, BorH 491, Janni K, 2 cr

8100 Seminar (prereq #, grad IT maj)
822928 Janni K, 1 cr

8190 Advanced Problems and Research (prereq 5191, 5192, Δ)
622929 2-6 cr

8191 Advanced Problems and Research (prereq 5191, 5192, Δ)
022930 2-6 cr

8192 Advanced Problems and Research (prereq 5191, 5192, Δ)
822931 2-6 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
622932 1-18 cr

8777 Thesis Credits: Masters
422933 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
222934 1-36 cr

BUSINESS ADMINISTRATION (BA)

Management

R 1001 Information Technology Skills I (prereq Carlson SMgt stu) (S-N only)
024578 1325-1505 F, BlegH 10, 2 cr

R 3000 Professional Skills (prereq soph, completion of 39 cr) (S-N only)
339501 1115-1255 F, BlegH 10, Rinehart G, 2 cr (prereq Δ)

R 3040 International Environment of Business (prereq Mgmt 3001, 90 cr completed) (A-F only)
824579 —1 0800-0930 TTh, BlegH 230, 4 cr
124580 —2 1430-1610 TTh, BlegH 230, 4 cr

3998 Independent Study (prereq SMgt approval)
135658 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
132145 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
235313 1-36 cr

BUSINESS AND INDUSTRY EDUCATION (BIE)

Work, Community, and Family Education
Education and Human Development

R 1130 Principles of Energy and Power (§Ind 1130) (A-F only)
322875 0805-1105 MW, VoTech 120, 4 cr

1302 Supervised Vocational-Technical Teaching (§Ind 1302; prereq #) (S-N only)
024449 3 cr

R 3121 Graphic Communication (§Ind 3020) (A-F only)
736921 1220-1520 TTh, VoTech 110, 3 cr

3150 Technical Development: Advanced (§Ind 3200; max 18 cr; prereq #) (A-F only)
324450 1-12 cr

3900 Independent Study (§Ind 3900; prereq #)
124451 1-6 cr

R 5010 Introduction to Microcomputer Applications in Business and Industry Education (§BME 5310) (A-F only)
438369 1535-1800 W, ClaOff 17, 3 cr

R 5015 Advanced Word Processing Practicum (§BME 5160) (A-F only)
232458 1535-1800 M, ClaOff 17, 3 cr

5150 Technical Development: Specialized (§Ind 5200; max 18 cr; prereq #) (A-F only)
024452 1-12 cr

R 5261 Sales Training (§BME 5261, HRD 5261) (A-F only)
834755 1600-1830 Th, VoTech 135, Peterson S, 3 cr

R 5325 Foundations of Industrial Education (§Ind 5325) (A-F only)
338980 1600-1830 Th, VoTech R250, Lewis T, 3 cr

R 5400 Introduction to Business and Marketing Education (§BME 5300)
632988 1440-1830 W, VoTech R285, Lambrecht J, 4 cr

R 5452 Methods of Teaching Business Concepts (§BME 5152) (A-F only)
940482 1440-1830 Th, VoTech 220, 4 cr

5500 Occupational Experience (max 15 cr; prereq #) (S-N only)
824453 1-5 cr

R 5510 Internship: Business and Industry Education (§BME 8600; max 12 cr) (S-N only)
133067 1-12 cr

R 5630 Course Development (§Ind 5330) (A-F only)
131523 1600-1830 W, VoTech R285, Pucel D, 3 cr

R 5700 Field-Based Projects (§BME 5600; max 12 cr; prereq # or advisor approval) (S-N only)
538833 1-6 cr

5900 Directed Study (§Ind 5901; max 12 cr; prereq # or advisor approval) (S-N only)
133868 1-6 cr

R 8900 Research Problems: Business and Industry (§Ind 8900; max 9 cr; prereq advisor approval) (S-N only)
033071 4-9 cr

BUSINESS LAW (BLaw)

Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3058 Introduction to Law, the Law of Contracts and Sales Contracts (§8158; prereq Econ 1002) (A-F only)
329695 —1 0800-0930 TTh, BlegH 415, Andrews A, 4 cr
632893 —2 1010-1140 TTh, BlegH 425, Andrews A, 4 cr

BUSINESS, GOVERNMENT AND SOCIETY (BGS)

Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3004 International Business (IP)
138611 —1 1010-1155 MW, BlegH 225, Maitland I, 4 cr
431972 —2 1325-1510 MW, BlegH 225, 4 cr

CELL BIOLOGY AND NEUROANATOMY (CBN)

Medical School

R 3001 Human Anatomy (prereq one qtr college biology, soph or jr or sr)
431390 0800-0955 TTh, SmithH 100, Bauer G, 4 cr

3058 Anatomy of Extremities (prereq regis OT or PT stu, 3001)
★LECT 1240-1415 MWF, MoosT 2530, Coleman K, 5 cr
136504 —1 LAB 1430-1625 MWF, JacH 5147
035032 —2 LAB 1325-1625 TTh, JacH 5147

5100 Gross Human Anatomy A (5100-5101†; §5107, 5108; prereq regis med fr or grad stu with #)
★LECT 1325-1520 MTWThF, 1010-1100 TWThF, PWB 2470, Shew R, (Sept 3-Dec 6)
539576 —1 LAB 1430-1730 MWF, JacH 5161, 5163, 5165, 5166, 5169, 5170, 8 cr

5103 Human Histology (prereq regis med or dent fr, anat grad or grad with #) (course fee)
★LECT 1010-1205 TThF, PWB 2470, Letourneau P, (Sept 30-Dec 6)
133319 —1 LAB 1325-1520 T, 1535-1730 Th, OwreH 2112, 2114, 2115, 2116, 2117, JOAd 2118, 2120, 3-8 cr
332032 —2 LAB 1535-1730 T, 1325-1520 Th, OwreH 2112, 2114, 2115, 2116, 2117, JOAd 2118, 2120, 3-8 cr

5104 Biochemistry, Molecular and Cellular Biology (§MdBc 5100; prereq regis med fr)
★LECT 0800-0955 MTWF, 0800-0850 Th, PWB 2470, Livingston D, VanNess B, 1 cr (Sept 3-Dec 6)
129982 —1 REC 1010-1100 F
833184 —2 REC 1115-1205 F
433253 —3 REC 1220-1310 F

5107 Gross Anatomy for Dental Students: Extremities (§5100; ¶5108; prereq regis dent fr) (A-F only)
★LECT 1325-1415 MTWThF, 1010-1100 TWThF, PWB 2470, Shew R, (Sept 3-Dec 6)
836750 —1 LAB 1430-1730 MWF, JacH 5161, 5163, 5165, 5166, 5169, 5170, 4 cr

5108 Gross Anatomy for Dental Students: Torso (§5100; ¶5107; prereq regis dent fr) (A-F only)
★LECT 1325-1415 MTWThF, 1010-1100 TWThF, PWB 2470, Shew R, (Sept 3-Dec 6)
333794 —1 LAB 1430-1730 MWF, JacH 5161, 5163, 5165, 5166, 5169, 5170, 4 cr

5190 Advanced Anatomy (prereq regis med, #)
736384 1-10 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

5500 General Gross Anatomy (prereq Phase D medical student or #)
939574 Robertson D, ar cr

5501 The Extremities (prereq Phase D medical student or #)
431759 Robertson D, ar cr

5502 Head and Neck (prereq Phase D medical student or #)
337814 Robertson D, ar cr

5504 The Endocrine System (prereq Phase D or #)
539464 Hamilton D, ar cr

5508 The Thorax (prereq Phase D or #)
733470 Robertson D, ar cr

5509 The Abdomen (prereq Phase D or #)
938506 Robertson D, ar cr

5510 Perineum, Genital-Urinary System and Pelvis (prereq Phase D or #)
738183 Robertson D, ar cr

8153 Advanced Anatomy (prereq #)
436251 1-6 cr

8200 Research (max 20 cr; prereq #) (S-N only)
440879 1-10 cr

8205 Seminar: Cell Biology and Neuroanatomy (prereq #) (S-N only)
141081 1220-1310 F, MoosT 2520, Letourneau P, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
638757 1-18 cr

8777 Thesis Credits: Masters
941020 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
331804 1-36 cr

CENTRAL ASIAN STUDIES (CAS)

Linguistics & Asian & Slavic Languages & Literatures
Liberal Arts

R 3531 Central Asian Culture (§MELC 3531) (Hist; IP)
134008 1430-1520 MWF, FolH 214, Bashiri I, 4 cr

R 3602 Persian Poetry in Translation (§5602, MELC 3602, MELC 5602)
623465 1010-1100 MWF, FolH 214, Bashiri I, 4 cr

R 5602 Persian Poetry in Translation (§3602, MELC 3602, MELC 5602)
423466 1010-1100 MWF, FolH 214, Bashiri I, 4 cr

R 5990 Directed Research (prereq #)
436640 Bashiri I, ar cr

CHEMICAL ENGINEERING (ChEn)

Chemical Engineering & Materials Science
Institute of Technology

R 5001 Computational Methods in Chemical Engineering and Material Science (prereq chem engr or mat sci maj)
★LECT 1115-1205 MWThF, AmundH B75, Derby J
136978 —1 REC 0800-0850 T, LindH 26, 4 cr
536550 —2 REC 0905-0955 T, LindH 26, 4 cr
732318 —3 REC 1010-1100 T, LindH 26, 4 cr
239765 —4 REC 1115-1205 T, LindH 26, 4 cr
935654 —5 REC 1220-1310 T, LindH 26, 4 cr
935234 —6 REC 1325-1415 T, LindH 26, 4 cr
732593 —7 REC 1430-1520 T, LindH 26, 4 cr
840152 —8 REC 1535-1625 T, LindH 26, 4 cr

R 5101 Principles of Chemical Engineering I (prereq IT stu or ChEn maj, Math 3261, Phys 1253, Chem 3302, Chem 3306)
★LECT 1220-1310 MWF, AmundH B75, Hu W
839616 —1 REC 0800-0850 TTh, AmundH 162, 4 cr
837655 —2 REC 0800-0850 TTh, AmundH 116, 4 cr
036441 —3 REC 0905-0955 TTh, AmundH 158, 4 cr
334184 —4 REC 0905-0955 TTh, AmundH 120, 4 cr
134521 —5 REC 1430-1520 TTh, AmundH 162, 4 cr
130274 —6 REC 1430-1520 TTh, FordH 115, 4 cr

R 5104 Unit Operations and Separation Processes (prereq upper div ChEn maj, 5103)
★LECT 0800-0850 MWF, AmundH B75, Fredrickson A
233271 —1 REC 0800-0850 TTh, AmundH 124, 4 cr
237742 —2 REC 0800-0850 TTh, AmundH 120, 4 cr
639875 —3 REC 1220-1310 TTh, AmundH 156, 4 cr
433513 —4 REC 1220-1310 TTh, AmundH 162, 4 cr
932804 —5 REC 1430-1520 TTh, AmundH 158, 4 cr
335593 —6 REC 1430-1520 TTh, AmundH 124, 4 cr

R 5301 Chemical Reactor Analysis (prereq 5202, upper division chem engr or mat sci maj)
★LECT 0905-0955 MWF, AmundH B75, Schmidt L
038724 —1 REC 0800-0850 TTh, AmundH 156, 4 cr
135045 —2 REC 0905-0955 TTh, AmundH 156, 4 cr
138567 —3 REC 1115-1205 TTh, AmundH 156, 4 cr
230094 —4 REC 1220-1310 TTh, AmundH 124, 4 cr
830835 —5 REC 1430-1520 TTh, AmundH 116, 4 cr
537505 —6 REC 1535-1625 TTh, AmundH 158, 4 cr

R 5402 Chemical Engineering Laboratory (prereq upper div ChEn maj, 5401)
★LECT 1220-1310 M, FordH 155, Geankoplis C
935461 —1 LAB 1325-1730 M, AmundH 356, 4 cr
830026 —2 LAB 0800-1205 T, AmundH 356, 4 cr
239264 —3 LAB 1325-1730 T, AmundH 356, 4 cr
538248 —4 LAB 1010-1415 W, AmundH 356, 4 cr
938019 —5 LAB 0800-1205 Th, AmundH 356, 4 cr
231763 —6 LAB 1325-1730 Th, AmundH 356, 4 cr
137183 —7 LAB 1010-1415 F, AmundH 356, 4 cr
234940 —8 LAB 1430-1830 F, AmundH 356, 4 cr

R 5751 Biochemical Engineering I (§AgEn 5751; prereq grad stu or ChEn or AgEn maj or #) (A-F only)
839258 1325-1415 MWF, AmundH 240, Srienc F, 3 cr

R 5780 Principles of Mass Transfer in Engineering and Biological Engineering (prereq upper division engineering or science)
338848 1010-1100 MWF, AmundH 156, Geankoplis C, 3 cr

R 5902 Special Topics
738135 ar cr

R 5903 Special Topics
436573 ar cr

R 5904 Special Topics
334413 1535-1730 TTh, EE/CSci 3210, Backus B, 3 cr

5905 Special Topics
938554 ar cr

R 8101 Intermediate Fluid Mechanics (prereq 5103, #)
540579 0800-0850 MWF, AmundH 116, Scriven L, 3 cr

R 8201 Advanced Mathematics for Chemical Engineers (prereq #)
637124 0800-0955 TTh, AmundH 240, 3 cr

R 8601 Molecular Theory of Equilibrium and Nonequilibrium Processes (prereq #)
930180 1010-1100 MWF, AmundH 104, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
340731 1-18 cr

8777 Thesis Credits: Masters
633199 1-16 cr

8801 Seminar (S-N only)
035189 1325-1625 TTh, AmundH B75, 1 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
932057 1-36 cr

R 8901 Research in Chemical Engineering
139797 1430-1730 MWF, AmundH 162, ar cr

R 8902 Research in Chemical Engineering
733145 ar cr

R 8903 Research in Chemical Engineering
537147 1640-1835 F, AmundH 158, ar cr

CHEMICAL PHYSICS (ChPh)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
136342 1-18 cr

8777 Thesis Credits: Masters
931393 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
238700 1-36 cr

CHEMISTRY (Chem)

Institute of Technology

NOTE: You must take a chemistry placement exam if you intend to register for 1051. You may register for the course prior to taking the exam. But by the first day of class you must have completed the exam with a passing score or have sucessfully completed Chem 1001. Students who receive a non-passing score must start in Chem 1001. Placement exams are given during the summer, during fall orientation, and a *limited* number of times during winter and spring registration. (There is no fee for taking this exam; however, you may take the exam only once.) Call the Chemistry Student Services Office, 624-0026, for further information.

The Department of Chemistry strictly enforces the University's mandatory attendance rule. All students must attend the **first** meeting of their laboratory section to hold their place. After the first 15 minutes of each lab, open spaces are given to students on the waiting list. (Students in Chem 1001 must attend the first lecture period as well to hold their place.)

Every student who checks into a lab must check out of the lab before the end of the quarter, even if she or he drops the course: otherwise a $25 check-out fee will be charged.

Materials and technical services fees are assessed at the time of registration for many Chemistry courses. See page 25 for course numbers and fee amounts.

R 1001 General Principles of Chemistry (§1003, 1008; for students not passing chem placement exam; prereq high schl chem or equiv, 2 yrs high schl math (4 yrs rec)...high schl physics rec) (Phys/L)
★LECT 0800-0850 MWF, SciCB 325, 4 cr
★REC 0800-0850 T, SmithH 231
332452 —1 LAB 0905-1150 T, SmithH 249
331821 —2 LAB 1325-1610 T, SmithH 249
529646 —3 LAB 1325-1610 W, SmithH 249
★REC 0800-0850 Th, SmithH 231
832634 —4 LAB 0905-1150 Th, SmithH 249
★LECT 1010-1100 MWF, SciCB 325, 4 cr
★REC 1010-1100 T, SmithH 231
239149 —5 LAB 1325-1610 T, SmithH 249
135474 —6 LAB 1325-1610 W, SmithH 249
★REC 1010-1100 Th, SmithH 231
836957 —7 LAB 1325-1610 Th, SmithH 249

R 1051 Chemical Principles I (primarily for stu majoring in sci or eng; prereq 1001 or passing placement exam) (Phys/L; Envt)
★LECT 0905-0955 MWF, SmithH 100, 4 cr
★REC 0800-0850 T, SciCB 375
637253 —1 LAB 0905-1150 T, SmithH 110
★REC 0905-0955 T, SmithH 331
538525 —2 LAB 1325-1610 W, SmithH 110
★REC 0905-0955 Th, SmithH 331
035094 —3 LAB 1325-1610 F, SmithH 110
037797 —4 LAB 1325-1610 M, SmithH 110
★REC 0905-0955 Th, SmithH 231
733291 —5 LAB 1325-1610 Th, SmithH 110
★LECT 1220-1310 MWF, SmithH 100, 4 cr
★REC 1220-1310 T, SciCB 325
332984 —6 LAB 1325-1610 T, SmithH 110
134793 —7 LAB 1325-1610 W, SmithH 110
★REC 0800-0850 Th, SciCB 375
437254 —8 LAB 0905-1150 Th, SmithH 110
★REC 1220-1310 Th, SciCB 325
132137 —9 LAB 1325-1610 M, SmithH 110
★REC 1220-1310 Th, SciCB 375
438677 —10 LAB 1325-1610 F, SmithH 110
★LECT 1325-1415 MWF, SmithH 100, 4 cr
★REC 1325-1415 T, SmithH 331
835095 —11 LAB 0905-1150 Th, SmithH 110
★REC 1325-1415 T, SmithH 231
132758 —12 LAB 1325-1610 Th, SmithH 110
030591 —13 LAB 0905-1150 F, SmithH 110
★REC 1325-1415 Th, SmithH 331
934794 —14 LAB 0905-1150 M, SmithH 110
634241 —15 LAB 0905-1150 T, SmithH 110
★REC 1325-1415 Th, SciCB 325
240964 —16 LAB 1325-1610 T, SmithH 110
334167 —17 LAB 0905-1150 W, SmithH 110

R 1052 Chemical Principles II (prereq 1051) (Phys/L; Envt)
★LECT 0800-0850 MWF, SmithH 100, 4 cr
★REC 0800-0850 T, SmithH 331
833525 —1 LAB 0905-1150 T, SmithH 210
138446 —2 LAB 1325-1610 T, SmithH 210
★REC 0800-0850 Th, SmithH 331
132453 —3 LAB 1325-1610 M, SmithH 210
238678 —4 LAB 1325-1610 Th, SmithH 210
★REC 0800-0850 Th, SciCB 325
631517 —5 LAB 0905-1150 Th, SmithH 210

R 3100 Quantitative Analysis Lecture (prereq 1052, non-chem maj)
735302 1010-1100 MWF, SciCB 175, 3 cr

R 3101 Quantitative Analysis Laboratory (prereq 3100 or ¶3100)
★REC 1220-1310 MW, SmithH 231
633106 —1 LAB 1310-1610 MW, SmithH 310, 2 cr
★REC 1220-1310 TTh, SmithH 231
736014 —2 LAB 1310-1610 TTh, SmithH 310, 2 cr

R 3301 Organic Chemistry I (§3331; prereq 1052 or equiv) (A-F only)
230192 —1 1010-1100 MTWF, SciCB 375, 4 cr
723148 —2 1325-1415 MTWF, SciCB 375, 4 cr

R 3302 Organic Chemistry II (prereq 3301, 3305 or ¶3305) (A-F only)
935556 —1 1115-1205 MTWF, SciCB 375, 4 cr
335397 —2 1430-1520 MTWF, SciCB 375, 4 cr

R 3305 Organic Chemistry Laboratory I (prereq 3301 or ¶3301) (A-F only)
★LECT 1010-1100 Th, SciCB 375, 2 cr
834951 —1 LAB 1220-1610 M, SmithH 349
432183 —2 LAB 1220-1610 T, SmithH 349
138410 —3 LAB 1220-1610 W, SmithH 349
132882 —4 LAB 1220-1610 Th, SmithH 349
232086 —5 LAB 1220-1610 F, SmithH 349
★LECT 1325-1415 Th, SciCB 375, 2 cr
430076 —6 LAB 0800-1150 T, SmithH 349
840488 —7 LAB 0800-1150 W, SmithH 349
637883 —8 LAB 0800-1150 Th, SmithH 349
035483 —9 LAB 0800-1150 F, SmithH 349

R 3306 Organic Chemistry Laboratory II (prereq 3302 or ¶3302, 3305) (A-F only)
★LECT 1115-1205 Th, SciCB 375, 2 cr
540727 —1 LAB 1220-1610 M, SmithH 349
134011 —2 LAB 1220-1610 T, SmithH 349
430210 —3 LAB 1220-1610 W, SmithH 349
836263 —4 LAB 1220-1610 Th, SmithH 349
923150 —5 LAB 1220-1610 F, SmithH 349
★LECT 1430-1520 Th, SciCB 375, 2 cr
723151 —6 LAB 0800-1150 T, SmithH 349
523152 —7 LAB 0800-1150 W, SmithH 349
323153 —8 LAB 0800-1150 Th, SmithH 349
123154 —9 LAB 0800-1150 F, SmithH 349

R 3335H Honors Organic Chemistry Laboratory (prereq 3301 or ¶3301 and #, Chem or ChEn or BioC maj) (A-F only)
037234 0800-0850 TTh, KoltH S132, 2 cr (lab ar)

R 3336H Honors Organic Chemistry Laboratory (prereq 3335H, Chem or ChEn or BioC maj) (A-F only)
731931 0800-0850 TTh, KoltH S132, 3 cr (lab ar)

3970 Directed Study (prereq #)
131571 ar cr

3991 Special Topics in Chemistry (prereq 1 qtr 1000-level chem or #) (S-N only)
129584 1220-1310 Th, SmithH 331, 1 cr

R 5133 Chemical Instrumentation and Analysis Lecture (prereq 5130, 5131, 5501 or 5534) (A-F only)
029358 1220-1310 TWF, SmithH 331, 3 cr

5311 Organic Synthesis I (§8311; prereq 3303 or equiv or #)
833766 1115-1205 MWF, SmithH 331, 4 cr

R 5501 Introduction to Thermodynamics and Kinetics (§5520, 5534; prereq 1052, Math 3251 or equiv, Phys 1253 or ¶Phys 1253 or Phys 1106)
333696 1010-1100 MTWF, SmithH 331, 4 cr

5527 Physical Biochemistry: Spectroscopic Methods II (§BioC 5527, MdBc 5527; prereq 2 qtrs phys chem)
637463 1535-1705 TTh, MoosT 2571, 2585, Thomas D, 4 cr

R 5534 Chemical Thermodynamics (§5501; prereq IT up div or CLA chem maj or Δ, 1052, Math 3251, Phys 1253 or ¶Phys 1253 or 1106 with #)
238745 —1 1010-1100 MTWF, AmundH B75, 4 cr
341037 —2 1325-1415 MTWF, SciCB 325, 4 cr

R 5540 Physical Chemistry Laboratory (prereq 5502 or 5533, chem maj) (A-F only)
★LECT 1325-1415 M, SmithH 231
831693 —1 LAB 1325-1715 T, KoltH 284, 3 cr
037086 —2 LAB 1325-1715 W, KoltH 284, 3 cr
740953 —3 LAB 1325-1715 Th, KoltH 284, 3 cr
724185 —4 LAB 1325-1715 F, KoltH 284, 3 cr

R 5610 Polymer Chemistry (§MatS 5610; prereq upper div, 3301 or #)
640931 1010-1100 MWF, EE/CSci 3230, Tirrell M, 3 cr

5970 Directed Study in Chemistry (prereq any 5xxx chem course, #)
829751 ar cr

8001 Applied Chemical Thermodynamics (prereq chem grad stu or #) (A-F only)
730181 0905-0955 MWF, SmithH 331, 4 cr

8002 Mechanisms of Chemical Reactions (prereq chem grad stu or #) (A-F only)
439926 1010-1100 MWF, SmithH 231, 4 cr

8104 Spectroscopic Methods of Analysis (prereq 5133 or equiv or #) (A-F only)
139399 0800-0850 MWF, SmithH 331, 4 cr

8190 Seminar: Modern Problems in Chemical Instrumentation and Analysis (prereq chem grad stu or #) (S-N only)
635339 1430-1630 F, SmithH 331, 1 cr

8191 Seminar Presentation: Modern Problems in Chemical Instrumentation and Analysis (prereq chem grad stu, #) (A-F only)
939235 1430-1630 F, SmithH 331, 1 cr

8290 Seminar: Materials Chemistry (prereq chem grad stu or #) (S-N only)
930034 1640-1900 Th, SciCB 325, 1 cr

8291 Seminar Presentation: Materials Chemistry (prereq chem grad stu, #) (A-F only)
635678 1640-1900 Th, SciCB 325, 1 cr

8311 Organic Synthesis I (prereq 3303 or equiv, or #) (A-F only)
040425 1115-1205 MWF, SmithH 331, 4 cr

8390 Seminar: Organic Chemistry (prereq chem grad stu or #) (S-N only)
334038 1535-1800 F, SmithH 231, 1 cr

8391 Seminar Presentation: Organic Chemistry (prereq chem grad stu, #) (A-F only)
429560 1535-1800 F, SmithH 231, 1 cr

8401 Bioorganic Chemistry I (prereq 3303 or equiv)
338414 1415-1530 TTh, SmithH 121, 4 cr

8521 Methods of Theoretical Chemistry (prereq undergrad physical chemistry) (A-F only)
340888 1325-1415 MWF, SmithH 331, 4 cr

8531 Introductory Quantum Mechanics and Spectroscopy (prereq 8521 or equiv) (A-F only)
936979 1430-1520 MWF, SmithH 231, 4 cr

8560 Seminar: Biological Systems (prereq chem grad stu or #) (S-N only)
631324 1535-1700 Th, SmithH 331, 1 cr

8561 Seminar Presentation: Biological Systems (prereq chem grad stu, #) (A-F only)
040893 1535-1700 Th, SmithH 331, 1 cr

8590 Seminar: Physical Chemistry (prereq chem or chem phys grad stu) (S-N only)
330197 1535-1800 M, SmithH 331, 1 cr

8591 Seminar Presentation: Physical Chemistry (prereq chem or chem phys grad stu or #) (A-F only)
335433 1535-1800 M, SmithH 331, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
636569 1-18 cr

8761 Organometallic Chemistry (prereq chem grad stu or #)
229818 1325-1530 TTh, SmithH 111, 4 cr

8777 Thesis Credits: Masters
530845 1-16 cr

8790 Seminar: Modern Problems in Inorganic Chemistry (prereq chem grad stu or #) (S-N only)
332161 1640-1900 Th, SmithH 231, 1 cr

8791 Seminar Presentation: Modern Problems in Inorganic Chemistry (prereq chem grad stu, #) (A-F only)
438551 1640-1900 Th, SmithH 231, 1 cr

8881 M.S. Plan B Project I (prereq grad chem or grad chem phys maj, Δ) (A-F only)
629590 4 cr

8882 M.S. Plan B Project II (prereq grad chem or grad chem phys maj, Δ) (A-F only)
730942 4 cr

8883 M.S. Plan B Project III (prereq grad chem or grad chem phys, Δ) (A-F only)
137841 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
134462 1-36 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

8990 Research in Chemistry (prereq chem grad stu or Δ) (S-N only)
835453 ar cr

8991 Special Topics in Chemistry (prereq Δ)
333763 2 cr

CHICANO STUDIES (Chic)
Liberal Arts

R 3106 Introduction to Chicano Studies: Mexico and the United States (Hist; CD)
036357 —1 0800-0850 MWF, ScottH 4, Rodriguez R, 4 cr
823531 —2 0800-0850 MWF, ChDev 216, Green S, 4 cr

R 3212 La Chicana (§LAS 3212) (Lit; CD)
537326 1245-1400 TTh, RarigC 616, Torres E, 4 cr

R 3507 Introduction to Chicano Literature (Lit)
338025 —1 1415-1530 TTh, BlegH 155, Rojas G, 4 cr
623532 —2 1415-1530 TTh, BlegH 235, Torres E, 4 cr

3970 Directed Studies (prereq #, Δ, ⊔)
039985 ar cr

5970 Directed Studies (prereq #, Δ, CLA approval)
829829 ar cr

CHILD AND ADOLESCENT PSYCHIATRY (CAPy)
Medical School

R 5203 Child and Adolescent Psychiatry for Psychology Interns (prereq #)
630755 1-5 cr

R 5204 Diagnostic Methods in Child and Adolescent Psychiatry (prereq med student, #)
233951 1 cr

R 5520 Outpatient Clinical Child and Adolescent Psychiatry for Primary Care Physicians (prereq regis med student) (A-F only)
740497 Realmuto G, 4.5-9 cr

R 5603 Inpatient Clinical Child Psychiatry for Primary Care Physicians (prereq med student, #)
137421 Borchardt, ar cr

5620 Disruptive Behavior Disorders I: Attention Deficit Hyperactivity Disorder (ADHD) Throughout the Lifespan
237515 0830-1600 S, MoosT 2620, August G, 1 cr (Nov 9)

5627 Disruptive Behavioral Disorders II: Conduct and Oppositional Defiant Disorders in Childhood and Adolescence
139380 0830-1600 S, MoosT 2620, Bloomquist M, 1 cr (Nov 23)

5636 Disruptive Behavioral Disorders III: Assessment Methods for the Diagnosis and Evaluation of Treatment Response
339403 0830-1600 S, MoosT 2620, August G, 1 cr (Dec 7)

5644 Child Abuse/Neglect and Childhood Psychopathology: Implications for Assessment and Treatment
330751 0830-1600 S, MoosT 2620, 1 cr (Oct 26)

R 8100 Readings in Child, Adolescent, and Family Psychiatry (prereq MD, #)
938666 Jensen J, 1 cr

R 8110 Diagnostic Methods in Child, Adolescent, and Family Psychiatry (prereq MD, #)
530246 1 cr

R 8120 Therapeutic Methods in Child and Adolescent Psychiatry (prereq MD, #)
237241 Jensen J, 1 cr

R 8200 Outpatient Clinical Child and Adolescent Psychiatry (prereq MD, #)
235537 Jensen J, 3 cr

R 8212 Clinical Inpatient Child Psychiatry (prereq MD, #)
739351 Realmuto G, 3 cr

R 8223 Family Therapy (prereq MD, #)
031319 Jensen J, 1 cr

R 8228 Research in Child and Adolescent Psychiatry (prereq MD, #)
729936 Jensen J, 1 cr

R 8233 Mental Health Administration and Training Seminar (prereq MD, #)
932432 Jensen J, 1 cr

R 8248 Residential Child and Adolescent Treatment (prereq MD, #)
441059 Jensen J, 3 cr

R 8253 Child and Adolescent Community Psychiatry (prereq MD, #)
530070 Jensen J, 2 cr

R 8301 Seminar in Child, Adolescent, and Family Psychiatry (prereq MD, #)
131433 Jensen J, 1 cr

CHILD PSYCHOLOGY (CPsy)
Education and Human Development

R 1301 Introductory Child Psychology (§3309, 5301; prereq 5 cr introductory psychology) (SSci)
129822 —2 LECT 1820-2050 T, SciCB 375, 4 cr (addtl hr ar)
★LECT 0945-1100 TTh, Phys 170, Maratsos M
029618 —1 REC 1115-1205 M, ChDev 105, 4 cr
537620 —2 REC 1430-1520 T, ChDev 105, 4 cr
132713 —3 REC 1535-1625 T, ChDev 105, 4 cr
340826 —4 REC 1115-1205 W, ChDev 105, 4 cr
338574 —5 REC 0905-0955 F, ChDev 105, 4 cr
436444 —6 REC 1115-1205 F, ChDev 105, 4 cr

R 3308 Research Methods in Child Psychology (prereq 1301, Psy 1001) (A-F only)
641013 0945-1100 TTh, ChDev 218, 4 cr (addtl hr ar)

R 3309 Introductory Child Psychology for the Social Sciences (§1301, 5301; prereq Psy 1001) (SSci)
635454 —2 LECT 1820-2050 T, SciCB 375, 4 cr (addtl hr ar)
★LECT 0945-1100 TTh, Phys 170, Maratsos M
133272 —1 REC 1115-1205 M, ChDev 105, 4 cr
030090 —2 REC 1430-1520 T, ChDev 105, 4 cr
329759 —3 REC 1535-1625 T, ChDev 105, 4 cr
835145 —4 REC 1115-1205 W, ChDev 105, 4 cr
233898 —5 REC 0905-0955 F, ChDev 105, 4 cr
436735 —6 REC 1115-1205 F, ChDev 105, 4 cr

R 3343 Introduction to Cognitive Development (prereq 1301 or #)
738765 1115-1230 TTh, Arch 50, Sera M, 4 cr (addtl hr ar)

3360H Honors Seminar: Current Research in Developmental Psychology (prereq 1301 or equiv) (S-N only)
936299 1325-1425 TTh, ChDev 108, Pick A, 2 cr

3960 Senior Project in Child Psychology (3960†, 2 qtr reg req; max 4 cr; prereq 1301, sr, #) (A-F only)
531266 —1 0905-0955 T, BuH 123, 2 cr
136639 —2 1820-1910 T, PeikH 315, 2 cr

3980 Directed Instruction (max 4 cr; prereq #) (S-N only)
540596 1-4 cr

5302 Infancy (prereq 1301 or #)
223310 1640-1910 W, NichH 213, 4 cr

5303 Adolescent Psychology (§3303; prereq 5 cr introductory psychology)
738779 1325-1500 TTh, BuH 120, Egeland B, 4 cr

5305 Multidisciplinary Perspectives on Aging (§AdEd 5440, HSU 5009, Nurs 5780, PA 5414, Phar 5009, PubH 5520, PubH 5737, Soc 5960, SW 5024)
433981 1640-1825 MW, MoosT 2690, 4 cr

5311 Introduction to Developmental Psychopathology (§3311; prereq 1301 or equiv, 3308 or Psy 1005)
931653 1010-1100 MWF, BuH 120, 4 cr (addtl hr ar)

R 5330 Directed Experiences with Children (prereq 1301, #) (A-F only)
932415 1820-2030 W, ChDev 216, Mooney-McLoone A, 4 cr (postbaccalaureate only)

5334 Children and Youth in Society (prereq 4 cr in child psychology) (C/PE)
136146 1115-1255 MW, NichH 213, 4 cr

5336 Development and Interpersonal Relations (§5339; prereq 1301 or equiv, 3308 or Psy 1005, 3331 or 5331)
534975 1640-1820 TTh, BorH 335, Thomas R, 4 cr (StP)

R 5970 Directed Study in Child Psychology (prereq #)
741102 ar cr

5990 Directed Research in Child Psychology (prereq #)
132767 ar cr

8301 Developmental Psychology: Biological Processes (prereq doctoral stu or #)
829409 1325-1500 TTh, ChDev 216, Nelson G, 4 cr

8310 Seminar: History of Child Development (S-N only)
739575 0830-1000 Th, ChDev 172, Weinberg R, 1 cr

8330 Directed Field Experiences (prereq #) (S-N only)
939896 1-6 cr

8360 Seminar: Developmental Psychology
838093 —3 1500-1730 T, ChDev 102, Pick H, 3 cr (Topics in Perceptual Development)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
732299 1-18 cr

8777 Thesis Credit: Masters
138379 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
439974 1-36 cr

8970 Independent Study
440770 ar cr

8990 Research Problems
432894 ar cr

CHINESE (Chn)
Linguistics & Asian & Slavic Languages & Literatures
Liberal Arts

R 1011 Beginning Modern Chinese
940885 —1 LECT 0905-0955 TTh, PeikH 215, Chen Y
731816 —2 LECT 1010-1100 TTh, PeikH 215, Chen Y
Registration in one of the following REC sections is also required:
✦733212 —1 REC 1010-1100 MWF, AkerH 319, 1010-1100 TTh, FolH 142, 5 cr
✦738524 —2 REC 1115-1205 MTWThF, FolH 142, 5 cr
✦430126 —3 REC 1115-1205 MTWThF, PeikH 215, 5 cr
✦136334 —4 REC 1325-1415 MTWThF, AmundH 158, 5 cr

R 3021 Intermediate Modern Chinese (prereq 1013)
★LECT 0905-0955 TTh, FolH 142
830480 —1 REC 1010-1100 MWF, FolH 142, 5 cr
729290 —2 REC 1010-1100 MWF, FolH 208, 5 cr
523538 —3 REC 1430-1520 MWF, NichH 213, 5 cr

R 3031 Introductory Classical Chinese (prereq 3023 or #)
539318 1325-1415 MWF, FolH 306, Wang S, 4 cr

R 3041 Third Year Modern Chinese (prereq 3023)
935332 —1 1325-1415 MWF, FolH 142, 4 cr
923536 —2 1115-1230 TTh, FolH 38, 4 cr

R 3090H Honors Tutorial (prereq Δ)
440848 1-4 cr

R 3172 Introduction to Chinese Literature in Translation II (§3165) (Lit; IP)
223534 1415-1530 TTh, FolH 38, 4 cr

R 3970 Directed Studies (prereq #, Δ, ⊔)
140688 1-15 cr

R 5041 Third Year Modern Chinese (prereq 3023)
931720 —1 1325-1415 MWF, FolH 142, 4 cr
723537 —2 1115-1230 TTh, FolH 38, 4 cr

R 5251 Structure of Standard Chinese (prereq 1013)
123535 1115-1205 MWF, FolH 218, Wang S, 4 cr

R 5970 Directed Studies (prereq #, Δ, CLA approval)
435584 1-4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
231827 1-18 cr

R 8777 Thesis Credits: Masters
939445 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
336761 1-36 cr

CIVIL ENGINEERING (CE)
Institute of Technology

R 3020 Computer Applications in Civil Engineering I (prereq civil engineering, geo-engineering or mining engineering maj, Math 1231) (A-F only)
529713 0905-1100 MW, CivE 210, Voller V, 4 cr

R 3100 Introduction to Surveying and Mapping (prereq Math 1251, IT stu) (A-F only)
★LECT 1115-1205 MWF, CivE 210, Johnson G
130198 —1 LAB 0905-1205 T, CivE 194, Johnson G, 4 cr
332340 —2 LAB 1325-1625 T, CivE 194, Johnson G, 4 cr
734070 —3 LAB 0905-1205 Th, CivE 194, Johnson G, 4 cr
839759 —4 LAB 1325-1625 Th, CivE 194, Johnson G, 4 cr

R 3300 Soil Mechanics (prereq AEM 3016, IT student) (A-F only)
★LECT 1010-1205 TTh, CivE 210, Labuz J
031191 —1 LAB 0905-1100 M, CivE 350, Labuz J, 4 cr
032292 —2 LAB 1430-1625 T, CivE 350, Labuz J, 4 cr
036567 —3 LAB 0905-1100 W, CivE 350, Labuz J, 4 cr
237482 —4 LAB 1430-1625 Th, CivE 350, Labuz J, 4 cr

R 3400 Fluid Mechanics (§AEM 5200; prereq Math 3261, AEM 1015 or AEM 3016, IT stu or ForP or pre-BAE maj) (A-F only)
★LECT 0800-0955 TTh, CivE 210, Reid K
632196 —1 LAB 1010-1310 M, CivE 277, Reid K, 4 cr
437612 —2 LAB 1010-1310 T, CivE 277, Reid K, 4 cr
131036 —3 LAB 1010-1310 W, CivE 277, Reid K, 4 cr
837431 —4 LAB 1010-1310 Th, CivE 277, Reid K, 4 cr
★LECT 1220-1415 TTh, CivE 210, Farell C
629198 —5 LAB 1430-1730 M, CivE 277, Farell C, 4 cr
223100 —6 LAB 1430-1730 T, CivE 277, Farell C, 4 cr
123101 —7 LAB 1430-1730 W, CivE 277, Farell C, 4 cr
923102 —8 LAB 1430-1730 Th, CivE 277, Farell C, 4 cr

R 3500 Principles of Environmental Engineering (prereq Chem 1052, Phys 1253) (A-F only)
937002 0800-0955 MW, CivE 212, Dwyer D, 4 cr

R 3700 How to Model It: Building Models to Solve Engineering Problems (prereq IT Honors or #)
★LECT 1430-1625 MW, Arch 10
730634 —1 REC Smith K, 4 cr

R 5002 Engineering Economics (prereq jr or sr IT stu or adult special or grad) (A-F only)
239636 1325-1415 TTh, AkerH 319, Reid K, 2 cr

R 5097 Advanced Design, Analysis, Research or Tutorial in Civil Engineering (prereq approval of faculty adviser) (A-F only)
135801 ar cr

R 5201 Highway Traffic Characteristics and Operation (prereq 3200, IT stu or grad) (A-F only)
723103 1430-1625 MW, CivE 212, Davis G, 4 cr

R 5210 Introduction to Transportation Systems Analysis (prereq #)
133618 1430-1625 TTh, CivE 212, 4 cr

R 5301 Applied Soil Mechanics (prereq 3300 or #, IT upper div stu or grad) (A-F only)
724560 1640-1835 TTh, CivE 212, DeTournay E, 4 cr

R 5305 Design of Underground Excavations in Rock (§GeoE 5218; prereq IT stu or grad IT maj, GeoE 5302 or #) (A-F only)
332810 1220-1415 MW, CivE 213, Fairhurst C, 4 cr

R 5410 Open Channel Hydraulics (prereq 3400, 5401 or #, IT or grad stu) (A-F only)
523104 1010-1205 MW, CivE 205, Song C, 4 cr

R 5425 Groundwater Mechanics (prereq 3400 or #, IT or grad stu) (A-F only)
931135 1430-1625 MW, CivE 210, Barnes R, 4 cr

R 5435 Intermediate Fluid Mechanics with Applications (prereq 3400, IT or grad stu) (A-F only)
129626 0800-0955 MF, CivE 213, Parker G, 4 cr

R 5500 Analysis and Design of Water Supply Systems (prereq IT or grad stu, 3400, 5401 or #) (A-F only)
★LECT 0905-0955 MWF, Arch 25, Semmens M
834982 —1 REC 1220-1415 M, CivE 202, Semmens M, 4 cr
333360 —2 REC 1220-1415 T, CivE 202, Semmens M, 4 cr
529811 —3 REC 1220-1415 W, CivE 202, Semmens M, 4 cr
831192 —4 REC 1220-1415 Th, CivE 202, Semmens M, 4 cr

R 5504 Mass Transport with Environmental Applications (prereq IT upper div or grad stu, 3400) (A-F only)
435004 1535-1730 MW, CivE 202, Gulliver J, 4 cr

R 5510 Solid and Hazardous Waste Management (prereq Chem 1052 or #, IT or grad stu) (A-F only)
436721 1430-1625 TTh, CivE 210, Hepworth M, 4 cr

R 5600 Linear Structural Systems (prereq AEM 1015, 3016, IT stu or grad) (A-F only)
★LECT 1640-1835 MW, CivE 210, Shield C
224554 —1 REC 1220-1310 M, CivE 194, Schield C, 4 cr
124555 —2 REC 1325-1415 M, CivE 194, Schield C, 4 cr
924556 —3 REC 1430-1520 M, CivE 194, Schield C, 4 cr
724557 —4 REC 1535-1625 M, CivE 194, Schield C, 4 cr

R 5601 Matrix Analysis of Structures (prereq 5600, upper division IT or grad) (A-F only)
129648 1010-1205 TTh, CivE 205, Stolarski H, 4 cr

R 5603 Introduction to Construction Materials (prereq IT upper div stu, AEM 3016) (A-F only)
★LECT 0800-0955 Th, CivE 212, Snyder M
737969 —1 LAB 1325-1625 M, CivE 380, Snyder M, 4 cr
831452 —2 LAB 1325-1625 T, CivE 380, Snyder M, 4 cr
940689 —3 LAB 1325-1625 W, CivE 380, Snyder M, 4 cr
337523 —4 LAB 1325-1625 Th, CivE 380, Snyder M, 4 cr

R 5610 Design of Metal Structures: Introduction (prereq 5600, 5603, upper division IT stu or grad) (A-F only)
★LECT 1220-1415 MW, CivE 210, Galambos T
729273 —1 REC 1430-1520 M, CivE 202, Galambos T, 4 cr
033619 —2 REC 1430-1520 W, CivE 202, Galambos T, 4 cr

R 5611 Design of Reinforced Concrete Structures (prereq 5600, 5603, upper division IT stu or grad) (A-F only)
★LECT 1640-1835 TTh, CivE 210, Camacho D
524558 —1 REC 1535-1625 W, CivE 194, Camacho D, 4 cr
324559 —2 REC 1640-1730 W, CivE 194, Camacho D, 4 cr

R 5615 Prestressed Concrete (prereq 5611, IT or grad stu...5613 rec) (A-F only)
323105 1325-1520 TTh, CivE 205, French C, 4 cr

R 5701 Bituminous Materials I (prereq IT upper div or grad stu, 5603) (A-F only)
★LECT 1640-1835 TTh, CivE 205, Newcomb D
130453 —1 LAB 0905-1205 T, CivE 380, Newcomb D, 4 cr
529274 —2 LAB 0905-1205 Th, CivE 380, Newcomb D, 4 cr

8097 Civil Engineering Research (prereq #)
623109 —1 4 cr
029778 —2 4 cr

R 8200 Theory of Traffic Flow (prereq #)
729970 1535-1730 MW, CivE 213, Michalopoulos P, 4 cr

R 8502 Biological and Chemical Processes for Wastewater Treatment (prereq 5501 or #) (A-F only)
123106 0800-0955 TTh, CivE 205, Maier W, 3 cr

R 8507 Environmental Processing of Organic Chemicals (prereq grad stu, 5506 or #)
023107 1325-1415 MTWTh, CivE 212, Brezonik P, 3 cr

R 8508 Groundwater Microbiology (prereq #) (A-F only)
324304 1115-1205 MTWF, CivE 214, Dwyer D, 4 cr

R 8606 Advanced Topics in Finite Element Analysis (prereq 8605 or #) (A-F only)
823108 1430-1625 MW, CivE 205, Stolarski H, 4 cr

R 8620 Structural Dynamics I (prereq AEM 3036 or #)
038903 0800-0955 MW, CivE 205, Schultz A, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
733453 1-18 cr

R 8697 Seminar: Structures (S-N only)
237207 0905-0955 F, CivE 205, Schultz A, 1 cr

8777 Thesis Credits: Masters
131859 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
038464 1-36 cr

Symbols

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† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

CLASSICAL CIVILIZATION (ClCv)

Classical and Near Eastern Studies
Liberal Arts

R 3510 Great Books (prereq jr or sr or Δ)
124501 1430-1520 MWF, FolH 208, Lardinois A, 4 cr

R 3950 Topics in Classical Civilization: Art of Islam (§ArtH 3015)
639147 0945-1100 TTh, AndH 310, Asher C, 4 cr

3970 Directed Studies (prereq #, Δ, ⊔)
830849 1-15 cr

3980 Directed Instruction (prereq #)
437514 ar cr

3990 Directed Research (prereq #, Δ or ⊔)
831922 1-15 cr

CLASSICS (Clas)

Classical & Near Eastern Studies
Liberal Arts

1001 Age of Homer (Hist)
223727 1220-1310 MWF, FolH 306, Hershbell J, 4 cr

R 1042 Greek and Roman Mythology (AH)
★LECT 1115-1205 MF, NichH 45, Lardinois A
535298 —1 REC 1115-1230 T, Arch 30, 4 cr
633302 —2 REC 1115-1230 T, BuH 125, 4 cr
831726 —3 REC 1115-1230 T, BuH 120, 4 cr
337098 —4 REC 1115-1230 W, ChDev 218, 4 cr
640623 —5 REC 1115-1230 W, Arch 60, 4 cr
735509 —6 REC 1115-1230 W, FordH 50, 4 cr
335643 —7 REC 1115-1230 Th, NichH 209A, 4 cr
038335 —8 REC 1115-1230 Th, ChDev 105, 4 cr
039436 —9 REC 1115-1230 Th, Arch 30, 4 cr

R 1042H Greek and Roman Mythology (AH)
★LECT 1115-1205 MF, NichH 45, Lardinois A
837607 —80 REC 1115-1230 W, AmundH 162, Lardinois A, 4 cr

R 1043 Introduction to Greek and Roman Archaeology (Hist)
036178 0905-0955 MWF, JonesH 207B, McNally S, 4 cr

1045 Basic Program in Technical Terminology and Word Study
439943 1535-1700 TF, FolH 50, 3 cr

1048 Greek and Latin Terminology in the Medical and Biological Sciences (§1141; prereq 1045 or ¶)
940420 1535-1700 TF, FolH 50, 2 cr

R 1082 Jesus in History (§RelA 1082, RelS 1082) (Hist)
★LECT 1010-1100 MF, NichH 211, Sellew P
131190 —1 REC 0945-1100 T, NichH 209A, 4 cr
039503 —2 REC 1115-1230 T, NichH 213, 4 cr
930051 —3 REC 0945-1100 Th, NichH 209A, 4 cr

R 1082H Jesus in History (§RelA 1082H, RelS 1082H)
★LECT 1010-1100 MF, NichH 211, Sellew P
430613 —80 REC 1115-1230 Th, NichH 213, Sellew P, 4 cr

1141 Greek and Latin Terminology for Nursing (§1048)
131061 1535-1700 TF, FolH 50, 3 cr

R 3008 History of Ancient Art (§ArtH 3008)
123728 1115-1205 MWF, AndH 310, Cooper F, 4 cr

3046 Advanced Etymology: Vocabulary of the Sciences and Humanities (prereq 1045 or ¶)
130945 1535-1700 TF, FolH 50, 2 cr

3081 Classical Epic in Translation (§5081) (Lit)
623725 1430-1520 MWF, FolH 208, Lardinois A, 4 cr

3162 Roman Art and Archaeology (§ArtH 3162)
923729 1115-1205 MWF, JonesH 207A, McNally S, 5 cr

3970 Directed Studies (prereq #, Δ, ⊔)
038917 1-5 cr

5081 Classical Epic in Translation (§3081)
423726 1430-1520 MWF, FolH 208, Lardinois A, 4 cr

5108 Greek Architecture (§ArtH 5108; prereq jr or #)
223730 1325-1415 MWF, JonesH 207A, Cooper F, 4 cr

5794 Proseminar: Introduction to Classical and Near Eastern Studies (prereq grad maj or #) (S-N only)
333682 1 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
830947 1-5 cr

5980 Directed Instruction (prereq #, Δ, CLA approval)
634496 4 cr

5990 Directed Research (prereq #, Δ, CLA approval)
737681 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
432913 1-18 cr

8777 Thesis Credits: Masters
931698 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
329521 1-36 cr

CLINICAL AND POPULATION SCIENCES (CAPS)

Veterinary Medicine

5012 Veterinary Public Health (VPH) Clinic Rotation (prereq 3rd or 4th yr vet med stu) (S-N only)
434287 Pullen M, 4-24 cr

5015 Advanced Veterinary Public Health (VPH) Clinic Rotation (prereq CAPS regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
531512 Pullen M, 4 cr

5112 Large Animal Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
530814 Ames T, 4-24 cr

5115 Advanced Large Animal Medicine (prereq CAPS regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
231178 Ames T, 4 cr

5150 Diagnostic and Therapeutic Techniques (S-N only)
936531 1400-1650 M, AnScVM 125, 1400-1500 M, ABLMS 125, Ames T, Polzin D, others, 1 cr

5161 Large Animal Medicine (prereq 5160 or #)
235666 0800-0850 MTWThF, VetS 145, Ames T, Valberg S, others, 5 cr

5184 Equine Neonatology (prereq regis 1st or 2nd or 3rd yr vet med) (S-N only)
631310 1700-1850 M, AnScVM 135, Wilson J, 1 cr

5212 Large Animal Surgery (prereq 3rd or 4th yr vet med stu) (S-N only)
235022 Turner T, Santschi L, 4-24 cr

5215 Advanced Large Animal Surgery (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
131814 Turner T, Santschi L, 4 cr

5222 Equine Lameness (prereq 3rd or 4th yr vet med stu) (S-N only)
240334 Turner T, 4-24 cr

5225 Advanced Equine Lameness (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
935251 Turner T, 4 cr

5232 Equine Podiatry (prereq 3rd or 4th yr vet med stu) (S-N only)
330863 Turner T, 4-24 cr

5235 Advanced Equine Podiatry (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
340468 Turner T, 4 cr

5242 Bovine Surgery (prereq 3rd or 4th yr vet med stu) (S-N only)
340423 Trent A, 4-24 cr

5245 Advanced Bovine Surgery (prereq regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
139483 Trent A, 4 cr

5252 Equine Surgery (prereq #) (S-N only)
024581 4-24 cr

5280 World Food Problems (prereq maj in agri, vet med, nutritional sci, social sci field or #...grads by # only) (IP)
640718 1800-2100 W, ClaOff B35, Robinson R, Peterson W, 3 cr

5512 Equine Theriogenology (prereq 3rd or 4th yr vet med stu) (S-N only)
037427 Troedsson M, 4-24 cr

5532 Dairy Palpation (prereq 3rd or 4th yr vet med stu) (S-N only)
839731 Fahning M, 4-24 cr

5535 Advanced Dairy Palpation (prereq regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
730875 Fahning M, 4 cr

5542 Dairy Theriogenology Management (prereq 5532, regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
534295 Olson J, 4-24 cr

5545 Advanced Dairy Theriogenology Management (prereq regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
434550 Olson J, 4 cr

5551 Theriogenology Diagnostics Laboratory (prereq regis vet med or grad or #)
636460 1400-1500 M, 1300-1400 F, VetTchHos A325, 1500-1650 M, 1300-1550 Th, ar, Seguin B, Fahning M, others, 1 cr (1st 5 weeks)

5552 Veterinary Obstetrics Laboratory (prereq 5550 or #)
535639 1300-1550 ThF, VetTchHos C208, Fahning M, 1 cr

5612 Swine Disease Diagnostics, Therapeutics, and Prevention (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
337389 Joo H S, 4-24 cr

5615 Advanced Swine Disease Diagnostics, Therapeutics, and Prevention (prereq IV track or grad or #) (A-F only)
035175 Joo H, 4 cr

5622 Swine Production Systems (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
639519 Dial G, 4-24 cr

5625 Swine Production Systems (prereq grad stu or IV track or #) (A-F only)
538976 Dial G, 4 cr

5632 Swine Nutrition (prereq regis 3rd or 4th yr vet med or grad stu or #)
736112 Dial G, 4-24 cr

5635 Advanced Swine Nutrition (prereq grad stu or # or IV track) (A-F only)
631968 Dial G, 4 cr

5642 Swine Economics, Financial Management and Marketing (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
934519 Marsh W, 4-24 cr

5645 Advanced Swine Economics, Financial Management and Marketing (prereq IV track or grad stu or #) (A-F only)
431664 Marsh W, 4 cr

5680 Problems in Veterinary Epidemiology and Public Health (prereq 5650 or equiv or #)
035645 Robinson R, Pullen M, ar cr

5682 Swine Virology and Immunology (prereq 3rd or 4th yr vet med stu) (S-N only)
336940 Molitor T, 4-24 cr

5692 Epidemiology and Biostatistics (prereq #) (S-N only)
934777 Marsh W, 4-24 cr

5712 Equine Sports and Preventive Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
435665 Turner T, 4-24 cr

5715 Advanced Equine Sports and Preventive Medicine (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
623269 Turner T, 4 cr

5812 Dairy Disease Control, Parasitology, Youngstock Management (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
639682 Ames T, 4-24 cr

5815 Advanced Dairy Disease Control, Parasitology, Youngstock Management (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
932981 Ames T, 4 cr

5822 Mastitis, Milking Machines, and Milk Quality (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
434418 Farnsworth R, 4-24 cr

5825 Advanced Mastitis, Milking Machines, and Milk Quality (prereq grad stu or # or IV track) (A-F only)
438355 Farnsworth R, 4 cr

5832 Ruminant Nutrition (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
831788 Olson W, 4-24 cr

5835 Advanced Ruminant Nutrition (prereq CAPS regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
836795 Olson W, 4 cr

5842 Applied Dairy Nutrition (prereq 5832, regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
738264 Olson J, 4-24 cr

5845 Advanced Dairy Nutrition (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
435553 Olson J, 4 cr

5852 Dairy Record Analysis, Epidemiology, and Economics (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
039355 Fetrow J, 4-24 cr

5855 Advanced Dairy Record Analysis, Epidemiology, and Economics (prereq IV track or grad stu or #) (A-F only)
329681 Fetrow J, 4 cr

5912 Advanced Building Design and Total Herd Evaluation (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
137202 Pijoan C, 4-24 cr

5915 Advanced Building Design and Total Herd Evaluation (prereq regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
929966 Pijoan C, 4 cr

5922 Beef Production Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
241001 Fetrow J, 4-24 cr

5925 Advanced Beef Production Medicine (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
133059 Fetrow J, 4 cr

5942 Small Ruminant Health and Production (prereq 3rd or 4th yr vet med stu) (S-N only)
335982 Wolf C, 4-24 cr

5945 Advanced Small Ruminant Health and Production (prereq CAPS regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
023270 Wolf C, 4 cr

5951 Directed Studies (prereq #) (S-N only)
641061 1-12 cr

5955 Advanced Directed Studies (prereq #) (A-F only)
823271 1-8 cr

8193 Advances in Clinical Immunobiology (prereq grad or #)
230774 Molitor T, ar cr

8194 Problems in Diagnostic Virology, Serology and Immunology (prereq grad or #)
131321 Molitor T, ar cr

8195 Preventive Veterinary Medicine
138852 Anderson J, others, ar cr

8197 Metabolic and Nutritionally Induced Diseases of Cattle (prereq grad student, #)
032602 2 cr

8199 Problems in Economics of Animal Health
140528 1-3 cr

8290 Advanced Veterinary Medicine (prereq 5162, SACS 5172, #)
238728 ar cr

8291 Advanced Diagnosis and Therapeutics of Animal Diseases (prereq 5162, SACS 5172, #)
131246 ar cr

8292 Seminar: Veterinary Medicine (prereq #)
829698 Ames T, Valberg S, others, ar cr

8293 Medical Conference (prereq 5162, SACS 5172, #)
840023 ar cr

8299 Research in Veterinary Medicine
035581 ar cr

8390 Seminar: Veterinary Surgery (prereq DVM degree or equiv)
730097 Trent A, Turner T, ar cr

8392 Advanced Large Animal Surgery (prereq DVM degree or equiv, #)
132100 Trent A, Turner T, ar cr

8393 Problems in Large Animal Orthopedics (prereq 5365, #)
732772 Turner T, Trent A, 3 cr

8397 Large Animal Anesthesia (prereq SACS 5380, #)
431499 Raffe M, Robinson E, ar cr

8590 Advanced Diagnostic Methods in Reproductive Diseases (prereq 5570 or #)
132436 Fahning M, others, ar cr

8591 Advanced Endocrinology of Reproduction (prereq grad student) (A-F only)
131884 Troedsson M, 2 cr

8594 Special Problems in Animal Reproduction (prereq 5570, #)
933127 Seguin B, ar cr

8595 Seminar: Veterinary Obstetrics (prereq #)
532725 Fahning M, 1 cr

8690 Epidemiology of Zoonoses and Diseases Common to Humans and Animals (prereq #)
830155 Robinson R, ar cr

8790 Problems in Veterinary Clinical Pharmacology and Therapeutics (prereq grad or #)
237210 3 cr

CLINICAL LABORATORY SCIENCE (CLS)

Laboratory Medicine and Pathology Medical School

5077 Hematology I: Basic Techniques (§MedT 5077; prereq Δ)
★LECT 1010-1100 M, MoosT 2520, Lofsness K
030171 —1 LAB 0905-1205 T, 1300-1600 F, MoosT 3349, Lofsness K, 3 cr

R 5103 Principles of Diagnostic Microbiology (§MedT 5102; prereq MdBc 3103, 5232 or #)
★LECT 0905-0955 M, 1325-1415 TTh, MoosT 3317, Wells C
639911 —1 LAB 0905-1100 W, 0800-0955 ThF, MoosT 3343, 5 cr
836697 —2 LAB 1115-1310 W, 1010-1205 ThF, MoosT 3343, 5 cr

5120 Seminar: Clinical Laboratory Science (prereq #) (S-N only)
633431 1200-1300 W, PWB 15194, 1 cr

5125 Practicum Teaching (§MedT 5125; prereq #)
036732 1-3 cr

5130 Practicum in Laboratory Administration (§MedT 5130; prereq #)
540307 3 cr

5138 Clinical Microbiology Seminar (§MedT 5138; prereq #)
838157 1115-1205 F, PWB 15194, Wells C, Ferrieri P, 1 cr

5140 Techniques for Teaching (§MedT 5140)
830107 1325-1615 Th, PWB 15194, Karni K, 3 cr

5145 Development of Medical Technology (§MedT 5145; prereq #)
934214 3 cr

5155 Advanced Clinical Hematology (§MedT 5155; prereq #)
031160 5 cr

5165 Advanced Clinical Immunohematology (§MedT 5165; prereq #)
231004 5 cr

5175 Advanced Clinical Chemistry (§MedT 5175; prereq #)
038948 5 cr

5179 Chemistry Seminar (§MedT 5179; prereq #)
631291 1 cr

5180 Advanced Chemistry (prereq #)
537293 1-5 cr

5197 Computer Methodology in the Delivery of Health Care II: Introduction to Medical Decision-Making Techniques (§HInf 5434; prereq HInf 5432, PubH 5452 or #)
235439 1115-1230 TTh, PWB 6210, 3 cr

5272 Immunohematology I: Immunology and Hematology in Immunohematology (prereq Δ) (A-F only)
033832 Polesky H, 3 cr

5280 Advanced Immunohematology Practicum I (prereq #) (S-N only)
135966 Polesky H, 2 cr

R 5310 Clinical Chemistry I: Lecture (§MedT 5310; prereq Chem 3301, Chem 3302, Chem 3305, Chem 3306, MdBc 5300, MdBc 5301) (A-F only)
330295 1430-1520 TTh, OwreH 2210, Brunzel N, 2 cr

R 5311 Clinical Chemistry I: Laboratory Applications §MedT 5311; prereq Chem 3301, Chem 3302, Chem 3305, Chem 3306, MdBc 5300, MdBc 5301) (A-F only)
440042 1220-1530 M, 1325-1630 W, MoosT 3343, Brunzel N, 2 cr

5346 Computer Applications in Health Care (§HInf 5430; prereq health professional or stu in health care discipline)
740760 1115-1205 MTWTh, PWB 6224, Gatewood L, 4 cr

5768 Advanced Hematology (prereq #)
240575 Brunning R, ar cr

5864 Research Seminar (prereq #)
032857 1200-1300 W, Mayo C231, 1 cr (Todd Amph)

5865 Departmental Seminar (prereq #)
533115 0800-0900 W, Mayo D230, 1 cr (Eustis Amph)

8236 Research on Clinical Laboratory Problems
937615 Hallgren H, 1-10 cr

8777 Thesis Credits: Masters
040912 1-16 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

COMMUNICATION DISORDERS (CDis)

Liberal Arts

R 3100 Clinical and Research Observation (S-N only)
238230 —1 0800-1200 W, MoosT 6274, Starr C, Moller K, 2 cr
935038 —2 1700-1900 W, 0900-1000 F, ShevH 125, Haroldson S, 2 cr
640704 —3 1230-1600 Th, MoosT 6274, Starr C, Moller K, 2 cr
122876 —4 Carlstrom J, 2 cr
231407 —5 Doyle S, 2 cr
731721 —6 van Deusen D, 2 cr
829278 —7 Hinderscheit L, 2 cr (off-campus)

3101 Introduction to Communication Disorders
938702 1010-1205 TTh, ShevH 3, Haroldson S, 4 cr

5301 Introduction to Acoustics
132310 0905-1100 MW, 0905-0955 F, ShevH 3, Speaks C, 5 cr

5302 Anatomy and Physiology of Speech and Hearing Mechanisms
932107 1115-1310 MW, 1115-1205 F, ShevH 3, Solomon N, 5 cr

5303 Phonetics Laboratory
133487 1430-1520 TTh, ShevH 3, Broen P, 2 cr

5305 Language Acquisition
739964 0800-0955 TTh, ShevH 3, Windsor J, 4 cr

5504 Normal and Disordered Child Phonology (prereq 5302, 5303, or #)
022877 1325-1520 MW, ShevH 3, Broen P, 4 cr

5507 Cleft Palate, Oral-Facial Anomalies and Speech (prereq 5304, 5504, or #)
429462 1615-1800 MW, ShevH 3, Starr C, Moller K, 4 cr

5611 Augmentative Systems of Communication
436895 1535-1835 T, ShevH 3, Reichle J, 4 cr (addtl 1 hr per wk ar)

5702 Advanced Audiometry (prereq 5701 or #)
★LECT 1430-1625 T, 1220-1415 Th, ShevH 119H, Schlauch R
229785 —1 LAB 1430-1520 Th, ShevH 119, Schlauch R, 5 cr

5900 Topics in Communication Disorders
822878 —1 1535-1730 MW, ShevH 125, Carney A, 4 cr (Diagnosis of Hearing Loss in Infants and Children) (prereq 5701 or #)
536032 —2 1530-1830 Th, ShevH 3, van Deusen D, 3 cr (Counseling in Communication Disorders)
124846 —3 1325-1625 F, ShevH 3, Carney A, 3 cr (Clinical Issues and Procedures) (prereq sr or grad stu)

5970 Directed Studies (prereq #, Δ, CLA approval)
330023 —1 ar cr
132901 —2 ar cr

8520 Clinical Education in Speech-Language Pathology (prereq communication disorders grad stu)
839633 1-6 cr

8521 Clinical Education in Speech-Language Pathology (prereq communication disorders grad stu)
735168 1-6 cr

8590 Seminar: Current Issues in Speech-Language Pathology
032549 —1 1325-1625 W, ShevH 119H, Siegel G, 3 cr
524592 —2 1220-1520 F, Siegel G, 3 cr

8608 Seminar: Aphasia (prereq 5608 or #)
539349 1630-1900 T, ShevH 125, Brookshire R, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
039288 1-18 cr

8720 Clinical Education in Audiology (prereq CDis grad stu)
938408 1-6 cr

8721 Clinical Education in Audiology (prereq CDis grad maj)
534359 1-6 cr

8777 Thesis Credits: Masters
935041 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
537178 1-36 cr

8990 Research
529999 —1 ar cr
137698 —2 ar cr

COMPARATIVE LITERATURE (CLit)

Cultural Studies and Comparative Literature
Liberal Arts

5147 Teaching as Dialogue
535558 1325-1625 T, PeikH 315, Sarles H, 4 cr

R 5711 Sociocriticism (prereq one 3XXX-level literature course or #)
223467 1415-1530 TTh, PeikH 155, Jha P, 4 cr

R 5910 Topics in Comparative Literature: Classical Epic in Translation (§Clas 3081, Clas 5081, ClCv 3510; prereq rdg knowledge of Fren or Ger or Span, or #)
024502 1430-1520 MWF, FolH 208, Lardinois A, 4 cr

5970 Directed Readings (prereq #, Δ, CLA approval)
734148 1-4 cr

8004 Seminar in Comparative Literature (8001-8002-8003-8004†; prereq 8003)
636118 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
237112 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
334511 1-36 cr

8970 Directed Reading (prereq grad student in comparative lit, Δ)
337327 1-4 cr

COMPARATIVE STUDIES IN DISCOURSE AND SOCIETY (CSDS)

Cultural Studies and Comparative Literature
Liberal Arts

5970 Directed Studies (prereq grad student, #)
831242 ar cr

R 8001 Basic Research Seminar in Comparative Studies in Discourse and Society (prereq Δ) (A-F only)
240821 1325-1625 M, FolH 350, Mowitt J, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
040568 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
536631 1-36 cr

R 8910 Advanced Topics in the Comparative Study of Discourse and Society
130632 —1 1220-1520 W, FolH 344, Messer-Davidow E, 4 cr (The Academic Knowledge Enterprise: Discourses, Practices, Institutions)
523541 —2 1325-1625 W, FolH 38, Schiappa A, 4 cr (Rhetoric of Popular Culture) (§Spch 8110)
323542 —3 1535-1750 W, WaLib 301, Fradenburg L, 4 cr (The Pleasures of History) (§Engl 8210, MeSt 8110, sec 2, WoSt 8610, sec 1)
123543 —4 1430-1730 Th, FolH 208, Vidal H, 4 cr (Bodily Fundamentalisms and Myths of Origin)

8970 Directed Studies (prereq grad student or #)
836389 ar cr

COMPOSITION AND COMMUNICATION (Comp)

Liberal Arts

R 1011 Writing Practice I (§Rhet 1101; prereq assignment to category 2 or 3)
634126 —1 0800-0955 MW, LindH 303, 5 cr
730889 —2 0800-0850 MF, LindH 215, 0800-0955 T, LindH 303, 5 cr
436959 —3 0800-0850 MF, AkerH 211, 0800-0955 Th, LindH 303, 5 cr
929613 —4 0800-0850 MWThF, LindH 203, 5 cr
033989 —5 0800-0850 MTWF, Phys 236A, 5 cr
640492 —6 0800-0955 MW, LindH 315, 5 cr
938893 —7 0800-0850 MTWF, FordH 150, 5 cr
439490 —8 0800-0850 MTWF, LindH 320, 5 cr
534037 —9 0905-1100 MW, LindH 320, 5 cr
740936 —10 0905-0955 MTWF, LindH 215, 5 cr
835002 —11 0905-0955 MWF, FordH 175, 0905-0955 T, LindH 203, 5 cr (non-native English speakers only) (go to KlaCt 127 for permission)
237420 —12 0905-0955 MF, AmundH 120, 0905-1100 Th, LindH 320, 5 cr
334797 —13 0905-1100 T, LindH 320, 0905-0955 MF, FordH 170, 5 cr
335125 —14 0905-1100 MW, LindH 325, 5 cr
836019 —15 1010-1205 MTh, LindH 203, 5 cr
334055 —16 1010-1100 MWF, 1010-1100 Th, LindH 303, 5 cr
840636 —17 1010-1100 MWF, AkerH 211, 1010-1100 T, LindH 303, 5 cr
131604 —18 1010-1100 MWThF, AkerH 317, 5 cr (non-native English speakers only) (go to KlaCt 127 for permission)
431485 —19 1010-1100 MWF, 1010-1100 T, LindH 215, 5 cr
130783 —20 1115-1205 MTThF, LindH 303, 5 cr
536161 —21 1115-1205 MF, 1115-1310 T, LindH 340, 5 cr
437089 —22 1115-1310 MTh, AmundH 120, 5 cr
031336 —23 1115-1205 MF, LindH 320, 1115-1310 T, LindH 325, 5 cr
429686 —24 1115-1310 Th, LindH 325, 1115-1205 MF, LindH 217, 5 cr
229477 —25 1220-1415 WF, LindH 215, 5 cr
131688 —26 1220-1310 MWThF, LindH 303, 5 cr (non-native English speakers only) (go to KlaCt 127 for permission)
939803 —27 1220-1310 MTWF, AkerH 215, 5 cr
640833 —28 1220-1310 MF, 1220-1415 W, LindH 325, 5 cr
233268 —29 1220-1310 MF, 1220-1415 Th, LindH 340, 5 cr
539786 —30 1220-1310 MF, 1220-1415 W, LindH 320, 5 cr
629606 —31 1220-1310 MF, LindH 229, 1220-1415 W, LindH 340, 5 cr
134798 —32 1325-1520 M, LindH 215, 1325-1520 Th, LindH 203, 5 cr
232430 —33 1325-1415 MWF, SmithH 121, 1325-1415 T, Phys 157, 5 cr (non-native English speakers only) (go to KlaCt 127 for permission)
335366 —34 1325-1415 MWThF, VinH 1, 5 cr
533129 —35 1325-1415 MWF, FordH 120, 1325-1415 Th, BuH 123, 5 cr
138729 —36 1325-1520 MW, LindH 315, 5 cr
435603 —37 1325-1415 MTWF, KoltH S138, 5 cr
629833 —38 1325-1415 MF, 1325-1520 W, LindH 303, 5 cr
134146 —39 1325-1415 MWThF, FordH 170, 5 cr
940708 —40 1430-1520 MWF, LindH 217, 1430-1520 Th, LindH 320, 5 cr
239619 —41 1430-1520 MTWF, LindH 203, 5 cr
337263 —42 1430-1520 MWThF, LindH 340, 5 cr
129990 —43 1430-1520 MWF, VinH 209, 1430-1520 T, LindH 315, 5 cr
839485 —44 1430-1520 MWF, CivE 213, 1430-1520 T, LindH 303, 5 cr

R 1011H Writing Practice I (prereq assignment to category 2 or 3, honors student)
834335 —80 0800-0850 MTWF, LindH 229, 5 cr
635163 —81 0905-0955 MTWF, Phys 143, 5 cr
536211 —82 1010-1100 MWF, Phys 157, 1010-1100 T, LindH 203, 5 cr
738877 —83 1115-1205 MTThF, CivE 213, 5 cr
032941 —84 1115-1205 MTThF, AkerH 211, 5 cr
433043 —85 1220-1310 MF, 1220-1415 W, AkerH 319, 5 cr
240771 —86 1325-1415 MF, 1325-1520 T, LindH 340, 5 cr
037864 —87 1430-1520 MTWF, LindH 320, 5 cr

1013 Writing Practice II (prereq grade of X in 1011 or 1012, Δ)
131285 1-4 cr

R 1014 Writing Practice I and Cultural Diversity (CD)
623787 —1 0800-0955 MW, AkerH 209, 5 cr
923780 —2 0800-0850 MF, 0800-0955 W, AkerH 215, 5 cr
523782 —3 0905-0955 MF, FordH 70, 0905-1100 W, CivE 213, 5 cr
323783 —4 1010-1100 MF, Phys 143, 1010-1205 Th, AmundH 158, 5 cr
123784 —5 1115-1205 MTThF, AmundH 116, 5 cr
023785 —6 1220-1310 MF, 1220-1415 T, LindH 203, 5 cr
923777 —7 1220-1310 MF, LindH 217, 1220-1415 Th, ApH 103, 5 cr
723778 —8 1325-1415 MF, LindH 325, 1325-1520 W, AkerH 313, 5 cr
523779 —9 1430-1625 MW, VinH 1, 5 cr
823786 —10 1430-1520 MF, AkerH 313, 1430-1625 W, VinH 301, 5 cr

R 1027 Intermediate Expository Writing (prereq fulfillment of Writing Practice req)
440364 —1 0800-0850 MWF, LindH 302, 4 cr
234503 —2 0905-0955 MWF, AkerH 211, 4 cr
834352 —3 0815-0930 TTh, Arch 60, 4 cr
540565 —4 1115-1230 TTh, LindH 215, 4 cr

R 3011 Writing about Literature (prereq fulfillment of Writing Practice req, jr)
131196 —1 1430-1520 MWF, VinH 206, 4 cr
831838 —2 0815-0930 TTh, ChDev 105, 4 cr
324917 —3 0945-1100 TTh, LindH 325, 4 cr

R 3012 Writing in the Humanities (prereq fulfillment of Writing Practice req, jr)
431647 —1 0800-0850 MWF, FordH 160, 4 cr
533700 —2 0905-0955 MWF, AmundH 116, 4 cr
124918 —3 1245-1400 TTh, LindH 315, 4 cr

R 3013 Writing for the Arts (prereq fulfillment of Writing Practice req, jr)
438680 —1 1010-1100 MWF, LindH 229, 4 cr
930597 —2 1115-1205 MWF, LindH 315, 4 cr
024919 —3 1115-1230 TTh, LindH 315, 4 cr

R 3014 Writing in the Social Sciences (prereq fulfillment of Writing Practice req, jr)
129349 —1 0800-0850 MWF, AmundH 120, 4 cr
333293 —2 0905-0955 MWF, AkerH 319, 4 cr
939297 —3 1010-1100 MWF, LindH 340, 4 cr
938604 —4 1220-1310 MWF, LindH 315, 4 cr
138777 —5 1325-1415 MWF, Arch 35, 4 cr
229348 —6 1430-1520 MWF, LindH 302, 4 cr
739155 —7 1430-1520 MWF, LindH 325, 4 cr
723781 —8 0945-1100 TTh, LindH 302, 4 cr
233545 —9 1115-1230 TTh, LindH 320, 4 cr

R 3015 Writing about Science (prereq fulfillment of writing practice req, jr)
730598 —1 0905-0955 MWF, MurH 308, 4 cr
036245 —2 1010-1100 MWF, LindH 315, 4 cr
824940 —3 0815-0930 TTh, LindH 315, 4 cr

R 3022 Critical Reading and Writing for Management (prereq 1011 or equiv, Mgmt or Pre-Mgmt stu with more than 60 credits)
231858 —1 0905-0955 MWF, LindH 229, 4 cr
429347 —2 1245-1400 TTh, LindH 320, 4 cr
539156 —3 1415-1530 TTh, LindH 325, 4 cr

R 3027 Advanced Expository Writing (prereq fulfillment of Writing Practice req, jr)
836960 —1 0800-0850 MWF, LindH 340, 4 cr
637365 —2 0815-0930 TTh, LindH 340, 4 cr
134168 —3 0945-1100 TTh, LindH 340, 4 cr

R 3031 Technical Writing for Engineers (prereq fulfillment of Writing Practice req, jr, IT stu)
632621 —1 0800-0850 MWF, LindH 325, 4 cr
437397 —2 0905-0955 MWF, LindH 340, 4 cr
431079 —3 1115-1205 MWF, LindH 325, 4 cr (non-native English speakers only) (go to 127 KlaCt for permission)
939154 —4 0945-1100 TTh, LindH 315, 4 cr
630643 —5 1245-1400 TTh, LindH 215, 4 cr

R 3032 Preprofessional Writing for Business (prereq fulfillment of Writing Practice req, School of Mgmt or BIS stu, jr)
041039 —1 1325-1415 MWF, BlegH 245, 4 cr
033099 —2 0815-0930 TTh, BlegH 115, 4 cr
731976 —3 1115-1230 TTh, BlegH 350, 4 cr

R 3033 Writing for the Health Sciences (prereq fulfillment of Writing Practice req, more than 60 credits)
631520 —1 0905-0955 MWF, LindH 203, 4 cr
034799 —2 1325-1415 MWF, LindH 203, 4 cr
731489 —3 0815-0930 TTh, LindH 302, 4 cr

COMPUTER SCIENCE (CSci)
Institute of Technology

An IT computer fee is assessed at the time of registration for *all* CSci courses except 1001, 3311, 3327, 5201, 5211, 5400, 5421, 8102, 8163, 8360, 8403, 8404, and 8571. See page 27 for more information on this fee.

R 3101 An Introduction to Computer Applications for Scientists and Engineers (prereq 1 qtr calculus)
★LECT 0905-0955 MWF, EE/CSci 3210
130833 —1 REC 0905-0955 T, EE/CSci 3230, 4 cr
430028 —2 REC 0905-0955 T, EE/CSci 3115, 4 cr
731069 —3 REC 1010-1100 T, EE/CSci 3115, 4 cr
433835 —4 REC 1010-1100 T, EE/CSci 3230, 4 cr

R 3102 Introduction to Pascal Programming (prereq non-CSci maj, precalc or #; informal lab)
★LECT 1325-1415 MWF, EE/CSci 3210
533423 —1 REC 0800-0850 Th, EE/CSci 3230, 4 cr
138012 —2 REC 0905-0955 Th, EE/CSci 3115, 4 cr
935475 —3 REC 1010-1100 Th, EE/CSci 3230, 4 cr

R 3113 Introduction to Procedural Programming in C (§3121, 3322, 5113; prereq precalc or #)
★LECT 0800-0850 MWF, Phys 150
323346 —1 LAB 1325-1725 M, EE/CSci 2120, 4 cr
123339 —2 LAB 1730-2130 M, EE/CSci 2120, 4 cr
423340 —3 LAB 0800-1200 T, EE/CSci 2120, 4 cr
223341 —4 LAB 1325-1725 T, EE/CSci 2120, 4 cr
123342 —5 LAB 0800-1200 Th, EE/CSci 2120, 4 cr
923343 —6 LAB 1325-1725 Th, EE/CSci 2120, 4 cr
723344 —7 LAB 0905-1305 F, EE/CSci 2120, 4 cr
523345 —8 LAB 0900-1300 S, EE/CSci 2120, 4 cr

R 3311 Discrete Structures of Computer Science (§3400; prereq 3317, 3321)
★LECT 1220-1310 MWF, EE/CSci 3115
235845 —1 REC 0800-0850 T, EE/CSci 3111, 4 cr
534913 —2 REC 1115-1205 T, EE/CSci 3111, 4 cr
240933 —3 REC 1220-1310 T, Arch 60, 4 cr

R 3316 The Structure of Computer Programming I (prereq 1 qtr calc or #)
★LECT 1115-1205 MWF, EE/CSci 3210
735073 —1 REC 0905-0955 T, AkerH 309, 4 cr
139914 —2 REC 0905-0955 T, Arch 10, 4 cr
437819 —3 REC 1010-1100 T, Arch 20, 4 cr
435326 —4 REC 1010-1100 T, Arch 45, 4 cr

R 3321 Algorithms and Data Structures I (§3105, 3121; prereq knowledge of C or 3113 or #)
★LECT 1010-1100 MWF, EE/CSci 3210
134185 —1 REC 0905-0955 Th, AkerH 225, 4 cr
237353 —2 REC 0905-0955 Th, Arch 45, 4 cr
738362 —3 REC 1010-1100 Th, EE/CSci 3115, 4 cr
333665 —4 REC 1010-1100 Th, Arch 45, 4 cr
930535 —5 REC 1115-1205 Th, MechE 202, 4 cr
129318 —6 REC 1115-1205 Th, EE/CSci 3210, 4 cr
323329 —7 REC 1325-1415 Th, Arch 30, 4 cr
723330 —8 REC 1325-1415 Th, Arch 45, 4 cr

R 3327 Introduction to the Organization of Computer Systems (§3107, 5101; prereq 3121 or 3316 or 3321 or #)
★LECT 1325-1415 MWF, Phys 133
737003 —1 REC 0800-0850 Th, EE/CSci 3115, 4 cr
434841 —2 REC 1010-1100 Th, Arch 20, 4 cr
332662 —3 REC 1115-1205 Th, EE/CSci 3111, 4 cr

R 5101 Introduction to the Organization of Computer Systems (§3327; prereq non-CSci maj, 3316 or 3121 or #)
★LECT 1325-1415 MWF, Phys 133
940224 —1 REC 0800-0850 Th, EE/CSci 3115, 4 cr
438095 —2 REC 1010-1100 Th, Arch 20, 4 cr
430692 —3 REC 1115-1205 Th, EE/CSci 3111, 4 cr

R 5102 Introduction to Systems Programming (no grad cr for CSci maj; prereq 3327, 5101 or #)
638824 1115-1230 TTh, FordH 55, 4 cr

R 5103 Introduction to Operating Systems (§5502; prereq 3322, 5102, ¶5201 or #)
630707 1245-1400 TTh, EE/CSci 3111, 4 cr

R 5106 Structure of Higher Level Languages (no grad cr for CSci maj; prereq 3321, 3327, 3317 or #)
238387 —1 0945-1100 TTh, MechE 108, 4 cr

R 5107 Computer Graphics I (prereq 3322, 3327 or #)
832018 —1 0815-0930 TTh, MechE 212, 4 cr

R 5113 Introduction to Object-Oriented Programming Using C++ (§3121, 3321, 3322; prereq backgrnd in C lang prog equiv to 3113, no grad cr for CSci maj)
031529 —1 1810-2040 T, MechE 108, 4 cr

R 5180 Software Engineering I (prereq 5106 or #)
131831 —1 1640-1755 MW, MechE 212, 4 cr

R 5211 Data Communications and Computer Networks (prereq 5102 or #)
437741 1640-1755 TTh, AmundH B75, 4 cr

R 5301 Numerical Computation (prereq Math 3261, knowledge of a prog lang or #; informal lab; no grad cr for CSci maj)
★LECT 1115-1230 TTh, EE/CSci 3115
224456 —1 LAB 0905-1035 M, EE/CSci 1260, 4 cr
124457 —2 LAB 1430-1600 W, EE/CSci 1260, 4 cr
924458 —3 LAB 1325-1455 F, EE/CSci 1260, 4 cr

R 5304 Computational Aspects of Matrix Theory (prereq 5302 or #)
629766 0945-1100 TTh, AmundH 124, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5421 Introduction to Algorithm Design (§8401; prereq 3322, 5121 or #)
639200 1640-1755 MW, EE/CSci 3230, 4 cr

R 5511 Artificial Intelligence I (prereq 3322 or #)
431017 —1 1640-1755 TTh, MechE 212, 4 cr

R 5705 Object-Oriented Databases (prereq 5702 or #)
323332 —1 1700-1945 W, MechE 108, 4 cr

R 8161 Advanced Compiler Techniques (§5505; prereq 5102, 5201, IT grad or #))
525077 —1 1545-1700 TTh, EE/CSci 3125, 3 cr

R 8203 Advanced Computer Architecture (§5205, EE 8362; prereq 5201)
023334 —1 1415-1530 TTh, MechE 212, 3 cr

R 8299 Seminar: Machine Design (prereq #)
424455 Lilja D, 1-3 cr

R 8314 Iterative Methods for Linear Systems (prereq 5304)
325081 1245-1400 TTh, EE/CSci 2260, 3 cr

8399 Seminar: Numerical Analysis (prereq #)
136616 1-3 cr

R 8403 Theory of Computation(prereq 5400 or equiv or #)
137483 1415-1530 TTh, EE/CSci 3111, 3 cr

8499 Seminar: Computational Theory and Logic (prereq #)
333102 1-3 cr

R 8521 Neurocomputing and Neural Networks (prereq 5511)
125079 —1 1415-1530 TTh, EE/CSci 3125, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
434404 1-18 cr

R 8701 Overview of Database Research (prereq 5703 or #)
125082 —1 1245-1400 TTh, MechE 102, 3 cr

R 8760 Plan B Project (prereq #, CSci maj) (S-N only)
735977 3 cr

8777 Thesis Credits: Masters
534054 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
439697 1-36 cr

R 8899 Computer Science Colloquium (prereq grad) (S-N only)
839552 —1 1430-1530 M, MechE 108, 1 cr

CONSERVATION BIOLOGY (CBio)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed prelim orals)
835632 1-18 cr

8777 Thesis Credits: Masters
932835 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
337568 1-36 cr

CONTROL SCIENCE AND DYNAMICAL SYSTEMS (CSDy)
Institute of Technology

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
738605 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
531798 1-36 cr

R 8899 Seminar in Control and Dynamical Systems (prereq #)
040957 —1 1430-1530 F, MechE 108, Tannenbaum A, 1-3 cr

COPTIC (Copt)
Classical & Near Eastern Studies
Liberal Arts

5011 Elementary Coptic (prereq some knowledge of another ancient language, preferably Greek)
323539 1325-1415 MWF, PeikH 315, Sellew P, 4 cr

CULTURAL STUDIES AND COMPARATIVE LITERATURE (CSCL)
Liberal Arts

R 1001 Introduction to Cultural Studies: Rhetoric, Power, Desire (AH)
235859 0905-0955 MWF, FolH 306, Thomas G, 4 cr

R 1301 Discourse and Society I: Reading Culture (AH)
133000 —1 0905-0955 MWF, FolH 326, 4 cr
529503 —2 1010-1100 MWF, FolH 326, 4 cr
133196 —3 1115-1205 MWF, FolH 326, 4 cr
231455 —4 0815-0930 TTh, FolH 326, 4 cr
333679 —5 1415-1530 TTh, FolH 104, 4 cr

R 1302 Discourse and Society II: Meaning and History (Hist)
236221 —1 1115-1205 MWF, FolH 50, 4 cr
630559 —2 1415-1530 TTh, FolH 326, 4 cr

R 1303 Discourse and Society III: Knowledge, Persuasion, and Power (AH)
930924 —1 0905-0955 MWF, FolH 104, 4 cr
733954 —2 1220-1310 MWF, FolH 50, 4 cr
029327 —3 1245-1400 TTh, FolH 38, 4 cr

R 1921 Introduction to Film Study (§ArtH 1921) (A-F only)
938375 1325-1415 MW, 1325-1600 F, AndH 310, Silberman R, 4 cr

R 3172 Music as Discourse (§Hum 3172) (Vis)
723733 1415-1530 TTh, FolH 306, Thomas G, 4 cr

R 3458 The Body and the Politics of Representation (AH)
323735 1010-1100 MWF, FolH 306, Leppert R, 4 cr

R 3910 Topics in Cultural Studies and Comparative Literature: German-Jewish Rebels (§Ger 3610; prereq jr or sr or #)
823738 1220-1310 MWF, FolH 326, Zipes J, 4 cr

R 3931 Problems in Stateless Literatures (prereq reading knowledge of a foreign language)
823741 1115-1230 TTh, FolH 326, Jha P, 4 cr

R 3979 Issues in Cultural Pluralism (§AmSt 3113) (CD; C/PE)
139225 1115-1205 MWF, Sarles H, 4 cr

CURRICULUM AND INSTRUCTION (CI)
Education and Human Development

R 1000 Schooling, Learning, and Society (A-F only)
536970 1325-1520 TTh, PeikH 28, Heller P, 4 cr

R 3001 Survey of Art Activities (§ArEd 3001; prereq non-art ed maj) (A-F only)
933290 0905-1100 MWF, PeikH 40, 4 cr

3680 Student Teaching in Second Languages and Cultures (§SeEd 3631; prereq #) (S-N only)
936030 Jorstad H, Tedick D, others, 3 cr

R 5008 Theory and Practice of Teaching Art in Elementary Schools (§ArEd 5308) (A-F only)
239085 1300-1620 MW, PeikH 40, 4 cr (elem postbac only)

R 5069 Curriculum Innovations in Art Education (§ArEd 5302) (A-F only)
432460 1640-1825 TTh, PeikH 40, DiBlasio M, 4 cr

R 5074 Visual Culture, Education, and Global Development (§ArEd 5318) (A-F only)
724509 1640-2010 M, PeikH 325, Freedman-Norberg K, 1 cr (Nov 4, 11, 18)

5080 Internship in Art Education (§ArEd 5600; prereq #)
440025 Freedman-Norberg K, 2-9 cr

5085 Practicum: Art Education (§ArEd 5605; prereq #)
140562 DiBlasio M, 2-9 cr

R 5110 Introduction to Elementary School Teaching (§Elem 3101, Elem 5000; prereq ¶5183, elem educ maj or CLA music educ maj or ⅃)
529968 1325-1415 MWF, PeikH 28, Buggey L, 3 cr (concurrent registration in CI 5183 is required)

R 5130 Introduction to Curriculum Studies (§CISy 5600) (A-F only)
033524 1630-2010 M, PeikH 315, Orton R, 4 cr

R 5133 Curriculum Planning and Design (§CISy 5605) (A-F only)
524513 1630-2010 M, PeikH 46, Finley F, 4 cr

R 5145 Curriculum Topics (§CISy 5100; max 6 cr)
130654 —1 0900-1500 S, Oct 5, 0900-1200 S, Nov 2, Minnetonka High School, Avery P, 1 cr
723165 —2 0900-1500 S, Oct 19, 0900-1200 S, Nov 16, EBCEC, Avery P, 1 cr (StP)
124510 —3 1640-1915 T, PeikH 165, Avery P, 3 cr
924511 —4 3 cr
224859 —5 1325-1445 TTh, PeikH 46, 3 cr

R 5150 Secondary School Teaching (§SeEd 5250; prereq educ or CLA mus ed or #, ¶5185, or reg in approved area practicum)
734635 —1 1630-1915 M, PeikH 28, Anderson E, 3 cr
130128 —2 1220-1310 MWF, PeikH 28, Anderson E, 3 cr

R 5155 Classroom Instruction and Assessment (§CISy 5902; prereq MEd or grad stu)
532465 1630-20 Th, PeikH 165, Balli S, 4 cr

5180 Clinical E ces in Elementary School Teaching (S-N only)
724848 Bugge 2 cr

R 5183 Applying ructional Methods in the Elementary School (max 4 cr; §Elem 5211) (S-N only)
131187 —1 2 cr (Elem postbac)
523166 —2 2 cr
524849 —3 Buggey J, 2 cr

5186 School-Related Projects in Curriculum and Instruction (§5090, 5480, 5583, 5669, 5764; prereq CI MEd stu or #)
435908 —1 Anderson G, 1-12 cr
323170 —2 Avery P, 1-12 cr
323167 —3 Balli S, 1-12 cr
123168 —4 Balli S, 1-12 cr (Rochester)
023169 —5 Beach R, 1-12 cr
123171 —6 DiBlasio M, 1-12 cr
023172 —7 Finley F, 1-12 cr
823173 —8 Freedman-Norberg K, 1-12 cr
623174 —9 Golez F, 1-12 cr
423175 —10 Graves M, 1-12 cr
223176 —11 Heller P, 1-12 cr
123177 —12 Hooper S, 1-12 cr
923178 —13 Jorstad H, 1-12 cr
723179 —14 Lambrecht J, 1-12 cr
123180 —15 Lawrenz F, 1-12 cr
923181 —16 Narvaez D, 1-12 cr
323184 —17 Orton R, 1-12 cr
123185 —18 Post T, 1-12 cr
023186 —19 Stochl J, 1-12 cr
823187 —20 Tedick D, 1-12 cr
623188 —21 Walker C, 1-12 cr

R 5187 Practicum: Improvement of Teaching in Elementary or Pre-Kindergarten Schools (§Elem 5602; prereq MEd student in elem educ and early childhood educ) (S-N only)
036262 —1 Avery P, 3 cr
034088 —2 Buggey L, 3 cr
729645 —3 Co n J, 3 cr
138978 —4 Di sio M, 3 cr
336646 —5 Finley F, 3 cr
531820 —6 Hansen H, 3 cr
140326 —7 Heller P, 3 cr
139581 —8 Johnson R, 3 cr
034480 —9 Lawrenz F, 3 cr
329969 —10 Manning J, 3 cr
137409 —11 Monson D, 3 cr
039422 —12 Orton R, 3 cr
130881 —13 Phinney M, 3 cr
130209 —14 Post T, 3 cr
134400 —15 Stochl J, 3 cr
929885 —16 Taylor B, 3 cr
234730 —17 Watts S, 3 cr

5190 Directed Individual Study in Curriculum and Instruction (§CISy 5509; max 6 cr; prereq #)
039663 —1 Anderson E, 1-6 cr
131361 —2 Freedman-Norberg K, 1-6 cr
837252 —3 Gardner W, 1-6 cr
436797 —4 Hooper S, 1-6 cr
232136 —5 Lambrecht J, 1-6 cr

5195 Directed Study in Elementary and Secondary Education (max 6 cr; §SeEd 5351; prereq educ or grad student)
734554 —1 Avery P, ar cr
840474 —2 Beach R, ar cr
030882 —3 Cogan J, ar cr
137796 —4 Finley F, ar cr
130050 —5 Heller P, ar cr
635325 —6 Johnson R, ar cr
231973 —7 Jorstad H, ar cr
029814 —8 Lawrenz F, ar cr
835100 —9 Taylor B, ar cr
435701 —10 Walker C, ar cr

R 5250 Current Trends in Early Childhood Education (§Elem 5376; prereq teaching exp in kindergarten or primary or #)
332290 1630-2000 T, PeikH 28, 4 cr

R 5253 Cognitive and Creative Learning in Early Childhood Education (§Elem 3379; prereq CPsy 1301 or CPsy 5301) (A-F only)
324514 1630-1915 T, NichH 213, Murphy B, 3 cr

5280 Student Teaching in the Kindergarten (prereq 5250, 6 cr elem stu tchg or current elem license) (S-N only)
338056 Buggey J, 3-6 cr

R 5281 Student Teaching in the Nursery School (§Elem 3604; prereq approval of maj advisor and director of student teaching) (S-N only)
124515 1630-1815 W, SmithH 111, Galle L, 3-6 cr

R 5300 Technology for Teaching and Learning (A-F only)
634806 0900-1230 S, PeikH 28, EddyH 62, Hooper S, 2 cr

R 5362 Introduction to Computer-Based Instructional Design (A-F only)
134731 1630-2000 W, EddyH 62, Hooper S, 4 cr

R 5400 Survey of Children's Literature (§Elem 5210; prereq educ student or #)
836571 —1 1115-1205 MWF, PeikH 46, Monson D, 3 cr (concurrent registration in 5410, sec 1 and 5425, sec 1 required)
337487 —2 1115-1205 MWF, PeikH 48, Taylor B, 3 cr (concurrent registration in 5410, sec 2 and 5425, sec 2 required)

R 5410 Teaching Reading in the Elementary School (§Elem 5331; prereq 9 cr educ) (A-F only)
241113 —1 1010-1100 MWF, PeikH 46, Watts S, 4 cr (Elem postbac) (concurrent registration in 5400, sec 1, and 5425, sec 1, required)
738829 —2 1010-1100 MWF, PeikH 48, Manning J, 4 cr (concurrent registration in 5400, sec 2, and 5425, sec 2, required)
239734 —3 1630-1915 W, PeikH 46, Manning J, 4 cr

R 5416 Workshop: Curriculum Implementation in Elementary School Reading (§Elem 5339; max 9 cr; prereq elem teaching exp or #)
423189 —1 Phinney M, 1 cr
823190 —2 Watts S, 1 cr

R 5425 Teaching Lsngusge Arts in the Elementary School (§Elem 5316; prereq 3420 or elem tchg exp)
139662 —1 0905-0955 MWF, PeikH 46, Phinney M, 3 cr (Elem postbac) (concurrent registration in 5400, sec 1, and 5410, sec 1, required)
929644 —2 0905-0955 MWF, PeikH 48, 3 cr (Elem postbac) (concurrent registration in 5400, sec 2, and 5410, sec 2, required)

R 5441 Literature for Adolescents (§SeEd 5320)
930468 1630-1915 Th, PeikH 28, Scapple S, 3 cr

R 5450 Teaching Reading in Content Areas (§SeEd 5344)
933063 1010-1200 TTh, PeikH 315, Graves M, 4 cr (English postbac students only)

R 5460 Teaching Writing in Secondary School and College (§SeEd 5322)
229740 1010-1200 MW, PeikH 28, Beach R, 4 cr (Engl Educ postbac)

R 5501 Workshop: Elementary School Science Education (§Elem 5347; max 16 cr)
623191 —1 Johnson R, 1 cr
423192 —2 Johnson R, 1 cr

R 5504 Materials and Resources for Elementary School Science (prereq elem teaching exp)
934553 1630-2000 M, PeikH 385, Johnson R, 4 cr (MEd only)

5530 Science Education for the Middle School (§SeEd 5700; prereq sci educ postbac stu or #) (A-F only)
637558 0905-1100 TTh, PeikH 365, Lawrenz F, 4 cr (postbac students only)

R 5532 Current Developments in Secondary School Science Teaching (§SeEd 5390; prereq MEd or grad stu or #) (A-F only)
223193 1630-2010 T, PeikH 385, 4 cr

R 5619 Teaching Second Languages and Cultures in Elementary Schools (§Elem 5319)
732450 0900-1200 S, PeikH 215, Jorstad H, 4 cr

5631 Second Language Curriculum (§SeEd 5801; prereq postbac student)
136177 1325-1520 MWF, PeikH 215, Tedick D, 3 cr (SLC postbac only)

R 5632 Second Language Instruction (§SeEd 5802; prereq postbac student)
129495 1325-1520 TTh, PeikH 215, Walker C, 3 cr (SLC postbac only)

5633 Second Language Research (§SeEd 5803; max 6 cr; prereq SLC postbac licensure graduate; 6 cr taken after compl of lic)
123194 1640-1810 T, PeikH 215, Walker C, 2 cr

R 5650 Second Language and Cultures Education: Introduction and Overview (§SeEd 5186)
923195 1640-2000 M, PeikH 215, Jorstad H, 4 cr

5656 Reading and Writing in a Second Language (§SeEd 5219)
540114 1640-2000 W, PeikH 215, Tedick D, 4 cr

R 5680 Practicum: Teaching Second Languages and Cultures in Elementary Schools (§Elem 5320; prereq 5619 or Elem 5319 or ¶5619, #) (S-N only)
139421 Jorstad H, Tedick D, others, 3 cr

R 5684 Clinical Experiences in Second Languages (§SeEd 5804; prereq postbac student)
135255 1535-1625 TTh, PeikH 215, 4 cr (SLC postbac only)

5690 Directed Study in Second Languages and Cultures (§SeEd 5351; prereq educ or grad student)
139502 —1 Jorstad H, ar cr
138360 —2 Paige M, ar cr
829734 —3 Tedick D, ar cr
731668 —4 Walker C, ar cr

R 5730 Social Studies for the Inservice Elementary/Middle School Teacher (§Elem 5361; prereq elem tchg exp or #) (A-F only)
723196 1630-2000 Th, PeikH 48, Cogan J, 4 cr (TC-inservice)

R 5740 Introduction to Social Studies Education (§SeEd 5152; prereq postbac student)
033863 1535-1735 MW, PeikH 365, 4 cr (social studies maj only)

5782 Student Teaching in Secondary Social Studies (§SeEd 3641; prereq postbac MEd stu) (S-N only)
137488 Avery P, 3-15 cr

8099 Problems: Art Education (§ArEd 8900; prereq #)
232296 —1 DiBlasio M, ar cr
138981 —2 Freedman-Norberg K, ar cr

R 8130 Curriculum and Instruction Core: Critical Examination of Curricular Contexts (§CISy 8100; prereq PhD student or #) (A-F only)
133630 1630-1915 T, PeikH 335, Freedman-Norberg K, 3 cr

R 8133 Seminar in Teaching in Colleges of Education (§CISy 8201; prereq doctoral student or #, ¶8134)
523197 1640-1925 W, PeikH 25, Graves M, 3 cr

R 8190 Problems: Improvement of Instruction (§Elem 8991; prereq #)
233139 —1 Avery P, ar cr
230211 —2 Cogan J, ar cr
137636 —3 Finley F, ar cr
331673 —4 Hansen H, ar cr
137337 —5 Heller P, ar cr
838367 —6 Johnson R, ar cr
832455 —7 Lawrenz F, ar cr
738832 —8 Manning J, ar cr
735400 —9 Monson D, ar cr
431521 —10 Orton R, ar cr
136180 —11 Phinney M, ar cr
339739 —12 Post T, ar cr
040652 —13 Stochl J, ar cr
234016 —14 Taylor B, ar cr
933631 —15 Watts S, ar cr

8199 Problems: Curriculum Studies (§CISy 8501; prereq PhD student)
832147 —1 Hooper S, 3-9 cr
540484 —2 Lambrecht J, 3-9 cr
631808 —3 Freedman-Norberg K, 3-9 cr

R 8290 Problems: Teaching Kindergarten (§Elem 8976; prereq #)
529498 Hansen H, 3 cr

R 8400 Special Topics in Children's and Young Adult Literature (§Elem 8300; max 9 cr)
024516 1630-1915 Th, PeikH 25, Monson D, 3 cr

8492 Readings in English Education and Reading (§SeEd 8895)
135479 Beach R, 1-3 cr

R 8493 Problems: Teaching English and Reading (§SeEd 8896)
235179 —1 Beach R, ar cr
731198 —2 Manning J, ar cr
941115 —3 Monson D, ar cr
832987 —4 Phinney M, ar cr
329650 —5 Taylor B, ar cr
038979 —6 Watts S, ar cr

8590 Problems: Science Education (§SeEd 8871; prereq #)
838529 —1 Finley F, ar cr
439425 —2 Heller P, ar cr
134560 —3 Johnson R, ar cr
839812 —4 Lawrenz F, ar cr

8694 Problems: Second Languages and Cultures Education (§SeEd 8894; max 8 cr)
133294 —1 Jorstad H, ar cr
437111 —2 Paige M, ar cr
337800 —3 Tedick D, ar cr
331978 —4 Walker C, ar cr

Symbols

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H Honors course (follows the course number).
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❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

8698 Readings in Second Languages and Cultures Education (§SeEd 8898)
937338 —1 Jorstad H, 1-4 cr
737258 —2 Paige M, 1-4 cr
236798 —3 Tedick D, 1-4 cr
234484 —4 Walker C, 1-4 cr

8740 Seminar: Trends and Issues in Social Studies Education (§Elem 8363, SeEd 8364; prereq doctoral stu or #) (A-F only)
334654 Avery P, 3 cr

8750 Problems: Social Studies Education (§SeEd 8801; prereq 5741, 5740, or SeEd 5150, SeEd 5152, SeEd 5156, SeEd 8104 or #)
234095 —1 Avery P, 3-9 cr
138374 —2 Cogan J, 3-9 cr

DANCE (Dnce)
Theatre Arts
Liberal Arts

R 1001 Fundamental Modern I (prereq Δ)
832262 1115-1245 TTh, NorrisH M153, Maddux M, 1 cr

R 1004 Fundamental Ballet I (prereq Δ)
430093 0750-0920 MW, NorrisH 67, Gilliland L, 1 cr

R 1007 Fundamentals of Jazz I (prereq Δ)
436878 0750-0920 TTh, NorrisH M153, Young C, 1 cr

R 1010 Beginning Modern I (max 4 cr; prereq # or Δ)
635518 1325-1455 MTThF, NorrisH 67, Thompson E, 2 cr

R 1040 Beginning Ballet I (max 4 cr; prereq # or Δ)
838434 0750-0920 MWF, NorrisH M153, Mathis B, 2 cr

R 1070 Beginning Jazz I (max 2 cr; prereq # or Δ)
330233 1115-1245 TTh, NorrisH 80, Sealy Z, 1 cr

R 1101 Introduction to Dance (Vis; IP)
434435 0750-0920 TTh, NorrisH 201, Barker B, 4 cr

R 1110 Topics in Dance Theory (prereq 1003 or 1006)
639066 0750-0920 W, NorrisH 80, 201, 1 cr

R 3010 Intermediate Modern I (max 4 cr; prereq # or Δ)
138401 —1 1325-1455 MTThF, NorrisH 80, Smith J, other, 2 cr
923066 —2 1325-1455 MTThF, NorrisH M151, Mann, 2 cr

R 3040 Intermediate Ballet I (max 4 cr; prereq # or ¶)
833315 0930-1100 MWF, NorrisH M153, Gilliland L, 2 cr

R 3070 Intermediate Jazz I (max 2 cr; prereq # or Δ)
037265 0930-1100 TTh, NorrisH M153, Young C, 1 cr

R 3311 Composition I (prereq 1030 or # or Δ)
440591 —1 LECT 1115-1245 MF, NorrisH M153, Smith J, 2 cr
★LAB 1115-1245 W, NorrisH M153, Smith J

R 3330 Topics in Dance Theory (prereq 1030)
634823 1325-1455 W, NorrisH 80, Aiken C, 2 cr

R 3486 Ethnic Dance Traditions in American Society (Vis; CD)
723067 0930-1100 TTh, NorrisH 201, Maddux M, 4 cr

R 3511 Music for Dance (prereq 1003 or 1006)
732657 0750-0920 MF, NorrisH 80, Gordon A, 4 cr

R 3666 Dance Philosophy and Esthetics (prereq 3401, 3402) (Vis; IP) (A-F only)
831161 1115-1245 TTh, NorrisH 201, Barker B, 4 cr

R 3700 Dance Repertory Theatre and Reconstruction (prereq concurrent enrollment in a technique class, audition, #) (A-F only)
534331 1510-1710 MTWThF, NorrisH 67, Cheng M, 3 cr

R 5010 Advanced Modern I (max 9 cr; prereq # or Δ)
231391 1325-1455 MTWThF, NorrisH M153, 3 cr

R 5040 Advanced Ballet I (max 6 cr; prereq # or Δ)
636426 0930-1100 MWF, NorrisH 67, Mathis B, 2 cr

R 5070 Advanced Jazz I (max 3 cr; prereq # or Δ)
636250 0930-1100 TTh, NorrisH 67, Sealy Z, 1 cr

R 5312 Composition IV (prereq Δ or 3313)
835131 —1 LECT 1115-1245 MF, NorrisH 67, Corning B, 3 cr
★LAB 1115-1245 W, NorrisH 67, Cheng M

R 5700 Workshop: Dance Performance (prereq concurrent registration in a technique class, Δ) (A-F only)
530800 1510-1710 MTWThF, NorrisH M153, Smith J, 3 cr

R 5910 Topics in Dance (max 12 cr; prereq #, Δ)
531140 1-5 cr

DANISH (Dan)
German, Scandinavian, and Dutch
Liberal Arts

R 1101 Beginning Danish
133854 1600-1730 MWTh, FolH 326, Petersson T, 5 cr

R 1104 Intermediate Danish (prereq 1103 or equiv)
132963 1750-2000 MTh, FolH 214, Petersson T, 5 cr

R 3670 Readings in Danish Literary Texts (max 28 cr; prereq 1106 or equiv)
723540 1325-1415 MWF, PeikH 155, Petersson T, 4 cr

DENTAL HYGIENE (DH)
Dentistry

1001 Dental Anatomy (A-F only)
★LECT 1325-1520 W, MoosT 5125, Anderson J, 3 cr
631727 —1 LAB 0905-1100 F, MoosT 4160, Anderson J
231021 —2 LAB 1300-1445 F, MoosT 4160, Anderson J

1190 The Dental Hygiene Care Process (A-F only)
★LECT 0800-0850 TTh, MoosT 5125, Osborn J, 6 cr
532630 —1 CLN 1000-1205 TTh, 1330-1630 TTh, MoosT, (8 South)

1203 Dental Specialties (A-F only)
832021 0745-0925 F, MoosT 5125, Bryan P, 2 cr

3030 Applied Nutrition in Dental Hygiene Care (prereq 1093) (A-F only)
040585 1010-1100 ThF, MoosT 5125, Sander P, 2 cr

3193 The Dental Hygiene Care Process: Clinical Application III (prereq 1091, 1192) (A-F only)
★LECT 0800-0850 M, MoosT 5125, Stoltenberg J, 4 cr
539951 —1 CLN 0930-1200 MTW, 1315-1600 MTWF, MoosT, Stoltenberg J, others, (addtl hrs 2nd 5 weeks, 1315-1600 T)

3196 The Dental Hygiene Care Process (prereq 3195) (A-F only)
★LECT 1015-1105 M, MoosT 5125, Newell K, 5 cr
831046 —1 CLN 0930-1200 TTh, 1315-1600 MTWThF, Stoltenberg J

3202 Dental Hygiene Care for the Pediatric/Orthodontic Patient (prereq 1192) (A-F only)
931622 0745-0925 Th, MoosT 2580, Ingebritson M, 2 cr

3276 Oral Radiology II: Theory and Principles of Radiology (prereq dent hyg jr) (A-F only)
937825 0745-0925 W, MoosT 5125, Kuba R, 2 cr

3278 Clinical Oral Radiology (3278-3279-3280-3281-3282-3283†; prereq dent hyg jr or sr) (A-F only)
134387 —1 CLN 0930-1200 MTW, 1315-1615 MWF, MoosT, Kuba R, 0 cr

3281 Clinical Oral Radiology (3278-3279-3280-3281-3282-3283†; prereq 3280, dent hyg jr or sr) (A-F only)
130993 —1 CLN 1315-1615 MTThF, 0930-1200 TTh, MoosT, Kuba R, 0 cr

3480 Independent Study (prereq #) (S-N only)
131344 ar cr

DENTISTRY (Dent)
Dentistry

5001 Fixed Prosthodontics Technique Lectures (A-F only)
930230 1325-1415 W, MoosT 2690, 1 cr (Sept 4-Dec 4)

5004 Fixed Prosthodontics Laboratory (A-F only)
435018 1430-1700 MW, MoosT 4210A; 4210, 4222, 4 cr (Sept 4-Dec 4)

5005 Fixed Prosthodontics Laboratories (A-F only)
037623 3 cr

5006 Fixed Prosthodontics I (A-F only)
136530 1 cr

5008 Porcelain Veneers
638936 1 cr

5009 Fixed Prosthodontics: Independent Study
131769 ar cr

5010 Fixed Prosthodontics Clinic (A-F only)
132235 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 9160, 9346, 9139, 4 cr (Sept 4-Dec 13)

5011 Fixed Prosthodontics Clinic (prereq 5010) (A-F only)
633364 3 cr

5015 Fixed Prosthodontics Clinic (A-F only)
135207 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 9160, 9346, 9139, 3 cr (Sept 4-Dec 13)

5016 Fixed Prosthodontics Clinic (prereq 5015) (A-F only)
235926 2 cr

5026 Introduction to Dental Care Delivery and Preventive Dentistry (A-F only)
932253 0905-0955 TTh, MoosT 2620, Sept 6-Dec 5, 1010-1100 F, MoosT 2690, Oct 4, 18, 25, Nov 1, 8, 15, 22, 3 cr

5027 Epidemiology, Prevention and Dental Public Health (prereq dent or grad dent or dent hyg stu) (A-F only)
336727 0745-0835 MTWThF, OwreH 2230, 3 cr (Sept 30-Dec 6)

5036 Organization and Management of Dental Practice I (S-N only)
636037 0745-0930 MTWThF, MoosT 2530, 2 cr (Sept 6-20)

5052 Dental Auxiliary Utilization Clinic (DAU I, II) (S-N only)
533759 0 cr

5054 Dental Auxiliary Utilization Clinic (DAU I, II) (prereq 5053) (S-N only)
033104 0900-1200 MTWThF, MoosT 9160, 9327, 9346, 1315-1600 MTWThF, MoosT 9160, 1315-1545 MTWThF, MoosT 9327, 9346, 2 cr (Sept 4-Dec 13)

5055 Health Ecology: Independent Study
337439 ar cr

5070 Health Ecology Elective
337456 ar cr

5073 Advanced General Dentistry Elective
929949 ar cr

5075 Health Ecology: Dental Associateships
430272 ar cr

5090 Business and Legal Aspects of a Dental Practice (A-F only)
130038 0745-0930 MTWThF, OwreH 2230, 5 cr 0745-0930 MTWThF, OwreH 2230 (Sept 6-27) 0745-0845 MTWThF, OwreH 2230 (Sept 30-Dec 6)

5091 Professional Problem Solving (†5091-5092-5093) (A-F only)
532868 0905-1100 F, MoosT 5125, 0 cr (Sept 6 only)

5094 Professional Problem Solving (†5094-5095-5096-5097-5098-5099) (A-F only)
837199 0 cr (Sept 4-Dec 6)

5095 Professional Problem Solving (prereq 5094) (A-F only)
831810 0 cr

5097 Professional Problem Solving (prereq 5096) (A-F only)
940286 0 cr

5098 Professional Problem Solving (prereq 5097) (A-F only)
733758 0 cr

5150 Operative Dentistry I (A-F only)
832200 2 cr

5151 Operative Dentistry II (prereq 5150) (A-F only)
138513 1325-1415 TTh, MoosT 2690, 2 cr (Sept 5-Dec 5)

5152 Operative Dentistry III (prereq 5151) (A-F only)
130064 1 cr

5154 Operative Dentistry Lab II (†5154-5155; prereq 5153) (A-F only)
339479 1430-1700 TTh, MoosT 4210A, 4210, 4222, 4222E, 4 cr

5155 Operative Dentistry Lab III (†5154-5155; prereq 5154) (A-F only)
529775 3 cr

5157 Patient Management II (§5452) (A-F only)
838708 2 cr

5158 Operative Dentistry: Independent Study
537763 ar cr

5161 Operative Dentistry Clinic (A-F only)
734876 1300-1615 MTWThF, 0845-1215 MTWThF, MoosT 9160, 9327, 9346, 4 cr (Sept 4-Dec 12)

5162 Operative Dentistry Clinic (prereq 5161) (A-F only)
737406 3 cr

5165 Operative Dentistry Clinic (†5165-5166-5167) (A-F only)
032244 1300-1615 MTWThF, 0845-1215 MTWThF, MoosT 9160, 9327, 9346, 5 cr (Sept 4-Dec 13)

5166 Operative Dentistry Clinic (†5165-5166-5167; prereq 5165) (A-F only)
933757 3 cr

5170 Seminar: Operative Dentistry
130119 1 cr

5172 Esthetic Direct Anterior Restoratives (prereq 5160)
739396 1 cr

5173 Clerkship in Operative Dentistry (prereq 5160, 5165)
934987 2 cr

5175 Esthetic Dentistry Clinic (prereq 5172)
036326 1 cr

5180 Patient Management III (S-N only)
340549 0930-1200 MTWThF, 1315-1545 MTWThF, MoosT 8384, 6194, 4108A, 2 cr (Sept 4-Dec 13)

5181 Patient Management III (prereq 5180) (S-N only)
232900 1 cr

5184 Patient Management IV (prereq 5183) (S-N only)
640346 0930-1200 MTWThF, 1315-1545 MTWThF, MoosT 8384, 6194, 4108A, 2 cr (Sept 4-Dec 13)

5185 Patient Management IV (prereq 5184) (S-N only)
130694 1 cr

5202 Current Literature Seminar (S-N only)
834626 1000-1200 MWF, MoosT 2672, 2680, PWB 6224, 6210, 1 cr (Sept 18-Nov 22)

5203 Topics in Dental Biochemistry (§MdBc 5203) (A-F only)
829362 0800-0850 MWF, MoosT 2690, 3 cr (Sept 4-Nov 13)

5250 Oral Pathology: Independent Study
130095 ar cr

5251 Oral Pathology (A-F only)
140979 0745-0835 MW, MoosT 2530, 3 cr (Sept 23-Dec 4)

5310 Oral and Maxillofacial Surgery I (A-F only)
335299 0745-0835 F, MoosT 2530, 1 cr (Sept 27-Dec 6)

5316 Oral and Maxillofacial Surgery Clinic Rotation (A-F only)
831435 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 7407, 7411, 7412, 7413, 7415, 7416, 7417, 7430, 7434, 2 cr (Sept 6-Dec 16)

5317 Pain and Anxiety Control (A-F only)
437402 1325-1415 MF, MoosT 2690, 2 cr (Sept 6-Nov 8, 1230-1415 F, Oct 11, 0800-0955 W, Nov 27)

5320 Oral and Maxillofacial Surgery: Independent Study
730827 ar cr

5330 Nitrous Oxide Inhalation Analgesia/Emergency Drug Utilization (S-N only)
133327 1 cr

5335 Oral and Maxillofacial Surgery Clinic Elective Rotation (prereq 5310, 5311, 5315) (S-N only)
538184 ar cr (Sept 6-Jan 13)

5340 Hospital Dentistry Lecture (A-F only)
130369 1 cr

5380 Orthodontics
329762 2 cr

5385 Orthodontics: Independent Study
640573 ar cr

5401 Pediatric Dentistry I (A-F only)
131392 1 cr

5407 Minor Tooth Movement
631081 1 cr

5409 Clinical Pediatric Dentistry (A-F only)
232802 0845-1200 MTWF, 1300-1600 MTWThF, MoosT 6125, 6162, 0 cr (Sept 4-Dec 13)

5410 Clinical Pediatric Dentistry (prereq 5409) (A-F only)
635468 0 cr

5412 Clinical Pediatric Dentistry (prereq 5411) (A-F only)
832407 0845-1200 MTWF, 1300-1600 MTWThF, MoosT 6125, 6162, 0 cr (Sept 4-Dec 13)

5413 Clinical Pediatric Dentistry (prereq 5412) (A-F only)
540226 0 cr

5420 Pediatric Dentistry: Independent Study
140755 ar cr

5425 Treatment of the Difficult Pediatric Patient
739608 1 cr

5452 Patient Management II (A-F only)
140397 1 cr

5453 Periodontology III Lecture (A-F only)
939364 0745-0835 TTh, MoosT 2530, 2 cr (Sept 24-Dec 5)

5460 Periodontology: Independent Study
137192 ar cr

5465 Periodontology Clinic (A-F only)
341068 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 8150, 8327, 8348, 1 cr (Sept 4-Dec 6)

5466 Periodontology Clinic (prereq 5465) (A-F only)
229964 2 cr

5468 Periodontology Clinic (A-F only)
729712 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 8150, 8327, 8348, 2 cr (Sept 4-Dec 6)

5469 Periodontology Clinic (prereq 5468) (A-F only)
238096 2 cr

5475 Clinical Seminar in Periodontology
830141 1 cr

5476 Periodontology Seminar
129875 2 cr

5477 Bacteriology and Immunology of Periodontal Disease
539769 1 cr

5478 Treatment of More Complicated Periodontal Patients
238423 ar cr

5553 Removable Prosthodontics: Independent Study
931412 ar cr

5560 Special Prosthodontics (A-F only)
730861 3 cr

5562 Removable Prosthodontics Clinic (A-F only)
431423 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 9160, 9346, 9227, 3 cr (Sept 4-Dec 6)

5563 Removable Prosthodontics Clinic (prereq 5562) (A-F only)
935248 4 cr

5565 Removable Prosthodontics Clinic (A-F only)
633350 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 9160, 9227, 9346, 2 cr (Sept 4-Dec 6)

5566 Removable Prosthodontics Clinic (A-F only)
135927 2 cr

5568 Review: Partial Removable Prosthetics
439991 1 cr

5569 Removable Prosthetics
632943 ar cr

5570 Seminar: Restorative Dentistry
132095 ar cr

5573 Treatment of the Difficult Prosthodontic Patient
337831 1 cr

5575 Overview of Implants Used in Dentistry
031255 1 cr

5577 Advanced Complete Denture Prosthetics (prereq 3rd yr dent stu) (A-F only)
932060 ar cr

5602 Biomaterials: Independent Study
537360 ar cr

5626 Endodontic Clinic (S-N only)
133112 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 8127, 8150, 8348, 1 cr (Sept 4-Dec 6)

5630 Endodontics: Independent Study
240916 ar cr

5642 Hospital Dentistry (S-N only)
035015 0845-1200 MF, 1300-1600 TF, PWB 7302, 0 cr (Sept 4-Dec 6)

5648 Oral Anatomy I (5648-5649†) (A-F only)
★LECT 0800-0850 MW, MoosT 2620, 5 cr (Sept 4-Nov 13)
031952 —1 LAB 0905-1205 MW, MoosT 4160, 4170A, 4170, (Sept 4-Nov 13)

5654 Oral Anatomy: Independent Study
340535 ar cr

5670 Introduction to Oral Biology (S-N only)
231732 0905-0955 F, MoosT 2620, 1 cr (Sept 13-Nov 8)

5677 Dental Research Training
330913 3 cr

5680 Oral Biology: Independent Study
137085 ar cr

5755 Occlusion: Independent Study (S-N only)
130072 ar cr

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❑ Approval of the college offering the course is required for registration.
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✦ This symbol will precede the call numbers of a course with multiple section types (e.g., LECT, LAB, REC) without automatic registration. You must select and register for one of each of the parts of the course.

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5775 Oral Radiology I (A-F only)
533244 2 cr

5776 Oral Radiology II (A-F only)
037699 0800-0850 TTh, MoosT 2690, 2 cr (Sept 5-Nov 14, 0800-0955 Nov 22, 26)

5778 Oral Radiology Clinic (A-F only)
338929 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 7221, 7223, 7225, 7226, 7227, 7234, 7235, 7238, 7240, 7241, 7245, 0 cr (Sept 4-Dec 6)

5779 Oral Radiology Clinic (A-F only)
331172 0 cr

5781 Advanced Clinical Roentgenology
035368 ar cr

5785 Oral Radiology: Independent Study
632876 ar cr

5786 Oral Radiology Preclinical Laboratory (S-N only)
637270 1000-1230 M, 1430-1700 F, MoosT 7221, 0 cr (Sept 4-Dec 6)

5800 Oral Medicine/Diagnosis (A-F only)
736076 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 9160, 9227, 9346, 1 cr (Sept 4-Dec 6)

5801 Oral Medicine/Diagnosis (prereq 5800) (A-F only)
029490 1 cr

5804 Emergency Clinic (S-N only)
038853 0900-1200 MTWThF, 1315-1600 MTWThF, MoosT 7336, 0 cr (Sept 4-Dec 6)

5807 Treatment Planning: Independent Study
233335 ar cr

5815 Oral Medicine Elective
436072 2 cr

5850 Treatment Planning Clinic (5850-5851-5852†) (A-F only)
937405 0845-1215 MTWThF, 1300-1615 MTWThF, MoosT 9227, 1 cr

5853 Treatment Planning Clinic (A-F only)
831659 1 cr

5900 Dental Clinic (S-N only)
729550 ar cr

5901 Dental Clinic Elective (S-N only)
434502 ar cr (Sept 4-Jan 13)

5945 Geriatric Hospital Dentistry
133157 ar cr

5951 Advanced General Dentistry Seminar II (S-N only)
830253 0715-0815 TTh, 0800-0900 M, 1200-1600 W, MoosT 15254, 1200-1300 Th, ar cr

5956 Advanced General Dentistry Clinical Administration II (S-N only)
733999 ar cr

5961 Advanced General Dentistry Clinic II (S-N only)
930244 0815-1200 MTWThF, 1300-1600 MTWThF, MoosT 7336, 8223, ar cr

5965 Advanced General Dentistry Clinic VI (S-N only)
036763 ar cr

5971 General Practice Seminar II (S-N only)
837669 0715-0830 TTh, 1200-1300 TWTh, 0800-0900 M, MoosT 15254, ar cr

5975 General Practice Clinical Administration II (S-N only)
430062 ar cr (Anoka Metro Regional Treatment Center)

5981 General Practice Clinic II (S-N only)
940305 0815-1200 MTWThF, 1300-1600 MTWThF, PWB 7315, ar cr

5985 General Practice Clinic VI (S-N only)
439361 ar cr (Anoka Metro Regional Treatment Center)

5989 Advanced Clinical Geriatric Dentistry
233996 ar cr (Wilder Senior Health Center)

5990 Field Experience: Administration in a Multidisciplinary Health Center
030154 ar cr (Wilder Senior Health Center)

5992 Oral Health Services for Older Adults I
134079 ar cr

8440 TMJ and Craniofacial Pain; Advanced Theory and Principles (prereq #) (A-F only)
135314 0730-0900 TTh, MoosT 6410, 3 cr

8441 Seminars in TMJ and Craniofacial Pain (prereq #) (A-F only)
639844 1530-1630 F, MoosT 6410, 1 cr

8442 Advanced Clinical TMJ and Craniofacial Pain (prereq #) (A-F only)
437190 0830-1600 MTWTh, MoosT 6374, 1-4 cr

8443 Current Literature in TMJ and Craniofacial Pain (prereq #) (A-F only)
734957 1300-1400 F, MoosT 6370, 1 cr

8777 Thesis Credits: Masters
236008 1-16 cr

DERMATOLOGY (Derm)
Medical School

5182 Preceptorship in Dermatology (prereq regis med)
435620 1300-1400 W, 1400-1500 W, 1500-1645 W, DiehlH 220, PWB 4274, Bart B, ar cr

5183 Advanced Dermatology (prereq 5181 or 5182)
140836 Bart B, ar cr

5184 Special Course in Dermatology
735574 Bart B, ar cr

5185 Research in Dermatology (prereq 5182)
333004 Grando S, ar cr

8225 Clinical Dermatology
030185 Dahl M, Hordinsky M, ar cr

8226 Clinical Seminar
140908 1300-1700 WF, PWB 4272, Dahl M, Hordinsky M, ar cr

8227 Histology of the Skin
329518 1500-1600 WF, PWB 4272, Rest B, ar cr

8228 Research: Dermatology and Related Basic Sciences
141064 Grando S, Nelson R, others, ar cr

8229 Electron Microscopy in Dermatology
734053 Zelickson A, ar cr

8230 Functional Biology of the Skin
130251 Grando S, Nelson R, others, ar cr

8231 Clinics in Dermatology for Non-Dermatologists
229463 Dahl M, ar cr

8232 Seminar: Dermatologic Histopathology and Mycology
337747 Rest B, ar cr

DESIGN, HOUSING, AND APPAREL (DHA)
Human Ecology

R 1101 Introduction to the Designed Environment (§1001) (AH)
539304 1010-1100 MWF, McNH 33, Guerin D, 3 cr

R 1211 Introduction to Retail Merchandising
130878 1220-1415 MW, McNH 376, 4 cr

R 1231 Clothing Design Studio I (prereq 1328, pass sewing proficiency exam)
532675 0905-1205 TTh, McNH 205, 212, Amir-Fazli H, 4 cr

R 1300 Introduction to Design (§1501) (AH)
134938 0905-0955 MWF, McNH 33, Blade T, 3 cr

R 1323 Design Process: Drawing I (§1523; prereq dsgn or hsg or apparel maj or pre-maj)
735249 —1 LAB 0800-1100 TTh, McNH 258, 4 cr
523426 —2 LAB 1115-1415 TTh, McNH 258, 4 cr

R 1325 Design Process: Two-Dimensional Design I (§1525; prereq dsgn or hsg or apparel maj or pre-maj)
★LECT 1115-1415 M, McNH 197
132753 —1 LAB 1115-1415 W, McNH 258, 4 cr
123428 —2 LAB 1115-1415 F, McNH 258, 4 cr

R 1328 Design Process: Color (§1528; prereq 1300, 1323, 1325, or equiv, dsgn or hsg or apparel maj or pre-maj)
237627 0800-1100 TTh, McNH 262, 4 cr

R 1331 Surface Design I (prereq 1300, 1323, 1325, DHA maj or premaj) (course fee)
636409 0800-1100 MW, McNH B9, 4 cr

R 1401 Residential Technology (§1801; prereq soph or #, Phys 1001 or Phys 1041)
140318 0800-0955 TTh, McNH 146, 4 cr

R 1642 Interior Design Studio II (§1555; prereq 1641, dsgn or hsg or apparel maj or pre-maj) (course fee)
935833 1115-1415 M, 1115-1310 WF, McNH 480, 4 cr

3203 Field Experience in Apparel Sciences and Design (§3003; prereq soph, HE 1003, #) (S-N only)
030204 —1 Amir-Fazli H, 1-3 cr
140884 —2 DeLong M, 1-3 cr
339658 —3 Eicher J, 1-3 cr
031353 —4 Johnson K, 1-3 cr
831175 —5 LaBat K, 1-3 cr
237479 —6 Williams G, 1-3 cr
136258 —7 1-3 cr

R 3211 Pattern Development I (prereq pass sewing proficiency exam)
135832 1220-1415 MW, McNH 205, 212, 4 cr

R 3216 Textile Analysis (prereq Phys 1001)
★LECT 0905-0955 MWF, McNH 10, LaBat K, (1 hr ar)
138522 —1 LAB 1010-1140 TTh, McNH 322, 5 cr
629637 —2 LAB 1220-1350 TTh, McNH 322, 5 cr

R 3325 Design Process: Two-Dimensional Design II (§3525; prereq 1325 or 1525, dsgn or hsg or apparel maj, pass dsgn comm portfolio rev or Δ)
033653 0800-1100 MW, McNH 305, 4 cr

R 3328 Design Process: Color II (§3528; prereq 1323 or 1523, 1328 or 1528, dsgn or hsg or app maj, pass des com port rev or Δ)
737714 1115-1415 MW, McNH 262, 4 cr

R 3351 Graphic Design I (prereq 3301, 3350, pass portfolio review for degree prog, or #)
140464 0800-1100 MW, McNH B3, 4 cr

3470 Professional Seminar in Housing (§3870; prereq 3463 or 3863) (S-N only)
139953 1115-1205 M, McNH 216, 1 cr

R 3611 Interior Design Professional Practice (§3558; prereq pass interior design portfolio review) (course fee)
434239 1415-1530 TTh, McNH 197, 3 cr

R 3631 Interior Design Resources and Materials (§3557; prereq pass int dsgn portfolio review, TexC 3216 or TexC 3621, or #)
130203 0945-1100 TTh, McNH 10, Ginthner D, 3 cr

R 5105 History of Visual Communication (prereq intro art hist course) (A-F only)
030509 1115-1255 TTh, McNH 33, Martinson B, 4 cr

R 5112 History of European Furniture and Interiors (§5512; prereq Arch 3411, Arch 3412 or #)
435469 1115-1205 MWF, McNH 33, Erickson A, 3 cr

5130 Internship in Design, Housing, and Apparel (prereq complet 1/2 prof seq, submit plan approved in advance by adviser, intern super, #)
423435 —1 0800-0855 M, McNH 363, 1-4 cr (retail merchandising stu only)
223436 —2 1-4 cr

5180 Directed Study in Design, Housing, and Apparel (max 8 cr; prereq #)
424584 1-4 cr

R 5217 International Trade in Textiles and Apparel (IP)
938974 1325-1520 TTh, McNH 216, Williams G, 4 cr

R 5231 Clothing Design Studio IV (§Dsgn 5541; prereq 3232 or Dsgn 3232, 5218 or Dsgn 5218)
834237 1010-1205 MWF, McNH 205, 212, Amir-Fazli H, 4 cr

R 5241 Retail Promotion (§TexC 3646; prereq 1211 or TexC 1211, Mktg 3000)
536645 0905-1100 MW, McNH 376, Johnson K, 4 cr

5266 Ethnic Dress (§5668; prereq 3212 or 3661, Anth 1102, Soc 1001 or #)
923438 1430-1700 M, McNH 363, Eicher J, 3 cr

5463 Housing Policy (§5863, PA 5611; prereq grad or adult special or 3463 or 3863)
938201 1115-1235 TTh, McNH 10, Goetz E, 3 cr

R 5483 Housing Discrimination (prereq 3463 or #) (A-F only)
123445 0905-1100 MW, McNH 10, Goetz E, 4 cr

R 5612 Interior Design Research (§5575; prereq 3643 or 3553 or #)
031174 1220-1310 MW, McNH 216, Guerin D, 2 cr

R 5645 Interior Design Studio V (§Dsgn 5552; prereq 3216 or TexC 3621, 3631 or Dsgn 3557, 3633 or Dsgn 3548, 3643 or Dsgn 3553, #) (course fee)
729306 1325-1520 MWF, McNH 475, Erickson A, 4 cr

R 5646 Interior Design Studio VI (§5554; prereq 3216 or TexC 3621, 3631 or Dsgn 3557, 3633 or Dsgn 3548, 3643 or Dsgn 3553, #) (course fee)
440641 0905-1100 MWF, McNH 475, Ginthner D, 4 cr

R 8101 Philosophy of Design and Human Interaction (prereq DHA grad stu or #) (A-F only)
524852 1010-1100 MW, 1010-1205 F, McNH 198, Eicher J, 3 cr

8180 Directed Study in Design, Housing, and Apparel (max 8 cr; prereq #) (A-F only)
524625 1-4 cr

8190 Readings in Design, Housing, and Apparel (max 8 cr; prereq #) (A-F only)
324626 1-4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
531204 1-18 cr

8777 Thesis Credits: Masters
239393 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
837364 1-36 cr

DEVELOPMENT STUDIES AND SOCIAL CHANGE (DSSC)

8210 Field Research Methodology in Developmental Studies and Social Change (prereq DSSC minor or #)
533860 1430-1700 W, BlegH 245, Aminzade R, 1 cr

8310 Topics in Developmental Studies and Social Change (prereq DSSC minor or #)
530201 1500-1700 F, BlegH 205, Samatar A, 2 cr (alt F)

DUTCH (Dtch)
German, Scandinavian, and Dutch
Liberal Arts

R 1101 Beginning Dutch (§1110)
935430 1115-1240 MWF, SmithH 121, Van der Sanden, 5 cr

R 1104 Intermediate Dutch (prereq 1103 or #)
940580 0905-1030 MWF, NichH 209, Van der Sanden, 5 cr

R 3011 Conversation and Composition (prereq 1106 or #)
732917 0945-1100 TTh, CivE 214, Van der Sanden, 4 cr

R 3310 Studies in Dutch Authors: Colonialism, Decadence, and the Loss of the Self (prereq 1103 or 15 cr of 1110 or #)
523670 1325-1520 T, NichH 209, Parente J, 4 cr

3970 Directed Studies (prereq 1105, #, Δ, ❑)
629508 1-5 cr

R 5490 Topics in Dutch Literature: Colonialism, Decadence, and the Loss of the Self (max 8 cr; prereq reading know of Dtch, jr or sr or grad stu)
323671 1325-1520 T, NichH 209, Parente J, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
123669 1-5 cr

EAST ASIAN STUDIES (EAS)
Area Studies Programs
Liberal Arts

R 1462 Introduction to East Asia: The Imperial Age (§Hist 1462, 3462)
★LECT 1115-1205 MWF, BlegH 155, Waltner A
824825 —1 REC 1010-1100 M, BlegH 140, 4 cr
424827 —2 REC 1220-1310 M, BlegH 140, 4 cr
224828 —3 REC 1115-1205 T, BlegH 140, 4 cr
124829 —4 REC 1010-1100 W, BlegH 140, 4 cr
424830 —5 REC 1115-1205 Th, BlegH 140, 4 cr
224831 —6 REC 1010-1100 F, BlegH 140, 4 cr

R 3211 East Asia (§Geog 3211)
134087 0905-0955 MWF, BlegH 415, Hsu M, 4 cr

3467 The Nationalist Revolution in China, 1900 to Present (§Hist 3467, Hist 5467)
429283 0945-1100 TTh, BlegH 120, Farmer E, 4 cr

R 3471 20th-Century Japan (§Hist 3471)
023463 1115-1230 TTh, BlegH 145, Marshall B, 4 cr

8061 Scope and Methods of East Asian Studies (§RAS 8061) (A-F only)
533468 1415-1530 TTh, HHHCtr 60, 4 cr

8777 Thesis Credits: Masters
630979 1-16 cr

ECOLOGY, EVOLUTION AND BEHAVIOR (EEB)
Biological Sciences

R 5014 Ecology of Vegetation (prereq Biol 5041 or Biol 5841, 1 qtr stat or #) (course fee)
★LECT 1325-1415 MW, BorH 365, Cushing E, (one weekend fieldtrip, Oct 5-6 or 12-13 or 19-20)
132274 —1 LAB 1325-1740 Th, BioSci 115, 5 cr (1st lab meets Sept 26)
030879 —2 LAB 1325-1740 F, BioSci 115, 5 cr (1st lab meets Sept 27)

R 5034 Population Genetics (prereq basic genetics, 1 qtr calc, familiarity with comput prog)
623479 0945-1100 TTh, McNH 197, Curtsinger J, 3 cr

R 5044 Evolution (prereq Biol 1106 or Biol 3011, Biol 1103 or Biol 3012)
★LECT 1415-1530 TTh, GrnH 110, Regal P
239555 —1 REC 1600-1650 T, BioSci 70, 4 cr
438985 —2 REC 1600-1650 Th, BioSci 70, 4 cr

R 5052 Theoretical Population Ecology (prereq Biol 5041 or Biol 5841 or #)
823478 0800-1010 TTh, Ecology 505, Tilman D, 5 cr

R 5122 Plant/Animal Interactions (prereq Biol 1106 or Biol 3011, Biol 1103 or Biol 3012, 10 cr in biological sciences, or #)
★LECT 1010-1115 MW, Ecology 150C, Morrow P
630562 —1 REC 1115-1205 M, Ecology 150C, 4 cr
829328 —2 REC 1325-1415 T, Ecology 150C, 4 cr

R 5129 Mammalogy (§FW 5129; prereq Biol 1106 or Biol 3011 or #)
★LECT 0905-0955 MWF, HodsonH 495, Birney E
335349 —1 LAB 0800-1100 T, Ecology 160, 5 cr
336047 —2 LAB 1010-1310 W, Ecology 160, 5 cr

R 5321 Evolution of Social Behavior (prereq Biol 1106 or Biol 3011 or #)
★LECT 1325-1415 MWF, Ecology 150C, McKinney F
733288 —1 REC 1430-1610 M, Ecology 150C, 4 cr

R 5324 Evolution of Primate Social Behavior (prereq 3111 or #)
730066 1115-1230 TTh, Ecology 150C, Pusey A, 3 cr

R 5601 Limnology (§Geo 5601; prereq Chem 1005 or #)
932172 1220-1310 MWThF, BorH 335, Sterner R, 4 cr

R 5607 Ecology of Animal Plankton (prereq 5601, Biol 5041 or Biol 5841 or #)
★LECT 1325-1415 MW, Ecology 200, McNaught D
823481 —1 LAB 1430-1640 MW, SnH 28, 5 cr

5970 Directed Studies (max 10 cr may count toward maj req; prereq #, Δ) (S-N only)
339899 ar cr

5990 Directed Research (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
133795 ar cr

8390 Graduate Seminar (prereq #)
229933 —1 1220-1350 T, McNH 198, Naeem S, 1 cr
334993 —2 1600-1700 W, HodsonH 495, 1 cr
636815 —3 1430-1630 Th, Ecology 505, Curtsinger J, ar cr
834657 —4 1600-1700 Th, Ecology, Sterner R, 1 cr
632490 —5 ar cr
830334 —6 ar cr

8391 Advanced Work in Ecology and Behavioral Biology (prereq #)
234145 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
140813 1-18 cr

8777 Thesis Credits: Masters
338476 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
435570 1-36 cr

8990 Graduate Research (prereq #)
630769 ar cr

ECONOMICS (Econ)
Liberal Arts

R 1101 Principles of Microeconomics (§1104; prereq plane geometry and interm algebra at GC 0623 and GC 0631 level) (SSci)
★LECT 1115-1205 MWF, WilleyH 175
537603 —1 REC 1220-1310 M, BlegH 235, 4 cr
138925 —2 REC 1220-1310 M, BlegH 425, 4 cr
730116 —3 REC 1325-1415 M, BlegH 235, 4 cr
139600 —4 REC 1325-1415 M, BlegH 115, 4 cr
034348 —5 REC 1325-1415 M, BlegH 105, 4 cr
934522 —6 REC 1430-1520 M, BlegH 105, 4 cr
137547 —7 REC 0800-0850 W, BlegH 105, 4 cr
036293 —8 REC 0905-0955 W, BlegH 105, 4 cr
631100 —9 REC 0905-0955 W, BlegH 215, 4 cr
131870 —10 REC 1010-1100 W, BlegH 130, 4 cr
739897 —11 REC 1010-1100 W, BlegH 230, 4 cr
★LECT 0815-0930 TTh, WilleyH 175
337778 —12 REC 0800-0850 M, BlegH 105, 4 cr
537245 —13 REC 0905-0955 M, BlegH 105, 4 cr
237532 —14 REC 1010-1100 M, BlegH 235, 4 cr
133103 —15 REC 1115-1205 M, BlegH 110, 4 cr
823819 —16 REC 0800-0850 W, BlegH 215, 4 cr
137659 —17 REC 0905-0955 W, BlegH 230, 4 cr
836120 —18 REC 1010-1100 W, BlegH 235, 4 cr
837719 —19 REC 1115-1205 W, BlegH 230, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 1102 Principles of Macroeconomics (§1105; prereq 1101 or equiv, plane geom, interm alg at GC 0623, GC 0631 level) (SSci)
★LECT 1010-1100 MWF, WilleyH 175
938330 —1 REC 0800-0850 F, BlegH 105, 4 cr
729905 —2 REC 0905-0955 F, BlegH 250, 4 cr
738880 —3 REC 0905-0955 F, BlegH 330, 4 cr
730195 —4 REC 1115-1205 F, BlegH 145, 4 cr
432698 —5 REC 1115-1205 F, BlegH 255, 4 cr
137989 —6 REC 1220-1310 F, BlegH 425, 4 cr

R 1104 Principles of Microeconomics (§1101; prereq 1 qtr calc) (SSci)
939672 1220-1310 MWF, BlegH 435, 4 cr

R 3101 Microeconomic Theory (§3105; prereq 1101, 1102 or equiv, 1 qtr calc)
123820 —1 0905-0955 MWF, BlegH 420, 4 cr
839700 —2 1010-1100 MWF, BlegH 260, 4 cr
638483 —3 1115-1205 MWF, BlegH 420, 4 cr
532689 —4 1220-1310 MWF, BlegH 105, 4 cr

R 3102 Macroeconomic Theory (prereq 3101 or equiv)
023852 1115-1205 MWF, BlegH 120, 4 cr

R 3103 Welfare Economics (prereq 3101 or equiv)
823853 0945-1100 TTh, BlegH 115, 4 cr

R 3105 Managerial Economics (§3101, BGS 3001; not open to Econ maj; prereq 1101, 1102 or equiv, 1 qtr calc)
★LECT 1115-1230 TTh, BlegH 115
631730 —1 REC 1010-1100 F, BlegH 115, 4 cr

R 3701 Money and Banking (§5701, 5721; not open to Econ maj; prereq 1101, 1102 or equiv)
★LECT 0815-0930 TTh, WilleyH 125
738653 —1 REC 0800-0850 M, BlegH 215, 4 cr
332399 —2 REC 0905-0955 M, BlegH 215, 4 cr
535169 —3 REC 1010-1100 M, BlegH 130, 4 cr
737292 —4 REC 0905-0955 F, BlegH 215, 4 cr
235098 —5 REC 1010-1100 F, BlegH 255, 4 cr

R 3751 Financial Economics I (prereq 3101 or 3105 or equiv, 1 qtr statistics, 1 qtr calculus)
540825 1115-1230 TTh, BlegH 215, 4 cr

3951 Major Project Seminar (prereq 3101, 3102, 3103 or equiv)
832276 2 cr

3970 Directed Studies (prereq #, Δ, ⊔)
035421 ar cr

R 5107H Honors Course: Game Theory and Its Applications (prereq 3101, 3102, 3103, or equiv, Math 1251-1252, 1261 or equiv)
333892 —80 1010-1100 MWF, BlegH 420, 5 cr (undergrads only)
131568 —81 1010-1100 MWF, BlegH 420, 4 cr (grad stu only)

R 5151 Elements of Economic Analysis: Firm and Household (prereq 3101 or equiv, 1 qtr calc, 1 qtr linear algebra, grad stu or #)
736658 1415-1530 TTh, BlegH 135, 3 cr

5161 Microeconomic Theory (prereq 3103, Math 3251-3252 or equiv, #...5113 rec)
★LECT 0945-1100 TTh, BlegH 330, 5 cr
331558 —1 REC 1545-1700 Th, BlegH 330
★LECT 1115-1230 TTh, BlegH 240, 5 cr
940904 —2 REC 1545-1700 Th, BlegH 240

5164 Macroeconomic Theory (prereq 3102, 3103, Math 3251-3252 or equiv, #...5113 rec)
★LECT 1415-1530 TTh, BlegH 145, 5 cr
335979 —1 REC 1545-1700 TTh, BlegH 145

R 5211 Principles of Econometrics (§3231, 5231; prereq 1101, 1102 or equiv, 1 qtr calc, Stat 3011-3012 or equiv, fam w/comput)
★LECT 0905-0955 MWF, HHHCtr 20
924590 —1 REC 0800-0850 Th, BlegH 125, 4 cr

R 5261 Introduction to Econometrics (no grad cr; prereq 3101 or equiv, Stat 5121-5122 or Stat 5131-5132-5133, Math 1251-1252, Math 1261 or equiv or #)
★LECT 1415-1530 TTh, AndH 330
140312 —1 REC 1415-1530 F, BlegH 425, 5 cr

R 5307 Comparative Economic Systems (§5337; not open to Econ maj; prereq 1101, 1102 or equiv) (IP)
924587 1115-1205 MWF, BlegH 215, 4 cr

R 5331 Economic Development (§5301; prereq 3101, 3102 or equiv)
234341 1245-1400 TTh, BlegH 125, 4 cr

R 5341 Economy of Latin America (§5311; prereq 3101, 3102 or #)
724588 1220-1310 MWF, BlegH 335, 4 cr

R 5401 International Economics (§5431, 5432; not open to Econ maj; prereq 1101, 1102 or equiv) (IP)
331754 —1 1010-1100 MWF, BlegH 120, 4 cr
934374 —2 1245-1400 TTh, BlegH 240, 4 cr

R 5431 International Trade (§5401; prereq 3101, 3102, 3103 or equiv) (IP)
839938 1115-1230 TTh, BlegH 125, 4 cr

R 5531 Labor Economics (§3501; prereq 3101, 3102 or equiv)
338882 1245-1400 TTh, BlegH 135, 4 cr

R 5721H Honors Course: Money and Banking (prereq 3101, 3102 or equiv, 1 qtr calculus...B avg rec)
334217 —80 1415-1530 TTh, BlegH 240, 5 cr (undergrads only)
532336 —81 1415-1530 TTh, BlegH 240, 4 cr (grad stu only)

R 5731 Macroeconomic Policy (prereq 3101, 3102 or equiv)
539982 0800-0850 MWF, BlegH 135, 4 cr

R 5821 Introduction to Public Economics (§3801; prereq 3101, 3103 or equiv)
429512 1010-1125 MW, BlegH 105, 4 cr

R 5831 Cost-Benefit Analysis (prereq 3101, 3103 or equiv)
136468 0815-0930 TTh, HHHCtr 25, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
035578 ar cr

8101 Microeconomic Theory (prereq 3101 or 5151, Math 3142, Math 3211 or equiv)
★LECT 0945-1100 TTh, BlegH 330
438467 —1 REC 1545-1700 Th, BlegH 330, 4 cr
★LECT 1115-1230 TTh, BlegH 240
137653 —2 REC 1545-1700 Th, BlegH 240, 4 cr

8104 Macroeconomic Theory (prereq 3102, Math 3142, Math 3211 or equiv)
★LECT 1415-1530 TTh, BlegH 145, 4 cr
638872 —1 REC 1545-1700 TTh, BlegH 145

8111 Introduction to Mathematical Economics (prereq Math 3142, Math 3211, ¶Econ 8101, Math 5612...Math 5243 rec)
134171 1245-1400 TTh, BlegH 210, 3 cr

R 8119 Cooperative Game Theory (prereq 8101-8102-8103, Math 5614, or equiv or #)
334864 1415-1530 TTh, BlegH 250, 3 cr

8181 Advanced Topics in Microeconomics (prereq 8103)
335822 1115-1230 TTh, HHHCtr 20, 3 cr

8191 Workshop in Mathematical Economics
933399 1535-1715 M, HHHCtr 20, ar cr

8201 Applied Econometrics (prereq 3101, 3102, Stat 5122, 1 qtr linear algebra)
★LECT 1415-1530 TTh, AndH 330
740712 —1 REC 1415-1530 F, BlegH 425, 4 cr

8211 Econometrics (prereq 5151, 5152, Stat 5133 or Stat 5122, Math 5243 or equiv)
337473 1245-1400 TTh, BlegH 140, 3 cr

R 8281 Advanced Topics in Econometrics
130721 1245-1400 TTh, BlegH 145, 3 cr

8291 Workshop in Econometrics
731167 1535-1805 T, BlegH 120, ar cr

8311 Economic Growth and Development Theory (prereq 8103, 8105)
929661 0815-0930 TTh, HHHCtr 30, 3 cr

R 8401 International Trade and Payments Theory (prereq 8102, 8104)
538878 1115-1230 TTh, HHHCtr 60, 3 cr

8491 Workshop in Trade and Development
040313 1535-1705 W, HHHCtr 20, ar cr

8501 Wages and Employment (prereq 8101, 8104)
132039 1010-1230 W, BlegH 210, 3 cr

8601 Industrial Organization and Government Regulation (prereq 8101)
037783 0945-1100 TTh, BlegH 205, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
736417 1-18 cr

8691 Workshop in Applied Microeconomics
134607 1535-1705 W, HHHCtr 20, ar cr

R 8701 Monetary Economics (prereq 8102, 8105)
129934 1115-1230 TTh, BlegH 205, 3 cr

8704 Financial Economics (prereq 8102, 8105)
830088 1325-1455 MW, BlegH 205, 3 cr

8777 Thesis Credits: Masters
736675 1-16 cr

8791 Workshop in Macroeconomics
632201 1535-1700 Th, BlegH 350, ar cr

R 8801 Public Economics (prereq 8102, 8105)
340924 0945-1100 TTh, HHHCtr 60, 3 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
936755 1-36 cr

8990 Individual Research
834139 ar cr

Education: See also Adult Education; Agricultural Education; Business and Industry Education; Child Psychology; Curriculum and Instruction; Educational Policy and Administration; Educational Psychology; Family Education; Kinesiology; Mathematics Education; Recreation, Park, and Leisure Studies; and Work, Community, and Family Education.

EDUCATION (Educ)
Education and Human Development

3001 Exploring the Teaching Profession (prereq early admission for Initial Licensure MEd Program) (S-N only)
122935 1535-1835 T, WullH 250, Bents M, 1 cr (Oct 8, 29, Nov 19)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
037878 1-18 cr

8777 Thesis Credits: Masters
231035 1-16 cr (Work, Community, and Family Education)

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
738555 —1 1-36 cr (Curriculum and Instruction)
037654 —2 1-36 cr (Work, Community, and Family Education)
130105 —3 1-36 cr (Recreation, Park, and Leisure Studies)

EDUCATIONAL ADMINISTRATION (EdAd)
Educational Policy and Administration
Education and Human Development

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq EdD stu who has not passed oral prelims)
740483 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
540761 1-36 cr

EDUCATIONAL POLICY AND ADMINISTRATION (EdPA)
Educational Policy and Administration
Education and Human Development

3101 Historical Foundations of Modern Education (§5101, Hum 3101, Hum 5101)
338073 1640-1910 M, WullH 140, Bagley A, 4 cr

R 5090 School and Society (§3090, SPFE 5090; prereq FoE stu or sr or post BA in ed or CLA mus ed maj or tchg maj or ⊔) (A-F only)
331186 —1 0815-0930 TTh, WullH 220, Nunneley R, 3 cr
931569 —2 1245-1400 TTh, WullH 140, Harkins A, 3 cr

5099 Directed Study (max 9 cr; prereq #)
236557 ar cr

5101 Historical Foundations of Modern Education (§3101, Hum 3101, Hum 5101)
430255 1640-1910 M, WullH 140, Bagley A, 4 cr

R 5103 Supervision and Administration of Special Education (§EPsy 5660; prereq #)
037170 1640-1910 M, NichH 122, Johnson D R, 3 cr

5125 Youth in Modern Society (§Soc 5952)
332550 1535-1850 M, WullH 220, Schneider B, 4 cr

5128 Workshop: Educational Administration
834240 —1 1535-1805 M, ChDev 218, Paige R, 1 cr (Sept 30-Oct 21)
630464 —2 1640-1910 W, PeikH 225, Harkins A, 3 cr
740113 —3 1640-1830 Th, ChDev 218, King J, 1 cr
924489 —4 1600-2100 F, 0900-2100 S, WullH 220, 1 cr (Oct 4-5)

5131 Comparative Education
733937 1640-2010 W, WullH 140, Cogan J, 4 cr

5171 Anthropology and Education (§Anth 5145)
040473 1535-1735 T, WullH 220, Lundy-Dobbert M, 4 cr

R 5201 Formal Organizations in Education
623319 —14 1640-1910 T, SmithH 121, Anderson M, 3 cr (PhD program)

5202 Politics of Education
231634 1640-1910 Th, WullH 140, Mazzoni T, 3 cr

5209 Education in Future Social Systems
430840 1640-1910 T, NichH 207, Harkins A, 3 cr

5212 School Budgeting
441031 1640-1910 W, WullH 220, Sederberg C, 3 cr

5215 The Principalship
936674 1640-1910 T, WullH 140, 3 cr

5222 Introduction to Policy Research (!; only grad stu may reg S-N, all others must reg A-F)
023320 1640-1910 M, ChDev 105, Bruininks R, 3 cr (PhD program)

5226 Educational Facilities Planning
438100 1640-1910 W, PeikH 315, Alkire G, 3 cr

5240 Seminar: Clinical Experiences in Educational Administration (§8240) (S-N only)
732691 1640-1910 Th, WullH 220, Sederberg C, 1-9 cr

R 5250 American Higher Education
140987 —1 1640-2000 W, NichH 122, Anderson M, 4 cr

5272 Problems: Educational Policy and Administration (§8272)
930079 1-3 cr

5274 Two-Year Postsecondary Institutions (§VoEd 5274, WCFE 5274)
131710 1640-1910 T, NichH 209A, Turner C, 3 cr

5280 Introduction to the Economics of Education
623322 1640-2000 W, NichH 207, Lewis D, 4 cr

5285 Principles and Methods of Evaluation (§EPsy 5240)
438453 —1 1640-1940 T, NichH 109, Lawrenz F, 3 cr
130646 —2 0945-1100 TTh, ChDev 105, Garfield J, 3 cr

5603 International Education and Development (§AdEd 5603) (A-F only)
033183 1640-2010 T, SmithH 111, Paige R, 4 cr

8175 General Systems Thinking for the Analysis of Education (§5175)
423323 1535-1735 Th, PeikH 315, Lundy-Dobbert M, 4 cr

8228 Problems: Higher Education (prereq #)
834190 ar cr

R 8229 Seminar: Higher Education (!; prereq #)
239488 —1 1-4 cr
923326 —2 1535-1805 T, ScottH 4, Mestenhauser J, Turner C, others, 2 cr (Oct 1-Nov 26)

8230 Seminar: Dissertation Research in Higher Education (S-N only)
223324 1640-1840 M, NichH 209A, Lewis D, 1 cr (alt M bgn 2nd wk of qtr)

8238 Seminar: Theory and Research (prereq educ admin or educ policy and admin maj or #)
434628 1640-1910 M, ChDev 216, Mazzoni T, 3 cr

8241 Seminar: Internship in Educational Administration (S-N only)
839910 1640-1910 Th, WullH 220, Sederberg C, 0-9 cr

8250 The Higher Education Institution: Organization and Environment (prereq 5201, 5250)
432135 1430-1730 Th, ChDev 105, Turner C, 3 cr

R 8261 Problems: Social and Philosophical Foundations of Education (prereq #)
234131 —1 ar cr
123325 —2 1430-1600 W, ChDev 105, Lundy-Dobbert M, 1 cr

8270 Problems: Elementary School Administration (prereq #)
331141 ar cr

8271 Problems: Secondary School Administration (prereq #)
031997 ar cr

8273 Field Study (prereq #)
740905 0-10 cr

8340 Simulation in Educational Design (§EdAd 8340; prereq 8220) (S-N only)
537049 1640-1910 Th, ClaOff 17, Ammentorp W, 3 cr (StP)

R 8603 Seminar: International Development Education (prereq 5603)
434578 1535-1905 Th, FolH 50, Paige R, 3 cr

8605 Problems: International Education Research (prereq 5605)
336694 3-6 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
038450 1-18 cr

8777 Thesis Credits: Masters
337246 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
136396 1-36 cr

EDUCATIONAL PSYCHOLOGY (EPsy)

Education and Human Development

R 1601 American Sign Language I
140285 0800-0955 TTh, PeikH 315, 5 cr

R 1602 American Sign Language II (prereq 1601 or #)
834514 0905-1100 MF, PeikH 315, 5 cr

R 1603 American Sign Language III (prereq 1602 or #)
340390 1115-1310 MW, PeikH 225, 5 cr

R 3119 Learning and Cognitive Bases of Education (prereq educ stu or CLA math maj...psy crse recommended) (SSci) (A-F only)
★LECT 1430-1620 T, 1430-1520 Th, SciCB 175, Samuels S J
023141 —1 LAB 1535-1630 Th, ApH 103, 4 cr

R 3132 Psychology of Multiculturalism in Education (SSci; CD) (A-F only)
541036 1010-1205 MW, BuH 123, Puncochar J, 4 cr

R 3260 Basic and Applied Statistics (Math)
338204 1640-1820 TTh, Arch 20, Garfield J, 4 cr

R 3601 American Sign Language IV (prereq 1603)
929479 0905-1100 WF, ChDev 218, 5 cr

R 3602 American Sign Language V (prereq 3601)
738250 0800-0955 TTh, ChDev 216, 5 cr

R 5110 Intelligence (A-F only)
632411 1640-1910 Th, PeikH 155, Bart W, 3 cr

R 5114 Psychology of Student Learning (A-F only)
438548 1640-1910 W, NichH 109, van den Broek P, 3 cr

R 5115 Psychology of Adult Learning (A-F only)
836456 1640-2010 T, ChDev 218, Tennyson R, 4 cr

R 5116 Behavior Analysis in Education (A-F only)
537312 1640-2030 M, PtH 204, McEvoy M, 4 cr

R 5119 Learning and Cognitive Foundations of Education (prereq CEHD stu or CLA mus ed maj or Δ...one course in psy rec) (SSci) (A-F only)
★LECT 1430-1620 T, 1430-1520 Th, SciCB 175, Samuels S
831936 —1 LAB 1535-1630 Th, SciCB 175, 4 cr
138942 —2 LAB 1535-1630 Th, KoltH S137, 4 cr
431003 —3 LAB 1535-1630 Th, KoltH S136, 4 cr

R 5135 Human Relations Workshop (S-N only)
★LECT 1700-1930 M, BuH 120, Puncochar J
138687 —1 REC 1945-2200 M, BuH 120, 6 cr

R 5139 Building a Learning Community (§3139; prereq College of EdHD stu or CLA mus ed maj or Δ, one psy crse) (SSci; CD) (A-F only)
129911 1430-1630 MW, Phys 150, Narvaez D, 4 cr

R 5150 Social Psychology of Education (A-F only)
640007 1640-1910 M, PeikH 225, Johnson D, 3 cr

R 5200 Special Topics: Psychological Foundations
029389 1430-1520 W, BuH 125, Bart W, 1 cr

R 5217 Educational Research Colloquium (max 6 cr) (S-N only)
623143 1640-1820 W, NichH 209A, Bart W, 1 cr (alt W: Oct 2, 16, 30, Nov 13, 27)

R 5221 Basic Principles of Measurement (prereq 5260 or 8260 or PsyF 5110 or 8110)
937839 0945-1100 TTh, BuH 120, Davenport E, 3 cr

R 5229 Classroom Assessment Methods (prereq concurrent participation in practice tchg or similar field exp) (A-F only)
032017 1640-1830 TTh, Arch 25, Marston D, Allen D, 2 cr (Oct 31-Dec 5)

R 5240 Principles and Methods of Evaluation (§EdPA 5285)
031871 —1 1640-1940 T, NichH 109, Lawrenz F, 3 cr
038044 —2 0945-1100 TTh, ChDev 105, Garfield J, 3 cr

R 5246 Evaluation Colloquium (max 6 cr) (S-N only)
930678 1640-1840 Th, ChDev 218, King J, 1 cr (Sept 26, Oct 10, 24, Nov 7, Dec 5)

R 5260 Introductory Statistical Methods
339918 —1 0800-0955 MW, BuH 123, Terwilliger J, 4 cr
138639 —2 1010-1205 MW, EltH N647, Friedman L, 4 cr
840572 —3 1640-1820 TTh, ChDev 216, Hendrix V, 4 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5281 Introduction to Statistical Computing (S-N only)
039839 1430-1525 MTWThF, LindH 26, Hendrix V, 1 cr (Sept 30-Oct 11)

R 5400 Workshop: Counseling Psychology (max 12 cr)
033829 1535-1730 T, ComH, Rickgarn R, 2 cr (East Conf Rm)

R 5401 Counseling Procedures (A-F only)
232265 —1 1640-1910 M, BuH 125, 3 cr
137161 —2 1325-1555 Th, BuH 125, Erickson V L, 3 cr

R 5430 Foundations of Career Development
331849 1640-1910 T, BuH 125, Hansen L, 3 cr

R 5434 Counseling Adults in Transition
938344 1640-1910 W, BuH 125, Romano J, 3 cr

5600 Childhood Language Development: Classroom Implications (A-F only)
738748 1640-1930 T, ChDev 105, Turnure J, 3 cr

5601 Education of Exceptional Children (A-F only)
931331 1640-2030 M, NichH 109, 4 cr

5608 Parent and Professional Planning for Handicapped Students (A-F only)
229608 1640-1930 Th, BuH 120, 3 cr

R 5612 Education of Learning-Disabled Children (A-F only)
836070 1640-1930 T, NichH 122, Espin C, 3 cr

5622 Programs and Curricula for Learners with Moderate to Severe Disabilities
239670 1640-2030 T, BuH 120, 4 cr

5625 Education of Infants and Preschool Children with Developmental Disabilities (prereq 5601 or 5620 or PsyS 5101 or PsyS 5120 or #) (A-F only)
634921 1640-1930 W, PeikH 155, Rynders J, 3 cr

5640 Psychological, Social, and Educational Aspect of Deafness (A-F only)
134969 1640-1930 W, ScottH 4, 3 cr

5642 Classroom Communication Through ASL (max 6 cr; prereq educ or grad stu, fingerspelling skills and conversational sign skills, #)
139189 1640-1840 T, PeikH 225, Holte D, 2 cr

5643 Language for Deaf/Hard of Hearing Children (prereq 5640 or PsyS 5140) (A-F only)
939400 1325-1645 T, ElfH N647, Rose S, 4 cr

R 5656 Educational Needs of Students with Emotional Disturbances or Behavioral Disorders (A-F only)
030252 1640-1930 W, BuH 120, Wilderson F, 3 cr

R 5660 Supervision and Administration of Special Education (§EdPA 5103) (A-F only)
740354 1640-1910 M, NichH 122, Johnson D R, 3 cr

5680 Education of the Disadvantaged (prereq 12 cr in sociology, psychology, educational psychology) (A-F only)
223145 1640-1930 W, ChDev 105, Taborn J, 3 cr

R 5700 Assessment and Decision Making in Special Education (A-F only)
235473 1640-1930 Th, PtH 204, Deno S, 3 cr

R 5701 Practicum: Special Education (prereq #)
032826 ar cr

R 5704 Workshop: Interventions and Practices in Educational and Human Service Programs (S-N only)
738278 Abery B, ar cr

R 5710 Contemporary Services for Persons with Developmental Disabilities (A-F only)
329504 1640-1930 T, BuH 123, York Barr J, 3 cr

R 5751 Student Teaching: Deaf, Hard-of-Hearing (prereq #) (S-N only)
724493 Rose S, ar cr

R 5752 Student Teaching: Learning Disabled (prereq #) (S-N only)
524494 Espin C, ar cr

R 5753 Student Teaching: Early Childhood Special Education (prereq #) (S-N only)
324495 McEvoy M, ar cr

R 5754 Student Teaching: Emotional Behavioral Disorders (prereq #) (S-N only)
124496 Wilderson F, ar cr

R 5755 Student Teaching: Mild to Moderate Intellectual Disabilities (prereq #) (A-F only)
024497 Rynders J, ar cr

R 5756 Student Teaching: Moderate to Severe Disabilities (prereq #) (A-F only)
824498 Hupp S, ar cr

R 5757 Student Teaching: Physical and Health-Related Disabilities (prereq #) (S-N only)
624499 Knowlton M, ar cr

R 5758 Student Teaching: Visual Impairments (prereq #) (S-N only)
324500 Knowlton M, ar cr

R 5900 Independent Study (max 12 cr; prereq #) (A-F only)
238485 —1 ar cr (special ed maj only)
335495 —2 ar cr (counseling maj only)
938487 —3 ar cr (school psych maj only)
338509 —4 ar cr (psych foundations)
830592 —5 Weinsheimer J, ar cr

8129 Research Problems: Learning and Cognition (prereq #)
631260 Samuels S, Bart W, others, ar cr

8150 Psychology of Conflict Resolution (prereq 5150 or PsyF 5170 or equiv)
539920 1325-1555 M, PeikH 225, Johnson D, 3 cr

8169 Research Problems: Social Psychology (prereq #)
633509 Johnson D, Maruyama G, ar cr

8239 Problems: Measurement (max 9 cr)
930227 Davison M, Terwilliger J, 1-3 cr

8247 Internship: Evaluation (max 12 cr; prereq #)
134888 King J, 3 cr (hrs ar, BuH 210G)

8259 Problems: Evaluation (prereq 5243 or 8245 or PsyF 5621 or 8525)
235263 King J, ar cr

R 8260 Statistical Methods (prereq 5260 or PsyF 5110 or Psy 3801 or equiv)
038657 —1 1640-1755 MW, BuH 123, Hummel T, 3 cr
835405 —2 0905-0955 MWF, BuH 120, MacEachern D, 3 cr
632831 —3 0945-1100 TTh, BuH 125, Edwards L, 3 cr

R 8262 Statistical Methods (prereq 8261)
140844 0800-0850 MWF, BuH 120, MacEachern D, 3 cr

R 8263 Design and Analysis of Experiments (prereq 8262 or PsyF 8112 or #)
031420 0815-0930 TTh, BuH 125, Edwards L, 3 cr

8279 Problems: Statistics for Students in Education and Psychology
532000 MacEachern D, Davenport E, others, ar cr

R 8280 Statistical Computing Using SPSSX (prereq 8261 or equiv)
031076 1115-1230 TTh, LindH 26, Hendrix V, 3 cr

R 8402 Individual Counseling: Theory and Procedures (prereq CSPP MA or PhD stu or #) (A-F only)
937498 0815-0930 TTh, BuH 120, Romano J, 3 cr

R 8411 Seminar: Advanced Counseling Research (prereq PhD student, #) (A-F only)
632733 1010-1205 M, BuH 240, 1010-1205 F, BuH 125, Hummel T, 4 cr

8435 Integrative Seminar: School Counseling (max 9 cr; prereq CSPP stu in schl counselor licensure prog; not open to sr or MEd stu) (A-F only)
123146 1535-1800 W, BuH 240, 3 cr

R 8501 Counseling Pre-Practicum (A-F only)
430594 0905-1200 M, BuH 125, 3 cr

R 8502 Counseling Practicum I (8502-8503-8504†; prereq ¶8402, #) (A-F only)
139466 1010-1205 Th, BuH 123, 4 cr (addtl hrs ar at Practicum sites)

8509 Supervision Practicum (prereq 8450, CSPP doctoral student or #) (A-F only)
131215 0800-0940 Th, BuH 139C, 2 cr

8510 Internship: CSPP (max 9 cr for MA and spec stu, 18 cr for PhD stu) (A-F only)
039971 —1 1-6 cr
134373 —2 1-6 cr
630996 —3 Hansen L S, 1-6 cr

8513 Counseling Practicum: University Counseling Services (8513-8514-8515†; max 12 cr; prereq #) (S-N only)
139766 1430-1625 Th, EddyH 202, Levin J, Loper R, 4 cr

R 8520 Counseling Practicum: Advanced (max 9 cr; prereq CSPP doctoral student) (S-N only)
332077 —1 1430-1625 W, BuH 239, Skovholt T, 3 cr
031532 —2 1430-1625 Th, EddyH 202, Levin J, 3 cr

8620 Psychological Theory and Research in Mental Retardation (S-N only)
923147 1640-2030 W, ChDev 218, Turnure J, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
129500 1-18 cr

R 8701 Advanced Practicum (prereq #)
137077 ar cr

8702 Seminar: Special Education (prereq #)
629850 1325-1620 M, PtH 204, Deno S, 3 cr

8777 Thesis Credits: Masters
530084 1-16 cr

R 8810 Assessment Approaches in School Psychology I (A-F only)
033202 1325-1625 T, BuH 123, Spicuzza R, 3 cr

R 8813 Assessment Practicum in School Psychology (prereq school psy student or #, ¶8810, ¶8811, ¶8812) (A-F only)
138835 1535-1730 Th, BuH 123, Spicuzza R, 2 cr (prereq ¶8810) (school psych maj only)

R 8815 Program Development and Systems Consultation (prereq EPsy grad stu) (A-F only)
340177 0905-1205 W, PeikH 315, Christenson S, 3 cr

R 8818 Intervention Practicum in School Psychology (prereq school psy stu or #, ¶8815 or ¶8816 or ¶8817) (A-F only)
330202 0905-1100 M, ElfH 303, Casey A, 1 cr (school psych maj only)

8820 Seminar: Research in School Psychology (max 6 cr) (S-N only)
033698 1430-1630 W, BuH 123, McConnell S, 1 cr (school psych maj only)

R 8821 Seminar: School Psychology (A-F only)
432832 1430-1630 M, SmithH 121, Ysseldyke J, 2 cr

8831 Practicum: School Psychological Services (!; prereq EPsy maj with schl psych subprog or #)
335187 0815-0930 Th, ElfH 303, Casey A, 1-5 cr

8832 Clinical Practice in School Psychology (!; prereq 8810)
835601 0815-0930 Th, ElfH 303, Casey A, 1-5 cr

8840 Internship: School Psychological Services (!; prereq EPsy maj with schl psych subprog or #) (S-N only)
636684 —1 Casey A, 1-15 cr (PhD only)
740404 —2 Casey A, 1-15 cr (Spec only)

8841 Internship: Instruction and Supervision in School Psychology (prereq EPsy maj with schl psych subprog or #) (A-F only)
032311 Spicuzza R, 3 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
633476 1-36 cr

R 8900 Research Problems
633915 —1 ar cr (special ed maj only) (prereq #)
538945 —2 ar cr (counseling maj only) (prereq #)
029683 —3 ar cr (school psych maj only)
738216 —4 ar cr (psych foundations) (prereq #)

R 8910 Directed Study (prereq #)
036147 —1 ar cr (special ed maj only)
139936 —2 ar cr (counseling maj only)
437478 —3 ar cr (school psych maj only)
139340 —4 ar cr (psych foundations)

ELECTRICAL ENGINEERING (EE)
Institute of Technology

An IT computer fee is assessed at the time of registration for EE 5505, 5506, 5511, 5512, 5571, 5572, 5666, 5852, 5853, 5860, 5874, 8364, and 8451 (8451 spring quarter, Harjani, only). See page 27 for more information on this fee.

R 1000 Introduction to Electrical Engineering (prereq IT lower division or Δ) (S-N only)
534409 1535-1730 T, Phys 150, Holte J, 1 cr

R 1400 Circuits Laboratory (prereq 3009 or ¶3009, IT maj or pre-BAE maj)
235697 —1 LAB 1325-1520 M, EE/CSci 3160, Higman T, 1 cr
735199 —2 LAB 0800-0955 T, EE/CSci 3160, Higman T, 1 cr
240897 —3 LAB 1325-1520 W, EE/CSci 3160, Higman T, 1 cr
036682 —4 LAB 1325-1520 Th, EE/CSci 3160, Higman T, 1 cr

R 3005 Electronic Circuits and Systems (not for EE maj; prereq 3009) (A-F only)
636765 0800-0850 MTWF, EE/CSci 3230, Riaz M, 4 cr

R 3006 Circuits and Electronics Laboratory (prereq non-EE maj, IT stu, 3005 or ¶3005) (A-F only)
534894 —1 LAB 1010-1205 M, EE/CSci 3160, 1 cr
730925 —2 LAB 1010-1205 T, EE/CSci 3160, 1 cr
231987 —3 LAB 1325-1520 T, EE/CSci 3160, 1 cr
340471 —4 LAB 1010-1205 W, EE/CSci 3160, 1 cr

R 3009 Linear Circuits I (prereq IT stu or pre-BAE maj, Math 3261, Phys 1253) (A-F only)
★LECT 1010-1100 MF, MechE 108, 212, 1010-1100 TTh, MechE 212, 202, Lee T, 4 cr
931491 —1 REC 1325-1415 T, AkerH 225
031448 —2 REC 1430-1520 T, EE/CSci 2260
931166 —3 REC 1430-1520 T, EE/CSci 3210
932110 —4 REC 1220-1310 W, AkerH 313
232220 —5 REC 1325-1415 W, EE/CSci 3115

R 3010 Linear Circuits II (prereq IT stu, grade of C or better in 3009; Math 3261, Phys 1253 or ¶Phys 1253) (A-F only)
★LECT 1220-1310 TWThF, EE/CSci 3230, Teel A, 4 cr
931233 —1 REC 1325-1415 T, AmundH 162
238390 —2 REC 1430-1520 T, AkerH 211

R 3011 Signal Analysis (prereq 3010, upper division elec engr maj)
★LECT 0905-0955 MWThF, EE/CSci 3230, Buckley K, 4 cr
635132 —1 REC 1325-1415 M, EE/CSci 3115
640895 —2 REC 1430-1520 M, EE/CSci 2260
638502 —3 REC 1325-1415 T, AmundH 124, (IT special program only)

R 3060 Semiconductor Devices (prereq 3010 or ¶3010, Phys 1254, upper div IT stu)
★LECT 1325-1415 MTWF, EE/CSci 3230, Cohen P, 4 cr
737275 —1 REC 1430-1520 T, AkerH 225
339594 —2 REC 1430-1520 W, LindH 215

R 3061 Analog Electronics (prereq upper div IT, 3010, 3060, 3400 or ¶3400) (A-F only)
★LECT 1115-1205 MTWThF, EE/CSci 3230, Campbell S, 4 cr
623370 —1 REC 1325-1415 W, EE/CSci 2260
423371 —2 REC 1430-1520 W, EE/CSci 2260
223372 —3 REC 1325-1415 Th, AmundH 162
123373 —4 REC 1430-1520 Th, EE/CSci 3210

R 3111 Electromagnetic Waves (prereq 3110, upper division elec engr maj)
★LECT 1010-1100 MTWF, AmundH 120, Ruden P, 4 cr
937145 —1 REC 1115-1205 M, AmundH 162
837400 —2 REC 1430-1520 M, EE/CSci 3115

R 3351 Introduction to Logic Design (prereq IT soph or jr or sr) (A-F only)
★LECT 1430-1520 MWF, EE/CSci 3210, Dutt S, 4 cr
541070 —1 LAB 1535-1730 M, EE/CSci 2178
036004 —2 LAB 1535-1730 M, EE/CSci 2178
130940 —3 LAB 0800-0955 T, EE/CSci 2178
434130 —4 LAB 1325-1520 T, EE/CSci 2178
429574 —5 LAB 1325-1520 T, EE/CSci 2178
635213 —6 LAB 0800-0955 Th, EE/CSci 2178
432975 —7 LAB 0800-0955 Th, EE/CSci 2178
137211 —8 LAB 1535-1730 Th, EE/CSci 2178
735171 —9 LAB 1535-1730 Th, EE/CSci 2178
729340 —10 LAB 1535-1730 F, EE/CSci 2178
Registration in one of the following REC sections is also required:
637267 —1 REC 1535-1625 W, EE/CSci 3210
934357 —2 REC 1325-1415 Th, EE/CSci 3210
238311 —3 REC 1430-1520 Th, AkerH 211
732125 —4 REC 1325-1415 F, EE/CSci 3115

R 3400 Junior Electrical Engineering Laboratory (prereq EE maj, 1400, 3060 or ¶3060) (A-F only)
423354 —1 LAB 1430-1730 M, EE/CSci 3136, Higman T, 2 cr (IT special program only)
223355 —2 LAB 0800-1100 T, EE/CSci 3136, Higman T, 2 cr
123356 —3 LAB 1115-1415 T, EE/CSci 3136, Higman T, 2 cr
923357 —4 LAB 1430-1730 T, EE/CSci 3136, Higman T, 2 cr
723358 —5 LAB 1430-1730 W, EE/CSci 3136, Higman T, 2 cr
523359 —6 LAB 1430-1730 Th, EE/CSci 3136, Higman T, 2 cr

R 3402 Junior Electrical Engineering Laboratory (prereq 3401, 3062 or ¶3062) (A-F only)
923360 —1 LAB 0800-1100 Th, EE/CSci 3136, Higman T, 2 cr
823352 —2 LAB 1115-1415 Th, EE/CSci 3136, Higman T, 2 cr
623353 —3 LAB 1430-1730 F, EE/CSci 3136, Higman T, 2 cr

R 3470 Summer Engineering Employment (prereq completion of 2nd or 3rd yr work, declaration of intention before end of spr qtr, #)
137684 Champlin K, 1-3 cr

R 3471 Summer Engineering Employment (prereq 3470, #)
730956 Champlin K, 1-3 cr

R 3476 Industrial Assignment I (prereq regis in co-op program)
229852 Champlin K, 2 cr

R 3477 Industrial Assignment II (prereq 3476)
438341 Champlin K, 2 cr

R 5002 Digital Signal Processing (prereq upper division elec engr maj or grad IT maj, 3012 or #)
935685 1115-1205 MWF, EE/CSci 3115, Tewfik A, 3 cr

R 5055 Instrumentation and Control Electronics (prereq upper division elec engr maj or grad IT maj, 3012 or ¶, 3062 or #)
133465 0800-0850 MTWF, EE/CSci 3115, Robbins W, 4 cr

R 5056 Electronic Circuits Laboratory (prereq IT stu or grad IT maj, 3402 or ¶3402, ¶5055) (A-F only)
934570 —1 LAB 1325-1730 W, EE/CSci 3144, Robbins W, 1 cr (alt W)
539707 —2 LAB 0800-1205 Th, EE/CSci 3144, Robbins W, 1 cr (alt Th)

R 5202 Analog Communication (prereq upper division elec engr maj or grad IT maj, 3012, Stat 3091 or #)
138320 1010-1100 MWF, EE/CSci 3111, Thiede E, 3 cr

R 5240 Analog Communications Laboratory (prereq 3402 or ¶3402, ¶5202) (A-F only)
940367 Thiede E, 1 cr (EE/CSci 2164)

R 5300 Electromechanics (prereq upper division EE maj or grad IT, 3011, 3110)
134378 1220-1310 MTWF, EE/CSci 3210, Mohan N, 4 cr

R 5450 Senior Design Project (prereq elec engr sr, 3012, 3062, 3110, 3351, 3352, 3402; first-day attendance is mandatory)
837218 1430-1730 T, EE/CSci 3230, Bailey F, 2 cr

R 5470 Directed Study (prereq Δ)
530795 ar cr

R 5478 Industrial Assignment III (prereq 3477, regis in co-op program)
537228 Champlin K, 2 cr

R 5479 Industrial Assignment IV (prereq 5478)
229589 Champlin K, 2 cr

R 5490H Honors Project (prereq Δ)
533390 1325-1625 Th, EE/CSci 3230, Kaveh M, 3 cr

R 5505 Analog Integrated Circuit Design (prereq grad stu or #) (A-F only)
838563 —1 1010-1100 MWF, EE/CSci 3125, Harjani R, 3 cr

R 5511 Digital Filters and Signal Processing (prereq grad IT maj or #)
624308 —1 1115-1205 MWF, EE/CSci 3125, 3 cr

R 5560 Biomedical Instrumentation (prereq #)
041011 —1 LECT 0815-0930 TTh, EE/CSci 3125, Holte J, 4 cr
★LAB (lab ar)

R 5571 VLSI Design I (prereq grad standing in elec engr, computer science or physics or #)
734909 —1 1220-1310 MWF, MechE 108, Sobelman G, 3 cr

R 5604 Introduction to Microwave Engineering (prereq EE sr or grad IT maj, 3111 or equiv)
540372 —1 0905-0955 MWF, MechE 102, Champlin K, 3 cr

R 5625 Fourier Optics (prereq 3011, 3111 or #)
131948 —1 1535-1725 MW, MechE 102, Leger J, 4 cr

R 5661 Semiconductor Properties and Devices I (prereq EE sr or grad stu or adult special, 5650, 3111 or #)
123347 0815-0930 TTh, MechE 108, Nathan M, 3 cr

R 5666 Magnetic Properties of Materials and Applications (prereq #)
034205 —1 0945-1100 TTh, MechE 102, Judy J, 3 cr

R 5702 Stochastic Processes and Optimum Filtering (prereq Stat 3091, grad standing or #)
338235 0945-1100 TTh, EE/CSci 2260, 3 cr

R 5750 Topics in Linear Systems (prereq grad stu, Math 5242 or #)
938442 —1 1220-1310 MWF, MechE 102, Tannenbaum A, 3 cr

Symbols

R The letter R preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5805 Electric Power Systems Engineering (prereq IT sr or IT grad stu or IT adult spec, 3010, 5300, 5310, or #) (A-F only)
023348 1535-1705 MW, EE/CSci 2260, Wollenberg B, 3 cr

R 5814 Switched Mode Power Electronics (prereq 3061, 3402 or #, IT sr, IT adult special or grad IT maj)
840507 —1 0905-0955 MWF, EE/CSci 3125, Mohan N, 3 cr

R 5851 Applied Switching Theory (prereq 3351, 3352 or #)
733002 —1 0905-0955 MWF, MechE 108, Vinnakota B, 3 cr

R 5852 Computer Organization and Design I (prereq 3351, 3352, ¶5851)
935587 —1 1325-1415 MWF, MechE 212, O'Keefe M, 3 cr

R 5863 Computer Systems Performance Analysis (prereq IT grad or #, 5858)
723361 —1 1325-1520 MW, MechE 102, Lilja D, 4 cr

R 5952 Special Topics in Electrical Engineering (prereq IT grad or adult special or #)
832486 Lee G, 1-3 cr

5953 Special Topics in Electrical Engineering (prereq IT grad stu or adult spec or #)
124921 Zhu J, 1-3 cr

8090 Electronics Seminar (prereq #) (S-N only)
938439 1535-1700 T, EE/CSci 2260, Nathan M, Higman T, 1 cr

R 8110 Plasma Physics (prereq 5652, #)
823349 0945-1100 TTh, EE/CSci 3111, Ernie D, 3 cr

R 8160 Quantum Electronics (prereq 5630, #)
323363 1010-1100 MWF, EE/CSci 3115, Gopinath A, 3 cr

8190 Seminar: Quantum Electronics (prereq #) (S-N only)
933788 1430-1530 Th, EE/CSci 2260, Gopinath A, Leger J, ar cr

R 8192 Seminar: Magnetics (prereq #) (S-N only)
129660 —1 1325-1415 F, MechE 108, Judy J, ar cr

R 8250 Advanced Control Topics (prereq #)
123364 1115-1230 TTh, EE/CSci 2260, Lee E, 3 cr

R 8353 Sequential Circuit Theory (prereq #)
023365 —1 0815-0930 TTh, MechE 102, Kinney L, 3 cr

R 8362 Advanced Computer Architecture (prereq grad IT maj, 8355, 8356 or #) (A-F only)
134597 —1 1415-1530 TTh, MechE 212, Yew P, 3 cr

R 8370 Design of Intelligent Systems (prereq #)
623367 —1 1245-1400 TTh, EE/CSci 3125, Cherkassky V, 3 cr

8390 Computer Systems Seminar (prereq grad IT stu or #) (S-N only)
238986 Lilja D, 1 cr

R 8450 Special Investigations (prereq #)
341006 —1 1-4 cr

R 8451 Advanced Topics in Electrical Engineering (prereq #)
123350 Chou S, 3 cr

8460 Plan B Project (prereq EE grad maj) (A-F only)
229768 4 cr

8461 Plan B Project (prereq 8460, EE grad maj) (A-F only)
936321 2-4 cr

8490 Graduate Seminar (S-N only)
335237 1535-1705 Th, MechE 108, Vinnakota B, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
134485 1-18 cr

8777 Thesis Credits: Masters
232038 —1 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
040845 1-36 cr

ENDODONTICS (Endo)
Dentistry

5300 Advanced Clinical Endodontics (A-F only)
429848 0830-1200 TWThF, MoosT 8127, 1300-1630 MTWThF, MoosT 8150, ar cr

5304 Advanced Clinical Endodontics (A-F only)
938845 0830-1200 TWThF, MoosT 8127, 1300-1630 MTWThF, MoosT 8150, ar cr

5310 Advanced Endodontic Emergency (S-N only)
532160 0830-1200 MTWTh, MoosT 8127, 1300-1630 MTWTh, MoosT 8150, 1 cr

5314 Advanced Endodontic Emergency (S-N only)
939395 0830-1200 MTWTh, MoosT 8127, 1300-1630 MTWTh, MoosT 8150, 1 cr

5330 Review of Cases (S-N only)
131005 0900-1200 Th, MoosT 8160, 1 cr

5334 Review of Cases (S-N only)
938389 0900-1200 Th, MoosT 8160, 1 cr

5400 Advanced Endodontics for Postgraduate Dental Fellows (S-N only)
338722 1 cr

8001 Research in Endodontics
437822 ar cr

8005 Research in Endodontics
838224 ar cr

8310 Seminar: Endodontics (A-F only)
631341 0830-1200 W, MoosT 8160, 2 cr

8314 Seminar: Endodontics (A-F only)
035693 0830-1200 W, MoosT 8160, 2 cr

8320 Advanced Endodontic Lectures (A-F only)
834187 0830-1200 W, MoosT 8160, 1 cr

ENGLISH AS A SECOND LANGUAGE (ESL)
Liberal Arts

0201 Basic Grammar (prereq high schl graduate, non-native Engl speaker, see Minnesota English Center for override) (S-N only)

0206 Beginning Oral Skills (prereq high schl graduate, non-native Engl speaker with lower level proficiency in Engl; see Minnesota English Center for override) (S-N only)

0207 Basic Reading and Composition (prereq high schl graduate, non-native Engl speaker with lower level proficiency in Engl; see Minnesota English Center for override) (S-N only)

R 0211 Lower Intermediate Grammar (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

R 0216 Lower Intermediate Oral Skills (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

R 0217 Lower Intermediate Reading and Composition (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0221 Upper Intermediate Grammar (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0226 Upper Intermediate Oral Skills (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0227 Upper Intermediate Reading and Composition (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0231 Advanced Grammar (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0232 The Written Word (prereq non-native Engl speakers; see Minnesota English Center for override) (S-N only)

0233 Advanced Composition (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0234 Advanced Listening Comprehension (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0235 Advanced Speaking/Pronunciation (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0236 Advanced Oral Skills (prereq non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0237 Advanced Reading/Composition (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0241 Grammar through Writing (prereq non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0253 Listening and Speaking Through Film (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

8777 Thesis Credits: Masters
535950 1-16 cr

ENGLISH LANGUAGE AND LITERATURE (Engl)
Liberal Arts

R 1005 Introduction to Literature (Lit)
323556 1430-1520 MWF, LindH 229, 4 cr

R 1018 Introduction to Modern Fiction (Lit)
429493 0945-1100 TTh, Phys 131, Luke D, 4 cr

R 1020 Topics: Introduction to Literature: Introduction to Medieval Studies
123557 1430-1520 MWF, FordH 155, Kendall C, 4 cr

R 1241 Introduction to Shakespeare (Lit)
032891 1220-1310 MWF, MurH 308, Clayton T, 4 cr

R 1591 Literature of American Minorities (Lit; CD)
833928 1325-1415 MWF, LindH 217, 4 cr

R 1595 Introduction to "Third World" Literatures in English (Lit; IP)
★LECT 1010-1100 MW, NichH 45, Sugnet C
123566 —1 REC 1010-1100 F, LindH 203, 4 cr
923567 —2 REC 1010-1100 F, MurH 308, 4 cr
423578 —3 REC 1010-1100 F, FordH 115, 4 cr
623580 —4 REC 1010-1100 F, FordH 285, 4 cr

R 3008 Techniques of Literary Study (prereq pre-Engl or Engl maj or min only)
032664 —1 0800-0850 MWF, LindH 217, Brown R, 4 cr
130752 —2 1545-1700 TTh, LindH 217, Elfenbein A, 4 cr

R 3111 Survey of English Literature (prereq 46 or more credits) (Lit)
★LECT 0905-0955 MW, Phys 131, Wallace D, Watkins J
540517 —1 REC 0905-0955 F, FordH 115, 4 cr
135501 —2 REC 0905-0955 F, FordH 115, 4 cr
737129 —3 REC 0905-0955 F, LindH 305, 4 cr
937095 —4 REC 0905-0955 F, Arch 60, 4 cr

R 3241 Shakespeare (§3243) (Lit)
640900 —1 0905-0955 MWF, LindH 217, Griffin E, 4 cr
337151 —2 0905-0955 MWF, LindH 217, Griffin E, 4 cr (Engl maj/premaj only)
833413 —3 1545-1700 TTh, LindH 229, Lee, 4 cr
835582 —4 1545-1700 TTh, LindH 229, Lee, 4 cr (Engl maj/premaj only)

R 3242 Shakespeare (§3243) (Lit)
531946 —1 1325-1415 MWF, LindH 229, Clayton T, 4 cr
439635 —2 1325-1415 MWF, LindH 229, Clayton T, 4 cr (Engl maj/premaj only)

R 3242H Honors Course: Shakespeare (prereq honors reg or Δ)
140187 1115-1230 TTh, LindH 229, Leyasmeyer A, 4 cr

R 3390 Major British Writers (max 12 cr)
923553 0815-0930 TTh, LindH 217, Reed P, 4 cr

R 3411 Survey of American Literature to 1850 (prereq 46 or more cr or Δ) (Lit)
★LECT 1115-1205 MW, AkerH 225, Griffin E
223596 —1 REC 1115-1205 F, AkerH 225, 4 cr
123597 —2 REC 1115-1205 F, LindH 203, 4 cr

R 3455 American Short Story (Lit)
623661 0945-1100 TTh, LindH 217, Geffen A, 4 cr

R 3591 Introduction to Afro-American Literature (§Afro 3591) (Lit; CD)
231181 1115-1230 TTh, BlegH 235, Wright J, 4 cr

R 3651H Honors Course: Poetry (prereq honors registration or Δ) (Lit)
423662 1245-1400 TTh, LindH 229, Elfenbein A, 4 cr

R 3851 The English Language (§5851) (SSci)
835078 1220-1310 MWF, AkerH 225, Anson C, 4 cr

R 3853 Gender and the English Language (SSci; CD)
224506 1415-1530 TTh, LindH 215, Escure G, 4 cr

R 3910 Topics in English and North American Literature: American Folklore: The Folklore of Horror
223663 1245-1400 TTh, LindH 305, Stekert E, 4 cr

R 3940 Figures in English and North American Literature
223582 —1 1010-1100 MWF, LindH 217, Solotaroff R, 4 cr (Hemingway)
923584 —2 1325-1415 MWF, LindH 302, Solotaroff R, 4 cr (Saul Bellow)

R 3960 Junior-Senior Seminar (prereq Engl maj jr or sr, Comp 3011 or Comp 3012 or Comp 3013, Δ)
136289 —1 0905-0955 MWF, LindH 302, Messer-Davidow E, 4 cr (What You Do with Texts and What Texts Do with You)
123560 —2 1115-1230 TTh, LindH 302, Rabinowitz P, 4 cr (Bad Girls: Film Noir)
823559 —3 1415-1530 TTh, LindH 229, McNaron T, 4 cr (Marriage in the Life and Art of Virginia Woolf)

3970 Directed Studies (prereq #, Δ, ❑)
938943 1-15 cr

3980 Directed Instruction (prereq #, Δ, ❑)
137667 ar cr

R 5211 Old English (Anglo-Saxon) (prereq grad stu or Engl maj or Δ)
123664 1010-1205 MWF, LindH 302, Kendall C, 5 cr

R 5221 Chaucer (prereq grad stu or Engl undergrad maj or Δ)
923665 1220-1310 MWF, LindH 302, Wallace D, 5 cr

R 5471 American Drama (prereq grad stu or Engl maj or Δ)
723666 1245-1400 TTh, LindH 302, Geffen A, 4 cr

R 5481 Folklore (prereq grad stu or Engl undergrad maj or Δ)
439411 1545-1700 TTh, LindH 305, Stekert E, 4 cr

R 5711 Classics of Literary Criticism (§3711, ClCv 3711, ClCv 5711; prereq grad stu or Engl maj or Δ)
136969 1115-1205 MWF, LindH 229, Hancher M, 4 cr

R 5843 American Social Dialects (prereq grad stu or Engl maj or Δ)
523667 0945-1100 TTh, LindH 229, Escure G, 4 cr

R 5852 Modern Irish Language (prereq grad stu or Engl maj or Δ)
023561 0905-0955 MTWThF, FolH 214, Stenson N, 5 cr

R 5910 Topics in English and North American Literature: History of American and British Children's Literature (prereq grad stu or Engl maj or Δ)
823562 1820-2050 M, WaLib, Hoyle K, 4 cr

R 5940 Figures in English and North American Literature: O'Neill and Williams (prereq grad stu or Engl undergrad maj or Δ)
423564 1415-1530 TTh, LindH 302, Leyasmeyer A, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
234307 1-4 cr

R 8011 Introduction to Advanced Literary Study (S-N only)
131876 1220-1435 Th, LindH 202, Lee, 4 cr

R 8050 Studies in Special Subjects
329857 —1 1535-1750 TTh, LindH 202, Roth M, 4 cr (Chaplin and Hitchcock)
030302 —2 2 cr

R 8118 Proseminar in 19th-Century American Literature
723568 1535-1750 W, LindH 203, Ross D, 4 cr

R 8210 Seminar in Medieval Studies: The Pleasures of History
523569 1535-1750 W, WaLib 301, Fradenburg L, 4 cr

R 8230 Renaissance Studies: Elizabeth I and the Development of a Nationalist Myth
923570 1220-1435 M, LindH 202, Watkins J, 4 cr

R 8310 Seminar: Studies in the English Romantic Movement: Wordsworth's Preludes
523572 1220-1435 T, LindH 202, Luke D, 4 cr

R 8610 Studies in 20th-Century British and American Literature: The Fiction of Joseph Conrad
123574 1820-2050 T, LindH 202, Firchow P, 4 cr

R 8710 Studies in Criticism
529355 —1 1535-1750 M, LindH 202, Hancher C, 4 cr (Electronic Text)
823576 —2 1535-1750 T, LindH 315, Rabinowitz P, 4 cr
024953 —3 1535-1750 Th, LindH 202, Sprengnether M, 4 cr (Writers as Critics)

R 8810 Studies in the English Language: Gendered/Feminist Readings in Language, Rhetoric, and Literacy
736966 1820-2035 M, LindH 202, Bridwell-Bowles L, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
931457 1-36 cr

8970 Independent Reading (prereq #, Δ)
738958 —1 1-15 cr

ENGLISH: CREATIVE & PROFESSIONAL WRITING (EngW)

English Language and Literature
Liberal Arts

Students who want to register in those 5000-level courses with a Δ in the prereq statement must submit an application form, a letter of introduction to the instructor, and, in most cases, a 10-page manuscript to the Creative Writing Office, 209 Lind Hall by Friday, September 13, 1996. For more information call 625-6366.

R 1101 Introduction to Creative Writing (Lit)
★LECT 1430-1545 T, MurH 105
631159 —1 REC 1430-1625 Th, AkerH 309, 4 cr
132811 —2 REC 1430-1625 Th, FordH 160, 4 cr
829555 —3 REC 1430-1625 Th, FordH 120, 4 cr
633932 —4 REC 1430-1625 Th, AmundH 104, 4 cr (MLK students only)

R 1102 Introduction to Fiction Writing (§Engl 1101; prereq writing practice or 1101)
034978 1115-1230 TTh, LindH 217, 4 cr

R 1103 Introduction to Poetry Writing (§Engl 1104; prereq 1101 or equiv)
335965 1245-1400 TTh, LindH 217, 4 cr

R 3102 Intermediate Fiction Writing (prereq 1102)
923469 1415-1530 TTh, LindH 217, 4 cr

R 3960 Writing Workshop for Majors (prereq Comp 3xxx, 3102 or 3103, Engl maj, jr or sr, Δ)
131280 1615-1815 T, LindH 216, Sprengnether M, 4 cr

R 5105 Advanced Poetry Writing (prereq Δ)
224585 1615-1845 M, LindH 217, Browne M, 4 cr

R 5120 Topics in Advanced Poetry Writing: Contemporary American Poetry (prereq Δ)
131514 1615-1845 Th, LindH 216, Browne M, 4 cr

R 5210 Topics in Advanced Literary Nonfiction (prereq Δ)
124586 1615-1845 W, LindH 216, Sugnet C, 4 cr

R 5310 Reading as Writers: Long Stories and Novellas (prereq Δ)
436489 1615-1845 W, LindH 217, Fitzgerald M, 4 cr

5970 Directed Study in Writing (prereq #, Δ, CLA approval)
637298 1-4 cr

R 8101 Reading Across Genres (prereq Creative Writing MFA stu, Δ)
539190 1430-1700 F, LindH 202, Fitzgerald M, 4 cr

R 8120 Writing of Poetry: Poetry Seminar: Trauma, Play, and Experiment (prereq Δ)
923472 1615-1845 T, LindH 215, Damon M, 4 cr

R 8160 Literary Nonfiction: Manuscript Preparation (prereq 8130, Creative Writing MFA candidate, Δ)
723473 1615-1845 M, LindH 211, Hampl P, 4 cr

8990 Creative Project Credits: MFA (prereq 8140 or 8150 or 8160, Creative Writing MFA candidate, #)
329390 1-16 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

ENTOMOLOGY (Ent)
Agricultural, Food, and Environmental Sciences

R 1005 Economic Entomology (prereq Biol 1009 or #) (Biol/L; Envt) (A-F only)
★LECT 1010-1100 MWF, HodsonH 495, Ragsdale D
737762 —1 LAB 1535-1730 M, HodsonH 485, 4 cr
430160 —2 LAB 1115-1310 T, HodsonH 485, 4 cr
431387 —3 LAB 1535-1730 W, HodsonH 485, 4 cr

5020 Insect Taxonomy (prereq 3005 or equiv) (A-F only)
★LECT 1220-1310 MWF, HodsonH 485, 5 cr
536581 —1 LAB 1325-1430 MWF, HodsonH 485, Holzenthal R

5040 Insect Ecology (prereq Biol 5041 or EBB 5122 or #)
623482 0800-0920 WF, HodsonH 219A, Andow D, 4 cr

5275 Medical Entomology (prereq...3005 rec) (A-F only)
223484 0945-1100 TTh, HodsonH 485, Fallon A, Kurtti T, others, 3 cr

5320 Ecology of Agriculture (prereq 3000-level biol or env studies crse or equiv or #) (Envt) (A-F only)
638600 1245-1400 TTh, HodsonH 490, Andow D, 4 cr

5900 Basic Entomology (prereq #)
536242 ar cr

5910 Special Problems in Entomology (prereq #)
140942 —1 ar cr
729760 —2 1535-1645 W, HodsonH 224, Fallon A, 1 cr (Introduction to Molecular Entomology) (S-N only)

5920 Special Lectures in Entomology
530442 ar cr

8230 Colloquium in Insect Physiology (prereq #)
229642 Kurtti T, Mesce K, ar cr

8300 Graduate Seminar (prereq #) (S-N only)
929451 1430-1530 Th, HodsonH 490, Ragsdale D, 1 cr

8500 Research in Entomology (prereq #) (S-N only)
930969 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
838370 1-18 cr

8777 Thesis Credits: Masters
636099 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
131652 1-36 cr

ENTREPRENEURSHIP (Entr)
Management

R 8082 Entrepreneurship (prereq MBA core courses) (A-F only)
035158 1535-1720 MW, BlegH 435, Cardozo R, 4 cr

ENVIRONMENTAL SCIENCE (ES)
Soil, Water, and Climate
Agricultural, Food, and Environmental Sciences

1001 Orientation to Environmental Science (S-N only)
136860 1640-1730 M, BorH 375, Cooper T, 1 cr

3050 Field or Work Experience in Environmental Science (A-F only)
039047 Underwood J, 1-4 cr

FAMILY EDUCATION (FE)
Work, Community, and Family Education
Education and Human Development

R 5320 Adult Education in Family Education (§HEEd 5320) (A-F only)
736028 1600-1830 M, VoTech R380, Rossmann M, 3 cr

R 5411 Challenges in Sexuality Education (prereq 5407, FSoS 5001 or #) (A-F only)
622879 1600-1930 Th, VoTech R380, 4 cr

R 5511 Family Education Instruction in Secondary Schools (§HEEd 5511) (A-F only)
339661 0905-1135 TTh, VoTech R380, McClelland J, 5 cr

5900 Independent Study in Family Education (max 12 cr; §HEEd 5900; prereq #)
134946 1-3 cr

8900 Problems: Family Education (§HEEd 8900)
638452 1-9 cr

FAMILY PRACTICE AND COMMUNITY HEALTH (FPCH)
Medical School

5137 Leadership in Family Medicine (prereq G-2 or G-3 resident)
838580 Crosby B, ar cr

5138 Community Medicine Workshop (prereq G-2 or G-3 resident)
141069 Lindblom M, Yeazel M, ar cr

5139 Colposcopy (prereq G-2 or G-3 resident)
232377 Fontaine P, ar cr

5500 Preceptorship in Clinical Family Practice (prereq regis med)
838899 Seim H, ar cr

5501 Rural Physician Associate Program (†5501; prereq completion of 8 academic quarters of medical school)
339482 Swentko W, 0-18 cr

5505 Problem-Focused Interactive Learning (prereq medicine, pediatrics, surgery and neurology)
231259 Seim H, 4.5 cr

5516 Research in Human Sexuality (prereq #)
735610 Coleman E, others, ar cr

5519 Clinical Practice of Occupational Medicine (prereq 4th yr med stu) (S-N only)
322858 Seim H, ar cr

5520 Rural Rotation in Family Practice (prereq regis med)
635664 Seim H, 4.5-9 cr

5521 Clinical Practice Preceptorship: Kenai, Alaska (prereq regis med) (S-N only)
834884 Hansen, 9 cr

5525 Cardiovascular Medicine in the Community Hospital (prereq regis med)
130100 Current D, Gjerdingen D, ar cr

5530 Clinical Problems in Family Practice (prereq regis med)
731007 Idrogo M, 9 cr

5533 Traditional Indian Medicine (prereq 3rd or 4th yr med stu)
231066 Hill G, ar cr

5535 Community Health in Family Practice (prereq minimum of two 6-week rotations from the following: Med, Ped, Obst or Surg)
031059 4.5-9 cr

5537 Primary Care Sports Medicine (prereq 3rd or 4th yr regis med stu) (S-N only)
834920 Johnson R, 4.5-9 cr

5538 Sports Medicine in Duluth (prereq 3rd or 4th yr med stu)
122859 Webb D, 6 cr

5540 Ambulatory HMO Rotation/Family Practice (prereq minimum of two 6-week rotations from the following: med, pediatrics, OB/Gyn or surg)
932785 Keenan J, others, 4.5-9 cr

5545 Family Practice in a Community Clinic (prereq minimum of two 6-week rotations from the following: Med, Ped, Obst or Surg)
736482 Richardson B, Raines, 9 cr

5550 Ambulatory Care Rotation/Family Practice (prereq minimum of two 6-week rotations from the following: med, peds, OB/Gyn or surgery)
635423 Seim H, others, 9 cr

5560 Alcohol and Drug Addiction Treatment Center (prereq regis med)
137359 Briggs T, Current D, 4.5 cr

5563 Clinical Neuropsychopharmacology (prereq FPCH resident or #)
239250 2 cr

5564 Family Practice Seminar (prereq med stu) (S-N only)
931779 1-3 cr

5569 Obstetrics in Family Practice (prereq 3rd or 4th yr med stu) (S-N only)
522860 Seim H, ar cr

5570 Practicum in Counseling Techniques (prereq compl of 1st yr residency)
636197 1 cr

5580 Community Emergency Medicine
233819 Seim H, ar cr

5585 Sexual Problems in Clinical Practice (prereq med student, #)
739978 Coleman E, others, ar cr

5595 Research in Family Practice: Independent Study
540369 Seim H, ar cr

5599 Undergraduate Independent Study
639293 Seim H, ar cr

5650 Principles of Geriatrics
139824 0800-1000 T, PWB 6210, Pacala J, 1 cr

5653 Future Health Interventions for Older Populations (prereq candidate for or recipient of grad deg in a hlth sci)
124880 1415-1615 W, Boult C, Pacala J, 2 cr

5843 Disease Prevention and Health Promotion - An Appraisal of Goals and Techniques in Family Practice (prereq M.D.)
938165 2 cr

5903 Community Health Rotation (prereq #)
337148 Ciriacy E W, ar cr

5955 Directed Study (prereq #)
237059 Coleman E, 1-15 cr

5960 Basic Research Methods Seminar and Practicum
941082 Kelly J, 4 cr

5962 Clinical Hypnosis Workshop (prereq #)
331642 Houge D, others, ar cr

5964 Health Care Delivery Systems (prereq 1st yr family practice residency)
041025 ar cr (Smiley's Point Clinic)

5968 Computers in Theory and Practice
431891 Gepner G, ar cr

5969 Independent Study
940496 ar cr

8201 Clinical Family Medicine
035211 Ciriacy E W, others, ar cr

8202 Families in Loss, Grief: Recovery Resources
636121 2 cr (Methodist Hosp)

8207 Seminar: Common Diseases Seen in Family Practice
131165 Seim H, 1 cr

8208 Family Medicine Conferences
129469 Seim H, 1 cr

8209 Family Medicine X-Ray Conference
839647 Ciriacy E W, 1 cr

8210 Family Medicine Grand Rounds
329776 1220-1310 W, MoosT 2690, Ciriacy E W, others, 0-1 cr (3rd W per month)

8212 Clinical Psychiatry Rounds (prereq 1st yr resident in family practice)
033961 Kelly J, 1 cr

8217 Seminar in Counseling (prereq 5567, 8212 or #)
533938 2 cr

8225 Medical Sociology
037704 Kelly J, 3 cr

8226 Seminar: Medical Sociology
336498 2 cr

8228 Seminar: Interdisciplinary Health (prereq #)
329664 Kelly J, 2 cr

8243 Family Medicine in Rural Area
538573 Hunt, ar cr

8250 Quantitative Strategies in Health Care Practice and Research II (prereq 8204)
134414 Weckwerth, 2 cr

8253 Research Problems
038240 O'Leary J, ar cr

FAMILY SOCIAL SCIENCE (FSoS)
Human Ecology

R 1001 Introduction to Family Relationships
434905 1700-1840 TTh, McNH 198, Tornatore J, 4 cr

3231 Planning for Education and Career (prereq declared maj in FSoS)
438212 1220-1400 W, McNH 33, Goodman W, 2 cr

R 3260 Family Resource Management (prereq intro course in econ, psy, soc, cult anth, pol sci recommended)
236879 —1 1430-1610 MW, McNH 198, Mangum K, 4 cr
124703 —2 4 cr

R 3600 Family Issues Across the Lifespan (prereq intro course in psy, soc) (A-F only)
135319 1325-1535 TTh, McNH 33, Detzner D, 5 cr

R 5001 Human Sexual Behavior (prereq 90 cr, 3600 or grad stu in social, behavioral, educational, health science, human service program, or #)
223808 1545-1755 TTh, GrnH 110, Maddock J, 5 cr

R 5025 Parenting (prereq 5200 or 5202)
723814 1640-2000 W, VoTech R280, Rossman M, 4 cr

5200 Family Systems (prereq intro course in psy, soc)
337828 0815-1025 TTh, McNH 33, 5 cr

5206 Undergraduate Research Internship (max 15 cr; prereq 5205, #)
137068 3-6 cr

R 5210 Family in World Perspective (prereq 3600 or 5200, intro cult anth course or #)
137832 1325-1505 MW, BorH 335, 4 cr

5230 Independent Study in Family Social Science (max 16 cr)
233979 —1 1-5 cr

R 5240 Special Topics in Family Social Science: Family Stress (max 16 cr; prereq sr or #)
123812 1325-1505 TTh, McNH 146, Boss P, 4 cr

R 5249 Fieldwork: Directed Community Work Experience (max 15 cr; prereq 3231, FSoS or human relationships maj, #) (S-N only)
536063 1010-1150 W, McNH 197, Goodman W, 5-15 cr

R 5260 Dynamics of Family Decision Making (prereq 3260 or #)
123809 0800-0940 MW, McNH 198, Rettig K, 4 cr

R 8217 Clinical Interventions for Sexual Problems (prereq grad in human service or health science prog, 5001 or #)
423810 1010-1240 Th, McNH 375, Maddock J, 3 cr

8222 Internship in Teaching College Level Family Courses II (prereq 8221, #) (S-N only)
029554 2 cr

8223 Internship in Teaching College Level Family Courses III (prereq 8222, #) (S-N only)
437643 2 cr

8230 Directed Study in Family Social Science (prereq #)
135345 1-7 cr

8231 Seminar: Gender Roles
124594 0905-1135 W, McNH 375, Doherty D, 3 cr

8255 Conceptual Frameworks in the Family (prereq 5200 or equiv, #) (A-F only)
535544 0945-1125 TTh, McNH 146, Doherty D, 4 cr

8261 Process Seminar for Family I (prereq #) (S-N only)
838885 0905-1045 F, McNH 375, 2 cr

R 8266 Family Research Methodology I (prereq 8255) (A-F only)
223811 1430-1610 MW, McNH 375, Olson D, 4 cr

8270 Practicum in Family Research (prereq #) (S-N only)
938649 —1 1-5 cr
641044 —2 Grotevant H, 1-5 cr (Adoptive Family Relationships)
836537 —3 Rosenblatt P, 1-5 cr (Qualitative Family Research)
330152 —4 Stum M, 1-5 cr (Decision Making in Aging Families)
039632 —5 Zimmerman S, 1-5 cr (Family Policy)
838790 —6 Hogan M, 1-5 cr (Family-Child Ecology)
534345 —7 Danes S, 1-5 cr (Family Business Issues)
739821 —8 Maddock J, 1-5 cr ((Power/Control in Close Relationship)
236784 —9 Maddock J, 1-5 cr (Sexual Meaning Survey)
924282 —10 Boss P, 1-5 cr (Ambiguous Loss)
939851 —11 Rettig K, 1-5 cr (Consequences of Divorce Decisions)
832357 —12 Bauer J, 1-5 cr (Family Economic Well-Being)
338624 —13 Detzner D, 1-5 cr (Aging Families in Crisis)
340194 —14 Doherty D, 1-5 cr (Families and Health)
238065 —15 Olson D, 1-5 cr (Healthy and Problem Families)
923813 —16 Maddock J, 1-5 cr (Child and Family Sexual Abuse)

8551 Internship in Marital and Family Therapy I (8551-8552-8553†; prereq 8214, 8215, #) (S-N only)
033801 Doherty D, 1-7 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
331981 1-18 cr

8777 Thesis Credits: Masters
932074 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
229897 1-36 cr

FINANCE (BFin)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3000 Finance Fundamentals (prereq Acct 1050) (A-F only)
935069 —1 1115-1245 MW, BlegH 145, 4 cr
633395 —2 1430-1600 MW, BlegH 145, 4 cr
239880 —3 0825-0955 TTh, BlegH 150, 4 cr

R 3200 Financial Markets and Interest Rates (prereq 3000 or #) (A-F only)
134406 1430-1600 MW, BlegH 415, 4 cr

R 3300 Securities Analysis and Portfolio Management (§8300; prereq 3000) (A-F only)
734991 1220-1350 MW, BlegH 125, 4 cr

R 3500 Advanced Corporate Finance (prereq 3000, 3100 or #) (A-F only)
730472 1010-1140 TTh, BlegH 255, 4 cr

R 3601 Financial Management of Depository Institutions (prereq 3000 or #) (A-F only)
336324 1730-2000 Th, HHHCtr 30, 4 cr

R 8150 Theory of Finance (prereq MBA 8040 or #, grad mgmt/IR student or grad SMgt approval) (A-F only)
636748 1010-1155 TTh, BlegH 420, 4 cr

R 8200 Financial Markets and Interest Rates (prereq MBA 8040 or #, grad mgmt student or grad SMgt approval)
636085 1325-1510 MW, BlegH 255, 4 cr

R 8601 Corporate Investment and Financial Strategy (prereq 8150 or #, grad mgmt student or grad SMgt approval) (A-F only)
823724 1730-2100 Th, BlegH 255, 4 cr

R 8602 Financial Management of Financial Institutions (prereq 8150 or #, grad mgmt stu or grad SMgt approval) (A-F only)
840703 1730-2100 W, BlegH 255, 4 cr

R 8801 Introduction to Finance (prereq Math 1261 or equiv, Math 3251 or equiv or ¶Math 3251, Math 3261 or equiv or ¶Math 3261, Econ 8101 or ¶Econ 8101 or #, PhD stu) (A-F only)
636202 1325-1455 MW, BlegH 260, 4 cr

8850 Independent Study in Finance (prereq #, grad mgmt student or grad SMgt approval)
435360 1-4 cr

8900 Directed Research in Finance (max 24 cr; prereq PhD stu in finance, completion of coursework for PhD degree) (S-N only)
137605 ar cr

FINNISH (Fin)
German, Scandinavian, and Dutch Liberal Arts

R 1101 Beginning Finnish
837462 —1 1115-1240 MWF, AmundH 158, Sinks T, 5 cr
123672 —2 1535-1700 MWF, FolH 214, 5 cr

R 1104 Intermediate Finnish (prereq 1103 or equiv)
632344 1325-1450 MWF, AmundH 116, Sinks T, 5 cr

R 3670 Readings: Finnish Texts (max 28 cr; prereq 1106 or equiv)
023673 4 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

FISHERIES AND WILDLIFE (FW)

Natural Resources

1001 Orientation in Fisheries and Wildlife (A-F only)
532952 0905-0955 T, HodsonH 495, Adelman I, 1 cr

3052 Introduction to Fisheries and Wildlife Conservation (Envt)
023317 1010-1100 MWF, ClaOff B45, Adelman I, 3 cr

R 3054 Biological Conservation: An Ecosystem Approach (prereq ecology crse) (A-F only)
123316 1010-1100 MWF, ClaOff B35, Cuthbert F, 3 cr

R 5129 Mammalogy (§EEB 5129; prereq Biol 1106 or Biol 3011 or #)
★LECT 0905-0955 MWF, HodsonH 495, Birney E, 5 cr
129312 —1 LAB 0800-1100 T, Ecology 160, Birney E
339112 —2 LAB 1010-1310 W, Ecology 160, Birney E

R 5393 Special Problems: Fisheries Biology (prereq #)
530229 —1 Adelman I, ar cr
331351 —2 Cooper J, ar cr
536922 —3 Kapuscinski A, ar cr
634756 —4 Newman R, ar cr
332581 —5 Sorensen P, ar cr
730522 —6 Spangler G, ar cr
240141 —7 Vondracek B, ar cr

R 5398 Special Problems: Wildlife Biology (prereq #)
432958 —1 Cooper J, ar cr
738006 —2 Cuthbert F, ar cr
530523 —3 Jordan P, ar cr
140142 —4 Kitts J, ar cr
538007 —5 Smith J, ar cr
835839 —6 Sorensen P, ar cr

5459 Fish Physiology (prereq EEB 5136 or EEB 5156 or AnSc 3301 or #)
★LECT 1010-1100 MWF, HodsonH 490, Sorensen P, 4 cr
738796 —1 REC 1115-1205 F, HodsonH 490

R 5603 Wildlife Habitats and Management (prereq 3052 or 3054 or graduate in biol or nat res or #, NRES 1020 or comput competency) (A-F only)
★LECT 1245-1400 TTh, ClaOff B35, Jordan P, 3 cr
438632 —1 LAB 1430-1600 T, KaufL 302

R 5620 Geographical Information Systems (GIS) for Fisheries, Wildlife and Biological Conservation (prereq Biol 5041)
★LECT 0905-1005 T, NatResAd 35, Cohen Y, 4 cr
139573 —1 LAB 0905-1205 Th, NatResAd 35

5701 Senior Project (5701-5702†; prereq FW senior or graduate student or #) (A-F only)
234260 1430-1520 W, KaufL 302, Cooper J, 1 cr

8200 Seminar (S-N only)
533566 1 cr

8364 Research in Fisheries Biology (prereq fisheries grad) (S-N only)
132008 ar cr

8377 Research in Wildlife Biology (prereq wildlife grad) (S-N only)
835307 ar cr

8452 Conservation Biology: Genetic and Demographic Issues (prereq #) (A-F only)
833072 1115-1240 TTh, HodsonH 490, Kapuscinski A, 3 cr

R 8459 Stream and River Ecology (prereq EEB 5601 or equiv or #)
★LECT 0815-0930 T, HodsonH 490, Newman R
323315 —1 LAB 0815-1100 Th, HodsonH 490, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
434242 1-18 cr

8777 Thesis Credits: Masters
337845 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
039713 1-36 cr

FLUID MECHANICS (FlMe)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
635633 1-18 cr

8777 Thesis Credits: Masters
931250 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
634269 1-36 cr

FOOD SCIENCE AND NUTRITION (FScN)

Agricultural, Food, and Environmental Sciences & Human Ecology

R 1020 Introductory Microbiology (Biol/L)
★LECT 1325-1415 MWF, FScN 15, O'Sullivan D
234372 —1 LAB 1325-1520 T, FScN 218, 4 cr
640976 —2 LAB 1325-1520 Th, FScN 218, 4 cr

1102 Food: Safety, Risks, and Technology (C/PE)
533471 1010-1205 TTh, ABLMS 125, Labuza T, 4 cr

R 1612 Principles of Nutrition (prereq high school chemistry and biology) (Biol/NL)
★LECT 1545-1700 TTh, MoosT 2650, Kurzer M, (Mpls)
937534 —1 REC 1745-1835 M, Arch 45, 4 cr (Mpls)
431731 —2 REC 1430-1520 T, AkerH 215, 4 cr (Mpls)
136379 —3 REC 1745-1835 T, Arch 15, 4 cr (Mpls)
740662 —4 REC 1745-1835 T, Arch 45, 4 cr (Mpls)
823237 —5 REC 1430-1520 Th, AkerH 215, 4 cr (Mpls)
623238 —6 REC 1430-1520 Th, AkerH 225, 4 cr (Mpls)
138844 —7 REC 1745-1835 Th, Arch 15, 4 cr (Mpls)
138150 —8 REC 1745-1835 Th, Arch 45, 4 cr (Mpls)

R 3102 Introduction to Food Science (prereq Chem 1002 or Chem 1052)
★LECT 0800-0850 MWF, McNH 33, Vickers Z
635440 —1 LAB 0800-0955 TTh, McNH 126, 134, 4 cr
731900 —2 LAB 1220-1415 TTh, McNH 126, 134, 4 cr
834030 —3 LAB 1430-1625 TTh, McNH 126, 4 cr

R 3472 Food Selection Principles (prereq 4 cr in food sci) (SSci)
133084 1115-1205 MTWTh, ClaOff B45, Asp E, 4 cr

3610 Community Nutrition (prereq 1612, 5 credits in anthropology or psychology or sociology) (CD)
332614 1535-1655 MW, McNH 33, Keenan D, 3 cr

3662 Introduction to the Clinical Practice of Dietetics (prereq 12 cr in food science, nutrition, regis in coordinated prog in dietetics)
440669 0905-1100 W, ABLMS 222, Hanson M, Hutchins A, 2 cr

R 5100 General Seminar (prereq sr or #) (A-F only)
924184 —1 1220-1310 W, ABLMS 222, 1 cr
824596 —2 1220-1310 T, ABLMS 222, 1 cr

5111 Independent Study in Food Science and Nutrition (prereq Δ)
437660 1-5 cr

5135 Food Engineering Unit Operations (prereq 1102 or ¶, Math 1142, Phys 1042, 1046)
★LECT 0800-0905 MWF, FScN 15, Bhattacharya M
729726 —1 REC 1430-1625 W, ABLMS 125, 5 cr

R 5312 Instrumental Analysis of Foods (prereq 3112, 5110)
★LECT 0800-0850 TTh, FScN 15, Reineccius G
030977 —1 LAB 1325-1520 T, FScN 111, 3 cr
323251 —2 LAB 0905-1105 F, ABLMS 135, 3 cr
123252 —3 LAB 1115-1315 F, ABLMS 135, Reineccius G, 3 cr

5562 Flavor Technology (prereq 1102, 5110)
523250 0800-0850 MWF, FScN 23, Reineccius G, 4 cr

5620 Nutrition and Metabolism (prereq 3612 or #, Biol 5001 or BioC 3031)
135305 0905-1045 MW, 0905-0955 F, ABLMS 125, Brady L, 5 cr

5643 World Food Problems (§AgEc 5790, Agro 5200, CAPS 5280; prereq sr or grad student) (IP)
134963 1800-2100 W, ClaOff B35, Brady L, Schafer, 3 cr

R 5664 Field Experience in Clinical Nutrition (prereq course in human nutrition, #)
★LECT 1010-1205 F, ABLMS 222, Hanson M, Hutchins A, (CUP students only)
632358 —1 LAB 1300-1700 ThF, Hanson M, Hutchins A, 3 cr (off-campus) (CUP students only)
★LECT 1115-1245 W, ABLMS 222, Hanson M, Hutchins A
534426 —2 LAB 0800-1700 W, Hanson M, Hutchins A, 3 cr (off-campus)

5665 Applied Medical Nutrition Therapy I (prereq Biol 5001, Phsl 3051 or Phsl 1002, LaMP 5177 or ¶LaMP 5177)
429915 1700-1930 Th, ABLMS 125, Hanson M, 3 cr

8101 Research Seminar (prereq #) (S-N only)
437206 1100-1200 Th, FScN 23, Slavin J, 1 cr

8205 General Seminar (prereq #) (S-N only)
230998 1600-1700 M, FScN 15, Addis P, 1 cr

8401 Independent Study: Food Science (prereq Δ)
233948 1-5 cr

R 8621 Independent Study: Nutrition (prereq #)
740791 —1 1-9 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
533454 1-18 cr

R 8777 Thesis Credits: Masters
837588 —1 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
333164 1-36 cr

FOREIGN STUDIES MANAGEMENT (FSMg)

Management

3460 Institute of European Studies Program in Vienna, Austria (prereq ⊥)
829457 1-54 cr

3490 Institute of European Studies Program at the University of Singapore (prereq ⊥)
239927 1-45 cr

3590 Institute of European Studies International Business Management Program in Dijon (prereq ⊥)
233223 1-24 cr

3620 Council on International Educational Exchange Japanese Business and Society Program (prereq ⊥)
440929 1-24 cr

3680 Council on International Educational Exchange Business and Society Program in Seville, Spain (prereq ⊥)
639472 1-26 cr

3820 Denmark's International Business Studies Program in Copenhagen (prereq ⊥)
236672 1-36 cr

FOREST PRODUCTS (ForP)

Natural Resources

1001 Forest Products Orientation (S-N only)
729600 1430-1530 T, AlderH 415, Bell J, 1 cr

R 1301 Wood as a Raw Material
★LECT 1220-1310 MWF, KaufL 302, Bowyer J
129805 —1 LAB 1220-1415 T, KaufL 65, 4 cr
329793 —2 LAB 1325-1520 Th, KaufL 65, 4 cr

R 3301 Industrial Internship (!; prereq forest products cooperative educ stu) (A-F only)
137189 —1 Bowyer J, 2 cr
532577 —2 Massey J, 2 cr
830513 —3 Ramaswamy S, 2 cr
023379 —4 Seavey R, 2 cr
123378 —5 Tschirner U, 2 cr

R 3325 Directed Study Experience (prereq #)
237806 —1 Bowyer J, 1-5 cr
640136 —2 Gertjejansen R, 1-5 cr
638001 —3 Petersen H, 1-5 cr
535835 —4 Seavey R, 1-5 cr
440137 —5 Steklenski P, 1-5 cr

5300 Wood-Fluid Relationships (prereq 1301)
132218 1325-1440 MW, KaufL 125, Larson T, 3 cr

5301 Mechanical Properties (prereq 1301 or #)
036021 1445-1600 MW, KaufL 125, Larson T, 3 cr

5302 Wood Chemistry I (prereq Chem 3302)
140584 0905-1015 TTh, KaufL 125, Sarkanen S, 3 cr

5305 Pulp and Paper Technology (prereq 5300 or #)
137810 1010-1100 TTh, KaufL 302, 2 cr

5311 Pulp and Paper Process Engineering Calculations I (recommended prereq ME 3301, CE 3400, ChEn 5001, CSci 3101 or AgET 3030)
★LECT 1010-1100 MWF, KaufL 125
833993 —1 REC 1115-1205 M, KaufL 125, 4 cr

5318 Pulp and Paper Process Dynamics and Control (prereq 5305, 5310, 5311-5312, 5315, CE 3400, ME 3301, ¶ME 5342, or #)
840457 1325-1415 MWF, KaufL 302, 3 cr

5359 Surface and Colloid Chemistry of Papermaking (prereq 5361, Chem 3302, Chem 5520 or #)
130968 1245-1400 TTh, KaufL 302, Muvundamina M, 3 cr

R 5401 Senior Topics (prereq sr, #)
433902 —1 Bowyer J, ar cr
438002 —2 Larson T, ar cr
335836 —3 Massey J, ar cr
633655 —4 Ramaswamy S, ar cr
630514 —5 Schmidt E, ar cr
929210 —6 Seavey R, ar cr
032504 —7 Tschirner U, ar cr

R 8300 Research Problems
239622 —1 Bowyer J, ar cr
329308 —2 Gertjejansen R, ar cr
339109 —3 Larson T, ar cr
736918 —4 Massey J, ar cr
334752 —5 Schmidt E, ar cr
224652 —6 Seavey R, ar cr

8301 Research Problems
133814 ar cr

8302 Research Problems
236235 ar cr

FOREST RESOURCES (FR)
Natural Resources

R 1001 Forest Resources Orientation (A-F only)
539917 1430-1530 W, GrnH 110, Splett P, Ek A, 1 cr

R 1100 Dendrology (prereq Biol 1103)
★LECT 1430-1520 TTh, BorH 335, Mohn C
435388 —1 LAB 1325-1625 M, GrnH 19, 4 cr
730858 —2 LAB 1010-1310 T, GrnH 19, 4 cr
339708 —3 LAB 1325-1625 W, GrnH 19, 4 cr
339417 —4 LAB 1010-1310 Th, GrnH 19, 4 cr

R 3103 Meteorology and Climatology for Natural Resource Managers (prereq Math 1142, Phys 1001, Phys 1005, Geo 1001, Biol 1009) (Phys/NL; Envt)
135529 0800-0850 TTh, GrnH 110, Perry J, 2 cr

R 3104 Forest Ecology (prereq 8 cr biol, 4 cr chem) (Biol/NL; Envt)
★LECT 0905-0955 MWF, GrnH 110, Sucoff E
029859 —1 REC 0905-0955 T, HodsonH 490, Sucoff E, 4 cr
132851 —2 REC 1325-1415 T, GrnH 203, Sucoff E, 4 cr
032101 —3 REC 1220-1310 W, GrnH 203, Sucoff E, 4 cr
129769 —4 REC 1430-1520 W, NatResAd 100, Sucoff E, 4 cr

R 3225 Directed Study Experience (prereq fr or soph, #)
136115 —1 Anderson D, 1-5 cr
940160 —2 Bauer M, 1-5 cr
138026 —3 Baughman M, 1-5 cr
435861 —4 Blinn C, 1-5 cr
832603 —5 Bolstad P, 1-5 cr
230564 —6 Brooks K, 1-5 cr
740161 —7 Burk T, 1-5 cr
038027 —8 Carlson S, 1-5 cr
235862 —9 Ek A, 1-5 cr
135863 —10 Ellefson P, 1-5 cr
533681 —11 Furnier G, 1-5 cr
430322 —12 Gregersen H, 1-5 cr
323430 —13 Johnson G, 1-5 cr
023432 —14 Lime D, 1-5 cr
823433 —15 Mohn C, 1-5 cr
123437 —16 Perry J, 1-5 cr
723439 —17 Puettmann K, 1-5 cr
123440 —18 Reich P, 1-5 cr
923441 —19 Rose D, 1-5 cr
523443 —20 Splett P, 1-5 cr
323444 —21 Sucoff E, 1-5 cr

R 5101 Field Silviculture (prereq 5100, Δ, given at Cloquet)
331446 Puettmann K, 4 cr (Cloquet)

5102 Forest Wildlife Habitat Management (prereq 5100, FW 3052, ¶5101; given at Cloquet) (A-F only)
938215 Nichols T, 1 cr

R 5104 Forest Ecology (prereq 8 cr biol, 4 cr chem) (Envt)
★LECT 0905-0955 MWF, GrnH 110, Sucoff E
335058 —1 REC 0905-0955 T, HodsonH 490, Sucoff E, 4 cr
436296 —2 REC 1325-1415 T, GrnH 203, Sucoff E, 4 cr
136124 —3 REC 1220-1310 W, GrnH 203, Sucoff E, 4 cr
432944 —4 REC 1430-1520 W, NatResAd 100, Sucoff E, 4 cr

R 5115 Forest Hydrology, Field Applications (prereq 5114, Δ, given at Cloquet)
938621 Brooks K, 2 cr (Cloquet)

R 5126 Silviculture: Soil-Site Relationships (prereq 1122, 5100, Δ, given at Cloquet)
235487 Grigal D, 2 cr (Cloquet)

5202 Remote Sensing: Field Applications (given at Cloquet; prereq 5200, 5212) (A-F only)
831256 0800-1700 MTWThF, Bauer M, 2 cr (Cloquet)

5222 Forest Resources Inventory (given at Cloquet; prereq 5212) (A-F only)
437495 Ek A, 2 cr

R 5225 Directed Study Experience (prereq jr or sr or grad stu, #)
136432 —1 Anderson D, 1-5 cr
130565 —2 Bauer M, 1-5 cr
629329 —3 Baughman M, 1-5 cr
239135 —4 Blinn C, 1-5 cr
136941 —5 Bolstad P, 1-5 cr
029330 —6 Brooks K, 1-5 cr
139136 —7 Burk T, 1-5 cr
036942 —8 Carlson S, 1-5 cr
734778 —9 Ek A, 1-5 cr
632604 —10 Ellefson P, 1-5 cr
930566 —11 Furnier G, 1-5 cr
540162 —12 Gregersen H, 1-5 cr
838028 —13 Johnson G, 1-5 cr
140052 —14 Lime D, 1-5 cr
023446 —15 Mohn C, 1-5 cr
823447 —16 Perry J, 1-5 cr
623448 —17 Puettmann K, 1-5 cr
423449 —18 Reich P, 1-5 cr
823450 —19 Rose D, 1-5 cr
623451 —20 Splett P, 1-5 cr
423452 —21 Sucoff E, 1-5 cr
223453 —22 1325-1455 F, Bengston D, 1-5 cr (NC FES 418)

R 5236 Forest Recreation Planning (prereq 5232, Δ, given at Cloquet)
138326 Anderson D, 1 cr (Cloquet)

R 5248 Harvesting and Engineering (prereq CE 3100 or FR 3300, Δ, given at Cloquet)
630819 Blinn C, 3 cr (Cloquet)

5703 Colloquium in Forest Biology: Nutrient Cycling: Plant Soil Interactions (S-N only)
934505 Reich P, 1-2 cr

8100 Research Problems: Silviculture
433155 Puettmann K, ar cr

8101 Research Problems: Forest-Tree Physiology
332435 Sucoff E, ar cr

8102 Problems: Forest-Tree Genetics
131229 Mohn C, Furnier G, ar cr

8103 Research Problems: Forest Hydrology
838787 Brooks K, Perry J, ar cr

8104 Research Problems: Forest Ecology
532966 Reich P, Sucoff E, others, 1-8 cr

8107 Seminar: Forest Resources
833931 1430-1530 MW, GrnH 203, Ek A, others, 1 cr

8112 Research Problems: Physiological Ecology
735462 Reich P, Sucoff E, 1-8 cr

8200 Research Problems: Forest Management
735431 Hoganson H, Rose D, others, ar cr

8201 Research Problems: Forest Economics
536306 Ellefson P, Gregersen H, others, ar cr

8202 Research Problems: Forest Biometry
732030 Ek A, Burk T, ar cr

8203 Research Problems: Forest Recreation
137807 Anderson D, Lime D, ar cr

8204 Research Problems: Forest Policy
140441 Ellefson P, Baughman M, others, ar cr

8205 Research Problems: Remote Sensing
132168 Bauer M, Bolstad P, ar cr

8207 Economic Analysis of Forestry Projects (prereq #)
639374 Gregersen H, 3 cr

8301 Teaching Practicum (prereq #, Δ) (S-N only)
935153 2-4 cr

FORESTRY (Fors)
Natural Resources

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
636183 1-18 cr

8777 Thesis Credits: Masters
731038 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
129528 1-36 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

FRENCH (Fren)
French and Italian
Liberal Arts

R 1101 Beginning French
033250 —1 0800-0850 MTWThF, FolH 246, 5 cr
833878 —2 0800-0850 MTWThF, FolH 240, 5 cr
329910 —3 0905-0955 MTWThF, FolH 246, 5 cr
431955 —4 0905-0955 MTWThF, FolH 138, 5 cr
735008 —5 1010-1100 MTWThF, FolH 246, 5 cr
131626 —6 1010-1100 MTWThF, FolH 240, 5 cr
639715 —7 1115-1205 MTWThF, FolH 246, 5 cr
130873 —8 1115-1205 MTWThF, FolH 138, 5 cr
338199 —9 1220-1310 MTWThF, FolH 246, 5 cr
640055 —10 1430-1520 MTWThF, FolH 240, 5 cr

R 1102 Beginning French (prereq 1101 or equiv)
038822 —1 0800-0850 MTWThF, FolH 138, 5 cr
931555 —2 0905-0955 MTWThF, KoltH S136, 5 cr
129858 —3 1325-1415 MTWThF, FolH 246, 5 cr

R 1103 Beginning French (prereq 1102 or equiv)
036231 —1 0800-0850 MTWThF, PeikH 215, 5 cr
439330 —2 0800-0850 MTWThF, FolH 142, 5 cr
937419 —3 1115-1205 MTWThF, KoltH S137, 5 cr
535429 —4 1220-1310 MTWThF, FolH 138, 5 cr
236817 —5 1430-1535 MTWThF, FolH 246, 5 cr

R 1104 Intermediate French (prereq 1103 or Entrance Proficiency Test)
637821 —1 0800-0850 MTWThF, KoltH S133, 5 cr
431597 —2 0800-0850 MTWThF, WullH 140, 5 cr
640010 —3 0800-0850 MTWThF, KoltH S136, 5 cr
534779 —4 1115-1205 MTWThF, KoltH S138, 5 cr
432605 —5 1220-1310 MTWThF, KoltH S137, 5 cr
036598 —6 1220-1310 MTWThF, KoltH S136, 5 cr
640668 —7 1220-1310 MTWThF, KoltH S140, 5 cr
429543 —8 1430-1520 MTWThF, KoltH S137, 5 cr

R 1105 Intermediate French (prereq 1104 or Entrance Proficiency Test)
438470 —1 0800-0850 MTWThF, KoltH S137, 5 cr
630027 —2 0905-0955 MTWThF, KoltH S137, 5 cr
932396 —3 1220-1310 MTWThF, FolH 340, 5 cr
330121 —4 1430-1520 MTWThF, KoltH S138, 5 cr

R 1106 Intermediate French (prereq 1105 or Entrance Proficiency Test; end-of-qtr proficiency test will be required)
233173 —1 0800-0850 MTWThF, KoltH S134, 5 cr
140276 —2 0905-0955 MTWThF, AkerH 317, 5 cr
532417 —3 1220-1310 MTWThF, KoltH S139, 5 cr

R 3014 French Phonetics (prereq 1106)
635017 1415-1530 TTh, VinH 209, 4 cr

R 3015 French Composition and Communication (prereq 1106)
731539 —1 0905-1020 MWF, VinH 209, Preckshot J, 4 cr
635308 —2 1115-1230 MWF, Arch 45, Preckshot J, 4 cr
538170 —3 0905-1100 TTh, CivE 213, 4 cr

R 3016 Advanced French Composition and Communication (prereq 3015 or #)
730567 1115-1215 MWF, AmundH 104, 4 cr

R 3017 Stylistics Through Translation (prereq 3016 or superior achievement in 3015 or #)
237529 1430-1520 MWF, AmundH 120, 4 cr

R 3101 Introduction to French Literary Texts: Poetry (prereq 3016 or equiv) (Lit; IP)
631047 —1 1010-1100 MWF, ChDev 105, Waldauer J, 4 cr
132159 —2 0945-1100 TTh, FolH 340, Sivert E, 4 cr

R 3103 French Literary Texts: Novel (prereq 3101 or above) (Lit; IP)
836747 1325-1415 MWF, FolH 426, Preckshot J, 4 cr

R 3239 Topics in 17th-Century French Literature (prereq 3101, 3103)
524222 1220-1310 MWF, FolH 208, Liu C, 4 cr

R 3269 Topics in 19th-Century French Literature (prereq 3101, 3103)
836490 1245-1400 TTh, VinH 209, Robinson P, 4 cr

R 3511 French Civilization and Culture (prereq 3015) (IP)
230838 0945-1100 TTh, VinH 301, Akehurst F, 4 cr

R 3606 Quebec: Literature and Film in Translation (no cr for maj) (Lit; IP)
624647 1245-1400 TTh, FordH 285, Sivert E, 4 cr

3800 CIEE Language/Culture Program in Brittany (prereq 1105)
229544 1-54 cr

3970 Directed Readings (prereq undergrad student, #, Δ, ⊔)
640914 1-5 cr

3980 Directed Instruction (prereq 3015, #, Δ, ⊔)
539299 3-5 cr

R 5207 Old French (prereq 3209 or above)
124224 1245-1400 TTh, FolH 426, Akehurst F, 4 cr

5800 CIEE Contemporary Film Program in Paris (prereq 1105 or #)
040702 1-45 cr

R 5900 Topics in French Literature: French Poetry from 1850 to 1900 (max 15 cr; prereq 3209 or above)
824226 1545-1700 MW, FolH 246, Waldauer J, 4 cr

R 5999 Foreign Language Teaching: Theory and Practice (prereq grad or #)
140293 1325-1455 M, 1325-1455 W, ChDev 218, Barnes B, 4 cr

R 8010 Seminar in Poetry (max 15 cr)
624809 1545-1715 TTh, FolH 246, Robinson P, 4 cr

R 8050 Seminar in Fiction: Genet (max 15 cr)
624227 1415-1530 TTh, NichH 213, Paganini M, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
839289 1-18 cr

8777 Thesis Credits: Masters
538699 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
834500 1-36 cr

8970 Directed Readings
231911 1-5 cr

8980 Directed Teaching (prereq #, Δ)
638662 1-5 cr

R 8990 Ph.D. Topics (prereq PhD stu in French) (S-N only)
632778 1-7 cr

GENERAL COLLEGE (GC)

Sections and courses marked BC (Base Curriculum) are recommended for students who are in their first year of enrollment and have not had prior college work in that subject area. Sections and courses marked TC (Transition Curriculum) are recommended for students who are in their second year of enrollment and have completed freshman composition. Credit equivalents for noncredit courses in GC are as follows: 0401, 0402, 0623, 0643—4-credit equivalent; 0611, 0615, 0616, 0617, 0618, 0621, 0625, 0631—5-credit equivalent. For further information, go to 25 Appleby Hall.

For GC 0401, 0402, 0419, 0611, 0615, 0616, 0617, 0618, 0621, 0623, 0625, 0631, and 0643, course fees are assessed instead of tuition. See page 25 for fee amounts. Credits for these courses will *not* count in the tuition plateau but will count towards the assessment of the student services fee.

NOTE: The restriction *GC stu only* is enforced through September 16, 1996. After September 16 other students may register for these courses.

R 0615 Introduction to Mathematical Problem Solving (§0611; prereq GC math placement)
333021 —1 0800-0955 MWF, ApH 226, Koch L, 0 cr
730231 —2 1010-1205 MWF, ApH 223, 0 cr

R 0621 Elementary Algebra (prereq GC math placement or arithmetic with C grade or better)
538542 —1 0800-0850 M, 0800-0955 TTh, FolH 104, 0 cr
638676 —2 1115-1205 M, 1010-1205 WF, FolH 104, 0 cr
340101 —3 1115-1205 M, 1010-1205 WF, ApH 103, 0 cr
039579 —4 1325-1415 M, 1220-1415 WF, FolH 104, 0 cr

R 0623 Plane Geometry: Programmed Study (prereq GC math placement or elem algebra, #)
140469 —1 0800-0955 MWF, ApH 223, 0 cr
936027 —2 1220-1415 MWF, ApH 223, 0 cr

R 0625 Intermediate Algebra, Part I (prereq GC math placement or elem algebra with grade of C or better)
137032 —1 0800-0850 M, 0800-0955 TTh, NichH 216, 0 cr
837963 —2 1010-1100 M, 1010-1205 TTh, NichH 216, 0 cr
940871 —3 1010-1100 M, 1010-1205 TTh, ApH 103, 0 cr
940725 —4 1220-1310 M, 1220-1415 TTh, NichH 216, 0 cr
938733 —5 1220-1310 M, 1220-1415 TTh, NichH 216, 0 cr (MLK stu only)
138648 —6 1430-1520 M, 1430-1625 TTh, NichH 216, 0 cr
137497 —7 0905-0955 M, 0800-0955 WF, NichH 216, 0 cr
436234 —8 1115-1205 M, 1010-1205 WF, NichH 216, 0 cr
040490 —9 1325-1415 M, 1220-1415 WF, NichH 216, 0 cr
534085 —10 1535-1625 M, 1430-1625 WF, NichH 216, 0 cr

R 0631 Intermediate Algebra, Part II (prereq GC math placement or 0625 with grade of C or better)
337683 —1 0800-0850 M, 0800-0955 TTh, NichH 207, 0 cr
129682 —2 1010-1100 M, 1010-1205 TTh, NichH 207, 0 cr
034432 —3 1220-1310 M, 1220-1415 TTh, NichH 207, 0 cr
938599 —4 1220-1310 M, 1220-1415 TTh, NichH 207, 0 cr (MLK stu only)
137507 —5 0905-0955 M, 0800-0955 WF, NichH 207, 0 cr
134719 —6 1115-1205 M, 1010-1205 WF, NichH 207, 0 cr
430238 —7 1325-1415 M, 1220-1415 WF, NichH 207, 0 cr
432846 —8 1535-1625 M, 1430-1625 WF, NichH 207, 0 cr

R 0643 Mathematics: Programmed Study (prereq #)
929935 —1 0800-0955 MWF, ApH 223, 0 cr
139671 —2 1220-1415 MWF, ApH 223, 0 cr

R 1051 Introduction to College Reading and Writing
639388 —1 0800-0955 MWF, NichH 122, 5 cr (Commanding English stu only)
737194 —2 1010-1205 MWF, NichH 122, 5 cr (Commanding English stu only)
332970 —3 1220-1415 MWF, NichH 209, 5 cr (Commanding English stu only)
034396 —4 1430-1625 MWF, NichH 122, 5 cr (Commanding English stu only)

R 1086 Higher Education Survival Seminar (max 6 cr) (S-N only)
632540 —1 0905-1035 MW, ApH 239, 1 cr (TRIO stu only) (concurrent reg in 1235, sec 3, is required)
131067 —2 1245-1415 MW, ApH 239, Neil, 1 cr (BC) (TRIO stu only) (concurrent reg in 1132, sec 6, is required)
023110 —3 1010-1140 TTh, ApH 239, 1 cr (TRIO stu only) (concurrent reg in 1851, sec 3, is required)
135790 —4 1245-1415 TTh, ApH 239, 1 cr (TRIO stu only) (concurrent reg in 1132, sec 2, is required)

R 1111 Science in Context: Weather and Climate (Phys/NL)
938764 1220-1310 MTWThF, SciCB 125, Johnson A, 5 cr (Lab time assigned first 2 days of class) (BC)

R 1112 Ecological Evaluation of Environmental Problems (Biol/NL; Envt)
539965 —1 1220-1415 MW, 1220-1310 F, ApH 319, 5 cr (BC) (GC stu only)
029263 —2 0800-0955 TTh, 0800-0850 F, ApH 319, Hatch J, 5 cr (BC) (GC stu only)

R 1131 Biological Science: Principles (Biol/L)
★LECT 1115-1205 MTWTh, SciCB 125, Hatch J, 5 cr (TC)
638144 —1 LAB 0800-0955 MW, ApH 309 (TC)
136768 —2 LAB 0905-1100 MW, ApH 309 (TC)
829927 —3 LAB 1220-1415 MW, ApH 309 (TC)
939784 —4 LAB 1325-1520 MW, ApH 309
733274 —5 LAB 0800-0955 TTh, ApH 309 (TC)
138312 —6 LAB 0905-1100 TTh, ApH 309 (TC)
340776 —7 LAB 1220-1415 TTh, ApH 309 (TC)
237840 —8 LAB 1325-1520 TTh, ApH 309 (TC)

R 1132 Biological Science: The Human Body (Biol/NL)
933323 —1 1010-1205 MW, 1010-1100 F, ApH 319, Jensen M, 5 cr (BC) (GC stu only)
824632 —2 1010-1205 MW, 1010-1100 F, ApH 319, Jensen M, 5 cr (TRIO stu only) (concurrent reg in 1086, sec 4, is required)
138357 —3 0800-1000 MW, 0905-0955 F, ApH 319, 5 cr (BC) (GC stu only)
239068 —4 1430-1625 MW, 1430-1520 F, ApH 319, Wilcox K, 5 cr (GC stu only)
636880 —5 1010-1205 TTh, 1115-1205 F, ApH 319, Wilcox K, 5 cr (GC stu only)
023124 —6 1010-1205 TTh, 1115-1205 F, ApH 319, Wilcox K, 5 cr (TRIO stu only) (concurrent reg in 1086, sec 2, is required)

R 1137 Biological Science Laboratory: The Human Body (prereq 1132 or ¶1132) (Biol/L)
137295 —1 LAB 0800-0955 MW, ApH 311, Jensen M, 2 cr (BC)
239460 —2 LAB 1220-1415 MW, ApH 311, Jensen M, 2 cr (BC)
136194 —3 LAB 0800-0955 TTh, ApH 311, Jensen M, 2 cr (BC)
240253 —4 LAB 1010-1205 TTh, ApH 311, 2 cr (BC)

R 1160 Investigations in Physical Science (prereq 1 yr high school algebra or 0616 or 0621 or equiv)
936271 —1 1010-1205 MWF, ApH 322, Snowden F, 5 cr (GC stu only) (BC)
130041 —2 1430-1625 MWF, ApH 322, Snowden F, 5 cr (GC stu only) (BC)

R 1166 Principles of Chemistry (prereq 0621 or Math Level D or high schl algebra or equiv) (Phys/NL)
840104 —1 LECT 1010-1100 MTWThF, SciCB 125, Uthe R, 5 cr
135796 —2 LECT 1010-1100 MTWThF, SciCB 125, Uthe R, 5 cr (GC stu only)
★REC 1115-1205 MWF, ApH 239

R 1171 Physical Geology (Phys/L)
638287 1325-1415 MTWThF, SciCB 125, Uthe R, 5 cr (addtl 3-4 lab hrs ar)

R 1211 People and Problems (SSci; CD)
229947 —1 0800-0850 MTWThF, ApH 103, Johnson F, 5 cr
333858 —2 0905-0955 MTWThF, ApH 103, Johnson F, 5 cr
334721 —3 1010-1205 MW, 1115-1205 F, ApH 3, Thoen G, 5 cr
129925 —4 1430-1625 MW, 1430-1520 F, ApH 3, 5 cr

R 1233 United States: Government and Politics (SSci)
131299 —1 1010-1205 TTh, 1010-1100 F, ApH 3, Kahn P, 5 cr (BC)
823111 —2 1220-1415 MW, 1220-1310 F, ApH 103, Kahn P, 5 cr (BC)

R 1235 United States: Law in Society (SSci; C/PE)
424634 —1 1430-1625 MW, 1430-1520 F, ApH 303, Kahn P, 5 cr (BC)
732366 —2 0800-0955 TTh, 0905-0955 F, ApH 303, Hower D, 5 cr
624633 —3 0800-0955 TTh, 0905-0955 F, ApH 303, Hower D, 5 cr (TRIO stu only) (concurrent reg in 1086, sec 1, is required)
233612 —4 1220-1415 TTh, 1325-1415 F, ApH 303, Hower D, 5 cr (BC)

R 1281 Psychology in Modern Society (SSci)
★LECT 1115-1205 F, SciCB 125, Brothen T, (BC) (addtl 3 hrs ar)
623112 —1 REC 0800-0850 MW, ApH 128, Brothen T, 5 cr (BC)
423113 —2 REC 0905-0955 MW, ApH 128, Brothen T, 5 cr (BC)
223114 —3 REC 1010-1100 MW, ApH 128, Brothen T, 5 cr (BC)
123115 —4 REC 1115-1205 MW, ApH 128, Brothen T, 5 cr (BC)
923116 —5 REC 1430-1520 MW, ApH 128, Brothen T, 5 cr (BC)

R 1283 Psychology of Human Development
233075 1010-1100 MTWThF, NichH 213, Latts S, 5 cr (TC)

R 1285 Cultural Anthropology (SSci; IP)
723117 1430-1520 MTWThF, ApH 103, Johnson F, 5 cr (TC)

R 1294 Economics in Contemporary Society (§1295, 1296) (C/PE)
036553 —1 1010-1100 MTWThF, ApH 303, Ghere D, 5 cr (BC)
831337 —2 1115-1205 MTWThF, ApH 303, Ghere D, 5 cr (BC)

R 1311 Art: General Arts (Vis; IP)
838630 —1 1220-1415 MW, ApH 302, Fung V, 4 cr (BC) (GC stu only)
539755 —2 1010-1205 TTh, ApH 302, Fung V, 4 cr (BC) (GC stu only)
530439 —3 1220-1415 TTh, ApH 302, James P, 4 cr (GC stu only)
629265 —4 1430-1625 TTh, ApH 302, 4 cr (GC stu only)

R 1357 World Religious Beliefs (prereq more than 30 GPA college cr completed, 1422 or equiv) (Phil; IP)
133344 —1 LECT 1220-1415 MW, 1220-1325 F, ApH 226, Adamson W, 5 cr (TC)
530652 —2 LECT 1220-1415 MW, 1220-1325 F, ApH 226, Adamson W, 5 cr (TRIO stu only)
★REC 1430-1520 MW, 1325-1415 F, ApH 239

R 1364 Literature of the American Immigrant Experience (prereq Commanding English enrollment, #) (CD)
929739 —1 1010-1205 TTh, ApH 223, 4 cr (Commanding English stu only) (BC)
040487 —2 1010-1205 TTh, NichH 122, 4 cr (Commanding English stu only) (BC)
730133 —3 1430-1625 TTh, NichH 122, 4 cr (Commanding English stu only) (BC)
541117 —4 1430-1625 TTh, ApH 226, 4 cr (Commanding English stu only) (BC)

R 1365 Literatures of the United States (prereq 1421 or equiv with C- grade or higher) (Lit; CD)
136687 —1 0800-0955 MW, ApH 302, Noble G, 4 cr (BC) (GC stu only)
236882 —2 1220-1415 TTh, ApH 226, Noble G, 4 cr (BC) (GC stu only)

R 1367 Contemporary Literature: International Perspectives (Lit; IP)
★LECT 1325-1415 MW, NichH 213, 4 cr (BC) (GC stu only)
532286 —1 REC 0800-0955 Th, ApH 223, (BC) (GC stu only)
635471 —2 REC 1430-1625 Th, NichH 209, (BC) (GC stu only)
636412 —3 REC 1010-1205 F, ApH 226, (BC) (GC stu only)
231357 —4 REC 1325-1520 F, NichH 209A, (BC) (GC stu only)

R 1371 Literature: Reading Short Stories (prereq 1421 or equiv with C- grade or higher) (Lit)
229687 —1 0800-0955 TTh, ApH 302, Gidmark J, 4 cr (BC) (GC stu only)
530909 —2 1010-1205 TTh, ApH 226, Gidmark J, 4 cr (BC) (GC stu only)
137564 —3 1430-1625 TTh, ApH 319, Adamson W, 4 cr (BC) (GC stu only)

R 1374 The Movies: An Introductory Course (Vis)
334007 —1 1010-1205 MW, 1010-1100 F, ApH 302, Yahnke R, 4 cr (BC) (GC stu only)
133523 —2 1430-1625 MW, 1430-1520 F, ApH 302, Yahnke R, 4 cr (BC) (GC stu only)

R 1421 Writing Laboratory: Basic Writing
839776 —1 0800-0955 MW, 0800-0850 F, ApH 321, 4 cr (microcomputer instruction, uses IBM PC) (BC)
138267 —2 0800-0955 MW, 0800-0850 F, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
134283 —3 0800-0955 MW, 0800-0850 F, ApH 204, 4 cr (microcomputer instruction, uses IBM PC)
734036 —4 0800-0955 MW, 0800-0850 F, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
736773 —5 1010-1205 MW, 1010-1100 F, ApH 321, 4 cr (microcomputer instruction, uses IBM PC) (BC)
032809 —6 1010-1205 MW, 1010-1100 F, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
136423 —7 1010-1205 MW, 1010-1100 F, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC)
438582 —8 1010-1205 MW, 1115-1205 F, ApH 227, 4 cr (BC) (microcomputer instruction, uses Macintosh PC)
732335 —9 1220-1415 MW, 1220-1310 F, ApH 321, 4 cr (microcomputer instruction, uses IBM PC) (BC)
635535 —10 1220-1415 MW, 1220-1310 F, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
839339 —11 1220-1415 MW, 1220-1310 F, ApH 204, 4 cr (microcomputer instruction, uses IBM PC)
031112 —12 1220-1415 MW, 1220-1310 F, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
833167 —13 1430-1625 MW, 1430-1520 F, ApH 321, 4 cr (microcomputer instruction, uses IBM PC) (BC)
139449 —14 1430-1625 MW, 1430-1520 F, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
931281 —15 1430-1625 MW, 1430-1520 F, ApH 204, 4 cr (BC) (microcomputer instruction, uses IBM PC)
935363 —16 1430-1625 MW, 1535-1625 F, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
236655 —17 0800-0955 TTh, 0905-0955 F, ApH 321, 4 cr (microcomputer instruction, uses IBM PC) (BC)
939252 —18 0800-0955 TTh, 0905-0955 F, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC)
540338 —19 0800-0955 TTh, 0905-0955 F, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
132940 —20 1010-1205 TTh, 1115-1205 F, ApH 321, 4 cr (microcomputer instruction, uses IBM PC) (BC)
331706 —21 1010-1205 TTh, 1115-1205 F, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
632036 —22 1010-1205 TTh, 1115-1205 F, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC)
733078 —23 1010-1205 TTh, 1010-1100 F, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† All courses preceding this symbol must be completed before credit will be granted for any quarter of the sequence.
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# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
⌟ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

132307 —24 1220-1415 TTh, 1325-1415 F, ApH 321, 4 cr (microcomputer instruction, uses IBM PC) (BC)
138892 —25 1220-1415 TTh, 1325-1415 F, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
232072 —26 1220-1415 TTh, 1325-1415 F, ApH 204, 4 cr (BC) (microcomputer instruction, uses IBM PC)
334718 —27 1220-1415 MW, 1325-1415 F, ApH 117, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
239071 —28 1430-1625 TTh, 1535-1625 F, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
723120 —29 1430-1625 TTh, 1535-1625 F, ApH 204, 4 cr (BC) (microcomputer instruction, uses IBM PC)

R 1422 Writing Laboratory: Communicating in Society (prereq 1421)
330006 —1220-1415 TTh, ApH 219, Albrecht L, 4 cr (BC) (microcomputer instruction, uses IBM PC)

R 1454 Statistics (prereq intermediate algebra or 0631) (Math)
532112 0800-0955 MW, 0905-0955 F, ApH 117, 5 cr (TC) (GC stu only)

R 1456 Functions and Problems of Logic (Math)
631002 —1 1010-1205 MW, ApH 226, 4 cr (TC) (GC stu only)
533275 —2 1220-1415 TTh, ApH 3, 4 cr (TC) (GC stu only)

R 1461 Oral Communication: Speaking and Creative Thinking
033913 —1 0800-0955 MW, ApH 102, 4 cr (Commanding English stu only)
933113 —2 1220-1415 MW, ApH 102, 4 cr (Commanding English stu only)
937551 —3 1010-1205 TTh, ApH 102, Owen-Cruise, 4 cr (Commanding English stu only)
039792 —4 1220-1415 TTh, ApH 102, 4 cr (Commanding English stu only)
523121 —5 1430-1625 TTh, ApH 102, 4 cr (BC)

R 1463 Multicultural Oral Communication (CD)
131674 0800-0955 TTh, ApH 102, 4 cr (BC)

R 1464 Oral Communication: Group Process and Discussion
323122 1010-1205 MW, ApH 102, Amram F, 4 cr (BC)

R 1481 Creativity: Art Laboratory: Experiences in the Media (Vis)
632425 1010-1205 MWF, ApH 201, James D, 4 cr (BC)

R 1511 Introduction to Business and Society (SSci)
230855 —1 0800-0955 MW, 0800-0850 F, ApH 3, Kroll P, 5 cr (BC)
137872 —2 1220-1415 MW, 1220-1310 F, ApH 3, Kroll P, 5 cr (GC incoming freshman only)

R 1571 Introduction to Computer Applications (prereq elem algebra)
130234 1220-1415 TTh, ApH 117, 5 cr (addtl hr ar) (GC stu only) (TC) (microcomputer instruction)

R 1575 Introduction to Computers (prereq 1435 or 0621)
136883 1010-1205 TTh, ApH 117, Dillemuth J, 4 cr (BC) (GC stu only)

R 1701 Psychology of Personal Effectiveness
429378 —1 1220-1415 TTh, ApH 319, Latts S, 4 cr (BC)
123123 —2 1430-1625 TTh, NichH 109, Gardner L, 4 cr (BC)

R 1816 African-American Literature (prereq 1421, 1422) (Lit; CD)
224800 1430-1625 MW, ApH 226, 4 cr (TC)

R 1851 Multicultural Relations (CD)
438937 —1 1220-1415 MW, ApH 303, Gardner L, 4 cr (BC)
640962 —2 0800-0955 TTh, ApH 3, Gardner L, 4 cr (BC)
224635 —3 0800-0955 TTh, ApH 3, Gardner L, 4 cr (BC) (TRIO stu only) (concurrent reg in 1086, sec 3, is required)

GENETICS AND CELL BIOLOGY (GCB)
Biological Sciences

3022 Genetics (§Biol 5003; prereq Biol 1009 or Biol 1202)
940448 1010-1150 TTh, HodsonH 495, Marks M D, 4 cr

5035 Intermediate Cell Biology (prereq Biol 5004 or #)
132770 1010-1150 TTh, BorH 365, Iwanij V, 4 cr

5114 General Physiology (prereq Biol 3011 or Biol 3111, Biol 5001 or BioC 3021 or BioC 5331, Phys 1109 or Phys 1295 or Phys 1253)
738619 1115-1205 MWF, BioSci 12, Goldstein S, 3 cr

R 5605 Cell Biology Laboratory (prereq Biol 5004 or ¶ or #)
935377 1325-1555 MW, BioSci 245, 2 cr

5970 Directed Studies (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
840989 ar cr

5990 Directed Research (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
132887 ar cr

8132 Advanced Genetics II
535124 1325-1430 MWF, BioSci 70, Hackett P, 4 cr

R 8213 Advanced Molecular Biology I (§BioC 8213, MdBc 8213; prereq BioC/MdBc 8002 or 8132 or #)
535589 0800-0930 TTh, HSUnitF 2120, Towle H, 4 cr (Mpls)

8900 Seminar (S-N only)
633820 —1 1200-1300 Th, MoosT 2580, King R, 1 cr (Mpls)
532272 —2 1535-1705 Th, BorH 365, Brooker R, 1 cr

8910 Journal Clubs (S-N only)
938540 1200-1250 T, BioSci 260, Herman R, 1 cr

8913 Psychosocial Issues in Genetic Counseling (prereq admission to genetic counseling emphasis within genetics master's program or #) (A-F only)
635681 1010-1150 F, MoosT 16104, LeRoy B, 3 cr (Mpls)

8970 Directed Studies (prereq #)
538380 ar cr

8990 Research (prereq #) (S-N only)
031482 ar cr

Geometry: See General College; Mathematics.

GEOGRAPHY (Geog)
Liberal Arts

R 1402 Geography of Environmental Systems (§1401) (Phys/NL; Envt)
★LECT 1010-1100 MWF, BlegH 5, Brown D, Skaggs R
334637 —1 REC 0905-0955 TTh, BlegH 245, 5 cr
836649 —2 REC 1010-1100 TTh, BlegH 245, 5 cr
529971 —3 REC 1010-1100 TTh, BlegH 445, 5 cr
839583 —4 REC 1115-1205 TTh, BlegH 445, 5 cr
634482 —5 REC 1220-1310 TTh, BlegH 445, 5 cr
834318 —6 REC 0905-0955 WF, BlegH 445, 5 cr
337411 —7 REC 1115-1205 WF, BlegH 445, 5 cr
836179 —8 REC 1220-1310 WF, BlegH 445, 5 cr
736031 —9 REC 1325-1415 WF, BlegH 245, 5 cr

R 1302 The World Around Us (SSci; IP)
★LECT 1830-2100 M, BlegH 235
124854 —1 REC 1430-1625 T, BlegH 445, 5 cr
024855 —2 REC 1820-2050 T, BlegH 445, 5 cr
824856 —3 REC 1430-1625 Th, BlegH 445, 5 cr
624857 —4 REC 1820-2050 Th, BlegH 445, 5 cr

R 1425 Introduction to Meteorology (§Soil 1425) (Phys/L)
★LECT 1325-1415 MWF, AndH 330, Baker D, Skaggs R
136754 —1 REC 1325-1415 TTh, BlegH 445, 4 cr
129609 —2 REC 1430-1520 TTh, BlegH 445, 4 cr

R 1501 The Language of Maps (§3311)
924153 1245-1400 TTh, AndH 230, Veregin H, 5 cr

1973 Geography of the Twin Cities (§3973)
031627 1115-1230 TTh, BlegH 415, Martin J, 4 cr

R 3101 Geography of the United States and Canada (§3102) (SSci; CD)
639830 1010-1100 MWF, WilleyH 125, Hart J, 4 cr

R 3111 Minnesota
424858 1830-2100 T, BlegH 250, 4 cr

R 3211 East Asia (§5211) (IP)
832293 0905-0955 MWF, BlegH 415, Hsu M, 4 cr

3212 South Asia (§5212)
029649 1115-1205 MWF, BlegH 415, Schwartzberg J, 4 cr

3331 Economic Geography (SSci; IP)
433866 1010-1100 MWF, AndH 230, Sheppard E, 4 cr

3361 Land Use and the Federal Government
636720 1415-1530 TTh, BlegH 330, Squires R, 4 cr

R 3371 Introduction to Urban Geography (SSci)
624860 0945-1100 TTh, BlegH 415, Miller R, 4 cr

R 3378 Third World Underdevelopment and Modernization (§LAS 3378)
724154 1300-1415 MW, AndH 230, Samatar A, 4 cr

3381 Population in an Interacting World (SSci; IP)
524155 1115-1205 MWF, BlegH 205, Leitner H, 4 cr

3530 Cartography Internship (max 10 cr; prereq #) (S-N only)
134034 2-5 cr

R 3531 Quantitative Methods in Geography (A-F only)
★LECT 1325-1415 MWF, BlegH 415, Smoyer K
132565 —1 REC 1430-1600 T, BlegH 455, 4 cr
624597 —2 REC 1430-1600 Th, BlegH 455, 4 cr

3940 Directed Field Study (prereq #) (A-F only)
632084 2-4 cr

3970 Directed Readings (prereq #, Δ, ⊿)
736434 1-15 cr

3973 Geography of the Twin Cities (§1973)
838840 1115-1230 TTh, BlegH 415, Martin J, 4 cr

R 3985 Senior Project Seminar (prereq Geog maj, #) (A-F only)
324156 1220-1450 WF, BlegH 260, Weil C, 4 cr

3990 Directed Research (prereq #, Δ, ⊿)
032406 1-15 cr

R 5211 East Asia: Regional Analysis (§3211)
331365 0905-0955 MWF, BlegH 415, Hsu M, 4 cr

5212 South Asia (§3212)
329972 1115-1205 MWF, BlegH 415, Schwartzberg J, 4 cr

5371 North American Cities (prereq 1301 or 1501 or 1970 or 3371 or 3973 or 5001 or #)
124160 0800-0940 TTh, BlegH 420, Adams J, 4 cr

5385 Political Economy of Development (prereq grad stu or sr or #) (A-F only)
239510 1535-1730 W, BlegH 430, Samatar A, 4 cr

5411 Medical Geography (IP; Envt)
124157 1220-1450 M, BlegH 260, Weil C, 4 cr

R 5441 Quaternary Landscape Evolution (prereq 1401 or #)
424598 1325-1520 MW, BlegH 445, Brown D, 4 cr

5530 Cartography Internship (max 10 cr; prereq #) (S-N only)
835274 2-5 cr

R 5601 Introduction to Land Use Planning
135667 1325-1505 TTh, HHHCtr 25, Lukermann B, 4 cr

R 5900 Topics in Geography: Multimedia Cartography I (prereq sr or grad)
829295 1325-1520 M, BlegH 455, Gersmehl P, 4 cr

8002 Proseminar: The Economy, the State and Spatial Development (prereq #)
024158 1325-1520 W, BlegH 430, Leitner H, Sheppard E, 3 cr

8004 Proseminar: Physical Geography (prereq #) (S-N only)
824159 1535-1730 W, BlegH 460, Brown D, Skaggs R, 3 cr

8300 Geographical Writing (prereq #) (S-N only)
937565 1325-1515 M, BlegH 430, Hart J, 3 cr

8302 Research Development (prereq #)
639097 0905-1030 W, BlegH 460, Samatar A, 3 cr

8344 Seminar: Public Land Policy (8344-8345†; prereq #)
130887 1325-1520 W, BlegH 460, Squires R, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
830284 1-18 cr

8777 Thesis Credits: Masters
629475 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
332418 1-36 cr

8970 Directed Readings
733050 1-5 cr

8980 Topics in Geography (prereq #)
036908 1325-1600 T, PeikH 165, Miller R, 3 cr

8990 Research Problems
440834 ar cr

GEOLOGICAL ENGINEERING (GeoE)
Civil Engineering
Institute of Technology

R 3700H How to Model It: Building Models to Solve Engineering Problems (prereq IT Honors or #)
★LECT 1430-1625 MW, Arch 10, Smith K
133442 —80 REC 4 cr

R 5218 Design of Underground Excavations in Rock (§CE 5305; prereq IT stu or grad IT maj, 5302 or #) (A-F only)
136597 1220-1415 MW, CivE 213, Fairhurst C, 4 cr

R 5262 Geo-Engineering Analysis (prereq IT sr or grad IT maj or #) (A-F only)
630173 Fairhurst C, 4 cr

R 5660 Special Geo-Engineering Problems (prereq IT sr or #) (A-F only)
339577 ar cr

R 8350 Advanced Rock Mechanics I (prereq 5302)
523068 1010-1205 MW, CivE 202, Labuz J, 4 cr

R 8601 Seminar: Geo-Engineering (prereq #) (S-N only)
131609 1115-1205 F, CivE 205, ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
134017 1-18 cr

R 8777 Thesis Credits: Masters
634224 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
431308 1-36 cr

GEOLOGY AND GEOPHYSICS (Geo)
Institute of Technology

R 1001 The Dynamic Earth: An Introduction to Geology (Phys/L; Envt)
✦232329 —1 LECT 1010-1100 MWF, SmithH 100, 4 cr
✦540873 —2 LECT 1220-1310 MWF, SciCB 325, 4 cr
323072 —1 LAB 0800-0955 M, FordH 180
023074 —2 LAB 0800-0955 M, FordH 185
823075 —3 LAB 1220-1415 M, FordH 180
623076 —4 LAB 1325-1520 M, FordH 185
423077 —5 LAB 1430-1625 M, FordH 180
223078 —6 LAB 1535-1730 M, FordH 185
123079 —7 LAB 0800-0955 T, FordH 180
423080 —8 LAB 0800-0955 T, FordH 185
223081 —9 LAB 1010-1205 T, FordH 180
123082 —10 LAB 1010-1205 T, FordH 185
923083 —11 LAB 1220-1415 T, FordH 180
723084 —12 LAB 1220-1415 T, FordH 185
523085 —13 LAB 1430-1625 T, FordH 180
323086 —14 LAB 1430-1625 T, FordH 185
123087 —15 LAB 0800-0955 W, FordH 180
023088 —16 LAB 0800-0955 W, FordH 185
823089 —17 LAB 1220-1425 W, FordH 180
123090 —18 LAB 1325-1520 W, FordH 185
023091 —19 LAB 1430-1625 W, FordH 180
823092 —20 LAB 1535-1730 W, FordH 185
623093 —21 LAB 0905-1100 Th, FordH 180
423094 —22 LAB 0905-1100 Th, FordH 185
223095 —23 LAB 1115-1310 Th, FordH 180
123096 —24 LAB 1115-1310 Th, FordH 185
923097 —25 LAB 1325-1520 Th, FordH 180
723098 —26 LAB 1325-1520 Th, FordH 185
124460 —27 LAB 0800-0955 F, FordH 185
924461 —28 LAB 1115-1310 F, FordH 185

R 1004 Physical and Historical Geology of Minnesota
724462 —1 1115-1205 MWF, FordH 155, Southwick D, Miller J, others, 3 cr
524463 —2 1115-1205 MWF, FordH 155, Southwick D, Miller J, others, 4 cr (field trips Oct 12, 26, Nov 9, 23)

R 1012 Planet Earth (Phys/NL; Envt)
038237 1430-1520 MWF, Phys 133, Murthy V, 4 cr

R 3201 Geodynamics I: The Solid Earth (prereq Phys 1251, Phys 1252) (course fee)
★LECT 1325-1415 MWF, PillsH 110, Moskowitz B, Stout J
138598 —1 REC 0905-1100 TTh, PillsH 125, 4 cr
140559 —2 REC 1325-1520 TTh, PillsH 125, 4 cr

3990 Problems in Geology and Geophysics (prereq #, Δ)
540856 1220-1310 W, PillsH 207C, 1-6 cr

5020 Laboratory Workshop (prereq geo, geophys, geo-eng maj or #)
324576 McSwiggen P, 2 cr

R 5121 History of the Earth (prereq geo maj or #)
723070 1010-1100 MWF, PillsH 105, Sloan R, 3 cr

R 5151 Introduction to Paleontology (prereq 1002 or #)
729404 1430-1520 MWF, PillsH 121, Sloan R, 5 cr

R 5261 Glacial Geology (5 cr with field trips; prereq 1002 or #)
236459 —1 0905-0955 MWF, PillsH 110, Patterson C, Kelts K, 4 cr
131201 —2 0905-0955 MWF, PillsH 110, Patterson C, Kelts K, 5 cr (field trips Sept 28, Oct 5-6, Oct 19-20) (course fee)

R 5311 Geochemical Processes (prereq 3301, Chem 5520 or #)
037282 1325-1500 TTh, PillsH 121, Berndt M, Ito E, 4 cr

R 5452 Igneous and Metamorphic Petrology (prereq 3102, Chem 5520, Math 3261 or #) (course fee)
★LECT 1115-1205 MWF, PillsH 207C, Stout J
936769 —1 LAB 1535-1730 TTh, PillsH 125, 5 cr

R 5505 Solid-Earth Geophysics I (prereq 3201, Phys 1253)
240740 1010-1205 TTh, PillsH 207C, Kohlstedt D, Yuen D, 4 cr

R 5535 Geological Thermomechanical Modelling (prereq Math 3261 or #)
523071 Yuen D, 4 cr

R 5541 Geomagnetism (prereq 3201, Math 1251, Phys 1251 or #)
935864 1010-1140 TTh, PillsH 121, Banerjee S, 4 cr

R 5601 Limnology (§EEB 5601; prereq Chem 1052 or equiv)
134882 1220-1310 MWThF, BorH 335, Sterner R, 4 cr (StP)

R 5641 General and Physical Hydrogeology (prereq 1001, Chem 1052, Math 1252, Phys 1105; Geo maj: core curriculum thru 3402; or #) (course fee)
★LECT 1630-1800 MW, PillsH 110, Pfannkuch H O
434063 —1 LAB 1630-1730 T, PillsH 110, 4 cr

R 5651 Sedimentology (prereq 3402, IT upper div Geo, Geophys, GeoE, MinE maj, or CLA jr/sr Geo maj or #) (course fee)
★LECT 1115-1205 MWF, PillsH 110, Paola C, 4 cr
234081 —1 LAB 0905-1100 MW, PillsH 125
136728 —2 LAB 1220-1415 MW, PillsH 125
436668 —3 LAB 1115-1310 TTh, PillsH 125

R 5980 Seminar: Current Topics in Geology and Geophysics (prereq #)
435536 1-6 cr

5990 Senior Thesis (max 6 cr; prereq sr geology or geophysics maj, #)
036679 2 cr

8097 Seminar: Current Topics in Geology and Geophysics (prereq #) (A-F only)
830723 1-6 cr

8098 Seminar: Current Topics in Geology and Geophysics (prereq #) (S-N only)
535138 —1 Kohlstedt D, 1-6 cr
236820 —2 Alexander E C, 1-6 cr

8099 Research in Geology and Geophysics (prereq #) (S-N only)
431289 1-6 cr

8617 Transport Phenomena in Natural Porous Media (prereq CE 3400 or Chem 5520 or equiv or #)
323069 1535-1730 T, PillsH 121, Pfannkuch H O, 2-3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
436265 1-18 cr

8777 Thesis Credits: Masters
236400 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
534572 1-36 cr

GERMAN (Ger)
German, Scandinavian, and Dutch
Liberal Arts

R 1101 Beginning German (§1000)
237126 —1 0800-0850 MTWThF, FolH 214, 5 cr
329289 —2 0905-0955 MTWThF, KoltH S132, 5 cr
534393 —3 1010-1100 MTWThF, KoltH S132, 5 cr
538752 —4 1115-1205 MTWThF, KoltH S132, 5 cr
529663 —5 1220-1310 MTWThF, SmithH 111, 5 cr
037430 —6 1325-1415 MTWThF, KoltH S137, 5 cr
137264 —7 1325-1415 MTWThF, KoltH S133, 5 cr

Symbols

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† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 1102 Beginning German (§1110; prereq 1101 or 1000)
637690 —1 0800-0850 MTWThF, FolH 38, 5 cr
933273 —2 0800-0850 MTWThF, PeikH 155, 5 cr
638998 —3 1115-1205 MTWThF, KoltH S133, 5 cr

R 1103 Beginning German (§1110; prereq 1102 or 5 cr of 1110)
630030 —1 0800-0850 MTWThF, FolH 234, 5 cr
235232 —2 1010-1100 MTWThF, SmithH 121, 5 cr
529288 —3 1325-1415 MTWThF, FolH 138, 5 cr
936819 —4 1325-1415 MWF, Arch 25, 1325-1415 TTh, FolH 340, 5 cr

R 1104 Intermediate German (prereq 1103 or 10 cr of 1110 or Entrance Standard proficiency test)
234534 —1 0905-0955 MTWThF, FolH 234, 5 cr
641089 —2 1010-1100 MTWThF, FolH 234, 5 cr
836439 —3 1115-1205 MTWThF, FolH 234, 5 cr
734277 —4 1220-1310 MTWThF, FolH 234, 5 cr
136902 —5 1325-1415 MTWThF, FolH 234, 5 cr

R 1105 Intermediate German (prereq 1104 or placement)
130937 —1 0905-0955 MTWThF, FolH 240, 5 cr
029747 —2 1115-1205 MTWThF, FolH 240, 5 cr
523796 —3 1220-1310 MTWThF, KoltH S138, 5 cr
838997 —4 1325-1415 MTWThF, FolH 240, 5 cr

R 1106 Intermediate German (prereq 1105 or placement)
437481 —1 0800-0850 MTWThF, ChDev 218, 5 cr
537231 —2 0905-0955 MTWThF, KoltH S133, 5 cr
323797 —3 1220-1310 MTWThF, FolH 240, 5 cr

R 3011 Conversation and Composition (prereq graduation proficiency test)
729869 —1 0800-0850 MTWF, VinH 20, 4 cr
433401 —2 1220-1310 MWThF, FolH 218, 4 cr
231472 —3 1715-1900 TTh, FolH 38, Metcalf E M, 4 cr

R 3012 Conversation and Composition (prereq 3011)
830270 1325-1415 MTThF, LindH 216, 4 cr

R 3014 German Media (prereq 3012)
734733 1415-1530 TTh, FolH 142, Metcalf E M, 4 cr

R 3104 Reading and Analysis of Prose (prereq 3012 or ¶3012)
832326 1010-1100 MWF, AkerH 313, Duroche L, 4 cr

R 3105H Honors Course: Reading and Analysis of Drama and Poetry (prereq 3012 or ¶3012, honors student or #)
123798 1115-1205 MWF, BuH 120, Weiss G, 4 cr

R 3312 German Drama: 19th Century (prereq 3104, 3105)
023799 1220-1310 MWF, FolH 426, Duroche L, 4 cr

R 3342 Major Project in German (max 5 cr; prereq jr or sr) (A-F only)
640654 1010-1100 W, BuH 125, McCormick R, 1 cr

R 3342H Major Project in German: Honors (max 5 cr; prereq honors stu, jr or sr) (A-F only)
833069 1010-1100 W, BuH 125, McCormick R, 1 cr

R 3502 Contemporary Germany: The German Democratic Republic (prereq 1106 or graduation proficiency test)
632327 0945-1100 TTh, VinH 213, 4 cr

R 3503 Contemporary Austria (prereq 1106 or graduation proficiency test)
124801 1415-1530 TTh, Arch 20, Boomgarden B, 4 cr

R 3511 German Civilization and Culture: Middle Ages to the Renaissance (prereq 3104, 3105, one additional 3xxx German course)
534734 1325-1415 MWF, FolH 208, Parente J, 4 cr

3590 Directed Studies: German-Speaking Countries (prereq 3501, #)
039310 5 cr

R 3604 Literature, History, and the German Film (no knowledge of German req; cr toward maj or min requires reading in German) (Vis; IP)
932558 1430-1645 T, 1430-1600 Th, FolH 234, McCormick R, 4 cr

R 3610 German Topics in Translation: German-Jewish Rebels (max 12 cr, no knowledge of German req; prereq non maj or minor)
723800 1220-1310 MWF, FolH 326, Zipes J, 4 cr

R 3704 German Dialects (prereq 1106) (A-F only)
523801 1115-1205 MWF, FolH 214, Fullerton G, 4 cr

3970 Directed Studies (prereq #, Δ, ⊔)
838966 1-5 cr

R 5011 Advanced Composition and Conversation (prereq 3013)
323802 1600-1715 TTh, FolH 214, Firchow E, 4 cr

R 5331 Cultural Analysis (prereq 3511, 3512 or 3513 or equiv)
123803 1535-1730 M, FolH 234, Weiss G, 4 cr

R 5721 Middle High German Language
340230 1245-1400 TTh, FolH 326, Firchow E, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
139511 1-5 cr

R 8230 Lyric Poetry: Symbolism/Expressionism (max 12 cr; §8333, 8334, 8335)
023804 1430-1625 Th, Arch 30, Melin C, 4 cr

R 8421 Heinrich von Kleist
823805 1430-1625 F, FolH 234, Schulte-Sasse J, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
032146 1-18 cr

R 8741 Gothic and Methods of Comparative Germanic Linguistics (prereq #)
623806 1325-1520 M, FolH 38, Liberman A, 4 cr

8777 Thesis Credits: Masters
040764 1-16 cr

R 8820 Advanced Theoretical Seminar: German Intellectual History (max 12 cr; prereq 8003 or #)
423807 1640-1835 W, FolH 38, Teraoka A, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
840930 1-36 cr

8990 Reading and Research (prereq #)
941003 3-6 cr

GERMANIC PHILOLOGY (GPhl)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
633218 1-18 cr

8777 Thesis Credits: Masters
132260 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
333083 1-36 cr

GRADUATE SCHOOL (Grad)

R 8100 Teaching in Higher Education (prereq #)
636555 —1 Smith J, 3 cr
934701 —2 Smith J, 3 cr
032521 —3 Smith J, 3 cr

R 8150 Practicum for Instructors in Higher Education (prereq 8100 or #) (S-N only)
722503 —1 Smith J, 3 cr
522504 —2 Smith J, 3 cr
322505 —3 Smith J, 3 cr

GREEK (Grk)
Classical & Near Eastern Studies
Liberal Arts

1101 Beginning Classical Greek (§1020)
132798 0905-0955 MTWThF, FolH 38, 5 cr

R 1104 Greek Prose (§3104; prereq 1103 or 2 yrs high school Greek or Δ)
641108 1325-1415 MTWThF, FolH 309, Hershbell J, 5 cr

R 3104 Greek Prose (§1104; prereq 3052 or 3002 or equiv or #)
439408 1325-1415 MTWThF, FolH 309, Hershbell J, 5 cr

3951 Major Project (prereq Grk-Lat or Grk maj, three 3xxx courses in Greek or #) (A-F only)
338915 5 cr

3960H Honors Tutorial (prereq Δ)
335240 5 cr

3970 Directed Studies (prereq #, Δ, ⊔)
730164 1-5 cr

R 5390 Greek Literature: Romance (max 12 cr)
823674 1430-1520 MWF, FolH 138, Keuls E, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
140352 1-5 cr

5980 Directed Teaching (prereq #, Δ, CLA approval)
533924 ar cr

5990 Directed Research (prereq #, Δ, CLA approval)
541053 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
340034 1-18 cr

8777 Thesis Credits: Masters
731993 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
531316 1-36 cr

HEALTH INFORMATICS (HInf)
Laboratory Medicine and Pathology
Medical School

5430 Health Informatics I: Computer Applications in Health Care (prereq elem algebra, prog, stat, or #)
133991 1115-1205 MTWTh, PWB 6224, Gatewood L, 4 cr

5434 Computer Methodology in the Delivery of Health Care II: Introduction to Medical Decision Making Techniques (prereq 5432 or PubH 5452 or #)
137829 1115-1230 TTh, PWB 6210, Connelly D, Hillson S, 3 cr

R 5436 Seminar: Health Informatics (S-N only)
029909 —1 1535-1625 Th, MechE 102, Ellis L, 1 cr

5470 Topics in Health Informatics (prereq #)
438694 ar cr

8405 Advanced Topics in Health Informatics I (prereq 5432, 5435, 5452 or #)
322844 1320-1450 MW, PWB 6210, 3 cr

8449 Advanced Readings in Health Informatics (prereq 5432, PubH 5434, #)
740547 1-3 cr

8450 Research in Health Informatics (prereq #)
137175 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
130131 1-18 cr

8777 Thesis Credits: Masters
235506 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
331415 1-36 cr

HEALTH SCIENCE UNITS (HSU)
Health Sciences

5009 Multidisciplinary Perspectives on Aging (§AdEd 5440, CPsy 5305, Nurs 5780, Phar 5009, PA 5414, PubH 5737, Soc 5960, SW 5024)
237448 1640-1825 MW, MoosT 2690, 4 cr

R 5018 Computer Applications in Health Services (§CLS 5346, HInf 5430; prereq health sciences student or #)
829426 1115-1205 MTWTh, PWB 6224, Gatewood L, 4 cr

R 5027 Human Sexual Behavior (§FSoS 5001; prereq upper division, 12 cr in social, behavioral or health science or grad in behavioral, social, educational, health science or human service prog or #)
023236 1545-1755 TTh, GrnH 110, Maddock J, 5 cr

5210 Terminology of the Health Sciences
936349 2 cr (pick up orientation schedule in HSUnitF 5-120 before 1st day of qtr)

HEBREW (Hebr)
Classical & Near Eastern Studies
Liberal Arts

1012 Beginning Hebrew for Students with Prior Exposure (§1101-1102-1103, total 15 cr for students who complete the sequence)
131487 1325-1415 MTWThF, Arch 15, Paradise J, 5 cr

1101 Beginning Hebrew (prereq # if Hebr studied previously)
832004 1325-1415 MTWThF, NichH 122, Reinberg M, 5 cr

3011 Intermediate Hebrew (prereq 1103, qualified freshman or #)
630920 1010-1100 MTWThF, FolH 426, Shendar J, 5 cr

3015 Advanced Modern Hebrew (prereq 3013 or #)
132176 1115-1205 MWF, FolH 426, Shendar J, 4 cr

3980 Directed Instruction (prereq #, Δ, ❑)
238941 1-5 cr

5970 Directed Readings (prereq 3013, #, Δ, CLA approval)
430935 ar cr

5990H Honors Course: Research (prereq 5970, #, Δ, CLA approval)
631288 ar cr

HINDI (Hndi)
Linguistics & Asian & Slavic Languages & Literatures
Liberal Arts

R 1101 Beginning Hindi
133756 0905-0955 MTWThF, PeikH 155, 5 cr

R 5131 Intermediate Hindi (prereq 1103 or 5103 or #)
533955 1325-1450 MWF, KlaCt 186, 5 cr

HISTORY (Hist)
Liberal Arts

R 1011 Introduction to World History (Hist; IP)
★LECT 0945-1100 TTh, WilleyH 125, Reyerson K
432118 —1 REC 0800-0850 MW, BlegH 230, 5 cr
029697 —2 REC 1220-1310 MW, BlegH 120, 5 cr
438730 —3 REC 1325-1415 MW, BlegH 230, 5 cr
140875 —4 REC 1325-1415 MW, BlegH 155, 5 cr
940014 —5 REC 1430-1520 MW, BlegH 230, 5 cr
032258 —6 REC 0800-0850 TTh, BlegH 350, 5 cr
629444 —7 REC 1220-1310 TTh, BlegH 340, 5 cr
035564 —8 REC 1325-1410 TTh, BlegH 230, 5 cr
329552 —9 REC 0905-0955 WF, BlegH 140, 5 cr
935296 —10 REC 1325-1415 WF, BlegH 145, 5 cr
523815 —11 REC 1220-1310 WF, BlegH 135, 5 cr
829703 —12 REC 1430-1520 WF, BlegH 250, 5 cr

R 1011H Honors: Introduction to World History
★LECT 0945-1100 TTh, WilleyH 125, Reyerson K
331740 —80 REC 1220-1310 TTh, HHHCtr 30, 5 cr

R 1031 Introduction to European Civilization: The Medieval Centuries (§1022) (Hist; IP)
★LECT 1245-1400 TTh, BlegH 5, Hanawalt B
135328 —1 REC 0800-0850 MW, BlegH 235, 5 cr
429736 —2 REC 1325-1415 MW, BlegH 330, 5 cr
032910 —3 REC 1430-1520 MW, BlegH 135, 5 cr
233528 —4 REC 0800-0850 TTh, BlegH 340, 5 cr
136650 —5 REC 1430-1520 TTh, BlegH 130, 5 cr
539738 —6 REC 0905-0955 WF, BlegH 245, 5 cr
333066 —7 REC 1010-1100 WF, BlegH 135, 5 cr
434483 —8 REC 1325-1415 WF, BlegH 235, 5 cr

R 1031H Honors Course: Introduction to European Civilization
★LECT 1245-1400 TTh, BlegH 5, Hanawalt B
438906 —80 REC 0945-1100 TTh, BlegH 350, Hanawalt B, 5 cr

R 1301 American History (§1301H) (Hist; CD)
★LECT 0905-0955 MWF, WilleyH 175, Ruggles S
823822 —1 REC 0800-0850 MW, BlegH 335, 5 cr
623823 —2 REC 0800-0850 MW, BlegH 340, 5 cr
423824 —3 REC 1115-1205 MW, BlegH 130, 5 cr
223825 —4 REC 1220-1310 MW, BlegH 115, 5 cr
123826 —5 REC 1325-1415 MW, BlegH 335, 5 cr (MLK stu only)
923827 —6 REC 1430-1520 MWF, BlegH 235, 5 cr
723828 —7 REC 0800-0850 TTh, BlegH 135, 5 cr
523829 —8 REC 0800-0850 TTh, BlegH 105, 5 cr
923830 —9 REC 0905-0955 TTh, BlegH 140, 5 cr
723831 —10 REC 1010-1100 TTh, BlegH 140, 5 cr
523832 —11 REC 1010-1100 TTh, HHHCtr 20, 5 cr
323833 —12 REC 1010-1100 TTh, BlegH 260, 5 cr
123834 —13 REC 0800-0850 WF, BlegH 330, 5 cr
023835 —14 REC 0800-0850 WF, BlegH 140, 5 cr
823836 —15 REC 1220-1310 WF, BlegH 140, 5 cr

R 1301H Honors Course: American History (§1301)
★LECT 0905-0955 MWF, WilleyH 175, Ruggles S
223842 —80 REC 1220-1415 W, BlegH 350, Ruggles S, 5 cr

3051 Ancient Civilization (§1051) (Hist; C/PE)
337876 1245-1400 TTh, BlegH 150, Kelly T, 4 cr

R 3151 History of the British Isles (Hist; C/PE)
★LECT 1115-1205 MWF, BlegH 150, Lehmberg S
338770 —1 REC 1010-1100 M, HHHCtr 30, 4 cr
737065 —2 REC 1220-1310 M, BlegH 330, 4 cr
633400 —3 REC 0905-0955 T, BlegH 105, 4 cr

3200 Selected Contemporary Problems in Historical Perspectives: The Mediterranean and the Modern World
123888 0945-1100 TTh, SocSci 1383, Saadallah B, 4 cr

3271 The Vikings at Home and Away (§Scan 3271)
435097 0905-0955 MWF, BlegH 145, 4 cr

3281 Intellectual and Cultural History of Modern Europe (§Hum 3281)
629525 1010-1100 MWF, BlegH 145, Thayer J, 4 cr

3347 Women in Colonial and Victorian America: 1600-1890 (CD)
334816 1245-1400 TTh, AndH 350, Norling L, 4 cr

R 3401 Survey of Latin American History: Colonial Period to 1800 (§1401, LAS 3401) (Hist; IP)
★LECT 1415-1530 TTh, AndH 230, Schwartz S
835629 —1 REC 1010-1100 M, BlegH 210, 4 cr
233450 —2 REC 1115-1205 T, BlegH 245, 4 cr
531669 —3 REC 1220-1310 T, BlegH 435, 4 cr
431194 —4 REC 0905-0955 W, BlegH 350, 4 cr

R 3431 History of Africa to 1800 (§1431, Afro 3431) (Hist; IP)
★LECT 0945-1100 TTh, BlegH 155, Allman J
634577 —1 REC 1010-1100 M, BlegH 230, 4 cr
336453 —2 REC 1115-1205 T, BlegH 230, 4 cr
123843 —3 REC 0800-0850 Th, BlegH 335, 4 cr

3451 Survey of Civilizations in Ancient Asia (§1451, 1451H)
223887 1245-1400 TTh, BlegH 230, Kopf D, 4 cr

R 3462 Introduction to East Asia: The Imperial Age (§1462, EAS 1462) (Hist; IP)
★LECT 1115-1205 MWF, BlegH 155, Waltner A
624812 —1 REC 1010-1100 M, BlegH 140, 4 cr
424813 —2 REC 1220-1310 M, BlegH 140, 4 cr
224814 —3 REC 1115-1205 T, BlegH 140, 4 cr
124815 —4 REC 1010-1100 W, BlegH 140, 4 cr
924816 —5 REC 1115-1205 Th, BlegH 140, 4 cr
724817 —6 REC 1010-1100 F, BlegH 140, 4 cr

3467 The Nationalist Revolution in China, 1900 to Present (§5467, EAS 3467)
330605 0945-1100 TTh, BlegH 120, Farmer E, 4 cr

R 3471 Twentieth Century Japan (§5471, EAS 3471) (IP)
523863 1115-1230 TTh, BlegH 145, Marshall B, 4 cr

3481 Classical and Hindu India
323864 0815-0930 TTh, BlegH 330, Kopf D, 4 cr

3541 History of the Arabs: 500-800 (§MidE 3541)
123865 0945-1100 TTh, BlegH 215, Farah C, 4 cr

3615 Women in European History, 1500 to the Present (Hist)
023866 1245-1400 TTh, BlegH 260, Pomata G, 4 cr

3623 The Reformation in Germany
440476 0800-0850 MWF, BlegH 415, Tracy J, 4 cr

3633 History of Germany: Empire to Hitler, 1848-1945
823867 0815-0930 TTh, BlegH 235, Schissler H, 4 cr

3721 Europe in the Era of World War I (IP)
123851 0905-0955 MWF, AndH 330, Munholland K, 4 cr

3821 United States in the 20th Century: 1900-1932
040196 1010-1100 MWF, BlegH 10, Spear A, 4 cr

3835 History of Civil Liberties and Civil Rights in the United States
423869 1010-1100 MWF, BlegH 155, Murphy P, 4 cr

3837 Minnesota History
133336 0905-0955 MWF, BlegH 235, Berman H, 4 cr

3851 American Labor History in the 19th Century
823870 1115-1205 MWF, BlegH 135, Berman H, 4 cr

3864 Afro-American History (§Afro 3864)
623871 1220-1310 MWF, BlegH 130, Dillard A, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 3871 American Indian History: Pre-Contact to 1830 (§AmIn 3111) (CD)
035337 —1 1220-1310 MWF, AndH 350, 4 cr
529906 —2 1245-1400 TTh, NichH 213, O'Brien J, 4 cr

3910 Topics in American History: Rise and Fall of Political Parties in America
423872 0945-1100 TTh, BlegH 335, Howe J, 4 cr

R 3955 Introduction to Historical Research (prereq Δ, to be taken prior to 3961)
138469 —1 1325-1520 M, BlegH 350, Spear A, 4 cr
038481 —2 1325-1520 T, BlegH 225, 4 cr
631078 —3 1325-1520 W, Maynes M J, 4 cr
535897 —4 1010-1205 Th, Bachrach B, 4 cr

R 3961 Major Paper (prereq Δ)
535611 —1 1010-1205 M, HHHCtr 60, 5 cr
934116 —2 1325-1520 W, BlegH 105, Brauer K, 5 cr

3970 Directed Studies (prereq #, Δ, ⊔)
736045 1-15 cr

3990 Directed Research (prereq #, Δ, ⊔)
234226 1-15 cr

5061 History of Greece to 600 B.C.
031823 1115-1230 TTh, BlegH 130, Kelly T, 4 cr

5284 Diplomatic History of Europe, 1848-1900
123874 1115-1230 TTh, AndH 230, Kieft D, 4 cr

5331 American Constitutional History
923875 1115-1230 TTh, BlegH 155, Murphy P, 4 cr

5337 Criminal Justice in American History (prereq jr, sr or grad) (C/PE)
723876 0945-1100 TTh, HHHCtr 25, Samaha J, 4 cr

R 5467 The Nationalist Revolution in China, 1900 to Present (§3467, EAS 3467)
830608 0945-1100 TTh, BlegH 120, Farmer E, 4 cr

5473 Family, School, and Work in Modern Japanese History
639195 1245-1400 TTh, BlegH 335, Marshall B, 4 cr

5620 Selected Topics in Medieval History: Women and Property in Medieval Europe (prereq 1 yr of medieval hist or equiv, reading knowledge of appropriate foreign lang, #) (A-F only)
924623 1325-1520 T, BlegH 350, Reyerson K, 4 cr

R 5651 Proseminar: English History: Tudor and Stuart Periods (5651-5652-5653; prereq #)
523877 1325-1520 Th, BlegH 350, Lehmberg S, 4 cr

R 5721 Proseminar: Europe in the 20th Century (5721-5722†; prereq #)
323878 1535-1720 T, BlegH 350, Munholland K, 4 cr

R 5764 New Interpretations and Approaches in Russian History (prereq #)
123879 1325-1520 W, NichH 209A, Noonan T, Stavrou T, 4 cr

R 5791 Social History of Modern Europe since 1750 (prereq #)
523880 1325-1520 T, BlegH 205, Rudolph R, 4 cr

R 5816 The Beginnings of American Politics (prereq #)
323881 1535-1735 T, SocSci 101, Howe J, 4 cr

R 5857 Proseminar: Social History of American Women (5857-5858†; prereq #)
035886 1535-1730 W, BlegH 225, Norling L, 4 cr

R 5890 Topics in American Indian Social History (prereq #)
634014 1325-1520 W, HHHCtr 60, O'Brien J, 4 cr

R 5901 Proseminar: Latin American History (prereq reading knowledge of Spanish, #)
538105 1325-1520 T, SocSci 101, Schwartz S, 4 cr

R 5932 Proseminar: African Historiography (prereq #)
123882 1325-1520 W, SocSci 1383, Isaacman A, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
333956 —1 1-15 cr
032423 —2 1-15 cr

5990 Directed Research (prereq #, Δ, CLA approval)
333813 —1 1-15 cr
235716 —2 1-15 cr

8015 Scope and Methods of Historical Studies (prereq #)
★LECT 1325-1730 Th, BlegH 415, Green G, Rudolph R
035063 —1 REC 1325-1515 M, BlegH 205, Rudolph R, 4 cr
541084 —2 REC 1325-1515 T, BlegH 110, Green G, 4 cr

8111 Medieval History (8111-8112-8113; prereq #)
023883 1325-1520 W, SocSci 680, Bachrach B, 3 cr

8121 Renaissance History (prereq #)
823884 1325-1520 W, BlegH 130, Tracy J, 3 cr

8240 Gender, Race, Class, and/or Ethnicity in America (§AmSt 8240; max 12 cr; prereq 8239 or # or Δ) (A-F only)
623885 1535-1735 T, BlegH 335, Roediger D, 4 cr

8464 Research in Late Imperial China: Yuan, Ming and Qing (prereq reading knowledge of Chinese, #)
423886 1325-1520 F, SocSci 101, Waltner A, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
131828 1-18 cr

8777 Thesis Credits: Masters
936772 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
440672 1-36 cr

8970 Directed Studies (prereq #)
829894 —1 1-15 cr
637785 —2 1-15 cr

8990 Directed Research (prereq #)
134042 —1 1-15 cr

HISTORY OF MEDICINE (HMed)
Medical School

R 3040 Human Disease and the Environment in History (Hist; Envt)
★LECT 1010-1100 MW, FordH 285, Eyler J
537875 —1 REC 1325-1415 W, FordH 60, 4 cr
823125 —2 REC 1010-1100 Th, FordH 160, 4 cr
732139 —3 REC 1115-1205 Th, FordH 40, 4 cr

3401 Early History of Medicine: The Classical Tradition (Hist) (A-F only)
336338 0905-0955 MWF, FordH 150, Wilson L, 4 cr

8630 Directed Study (prereq #)
032745 Wilson L, 3-15 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
931524 1-18 cr

8777 Thesis Credits: Masters
136230 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
932883 1-36 cr

HISTORY OF SCIENCE AND TECHNOLOGY (HSci)
Institute of Technology

R 1711 Technology and Western Civilization: Ancient and Medieval (§3711) (Hist; IP)
★LECT 1325-1415 MWF, SciCB 175, Layton E
135457 —1 REC 1010-1100 T, FordH 115, 4 cr
933516 —2 REC 1325-1415 T, AkerH 215, 4 cr
537455 —3 REC 1325-1415 T, AmundH 156, 4 cr
538315 —4 REC 1430-1520 T, VinH 1, 4 cr
937159 —5 REC 1010-1100 W, LindH 305, 4 cr
132865 —6 REC 1115-1205 W, MechE 202, 4 cr
133554 —7 REC 1220-1310 W, MechE 202, 4 cr
923892 —8 REC 1010-1100 Th, FordH 115, 4 cr
123891 —9 REC 1115-1205 Th, LindH 305, 4 cr
223890 —10 REC 1325-1415 Th, AmundH 156, 4 cr
523894 —11 REC 1430-1520 Th, MechE 221, 4 cr
323895 —12 REC 1115-1205 F, MechE 202, 4 cr

R 1811 Introduction to History of Science: Ancient (§3811) (Hist; IP)
★LECT 0905-0955 MWF, SciCB 175, Shapiro A
331379 —1 REC 1115-1205 M, LindH 305, 4 cr
231729 —2 REC 1430-1520 M, MechE 202, 4 cr
931586 —3 REC 0905-0955 T, FordH 40, 4 cr
230242 —4 REC 1010-1100 T, FordH 150, 4 cr
929840 —5 REC 1325-1415 T, VinH 1, 4 cr
629704 —6 REC 1325-1415 W, LindH 305, 4 cr
823898 —7 REC 1430-1520 W, FordH 70, 4 cr
023897 —8 REC 0905-0955 Th, FordH 40, 4 cr
623899 —9 REC 1010-1100 Th, FordH 60, 4 cr
123901 —10 REC 1220-1310 Th, FordH 40, 4 cr
023902 —11 REC 1010-1100 F, LindH 305, 4 cr
823903 —12 REC 1325-1415 F, MechE 202, 4 cr

R 3331 Technology and American Culture (Hist; CD)
723909 1245-1400 TTh, Arch 20, Norberg A, 4 cr

3401 Engineering Ethics in Historical Perspective (§HSci 5401) (C/PE)
436928 0905-0955 MWF, MurH 311, Layton E, 4 cr

R 3711 Technology and Western Civilization: Ancient and Medieval (§1711) (Hist; IP)
★LECT 1325-1415 MWF, SciCB 175, Layton E
536239 —1 REC 1010-1100 T, FordH 115, 4 cr
433348 —2 REC 1325-1415 T, AkerH 215, 4 cr
238437 —3 REC 1325-1415 T, AmundH 156, 4 cr
135126 —4 REC 1430-1520 T, VinH 1, 4 cr
539495 —5 REC 1010-1100 W, LindH 305, 4 cr
941017 —6 REC 1115-1205 W, MechE 202, 4 cr
330328 —7 REC 1220-1310 W, MechE 202, 4 cr
523913 —8 REC 1010-1100 Th, FordH 115, 4 cr
723912 —9 REC 1115-1205 Th, LindH 305, 4 cr
923911 —10 REC 1325-1415 Th, AmundH 156, 4 cr
323914 —11 REC 1430-1520 Th, MechE 221, 4 cr
123915 —12 REC 1115-1205 F, MechE 202, 4 cr

R 3811 Introduction to History of Science: Ancient (§1811) (Hist; IP)
★LECT 0905-0955 MWF, SciCB 175, Shapiro A
239894 —1 REC 1115-1205 M, LindH 305, 4 cr
741018 —2 REC 1430-1520 M, MechE 202, 4 cr
132226 —3 REC 0905-0955 T, FordH 40, 4 cr
532742 —4 REC 1010-1100 T, FordH 150, 4 cr
138706 —5 REC 1325-1415 T, VinH 1, 4 cr
134471 —6 REC 1325-1415 W, LindH 305, 4 cr
023916 —7 REC 1430-1520 W, FordH 70, 4 cr
823917 —8 REC 0905-0955 Th, FordH 40, 4 cr
623918 —9 REC 1010-1100 Th, FordH 60, 4 cr
423919 —10 REC 1220-1310 Th, FordH 40, 4 cr
223923 —11 REC 1010-1100 F, LindH 305, 4 cr
123924 —12 REC 1325-1415 F, MechE 202, 4 cr

5050 Special Topics in History of Science: Women, Gender, and Science (prereq upper div or grad stu)
024922 0945-1100 TTh, Phys 157, Kohlstedt S, 4 cr

5242 The Darwinian Revolution (prereq Biol 1009 or 1101 or #)
623921 1115-1230 TTh, MurH 311, Beatty J, 4 cr

5331 Technology and American Culture (CD)
823920 1115-1230 TTh, MurH 308, Norberg A, 4 cr

5401 Engineering Ethics in Historical Perspective (§HSci 3401) (C/PE)
234761 0905-0955 MWF, MurH 311, Layton E, 4 cr

5924 History of 19th-Century Physics (§Phys 5924; prereq general physics or #)
423922 1640-1755 TTh, Phys 236A, Stuewer R, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
932091 1-15 cr

5990 Directed Research (prereq #, Δ, CLA approval)
130766 1115-1315 F, MechE 138, 1-15 cr

R 8121 Foundations for Research in Ancient Science (prereq grad major or minor in HSci or #) (A-F only)
629864 1535-1705 M, WaLib 435, Shapiro A, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
930213 1-18 cr

8777 Thesis Credits: Masters
232833 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
338896 1-36 cr

8920 Seminar: History of Biological Sciences (prereq #)
232587 4 cr

8930 Seminar: History of Technology (prereq #)
230533 —1 1600-1830 T, LindH 320, Norberg A, 4 cr
432586 —2 1430-1630 W, MechE 207, Layton E, 4 cr

R 8970 Directed Study (max 15 cr; prereq #)
733663 1220-1310 W, PillsH 121, Kohlstedt S, 1 cr

8990 Directed Research (max 15 cr; prereq #)
634109 1-5 cr

HONORS COLLOQUIA (HCol)

Honors Program
Liberal Arts

R 1001 Honors Colloquium: Introduction to the Arts and Sciences (prereq fr, regis honors div) (S-N only)
733890 —1 1325-1520 M, MdbH 131, 2 cr
637687 —2 0905-1100 T, MdbH 131, 2 cr
332242 —3 1220-1415 T, MdbH 131, 2 cr
635020 —4 1325-1520 W, MdbH 131, 2 cr
731234 —5 1220-1415 Th, MdbH 131, 2 cr
736143 —6 1325-1520 F, MdbH 131, 2 cr

R 1010 Animal Research for Human Health (prereq fr or soph, regis honors div)
432328 1220-1415 W, JohH 101, Peter Santi, 2 cr

R 1020 Faces of the Earth (prereq fr or soph, regis honors div)
237403 1010-1205 W, PillsH 121, Subir Banerjee, 2 cr

R 1030 "An Assemblage of Societies": American Federalism and Social Responsibility (prereq fr or soph, regis honors div)
631033 1325-1520 M, FordH 50, Stacy Hunter Hecht, 2 cr

R 1040 The Internet: Issues and Implications (prereq fr or soph, regis honors div)
523507 —1 1245-1430 T, JohH 101, Jennifer McGee, 2 cr
323508 —2 1245-1430 Th, JohH 101, Jennifer McGee, 2 cr

R 1050 Introduction to Psychopharmacology (prereq fr or soph, regis honors div)
937775 1010-1205 T, AmundH 158, F S Abuzzahab, 3 cr

R 1060 Contemporary Perspectives on the European Union (prereq fr or soph, regis honors div)
823934 1010-1205 F, HHHCtr 60, Linda McCarthy, 2 cr

1970 Honors Colloquium: Directed Studies (prereq fr or soph, regis honors div, #, Δ)
734182 1-4 cr

HONORS SEMINAR (HSem)

Honors Program
Liberal Arts

R 3010 Information Democracy: Linking Questions of Access, Privacy, and Censorship (prereq jr or sr, reg honors div)
032180 1325-1520 MW, MurH 311, Nancy Rohde, 4 cr

R 3020 The Visual World of the Infant (prereq jr or sr, reg honors div)
235649 0945-1100 TTh, ChDev 108, Albert Yonas, 4 cr

R 3030 The Rhetoric of the Internet (prereq jr or sr, reg honors div)
037251 1430-1600 MW, JohH 101, L David Schuelke, 4 cr

R 3040 How Common is Extraterrestrial Life? (prereq jr or sr, reg honors div)
138902 1430-1600 MW, Phys 157, J Woods Halley, 4 cr

R 3050 Honors Seminar (prereq jr or sr, reg honors div)
022944 4 cr

3970 Honors Seminar: Directed Studies (prereq jr, sr, reg honors div, #, Δ)
939476 1-5 cr

HORTICULTURAL SCIENCE (Hort)

Agricultural, Food, and Environmental Sciences

R 1021 Woody Plant Materials
★LECT 1220-1310 TTh, HodsonH 495, Zins M
134297 —1 LAB 1010-1205 TTh, AlderH 423, Zins M, 5 cr
839471 —2 LAB 1325-1520 TTh, AlderH 423, Zins M, 5 cr

R 1036 Plant Propagation (Biol/L)
★LECT 1710-1800 TTh, HrG 172, 174, Ascher P
934908 —1 LAB 1500-1655 TTh, HrG 172, 174, 5 cr
640735 —2 LAB 1815-2015 TTh, HrG 172, 174, Ascher P, 5 cr

R 3003 Plant Genetics and Improvement (prereq Biol 1009) (Biol/L)
★LECT 0905-0955 MWF, HrG 172, Luby J
436038 —1 LAB 1115-1310 Th, HrG 172, 174, Luby J, 4 cr

3097 Horticulture Practicum (prereq upper division horticulture emphasis or sequence, Δ) (S-N only)
037363 2-4 cr

5000 Professional Experience Program (prereq #) (S-N only)
235408 4 cr

5001 Harvest to Market of Horticultural Crops (prereq PBio 3131)
★LECT 1010-1100 MW, AlderH 152, Li P
435259 —1 LAB 1010-1205 F, AlderH 152, Tong C, 3 cr

R 5026 Landscape Management (prereq completion of 75 percent landsc, nurs, and turf sequence, and bus enrich requirmnts) (A-F only)
839955 0905-1205 MW, AlderH 405, Pedersen B, 4 cr

5042 Turf Grass Science (prereq 3001, 3072, PBio 3131, PlPa 5001)
★LECT 1010-1205 TTh, AlderH 405, White D
829717 —1 LAB 1220-1625 Th, AlderH 405, White D, 5 cr

5046 Nursery Management I (5046-5047-5048†; prereq 1021, 1036)
★LECT 0800-0955 TTh, AlderH 415, Swanson B
039615 —1 LAB 1220-1625 T, HrG 172, Swanson B, 4 cr

R 5055 Commercial Floriculture Production Systems (prereq 1036, 3002, PBio 3131 or #)
★LECT 0800-0850 MWF, AlderH 415, Strefeler M
137371 —1 LAB 1220-1415 MF, HrG 172, 5 cr

5091 Directed Studies (prereq 8 cr upper division hort course, Δ)
531008 2-6 cr

8000 Supervised Teaching Experience in Horticulture (§Soil 8000, Agro 8000; prereq #) (S-N only)
340261 1220-1415 M, BorH 491, Hoover E, 2 cr

8007 Extension Horticulture Practicum (max 6 cr; prereq 12 grad cr)
136759 1-5 cr

8042 Horticultural Seminar (S-N only)
131903 1535-1715 W, AlderH 415, 1 cr

8051 Advanced Problems in Horticultural Crop Breeding (prereq #)
135054 3-9 cr

8052 Advanced Problems in Physiology of Horticultural Crops (prereq #)
638175 3-9 cr

8060 Discussions in Potato Research
138178 Lauer F, 1 cr

8062 Discussions in Plant Hardiness (prereq #)
533308 1220-1310 F, AlderH 398, Li P, 1 cr

8063 Discussions in Plant Breeding (prereq #)
731945 1430-1520 Th, AlderH 394, Luby J, 1 cr

8066 Discussione in Horticulturel Research (S-N only)
433415 1605-1655 Th, AlderH 394, Smith A, 1 cr

8090 Graduate Horticultural Research (prereq Δ) (S-N only)
834450 1-18 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
638371 1-18 cr

8777 Thesis Credits: Masters
933306 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
232850 1-36 cr

HUMAN ECOLOGY (HE)

Human Ecology

R 1191 Career Planning Strategies (S-N only)
136227 1325-1510 W, McNH 10, Exline J, 2 cr

5003 Field Experience (max 15 cr; prereq #)
738541 Yust B, 1-5 cr

5130 Independent Study in Home Economics (max 16 cr; prereq #)
132419 1-5 cr

HUMAN RESOURCE DEVELOPMENT (HRD)

Work, Community, and Family Education
Education and Human Development

R 5104 Survey: Human Resource Development and Adult Education (§AdEd 5104) (A-F only)
435925 1845-2205 M, VoTech R285, Peterson S, 4 cr

R 5261 Sales Training (§BIE 5261) (A-F only)
639102 1600-1830 Th, VoTech 135, Peterson S, 3 cr

R 5750 Personnel Training and Development (§VoEd 5750) (A-F only)
837557 1845-2205 M, VoTech R285, Swanson R, 4 cr

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- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5751 Motivational Training Practices (§VoEd 5751)
022880 1845-2115 M, VoTech R380, 3 cr

R 5760 Organization Development (§VoEd 5760) (A-F only)
233061 1845-2205 T, VoTech R280, 4 cr

R 5761 Team Building in Organizations
735090 0800-1300 S, VoTech R285, 3 cr (Oct 12-Nov 16)

R 5762 Management of Conflict (§VoEd 5762) (A-F only)
133862 1845-2115 W, VoTech R385, 3 cr

5780 Internship: Human Resource Development (max 15 cr; prereq 5750)
134552 Swanson R, ar cr

R 5793 International Human Resource Development
740886 1845-2205 Th, VoTech R285, McLean G, 4 cr

HUMANITIES (Hum)
Liberal Arts

1004 Humanities in the Modern West IV (§3004, Rhet 3381) (AH; IP)
837090 1115-1230 TTh, FordH 155, Kliger G, 4 cr

3004 Humanities in the Modern West IV (§1004, Rhet 3381; prereq jr or sr or #) (AH; IP)
740578 1115-1230 TTh, FordH 155, Kliger G, 4 cr

R 3027 Lyric Song in Medieval and Renaissance Culture (§Mus 3027; prereq non-music maj)
023303 1010-1205 TTh, FergH 115, Jackson D, 4 cr

3101 Foundations of Modern Education (§5101, EdPA 3101, EdPA 5101)
340227 1640-1910 M, WullH 140, Bagley A, 4 cr

3281 Intellectual and Cultural History of Modern Europe (§Hist 3281)
434029 1010-1100 MWF, BlegH 145, Thayer J, 4 cr

3910 Topics in the Humanities (prereq jr or sr or #)
323301 —1 1010-1125 MW, FordH 175, Liberman A, 4 cr (The Folktale)
123302 —2 1245-1400 TTh, BlegH 230, Kopf D, 4 cr (The West and the Orient: Perspectives on Each Other Since 1770)

5101 Foundations of Modern Education (§3101, EdPA 3101, EdPA 5101)
238101 1640-1910 M, WullH 140, Bagley A, 4 cr

5304 Theories of Ideology: Philosophical Views (prereq jr or sr or grad stu, or #)
823304 1430-1600 TTh, FordH 175, Kliger G, 4 cr

5910 Topics in the Humanities (prereq jr or sr or grad stu)
623305 —1 1010-1125 MW, FordH 175, Liberman A, 4 cr (The Folktale)
423306 —2 1245-1400 TTh, BlegH 230, Kopf D, 4 cr (The West and the Orient: Perspectives on Each Other Since 1770)

INDUSTRIAL ENGINEERING/ OPERATIONS RESEARCH (IEOR)
Mechanical Engineering Institute of Technology

R 3000 Introduction to Industrial Engineering Analysis (prereq IT stu, Math 1252)
532143 0905-0955 MWThF, MechE 18, Irani S, 4 cr

R 5010 Introduction to Work Analysis (prereq 3000, IT or grad)
137726 —1 1220-1410 TTh, MechE 108, Kvalseth T, 4 cr

R 5020 Engineering Cost Accounting, Analysis and Control (prereq 3000, IT or grad...ME 3900 rec)
423418 0800-0850 MWThF, MechE 202, Arora S, 4 cr

R 5030 Quality Engineering (prereq IT or grad stu, Math 1261, ME 3900...3000 rec)
524608 1430-1625 MW, Phys 210, Dooley K, 4 cr

R 5070 Introduction to Human Factors Engineering (prereq IT or grad or public health stu or #)
533664 1010-1150 TTh, Arch 15, Kvalseth T, 4 cr

R 5180 Applied Industrial Engineering (prereq 3000, 5010, 5020, 5030, 5040, #, Δ)
429932 3-5 cr

R 5181 Applied Industrial Engineering (prereq 3000, 5010, 5020, 5030, 5040, #, Δ)
732092 3-5 cr

5198H Industrial Engineering Upper Division Honor Thesis I (prereq upper div ME honors stu IEOR option)
435424 4 cr

5199H Industrial Engineering Upper Division Honor Thesis II (prereq upper div ME/IEOR option honors stu)
738782 4 cr

R 5254 Design Morphology with Applications (prereq completion of sequences ME 3201/3 or 5, ME 3303 or 5342, upper div mech engr maj)
★LECT 1325-1415 TTh, MechE 18
040019 —1 LAB 1325-1730 TTh, AmundH 240, 4 cr

R 5255 Engineering Design Project (prereq ME upper div stu, 5254)
★LECT 1325-1415 TTh, MechE 18
330488 —1 LAB 1325-1730 TTh, AmundH 240, 4 cr

R 5311 Management for Engineers (prereq 3000 or 5000, IT stu or grad)
324609 1220-1415 MW, MechE 321, Dooley K, 4-5 cr

R 5442 Operations Research III (prereq 5441, IT stu or grad)
135823 1115-1310 TTh, MechE 221, 4 cr

R 5445 Topics in Management Science (prereq 5010, 5020, 5030, 5040, IT stu or grad)
724610 1115-1310 MW, MechE 221, Irani S, 3-5 cr

R 5990 Topics in Industrial Engineering (prereq IT or grad stu...5010, 5020, 5030, 5040 rec)
524611 1115-1310 TTh, Arch 40, Benjaafar S, 4 cr

R 8410 Industrial Engineering Research (prereq #)
639651 3-5 cr

R 8411 Industrial Engineering Research (prereq 8410)
132839 3-5 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
233142 1-18 cr

8773 Graduate Seminar (S-N only)
131084 1535-1635 W, MechE 108, 1 cr

8774 Graduate Seminar (S-N only)
135451 1535-1635 W, MechE 108, 1 cr

8775 Graduate Seminar (S-N only)
129786 1535-1635 W, MechE 108, 1 cr

8777 Thesis Credits: Masters
339790 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
736241 1-36 cr

INDUSTRIAL RELATIONS (IR)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3002 Personnel and Industrial Relations (prereq 90 cr completed or in progress, Econ 1101, Econ 1102, Psy 1001) (A-F only)
436430 —1 0800-0945 MW, BlegH 255, 4 cr
937761 —2 1010-1155 MW, BlegH 255, 4 cr
440509 —3 0800-0945 TTh, BlegH 255, 4 cr

R 5002 Systems of Conflict and Dispute Resolution
936593 1730-2100 T, HHHCtr 60, 4 cr

R 5990 Independent Study in Personnel and Industrial Relations (prereq SMgt or grad SMgt approval)
830866 1-8 cr

R 8001 Introduction to Quantitative Methods and Techniques for Industrial Relations (prereq IR grad stu or Δ)
★LECT 1010-1155 MW, HHHCtr 15
340678 —1 LAB 1010-1155 F, HHHCtr 15, 4 cr
★LECT 0800-0945 TTh, HHHCtr 15
733484 —2 LAB 0800-0945 F, HHHCtr 15, 4 cr

R 8002 An Introduction to Industrial Relations (§3002; prereq Econ 1101, 1102, Psy 1001, IR MA student or Δ)
039937 —1 1535-1720 MW, HHHCtr 15, 4 cr
429980 —2 1535-1720 TTh, HHHCtr 15, 4 cr

R 8003 Staffing, Training and Development (prereq 8002 or #, IR grad maj or Δ, IR grad maj must reg A-F)
031126 1730-2100 M, HHHCtr 15, 4 cr

R 8004 Design and Management of Organizations for a Changing World (prereq 8002 or #, IR grad maj or Δ, IR grad maj must reg A-F)
437688 —1 1325-1510 MW, HHHCtr 15, 4 cr
139810 —2 1010-1155 TTh, HHHCtr 15, 4 cr

R 8005 Compensation and Reward Theory and Programs (prereq 8002 or #, IR grad maj or Δ, IR grad maj must reg A-F)
139203 1325-1510 TTh, HHHCtr 15, 4 cr

R 8006 Introduction to Labor Market Analysis (prereq 8002 or #, IR grad maj or Δ, IR grad maj must reg A-F)
440803 1730-2100 W, BlegH 260, 4 cr

R 8007 Collective Bargaining: Private and Public Sectors (prereq 8002 or #, IR grad maj or Δ, IR grad maj must reg A-F)
833122 1730-2100 Th, HHHCtr 15, 4 cr

R 8011 Intermediate Quantitative Methods and Techniques for Industrial Relations (prereq 8001, IR grad stu, or Δ) (A-F only)
★LECT 1730-2100 M, BlegH 330
738247 —1 LAB 1730-2100 W, HHHCtr 15, 4 cr

R 8012 Industrial Relations Systems (prereq complet of core sequence in IR or #, IR grad maj or Δ, IR grad maj mus reg A-F)
133800 1730-2100 M, BlegH 260, 4 cr

R 8013 Staffing and Selection: Strategic and Operational Concerns (prereq 8003 or #, IR grad maj or Δ, IR grad maj must reg A-F)
230161 1730-2100 M, HHHCtr 60, 4 cr

R 8014 Organizational Structure and Environmental Systems (prereq 8004 or #, IR grad maj or Δ, IR grad maj must reg A-F)
837011 1730-2100 W, HHHCtr 20, 4 cr

R 8017 Labor Movements in a Changing World (prereq 8007 or #, IR grad maj or Δ, IR grad maj must reg A-F)
637012 1730-2100 T, HHHCtr 15, 4 cr

R 8023 Employee Training: Creating a Learning Organization (prereq 8003 or #, IR grad maj or Δ, IR grad maj must reg A-F)
137362 1730-2100 Th, HHHCtr 60, 4 cr

R 8037 Labor-Management Negotiations (prereq 8007 or #, IR grad maj or Δ, IR grad maj must reg A-F)
134468 1730-2100 Th, BlegH 350, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
436184 1-18 cr

R 8777 Thesis Credits: Masters
438808 1-16 cr

R 8804 Seminar: Organization Theory (prereq 8004 or #, IR PhD maj or Δ)
130749 1325-1655 W, BlegH 205, 4 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
735445 1-36 cr

R 8990 Independent Study in Industrial Relations (prereq #, IR grad maj must reg A-F)
429798 ar cr

INFORMATION AND DECISION SCIENCES (IDSc)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3030 Information Systems and Information Management (prereq OMS 1020) (A-F only)
★LECT 0815-0930 TTh, BlegH 130
536077 —1 LAB 0945-1045 Th, BlegH 90, 4 cr
439621 —2 LAB 1100-1200 Th, BlegH 90, 4 cr
★LECT 0945-1100 TTh, BlegH 130
936044 —3 LAB 1215-1315 Th, BlegH 90, 4 cr
837980 —4 LAB 1330-1430 Th, BlegH 90, 4 cr
★LECT 1245-1400 TTh, BlegH 130
038707 —5 LAB 1445-1545 Th, BlegH 90, 4 cr
129920 —6 LAB 1600-1700 Th, BlegH 90, 4 cr

R 8110 Individual Productivity with Information Technology (§8103) (A-F only)
331530 1730-2100 W, BlegH 335, 4 cr

R 8120 Organizational Productivity with Information Technology (§8102) (A-F only)
223422 1010-1155 MW, BlegH 330, 4 cr

R 8450 Telecommunications (prereq MBA 8025 or equiv or #) (A-F only)
333634 1730-2100 Th, BlegH 335, 4 cr

R 8500 Conceptual and Research Introduction to Information and Decision Sciences (prereq PhD student or #) (A-F only)
734487 1010-1205 MW, SocSci 101, 4 cr

R 8503 Cognitive Science Research and Theory in the Information and Decision Sciences (prereq PhD stu or #) (A-F only)
432166 1430-1730 W, BlegH 350, 4 cr

R 8599 Seminar in Information and Decision Sciences Topics (prereq PhD student or #) (A-F only)
229284 1325-1625 T, BlegH 245, 4 cr

8990 Readings in Information and Decision Sciences (prereq PhD stu, #) (A-F only)
729676 ar cr

8995 Graduate Research in Information and Decision Sciences (prereq PhD stu, #) (A-F only)
032955 ar cr

INSURANCE (Ins)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 5230 Life Contingencies I (§Math 5057; prereq Math 1211, Math 1221 plus Math 1231 or Math 1131 or #, one qtr course in probability or stat)
535379 1325-1415 MWF, VinH 113, 4 cr

8990 Readings in Risk Management and Insurance (prereq consent of advisor, #, grad SMgt approval)
930910 ar cr

8995 Graduate Research in Risk Management and Insurance (prereq grad SMgt approval)
434967 ar cr

INTERDEPARTMENTAL STUDY (ID)
Liberal Arts

R 1011 Career Exploration and Planning (§Psy 1011)
624549 —1 1220-1415 T, LindH 303, 2 cr
024550 —2 1010-1205 W, Arch 35, 2 cr
824551 —3 1325-1520 Th, SmithH 231, 2 cr

3101 An Introduction to Marxism
123423 0945-1100 TTh, Arch 60, Marquit E, 4 cr

3170 HECUA Off-Campus Study Program: Metro Urban Studies Term (prereq #)
939557 24 cr

R 3205 Community, Service, and Self (3205-3206-3207†; prereq Δ) (C/PE; CD; practicum)
140102 1220-1350 W, AkerH 309, Rubright D, 2 cr

R 3211 Internship: Perspectives on Work (prereq acceptance into internship program in Office for Special Learning Opportunities, Δ)
624552 1535-1730 W, FolH 344, Stebleton M, 6 cr

R 3925 Strategic Career Planning (§Jour 3925; prereq CLA jr or sr or #; non-jour stu should reg for Jour 3925)
931118 0905-1100 F, FolH 312, 2 cr

3970 Directed Studies (prereq consult with Office for Special Learning Opportunities, JohH 220, Δ)
431261 1-15 cr

INTERDISCIPLINARY ARCHEOLOGICAL STUDIES (InAr)
Liberal Arts

5970 Directed Studies
537925 4 cr

8001 Method and Theory in Archaeology (prereq InAr maj or #)
334945 1220-1415 M, FordH 60, Arnold B, 4 cr

8200 Directed Readings (prereq Δ)
432300 ar cr

8300 Directed Research (prereq Δ)
732982 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
239507 1-18 cr

8777 Thesis Credits: Masters
234405 1-16 cr

8888 Thesis Credit: Doctoral (max 18 cr per quarter)
529890 1-36 cr

INTERDISCIPLINARY MEDICINE (InMd)
Medical School

5000 Independent Study, Student Status (prereq regis med, Medical School Student Affairs Office approval)
532997 0 cr

5001 Directed Study I (prereq regis med, Medical School Student Affairs Office approval)
431583 0 cr

5002 Directed Study II (prereq regis med, Medical School Student Affairs Office approval)
539254 0 cr

5003 Research (prereq regis med, Medical School Student Affairs/Curriculum Office approval)
032079 0 cr

5004 Directed Study III (prereq regis med, Medical School Student Affairs/Curriculum Office approval)
840376 0 cr

5090 Clinical Medicine I: Ethics (5090†; prereq regis med, Medical School Curriculum Affairs Office approval)
433057 0905-0955 Th, PWB 2470, 1220-1310 T, MoosT 2650, 2 cr (Sept 3-Dec 13)

5101 Clinical Medicine II: Advanced Physical Exam (prereq regis med, 5100, Medical School Curriculum Affairs Office Approval)
129388 4 cr (Sept 3-Oct 16)

5201 Pathophysiology I (prereq regis med, Medical School Curriculum Affairs Office Approval)
933970 1010-1205 MWF, 1325-1520 F, 0905-1100 T, MoosT 2650, 1220-1310 M, MoosT 2620, 1010-1100 Th, 1220-1310 Th, MoosT 2650, Soltis R, 13 cr (Sept 3-Dec 20)

5500 Clinical Medicine IV/Ambulatory Medicine (prereq regis med)
141055 0800-1600 W, PWB 8335, 9 cr (Sept 16-Dec 6)

5501 Emergency Room Externship (prereq regis year 3 and 4 medical student)
537567 ar cr (Sept 16-Dec 6)

5508 Clinical Medicine IV: Primary Care Medicine (5508-5509†; prereq med stu, 2 maj req rotations)
124398 0800-1600 W, PWB 8335, 6 cr (Sept 16-Dec 6)

5509 Clinical Medicine IV: Primary Care Medicine (5508-5509†; prereq 5508, med stu)
024399 0800-1600 W, PWB 8335, 6 cr (Sept 16-Dec 6)

5552 Indian Health Service Elective (prereq regis med)
737163 ar cr (Sept 16-Dec 6)

5553 Elective Away at Centers for Disease Control (CDC) (prereq med stu)
130444 ar cr

5555 Elective Away for Credit (prereq #)
438663 ar cr (Sept 16-Dec 6)

5560 Elective Away at the National Inatitutes of Health (prereq regis 3rd or 4th yr stu)
631436 ar cr (Sept 16-Dec 6)

INTERFACIAL ENGINEERING, CENTER FOR (CIE)
Institute of Technology

8001 Strategies for Interfacial Engineering (prereq IT grad stu, 5101) (A-F only)
740645 1-3 cr

INTERNATIONAL RELATIONS (IntR)
Liberal Arts

R 3101 Theoretical Approaches to International Relations (prereq international relations maj or #) (A-F only)
★LECT 0905-0955 MW, AndH 230
634207 —1 REC 0905-0955 Th, HHHCtr 20, 4 cr
933354 —2 REC 1430-1520 Th, BlegH 110, 4 cr
835677 —3 REC 0905-0955 F, BlegH 335, 4 cr
338249 —4 REC 1325-1415 F, HHHCtr 20, 4 cr

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Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 3101H Honors Course: Theoretical Approaches to International Relations (prereq honors international relations maj or #) (A-F only)
★LECT 0905-0955 MW, AndH 230
732884 —80 REC 0800-0955 F, BlegH 340, 5 cr

R 3301H Honors Seminar: The Making of the Modern World (prereq #) (A-F only)
224599 1415-1530 TTh, BlegH 5, Allman J, 4 cr

R 3900 Topics in International Relations (prereq 12 cr in social sciences)
323377 —1 1245-1400 TTh, BlegH 115, Eckman K, 4 cr (The Ecology of Development)
935394 —2 0905-1205 F, Law 35, Frey B, 4 cr (International Human Rights Law)

3960 Field Studies/Internship in International Studies (max 8 cr for international relations maj; prereq Δ)
530036 1-8 cr

3970 Directed Studies (prereq #, Δ, ⊔)
740970 1-15 cr

R 3981 Major Project Seminar (prereq non-honors IntR maj, sr, or #) (A-F only)
336615 1325-1510 M, HHHCtr 60, 4 cr

3990H Honors: Supervised Research Paper (prereq sr honors candidate in international relations, #, Δ, ⊔)
340440 1-5 cr

R 5701 Theories of International Development (prereq international relations maj or #)
635180 1415-1530 TTh, BlegH 115, Hinnebusch R, 4 cr

INTERPERSONAL RELATIONSHIPS RESEARCH (IRel)

R 8001 Proseminar in Interpersonal Relationships Research (max 3 cr; prereq int rel res grad minor) (S-N only)
136521 1445-1615 W, ChDev 108, Collins W A, 1 cr

ITALIAN (Ital)
French and Italian
Liberal Arts

R 1101 Beginning Italian
141114 —1 0800-0850 MTWThF, FolH 344, 5 cr
440445 —2 0905-0955 MTWThF, SmithH 121, 5 cr
136647 —3 1010-1100 MTWThF, KoltH S135, 5 cr
040876 —4 1115-1205 MTWThF, FolH 340, 5 cr
830219 —5 1220-1310 MTWThF, PeikH 315, 5 cr
133361 —6 1325-1415 MTWThF, KoltH S134, 5 cr
240317 —7 1430-1520 MTWThF, KoltH S135, 5 cr

R 1104 Intermediate Italian (prereq 1103)
034186 —1 0905-1020 MWF, FolH 340, 5 cr
639925 —2 1010-1125 MWF, FordH 70, 5 cr
640296 —3 1325-1440 MWF, FordH 160, 5 cr

R 1106 Intermediate Italian (prereq 1105)
137614 1325-1415 MWF, FolH 340, 5 cr

R 3015 Intermediate Italian Conversation and Composition (prereq 1106)
130730 1325-1440 MWF, Phys 236A, Ferlito S, 4 cr

R 3209 Medieval Italian Literature (prereq 3015) (Lit)
123817 1415-1530 TTh, ChDev 218, Martinez R, 4 cr

R 3501 Italian Civilization and Culture (prereq 3015) (AH; IP)
023818 1115-1230 TTh, SmithH 121, Martinez R, 4 cr

3970 Directed Readings (prereq undergrad, #, Δ, ⊔)
140455 1-5 cr

8777 Thesis Credits: Masters
336629 1-16 cr

8970 Directed Readings
035418 1-5 cr

JAPANESE (Jpn)
Linguistics & Asian & Slavic Languages & Literatures
Liberal Arts

R 1011 Beginning Japanese
038447 —1 LECT 0905-0955 TTh, FolH 218, Szatrowski P
032907 —2 LECT 1010-1100 TTh, FolH 218, Szatrowski P
836568 —3 LECT 1115-1205 TTh, FolH 218, Szatrowski P
Registration in one of the following REC sections is also required:
✦135708—1 REC 1010-1100 MTWThF, KoltH S136, 5 cr
✦132140—2 REC 1010-1100 MTWThF, KoltH S134, 5 cr
✦636491—3 REC 1115-1205 MTWThF, KoltH S136, 5 cr
✦230886—4 REC 1325-1415 MTWThF, FolH 218, 5 cr
✦138754—5 REC 1325-1415 MTWThF, KoltH S136, 5 cr

R 3021 Intermediate Japanese (prereq 1013)
★LECT 0905-0955 TTh, Arch 30, Pradt S
438792 —1 REC 1010-1100 MWF, FolH 218, 5 cr
031028 —2 REC 1010-1100 MWF, PeikH 155, 5 cr
★LECT 1010-1100 TTh, Arch 30, Pradt S
639794 —3 REC 1325-1415 MWF, NichH 109, 5 cr
938280 —4 REC 1325-1415 MWF, BuH 123, 5 cr

R 3031 Third Year Japanese (prereq 3023)
734618 —1 1430-1520 MWF, FolH 218, 5 cr
140223 —2 1430-1520 MWF, PeikH 155, 5 cr
723599 —3 1535-1625 MWF, FolH 138, 5 cr

R 3051 Advanced Japanese Conversation and Composition (§5051; prereq 3033 or #)
130534 —1 1535-1625 MWF, FolH 218, 4 cr
638094 —2 1640-1730 MWF, FolH 218, 4 cr

R 3090H Honors Course: Tutorial (prereq Δ)
429820 1-4 cr

R 3164 Modern Japanese Literature in English Translation
923598 1415-1530 TTh, PeikH 225, Pradt S, 4 cr

R 3970 Directed Studies (prereq #, Δ, ⊔)
635311 1-15 cr

R 5051 Advanced Japanese Conversation and Composition (§3051; prereq 3033 or #)
538119 1535-1625 MWF, FolH 218, 4 cr

R 5650 Proseminar: Japanese Linguistics (max 12 cr; prereq 5451 or #)
423600 1545-1700 TTh, FolH 38, Szatrowski P, 4 cr

R 5970 Directed Studies in Japanese (prereq #, Δ, CLA approval)
340843 1-15 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
837638 1-18 cr

R 8777 Thesis Credits: Masters
040683 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
731704 1-36 cr

JEWISH STUDIES (JwSt)
Classical & Near Eastern Studies
Liberal Arts

R 3900 Topics in Jewish Studies: German-Jewish Rebels (§Ger 3610)
423550 1220-1310 MWF, FolH 326, Zipes J, 4 cr

5970 Directed Readings (max 12 cr; prereq #, Δ, CLA approval)
938912 1-12 cr

JOURNALISM AND MASS COMMUNICATION (Jour)
Liberal Arts

R 1001 Introduction to Mass Communication (SSci) (A-F only)
930759 1325-1415 MWF, MurH 105, 4 cr

R 3004 Information for Mass Communication (prereq jour maj or min, fr comp or exempt, Δ) (A-F only)
936612 1010-1100 MWF, MurH 105, Hansen K, 4 cr

R 3007 The Media in American History and Law: Case Studies (prereq jour maj or min status, 3004, Δ) (A-F only)
337215 1115-1205 MWF, MurH 105, Dicken-Garcia H, 4 cr

R 3011 News Writing (prereq jour maj or minor, fr comp or exempt, pass 40wpm keybrd test w/ 6 or fewer errors, Δ) (A-F only)
★LECT 1115-1205 TTh, MurH 105, Huntzicker W, 4 cr
124479 —1 LAB 1535-1730 M, MurH 212
524480 —2 LAB 0905-1100 T, MurH 212
324481 —3 LAB 1220-1415 T, MurH 212
124482 —4 LAB 1535-1730 W, MurH 212
024483 —5 LAB 1220-1415 Th, MurH 212
824484 —6 LAB 0800-0955 F, MurH 212

R 3101 Reporting (prereq jour maj, 3004, 3011, pass 40 wpm keybrd test with 6 or fewer errors, Δ) (A-F only)
739320 —1 0905-1100 MW, MurH 212, 4 cr
532207 —2 1430-1625 TTh, MurH 212, Babcock W, 4 cr

R 3121 Public Affairs Reporting (prereq jour maj, 3004, C or higher in 3101, pass 40 wpm keybrd test w/6 or fewer errors, Δ) (A-F only)
922936 0800-0955 MW, MurH 320, 4 cr

R 3155 Publications Editing (prereq jour maj, 3004, C or higher in 3101, pass 40 wpm keybrd test w/6 or fewer errors, Δ) (A-F only)
★LECT 1010-1310 MW, MurH 315, 320, 4 cr
833024 —1 LAB 1010-1205 F, MurH 315

R 3251 Advertising and Public Relations Research (prereq jour maj or minor, Δ, 3004, 3159 or 3201) (A-F only)
623854 1415-1530 TTh, MurH 308, Tims A, 4 cr

R 3451 Television and Radio News (prereq jour maj, 3004, C or higher in 3101, pass 40 wpm keybrd test w/6 or fewer errors, Δ) (A-F only)
032650 0945-1100 TTh, MurH 207, 4 cr

R 3745 Mass Media and Popular Culture (open to non-jour maj; jour maj must have crse appr on prog plan; pre-jour shld not enroll) (A-F only)
722937 0945-1100 TTh, MurH 105, Griffin M, 4 cr

R 3796 Mass Media and Politics (prereq 1001 or Pol 1001 or #; open to non-jour maj; jour maj must have crse appr on prog plan; pre-jour shld not enroll) (SSci) (A-F only)
533325 1010-1205 MW, MurH 308, Faber R, 4 cr

R 3970 Projects in Journalism (max 8 cr; prereq jour maj or min status, 3004, #, Δ, ⊔) (A-F only)
839857 1-4 cr

3980 Directed Instruction (max 2 cr; prereq maj stat, adv appr, 1 prof crse for prof maj, 1 adv appr crse for mass comm maj, Δ, ⊔) (S-N only)
329468 1-2 cr

R 5131 Interpretive Reporting (prereq jour maj, 3004, 3121 or 3173 or 5155, Δ, pass 40 wpm keybrd test 6 or fewer errors) (A-F only)
836411 1325-1520 MW, MurH 320, Huntzicker W, 4 cr

R 5174 Magazine Editing and Production (prereq jour maj, 3004, 3155 or 3173 or 3321 or 5302 or prof exp for 5302, #, Δ) (A-F only)
839650 1220-1415 TTh, MurH 315, 320, Roberts N, Griffin M, 4 cr

R 5261 Advertising: Media Analysis (prereq jour maj status, 3004, 3201 or #, Δ) (A-F only)
★LECT 1700-1800 TTh, MurH 320, 4 cr
539822 —1 LAB 1010-1205 F, MurH 212
135975 —2 LAB 1220-1415 F, MurH 212

R 5263 Advertising Campaign Planning (prereq jour maj status, 3004, 5261, Mktg 3000 or #, Δ) (A-F only)
522938 1640-1800 MW, MurH 311, 4 cr

R 5274 Advertising in Society (prereq jour maj or min, 3004, Δ) (C/PE) (A-F only)
322939 1245-1400 TTh, MurH 308, Wackman D, 4 cr

R 5303 Projects in Photographic Communication (prereq jour maj status, 3004, 5302 or #, Δ) (A-F only)
524477 1220-1520 TTh, MurH 20, Schwartz D, 4 cr

R 5441 Electronic Newsgathering (prereq jour maj, 3004, 3451, Δ) (A-F only)
930664 1115-1230 TTh, MurH 207, 4 cr

R 5501 Communication and Public Opinion I (prereq 16 cr soc sci; jour maj must hav crse appr on prog plan; pre-jour maj shld not enrl) (A-F only)
535799 1415-1530 TTh, MurH 311, Doyle K, 4 cr

R 5606 Literary Aspects of Journalism (prereq jour maj or min status, 3004, #, Δ) (A-F only)
722940 0945-1100 TTh, MurH 311, Roberts N, 4 cr

R 5725 The Management of Media Organizations (prereq jour maj or min status, 3004, Δ) (A-F only)
522941 1545-1700 TTh, MurH 308, 4 cr

R 5771 Media Ethics: Principles and Practice (prereq jour maj or minor, 3004, #, Δ) (A-F only)
624485 1115-1230 TTh, MurH 320, Babcock W, 4 cr

R 5777 Contemporary Problems in Freedom of Speech and Press (prereq jour maj or min status, 3004, Δ) (A-F only)
131416 0945-1100 TTh, MurH 308, Gillmor D, 4 cr

R 5970 Advanced Projects in Journalism (max 8 cr; prereq jour maj or min status, 3004, #, B avg, Δ, ❑) (A-F only)
536760 1-4 cr

R 5970H Honors Course: Advanced Projects in Journalism (max 8 cr; prereq jour maj or min status, 3004, #, B avg, Δ, ❑, honors div registration) (A-F only)
830091 1-4 cr

8010 Studies in Mass Communication (A-F only)
635566 1325-1520 MW, MurH 308, Chang T, Faber R, 4 cr

R 8513 Seminar: Ethnographic Methods in Mass Communication Research (prereq prosemi-nars or #, Δ) (A-F only)
235800 1325-1600 M, MurH 30, Schwartz D, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
134641 1-18 cr

R 8675 Seminar: Issues in Information Access and Communication (prereq 5731 or equiv or #, Δ) (A-F only)
322942 1220-1520 W, MurH 30, Hansen K, 4 cr

R 8678 Government and Mass Communication: Constitutional Law (prereq 5777 or #, Δ) (A-F only)
122943 1220-1530 Th, MurH 30, Gillmor D, 4 cr

R 8681 Seminar: International Mass Communication (prereq 5801 or 5825 or #, Δ) (A-F only)
430451 0905-1205 F, MurH 30, Chang T K, 4 cr

8777 Thesis Credits: Masters
837817 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
732836 1-36 cr

8970 Advanced Projects in Mass Communication (max 8 cr; prereq grad maj or min in mass comm, #, Δ) (A-F only)
939994 1-4 cr

R 8990 Special Problems in Mass Communication: Practicum in Communication Research (reg in 8990 Winter 1997 req; prereq bas meth of soc sci res crse, stat crse) (A-F only)
524186 0945-1100 TTh, MurH 30, Wells W, 4 cr

KINESIOLOGY (Kin)

School of Kinesiology & Leisure Studies

Education and Human Development

R 1871 Introduction to Kinesiology (PEL) (A-F only)
640721 1010-1130 TTh, CookeH 214, 215, 3 cr

R 1990 Directed Study (prereq #) (A-F only)
730911 Pickert R, 1-6 cr

R 1999 Active Wellness: Individuals and Communities (A-F only)
523264 1535-1705 TTh, BoynHS N101, Meath J, 3 cr

R 3001 Lifetime Fitness and Health (A-F only)
535396 0800-1000 TTh, AkerH 319, 4 cr

R 3111 Mechanics of Movement (prereq CBN 1027, EDH stu or #; PEL) (A-F only)
323265 0800-0850 MWF, CookeH 215, Stoner L, 3 cr

R 3114 Prevention and Care of Athletic Injuries (prereq 3110 or CBN 1027, CEDH stu or #; PEL) (A-F only)
730584 1010-1100 MWF, FbComp 210, Mays S, Raffle H, 3 cr

R 3132 Motor Development (prereq Kin maj or #; PEL) (A-F only)
433852 0905-0955 MWF, CookeH 400, Wade M, 3 cr

R 3143 Organization and Management of Sport and Physical Education (prereq 2 cr coaching crse, Kin maj or #; PEL) (A-F only)
131599 0800-0930 TTh, CookeH 215, Krotee M, 3 cr

R 3150 Introduction to Evaluation (prereq Kin maj or #; PEL) (A-F only)
336050 1325-1520 MW, CookeH 214, 325, Stoner L, 4 cr

R 3171 Basketball Coaching (PEL) (A-F only)
029795 1815-2000 W, CookeH 215, 2 cr

R 3178 Track and Field Coaching (prereq PE 1059 or #; PEL) (A-F only)
424486 1010-1100 TTh, BFAB 210, Griak R, 2 cr

R 3327 Teaching Physical Education in the Elementary School (prereq elem educ maj) (A-F only)
123266 0800-0850 MWF, NorrisH 3, M151, 3 cr

R 3371 Soccer Coaching (prereq PE 1072 or #; PEL) (A-F only)
030770 1325-1520 T, FieldHse, CookeH 206, Krotee M, 2 cr

R 3385 Exercise Physiology I (prereq CBN 1027 or equiv, Kin maj or #; PEL) (A-F only)
★LECT 0800-0850 MWF, Phys 131, Serfass R, 4 cr
730939 —1 LAB 1010-1205 Th, MoosT 3110

R 3624 Student Teaching: Coaching (prereq #; PEL) (S-N only)
337702 1830-2000 W, CookeH 206, Radtke D, 3 cr (addtl hrs ar)

R 3625 Supervised Practical Experience (max 12 cr; prereq #; PEL) (S-N only)
230788 —1 1615-1800 T, CookeH 202, Pickert R, 1-12 cr (addtl hrs ar)
433690 —2 1615-1800 T, CookeH 222, Spletzer E, 1-12 cr

3900 Directed Study (max 12 cr; prereq #) (A-F only)
529338 —1 Anderson B, 1-12 cr
339143 —3 Burton A, 1-12 cr
936951 —5 Hancock P, 1-12 cr
530585 —7 Kane M, 1-12 cr
733548 —8 Kernozek T, 1-12 cr
240172 —9 Krotee M, 1-12 cr
538038 —11 Leon A, 1-12 cr
330586 —13 Pickert R, 1-12 cr
140173 —15 Serfass R, 1-12 cr
338039 —17 Spletzer E, 1-12 cr
035872 —19 Stoner L, 1-12 cr
631694 —21 Wade M, 1-12 cr
233688 —23 Walker A, 1-12 cr
633686 —25 Wiese-Bjornstal D, 1-12 cr

R 5100 Developmental/Adapted Physical Education (PEL) (A-F only)
940594 1815-2045 W, CookeH 214, Mastro J, 3 cr

R 5122 Applied Exercise Physiology (prereq 3386 or equiv or #; PEL)
133823 1830-2030 M, CookeH 214, Serfass R, 3 cr

R 5126 Advanced Psychological and Sociological Dimensions of Physical Activity (prereq Kin maj or #; PEL) (A-F only)
139614 1115-1230 TTh, CookeH 400, Weise-Bjornstal D, 3 cr

R 5136 Psychology of Coaching (A-F only)
023267 1325-1455 TTh, CookeH 214, Wiese-Bjornstal D, 3 cr

R 5141 Nutrition for Exercise and Physical Performance (prereq 3115 or FScN 1612 or equiv)
940644 1325-1455 TTh, CookeH 215, Leon A, 3 cr

R 5152 Curriculum Development (prereq 5151 or #, educ or grad stu; PEL) (A-F only)
929336 1630-1830 M, CookeH 215, Hanson G, 3 cr (addtl hr ar)

R 5170 Foundations of Kinesiology (prereq grad or MEd stu) (A-F only)
338686 1630-1825 W, CookeH 206, Hancock P, 3 cr

R 5460 Foundations of Sport Management (§Rec 5460; prereq recreation or kinesiology maj or #) (A-F only)
137846 1115-1230 MW, CookeH 214, Anderson B, 3 cr

R 5530 Biological and Physical Foundations of Education (prereq stu in Foundation of Educ prog or Educ Teacher Licensure Prog) (A-F only)
935184 1640-1830 TTh, Arch 25, Rodgerson R, 2 cr (Sept 26-Oct 29)

5561 Clinical Experience I: Physical Education (prereq 5521, 5522, admission to init lic/MEd PE prog or #; PEL) (S-N only)
635390 1845-2045 M, CookeH 215, Spletzer E, 6 cr

R 5980 Research Methodology (§Rec 5980; prereq School of Kinesiology and Leisure Studies stu or #) (A-F only)
232881 1615-1845 Th, CookeH 214, 215, Kane M, 3 cr

5981 Problems (prereq MEd candidate, #; PEL) (A-F only)
233691 —1 Anderson B, ar cr
130587 —3 Burton A, ar cr
329339 —5 Hancock P, ar cr
230581 —7 Kane M, ar cr
729337 —9 Krotee M, ar cr
539142 —11 Leon A, ar cr
736949 —13 Pickert R, ar cr
634787 —15 Serfass R, ar cr
932611 —17 Spletzer E, ar cr
136950 —19 Stoner L, ar cr
432863 —21 Wade M, ar cr
132730 —23 Walker A, ar cr
032731 —25 Wiese-Bjornstal D, ar cr

5983 Readings: Kinesiology (max 9 cr; prereq educ or grad stu or #) (A-F only)
434788 —1 Anderson B, ar cr
732612 —3 Burton A, ar cr
130582 —5 Hancock P, ar cr
440171 —7 Kane M, ar cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
\# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

530313 —8 Kernozek T, ar cr
738037 —9 Krotee M, ar cr
135871 —11 Leon A, ar cr
930583 —15 Serfass R, ar cr
034785 —17 Spletzer E, ar cr
739141 —19 Stoner L, ar cr
135118 —21 Wade M, ar cr
138804 —23 Walker A, ar cr
636703 —25 Wiese-Bjornstal D, ar cr

R 8132 Seminar: Motor Development (prereq 5132 or equiv, a course in statistics or #)
823268 1615-1935 M, CookeH 202, Burton A, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
831676 1-18 cr

8777 Thesis Credits: Masters
234470 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
039520 1-36 cr

8980 Graduate Research Seminar (prereq #) (S-N only)
832133 —5 1430-1625 M, Mariucci 141B, Hancock P, 1 cr
834786 —11 1430-1625 M, URecCtr 27J, Leon A, 1 cr
132610 —21 1430-1625 M, CookeH 20, Wade M, 1 cr
723263 —25 1430-1625 M, CookeH 215, Wiese-Bjornstal D, 1 cr

8981 Research Problems (prereq 8980 or #) (S-N only)
130579 —1 Anderson B, ar cr
240169 —3 Burton A, ar cr
138035 —5 Hancock P, ar cr
035869 —7 Kane M, ar cr
433687 —9 Krotee M, ar cr
430580 —11 Leon A, ar cr
938036 —15 Serfass R, ar cr
335870 —17 Spletzer E, ar cr
230578 —19 Stoner L, ar cr
040456 —21 Wade M, ar cr
440333 —23 Walker A, ar cr
629900 —25 Wiese-Bjornstal D, ar cr

LABORATORY MEDICINE AND PATHOLOGY (LaMP)

Laboratory Medicine and Pathology
Medical School

5102 Organ System Pathology I (prereq registered 2nd yr med student)
★LECT 0905-0955 M, 1115-1205 T, MoosT 2650, Anderson R E, others, (Sept 3-Dec 20)
633803 —1 LAB 1325-1415 T, MoosT 2650, 1325-1535 T, MoosT 3317, 3337, 3343, 3349, 3 cr (Sept 3-Dec 20)
935976 —2 LAB 1325-1415 Th, MoosT 2650, 1325-1535 Th, MoosT 3317, 3337, 3343, 3349, 3 cr (Sept 3-Dec 20)

5113 Surgical Pathology: University Hospitals (prereq 3rd or 4th yr medical student)
733985 Manivel J, ar cr

5114 Surgical Pathology: Hennepin County Medical Center (prereq 3rd or 4th yr medical student)
636152 Linzie B, ar cr

5115 Surgical Pathology: Veterans Administration Hospital (prereq 3rd or 4th yr medical student)
037508 Niehans G, ar cr

5119 Forensic Pathology: Medical Examiner's Office, Hennepin County Medical Center (prereq 3rd or 4th yr medical student)
838384 Peterson G, ar cr

5125 Chronobiology (prereq 3rd or 4th yr medical student, #)
132842 Halberg F, ar cr

5141 Problems in Experimental Pathology (prereq 3rd or 4th yr medical student, #)
035029 ar cr

5150 Anatomic Pathology in a Hospital Setting: University Hospitals (prereq 3rd or 4th yr medical student)
433169 Anderson R E, ar cr

5151 Anatomic Pathology in a Hospital Setting: Hennepin County Medical Center (prereq 3rd or 4th yr medical student)
036472 Linzie B, ar cr

5152 Anatomic Pathology in a Hospital Setting: Veterans Administration Hospital (prereq 3rd or 4th yr medical student)
931300 Niehans G, ar cr

5153 Anatomic Pathology in a Hospital Setting: St. Paul-Ramsey Medical Center (prereq 3rd or 4th yr medical student)
131151 Posalaky Z, ar cr

5158 Cardiac Pathology: United Hospital (prereq 3rd or 4th yr medical student, #)
937369 Rose A, Titus J, ar cr

5166 Forensic Pathology for Post-MDs (prereq regis med fellow specialist, #) (S-N only)
532420 Peterson G, 1-10 cr

5172 Pathology for Allied Health Students (prereq regis A.H. program, anat, physiol, #)
731928 1010-1205 TTh, MoosT 2620, Linne J, Wilkie M, 4 cr

5181 Laboratory and Clinical Hematology (prereq #)
631761 Brunning R, ar cr

5184 Immunohematology in Blood Banking (prereq #)
334198 Stroncek D, ar cr

5186 Laboratory Medicine in a Community Hospital (prereq 4th yr medical student, #)
440610 Bandt C, ar cr

5187 Clinical Pathology Externship (prereq #)
232427 ar cr

5188 Clinical Pathology Externship: Methodist Hospital (prereq #)
235621 Manoles E, ar cr

5192 Laboratory Medicine for Primary Care: Virginia (prereq 4th yr medical student, #)
037671 Knabe G, ar cr

5193 Clinical Pathology Externship: Hibbing Hospital (prereq #)
234078 Uncini T, ar cr

5195 Computer Applications in Medical Research (prereq #)
137290 Ellis L, ar cr

5210 Surgical Pathology for Post-M.D.s (prereq regis med fellow special, #) (S-N only)
131738 1-10 cr

5211 Autopsies for Post-M.D.s (prereq regis med fellow special, #) (S-N only)
435486 1-10 cr

5213 Laboratory Medicine for Post-M.D.s (prereq regis med fellow special, #) (S-N only)
235120 1-10 cr

LANDSCAPE ARCHITECTURE (LA)

Architecture & Landscape Architecture

R 1301 Introduction to Landscape Architecture Drawing (Vis) (A-F only)
634949 —1 LAB 0905-1205 MW, Arch 40, 4 cr (LA maj or pre-LA maj for BED only)
835209 —2 LAB 0905-1205 MW, Arch 50, 4 cr
341118 —3 LAB 1325-1625 TTh, Arch 40, 4 cr

R 1401 The Designed Environment (§1031) (AH; Envt) (A-F only)
★LECT 1535-1700 T, SmithH 100, Damon P, 4 cr
139094 —1 REC 0905-1035 Th, Damon P
536905 —2 REC 1115-1245 Th, Damon P
034737 —3 REC 1325-1500 Th, Damon P
024435 —4 REC 1535-1700 Th, Damon P

3200 Landscape Architecture Practicum (prereq landscape architecture student, #) (S-N only)
138284 1-6 cr

R 3311 Drawing for Design (§Arch 3311; prereq arch or env dsgn or landscape arch maj, Arch/LA 1301, or #) (A-F only)
240124 —1 LAB 1220-1520 TTh, Arch 55, 4 cr
930485 —2 LAB 1325-1625 TTh, Arch 50, 4 cr

R 3411 History of Architecture to 1750 (§Arch 3411) (Vis; IP) (A-F only)
★LECT 1115-1230 TTh, NichH 45, Satkowski L, 4 cr
440123 —1 REC 0800-0850 M, Arch 45
537987 —2 REC 0800-0850 M, Arch 20
337988 —3 REC 0905-0955 M, Arch 45
535821 —4 REC 1010-1100 M, Arch 35
633641 —5 REC 1535-1625 T, Arch 30
623935 —6 REC 0800-0850 W, Arch 45
423936 —7 REC 0905-0955 W, Arch 45
223937 —8 REC 1010-1100 W, Arch 60
123938 —9 REC 0800-0850 F, Arch 45
223940 —10 REC 0905-0955 F, Arch 45

5131 Directed Studies in Landscape Architecture History and Theory (prereq LA student or Δ) (A-F only)
132825 1-6 cr

5133 Directed Studies in Landscape Architecture Technology (prereq LA student, Δ) (A-F only)
530098 1-6 cr

5134 Directed Studies in Emerging Areas for Landscape Architecture (prereq LA student, Δ) (A-F only)
835694 1-6 cr

5200 Directed Studies in Landscape Architecture Design (§5132; prereq #) (course fee)
236073 1-6 cr

R 5201 Field Techniques for Landscape Analysis (prereq LA grad student or BED or Δ) (A-F only)
038206 0800-1200 M, Arch 60, Galatowitsch S, 3 cr

5211 Making Landscape Space (§3081; prereq BED or BLA stu or Δ) (A-F only) (course fee)
540923 1400-1730 MWF, Arch 240, 1430-1730 MWF, EE/CSci 3111, Pitt D, 6 cr

5431 History of Landscape Architecture: Individual Influences (§5265; prereq 3413) (A-F only)
036195 1010-1205 MW, Arch 30, Neckar L, 4 cr

R 5571 Landscape Construction: Landform Systems (§3065; prereq 5211 or #, land arch maj) (A-F only)
730486 1325-1625 TTh, Arch 240, Sykes R, 4 cr

8221 Design of Landscapes for Dwelling (§3091; prereq 5213, 5572, LA student or Δ) (A-F only) (course fee)
435410 1400-1730 MWF, Arch 230, 1430-1730 MWF, Arch 35, Sykes R, 6 cr

8231 Urban Landscape Design (§5103; prereq LA student or #) (A-F only) (course fee)
832973 1400-1730 MWF, Arch 210, 1430-1730 MWF, Arch 25, Neckar L, 6 cr

8500 Landscape Architecture Research Project (prereq 8283 or #) (A-F only)
240432 1-6 cr

8573 Landscape Construction: Structural Systems (§3067; prereq 5123, LA student or #) (A-F only)
★LECT 1325-1520 T, Arch 60, Gunderson R, 4 cr
129293 —1 LAB 1325-1640 Th, Arch 60

8600 Landscape Architecture Education (prereq M.L.A. candidate or #) (A-F only)
040800 1-4 cr

8777 Thesis Credits: Masters (course fee)
329938 —1 1-16 cr
039095 —2 Galatowitsch S, 1-16 cr
336906 —3 Martin R, 1-16 cr
834738 —4 Nassauer J, 1-16 cr
532563 —5 Neckar L, 1-16 cr
530487 —6 Pitt D, 1-16 cr
140125 —7 Sykes R, 1-16 cr

LATIN (Lat)

Classical & Near Eastern Studies
Liberal Arts

R 1101 Beginning Latin
029781 —1 0905-0955 MTWThF, KoltH S134, 5 cr
332273 —2 1010-1100 MTWThF, PeikH 225, 5 cr
138195 —3 1010-1100 MTWThF, KoltH S133, 5 cr

R 1104 Latin Prose (prereq 1103 or 3 yrs high school Latin or Δ)
529596 —1 1430-1520 MTWThF, KoltH S133, 5 cr
537892 —2 1430-1520 MTWThF, KoltH S134, 5 cr

R 1111H Honors Course: Beginning Latin (prereq regis in honors division or high ability as indicated by college entrance records)
532031 1010-1100 MTWThF, FolH 50, Sheets G, 5 cr

R 3051 Accelerated Beginning Latin (§1101, 1102, 1103, 1104)
239703 1010-1100 MTWThF, FolH 50, Sheets G, 5 cr

R 3104 Latin Prose (§1104; prereq 3052 or 3002 or equiv or #)
334332 —1 1430-1520 MTWThF, KoltH S133, 5 cr
535723 —2 1430-1520 MTWThF, KoltH S134, 5 cr

R 3453 Advanced Undergraduate Latin (prereq 3106 or 4 yrs high school Latin or Δ)
223601 0905-0955 MWF, FolH 50, Belfiore E, 5 cr

3951 Major Project (prereq Greek-Latin or Latin maj, three 3xxx courses in Latin or #) (A-F only)
140349 5 cr

3960H Honors Tutorial (prereq Δ)
237370 5 cr

3970 Directed Studies (prereq #, Δ, ❑)
734912 1-5 cr

R 5310 Latin Literature: History (max 12 cr)
123602 1535-1625 MWF, FolH 208, Keuls E, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
440400 1-5 cr

5980 Directed Instruction (prereq #, Δ, CLA approval)
035371 ar cr

5990 Directed Research (prereq #, Δ, CLA approval)
834576 ar cr

R 8120 Latin Text Course (prereq 3052 or Δ, non-maj)
630495 0905-0955 MWF, FolH 50, Belfiore E, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
937341 1-18 cr

8777 Thesis Credits: Masters
034043 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
739561 1-36 cr

R 8910 Seminar: Seneca
923603 1220-1445 W, FolH 315, Sonkowsky R, 4 cr

LATIN AMERICAN STUDIES (LAS)
Area Studies Programs
Liberal Arts

R 3378 Third World Underdevelopment and Modernization (§Geog 3378)
124023 1300-1415 MW, AndH 230, Samatar A, 4 cr

R 3401 Survey of Latin American History: Colonial Period to 1800 (§Hist 3401) (Hist; IP)
★LECT 1415-1530 TTh, AndH 230, Schwartz S
131358 —1 REC 1010-1100 M, BlegH 210, 4 cr
536175 —2 REC 1115-1205 T, BlegH 245, 4 cr
532448 —3 REC 1220-1310 T, BlegH 435, 4 cr
230127 —4 REC 0905-0955 W, BlegH 350, 4 cr

LAW SCHOOL (Law)
Contact Law School for information.

LEARNING AND ACADEMIC SKILLS (LASk)
Liberal Arts

R 1001 Becoming a Master Student
733128 —1 0905-0955 MW, EddyH 20, Wark D, 2 cr (study skills using self-hypnosis)
529467 —2 0905-0955 MW, EddyH 102, 2 cr
039291 —3 1010-1100 MW, EddyH 102, 2 cr
533793 —4 1115-1205 MW, EddyH 102, 2 cr
634367 —5 1220-1310 MW, EddyH 102, 2 cr
734215 —6 1325-1415 MW, SmithH 111, 2 cr
740273 —7 1325-1415 MW, EddyH 102, 2 cr
832178 —8 1430-1520 MW, EddyH 102, 2 cr
734960 —9 0905-0955 TTh, EddyH 102, 2 cr
331723 —10 1010-1100 TTh, EddyH 102, 2 cr
232444 —11 1115-1205 TTh, EddyH 102, 2 cr
824503 —12 1325-1415 TTh, EddyH 102, 2 cr

R 1101 Academic Success (prereq #) (S-N only)
936416 Weinsheimer J, 1 cr (individualized study for academic probation stu; go to EddyH 104 for info packet before 1st day of qtr)

LINGUISTICS (Ling)
Linguistics & Asian & Slavic Languages & Literatures
Liberal Arts

R 1005 Language and Society (IP; CD)
536127 1010-1100 MWF, WullH 140, Downing B, 4 cr

R 3001 Introduction to Linguistics (§5001) (SSci)
★LECT 1115-1205 MTW, WullH 140, Gundel J
433091 —1 REC 1115-1205 Th, WullH 140, 5 cr
231441 —2 REC 1115-1205 F, WullH 140, 5 cr

R 3001H Introduction to Linguistics (§3001, 5001; prereq honors regis or #)
★LECT 1115-1205 MTW, FordH 115, Kac M
137080 —80 REC 1115-1205 Th, FordH 175, 5 cr

R 3051H Honors Course: Linguistics (prereq candidacy for honors in linguistics or #)
535060 4 cr

R 3301 Phonetics (§5301, 5003; prereq 3001 or ¶ or #)
135532 1325-1415 MTWThF, FolH 50, Stemberger J, 5 cr

R 3970 Directed Studies (prereq linguistics maj, #, Δ, ❑)
732920 1-5 cr

R 3971 Senior Project (prereq #) (S-N only)
629539 1 cr

R 5001 Introduction to Linguistics (§3001; prereq grad standing or #)
★LECT 1115-1205 MTW, FordH 115, Kac M
333827 —1 REC 1115-1205 Th, FordH 175, 5 cr

R 5301 Phonetics (§3301, 5003; prereq 3001 or 5001 or ¶ or #)
933807 1325-1415 MTWThF, FolH 50, Stemberger J, 5 cr

R 5701 Introduction to Second-Language Acquisition (prereq 5002 or 5201, 5302, 5003 or 5301, or #)
140769 0945-1100 TTh, FolH 326, Tarone E, 4 cr

R 5751 Conversation Analysis (§Spch 5461; prereq Spch 3401, 3001 or 5001, or #)
324237 1325-1520 MW, FolH 326, Sheldon A, 4 cr

R 5821 Sociolinguistics (prereq 3001 or 5001 or #)
624504 1115-1230 TTh, ChDev 216, 4 cr

R 5910 Seminar in Linguistics: Bilingualism (prereq #)
837977 1415-1530 TTh, FolH 214, Downing B, 4 cr

R 5970 Directed Studies (prereq linguistics or ESL maj, #, Δ, CLA approval)
031742 1-5 cr

R 8210 Seminar in Semantics: The Syntax/Semantics Interface (prereq #)
029280 1325-1555 F, FolH 326, Hegarty M, 4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
734019 1-18 cr

R 8777 Thesis Credits: Masters
137281 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
729578 1-36 cr

R 8900 Independent Study (prereq Ling maj, #)
638547 1-5 cr

LOGISTICS MANAGEMENT (LM)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3000 Introduction to Logistics Management (prereq Econ 1101 or equiv) (A-F only)
932088 1010-1155 TTh, BlegH 340, Harper D, 4 cr

8990 Readings in Logistics Management (prereq consent of advisor, #, grad SMgt approval) (A-F only)
737504 ar cr

8995 Graduate Research in Logistics Management (prereq grad SMgt approval) (A-F only)
131058 ar cr

MANAGEMENT (Mgmt)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3001 Fundamentals of Management (§8001) (A-F only)
039274 —1 0800-0945 MW, BlegH 220, Rulke D, 4 cr
431468 —2 1010-1205 MW, BlegH 220, Rulke D, 4 cr
233934 —3 0800-0945 TTh, BlegH 220, 4 cr
039324 —4 1010-1155 TTh, BlegH 220, 4 cr

R 3004 Business Policy: Strategy Formulation and Implementation (prereq sr, completion of business core courses or equiv of final core course) (A-F only)
038884 —1 1430-1640 MW, BlegH 335, 5 cr
037668 —2 1220-1430 TTh, BlegH 220, 5 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5050 The Management of Innovation and Change (§8050; prereq SMgt jr or sr) (A-F only)
024600 0800-1100 F, BlegH 435, VandeVen A, 4 cr

R 5101 Advanced Topics in Management (prereq sr or grad, #, SMgt approval)
230628 1730-2100 M, BlegH 255, Shah P, 2 cr

R 8031 Industry and Competitive Analysis (prereq grad mgmt stu or grad SMgt approval, MBA 8060) (A-F only)
431633 —1 1010-1155 MW, BlegH 340, Srinivasan S, 4 cr
432555 —2 1325-1510 MW, BlegH 340, Srinivasan S, 4 cr

R 8040 International Business (§BGS 3004; prereq grad mgmt stu or grad SMgt approval, 3001 or 8001 or MBA 8010)
130475 1730-2100 T, BlegH 340, 4 cr

R 8050 The Management of Innovation and Change (§5050; prereq grad mgmt stu or grad SMgt approval) (A-F only)
824601 0800-1100 F, BlegH 435, VandeVen A, 4 cr

R 8082 Entrepreneurship (prereq MBA core courses) (A-F only)
837154 1535-1720 MW, BlegH 435, Cardozo R, 4 cr

R 8301 Seminar in Organization Behavior (prereq PhD student or grad SMgt approval)
123509 1325-1640 M, BlegH 210, Albert S, 4 cr

R 8303 Organizational Research Seminar (prereq PhD stu, #)
235814 1325-1640 W, BlegH 115, Shah P, 4 cr

R 8402 Seminar in Strategy Implementation (prereq PhD student or #, grad SMgt approval)
523510 1325-1640 T, BlegH 415, Bromiley P, 4 cr

R 8990 Readings in Management Theory and Administration (prereq 2nd yr grad stu, requisite intro courses, consent of adviser, #, grad SMgt approval)
036360 ar cr

R 8995 Graduate Research in Management Theory and Administration (prereq 2nd yr grad stu, requisite intro courses, consent of adviser, #, grad SMgt approval)
831029 ar cr

MANAGEMENT OF TECHNOLOGY (MOT)
Management & Technology

R 8112 Management Accounting (§MBA 8035; prereq MOT stu) (A-F only)
140514 1245-1630 FS, WBOB 150, Joyce E, 4 cr (alt F, S, Sept 14-Dec 6)

R 8113 Manufacturing for Competitive Advantage (§MBA 8050, OMS 5100; prereq MOT stu) (A-F only)
331933 1245-1630 FS, WBOB 150, Hill A, 4 cr (alt F, S, Sept 20-Dec 6)

8122 Financial Management for Technology-Based Organizations (§MBA 8040; prereq MOT stu) (A-F only)
131893 0800-1145 FS, WBOB 150, Nantell T, 5 cr

R 8213 Business, Government and Macroeconomics (§MBA 8055; prereq MOT stu) (A-F only)
637740 1245-1630 FS, WBOB 150, Erickson B, 4 cr (alt F, S, Sept 21-Dec 7)

R 8214 Understanding and Forecasting Technology Development (prereq MOT stu) (A-F only)
624602 van Wyck R, 4 cr

R 8221 Project Management and Leadership (§OMS 8041; prereq MOT stu) (A-F only)
022846 1245-1630 FS, WBOB 150, Shenhar A, 4 cr

MARATHI (Mar)
Linguistics & Asian & Slavic Languages & Literatures
Liberal Arts

5970 Directed Readings
833038 Junghare I, ar cr

MARKETING (Mktg)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3000 Principles of Marketing (prereq Econ 1101 or equiv) (A-F only)
441045 —1 0800-0945 MW, BlegH 435, 4 cr
131456 —2 0800-0945 TTh, BlegH 425, Shocker A, 4 cr
239233 —3 1535-1720 TTh, BlegH 130, Shocker A, 4 cr

R 3010 Marketing Research (prereq 3000, OMS 1020, or equiv)
731699 1010-1155 TTh, BlegH 135, Childers T, 4 cr

R 3030 Sales Management (prereq 3000)
623675 1010-1155 MW, BlegH 125, Hansen R, 4 cr

R 3040 Buyer Behavior (prereq 3000)
739088 1325-1510 TTh, BlegH 420, Loken B, 4 cr

R 3080 Marketing Strategy (§3020; prereq 3000, sr status recommended)
330474 1535-1720 MW, BlegH 425, Hansen R, 4 cr

R 8051 Marketing Research (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
437335 1535-1720 TTh, BlegH 435, Childers T, 4 cr

R 8072 International Marketing (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
123678 1325-1510 MW, BlegH 420, 4 cr

R 8075 Pricing Strategy (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
423676 1730-2100 W, BlegH 330, Rao A, 4 cr

R 8082 Entrepreneurship (§Entr 8082, Mgmt 8082; prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval) (A-F only)
633171 1535-1720 MW, BlegH 435, Cardozo R, 4 cr

R 8800 Seminar: Marketing Theory (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt stu or grad SMgt approval)
223680 Rao A, 4 cr (PhD students only) (Mgmt/Econ 1275)

R 8990 Readings in Marketing (prereq MBA 8045 or MBA 8210 or equiv or Δ, consent of advisor, #, grad mgmt student, grad SMgt approval)
234422 ar cr

R 8995 Graduate Research in Marketing (prereq MBA 8045 or MBA 8210 or equiv or Δ, consent of advisor, #, grad mgmt student, grad SMgt approval)
531218 —1 ar cr
630898 —2 1115-1245 TTh, SocSci 101, ar cr

MASTER OF BUSINESS ADMINISTRATION (MBA)
Management

R 5500 Managerial Communication (prereq MBA stu) (A-F only)
832939 1730-2100 T, BlegH 350, 4 cr

R 8110 Behavioral Science for Business (prereq MBA stu) (A-F only)
123518 —1 1010-1155 MW, BlegH 425, 4 cr
735106 —2 1325-1510 MW, BlegH 435, 4 cr

R 8120 Data Analysis and Statistics for Managers (prereq MBA stu) (A-F only)
923519 —1 1010-1155 TTh, BlegH 435, 4 cr
131271 —2 1325-1510 TTh, BlegH 435, 4 cr

R 8130 Financial Accounting (prereq MBA stu) (A-F only)
223520 —1 1010-1155 MW, BlegH 435, 3 cr
032924 —2 1325-1510 MW, BlegH 425, 3 cr

R 8140 Managerial Economics (prereq MBA stu) (A-F only)
830477 —1 1325-1510 TTh, BlegH 425, 4 cr
231942 —2 1535-1720 TTh, BlegH 425, 4 cr

R 8300 Strategic Management (prereq MBA stu) (A-F only)
323511 0800-0945 TTh, BlegH 435, 4 cr

R 8305 The International Environment of Business (prereq MBA stu) (A-F only)
730049 0800-0945 MW, BlegH 425, 2 cr (Sept 30-Oct 30)

R 8335 Managing for Quality and Continuous Improvement (prereq MBA stu) (A-F only)
334010 0800-0945 MW, BlegH 425, 2 cr (Nov 4-Dec 4)

MATERIALS SCIENCE (MatS)
Chemical Engineering & Materials Science
Institute of Technology

R 3400 Mechanical Properties of Materials (prereq 2nd yr IT student)
★LECT 1325-1415 MWF, AmundH B75, Francis L
135197 —1 LAB 1430-1730 M, AmundH 410, 4 cr
131562 —2 LAB 1430-1730 W, AmundH 410, 4 cr
136700 —3 LAB 1430-1730 F, AmundH 410, 4 cr

R 5011 Introduction to the Science of Materials (prereq upper div ChEn or MatS maj, Math 3261, Phys 1253)
★LECT 1430-1520 MWF, AmundH B75, Palmstrom C
129780 —1 REC 0905-0955 TTh, LindH 305, 4 cr
231553 —2 REC 0905-0955 TTh, AmundH 116, 4 cr
739558 —3 REC 0905-0955 TTh, AmundH 104, 4 cr
038500 —4 REC 1010-1100 TTh, AmundH 104, 4 cr
132106 —5 REC 1010-1100 TTh, AmundH 156, 4 cr
732688 —6 REC 1010-1100 TTh, AmundH 156, 4 cr
838451 —7 REC 1220-1310 TTh, AmundH 240, 4 cr
438372 —8 REC 1220-1310 TTh, AmundH 158, 4 cr
137880 —9 REC 1430-1520 TTh, FordH 150, 4 cr
934486 —10 REC 1430-1520 TTh, AmundH 120, 4 cr

R 5112 Ceramics (prereq upper division IT, 5011, 5101, 5102 or #)
834495 0905-1100 TTh, AmundH 162, Carter C, 4 cr

R 5200 Optical and Electron Microscopy of Solids (prereq upper division IT, 3400 or #)
★LECT 1325-1415 MWF, AmundH 156, Sivertsen J
540792 —1 LAB 1325-1730 T, AmundH 410, 4 cr
834108 —2 LAB 1325-1730 Th, AmundH 410, 4 cr

R 5450 Corrosion and Electrochemistry of Corrosion (prereq upper division IT, 5101 or #)
★LECT 1115-1205 MWF, AmundH 124, Shores D
429641 —1 LAB 1325-1520 M, AmundH 61, 4 cr
137717 —2 LAB 1325-1520 T, AmundH 61, 4 cr
133210 —3 LAB 1535-1730 W, AmundH 61, 4 cr

R 5481 Special Problems in Physical Metallurgy and Materials Science (prereq sr)
635387 ar cr

R 5482 Special Problems in Physical Metallurgy and Materials Science (prereq sr)
139251 ar cr

R 5483 Special Problems in Physical Metallurgy and Materials Science (prereq sr)
532949 ar cr

R 5610 Polymer Chemistry (prereq upper div IT stu, Chem 3301, or #)
236011 1010-1100 MWF, EE/CSci 3230, Tirrell M, 3 cr

R 8110 Fundamentals of Materials Science
432278 —1 1220-1310 MWF, EE/CSci 3125, Weaver J, 3 cr

R 8213 Electronic Properties of Materials (prereq #)
739415 1325-1415 MWF, AmundH 162, Chelikowsky J, 3 cr

8401 Transformations in Alloys and Origins of Microstructure (prereq #)
123521 1115-1205 MWF, AmundH 156, Sivertsen J, 3 cr

8470 Seminar: Materials Science and Engineering (S-N only)
335108 1325-1625 TTh, AmundH B75, ar cr

R 8480 Selected Topics in Materials Science and Engineering
241015 ar cr

8481 Selected Topics in Materials Science and Engineering (prereq 8480)
632747 ar cr

R 8482 Selected Topics in Materials Science and Engineering (prereq 8481)
135507 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
133375 1-18 cr

8777 Thesis Credits: Masters
939655 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
134177 1-36 cr

MATHEMATICS (Math)
Institute of Technology

R 1001 Excursions in Mathematics (prereq 3 yrs high schl math, placement exam or GC 0631 with grade of C or better) (Math)
★LECT 1115-1205 MWF, Arch 10
435195 —1 REC 1010-1100 TTh, Phys 166, 4 cr
732321 —2 REC 1115-1205 TTh, VinH 213, 4 cr
138043 —3 REC 1115-1205 TTh, VinH 313, 4 cr

R 1008 Trigonometry (§1201; prereq plane geometry, 2 yrs hs algebra or ¶1111, grade of C or better in GC 0631)
538475 1430-1520 MTWF, VinH 2, 4 cr

R 1031 College Algebra and Probability (§1051, 1151, 1111, 1201; prereq 3 yrs high school math, plcmnt exam or GC 0631 with C or better) (Math)
★LECT 0800-0850 MWF, HodsonH 495, (StP)
932334 —1 REC 0800-0850 TTh, ClaOff B26, 4 cr (StP)
034608 —2 REC 0800-0850 TTh, McNH 198, 4 cr (StP)
738927 —3 REC 0905-0955 TTh, McNH 198, 4 cr (StP)
★LECT 1115-1205 MWF, MechE 18
030137 —4 REC 1010-1100 TTh, AkerH 211, 4 cr
731122 —5 REC 1010-1100 TTh, VinH 6, 4 cr
338400 —6 REC 1115-1205 TTh, VinH 6, 4 cr
329843 —7 REC 1115-1205 TTh, VinH 2, 4 cr
★LECT 1325-1415 MWF, FordH 155
632957 —8 REC 1220-1415 TTh, ApH 239, 4 cr (TRIO stu only)
938957 —9 REC 1220-1310 TTh, FordH 160, 4 cr
137863 —10 REC 1220-1310 TTh, VinH 6, 4 cr
532773 —11 REC 1325-1415 TTh, FordH 55, 4 cr
838191 —12 REC 1325-1415 TTh, ApH 311, 4 cr
★LECT 1430-1520 MWF, SciCB 125
937470 —13 REC 1325-1415 TTh, VinH 2, 4 cr
539559 —14 REC 1325-1415 TTh, VinH 6, 4 cr
231343 —15 REC 1430-1520 TTh, FordH 55, 4 cr
532238 —16 REC 1430-1520 TTh, SciCB 325, 4 cr
★LECT 1535-1625 MWF, FordH 155
135112 —17 REC 1430-1520 TTh, CivE 213, 4 cr
133501 —18 REC 1430-1520 TTh, VinH 311, 4 cr
739589 —19 REC 1535-1625 TTh, NichH 209A, 4 cr
530666 —20 REC 1535-1625 TTh, FordH 55, 4 cr

R 1038 College Algebra and Probability Submodule (§1031, 1111; prereq 1051)
736790 2 cr

R 1051 Precalculus I (§1031, 1111, 1201, 1008, 1151; prereq 3 yrs hi sch math, placemnt exam or GC 0631 C or bet)
★LECT 1010-1100 MWF, FordH 155
236106 —1 REC 0800-0955 TTh, ApH 239, 4 cr (TRIO stu only)
129827 —2 REC 0905-0955 TTh, AkerH 211, 4 cr
531834 —3 REC 0905-0955 TTh, FordH 115, 4 cr
631601 —4 REC 1010-1100 TTh, AmundH 240, 4 cr
229950 —5 REC 1010-1100 TTh, VinH 211, 4 cr
★LECT 1220-1310 MWF, VinH 16
239457 —6 REC 1115-1205 TTh, SmithH 231, 4 cr
033815 —7 REC 1115-1205 TTh, Arch 10, 4 cr
440719 —8 REC 1115-1205 TTh, VinH 113, 4 cr
039923 —9 REC 1220-1310 TTh, FolH 104, 4 cr
529842 —10 REC 1220-1310 TTh, Arch 15, 4 cr
★LECT 1430-1520 MWF, OwreH 2230
631579 —11 REC 1430-1520 TTh, AkerH 209, 4 cr
833461 —12 REC 1430-1520 TTh, Arch 10, 4 cr
938795 —13 REC 1535-1625 TTh, AmundH 124, 4 cr
729385 —14 REC 1535-1625 TTh, Arch 10, 4 cr

R 1058 Precalculus I Submodule (§1051, 1151, 1111, 1201, 1008; prereq 1031)
539996 2 cr

R 1131 Finite Mathematics (prereq 3 1/2 yrs high school math or grade of C or better in 1031 or 1181, pre-bus or soc and behav sci students) (Math)
★LECT 1430-1520 MWF, VinH 207
138696 —1 REC 1430-1520 TTh, Arch 25, 5 cr

R 1142 Short Calculus (§1211, 1411H; prereq 3 1/2 yrs hs math or grade of C or better in 1031 or 1181 or 1151) (Math)
★LECT 1325-1415 MWF, OwreH 2210
634305 —1 REC 1325-1415 TTh, VinH 211, 5 cr
631954 —2 REC 1325-1415 TTh, PillsH 110, 5 cr
734490 —3 REC 1430-1520 TTh, Phys 133, 5 cr
737745 —4 REC 1430-1520 TTh, VinH 113, 5 cr
★LECT 1430-1520 MWF, MoosT 2530
332192 —5 REC 1430-1520 TTh, SmithH 331, 5 cr
636300 —6 REC 1535-1625 TTh, AmundH 162, 5 cr
029540 —7 REC 1535-1625 TTh, Arch 25, 5 cr
830043 —8 REC 1535-1625 TTh, Arch 35, 5 cr

R 1151 Precalculus II (§1111, 1201, 1008; prereq 3 1/2 yrs hi sch math, plcmnt exam or 1051 grade of C or better) (Math)
★LECT 1010-1100 MWF, FordH 55
130590 —1 REC 0905-0955 TTh, VinH 6, 4 cr
740838 —2 REC 0905-0955 TTh, VinH 113, 4 cr
438646 —3 REC 1010-1100 TTh, VinH 113, 4 cr
636670 —4 REC 1010-1100 TTh, FordH 155, 4 cr
★LECT 1220-1310 MWF, BlegH 5
636457 —5 REC 1115-1205 TTh, SciCB 325, 4 cr
837848 —6 REC 1115-1205 TTh, SciCB 175, 4 cr
639391 —7 REC 1220-1310 TTh, AmundH B75, 4 cr
739270 —8 REC 1220-1310 TTh, VinH 113, 4 cr
231956 —9 REC 1220-1315 TTh, FordH 115, 4 cr
★LECT 1430-1520 MWF, SciCB 175
635244 —10 REC 1325-1415 TTh, VinH 113, 4 cr
037766 —11 REC 1325-1415 TTh, VinH 311, 4 cr
634661 —12 REC 1430-1520 TTh, SciCB 125, 4 cr
339000 —13 REC 1430-1520 TTh, PillsH 110, 4 cr

R 1251 One-Variable Differential and Integral Calculus I (§1142, 1451H, 1211, 1411H; prereq 4 yrs high schl math incl trig, or C grade or better in 1201 or 1008 and 1111, or equiv) (Math)
★LECT 0905-0955 MWF, Phys 170
936688 —1 REC 0800-0850 TTh, VinH 311, 4 cr
931636 —2 REC 0800-0850 TTh, VinH 2, 4 cr
029716 —3 REC 0905-0955 TTh, VinH 2, 4 cr
329745 —4 REC 0905-0955 TTh, VinH 311, 4 cr
★LECT 1010-1100 MWF, VinH 16
539691 —5 REC 0905-0955 TTh, VinH 211, 4 cr
139637 —6 REC 0905-0955 TTh, SciCB 375, 4 cr
632828 —7 REC 1010-1100 TTh, VinH 207, 4 cr
239314 —8 REC 1010-1100 TTh, WullH 140, 4 cr
★LECT 1115-1205 MWF, SmithH 231
739737 —9 REC 1010-1100 TTh, PillsH 110, 4 cr
131473 —10 REC 1010-1100 TTh, AkerH 309, 4 cr
730908 —11 REC 1115-1205 TTh, PillsH 110, 4 cr
436007 —12 REC 1115-1205 TTh, VinH 311, 4 cr
★LECT 1220-1310 MWF, SciCB 375
929580 —13 REC 1115-1205 TTh, VinH 364, 4 cr
540629 —14 REC 1115-1205 TTh, VinH 301, 4 cr
736689 —15 REC 1220-1310 TTh, VinH 364, 4 cr
041073 —16 REC 1220-1310 TTh, VinH 311, 4 cr
832116 —17 REC 1325-1520 TTh, VinH 364, 4 cr (Emerging Scholars)
★LECT 1325-1415 MWF, VinH 16
831130 —18 REC 1220-1310 TTh, PillsH 110, 4 cr
034365 —19 REC 1220-1310 TTh, VinH 207, 4 cr
038156 —20 REC 1325-1415 TTh, CivE 213, 4 cr
741066 —21 REC 1325-1415 TTh, EE/CSci 3115, 4 cr
★LECT 1430-1520 MWF, EE/CSci 3230
935220 —22 REC 1325-1415 TTh, FordH 155, 4 cr
534071 —23 REC 1325-1415 TTh, Phys 236A, 4 cr
631422 —24 REC 1430-1520 TTh, FordH 155, 4 cr
033880 —25 REC 1430-1520 TTh, MoosT 2520, 4 cr
★LECT 1535-1620 MWF, Phys 170
134986 —26 REC 1430-1520 TTh, AkerH 319, 4 cr
939669 —27 REC 1430-1520 TTh, NichH 209A, 4 cr
231326 —28 REC 1535-1620 TTh, FordH 155, 4 cr
040988 —29 REC 1535-1620 TTh, AkerH 209, 4 cr
★LECT
131912 —30 REC 1800-1900 TTh, TerH, 4 cr (Territorial Hall Library) (Residential College stu only)

R 1252 One-Variable Differential and Integral Calculus II (§1452H, 1221, 1421H; prereq C grade or better in 1251)
★LECT 0900-0955 MWF, VinH 16
737373 —1 REC 0800-0850 TTh, VinH 211, 4 cr
531302 —2 REC 0800-0850 TTh, VinH 364, 4 cr
431793 —3 REC 0905-0955 TTh, VinH 313, 4 cr
940532 —4 REC 0905-0955 TTh, AkerH 209, 4 cr
★LECT 1220-1310 MWF, Arch 50
729838 —5 REC 1220-1310 TTh, VinH 211, 4 cr
631016 —6 REC 1220-1310 TTh, VinH 2, 4 cr
531557 —7 REC 1325-1415 TTh, Phys 131, 4 cr
134574 —8 REC 1325-1415 TTh, Phys 133, 4 cr
★LECT 1325-1415 MWF, Phys 166
633980 —9 REC 1220-1310 TTh, VinH 206, 4 cr
737731 —10 REC 1220-1310 TTh, Phys 133, 4 cr
138494 —11 REC 1325-1415 TTh, Phys 166, 4 cr
934911 —12 REC 1325-1415 TTh, Phys 170, 4 cr
★LECT 1430-1520 MWF, FordH 55
136387 —13 REC 1325-1415 TTh, EltH N119, 4 cr
435276 —14 REC 1325-1415 TTh, NichH 211, 4 cr
937209 —15 REC 1430-1520 TTh, VinH 364, 4 cr
035712 —16 REC 1430-1520 TTh, ScottH 4, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 1261 Calculus III (§1241, 1553H, 3551H; prereq 1252 or 1353 or equiv)
★LECT 1010-1100 MWF, Phys 131
633381 —1 REC 0905-0955 TTh, FordH 55, 4 cr
738281 —2 REC 0905-0955 TTh, FordH 120, 4 cr
836702 —3 REC 1010-1100 TTh, FordH 55, 4 cr
732156 —4 REC 1010-1100 TTh, AkerH 319, 4 cr
★LECT 1115-1205 MWF, SciCB 325
833220 —5 REC 1010-1100 TTh, VinH 313, 4 cr
233822 —6 REC 1010-1100 TTh, VinH 20, 4 cr
336601 —7 REC 1115-1205 TTh, VinH 206, 4 cr
936223 —8 REC 1115-1205 TTh, VinH 211, 4 cr
★LECT 1220-1310 MWF, Arch 55
435973 —9 REC 1115-1205 TTh, VinH 1, 4 cr
024161 —10 REC 1220-1310 TTh, Phys 170, 4 cr
031496 —11 REC 1220-1310 TTh, VinH 1, 4 cr
134039 —12 REC 1325-1415 TTh, VinH 213, 4 cr

R 1268 Short Course: Introduction to Linear Algebra (§1261, 3221, 3142; prereq any crse in diff equations) (S-N only)
730746 1220-1310 MTWThF, VinH 313, 2 cr (meets 1st 4 wks only)

R 1351 Calculus: Concepts, Explorations, and Applications (§1251; prerep solid bkgrnd in precalc, geom, visual of func/graphs, #, C or better req to continue seq...famil with graphing calculator rec) (Math)
★LECT 0905-0955 TTh, Arch 35
336971 —1 REC 0905-0955 M, 0905-1100 W, NichH 209A, 4 cr
234808 —2 REC 0905-0955 M, 0905-1100 W, FordH 60, 4 cr
332628 —3 REC 1325-1415 M, 1325-1520 W, EltH N119, 4 cr
930616 —4 REC 1325-1415 M, 1325-1520 W, AkerH 215, 4 cr
★LECT 1325-1415 TTh, Arch 25
824128 —5 REC 0905-1100 M, 0905-0955 W, FordH 160, 4 cr
624129 —6 REC 0905-1100 M, 0905-0955 W, AmundH 158, 4 cr
024130 —7 REC 1325-1520 M, 1325-1415 W, AkerH 317, 4 cr
824131 —8 REC 1325-1520 M, 1325-1415 W, VinH 301, 4 cr

R 1551H Honors: One-Variable Differential and Integral Calculus I (§1251, 1411H, 1211; prereq consent of IT Honors Office) (Math)
★LECT 1010-1100 MWF, AkerH 309
632408 —80 REC 1010-1100 TTh, VinH 1, 4 cr
134638 —81 REC 1220-1310 TTh, Phys 236A, 4 cr

R 1552H Honors: One-Variable Differential and Integral Calculus II (§1252, 1421H, 1221; prereq 1551H with grade of C or better, consent of IT Honors Office)
★LECT 1010-1100 MWF, AmundH 240
835386 —80 REC 1010-1100 TTh, Phys 236A, 4 cr

R 3105 Topics in Elementary Mathematics (no cr for IT stu; prereq 1031 or equiv)
624132 1430-1625 TTh, NichH 207, 4 cr

R 3221 Introduction to Linear Algebra and Linear Differential Equations (§1261, 3066, 3142, 3261, 3552H; prereq 1 yr calc)
533695 1220-1310 MTWThF, VinH 313, 5 cr

R 3251 Multivariable Differential Calculus (§3211, 3311, 3521H, 3552H; prereq 1 yr calc, e.g. 1261 or 1353)
★LECT 1010-1100 MWF, MoosT 2620
836232 —1 REC 0905-0955 TTh, AkerH 215, 4 cr
435309 —2 REC 0905-0955 TTh, FordH 155, 4 cr
941048 —3 REC 1010-1100 TTh, Arch 35, 4 cr
631629 —4 REC 1010-1100 TTh, Arch 50, 4 cr
132400 —5 REC 1010-1100 TTh, ChDev 216, 4 cr
★LECT 1430-1520 MWF, MechE 18
440588 —6 REC 1220-1310 TTh, FordH 70, 4 cr
038870 —7 REC 1220-1310 TTh, BuH 123, 4 cr
640377 —8 REC 1325-1415 TTh, NichH 109, 4 cr
624180 —9 REC 1325-1415 TTh, NichH 209A, 4 cr

R 3252 Multivariable Integral Calculus (§3311/3331 or 3211/3331 or 3551H or 3552H; prereq 1252, ¶3251)
★LECT 1115-1205 MWF, VinH 16
232167 —1 REC 1010-1100 TTh, FolH 104, 4 cr
834545 —2 REC 1010-1100 TTh, FolH 208, 4 cr
737454 —3 REC 1115-1205 TTh, FolH 104, 4 cr
136592 —4 REC 1115-1205 TTh, AmundH 162, 4 cr
435228 —5 REC 1115-1205 TTh, AmundH 240, 4 cr

R 3261 Differential Equations with Linear Algebra (§3221, 3321, 3531H, 3551H; prereq 1 yr calc, e.g. 1261 or 1353)
★LECT 0905-0955 MWF, SciCB 325
736577 —1 REC 0905-0955 TTh, Phys 210, 4 cr
838692 —2 REC 0905-0955 TTh, PillsH 110, 4 cr
038819 —3 REC 0905-0955 TTh, SciCB 325, 4 cr
835162 —4 REC 1010-1100 TTh, MechE 18, 4 cr
136678 —5 REC 1010-1100 TTh, SciCB 325, 4 cr
★LECT 1220-1310 MWF, Arch 40
736398 —6 REC 1115-1205 TTh, Arch 60, 4 cr
231097 —7 REC 1115-1205 TTh, FordH 160, 4 cr
739950 —8 REC 1115-1205 TTh, AkerH 215, 4 cr
931703 —9 REC 1220-1310 TTh, Arch 25, 4 cr
235411 —10 REC 1220-1310 TTh, FordH 170, 4 cr
★LECT 1430-1520 MWF, SciCB 325
229723 —11 REC 1325-1415 TTh, AmundH 116, 4 cr
037055 —12 REC 1325-1415 TTh, SciCB 175, 4 cr
336226 —13 REC 1325-1415 TTh, VinH 16, 4 cr
835260 —14 REC 1430-1520 TTh, MechE 18, 4 cr
734022 —15 REC 1430-1520 TTh, NichH 211, 4 cr

R 3262 Sequences, Series, and Foundations (prereq 1261)
★LECT 1220-1310 MWF, VinH 209
534118 —1 REC 1220-1310 TTh, Arch 45, 4 cr

R 3354 Calculus Concepts, Explorations, and Applications (prereq 1353, sing-var calc, geom/visual of func and graphs, famil w/graph calculator)
★LECT 1115-1205 WF, AkerH 319
★LAB 0905-1100 Th, LindH 1
424925 —1 REC 0905-0955 T, Arch 20, 4 cr
★LAB 1115-1310 Th, LindH 1
124927 —2 REC 1115-1205 T, AkerH 317, 4 cr
★LAB 1325-1520 Th, LindH 1
724929 —3 REC 1325-1415 T, Phys 143, 4 cr

R 3551H Honors: Linear and Nonlinear Analysis II (prereq 1553H with C grade of better, consent of IT Honors Office)
★LECT 1010-1100 MWF, Arch 45
234338 —80 REC 0905-0955 TTh, VinH 364, 4 cr
637513 —81 REC 1010-1100 TTh, VinH 364, 4 cr

R 3552H Honors: Linear and Nonlinear Analysis III (prereq 3551H with C grade or better, consent of IT Honors Office)
★LECT 1010-1100 MWF, Phys 236A
833296 —80 REC 1430-1520 TTh, VinH 6, 4 cr

R 5056 Theory of Interest (prereq 1252 or equiv)
136785 1220-1310 MWF, VinH 207, 4 cr

R 5057 Actuarial Mathematics I (prereq 5056, 1 qtr 5XXX-level probability or statistics)
129455 1325-1415 MWF, VinH 113, 4 cr

R 5162 Mathematical Logic (prereq 1 yr calc or equiv or Phil 5202 or #)
934262 1430-1520 MWF, VinH 113, 4 cr

R 5232 Computer-Oriented Linear Algebra (§5242-5243, 5247, 5284; prereq [1261, 3261] or 3142 or equiv or #)
239183 1220-1310 MWF, VinH 113, 1430-1520 M, LindH 1, 4 cr

R 5242 Linear Algebra with Applications (§5232-5233, 5247, 5284; prereq [1261, 3261] or 3142 or equiv or #)
★LECT 0905-0955 MWF, VinH 113
134132 —1 REC 0905-0955 Th, Phys 166, 4 cr

R 5245 Introduction to Modern Algebra I (§5282; prereq three 32XX math courses or equiv or #)
631758 —1 0905-0955 MWF, VinH 211, 4 cr
130914 —2 1010-1100 MWF, AmundH 162, 4 cr

R 5247 Introduction to Modern Algebra III (§5284; prereq 5246)
924136 0905-0955 MWF, AmundH 162, 4 cr

R 5282 Fundamental Structures of Algebra (§5245; prereq one soph sequence or #...some previous abstract math rec)
738913 0905-0955 MWF, VinH 311, 4 cr

R 5331 Geometry I (§3161; prereq 1261 or equiv)
832617 1325-1520 M, 1325-1415 WF, FordH 115, 4 cr

R 5341 Introduction to Topology (prereq one sophomore sequence or #...some previous abstract mathematics rec)
824517 1325-1415 MWF, VinH 206, 4 cr

R 5457 Methods of Applied Mathematics (prereq [3252, 3261] or equiv...3262 rec)
730262 1115-1205 MWF, VinH 6, 4 cr

R 5463 The Mathematics of Industrial Problems (prereq 2 yrs calc includ 3262 or equiv, famil with FORTRAN, Pascal, or C)
531882 1325-1415 MWF, VinH 209, 4 cr

R 5473 Analysis of Numerical Methods (prereq [3252, 3261] or equiv, some computer skills rec) (A-F only)
632022 1115-1205 MWF, VinH 2, 4 cr

R 5477 Applied Numerical Analysis of Partial Differential Equations (prereq 5242 or equiv, 5608 or equiv, 5513 or equiv, computer skills or #)
939767 1010-1100 MWF, MurH 130, 4 cr

R 5512 Differential Equations with Applications I (prereq 3261 or equiv or #...3262 rec)
036522 1010-1100 MWF, VinH 301, 4 cr

R 5521 Introduction to Ordinary Differential Equations (prereq one sophomore sequence or #...some previous abstract math rec) (A-F only)
538895 1010-1100 MWF, VinH 6, 4 cr

R 5531 Dynamical Systems and Chaos (prereq multivariable calculus and linear algebra, e.g. 1261-3251-3252-3261)
534281 1325-1415 MWF, VinH 20, 4 cr

R 5567 Fourier Series and Boundary Value Problems (§5571; prereq 3261 or equiv or #...3262 rec)
138441 1325-1415 MWF, VinH 207, 4 cr

R 5571 Elementary Partial Differential Equations (prereq 5613 or ¶5608)
037850 1115-1205 MWF, VinH 301, 4 cr

R 5606 Advanced Calculus: A Rigorous Approach (§5612; prereq 2 yrs calculus)
837820 —1 1115-1205 MWF, VinH 311, 4 cr
131862 —2 1220-1310 MWF, VinH 6, 4 cr

R 5608 Multivariable Advanced Calculus (§5614; prereq 3252, 5606-5607 recommended)
835419 1220-1310 MWF, VinH 2, 4 cr

R 5612 Introduction to Analysis (prereq 3252 or equiv, ¶3262)
833346 —1 1220-1310 MWF, VinH 211, 4 cr
135877 —2 1430-1520 MWF, VinH 20, 4 cr

R 5681 Probability and Stochastic Processes (§5679, Stat 5131; prereq 3252 or equiv ...¶3262 rec)
934889 1010-1100 MWF, VinH 113, 4 cr

R 5701 Enumerative Combinatorics (prereq 3251 or equiv...3XXX linear algebra rec)
036312 1545-1700 M, MechE 108, 1545-1700 W, EE/CSci 3125, 4 cr

R 5711 Linear Programming and Application (prereq linear algebra crse)
124930 1010-1100 MWF, VinH 207, 4 cr

5900 Tutorial Course in Advanced Mathematics (prereq #)
231133 ar cr

R 8000 Preparation for Teaching College Mathematics (!; prereq grad stu in doct prog in math, beyond 1st yr, good acad stand with dept, #) (S-N only)
424133 1600-1730 W, VinH 209, 2 cr

R 8140 Applied Logic (prereq #)
624518 1430-1520 MWF, VinH 6, 3 cr

R 8200 General Algebra (prereq 5284 or #)
534832 1115-1205 MWF, VinH 207, 3 cr

R 8203 Algebraic Geometry (prereq 8202, #)
330667 1115-1205 MWF, VinH 113, 3 cr

R 8211 Commutative Algebra (prereq 8202 or #)
424519 0905-0955 MWF, VinH 6, 3 cr

R 8266 Topics in Number Theory (prereq #)
824520 1010-1100 MWF, VinH 2, 1-3 cr

R 8270 Lie Groups, Algebras (prereq 8202 or #)
130668 1325-1520 TTh, VinH 313, 3 cr

R 8290 Topics in Algebra (prereq 8202 or #)
524138 0905-0955 MWF, VinH 213, 1-3 cr

R 8300 Manifolds/Topology (prereq 5282-5283, 5341 or #)
439988 1325-1415 MWF, VinH 364, 3 cr

R 8308 Algebraic Topology (prereq 5342 or #)
938084 1010-1100 MWF, VinH 364, 3 cr

R 8365 Riemannian Geometry (prereq 5377 or #)
233738 1220-1310 MWF, VinH 301, 3 cr

R 8380 Topics: Advanced Differential Geometry (prereq #)
224134 0905-0955 MWF, VinH 364, 1-3 cr

R 8406 Advanced Methods of Applied Mathematics (prereq 5459 or #)
030669 0905-0955 MWF, VinH 207, 3 cr

R 8430 Mathematical Theory of Fluid Dynamics (prereq 5573, 5602 or #)
124135 1010-1100 MWF, VinH 213, 3 cr

R 8441 Variational Methods in Eigenvalue Problems (prereq 5573 or #)
324139 1325-1415 MWF, VinH 213, 3 cr

R 8445 Numerical Analysis of Ordinary and Partial Differential Equations (prereq 5567, 5571 or equiv, 5513 or equiv) (A-F only)
333438 1115-1205 MWF, VinH 313, 1-3 cr

R 8450 Topics in Numerical Analysis (prereq #)
836666 1325-1415 MWF, VinH 2, 1-3 cr

R 8500 Theory of Ordinary Differential Equations (prereq 5614, 5521 or #)
733503 1010-1100 MWF, AkerH 225, 3 cr

R 8550 Theory of Partial Differential Equations (prereq 5614, 5521 or #)
629718 1430-1520 MWF, VinH 311, 3 cr

R 8560 Calculus of Variations, Minimal Surfaces (prereq 5614 or equiv, 5521 or #)
624521 1430-1520 MWF, VinH 364, 3 cr

R 8580 Mathematical Modelling of Industrial Problems (prereq 5521/5522/5523, 5571/5572/5573 or 5463/5464/5465, some comput exp)
436816 1430-1520 MWF, VinH 211, 4 cr

R 8590 Topics in Partial Differential Equations (prereq 8609, 8552 or #)
136101 1115-1205 MWF, VinH 364, 1-3 cr

R 8600 Real Analysis (prereq 5614 or 8702 or #)
440316 1220-1310 MWF, VinH 311, 3 cr

R 8620 Theory of Singular Integrals (prereq 8602 or equiv or #)
139184 1325-1415 MWF, VinH 6, 3 cr

R 8656 Measure Theory and Probability (prereq 5614 or #)
338784 1010-1100 MWF, VinH 211, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
038982 1-18 cr

R 8668 Introduction to Combinatorial Theory (prereq #)
424522 1010-1100 MWF, VinH 311, 3 cr

R 8690 Topics in the Theory of Probability (prereq 8652 or #)
137449 1245-1400 TTh, MurH 311, 1-3 cr

R 8700 Complex Analysis (prereq 5614 or 5573 or #)
234033 1430-1520 MWF, VinH 313, 3 cr

8777 Thesis Credits: Masters
140360 1-16 cr

R 8790 Topics in the Theory of Analytic Functions (prereq 8702 or #)
236994 0905-0955 MWF, VinH 301, 1-3 cr

R 8800 Functional Analysis (prereq 8602 or #)
537780 1220-1310 MWF, VinH 20, 3 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
439456 1-36 cr

R 8990 Reading and Research
330829 ar cr

R 8991 Reading and Research (prereq 8990)
929904 ar cr

MATHEMATICS EDUCATION (MthE)

Curriculum and Instruction
Education and Human Development

R 5020 Teaching Mathematics: Algebraic Structures (§5082; prereq 5010, 5610, math ed stu or #) (A-F only)
822881 1010-1205 MTWThF, PeikH 375, Pandiscio E, 3 cr

5172 Historical Topics in the Mathematics Classroom (prereq math ed or grad stu or #) (A-F only)
724932 1630-1915 W, PeikH 165, Stochl J, 3 cr

R 5312 Teaching and Supervision of Mathematics in the Secondary School (prereq math tchg exp or #) (A-F only)
340762 1630-2010 T, PeikH 365, Stochl J, 4 cr

R 5355 Mathematics for Diverse Learners (prereq CI 5821 or #) (A-F only)
741021 1640-2010 M, PeikH 375, Post T, 4 cr

5620 Clinical Experiences in Teaching Algebra (prereq 5610, math ed stu or #, ¶5020, does not apply to MEd or grad prog) (S-N only)
924847 2 cr

5680 Practicum in Mathematics Education (max 9 cr; prereq #) (A-F only)
235554 —1 Orton R, 3-9 cr
937873 —2 Post T, 3-9 cr
234601 —3 Stochl J, 3-9 cr

5980 Directed Studies in Mathematics Education (max 9 cr; prereq #) (A-F only)
329809 —1 Orton R, 3-9 cr
729967 —2 Post T, 3-9 cr
531414 —3 Stochl J, 3-9 cr

8500 Theory and Classical Research in Mathematics Education (prereq 5311 or 5312 or #)
622882 1630-1915 T, PeikH 375, Stochl J, 3 cr

8680 Internship: Mathematics Education
334315 —1 Orton R, ar cr
738359 —2 Post T, ar cr
138519 —3 Stochl J, ar cr

8980 Problems: Mathematics Education (prereq 8500 or 8570)
736174 —1 Orton R, ar cr
339580 —2 Post T, ar cr
034981 —3 Stochl J, ar cr

MECHANICAL ENGINEERING (ME)

Mechanical Engineering
Institute of Technology

An IT computer fee is assessed at the time of registration for ME 1025, 3020, 3203, 5203, 5220, 5225, 5226, 5227, 5260, 5265, 5268, 5271, 5288, and 5351. See page 27 for more information on this fee.

R 1025 Engineering Graphics (prereq Math 1251 or equiv, IT stu or pre-BAE maj)
729595 —1 LECT 1010-1100 MTWThF, Arch 10, Berhe T, 4 cr
336534 —2 LECT 1325-1415 MTWThF, Arch 10, Berhe T, 4 cr
★LAB (open hrs, MechE 314)

R 3020 Mechanical Engineering Computation (prereq IT stu, Math 3261, CSci 3101)
133921 —1 0800-0850 MWThF, FordH 115, 4 cr
831869 —2 0905-0955 MWThF, Arch 10, 4 cr

R 3201 Mechanical Engineering Systems Analysis (§AEM 3401; prereq AEM 3036, 3020 recommended)
★LECT 1010-1100 MWF, MechE 18
240947 —1 REC 1220-1415 M, MechE 202, 4 cr
338168 —2 REC 1325-1520 T, Arch 45, 4 cr
533261 —3 REC 1430-1625 W, AmundH 158, 4 cr

R 3205 Engineering Systems Design (prereq AEM 3016, upper division mech engr maj)
★LECT 1220-1310 MWF, Arch 25
133482 —1 REC 1430-1625 M, MechE 321, 4 cr
236090 —2 REC 1430-1625 W, MechE 202, 4 cr
438243 —3 REC 1430-1625 Th, MechE 202, 4 cr

R 3205H Engineering Systems Design (§3205; prereq AEM 3016, ME upper div honors stu)
★LECT 1220-1310 MWF, Arch 25
431244 —80 REC 1430-1625 W, MechE 202, 4 cr

R 3301 Thermodynamics (prereq IT or ForP or pre-BAE maj, Chem 1014 or Chem 1052 or Phys 1252, Math 3261 or equiv)
238633 —1 0800-0850 MTWThF, Arch 10, 4 cr
535236 —2 0800-0850 MTWThF, Arch 55, 4 cr
923889 —3 1010-1100 MTWThF, Arch 55, 4 cr

R 3301H Thermodynamics (§3301; prereq Chem 1014 or Phys 1281, Math 3221 or equiv, IT upper div honors stu)
936545 1010-1100 MTWThF, Arch 55, 4 cr

R 3303 Applied Thermodynamics (§3305; prereq 3301 or equiv, upper division mech engr or aerospace engr maj)
733498 0905-0955 MTWThF, Arch 55, 4 cr

R 3701 Basic Measurements Laboratory I (prereq 3301 or ¶, upper division mech engr maj)
435567 —1 LECT 1220-1310 T, Arch 10, Davidson J, 2 cr
★LAB (open lab ar, MechE 370-388)

R 3701H Basic Measurement Laboratory I §3701; prereq ME upper div honors stu)
831712 —80 LECT 1220-1310 T, Arch 10, Davidson J, 2 cr
★LAB (open lab ar, MechE 370-388)

R 3702 Basic Measurements Laboratory II (prereq 3701, upper division mech engr maj)
440994 —1 LECT 1220-1310 Th, Arch 10, Davidson J, 2 cr
★LAB (open lab ar, MechE 370-388)

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † All courses preceding this symbol must be completed before credit will be granted for any quarter of the sequence.
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- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 3741 Industrial Assignment (prereq regis in intern program)
539867 Marple V, 2 cr

R 3742 Industrial Assignment (prereq 3741)
531431 Marple V, 2 cr

R 3743 Industrial Assignment (prereq 3742)
030199 Marple V, 2 cr

R 3900 Introduction to Engineering Statistics (prereq IT stu or pre-BAE maj, Math 1261 or equiv)
723893 0905-0955 MWThF, AkerH 309, Arora S, 4 cr

R 5190 Advanced Engineering Problems (prereq #, Δ)
931460 2-4 cr

5198H Mechanical Engineering Upper Division Honor Thesis I (prereq upper div ME honors stu)
037380 4 cr

5199H Mechanical Engineering Upper Division Honor Thesis II (prereq upper div ME honors stu)
636054 4 cr

R 5220 Computer-Aided Design, Optimization, and Computer Graphics (prereq IT or grad stu, 1025, 3020, 3203, 3205)
832231 —1 LECT 0800-0850 MTWThF, MurH 308, 4 cr
★LAB (lab ar)

R 5226 Finite Element Methods in Mechanical Engineering I (prereq Math 3261, AEM 3016, ME 3020, IT upper div or grad stu)
132016 1535-1730 TTh, MechE 221, Tamma K, 4 cr

R 5230 Acoustics and Vibration Laboratory (prereq 3701, 3702, 3201, ME upper div) (A-F only)
★LECT 1325-1415 M, AkerH 309, Frohrib D
334265 —1 LAB 1430-1730 M, MechE 357, 2 cr
139444 —2 LAB 1430-1730 T, MechE 357, 2 cr
032325 —3 LAB 1430-1730 W, MechE 357, 2 cr
433074 —4 LAB 1430-1730 F, MechE 357, 2 cr

R 5233 Programmable Automation (prereq ME upper div stu, 3702)
★LECT 1325-1415 M, MechE 221, Vogel J
138939 —1 LAB 0905-1205 T, ElectE 304, 2 cr
429753 —2 LAB 1430-1730 T, ElectE 304, 2 cr
536225 —3 LAB 1430-1730 W, ElectE 304, 2 cr
330068 —4 LAB 0905-1205 Th, ElectE 304, 2 cr
131805 —5 LAB 1430-1730 Th, ElectE 304, 2 cr
840331 —6 LAB 1430-1730 F, ElectE 304, 2 cr

R 5244 Vibration Engineering (prereq 3201 or equiv, IT stu or grad)
430286 —1 1430-1520 MWF, MechE 212, 4 cr

R 5254 Design Morphology with Applications (prereq upper div ME maj, 1025, 3201, 3205, 3303, 5342 or #)
★LECT 1325-1415 TTh, MechE 18
837347 —1 LAB 1325-1730 TTh, AmundH 240, 4 cr

R 5255 Engineering Design Project (prereq 5254, upper division mech engr maj)
★LECT 1325-1415 TTh, MechE 18, 4 cr
236669 —1 LAB 1325-1730 TTh, AmundH 240

R 5260 Engineering Materials and Processing (prereq ME upper div, 3020, Phys 1253, Chem 1052, AEM 3016, MatS 3400, safety glasses req)
★LECT 1325-1425 MWF, MechE 18, Klamecki B
134980 —1 REC 1430-1625 M, MechE 70, 4 cr
533230 —2 REC 0800-0955 T, MechE 70, 4 cr
530960 —3 REC 1010-1205 T, MechE 70, 4 cr
838319 —4 REC 1220-1415 T, MechE 70, 4 cr
423905 —5 REC 0800-0955 W, MechE 70, 4 cr
834609 —6 REC 1010-1205 W, MechE 70, 4 cr
032387 —7 REC 1430-1625 W, MechE 70, 4 cr
234968 —8 REC 1010-1205 Th, MechE 70, 4 cr
623904 —9 REC 1220-1415 Th, MechE 70, 4 cr
734358 —10 REC 1010-1205 F, MechE 70, 4 cr
731315 —11 REC 1430-1625 F, MechE 70, 4 cr

R 5265 Computer-Assisted Product Realization (prereq 5260 or equiv, IT sr or grad stu, course in engr computer language)
638810 1535-1835 M, LindH 229, 4 cr

R 5270 Materials-Design Requirements (prereq 5260, IT stu or grad)
★LECT 1115-1310 MW, AmundH 240, Ramalingam S
932964 —1 LAB 4 cr

R 5283 Industrial Instrumentation and Automatic Control (prereq 3201 or equiv, IT stu or grad)
436248 1430-1625 MW, AmundH 240, Ogata K, 4 cr

R 5285 Control Systems Laboratory (prereq 5283 or equiv, IT or grad IT maj)
536483 1325-1415 TTh, MechE 221, Donath M, 2 cr

R 5342 Heat Transfer (prereq IT upper div or grad or ForP stu, 3301, CE 3400 or AEM 3200)
223906 —1 0800-0850 MTWThF, Arch 40, 4 cr
440932 —2 1115-1205 MTWThF, Arch 55, 4 cr

R 5342H Heat Transfer (§5342; prereq 3301, CE 3400 or AEM 3200, ME upper div honors stu)
123907 1115-1205 MTWThF, Arch 55, 4 cr

R 5343 Introduction to Thermal Design (prereq 5342, 5254 or equiv, upper division IT stu or grad)
639262 1535-1730 MTh, LindH 203, Bar-Cohen A, 4 cr

R 5351 Computational Heat Transfer (prereq 5342, IT stu or grad)
039727 1325-1505 WF, MechE 221, Patankar S, 4 cr

R 5370 Transport Phenomena Laboratory (prereq upper div ME maj, 3303, 3701, 3702, AEM 3200 or CE 3400, 5342)
★LECT 1220-1310 MF, AkerH 313
125026 —1 LAB 1325-1725 M, MechE 260, 4 cr
925027 —2 LAB 1325-1725 T, MechE 260, 4 cr
725028 —3 LAB 1325-1725 W, MechE 260, 4 cr

R 5442 Vapor Cycle Power Systems (prereq 3303, IT stu or grad)
331477 0800-0850 MTWThF, MechE 321, Kittelson D, 4-5 cr

R 5446 An Introduction to Combustion (prereq 5342 or equiv, IT stu or grad; 3303 recommended)
036424 1115-1205 MTWThF, MechE 321, Blackshear P, 4 cr

R 5460 Internal Combustion Engines (prereq IT or grad stu; 3301, 3303, ¶5430 recommended)
134180 0905-0955 MTWThF, MechE 321, 4 cr

R 5462 Gas Turbines (prereq 3301, IT stu or grad)
530232 1010-1100 MTWThF, MechE 321, 4 cr

R 5470 Energy Conversion Systems Laboratory (prereq upper div ME stu, 3303, 3701, 3702, AEM 3200 or CE 3400)
★LECT 1220-1310 MF, AkerH 309
025021 —1 LAB 1325-1725 M, MechE 460, 4 cr
825022 —2 LAB 1325-1725 T, MechE 460, 4 cr
625023 —3 LAB 1325-1725 W, MechE 460, 4 cr

R 5603 Thermal Environmental Engineering (prereq 3303, 5342 or equiv, IT stu or grad)
037492 1325-1415 MWThF, AkerH 225, Kuehn T, 4 cr

R 5609 Air Pollution (prereq IT upper div or grad stu)
923908 0800-0955 TTh, MechE 221, McMurry P, 4 cr

R 5613 Principles of Particle Technology (prereq 3303, IT stu or grad)
729743 0800-0955 MW, MechE 221, Liu B, 4 cr

R 5630 Thermal Environmental Engineering Senior Laboratory (prereq 3701, 3702, ¶5603; formerly 5703-4-5, Lab sections E-1, E-2) (A-F only)
★LECT 1115-1205 T, MechE 202, Kuehn T, Ramsey J
237644 —1 LAB 1115-1310 W, MechE 362, 2 cr
339692 —2 LAB 1115-1310 Th, MechE 362, 2 cr
734098 —3 LAB 1115-1310 F, MechE 362, 2 cr

R 5741 Industrial Assignment and Design Project (5741-5742†; prereq 3742)
132333 Marple V, 4 cr

R 5742 Industrial Assignment and Design Project (5741-5742†; prereq 5741)
239295 Marple V, 4 cr

R 8250 New Product Design and Development (prereq 5254 or equiv)
740239 1115-1245 TTh, SocSci 101, Durfee W, Erdman A, 4 cr

R 8330 Conduction (prereq 5342)
029487 1115-1230 TTh, MechE 102, 3 cr

R 8360 Introduction to Plasma Technology (prereq 5342 or #)
930504 1010-1100 MWThF, MechE 221, Pfender E, 3 cr

R 8370 Experimental Methods in Heat Transfer
032020 1010-1100 MWF, MechE 202, 3 cr

R 8443 Applied Thermodynamics I (prereq 3303 or equiv)
123910 1220-1340 TTh, MechE 202, Fletcher E, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
635258 1-18 cr

8770 Mechanical Engineering Research (prereq Δ)
740757 ar cr

8771 Mechanical Engineering Research (prereq 8770, Δ)
539383 ar cr

R 8773 Graduate Seminar (S-N only)
538220 —1 1535-1635 W, MechE 108, 1 cr

R 8774 Graduate Seminar (prereq 8773) (S-N only)
932219 —1 1535-1635 W, MechE 108, 1 cr

R 8775 Graduate Seminar (prereq 8774) (S-N only)
331320 —1 1535-1635 W, MechE 108, 1 cr

8777 Thesis Credits: Masters
229849 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
834206 1-36 cr

MEDICAL TECHNOLOGY (MedT)

Medical School

1010 Orientation (prereq freshman) (S-N only)
230760 1220-1310 Th, MoosT 3317, Karni K, 1 cr

3001 Basic Techniques in Laboratory Science (prereq previous enroll in NAACLS/CAHEA accredited med lab tech prog) (S-N only)
732187 3 cr

5010 Introduction to Clinical Laboratory Science (prereq regis as a student in the prof medical technology program) (S-N only)
135272 0800-1645 MTWThF, MoosT 3317, Swinehart C, 2 cr (Sept 16-25 only)

5077 Hematology I: Basic Techniques (A-F only) (course fee)
★LECT 1010-1100 M, MoosT 2520, Lofsness K
039873 —1 LAB 0905-1205 T, 1300-1600 F, MoosT 3349, Lofsness K, 3 cr

5082 Applied Clinical Chemistry (prereq 5113) (S-N only)
039601 0700-1600 MTWThF, UHosp, Hanson N, 4 cr

5084 Applied Clinical Virology (prereq 5100, 5102) (S-N only)
334301 0730-1600 MTWThF, UHosp, Stratton C, 1 cr

5085 Applied Clinical Hematology (prereq 5077, 5078, 5765 or CLS 5765) (S-N only)
134459 0715-1600 MTWThF, UHosp, Lofsness K, Swinehart C, 4 cr

5086 Applied Clinical Immunohematology (prereq 5064, 5065) (S-N only)
231584 0730-1600 MTWThF, UHosp, Hallgren H, 4 cr

5088 Applied Diagnostic Microbiology (prereq 5100, 5102) (S-N only)
837171 0730-1600 MTWThF, UHosp, Wells C, 4 cr

5089 Specialty Rotation (prereq completion of med tech preclin prof crses, 5064, 5065, 5078, 5100, 5102, 5113, 5765) (S-N only)
138592 0730-1600 MTWThF, UHosp, Karni K, 1 cr

5090 Special Laboratory Methods (prereq #)
839292 2 cr

5092 Honors Program: Laboratory Methods (prereq #)
535270 Karni K, 5 cr

5102 Principles of Diagnostic Microbiology (prereq MicB 5233) (A-F only) (course fee)
★LECT 0905-0955 M, 1325-1415 TTh, MoosT 3317, Wells C
529940 —1 LAB 0905-1310 W, 0800-1200 ThF, MoosT 3343, Wells C, Jechorek R, 5 cr

5120 Seminar
132056 Karni K, 1-3 cr

5125 Practicum: Teaching (max 3 cr)
337070 ar cr

5128 Elements of Laboratory Administration (prereq Δ)
233237 0800-1100 M, Karni K, 3 cr

5130 Practicum in Laboratory Administration (prereq #)
834934 3 cr

5135 Advanced Clinical Microbiology (prereq #)
★LECT Wells C
033345 —1 LAB Wells C, 5 cr

5138 Seminar: Clinical Microbiology
233917 1115-1205 F, PWB 15194, Wells C, ar cr

5140 Techniques for Teaching (prereq Δ)
533910 1325-1615 Th, PWB 15194, Karni K, 3 cr

5145 Development of Medical Technology
340602 3 cr

5155 Advanced Clinical Hematology (prereq #)
437156 5 cr

5165 Advanced Clinical Immunohematology (prereq #)
139296 0800-1600 M, PWB 15194, Hallgren H, 5 cr

5175 Advanced Clinical Chemistry (prereq #)
140701 5 cr

5179 Chemistry Seminar (prereq #)
239913 1 cr

R 5310 Clinical Chemistry I: Lecture (prereq Chem 3301, Chem 3302, Chem 3305, Chem 3306, MdBc 5300, MdBc 5301) (A-F only)
434869 1430-1520 TTh, OwreH 2210, Brunzel N, 2 cr

R 5311 Clinical Chemistry I: Laboratory Applications (prereq Chem 3301, Chem 3302, Chem 3305, Chem 3306, MdBc 5300, MdBc 5301) (A-F only)
932687 1220-1530 M, 1325-1630 W, MoosT 3343, Brunzel N, 2 cr (MoosT 3343, 1st five-weeks; MoosT rm ar, 2nd five-weeks)

MEDICINAL CHEMISTRY (MedC)
Pharmacy

5151 Biochemistry I (prereq ¶Phcy 5921) (A-F only)
033720 1325-1520 MW, MoosT 2620, Ferguson D, 4 cr

5162 Therapeutic Agents II (prereq 5152, 5161, or #) (A-F only)
223856 1430-1520 MW, MoosT 2520, Johnson R, 2 cr

5172 Pharmaceutical Microbiology and Immunology (prereq 5152 or equiv) (A-F only)
423855 1115-1230 WF, MoosT 2620, Wagner C, 3 cr

5495 Vistas in Medicinal Chemistry Research (S-N only)
939929 1640-1730 MW, HSUnitF 7135, Abul-Hajj Y, 1 cr

5600 General Principles of Medicinal Chemistry (prereq Phcl 1009, BioC 5001) (A-F only)
831581 1430-1520 MWThF, HSUnitF 7191, Hanna P, others, 4 cr

8100 Medicinal Chemistry Seminar
333472 1535-1730 T, MoosT 2520, Vince R, ar cr

8114 Natural Toxins (§Phcg 8114; prereq #) (A-F only)
336565 Shier W T, 2 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
031207 1-18 cr

8777 Thesis Credits: Masters
829460 1-16 cr

8800 Laboratory Techniques (prereq Chem 3303 or #)
729466 ar cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
939963 1-36 cr

8900 Research in Medicinal Chemistry (prereq Chem 3303 or #)
033975 ar cr

MEDICINAL CHEMISTRY, UNDERGRADUATE (MChm)
Pharmacy

5495 Vistas in Medicinal Chemistry Research (S-N only)
439389 1640-1730 MW, HSUnitF 7135, Abul-Hajj Y, 1 cr

5710H Medicinal Chemistry Seminar (prereq #) (A-F only)
238244 1 cr

5711H Natural Toxins (prereq #) (A-F only)
838109 Shier W T, 2 cr

5970 Directed Studies (prereq #)
431163 1-5 cr

5999 Special Problems (prereq #)
539805 ar cr

MEDICINE (Med)
Medical School

R 5500 Medicine Externship I (prereq regis med student)
138245 Parenti C, 9 cr

R 5501 Externship in Medicine (prereq regis med student, 5500)
229575 Parenti C, 9 cr

5505 Infectious Disease Research at the University Hospital
131781 Jordan C, ar cr

5507 Research in Oncology (prereq regis med student)
129679 Ginder G, ar cr

5508 Preceptorships in Internal Medicine (prereq regis med)
330037 Nath K, ar cr

5509 Research in Rheumatology
633848 Messner R, 9 cr

5511 Research in Gastroenterology
830267 Steer C, ar cr

5512 Research in Hematology
940921 Jacob H, 1-18 cr

5518 Research in Endocrinology (prereq regis med student)
332337 Robertson P, ar cr

5521 Infectious Diseases, Clinical Aspects at the University Hospitals
532188 Jordan C, 6-9 cr

5522 Medical Gastroenterology
836084 Soltis R, 6-9 cr

5523 Medical Endocrinology, Metabolism and Clinical Pharmacology
539397 Robertson P, 6-9 cr

5525 Cardiovascular Medicine
337666 Bache R, ar cr

5526 Medical Oncology Outpatient/Consulation (prereq 5500)
236039 Luikart S, 4.5-9 cr

5527 Contemporary Problems in Investigative Cardiology
731105 Bache R, 9 cr

5528 Clinical Hematology
138486 Weisdorf D, ar cr

5531 Clinical Rheumatology
436766 Messner R, 4.5-9 cr

5532 Pulmonary Disease
939638 Bitterman P, ar cr

5533 Clinical Allergy at University Hospitals
433947 Blumenthal M, 4.5-9 cr

5534 Research in Allergy (prereq regis med)
139984 Blumenthal M, 9 cr

5548 Clinical Genetics
339532 King R, 9 cr

5554 Fluid Electrolyte, Acid-Base Metabolism
133019 Ma K V, 6-9 cr

5556 Renal Consultation (prereq 5500)
938697 Nath K, 6-9 cr

5557 Research in Nephrology (prereq 5500 at Univ Hosp)
534202 Nath K, ar cr

5561 Outpatient and Clinical Nephrology (prereq 5500, regis med stu)
131506 Abraham P, ar cr

5562 Clinical Nephrology (prereq 5500)
531901 Rao V K, 6-9 cr

5570 Clinical Medicine in the General Clinical Research Center (prereq 5500)
040750 Bantle J, ar cr

5571 Clinical Toxicology and Emergency Medicine (prereq regis med student)
031787 Saxena K, ar cr

5580 Coronary Care Unit (CCU) at VA (prereq 5500, other basic externships)
540680 Pierpont G, 6-9 cr

5581 Medicine Intensive Care Unit at Hennepin County Medical Center (prereq regis med stu)
132395 Leatherman J, 6-9 cr

5582 Clinical Elective in Medical Intensive Care: Ramsey (prereq completion of pre-clinical course work, sr med stu preferred)
435133 Marini J, 6-9 cr

5583 Fundamentals of Clinical Oncology (prereq 5500 or Ped 5501)
631114 Peterson B, 6 cr

5590 Preceptorships in Internal Medicine
140366 McCollister R, 4.5-9 cr

5596 Occupational Health
130758 Lohman W, 4.5 cr

5597 Research in Occupational Health
040361 Miles S, 9 cr

8201 Clinical Medicine
537701 Ferris T, ar cr

8202 Clinical Conference
239409 Ferris T, 1 cr

8203 Clinical Radiology Conference
631582 Ferris T, 1 cr

8204 Pathology Conference
133255 Ferris T, 1 cr

8205 Electrocardiographic Conference
936481 Tuna N, 1 cr

8206 Nephrology Seminar
536368 Hostetter T, 3 cr

Symbols

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H Honors course (follows the course number).
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Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
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Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

8209 Tumor Clinical Conference
029439 Kennedy B J, 1 cr

8210 Infectious Disease Seminar
336114 Jordan C, ar cr

8211 Diseases of the Cardiovascular System
838482 Cohn J, ar cr

8212 Diseases of the Chest
737051 Bitterman P, ar cr

8213 Diseases of the Kidney
433821 Hostetter T, ar cr

8214 Diseases of Diabetes, Endocrinology, Metabolism
534443 Oppenheimer J, ar cr

8215 Diseases of Hematology
635356 Jacob H, ar cr

8216 Diseases of Gastroenterology
835288 Bloomer J, ar cr

8217 Diseases of Oncology
140416 Mandel J, ar cr

8220 Research in Medicine
133232 Ferris T, ar cr

8221 Topics in Medicine
334105 Ferris T, ar cr

8223 Topics in Related Basic Science
636541 Ferris T, ar cr

MEDIEVAL STUDIES (MeSt)
Liberal Arts

R 3610 Topics in Medieval Studies
829345 —1 0945-1100 TTh, BlegH 215, Farah C, 4 cr
123695 —2 1245-1400 TTh, BlegH 215, Farah C, 4 cr
923696 —3 1010-1205 TTh, FergH 115, Jackson D, 4 cr

R 5610 Topics in Medieval Studies (prereq 1 yr work in some area of Middle Ages, reading knowledge of appropriate language)
730973 —1 1220-1310 MWF, LindH 302, Wallace D, 4 cr
735879 —2 1325-1520 T, BlegH 350, Reyerson K, 4 cr
230595 —3 1245-1400 TTh, FolH 326, Firchow E, 4 cr
930633 —4 1415-1530 TTh, FolH 426, Grimstad K, 4 cr
723697 —5 1325-1520 W, NichH 209A, Noonan T, Stavrou T, 4 cr
523698 —6 1430-1730 W, FolH 426, Mirrer L, 4 cr

8010 Medieval Studies Colloquium (prereq #) (S-N only)
129979 Hanawalt B, 1 cr

R 8110 Seminar in Medieval Studies (prereq #) (A-F only)
540789 —1 1325-1520 W, SocSci 680, Bachrach B, 3 cr
123700 —2 1535-1750 W, WaLib 301, Fradenburg L, 4 cr

MICROBIAL ENGINEERING (MicE)
Biological Sciences

5990 Teaching Practicum (A-F only)
737650 0-1 cr

8777 Thesis Credits: Masters
330779 1-16 cr

8950 Special Topics (A-F only)
322861 1-4 cr

MICROBIOLOGY (MicB)
Medical School

R 5105 Biology of Microorganisms (§3103, Biol 5013, VPB 3103; prereq 5 cr biol sci, Biol 5001 or BioC 3021 or BioC 5331 or #) (course fee)
★LECT 0945-1100 TTh, MoosT 2520, Hanson R, 5 cr
137581 —1 REC 1115-1205 T, MoosT 2690, Hanson R
★LAB 1325-1520 TTh, MoosT 2252, Hanson R

5201 Microbiology for Dental Students (A-F only)
★LECT 0905-0955 MTWThF, MoosT 2690, Reilly B, 8 cr (Sept 3-Dec 11)
835971 —1 LAB 1000-1200 TTh, MoosT 2252 (Sept 10-Dec 5)

5235 Microorganisms and Disease (§5233; prereq 10 cr in chem, 5 cr in biol sci or #, not open to microbiol maj)
832309 1115-1205 MWF, MoosT 2690, Johnson R, 3 cr

5321 Physiology of Bacteria (prereq 3103 or 5105 or Biol 5013 or VPB 3013, Biol 5001, 3 cr genetics, 10 cr organic chem)
836361 0815-0930 TTh, MoosT 2520, Rogers P, 3 cr

R 5322 Microbial Diversity and Physiology Laboratory (prereq 5322 or ¶5321 or equiv) (A-F only) (course fee)
938652 1220-1520 TTh, MoosT 2252, Dworkin M, Rogers P, 3 cr

5900 Topics in Microbiology (prereq sr microbiology maj, 5105 or Biol 5013) (A-F only)
440428 1535-1625 M, PWB 6224, 1 cr

5970 Directed Studies (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
832035 Rogers P, ar cr

5990 Directed Research (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
332998 Rogers P, ar cr

5992 Practicum: Teaching (prereq microbiology grad stu or #) (A-F only)
738474 1 cr

R 8110 Structure, Function and Metabolism of Bacteria (prereq beginning microbiology, biochemistry, organic chemistry, general biology or #)
436718 1010-1125 MW, Mayo 1450, Dworkin M, Rogers P, 3 cr

R 8216 Frontiers of Immunology I: Molecular Immunology (§Path 8216; prereq 5218)
031644 1535-1625 MWF, MoosT 2520, Jemmerson R, Pennell C, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
838210 1-18 cr

8777 Thesis Credits: Masters
140746 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
631243 1-36 cr

R 8910 Seminar (prereq #)
929952 1200-1300 M, Mayo C231, 1 cr

8990 Research in Microbiology (prereq microbiol grad stu or #)
436136 ar cr

MIDDLE EASTERN LANGUAGES & CULTURES (MELC)
Linguistics & Asian & Slavic Languages & Literatures
Liberal Arts

R 3036 The Religion of Islam (§5036, Arab 3036, RelA 3036, RelA 5036)
035791 1245-1400 TTh, BlegH 215, Farah C, 4 cr

R 3531 Central Asian Culture (§CAS 3531)
723702 1430-1520 MWF, FolH 214, Bashiri I, 4 cr

R 3541 History of the Arabs: 500-800 (§Hist 3541) (A-F only)
424603 0945-1100 TTh, BlegH 215, Farah C, 4 cr

R 3602 Persian Poetry in Translation (§5602, CAS 3602, CAS 5602)
123681 1010-1100 MWF, FolH 214, Bashiri I, 4 cr

R 5602 Persian Poetry in Translation (§3602, CAS 3602, CAS 5602)
923682 1010-1100 MWF, FolH 214, Bashiri I, 4 cr

R 5990 Directed Research (prereq #, Δ, CLA approval)
038836 ar cr

MILITARY SCIENCE (Mil)

0100 Leadership Laboratory (prereq fr or soph) (A-F only)
833962 0645-0745 Th, Armory 116, Sengbusch B, 0 cr

0300 Advanced Leadership Laboratory (prereq enrolled as a military science advanced course cadet or #) (A-F only)
631131 0645-0800 Th, Armory 100, Oravis J, 0 cr

1001 Leadership Laboratory (prereq fr or soph) (A-F only)
639410 0645-0745 Th, Armory 116, Sengbusch B, 1 cr

1011 Military Skills I (A-F only)
032633 —1 0905-0955 MW, Armory 103, Sengbusch B, 2 cr
430627 —2 1325-1415 MW, Armory 103, Sengbusch B, 2 cr

1201 Leadership Laboratory (prereq fr or soph) (A-F only)
039906 0645-0745 Th, Armory 116A, Larson S, 1 cr

3130 Military Science III: Leadership Laboratory (max 3 cr) (A-F only)
633087 0645-0800 Th, Armory 100, Bainbridge B, 1 cr

R 3131 Leadership Assessment and Training (prereq Military Science III student or #) (A-F only)
639939 —1 0905-0955 TTh, Armory 116A, Bainbridge B, 3 cr
734389 —2 1325-1415 TTh, Armory 116A, Bainbridge B, 3 cr

3140 Military Science IV: Leadership Laboratory (max 3 cr) (A-F only)
136003 0645-0800 Th, Armory 100, Oravis J, 1 cr

R 3141 Military Management, Ethics, and Professionalism (prereq Military Science IV student or #) (A-F only)
734585 —1 0800-0850 TTh, Armory 103, Oravis J, 3 cr
132193 —2 1430-1520 TTh, Armory 103, Oravis J, 3 cr

3970 Directed Studies (prereq #, Δ) (A-F only)
931247 1-3 cr

MOLECULAR, CELLULAR, DEVELOPMENTAL BIOLOGY, AND GENETICS (MCDG)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
837560 1-18 cr

8777 Thesis Credits: Masters
931815 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
236333 1-36 cr

8920 Special Topics (prereq MCDG grad stu or Δ) (S-N only)
032471 1535-1625 M, SnH 128A, McLoon S, 1-5 cr

8950 Teaching Practicum (prereq MCDG maj or Δ) (S-N only)
230290 1 cr

8970 Directed Studies (prereq MCDG maj or Δ)
440039 ar cr

8990 Research (prereq MCDG maj or Δ) (S-N only)
237885 ar cr

MORTUARY SCIENCE (Mort)
Medical School

3001 Orientation in Funeral Services (A-F only)
939591 1430-1520 MWF, OwreH 2210, Mathews M, 3 cr

3040 Funeral Service Psychology (prereq introductory course in general psychology) (A-F only)
229995 1325-1415 MWF, JOAd 2125, Tibbetts S, 3 cr

R 3050 Restorative Art (prereq regis mortuary science) (A-F only)
★LECT 0800-0955 TTh, JacH 2153, Tibbetts S
040506 —1 LAB 1010-1205 T, JacH 2153B, Tibbetts S, 4 cr
840765 —2 LAB 1325-1520 T, JacH 2153B, Tibbetts S, 4 cr
330071 —3 LAB 1010-1205 Th, JacH 2153B, Tibbetts S, 4 cr

R 3060 Embalming (prereq biology, human anatomy, regis in mortuary science or #) (A-F only)
★LECT 0800-0955 MWF, JacH 2153, Kroshus J, Lee D, 8 cr
736952 —1 LAB 1010-1310 M, JacH 2153A, Kroshus J, Lee D
634790 —2 LAB 1010-1310 W, JacH 2153A, Kroshus J, Lee D
039145 —3 LAB 1010-1310 F, JacH 2153A, Kroshus J, Lee D

3070 Funeral Service Management (prereq regis mortuary science) (A-F only)
336291 1115-1205 MTWTh, JOAd 2125, Mathews M, 4 cr

R 3071 Funeral Service Practice (prereq regis mortuary science) (A-F only)
★LECT 0800-1100 T, 0800-0955 Th, JOAd 2125, Mathews M
037539 —1 LAB 0800-0955 M, JOAd 2125, Mathews M, 6 cr
629914 —2 LAB 0800-0955 W, JOAd 2125, Mathews M, 6 cr
835226 —3 LAB 0800-0955 F, JOAd 2125, Mathews M, 6 cr

3080 Funeral Service Practicum (prereq have completed all requirements for graduation with the exception of 3080, Δ) (S-N only)
138780 Mathews M, Kroshus J, 15 cr

3090 Independent Study (prereq regis in mortuary science)
237238 Kroshus J, Tibbetts S, others, 1-3 cr

3270 Funeral Service Seminar (prereq regis mortuary science) (S-N only)
432250 1325-1520 Th, JOAd 2125, Tibbetts S, 1 cr

MUSEUM STUDIES (MSt)

8016 Internship (prereq 8010, prereq permission of Director of Graduate Studies in Museum Studies)
132789 1-6 cr

MUSIC (Mus)
Music
Liberal Arts

R 1001 Fundamentals of Music (§1003, 1004; prereq non-mus maj) (Vis)
★LECT 0800-0855 MWF, FergH 225, 4 cr
238325 —1 REC 0905-0955 F, FergH 105
839437 —2 REC 1010-1100 F, FergH 105
240690 —3 REC 1115-1205 F, FergH 105
934293 —4 REC 1220-1310 F, FergH 105
★LECT 0800-0855 TTh, FergH 225, 4 cr
724820 —5 REC 0905-0955 TWThF, FergH 149 (prereq Δ)
124823 —6 REC 1010-1100 TWThF, FergH 203 (prereq Δ)
★LECT 0800-0855 TTh, FergH 105, 4 cr
524821 —7 REC 0905-0955 TWThF, FergH 203 (prereq Δ)
324822 —8 REC 1010-1100 TWThF, FergH 149 (prereq Δ)

R 1051 Piano Class for Non-Music Majors (Vis)
840720 —1 0800-0850 TTh, FergH 259, 2 cr
333052 —2 1115-1205 TTh, FergH 259, 2 cr

R 1151 Piano: Class Lessons (prereq mus maj, #) (A-F only)
632537 —1 0800-0850 MW, FergH 259, 2 cr
430434 —2 0800-0850 MW, FergH 265, 2 cr
436542 —3 0905-0955 MF, FergH 259, 2 cr
333830 —4 1010-1100 MF, FergH 259, 2 cr
739379 —5 0905-0955 TTh, FergH 265, 2 cr
933242 —6 1010-1100 TTh, FergH 265, 2 cr

R 1160 Voice: Class Lessons
635972 —1 1010-1100 MW, FergH 90, 2 cr
232332 —2 1115-1205 MW, FergH 90, 2 cr
329549 —3 1430-1520 MW, FergH 90, 2 cr
131612 —4 1010-1100 TTh, FergH 90, 2 cr

R 1161 Diction for Singers I (prereq pre-mus or mus maj or minor)
531090 1010-1100 MW, FergH 123, del Santo J, 1 cr

R 1164 Diction for Singers IV (prereq pre-mus or mus maj or min)
331401 1115-1205 TTh, FergH 90, del Santo J, 1 cr

1340 Jazz Ensemble (max 6 cr; prereq audition, #) (A-F only)
535964 —1 1640-1830 MW, FergH 95, McCurdy R, 1 cr (Jazz I)
534524 —2 1220-1310 TThF, FergH 95, 1 cr (Jazz II)

R 1440 Ensemble (prereq #)
439912 —1 1430-1625 F, FergH 72, Van J, 1 cr (Guitar)
539478 —2 Aspnes, F M, 1 cr (Harp)
036388 —3 Shockley R, 1 cr (Piano)
137815 —4 1 cr (Strings)
138947 —5 McCurdy R, 1 cr (Jazz Combo I)
933824 —6 1535-1625 M, FergH 95, Ashworth T, 1 cr (Trombone Choir)
332189 —7 Anderson J, 1 cr (Woodwind Ensemble)
931071 —9 Baldwin D, 1 cr (Brass Quintet)
133241 —10 1 cr (Jazz Combo II)
735395 —12 Ashworth T, 1 cr (Trombone Quartets)

1480 Marching Band (prereq #)
138415 1430-1625 MTWTh, NMA 4, Becher E, 1 cr

R 1513 Ear-Training and Sight-Singing II (prereq 1512, ¶1533) (A-F only)
830978 —1 0800-0850 TTh, FergH 149, 1 cr
137600 —2 0800-0850 TTh, FergH 203, 1 cr
029456 —3 1115-1205 TTh, FergH 149, 1 cr
935699 —4 1115-1205 TTh, FergH 203, 1 cr

R 1521 Keyboard Skills (prereq keyboard maj, #) (A-F only)
832195 —1 0905-0955 TTh, FergH 259, Shockley R, 2 cr
534538 —2 1010-1100 TTh, FergH 259, Shockley R, 2 cr

R 1533 Theory III: Harmony and Voice Leading (prereq 1532, 1153 or 1523, ¶1513) (A-F only)
431230 0905-1100 MW, FergH 225, Damschroder D, 3 cr

R 3020 Campus Orchestra (prereq audition, #)
333522 1800-2000 T, FergH 85, 1 cr

R 3027 Lyric Song in Medieval and Renaissance Culture (prereq non-music maj)
622946 1010-1205 TTh, FergH 115, Jackson D, 4 cr

R 3290 Jazz Singers (prereq #)
131383 1535-1730 TTh, FergH 81, McCurdy R, 1 cr

R 3331 Jazz Improvisation I (prereq #)
440347 1115-1205 MWTh, FergH 95, 2 cr

R 3351 Jazz Class Piano (prereq 1153 or #)
224490 1115-1205 MW, Hamilton J, 2 cr

R 3410 University Wind Bands (A-F only)
931782 —1 1325-1520 MWF, FergH 95, Kirchhoff C, 1 cr (Symphonic Wind Ensemble) (prereq audition, #)
239989 —2 1325-1520 TTh, FergH 95, Kirchhoff C, 1 cr (Symphonic Band) (prereq audition, #)
140049 —3 1830-2030 TTh, FergH 95, 1 cr (University Band)

3420 Orchestra (prereq audition, #) (A-F only)
535494 1325-1520 MTTh, FergH 85, 1 cr

3430 Chorus (prereq audition, #)
535186 —1 1535-1625 MWF, FergH 90, Romey K, 1 cr (Women's Chorus)
537584 —2 1535-1625 TTh, FergH 90, 1535-1625 F, FergH 225, Romey K, 1 cr (Men's Chorus)
131142 —3 1325-1415 MTWThF, FergH 90, Romey K, 1 cr (Concert Choir)

R 3440 Ensemble (prereq #)
737728 —1 1430-1625 F, FergH 72, Van J, 1 cr (Guitar)
132154 —2 Aspnes, F M, 1 cr (Harp)
338140 —3 Shockley R, 1 cr (Piano)
139783 —4 1 cr (Strings)
630805 —5 McCurdy R, 1 cr (Jazz Combo I)
133392 —6 1535-1625 M, FergH 95, Ashworth T, 1 cr (Trombone Choir)
236378 —7 Anderson J, 1 cr (Woodwind Ensemble)
438954 —9 Baldwin D, 1 cr (Brass Quintet)
429784 —10 1 cr (Jazz Combo II)
037556 —12 Ashworth T, 1 cr (Trombone Quartets)

3451 Accompanying Skills (max 3 cr; prereq must have reached upper div in piano or organ) (A-F only)
129884 1115-1205 M, FergH 3, 1 cr (addtl hrs ar)

R 3534 Form and Structure in Tonal Music (prereq 3531, 3511 or 1508, 1518 or placement exam) (A-F only)
638418 0905-1100 MW, FergH 105, Lubet A, 3 cr

3604 History of Western Music (prereq 1153 or 1523, 1532 or #) (IP) (A-F only)
★LECT 0905-1100 TTh, FergH 225
434466 —1 REC 0905-0955 F, FergH 225, 5 cr

3741 Vocal Repertoire Survey (prereq upper div mus maj or #) (A-F only)
322956 1430-1625 W, FergH 123, del Santo J, 2 cr

3970 Directed Studies (prereq #, Δ, ❑)
138472 —1 1-15 cr
038738 —2 1-15 cr

3995 Major Project (prereq sr, #, Δ) (A-F only)
136552 2 cr

R 5290 Jazz Singers (prereq #)
138575 1535-1730 TTh, FergH 81, McCurdy R, 1 cr

R 5300 Jazz Rhythm Section Techniques (prereq jazz studies maj or #) (A-F only)
633610 1430-1520 Th, FergH 3, McCurdy R, 1 cr

R 5301 Advanced Jazz Class Piano (prereq keyboard maj, #)
124491 1115-1205 MW, Hamilton J, 2 cr

R 5310 Piano Pedagogy Practicum (max 3 cr; prereq ¶5351-5352-5353 or ¶5354-5355-5356 or #) (A-F only)
229494 Shockley R, 1 cr

R 5321 Suzuki Violin Pedagogy (prereq undergrad or grad string maj with violin as principle performing instrument or #)
139539 1220-1415 W, FergH 203, Bjork M, 2 cr

R 5324 Advanced Suzuki Violin Pedagogy (prereq 5323 or equiv, audition)
536094 0905-1100 T, FergH 224, Bjork M, 2 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

5336 Jazz Arranging I (prereq 3532 or #) (A-F only)
638130 1535-1625 W, FergH 203, McCurdy R, 2 cr

5340 Jazz Ensemble (max 6 cr; prereq audition, #) (A-F only)
531039 —1 1640-1830 MW, FergH 95, McCurdy R, 1 cr (Jazz I)
533258 —2 1220-1310 TThF, FergH 95, 1 cr (Jazz II)

5354 Advanced Piano Pedagogy (prereq grad piano maj or 5353 or #) (A-F only)
122949 0905-1100 W, FergH 205, Shockley R, 2 cr

R 5360 Woodwind Ensemble (prereq audition)
133411 —1 Anderson J, 1 cr (Clarinet Choir)
437657 —2 1 cr (Flute Choir)
538816 —3 1 cr (Woodwind Quintet)
035676 —4 1 cr (Saxophone Quartet)
232363 —5 1 cr

R 5366 Guitar Pedagogy (prereq guitar principal or maj or #)
138141 0905-1100 F, FergH 116, Van J, 2 cr

R 5370 Vocal Pedagogy Practicum (max 3 cr; prereq sr or grad stu, #) (A-F only)
936268 1325-1415 TTh, FergH 115, Ware D, 1 cr

5371 Diction for Singers (prereq 12 cr of MusA 1204 or #)
122957 1010-1100 TTh, FergH 81, Weller L, 2 cr

R 5375 Vocal Mechanism (prereq sr or grad stu, #) (A-F only)
935105 1430-1520 MW, FergH 115, Ware D, 2-3 cr

5380 Brass Choir (prereq #)
631792 1535-1730 TTh, FergH 85, Baldwin D, 1 cr (Brass Choir)

5390 Percussion Ensemble (prereq #)
940840 1535-1730 TTh, FergH 95, Meza F, 1 cr

R 5410 University Wind Bands (A-F only)
538735 —1 1325-1520 MWF, FergH 95, Kirchhoff C, 1 cr (Symphonic Wind Ensemble) (prereq audition, #)
841012 —2 1325-1520 TTh, FergH 95, Kirchhoff C, 1 cr (Symphonic Band) (prereq audition, #)
637897 —3 1830-2030 TTh, FergH 95, 1 cr (University Band)

R 5411 Instrumental Accompanying Skills and Repertoire (prereq accompanying maj) (A-F only)
636717 1010-1205 Th, FergH 240, 2 cr

5420 Orchestra (prereq audition, #) (A-F only)
138665 1325-1520 MTTh, FergH 85, 1 cr

R 5421 Vocal Accompanying Skills and Repertoire (prereq Italian, German, French diction, accompanying or grad vocal maj) (A-F only)
731833 1115-1310 W, FergH 240, 2 cr

5430 University Chorus (prereq #)
231052 —1 1535-1625 MWF, FergH 90, Romey K, 1 cr (Women's Chorus)
929448 —2 1535-1625 TTh, FergH 90, 1535-1625 F, FergH 225, Romey K, 1 cr (Men's Chorus)
234579 —3 1325-1415 MTWThF, FergH 90, Romey K, 1 cr (Concert Choir)

R 5440 Ensemble (prereq #)
638497 —1 1430-1625 F, FergH 72, Van J, 1 cr (Guitar)
639309 —2 Aspnes, F M, 1 cr (Harp)
838160 —3 Shockley R, 1 cr (Piano)
739768 —4 1 cr (Strings)
940272 —5 McCurdy R, 1 cr (Jazz Combo I)
436968 —6 1535-1625 M, FergH 95, Ashworth T, 1 cr (Trombone Choir)
539237 —7 Anderson J, 1 cr (Woodwind Ensemble)
531395 —9 Baldwin D, 1 cr (Brass Quintet)
630139 —10 1 cr (Jazz Combo II)
637334 —12 Ashworth T, 1 cr (Trombone Quartets)

5470 Opera Workshop and Ensemble (prereq ability to sing arias satisfactorily, # by audition)
337425 1535-1730 MTTh, FergH 99, Sutton E, 1 cr

5480 Opera Theatre (prereq advanced ability to sing arias satisfactorily, by audition, #)
035144 1535-1730 MTTh, FergH 99, Sutton E, 2 cr

5490 Chamber Singers (prereq audition, #)
139533 1220-1310 MTWThF, FergH 90, Lancaster T, 1 cr

R 5521 Advanced Keyboard Skills (prereq 3532, sr or grad or #) (A-F only)
037959 1325-1415 MW, FergH 259, Billmeyer D, 2 cr

5550 Composition (prereq 3532 or equiv, 3553 or grad, #) (A-F only)
237093 —1 Argento D, 2 cr
230158 —2 Zaimont J, 2 cr
441112 —3 Lubet A, 2 cr

R 5561 Orchestration (prereq 3532) (A-F only)
134591 1220-1310 MW, FergH 149, Argento D, 2 cr

R 5571 Schenkerian Analysis for Performers (prereq 3531) (A-F only)
122952 1115-1310 TTh, FergH 123, Damschroder D, 4 cr

5645 18th-Century European Music (prereq 3606 or equiv, 12 cr undergrad mus hist, 3534 or equiv, # for undergrads) (A-F only)
640816 1115-1310 MW, FergH 105, 4 cr

R 5731 Percussion Literature I (prereq upper div or grad perc maj or #) (A-F only)
533373 Meza F, 2 cr

R 5744 Piano Literature (prereq 12 cr of MusA 1201 or MusA 1301 or #) (A-F only)
129536 1535-1830 T, FergH 115, McNab D, 2 cr

5747 Organ Literature (prereq 3606, 3532, or #) (A-F only)
924492 1325-1625 Th, FergH 213, Billmeyer D, 2 cr

R 5791 Electronic Music: History, Literature, Principles (A-F only)
235215 1325-1625 W, FergH 205, 4 cr

5810 Asian Music: Performance (prereq #)
422947 Kagan A, 2 cr (FergH)

R 5811 Traditional Indian Music: The Sacred and the Profane
222948 1325-1520 MW, FergH 149, Kagan A, 4 cr

R 5841 Resources for Music Research (prereq 3606 or #) (A-F only)
522955 0905-1100 F, FergH 70, Probst L, 2 cr

R 5950 Topics in Music
422950 0905-1100 TTh, FergH 105, Hepokoski J, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval) (A-F only)
135006 —1 1-5 cr
429221 —2 1-5 cr

8371 Wind Ensemble/Band Conducting I (prereq wind conducting maj or #) (A-F only)
139001 Kirchhoff C, 4 cr

R 8380 Orchestral Conducting (prereq #) (A-F only)
838644 4-5 cr

8391 Advanced Conducting (prereq #)
138138 4 cr

8399 Performance: Choral Conducting (prereq 5384, 5385, #) (A-F only)
430899 Lancaster T, 4 cr

R 8401 Sonata Seminar (prereq accompanying maj; strings and winds by audition, #) (A-F only)
039484 1115-1310 T, FergH 240, 2 cr

8537 Score Study (Choral) (prereq grad student, #)
337960 0905-1100 MWF, FergH 115, Lancaster T, 4 cr

8550 Composition (max 18 cr; prereq compl of undergrad maj sequence in music theory and composition , #)
231651 —1 Argento D, 3 cr
133191 —2 Zaimont J, 3 cr
539660 —3 Lubet A, 3 cr

R 8570 Seminar in Composition (prereq grad stu, #) (A-F only)
939705 1220-1415 F, FergH 149, Lubet A, 2 cr

R 8580 Topics in Tonal Analysis (prereq #) (A-F only)
222951 1535-1730 TTh, FergH 149, Cherlin M, 4 cr

R 8631 Music in Medieval Europe (prereq 3606)
922953 0905-1100 TTh, FergH 108, Jackson D, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
036035 1-18 cr

8777 Thesis Credits: Masters
133224 1-16 cr

R 8864 Research: Ethnomusicology (prereq 5861 or #)
722954 1325-1520 TTh, FergH 108, Kagan A, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
832715 1-36 cr

8990 Special Problems (prereq Δ)
136060 2-12 cr

8999 Recital Credits: Doctoral (max 12 cr per qtr; prereq Doctor of Musical Arts students) (S-N only)
137040 —1 6 cr

MUSIC APPLIED (MusA)
Music
Liberal Arts

See Applied Music chart on the next page.

MUSIC EDUCATION (MuEd)
Liberal Arts

1201 Introduction to Music Education (A-F only)
831564 1115-1205 T, FergH 107, McCoy C, 1 cr

1801 Introduction to Music Therapy (A-F only)
137242 1010-1100 F, FergH 151, Furman C, 1 cr

R 3011 Teaching Music in the Elementary School (prereq Mus 1001, elementary educ maj) (A-F only)
035788 1430-1520 MWF, FergH 107, 4 cr

3301 Teaching Elementary Vocal and General Music (prereq music education or music therapy maj or #) (A-F only)
234453 1010-1100 MTWTh, FergH 107, 4 cr

3322 Techniques of Classroom Instruments (prereq Mus 1001 or music or music education or music therapy maj) (A-F only)
929577 —1 0905-0955 MW, FergH 107, McCoy C, 2 cr
834478 —2 0905-0955 TTh, FergH 107, McCoy C, 2 cr

R 3500 String Techniques I (prereq music education or music therapy maj or #) (A-F only)
631095 1010-1100 MWF, FergH 81, Bjork M, 3 cr

3503 Woodwind Techniques (prereq music education or music therapy maj or #) (A-F only)
340518 0905-0955 MTWTh, FergH 85, Schultz S, 4 cr

3504 Brass Techniques (prereq music education or music therapy maj or #) (A-F only)
638838 0905-0955 MTWTh, FergH 81, Haack P, 4 cr

3505 Percussion Techniques (prereq music education or music therapy maj) (A-F only)
934147 0800-0850 MTWTh, FergH 7A, Meza F, 4 cr

3650 Student Teaching in Music (prereq #) (A-F only)
837851 —1 1430-1625 M, FergH 157, Schultz S, 6-18 cr
138651 —2 1535-1700 W, FergH 157, McCoy C, 6-18 cr

3800 Observation in Music Therapy (prereq educ stu) (A-F only)
138477 1115-1310 M, FergH 151, Furman C, 2 cr

3805 Music Therapy Techniques II (3805-3806†; prereq 3804) (A-F only)
131996 1115-1310 T, 1115-1205 Th, FergH 151, Furman C, 3 cr

R 3850 Field Experiences: Music Therapy (max 12 cr; prereq 3800, 3804) (A-F only)
430174 —1 1220-1310 Th, FergH 151, Furman C, 2 cr
338252 —2 1220-1310 Th, FergH 144, Furman C, 2 cr
340664 —3 1325-1415 Th, FergH 151, Furman C, 2 cr
130825 —4 1325-1415 Th, FergH 144, Furman C, 2 cr

APPLIED MUSIC (MusA) COURSES

Courses in applied music are classified according to nine modes: elective (with or without credit), principal, major, secondary required, secondary elective, principal beyond requirement, major beyond requirement, minor, and transfer student, as well as 3 levels: 1000-, 3000-, and 8000-level (graduate level). You may not register for a course in applied music for credit until you pass the required applied entrance exam. The examining committee will determine the mode(s) for which you may register. You should consult the School of Music, 100 Ferguson Hall, regarding the mode and level appropriate for your degree program. Studio class is required for all undergraduates registering at the x2xx, x3xx, x6xx, x7xx, or 19xx levels. Specific times for these classes will be available from the applied instructor.

Fees for applied music courses are based on individual lessons: 1 half-hour lesson per week for two credits; 2 half-hour lessons or 1 hour lesson per week for 4 credits. See the chart below for individual amounts. Music fees are course fees: they are applied *in addition to* tuition.

NOTE: Call numbers for courses in applied music will be posted outside 100 Ferguson Hall and must be listed on your Course Request form. Do not call the music office for these numbers.

Instrument	Elective	Principal	Major	Secondary Required	Secondary Elective	Principal Beyond Requirement	Major Beyond Requirement	Minor	Transfer Student
Fee per 2 cr	$125	$50	$50	$65	$65	$65	$65	$65	$50
Fee per 4 cr	n.a.	$100	$100	$130	n.a.	$130	$130	n.a.	$100
Accomp/ Coach			8324						
Baritone	1118, 3118, 5118	1218, 3218, 8218	1318, 3318, 8318	1418, 3418, 8418	1518, 3518, 8518	1618, 3618, 8618	1718, 3718, 8718	3818	1918
Bassoon	1114, 3114, 5114	1214, 3214, 8214	1314, 3314, 8314	1414, 3414, 8414	1514, 3514, 8514	1614, 3614, 8614	1714, 3714, 8714	3814	1914
Cello	1107, 3107, 5107	2107, 3107, 8107	1307, 3307, 8307	1407, 3407, 8407	1507, 3507, 8507	1607, 3607, 8607	1707, 3707, 8707	3807	1907
Clarinet	1112, 3112, 5112	1212, 3212, 8212	1312, 3312, 8312	1412, 3412, 8412	1512, 3512, 8512	1612, 3612, 8612	1712, 3712, 8712	3812	1912
Double Bass	1108, 3108, 5108	1208, 3208, 8208	1308, 3308, 8308	1408, 3408, 8408	1508, 3508, 8508	1608, 3608, 8608	1708, 3708, 8708	3808	1908
Flute	1109, 3109, 5109	1209, 3209, 8209	1309, 3309, 8309	1409, 3409, 8409	1509, 3509, 8509	1609, 3609, 8609	1709, 3709, 8709	3809	1909
French Horn	1115, 3115, 5115	1215, 3215, 8215	1315, 3315, 8315	1415, 3415, 8415	1515, 3515, 8515	1615, 3615, 8615	1715, 3715, 8715	3815	1915
Guitar	1123, 3123, 5123	1223, 3223, 8223	1323, 3323, 8323	1423, 3423, 8423	1523, 3523, 8523	1623, 3623, 8623	1723, 3723, 8723	3823	1923
Harp	1122, 3122, 5122	1222, 3222, 8222	1322, 3322, 8322	1422, 3422, 8422	1522, 3522, 8522	1622, 3622, 8622	1722, 3722, 8722	3822	1922
Harpsicord	1102, 3102, 5102	1202, 3202, 8202	1302, 3202, 8302	1402, 3402, 8402	1502, 3502, 8502	1602, 3602, 8602	1702, 3702, 8702	3802	1902
Oboe	1111, 3111, 5111	1211, 3211, 8211	1311, 3311, 8311	1411, 3411, 8411	1511, 3511, 8511	1611, 3611, 8611	1711, 3711, 8711	3811	1911
Organ	1103, 3103, 5103	1203, 3203, 8203	1303, 3303, 8303	1403, 3403, 8403	1503, 3503, 8503	1603, 3603, 8603	1703, 3703, 8703	3803	1903
Percussion	1121, 3121, 5121	1221, 3221, 8221	1321, 3321, 8321	1421, 3421, 8421	1521, 3521, 8521	1621, 3621, 8621	1721, 3721, 8721	3821	1921
Piano	1101, 3101, 5101	1201, 3201, 8201	1301, 3301, 8301	1401, 3401, 8401	1501, 3501, 8501	1601, 3601, 8601	1701, 3701, 8701	3801	1901
Saxophone	1113, 3113, 5113	1213, 3213, 8213	1313, 3313, 8313	1413, 3413, 8413	1513, 3513, 8513	1613, 3613, 8613	1713, 3713, 8713	3813	1913
Trombone	1117, 3117, 5117	1217, 3217, 8217	1317, 3317, 8317	1417, 3417, 8417	1517, 3517, 8517	1617, 3617, 8617	1717, 3717, 8717	3817	1917
Trumpet	1116, 3116, 5116	1216, 3216, 8216	1316, 3316, 8316	1416, 3416, 8416	1516, 3516, 8516	1616, 3616, 8616	1716, 3716, 8716	3816	1916
Tuba	1119, 3119, 5119	1219, 3219, 8219	1319, 3319, 8319	1419, 3419, 8419	1519, 3519, 8519	1619, 3619, 8619	1719, 3719, 8719	3819	1919
Viola	1106, 3106, 5106	1206, 3206, 8206	1306, 3306, 8306	1406, 3406, 8406	1506, 3506, 8506	1606, 3606, 8606	1706, 3706, 8706	3806	1906
Violin	1105, 3105, 5105	1205, 3205, 8205	1305, 3305, 8305	1405, 3405, 8405	1505, 3505, 8505	1605, 3605, 8605	1705, 3705, 8705	3805	1905
Voice	1104, 3104, 5104	1204, 3204, 8204	1304, 3304, 8304	1404, 3404, 8404	1504, 3504, 8504	1604, 3604, 8604	1704, 3704, 8704	3804	1904

3851 Internship: Music Therapy (3851-3852†; prereq #) (S-N only)
638869 Furman C, 6 cr

3852 Internship: Music Therapy (3851-3852†; prereq #) (S-N only)
337201 Furman C, 6 cr

5633 Techniques and Materials: Choral Ensembles (A-F only)
822959 1640-1845 M, FergH 107, McCoy C, 3 cr

5750 Topics in Music Education: Aesthetics for Musicians and Educators (max 12 cr; prereq mus or mus ed maj or #)
022958 1640-1845 T, FergH 107, Haack P, 3 cr

5804 Music in Therapy (prereq music educ or music therapy grad stu or #) (A-F only)
732903 Furman C, 3 cr

5970 Independent Study (prereq music educ/ therapy or grad stu, #, Δ)
738944 1-4 cr

8880 Master's Research Project (prereq 5112 or #)
532983 1-8 cr

8990 Research Problems (prereq knowledge of elementary statistics, Δ)
240513 1-12 cr

NATURAL RESOURCES AND ENVIRONMENTAL STUDIES (NRES)

Natural Resources

R 1001 Orientation to Natural Resources and Environmental Studies (S-N only)
832861 1430-1520 M, GrnH 110, Ek A, 1 cr

R 3050 Experience and Training in a Field Setting (prereq #) (A-F only)
835341 Splett P, 1-4 cr

R 3225 Directed Study Experience (prereq fr or soph, #)
932866 —1 Anderson D, 1-5 cr
038013 —2 Bauer M, 1-5 cr
135846 —3 Baughman M, 1-5 cr
133666 —4 Blinn C, 1-5 cr
838014 —5 Bolstad P, 1-5 cr
232590 —6 Brooks K, 1-5 cr
935847 —7 Burk T, 1-5 cr
423273 —8 Carlson S, 1-5 cr
223274 —9 Ek A, 1-5 cr
123275 —10 Ellefson P, 1-5 cr
923276 —11 Furnier G, 1-5 cr
723277 —12 Gregersen H, 1-5 cr
523278 —13 Johnson G, 1-5 cr
323279 —14 Kitts J, 1-5 cr
723280 —15 Lime D, 1-5 cr
523281 —16 Mohn C, 1-5 cr
323282 —17 Perry J, 1-5 cr
123283 —18 Puettmann K, 1-5 cr
023284 —19 Reich P, 1-5 cr
823285 —20 Rose D, 1-5 cr
623286 —21 Splett P, 1-5 cr
423287 —22 Sucoff E, 1-5 cr

R 5100 Problem Solving in Natural Resources and Environmental Studies (prereq Rhet 3562, Stat 3011 or 5210; NRES maj must have completed 12 cr in area of conc; RRM maj must have FR 5232, FR 5233) (Envt; practicum) (A-F only)
436220 1430-1630 TTh, GrnH 203, Anderson D, Bolstad P, 5 cr

R 5225 Directed Study Experience (prereq jr or sr or grad stu, #)
838871 —1 Anderson D, 1-5 cr
033667 —2 Bauer M, 1-5 cr
530537 —3 Baughman M, 1-5 cr
229320 —4 Blinn C, 1-5 cr
636930 —5 Bolstad P, 1-5 cr
534765 —6 Brooks K, 1-5 cr
330538 —7 Burk T, 1-5 cr
334766 —8 Carlson S, 1-5 cr
933578 —9 Ek A, 1-5 cr
223288 —10 Ellefson P, 1-5 cr
123289 —11 Furnier G, 1-5 cr
423290 —12 Gregersen H, 1-5 cr
223291 —13 Johnson G, 1-5 cr
123292 —14 Kitts J, 1-5 cr
923293 —15 Lime D, 1-5 cr
723294 —16 Mohn C, 1-5 cr
523295 —17 Perry J, 1-5 cr
323296 —18 Puettmann K, 1-5 cr
123297 —19 Reich P, 1-5 cr
023298 —20 Rose D, 1-5 cr
823299 —21 Splett P, 1-5 cr
523300 —22 Sucoff E, 1-5 cr

R 5245 Fundamentals of Landscape Planning for Recreation (prereq 5260 or FR 5232 or Rec 5310)
623272 0945-1100 TTh, GrnH 203, Anderson D, Lime D, 3 cr

NAVAL SCIENCE (Nav)

R 0204 Professional Training in Naval Science (S-N only)
839227 0650-0850 T, Armory 202, Matkin J, 0 cr

R 1101 Fundamentals of Naval Science I (A-F only)
435455 —1 0905-0955 TTh, Armory 205, Steen A, 2 cr
140643 —2 1325-1415 TTh, Armory 205, Steen A, 2 cr

R 1201 Navigation I: Inland Coastal (A-F only)
830432 0800-0850 MWF, Armory 12A, Covington N, 3 cr

R 3301 Naval Ship Systems I: Engineering (A-F only)
537794 0905-0955 TTh, Armory 202, Vellella R, 2 cr

R 3452 Amphibious Warfare I (prereq #) (A-F only)
123308 1430-1520 TTh, Armory 205, Matkin J, 2 cr

NEUROLOGY (Neur)

Medical School

5120 Selected Problems in Neurology (prereq regis med)
031692 Parry G, ar cr

5122 Pediatric Neurology: Health Care Psychology Interns (prereq #)
929787 Shapiro E, ar cr

R 5124 Sleep Disorders Medicine: Externship (prereq regis med) (S-N only)
131917 Mahowald M, ar cr

5125 Neuroimmunology Research (S-N only)
134221 Birnbaum G, ar cr

5510 Externship in Clinical Neurology (prereq regis med)
230791 Parry G, ar cr

5541 Pediatric Neurology: Neurochemistry (prereq regis med)
337764 Swaiman K F, ar cr

5542 Pediatric Neurology (prereq regis med)
238793 Swaiman K F, ar cr

5544 Clinical Electroencephalography (prereq regis med)
931944 Torres F, ar cr

5545 Electromyography (prereq regis med)
934438 Kennedy W, ar cr

5599 Subinternship in Clinical Neurology (prereq 5510, course director recommendation, med stu) (S-N only)
934441 Rottenberg D, ar cr

8200 Clinical Neurology
032728 Parry G, ar cr

8201 Clinical Pediatric Neurology
535978 Swaiman K F, ar cr

8202 Research in Neurology
534488 Parry G, ar cr

8203 Applied Electroencephalography
837204 Torres F, ar cr

8204 Applied Electromyography
736448 Parry G, ar cr

8205 Applied Neuropathology
538959 Sung J H, ar cr

8221 Neurochemical Aspects of Selected Clinical Disorders
136222 0700-0830 F, PWB 12100, Swaiman K F, 2 cr

8229 Clinical Correlative Neuroanatomy
133974 Parry G, 1 cr

8233 Neurological Clinical Pathological Conference
638564 1100-1300 W, Mayo B535, Parry G, 1 cr

8236 Research in Neuropathology
133473 Sung J H, ar cr

8704 Survey of Neuropethology
634000 1100-1300 M, Mayo B535, Sung J H, 1 cr

8705 Neurological-Neurosurgical Conference (§Rad 0124)
829863 1300-1430 F, Mayo C231, Chou S, 1 cr (Todd Amph)

NEUROSCIENCE (NSc)

5031 Perception (§Psy 5031; prereq Psy 3051 or Psy 3031 or #)
535947 0945-1100 TTh, ElH N119, Legge G, 4 cr

5201 Computational Neuroscience I: Membranes and Channels (§Phsl 5201; prereq Phsl 5112 or equiv)
934133 1430-1600 MW, MIrdH 5276, Fohlmeister J, 5 cr

5400 Veterinary Pharmacology (§VB 5400; prereq VB 5310 or equiv or #) (A-F only)
836618 0900-0950 M, AnScVM 135, 0900-0950 WF, AnScVM 125, Larson A, 3 cr (StP)

5460 Cellular and Molecular Neuroscience (§GCB 5460, MdBc 5460, Phcl 5460, Phsl 5460, VB 5460; prereq biochemistry)
139556 1010-1100 MTWThF, MoosT 2580, Koerner J, Wilcox G, 3 cr

8026 Neuro-Immune Interactions (§PNI 8026, Psy 8026, VMic 8026; prereq MicB 5218 or equiv, 5111 or equiv) (A-F only)
724638 Sharp B, 3 cr

8207 Seminar: Psychopharmacology (max 3 cr, §Phcl 8207; prereq #)
837316 Sparber S, 1 cr (MIrdH 3260)

8216 Selected Topics: Neurophysiology (§Phsl 8216; prereq CBN 5111, Phsl 5112 or equiv, or #)
132977 Pardo J, 1 cr

8217 Selected Topics: Systems and Computational Neuroscience (prereq CBN 5111, Phsl 5112, or equiv, or #) (S-N only)
223307 Soechting J, 2 cr

8222 Central Regulation of Autonomic Function (§CBN 8222; prereq #)
133764 Osborn J, Engeland W, 3 cr

8333 Lab Neuroscience (prereq NSc grad stu or Δ) (S-N only)
136633 —1 Ebner T, ar cr
532241 —2 Ebner T, ar cr

8400 Neurobiology of Disease (prereq 5111 or CBN 5111, 5112 or Phsl 5112, 5460 or #)
536662 1600-1730 TTh, Ross M, Ranum L, 2 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
139959 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
531574 1-36 cr

NEUROSURGERY (NSu)

Medical School

5200 Neurosurgery Specialty Course (prereq 3rd or 4th yr med stu)
234386 Hall W, ar cr

5500 Externship at the University Hospitals (prereq regis med)
934343 Hall W, Maxwell R, others, 4.5-9 cr

5510 Externship at Veterans Hospital (prereq regis med)
129545 Wen D, Maxwell R, 4.5-9 cr

5511 Externship at Hennepin County Medical Center (prereq regis med)
033197 Rockswold G, Bergman T, 4.5-9 cr

5512 Externship at St. Paul Ramsey Hospital (prereq regis med)
031689 Ganz W, 4.5-9 cr

5520 Neurosurgical Investigation (prereq regis med)
630237 Ebner T, Low W, ar cr

8305 Neurosurgical Diagnosis
133417 Maxwell R, Camarata P, others, 4 cr

8308 Neurosurgical Problems and Management
336016 Maxwell R, Camarata P, others, 4 cr

8311 Operative Neurosurgery
630075 Maxwell R, Camarata P, others, 4 cr

8316 Neurosurgical Research
932009 Ebner T, Low W, 6 cr

8318 Neuroradiological Conference
734604 1630-1730 F, Mayo C231, Maxwell R, Camarata P, others, 1 cr (Todd Amph)

8320 Neurosurgical Conference
034950 0800-1100 S, Mayo D417, Maxwell R, Camarata P, others, 2 cr

8324 Readings in Neurobiology (§NSc 8324; prereq 8104, consent of Medical School)
839793 Ebner T, Low W, ar cr

8330 Neurosurgery Literature Seminar
637284 2000-2200 Th, MoosT 2580, Maxwell R, Camarata P, others, 2 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
135482 1-18 cr

8777 Thesis Credits: Masters
932849 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
936383 1-36 cr

NORWEGIAN (Nor)
German, Scandinavian, and Dutch
Liberal Arts

R 1101 Beginning Norwegian
723683 —1 1220-1310 MTWThF, PeikH 155, 5 cr
137452 —2 1325-1415 MTWThF, KoltH S135, 5 cr

R 1104 Intermediate Norwegian (prereq 1103 or equiv)
139640 0905-1030 MWF, FordH 50, 5 cr

R 3670 Readings in Norwegian Literary Texts (max 28 cr; prereq 1106 or equiv)
523684 1010-1100 MWF, PeikH 215, Mishler W, 4 cr

NURSING, SCHOOL OF (Nurs)

R 1001 Challenge of Nursing (S-N only)
830852 1325-1520 T, OwreH 2230, 2 cr

R 5000 Core Concepts in Nursing (prereq ¶5021)
831340 0800-0955 TTh, AmundH B75, Anglim M, 4 cr

R 5021 Practicum: Ill Adults (prereq ¶5000, pathophysiology or ¶ pathophysiology, pharmacology or ¶ pharmacology)
★REC 0800-0955 M, HSUnitF 4120, 3 cr
★LAB 0800-0955 W, HSUnitF 4120 (1st 6 weeks)
829846 —1 CLN 0730-1230 W (last 4 weeks) (off-campus)
★REC 1010-1205 M, HSUnitF 4120, 3 cr
★LAB 1010-1205 W, HSUnitF 4120 (1st 6 weeks)
032874 —2 CLN 0730-1230 W (last 4 weeks) (off-campus)
★REC 1325-1520 W, HSUnitF 4120, 3 cr
★LAB 0800-0955 F, HSUnitF 4120 (1st 6 weeks)
439652 —3 CLN 0730-1230 F (last 4 weeks) (off-campus)
★REC 1530-1730 W, HSUnitF 4120, 3 cr
★LAB 1010-1205 F, HSUnitF 4120 (1st 6 weeks)
831547 —4 CLN 0730-1230 F (last 4 weeks) (off-campus)

R 5214 Expansion of Perspectives in Nursing I (prereq RN, admission to School of Nursing)
630903 1640-1835 TTh, HSUnitF 4178, Brand K, 4 cr

5422H Applied Clinical Research II (prereq nurs honors stu)
137765 1430-1625 T, HSUnitF 4178, Brand K, Duckett L, 2 cr

R 5440 Core Concepts in Community Health and Long Term Care (prereq 5450)
132002 1220-1415 TTh, OwreH 2210, Lia-Hoagberg B, Weisensee M, 4 cr

R 5446 Healthy and High Risk Childbearing Families (prereq 5140, 5141, 5142, 5440 or ¶5440, 5445, 5450)
★LECT 1010-1205 M, HSUnitF 4180
★REC 1010-1205 T, HSUnitF 4180
237966 —1 CLN 0700-1500 W, Fairbanks D, 5 cr (HCMC)
324402 —2 CLN 0700-1500 F, Fairbanks D, 5 cr (HCMC)
124403 —3 CLN 0700-1500 W, Goering M, 5 cr (Riverside)
024404 —4 CLN 0700-1500 F, Goering M, 5 cr (Riverside)
624406 —5 CLN Rabinowitz L, 5 cr (NMMC)

R 5447 Families with Children: Practicum (prereq 5140, 5141, 5142, 5440 or ¶5440, 5445, 5450)
★REC 0800-0955 M, HSUnitF 4180
838532 —1 CLN 3 cr

R 5448 Practicum: Nursing Care of Individuals, Groups, and Populations in the Community (prereq 5140, 5141, 5142, 5440 or ¶5440, 5445, 5450)
★REC 0800-0955 M, HSUnitF 2110, 2140
830897 —1 CLN 0830-1630 W, Enestvedt R, 6 cr (HiRise)
424407 —2 CLN 0830-1630 W, Leuning C, 6 cr (HiRise)
224408 —3 CLN Leuning C, 6 cr (0830-1630, day ar) (HiRise)

R 5449 Practicum: Nursing Care of Individuals, Groups, and Populations with Mental Health Problems (prereq 5140, 5141, 5142, 5440 or ¶5440, 5445, 5450)
★REC 1010-1205 M, HSUnitF 2110, 2140
733615 —1 CLN 0830-1130 T, 1600-2100 W, UHosp, Saline E, 4 cr (1st 5 wks)
124409 —2 CLN 0830-1130 T, 1600-2100 W, UHosp, Saline E, 4 cr (2nd 5 wks)
424410 —3 CLN 1000-1400 WF, Quast S, 4 cr (HCMC) (1st 5 wks)
224411 —4 CLN 1000-1400 WF, Quast S, 4 cr (HCMC) (2nd 5 wks)

R 5609 Special Educational Experiences in Nursing (prereq #)
233433 —1 ar cr
140231 —2 0830-1600 S, Leonard B, 2 cr (Oct 19, Nov 9)
623000 —3 1535-1730 T, HSUnitF 4155, Camillo P, 2 cr
124412 —4 1600-2100 M, MoosT 5125, Lindeke L, Kubik M, 2 cr (Sept 30, Oct 7, 14, 21) (ITV) (Twin Cities students only)
924413 —5 1600-2100 M, Lindeke L, Kubik M, 2 cr (Sept 30, Oct 7, 14, 21) (ITV) (outstate students only)

5620 Independent Study in Nursing Topics (prereq #)
437173 1-9 cr

R 5642 Behavioral Problems in Persons with Dementia (prereq upper div stu with knowledge of the research process, grad stu, #)
724414 1640-1835 T, HSUnitF 4180, Ryden M, 2 cr

R 5738 Transcultural Nursing: Theories and Issues (prereq cultural anthropology course, undergrad or grad stu in nursing or RN)
734540 —1 1640-1940 Th, MoosT 5125, Gustafson M, 3 cr (ITV) (Twin Cities students only)
336887 —2 1640-1940 Th, Gustafson M, 3 cr (ITV) (outstate students only)

R 5780 Multidisciplinary Perspectives on Aging (§AdEd 5440, CPsy 5305, HSU 5009, Phar 5009, PA 5414, PubH 5737, SW 5024, Soc 5960)
240446 1640-1835 MW, MoosT 2690, 4 cr

5799 Self-Directed Study as a Means of Accomplishing Nursing Electives (prereq #)
038402 ar cr

R 5882 Practicum in Environmental and Occupational Health (§PubH 5154; prereq env hlth maj or grad nurs stu) (S-N only)
532739 1-6 cr

R 5885 Theory and Practice of Occupational Health: Field Experience (§PubH 5168; prereq 5680, PubH 5167) (S-N only)
835212 Olson D, 1 cr

R 5890 Professional Issues in Nurse-Midwifery (prereq grad nurs stu) (S-N only)
232668 1430-1625 W, HSUnitF 4178, Avery M, 3 cr (addtl 1 hr ar)

R 5891 Human Reproductive Processes (prereq nurse pract stu or #)
133540 —1 1640-1940 T, MoosT 5125, Avery M, 3 cr (ITV to MSU) (Twin Cities students only)
324416 —2 1640-1940 T, Avery M, 3 cr (ITV to MSU) (outstate students only)

R 5917 Health Care for Children and Youth With Special Health Care Needs (prereq #)
338607 1640-2045 Th, HSUnitF 4155, Leonard B, 4 cr

5918 Health Care for Children and Youth With Special Health Care Needs Practicum (prereq 5925, 5917 or ¶5917, #)
238454 Lindeke L, 5 cr

R 5920 Conceptualization of Family Health (prereq nursing grad stu, 8010 or #)
423001 1325-1625 Th, HSUnitF 4180, Tomlinson P, 3 cr

R 5923 Primary Care Practicum: Health Assessment and Care of Well Infants, Children, and Adolescents (prereq grad nurs stu, 5810, ¶5924, #)
936562 —1 1120-1205 W, MoosT 5125, Bata-Jones B, Smith K, 5 cr (FNP students) (addtl hrs ar)
230709 —2 Leonard B, Poe C, others, 4-5 cr (PNP students)
629203 —3 1120-1205 W, 5 cr (Moorhead State Univ) (out-state FNP stu only)

R 5924 Primary Care: Nursing Assessment and Health Promotion of Infants, Children, and Adolescents (§5923; prereq grad nurs stu, #)
330135 —1 1220-1730 W, MoosT 5125, Kubik M, Smith K, others, 5 cr (ITV to MSU) (Twin Cities students only)
330622 —2 1220-1730 W, Kubik M, Smith K, others, 5 cr (ITV to MSU) (outstate students only)

R 5942 Nursing Care of the Elderly I (prereq grad nurs stu, assessment of the elderly course)
223002 1220-1415 W, HSUnitF 4150, 4176, Camillo P, 4 cr (alt W; bgn 1st wk)

R 5944 Nursing Care of the Elderly II (prereq 5940, grad nurs student, #)
238776 1220-1415 W, HSUnitF 4150, 4176, Betts B, Camillo P, 4 cr (alt W; bgn 2nd wk) (addtl hrs ar)

R 5948 Advanced Practice Roles (prereq nurs grad stu, 12 grad cr)
★LECT 1010-1205 T, HSUnitF 4155
037072 —1 CLN 2-3 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5949 Practicum: Advanced Practice Nursing (prereq grad nurs stu, 12 grad cr, 5948 or ¶5948)
138107 4-8 cr (CNS students)

R 5950 Physiological Manifestations of Cancer (prereq grad nurs stu, 8011 or #)
635938 1535-1835 W, HSUnitF 4155, Post-White J, 3 cr

R 5951 Oncology Practicum I (prereq grad nurs stu, 5950 or ¶5950)
633767 Post-White J, 3 cr

R 5960 Advanced Public Health Nursing (prereq 8010 or ¶8010, grad nurs stu or nurs grad stu in related field)
134535 1640-1940 W, HSUnitF 4180, Lia-Hoagberg B, 3 cr

5964 Public Health Nursing Leadership Practicum (prereq 8010, 5960, 8040, 5963 or ¶5963, #) (S-N only)
234324 Josten L, 4 cr

R 5965 Special Problems of Management of Community Based Nursing Services (prereq 8014 or ¶8014, 8011 or ¶8011, 8010 or ¶8010, completion of clin crses in student's area of study or #, grad nurs stu)
140777 1640-1940 T, HSUnitF 4150, 4176, Josten L, 3 cr

8001 Special Educational Experiences in Nursing (prereq #)
138172 ar cr

8009 Special Topics (prereq #)
136373 ar cr

R 8010 Structure of the Discipline of Nursing (prereq nurs grad student or #)
937324 —1 1640-1940 W, HSUnitF 4150, 4176, Egan E, 3 cr
639598 —2 1800-2100 W, Hooper R, 3 cr (MSU)
137418 —3 1325-1625 Th, HSUnitF 4150, 4176, 3 cr
533616 —4 0905-1205 F, HSUnitF 4150, 4176, Egan E, 3 cr

R 8011 Moral and Ethical Positions in Nursing (prereq grad nurs stu or #)
235117 —1 1325-1625 T, HSUnitF 4150, 4176, 3 cr
938229 —2 1640-1940 Th, HSUnitF 4150, 4176, Crisham P, 3 cr

R 8014 Research in Nursing (prereq inferential statistics)
729662 0905-1205 T, HSUnitF 4150, 4176, De Hart S, 3 cr

R 8030 Nursing Intervention Models (8 cr must be completed before any cr is given; prereq 8012, 8011 or ¶8011, #)
740192 —1 LECT 1220-1625 T, MoosT 5125, Lewis M, 8 cr (ITV to MSU) (Twin Cities students only) (cln ar)
★REC (cln conf ar)
935895 —2 LECT 1220-1625 T, Lewis M, 8 cr (ITV to MSU) (outstate students only) (cln ar)
★REC (cln conf ar)

8050 Problems in Nursing (prereq #) (S-N only)
824419 —1 Avery M, 1-9 cr
838143 —2 Bearinger L, 1-9 cr
137510 —3 Bliss D, 1-9 cr
137779 —4 Bull M, 1-9 cr
335545 —5 Corcoran-Perry S, 1-9 cr
131800 —6 Crisham P, 1-9 cr
235229 —7 DeHart S, 1-9 cr
140407 —8 Duckett L, 1-9 cr
129603 —9 Edwardson S, 1-9 cr
333276 —10 Egan E, 1-9 cr
531865 —11 Feldman B, 1-9 cr
436671 —12 Gross C, 1-9 cr
937596 —13 Hansen H, 1-9 cr
731895 —14 Hooper R, 1-9 cr
136602 —15 Josten L, 1-9 cr
329874 —16 Kaas M, 1-9 cr
437058 —17 Krichbaum K, 1-9 cr
939381 —18 Leonard B, 1-9 cr
737308 —19 Lewis M, 1-9 cr
830060 —20 Lia-Hoagberg B, 1-9 cr
534328 —21 Lindeke L, 1-9 cr
131657 —22 Lindquist R, 1-9 cr
238132 —23 Pederson C, 1-9 cr
140990 —24 Post-White J, 1-9 cr
231861 —25 Ryden M, 1-9 cr
432961 —26 Sime A, 1-9 cr
636068 —27 Snyder M, 1-9 cr
232119 —28 Tomlinson P, 1-9 cr
532076 —29 Vellenga B, 1-9 cr
233853 —30 1-9 cr
740922 —31 1-9 cr

8051 Special Topics in Nursing Research
235635 —1 1-9 cr
439215 —2 Avery M, 1-9 cr
537021 —3 Bearinger L, 1-9 cr
134860 —4 Bliss D, 1-9 cr
132680 —5 Bull M, 1-9 cr
330734 —6 Corcoran-Perry S, 1-9 cr
140245 —7 Crisham P, 1-9 cr
738121 —8 DeHart S, 1-9 cr
130735 —9 Duckett L, 1-9 cr
040246 —10 Edwardson S, 1-9 cr
538122 —11 Egan E, 1-9 cr
035953 —12 Feldman B, 1-9 cr
833783 —13 Gross C, 1-9 cr
030736 —14 Hansen H, 1-9 cr
929417 —15 Hooper R, 1-9 cr
239216 —16 Josten L, 1-9 cr
337022 —17 Kaas M, 1-9 cr
934861 —18 Krichbaum K, 1-9 cr
139217 —19 Leonard B, 1-9 cr
137023 —20 Lewis M, 1-9 cr
734862 —21 Lia-Hoagberg B, 1-9 cr
032681 —22 Lindeke L, 1-9 cr
830737 —23 Lindquist R, 1-9 cr
840247 —24 Pederson C, 1-9 cr
338123 —25 Post-White J, 1-9 cr
835954 —26 Ryden M, 1-9 cr
633784 —27 Sime A, 1-9 cr
630738 —28 Snyder M, 1-9 cr
635955 —29 Tomlinson P, 1-9 cr
433785 —30 Vellenga B, 1-9 cr
430739 —31 1-9 cr

R 8060 Advanced Clinical Nursing (prereq #)
840295 —1 3-9 cr
931183 —2 Lia-Hoagberg B, 4 cr

R 8062 Qualitative Research in Nursing and Health Care (prereq 8014, 8010 or equiv grad level course in theory and research or #)
633851 —1 1220-1520 W, HSUnitF 4155, Bull M, 3 cr
731041 —2 1220-1520 W, HSUnitF 4155, Bull M, 4 cr (addtl 2 hr lab ar)

R 8064 Research on Decision Making in Health Care (prereq one grad level research course)
123003 0905-1205 Th, HSUnitF 4178, 4 cr (addtl 1 hr ar)

R 8114 Advanced Nursing Research (prereq 8014 or equiv, adv inferentl and non-parametric stat, comp sci, nurs grad stu or #)
532370 1220-1625 Th, HSUnitF 4178, Bull M, Gross C, 4 cr

R 8115 Advanced Nursing Research Practicum (6 cr must be completed before credit is granted; prereq nurs grad stu, 2 qtrs doct study) (S-N only)
424648 —1 Avery M, 6 cr
224649 —2 Bearinger L, 6 cr
424651 —3 Bliss D, 6 cr
124653 —4 Bull M, 6 cr
724655 —5 Corcoran-Perry S, 6 cr
524656 —6 Crisham P, 6 cr
324657 —7 DeHart S, 6 cr
124658 —8 Duckett L, 6 cr
024659 —9 Edwardson S, 6 cr
324660 —10 Egan E, 6 cr
024662 —11 Feldman B, 6 cr
824663 —12 Gross C, 6 cr
624664 —13 Hansen H, 6 cr
424665 —14 Hooper R, 6 cr
224666 —15 Josten L, 6 cr
124667 —16 Kaas M, 6 cr
924668 —17 Krichbaum K, 6 cr
724669 —18 Leonard B, 6 cr
124670 —19 Lewis M, 6 cr
924671 —20 Lia-Hoagberg B, 6 cr
724672 —21 Lindeke L, 6 cr
524673 —22 Lindquist R, 6 cr
324674 —23 Pederson C, 6 cr
124675 —24 Post-White J, 6 cr
024676 —25 Ryden M, 6 cr
824677 —26 Sime A, 6 cr
624678 —27 Snyder M, 6 cr
424679 —28 Tomlinson P, 6 cr
824680 —29 Vellenga B, 6 cr
624681 —30 6 cr
424682 —31 6 cr
224683 —32 6 cr

R 8313 Care of the Childbearing Family in Risk (prereq physiology, #)
440624 0905-1205 W, 1325-1415 W, HSUnitF 4178, Avery M, 4-6 cr (cln ar)

R 8431 Childbearing-Childrearing Family Nursing I (prereq 8030, #)
024418 0905-1205 F, HSUnitF 4155, Pederson C, 4-6 cr (cln ar)

R 8455 Nurse Educator in Higher Education (prereq 8451, ¶course in educational measurement, #)
★LECT 0905-1205 T, HSUnitF 4178, Krichbaum K, 6 cr
★REC (1 hr ar)
637446 —1 CLN (cln ar)

8509 Special Topics: Nursing Education (prereq #)
832102 ar cr

8609 Special Topics in Nursing Supervision (prereq #)
031577 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
435181 1-18 cr

R 8701 Nursing Administration I (prereq 8030, #)
★LECT 1640-1940 T, HSUnitF 4176, 4150, Hansen H, 6 cr (cln ar)
031417 —1 REC (cln conf ar)

8777 Thesis Credits: Masters
129908 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
136454 1-36 cr

Nutrition: See also Food Science and Nutrition.

NUTRITION (Nutr)
Food Science and Nutrition
Agricultural, Food, and Environmental Sciences & Human Ecology

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
139430 1-18 cr

8745 Seminar (prereq #) (S-N only)
133028 1600-1700 T, FScN 23, Brady L, 1 cr

8777 Thesis Credits: Masters
230757 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
932771 1-36 cr

8990 Graduate Research (prereq #)
140304 2-5 cr

OBSTETRICS AND GYNECOLOGY (Obst)
Medical School

5500 Externship in Obstetrics and Gynecology: Primary Health Care of Women (prereq regis med)
733341 Twiggs L, others, ar cr

5520 Obstetrics and Gynecology Externship in Clinical Practice (prereq regis med)
931992 Twiggs L, others, 4.5 cr

5540 Advanced Externship in Obstetrics and Gynecology (prereq 5500)
832844 Twiggs L, others, ar cr

5560 Research in Reproduction (prereq 5500)
730102 Twiggs L, others, ar cr

5575 Gynecological Pathology and Diagnostic Cytology (prereq 5500)
740628 Okagaki T, Brooker D, 9 cr

5590 Preceptorship in Obstetrics and Gynecology (prereq 5500)
129898 Twiggs L, others, 0-0 cr

8201 Advanced Obstetrics and Gynecology I
829619 Twiggs L, others, ar cr

8202 Advanced Obstetrics and Gynecology I (prereq 8201)
139709 Twiggs L, others, ar cr

8203 Advanced Obstetrics and Gynecology I (prereq 8202)
937047 Twiggs L, others, ar cr

8204 Advanced Obstetrics and Gynecology I (prereq 8203)
334394 Twiggs L, others, ar cr

8205 Advanced Obstetrics and Gynecology II
033359 Twiggs L, others, ar cr

8206 Advanced Obstetrics and Gynecology II (prereq 8205)
935007 Twiggs L, others, ar cr

8207 Advanced Obstetrics and Gynecology II (prereq 8206)
232699 Twiggs L, others, ar cr

8208 Advanced Obstetrics and Gynecology II (prereq 8207)
035273 Twiggs L, others, ar cr

8209 Advanced Obstetrics and Gynecology III
034284 Twiggs L, others, ar cr

8210 Advanced Obstetrics and Gynecology III (prereq 8209)
333424 Twiggs L, others, ar cr

8211 Advanced Obstetrics and Gynecology III (prereq 8210)
640444 Twiggs L, others, ar cr

8212 Advanced Obstetrics and Gynecology III (prereq 8211)
341085 Twiggs L, others, ar cr

8213 Advanced Obstetrics and Gynecology IV (prereq 8212)
230015 Twiggs L, others, ar cr

8214 Advanced Obstetrics and Gynecology IV (prereq 8213)
138155 Twiggs L, others, ar cr

8215 Advanced Obstetrics and Gynecology IV (prereq 8214)
438422 Twiggs L, others, ar cr

8216 Advanced Obstetrics and Gynecology IV (prereq 8215)
937274 Twiggs L, others, ar cr

8217 Seminar: Obstetrics and Gynecology IV (prereq 8216)
636510 Twiggs L, others, ar cr

8218 Seminar: Obstetrics and Gynecology (prereq 8217)
733940 Twiggs L, others, ar cr

8219 Seminar: Obstetrics and Gynecology (prereq 8218)
629928 Twiggs L, others, ar cr

8221 Seminar: Obstetrics and Gynecology (prereq 8219)
732819 Twiggs L, others, ar cr

8222 Gynecological Oncology (prereq 8221)
737664 Twiggs L, others, ar cr

8223 Gynecological Oncology (prereq 8222)
230841 Twiggs L, others, ar cr

8224 Gynecological Endocrinology I (prereq 8223)
236381 Twiggs L, others, ar cr

8225 Gynecological Endocrinology II (prereq 8224)
632926 Twiggs L, others, ar cr

8226 Obstetrical Physiology and Anesthesiology (prereq 8225)
034057 Twiggs L, others, ar cr

8227 Preceptorship in Clinical Practice (prereq 8226)
338512 Twiggs L, others, ar cr

8228 Selected Aspects of Radiation Therapy (prereq 8227)
336789 Twiggs L, others, ar cr

8229 Selected Aspects of Medical Oncology (prereq 8228)
037198 Twiggs L, others, ar cr

8230 Research in Reproduction (prereq 8229)
437237 Twiggs L, others, ar cr

8777 Thesis Credits: Masters
929563 1-16 cr

OFF CAMPUS STUDY (OCS)
Liberal Arts

0120 Off-Campus Study (prereq permission of coordinator for special learning opportunities) (S-N only)
533406 0 cr

0150 National Student Exchange: Off-Campus Study (prereq Δ) (S-N only)
038867 0 cr

1150 National Student Exchange: Off-Campus Study (prereq Δ) (S-N only)
329602 15 cr

3150 National Student Exchange: Off-Campus Study (prereq Δ) (S-N only)
732707 15 cr

OPERATIONS AND MANAGEMENT SCIENCES (OMS)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 1020 Data Analysis and Statistical Inference for Managers (prereq IDSc 1010, Math 1111 ...Math 1131 rec) (A-F only)
★LECT 1115-1230 TTh, BlegH 10
139489 —1 LAB 0905-1005 F, BlegH 125, 4 cr (BlegH 90, 1st 4 wks)
239328 —2 LAB 1010-1110 F, BlegH 125, 4 cr (BlegH 90, 1st 4 wks)

R 8056 Production and Inventory Management (prereq 3000 or MBA 8050 or #) (A-F only)
432653 1325-1510 TTh, BlegH 340, 4 cr

R 8710 Research in Operations Strategy (prereq PhD stu or #) (A-F only)
723523 0905-1205 Th, BlegH 210, 4 cr

R 8850 Topics in Operations and Management Science (prereq MBA 8050, MBA 8020 or #) (A-F only)
840216 1730-2100 W, BlegH 420, 4 cr

8990 Readings in Operations and Management Science (prereq #, Grad Schl of Mgmt approval) (A-F only)
136213 ar cr

R 8995 Graduate Research in Operations and Management Science (prereq #, Grad Schl of Mgmt approval) (A-F only)
132090 —1 ar cr
730200 —2 1115-1245 TTh, SocSci 101, ar cr

OPHTHALMOLOGY (Oph)
Medical School

5100 Introduction to Anatomy, Histology, and Embryology (prereq physician or vet med student)
237689 0715-0830 Th, PWB 9335, Cameron J D, 1 cr

5180 Externship (prereq regis med)
137127 ar cr

5190 Research Problems (prereq regis med)
732710 ar cr

8101 Clinical Ophthalmology
534247 0800-1700 MTWThF, PWB 9100, Krachmer J, others, 8 cr (Eye Clinic)

8106 Strabismus Management (prereq grad physician or grad in veterinary science)
239684 0730-0830 M, PWB 9339, Summers G, 1 cr

8117 Orbit, Plastics and Trauma (prereq grad physician or grad in veterinary science)
540095 1400-1500 F, PWB 9339, Wirtschafter J, 3 cr

8119 Clinical Pathological Correlations in Ophthalmology (prereq grad physician or grad in veterinary sci)
729998 1500-1630 F, PWB 9339, Cameron J D, 1 cr

8120 Scope of Ophthalmic Pathology (prereq grad physician or grad in veterinary science)
137144 1630-1730 F, PWB 9339, Cameron J D, 2 cr

8131 Practical Ocular Surgery
239359 0800-1200 MTWThF, Krachmer J, others, 3 cr (Mayo OR)

8142 Ophthalmic Pathology Laboratory
634532 1330-1530 T, PWB 9335, Cameron J D, others, 2 cr

8152 Ophthalmology Laboratory
229866 15 cr

8155 Special Topics in Ophthalmology (prereq #)
838269 1-3 cr

ORAL AND MAXILLOFACIAL SURGERY (OSur)
Dentistry

5257 Ambulatory General Anesthesia
539979 0900-1200 MTTh, 1300-1600 T, MoosT, 1 cr

5275 Oral Pathology Review
530179 1 cr (Th, MoosT 7168)

5276 Medicine for the Oral Surgeon (prereq participation in an oral surgery residency program)
837283 0700-1800 MTWThF, PWB, 2 cr (Univ Hosp PCU's)

5277 Physical Diagnosis for Oral and Maxillofacial Surgery Residents (prereq participation in oral and maxillofacial surgery residency program)
134199 1 cr (VA Hosp PCU's)

5280 Advanced Oral and Maxillofacial Surgery for Postgraduate Dental Fellows (S-N only)
637429 1 cr

8250 Advanced Oral and Maxillofacial Surgery
039677 ar cr

8251 Seminar: Oral Surgery
640413 ar cr

8252 Research in Oral and Maxillofacial Surgery
132694 ar cr (MoosT 7406)

8253 Problems in Oral and Maxillofacial Surgery
136303 ar cr

8254 Topics: Oral Surgery
032003 ar cr

8255 General Surgery
433236 0700-1800 MTWThF, ar cr (Fairview Hosp)

8258 Anesthesia II Seminar
130243 1 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

8280 Oral and Maxillofacial Surgery Clinical Pathology Conference
238468 1 cr

ORAL BIOLOGY (OBio)
Dentistry

5001 Methods in Research and Writing (prereq grad stu)
133238 1530-1700 Th, MoosT 18211, 2 cr

8001 Research in Oral Biology
836215 ar cr

8002 Tutorial in Oral Biology
136096 ar cr

8021 Topics in Oral Biology (prereq #)
933953 1325-1520 Th, MoosT 18211, 1-3 cr

8030 Seminar (S-N only)
641092 1230-1330 T, MoosT 18211, 1 cr

8101 Topics in Cariology (prereq possession of a dental degree or PhD) (A-F only)
230189 1-2 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
436802 1-18 cr

8777 Thesis Credits: Masters
731864 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
829801 1-36 cr

ORAL PATHOLOGY (OPat)
Dentistry

5017 Oral Pathology Clinic
229981 ar cr

8002 Oral Pathology (prereq 5251, 5252)
935024 ar cr

8004 Histopathology
239815 2 cr

8005 Advanced Oral Pathology
732805 3 cr

8006 Current Literature Review
631887 1 cr

8007 Special Oral Pathology
140593 2 cr

8008 Clinical Oral Pathology
539268 1 cr

8011 Surgical Oral Pathology
134140 ar cr

8012 Human and Medical Cytogenetics
134333 4 cr

8015 Methods of Genetic Counseling and Treatment
130167 1 cr

8300 Human Development Genetics I (prereq GCB 3022, BioC 5970, Path 5101 or #)
334492 2 cr

ORAL RADIOLOGY (ORad)
Dentistry

8300 Advanced Oral Roentgenographic Interpretation (prereq #)
629556 0800-0945 M, HSUnitF 2110, 2 cr (Sept 9-Dec 2)

ORTHODONTICS (Otho)
Dentistry

5001 Clinical Orthodontics
930146 0900-1200 MTWThF, 1400-1630 MTWThF, MoosT 6320, 6345, ar cr

8001 Research in Orthodontics
740855 ar cr

8200 Growth and Development
334220 0800-0900 MTWThF, 1300-1400 MTWThF, MoosT 6370, ar cr

8204 Orthodontic Diagnosis and Treatment Planning
432202 ar cr

8208 Orthodontic Seminar
235425 0800-0900 MTWThF, 1300-1400 MTWThF, MoosT 6374, ar cr

ORTHOPAEDIC SURGERY (OrSu)
Medical School

5180 Orthopaedics I (prereq regis med)
738846 Ogilvie J, others, 6 cr

5185 Orthopaedics II: Externship in Orthopaedic Surgery (prereq regis med)
235540 Ogilvie J, others, ar cr

5186 Research Problems in Orthopaedic Surgery (prereq regis med)
837185 Ogilvie J, others, ar cr

5188 Externship in Orthopaedic Surgery and Fractures-Gillette Children's Hospital (prereq regis med)
137118 Koop S, 4.5-9 cr

5190 Externship in Orthopaedic Surgery and Fractures-Veterans Hospital (prereq regis med)
133997 McElfresh E, ar cr

5191 Orthopaedic Externship at Hennepin County Medical Center (prereq regis med)
230953 Kyle R, ar cr

5192 Preceptorship in Orthopaedic Surgery (prereq regis med jr or sr)
336436 ar cr

5193 Scoliosis and Other Spinal Deformities (prereq general orthopaedic course or elective clerkship in orthopaedic surgery)
730228 9 cr

5194 Orthopaedic Externship (prereq regis 3rd or 4th yr med stu)
939865 Aadalen R, others, 4.5-9 cr

5195 Orthopaedics for the Generalist (prereq regis med stu)
433544 ar cr

8401 Orthopaedic Conference
833282 Ogilvie J, others, 3 cr

8403 Fractures
531137 Kyle R, 5 cr

8405 Orthopaedic Diagnosis
036505 Ogilvie J, others, 3 cr

8407 Pediatric Orthopaedics
037217 Koop S, 5 cr

8408 Orthopaedic Problems and Management
040263 Ogilvie J, others, 5 cr

8409 Orthopaedic Problems and Management
038478 Aamoth G, 5 cr

8410 Orthopaedic Pathology
232203 Ogilvie J, others, 2 cr

8411 Orthopaedic Operative Surgery
737230 Ogilvie J, others, 5 cr

8412 Orthopaedic Anatomy
334072 Putnam M, 2 cr

8416 Orthopaedic Research
833041 Ogilvie J, 5 cr

OTOLARYNGOLOGY (Otol)
Medical School

5101 Introduction to the Basic Sciences in Otolaryngology, I: Ear (prereq #)
434340 Lassman F, others, 3 cr

5200 Surgical Specialty: Otolaryngology (prereq regis med student)
833489 Hom D, ar cr

5501 Surgical-ENT Elective
738734 Hom D, ar cr

5503 Research Basic Science (prereq regis med student)
935279 Hom D, ar cr

5970 Directed Studies (prereq #)
234064 ar cr

8230 Clinical Otorhinolaryngology
035614 Adams G, others, 6 cr

8231 Surgery of Ear, Nose, and Throat
540422 Adams G, others, 4 cr

8232 Maxillofacial Surgery
636359 Adams G, Boies L, others, 1 cr

8233 Plastic and Reconstructive Surgery of the Head and Neck
438887 Adams G, Boies L, others, 1 cr

R 8234 Anatomy of the Head and Neck and Temporal Bone Dissection
634255 Gapany M, Levine S, 2 cr

8235 Roentgenology of the Head and Neck
140763 2 cr

8236 Pharmacology in ENT
637544 2 cr

8237 Endoscopy
439828 Adams G, others, 2 cr

8238 Pathology of the Ear, Nose, and Throat
636281 Adams G, others, 2 cr

8239 Otoneurology
637303 Anderson J, Levine S, 2 cr

8240 Allergy
134381 2 cr

8241 Tumor Clinic
829961 Adams G, others, 1 cr

8242 Audiology and Speech Pathology
731654 Hunter L, others, 2 cr

8243 Introduction to Research Methodology
941101 Daly K, others, 2 cr

8244 Seminar: Current Literature
838921 Gapany M, others, 1 cr

8245 Master's Thesis Research
538458 ar cr

8246 Ph.D. Thesis Research
339546 ar cr

8247 Physiology of Hearing (§NSc 8247; prereq #)
337957 Javel E, 3 cr

8248 Readings in Auditory Physiology (prereq #)
135787 Santi P, 1-3 cr

8249 Seminar: Current Topics in Cochlear Anatomy (prereq #) (S-N only)
135376 Santi P, 1 cr

8250 Advanced Biochemistry of the Auditory System (prereq MdBc 5100, MdBc 5101 or equiv or #)
032194 Juhn S, 2 cr

8262 Advanced Clinical Audiology (prereq Otol grad maj, 8242 or #) (A-F only)
332743 Margolis R, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
632148 1-18 cr

8777 Thesis Credits: Masters
131075 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
631162 1-36 cr

PATHOBIOLOGY (Path)
Laboratory Medicine and Pathology
Medical School

5109 Seminar: Selected Topics in Pathobiology (prereq #)
133126 1600-1700 T, MoosT 2116, McCarthy J, 1 cr

5110 Seminar: Pathology (prereq #) (S-N only)
630013 1200-1300 M, Mayo C231, 1 cr (Todd Amph)

5141 Problems in Experimental and Clinical Chronobiology
837123 Halberg F, ar cr

5865 Departmental Seminar (prereq #) (S-N only)
740001 0800-0900 W, Mayo D230, 1 cr (Eustis Amph)

8108 Pathobiology I (8108-8109-8110†; prereq MdBc 5100, MdBc 5101, or ¶, CBN 5103, CBN 5104 or ¶, or #)
931409 0905-0955 MWF, MoosT 2580, McCarthy J, 3 cr

8201 Research
332323 ar cr

8216 Frontiers of Immunology I: Molecular Immunology (§MicB 8216; prereq Biol 5001 or equiv)
440686 1535-1625 MWF, MoosT 2520, Pennell C, Jemmerson R, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
831208 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
529582 1-36 cr

PEDIATRIC DENTISTRY (Pedo)
Dentistry

5405 Advanced Pediatric Dentistry for Postgraduate Dental Fellows (S-N only)
434175 1 cr

5414 Advanced Clinical Pedodontics
639858 0900-1200 MTWThF, 1300-1600 MTWThF, MoosT 6220, ar cr

8001 Research
236199 ar cr

8290 Hospital Pedodontics I (S-N only)
539898 ar cr

8291 Hospital Pedodontics II (S-N only)
337537 1300-1600 MTWThF, 0900-1200 TW, MoosT 6162, ar cr

8292 Pedodontic Literature
538279 0800-0900 F, MoosT 6162, ar cr

8294 Pedodontic Diagnosis and Treatment Planning
337442 ar cr

8295 Independent Pedodontic Study
739706 ar cr

8298 Interdisciplinary Care of the Cleft Palate Patient (S-N only)
138147 1 cr

PEDIATRICS (Ped)
Medical School

5501 Pediatric Externship (prereq successful completion of Year 2 Clinical Medicine III Pediatrics)
840409 Moller J, 9 cr

R 5512 Pediatric Acting Internship
129620 Moller J, ar cr

5520 Pediatrics Ambulatory Course (prereq 2nd yr clinical pediatrics)
139847 Moller J, ar cr

5531 Psychology Internship (prereq psych fellow specialist)
038061 Robiner W, 12 cr

R 5533 Pediatric Clinical Allergy at University Hospital (prereq 3rd or 4th yr medical student)
130069 Blumenthal M, 4.5-9 cr

R 5534 Pediatric Cardiology at the University Hospital
837087 Moller J, ar cr

R 5535 Pediatric Infectious Diseases
039565 Ferrieri P, ar cr

R 5536 Pediatric Hematology/Oncology/Bone Marrow Transplantation at the University Hospital
939560 Orchard P, ar cr

R 5537 Pediatric Endocrinology and Metabolism at the University
536371 Brown D, ar cr

R 5538 Pediatric Gastroenterology and Nutrition
031935 Sharp H, ar cr

5539 Neonatal Medicine Externship
134929 Boros S, ar cr

R 5540 Pediatric Neurology
337229 Swaiman K, ar cr

R 5543 Pediatric Nephrology at University
437450 Fish A, ar cr

R 5544 Pulmonary Disease in Pediatrics
933998 Warwick W, ar cr

R 5548 Pediatric Genetics at the University
136527 Pierpont M, 9 cr

R 5553 Adolescent Medicine
832889 Shew M, ar cr

R 5555 Neonatal Clerkship (prereq 5501 or 5512)
836358 Opitz J, ar cr

R 5556 Clinical Pediatrics Clerkship (prereq 5501 or 5512)
138849 Moller J, ar cr

5559 Pediatric Critical Care Medicine (prereq 5501 and/or 5512)
331608 Green T, 4.5-9 cr

5560 Research/Special Problems in Pediatrics (prereq regis med) (S-N only)
734067 Moller J, ar cr

5565 Pediatric Immunology (prereq completion of at least one general pediatric inpatient rotation)
634871 Filipovich L, 4.5-9 cr

8204 Residency in Pediatrics (prereq #)
736286 Shannon M, ar cr

8206 Pediatric Special Interest (prereq #)
933841 Shannon M, ar cr

PERIODONTICS (Pero)
Dentistry

5222 Dentistry and Systematic Health Care (prereq graduate students in Dentistry) (S-N only)
032468 0730-0900 T, MoosT 6410, Rhodus N, 1 cr

5300 Advanced Periodontics for Postgraduate Dental Fellows (S-N only)
338381 1 cr

8000 Advanced Clinical Periodontology
538587 0930-1215 MTWThF, 1330-1615 MTWTh, MoosT 7470, ar cr

8200 Lectures
340955 1220-1310 M, MoosT 7580, ar cr

8220 Topics in Conscious Sedation
831077 1600-1745 T, MoosT 7580, 2 cr

8300 Seminar: Periodontology
032938 0730-0930 W, MoosT 7580, ar cr

PHARMACEUTICS (Phm)
Pharmacy

8100 Seminar: Pharmaceutics
730701 1600-1700 Th, MoosT 2520, Grant D J W, 1 cr

8101 Readings in Pharmaceutics
739480 1530-1620 F, HSUnitF 7193, Zimmerman C, 1 cr

8105 Pharmacokinetics Research Seminar (prereq grad in pharmaceutics majoring in pharmacokinetics) (S-N only)
038626 Sawchuk R, Zimmerman C, 2 cr

8200 Research Problems (S-N only)
236428 ar cr

8430 Drug Transport and Absorption (prereq Phmc 5630 (Biopharmaceutics), diff equat and phys chem surv crses)
222996 Bai P F, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
731525 1-18 cr

8777 Thesis Credits: Masters
830902 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
531011 1-36 cr

PHARMACEUTICS, UNDERGRAD (Phmc)
Pharmaceutics
Pharmacy

5450 Introduction to Drug Delivery (prereq ¶Phcy 5921) (A-F only)
739169 1115-1205 MW, MoosT 2530, Grant D, Jafari M, 2 cr

5460 Pharmacokinetics (prereq Calc II, 5452 or #) (A-F only)
124109 1535-1625 M, 1325-1520 T, 1325-1415 Th, MoosT 2530, Zimmerman C, 4 cr

5730H Pharmaceutics Seminar (prereq #) (A-F only)
237708 1600-1700 Th, MoosT 2520, 1 cr

5970 Directed Studies (prereq #)
538962 1-5 cr

5999 Special Problems (prereq #)
930941 ar cr

PHARMACOLOGY (Phcl)
Medical School

1001 Dental Therapeutics (prereq regis dental hygiene program or #)
837834 1325-1520 T, MoosT 2620, Ramakrishnan S, 2 cr

5100 Pharmacology for Nursing Students (prereq regis Nurs stu or #)
136065 1325-1520 TTh, MoosT 2620, Ramakrishnan S, 4 cr

5101 Pharmacology for Pharmacy Students (prereq registered 2nd yr Pharmacy student or #) (A-F only)
★LECT 1325-1415 MWF, MoosT 2520, 0905-0955 TTh, MoosT 5125, Dunham E, 5 cr
140495 —1 LAB 1430-1625 F, MoosT 3110, Dunham E

5103 Pharmacology for Dental Students (prereq regis Dent stu or #)
631128 0840-0930 MTWThF, MoosT 2530, Law P Y, Hargreaves K, 5 cr (Sept 23-Dec 6)

5109 Problems in Pharmacology (prereq grad or upper div stu or #)
535107 Loh H, ar cr

5111 Pharmacology (5111†; prereq 5110 or #)
933967 0905-0955 WF, 1115-1205 Th, MoosT 2650, Hunninghake D, Lichtblau L, 3 cr (Sept 3-Dec 19)

5261 General Environmental Toxicology (§PubH 5261; prereq undergrad course in biology and some chemistry)
239992 1730-1900 TTh, MoosT 2530, Holtzman J, 3 cr

8110 Advanced Pharmacology I (prereq biochem, physiol background, 5111 or ¶5111, 5110 or #) (A-F only)
429509 Sladek N, 2 cr (MIrdH 3260)

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

8204 Seminar: Selected Topics in Pharmacology (prereq 5111 or #)
138391 1215-1300 T, MoosT 3110, Walseth T, 1 cr

8207 Seminar: Psychopharmacology (§NSc 8207; prereq #)
739835 Sparber S, 1 cr (MIrdH 3260)

8209 Current Research in Drug Metabolism (prereq #) (A-F only)
831015 Holtzman J, 1 cr (MIrdH 3260)

8217 Problems in Investigative Pharmacology (prereq #) (S-N only)
937307 1200-1300 MTWThF, 1600-1700 MTWThF, MIrdH 3260, Loh H, 2 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
340969 1-18 cr

8777 Thesis Credits: Masters
635602 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
034074 1-36 cr

PHARMACY PRACTICE (Phar)
Pharmacy

R 5009 Multidisciplinary Perspectives on Aging (§AdEd 5440, CPsy 5305, HSU 5009, PA 5414, PubH 5737, Soc 5960, SW 5024)
336372 1640-1825 MW, MoosT 2690, 4 cr

5210 Terminology of the Health Sciences (§HSU 5210)
339563 Zaske D, 2 cr (pick up orientation schedule in HSUnifF 5-120 before 1st day of qtr)

R 5232 Drugs and Prison Health (S-N only)
640993 Kingston R, 2 cr

5290 Specialty Clerkships (prereq #)
129701 Rodriguez R, 1-12 cr

5291 Specialty Externship (prereq #)
733307 Rodriguez R, 1-12 cr

5306 Clinical Toxicology (prereq third yr phar student or #) (A-F only)
334136 1010-1205 W, 1010-1100 F, MoosT 2520, Sioris L, 2 cr

5307 Pharm.D. IV Seminar (prereq PharmD IV student) (S-N only)
440798 1325-1625 Th, MoosT 2580, 2 cr

5390 Community Practice Externship (prereq third yr phar student) (A-F only)
134073 —1 LECT 0800-0955 T, HSUnitF 7135, Johnson J, 7 cr
★REC

5392 Hospital Practice Externship (prereq third yr phar student) (A-F only)
533714 —1 LECT 1430-1625 T, HSUnitF 7135, 7 cr
★REC

5500 Pathophysiology and Therapeutics: Cardiovascular Diseases (prereq 3rd yr pharmacy stu) (A-F only)
831886 0800-0955 M, MoosT 2520, 0800-0955 Th, MoosT 2650, Straka R, 4 cr

5503 Pathophysiology and Therapeutics: Immune Diseases (prereq 3rd yr pharmacy stu) (A-F only)
639620 1010-1205 Th, HSUnitF, Canafax D, 2 cr

5504 Pathophysiology and Therapeutics: Gastrointestinal Disorders (prereq 3rd yr pharmacy stu) (A-F only)
934603 1010-1205 M, 1115-1205 F, HSUnitF 7135, Guay D, 2 cr

5505 Pathophysiology and Therapeutics: Kidney and Urinary Tract Disorders (prereq 3rd yr pharmacy stu) (A-F only)
081286 0800-0955 WF, MoosT 2520, Hirata-Dulas C, 3 cr

5515 Neuroanatomy (prereq 3rd yr pharmacy stu) (S-N only)
836067 Graves N, 1 cr (independent study ar, HSUnitF 7115)

5550 Pharmacy Practice Clerkship: Acute Care (prereq PharmD IV student) (A-F only)
039307 4-12 cr

5551 Pharmacy Practice Clerkship: Clinical Pharmacokinetics (prereq PharmD IV student) (A-F only)
032308 4 cr

5552 Pharmacy Practice Clerkship: Pediatrics (prereq PharmD IV student) (A-F only)
829488 4 cr

5553 Pharmacy Practice Clerkship: Clinical Elective I (prereq PharmD IV student) (A-F only)
133384 4-12 cr

5554 Pharmacy Practice Clerkship: Special Elective I (prereq PharmD IV student) (A-F only)
334296 4-12 cr

5555 Pharmacy Practice Clerkship: Clinical Elective II (prereq PharmD IV student) (A-F only)
937808 4-12 cr

5556 Pharmacy Practice Clerkship: Clinical Elective III (prereq PharmD IV student) (A-F only)
829958 4-12 cr

5557 Pharmacy Practice Clerkship: Special Elective II (prereq PharmD IV student) (A-F only)
934066 4-12 cr

5556 Pharmacy Practice Clerkship: Special Elective III (prereq PharmD IV student) (A-F only)
136365 4-12 cr

5770H Hospital Pharmacy Seminar (prereq #) (A-F only)
133053 1 cr

5811 Pharmaceutical Care I (prereq ¶5921) (A-F only)
034818 1010-1205 TTh, MoosT 2530, Cloyd J, 4 cr

5632 Statistics and Drug Literature Evaluation (prereq 5811, ¶Phcy 5924) (A-F only)
123857 1045-1200 TTh, HSUnitF 7135, Gross C, 3 cr

5865 Pharmacy Clerkship I (S-N only)
139170 Benson B, 1 cr

5970 Directed Studies (prereq #)
632120 1-5 cr

5999 Special Problems (prereq #)
731685 ar cr

PHARMACY, INTERDEPARTMENTAL (Phcy)
Pharmacy

R 5921 Pharmacy Laboratory I (prereq ¶Phar 5811, ¶MedC 5151, ¶Phmc 5450) (A-F only)
★LECT 1535-1625 W, MoosT 2620, Jafari M, 1 cr
330698 —1 LAB 0800-0955 T, HSUnitF 3150
929398 —2 LAB 0800-0955 Th, HSUnitF 3150
439196 —3 LAB 0800-0955 F, HSUnitF 3150

R 5924 Pharmacy Laboratory IV (prereq ¶Phar 5832, MedC 5172, Phmc 5460) (A-F only)
★LECT 1430-1520 Th, MoosT 2530, 1 cr
723859 —1 LAB 0800-0955 M,
123860 —2 LAB 1010-1205 M,
923861 —3 LAB 0905-1100 W,

PHILOSOPHY (Phil)
Liberal Arts

R 1001 Introduction to Logic (Math)
★LECT 0905-0955 MWF, NichH 45, Dolan J
339367 —1 REC 0800-0850 T, FordH 285, 5 cr
235389 —2 REC 0905-0955 T, FordH 170, 5 cr
635048 —3 REC 1010-1100 T, LindH 305, 5 cr
434077 —4 REC 1010-1100 T, FordH 60, 5 cr
336369 —5 REC 1115-1205 T, LindH 305, 5 cr
235991 —6 REC 0800-0850 Th, FordH 175, 5 cr
131397 —7 REC 1220-1310 Th, FordH 175, 5 cr
530151 —8 REC 1325-1415 Th, FordH 120, 5 cr
332113 —9 REC 1325-1415 Th, FordH 160, 5 cr
★LECT 1325-1415 MWF, NichH 211, Lewis D
330801 —10 REC 1010-1100 T, FordH 170, 5 cr
434290 —11 REC 1115-1205 T, Arch 20, 5 cr
933029 —12 REC 1325-1415 T, FordH 175, 5 cr (MLK stu only)
338879 —13 REC 1430-1520 T, MechE 221, 5 cr
137300 —14 REC 1325-1415 Th, FordH 175, 5 cr
235036 —15 REC 1430-1520 Th, FordH 170, 5 cr

R 1002 Introduction to Philosophy (Phil)
★LECT 1010-1100 MWF, Phys 166, Hanson W
131621 —1 REC 0800-0850 T, FordH 50, 5 cr
737227 —2 REC 0905-0955 T, FordH 60, 5 cr
934326 —3 REC 1010-1100 T, MechE 221, 5 cr
231116 —4 REC 1010-1100 T, FordH 175, 5 cr
829765 —5 REC 1325-1415 T, FordH 115, 5 cr
734473 —6 REC 1325-1415 Th, FordH 115, 5 cr

R 1003 Introduction to Ethics (Phil)
★LECT 1115-1205 MWF, FordH 40, Holtman S
223551 —1 REC 1115-1205 T, FordH 40, 5 cr
223565 —2 REC 1325-1415 T, ApH 103, 5 cr
623563 —3 REC 1115-1205 Th, FordH 70, 5 cr

R 1004 Introduction to Political Philosophy (Phil; C/PE)
★LECT 0945-1100 TTh, FordH 130, Wallace J
323573 —1 REC 0800-0850 W, FordH 70, 5 cr
023575 —2 REC 0905-0955 W, FordH 170, 5 cr
623577 —3 REC 1325-1415 W, FordH 70, 5 cr

R 1005 Scientific Reasoning (Phil)
423581 1115-1230 TTh, FordH 150, Giere R, 5 cr

R 1007 Introduction to Political Philosophy Practicum (prereq ¶1004)
723571 0945-1100 TTh, FordH 130, Wallace J, 2 cr

R 3001 General History of Western Philosophy (Phil)
★LECT 1010-1100 MWF, FordH 120, Owens J
539626 —1 REC 0905-0955 T, FordH 150, 5 cr
437271 —2 REC 0905-0955 Th, FordH 160, 5 cr
431082 —3 REC 1325-1415 Th, LindH 303, 5 cr

3005 Introduction to the Philosophy of Plato
223579 1430-1520 MWF, FordH 175, Peterson S, 4 cr

3105 Introduction to the Theory of Knowledge (prereq 1001 or #)
123583 1430-1520 MWF, FordH 285, Scheman N, 4 cr

R 3302 Moral Problems of Contemporary Society (Phil; C/PE)
★LECT 1325-1415 MWF, FordH 55
033684 —1 REC 1115-1205 T, FordH 70, 5 cr
330572 —2 REC 1325-1415 T, FordH 70, 5 cr
429333 —3 REC 1325-1415 Th, FordH 70, 5 cr

R 3307 Social Justice and Community Service: Basic Political Values (Phil; C/PE; practicum)
438033 1245-1400 TTh, FordH 60, Wallace J, 4 cr

3601 Scientific Thought (prereq 1002, 2 natural science courses or completion of Group B) (AH)
739138 1245-1400 TTh, FordH 130, Longino H, 4 cr

3607 Philosophy of Psychology (prereq one course in philosophy or psychology or #)
723585 1325-1415 MWF, FordH 40, Savage C, 4 cr

3970 Directed Studies (prereq #, Δ, ⊿)
834349 1-5 cr

3980 Directed Instruction (prereq #, Δ, ⊿)
439327 1-5 cr

5043 Hume (prereq 3003 or #)
323587 1115-1205 MWF, FordH 150, Lewis D, 4 cr

5068 Later Philosophy of Wittgenstein (prereq 5231 or 3003 or #)
523586 1415-1530 TTh, FordH 60, Mason H, 4 cr

5101 Metaphysics (prereq one qtr history of philosophy or #)
123588 1325-1415 MWF, FordH 175, Root M, 4 cr

5201 Symbolic Logic I (prereq 1001 or #)
★LECT 1010-1100 MWF, FordH 130, Kac M
629752 —1 REC 1010-1100 TTh, FordH 40, 5 cr

5211 Modal Logic (prereq 5202 or Math 5162 or #)
023589 1430-1520 MWF, FordH 40, Hanson W, 4 cr

5231 Philosophy of Language (prereq 1001, 5201 or #)
823593 1220-1310 MWF, FordH 130, Owens J, 4 cr

5311 Ethical Theory (prereq 1003 or #)
334783 1325-1415 MWF, FordH 130, Holtman S, 4 cr

5321 Theories of Justice (prereq 1003 or 1004 or 5311 or #)
224473 1115-1230 TTh, Arch 35, Mason H, 4 cr

5607 Philosophy of the Biological Sciences (prereq courses in phil of sci or biol)
323590 1245-1400 TTh, FordH 150, Waters C, 4 cr

5970 Directed Studies and Research (prereq #, Δ, CLA approval)
134915 1-5 cr

5990 Directed Studies and Research (prereq #, Δ, CLA approval)
835193 1-5 cr

8131 Epistemology Survey
123591 1535-1730 W, FordH 359, Savage C, 4 cr

8310 Seminar: Moral Philosophy (prereq 5311 or #)
630576 1535-1730 Th, FordH 359, Dolan J, 4 cr

8600 Seminar in Philosophy of Science
023592 1535-1730 T, FordH 359, Giere R, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
629976 1-18 cr

8777 Thesis Credits: Masters
732822 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
139452 1-36 cr

8970 Directed Study and Research (prereq passing grade on written prelim exam for PhD in philosophy, #)
538640 1-4 cr

8990 Directed Study and Research (prereq passing grade on written prelim exam for PhD in philosophy, #)
037573 1-4 cr

PHYSICAL EDUCATION (PE)

School of Kinesiology & Leisure Studies
Education and Human Development

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. You are encouraged to consider carefully any limits on your health or physical fitness and to consult a doctor if you have any questions about your health or about your ability to participate safely in the physical activities required for the course.

R 1004 Diving, Springboard (prereq 1007 or #)
436069 0800-0850 TTh, UAqCtr, 1 cr (Natatorium Diving Well)

R 1007 Swimming (prereq non-swimmer)
139699 —1 0800-0850 MW, CookeH 10, 1 cr
331737 —2 0905-0955 MW, CookeH 10, 1 cr

R 1014 Conditioning
336307 —1 0800-0850 MW, FieldHse, 1 cr
930826 —2 0905-0955 MW, FieldHse, 1 cr
529680 —3 1010-1100 MW, FieldHse, 1 cr
734344 —4 1115-1205 MW, FieldHse, 1 cr
239796 —5 0800-0850 TTh, FieldHse, 1 cr
833105 —6 0905-0955 TTh, FieldHse, 1 cr
535012 —7 1010-1100 TTh, FieldHse, 1 cr
629931 —8 0800-0850 MW, Gym, 1 cr (StP)

R 1015 Weight Training
331284 —1 0800-0950 M, URecCtr, 1 cr
134347 —2 0800-0850 MW, URecCtr, 1 cr
134154 —3 0905-0955 MW, URecCtr, 1 cr
629573 —4 1325-1415 MW, URecCtr, 1 cr
336081 —5 0800-0955 T, URecCtr, 1 cr
937131 —6 0800-0850 TTh, URecCtr, 1 cr
732402 —7 1010-1100 TTh, URecCtr, 1 cr
333911 —8 0905-0955 MW, Gym, 1 cr (StP)

R 1031 Saber Fencing
139329 1010-1100 TTh, CookeH 308, 1 cr

R 1032 Badminton
132011 0800-0850 TTh, URecCtr, 1 cr

R 1033 Foil Fencing
838918 0905-0955 TTh, CookeH 308, 1 cr

R 1034 Judo (facility fee)
430577 —1 1325-1415 TTh, Gym, 1 cr (StP)
440168 —2 1430-1520 TTh, Gym, 1 cr (StP)

R 1035 Karate (facility fee)
534927 —1 0905-0955 MW, CookeH 308, 1 cr
935511 —2 1010-1100 MW, CookeH 308, 1 cr

R 1036 Racquetball
734442 —1 0905-0955 MW, URecCtr, 1 cr
938862 —2 1010-1100 MW, URecCtr, 1 cr

R 1037 Squash Racquets
238034 0905-0955 TTh, URecCtr, 1 cr

R 1038 Tennis
733047 —1 0800-0850 MW, FieldHse, TCts, 1 cr
537052 —2 0905-0955 MW, FieldHse, TCts, 1 cr
837137 —3 1010-1100 MW, FieldHse, TCts, 1 cr
232380 —4 1115-1205 MW, FieldHse, TCts, 1 cr
433480 —5 0800-0850 TTh, FieldHse, TCts, 1 cr
731606 —6 0905-0955 TTh, FieldHse, TCts, 1 cr
932706 —7 1010-1100 TTh, FieldHse, TCts, 1 cr

R 1044 Self Defense
137368 0905-0955 MW, NorrisH M151, 1 cr

R 1048 Bowling (moderate intensity) (facility fee)
540694 —1 0905-0955 MW, CMU B55, 1 cr
938456 —2 1010-1100 MW, CMU B55, 1 cr
034527 —3 1115-1205 MW, CMU B55, 1 cr
940577 —4 0905-0955 TTh, CMU B55, 1 cr
440395 —5 1010-1100 TTh, CMU B55, 1 cr

R 1050 Golf (moderate intensity)
630982 —1 1325-1415 MTWTh, Golf Course, Club House, 1 cr (Sept 26-Oct 30) (StP)
129553 —2 1430-1520 MTWTh, Golf Course, Club House, 1 cr (Sept 26-Oct 30) (StP)

R 1053 Ice Skating
829779 —1 0905-0955 MW, Mariucci, 1 cr
830236 —2 1010-1100 MW, Mariucci, 1 cr

R 1060 Tumbling and Floor Exercise
833427 0905-0955 TTh, PeikG G100, 1 cr

R 1067 Basketball
230984 1325-1415 TTh, URecCtr, 1 cr

R 1072 Soccer
139525 0905-0955 MTWTh, FieldHse, 1 cr (Sept 26-Oct 30)

R 1074 Volleyball
834464 —1 0800-0850 MW, URecCtr, 1 cr
130842 —2 0905-0955 MW, URecCtr, 1 cr
937033 —3 1010-1100 MW, URecCtr, 1 cr
439604 —4 1325-1415 MW, URecCtr, 1 cr

R 1107 Intermediate Swimming (prereq swim 100 yards)
132316 —1 1010-1100 MW, UAqCtr, 1 cr (Natatorium West)
240981 —2 1115-1205 MW, UAqCtr, 1 cr (Natatorium West)

R 1205 Scuba and Skin Diving (prereq 1107 or equiv) (facility fee)
529856 1010-1205 T, CookeH 202, 1010-1205 Th, CookeH 15, 1 cr

R 1306 Lifeguard Training (prereq ability to swim 100 meters)
036066 1010-1205 MW, UAqCtr, 1 cr (Natatorium East)

R 1410 Water Safety Instructor (prereq curr ARC adv Lifesaving Cert, have or concurrently acquire ARC First Aid, CPR Cert)
029442 0800-0950 TTh, UAqCtr, 2 cr (Natatorium)

R 1497 Directed Study (prereq 3 cr in physical education, #)
934181 Pickert R, 1-6 cr

PHYSICAL MEDICINE AND REHABILITATION (PMed)

Medical School

R 1002 Orientation to Physical Therapy (S-N only)
833329 1325-1415 Th, ChRC R208, Gardner M, 1 cr

R 1003 Orientation to Occupational Therapy (S-N only)
338851 1220-1310 T, ChRC R208, Anderson D, 1 cr

5215 Introduction to Physical Therapy Clinical Education (prereq regis PT) (S-N only)
635700 1325-1625 TTh, ChRC R262, 0905-0955 T, 1010-1205 W, ChRC R208, Ellingham C, 1 cr (obs ar)

5256 Special Interim Clinical Education in Physical Therapy (prereq regis PT) (S-N only)
036603 Ellingham C, ar cr

5275 Applied Anatomy (prereq regis PT)
235344 1535-1730 M, 1535-1625 T, ChRC R208, 0905-0955 F, ChRC R220, Ellingham C, Scudder G, others, 3 cr

5282 Theory of Therapeutic Exercise (prereq 5281)
937730 0800-0955 MWTh, ChRC R208, Carey J, 4 cr

5284 Techniques of Therapeutic Exercise (prereq 5283)
831144 1010-1205 MTWThF, 0800-0955 F, ChRC R220, Scudder G, Coleman K, 4 cr

5288 Evaluation Procedures II (prereq regis PT)
137239 1325-1520 MTWThF, ChRC R220, Gardner M, 4 cr

5294 Independent Study in Physical Therapy (prereq regis PT stu or #)
332225 DiFabio R, ar cr

5300 Concepts for Occupational Therapy Practice (prereq registered OT student) (A-F only)
434452 0800-0955 TTh, ChRC R262, Meyers C, 5 cr

5340 Human Development (prereq regis OT or PT)
832214 1010-1205 MW, 0800-1205 F, 0800-0955 Th, ChRC R208, 4 cr

5343 Specialty Topics: Assessment and Intervention (prereq regis OT) (A-F only)
736255 0800-0955 MW, 1010-1100 F, ChRC R262, Anderson D, Stern E, 5 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

5360 Dynamics of Group Models (prereq regis OT) (A-F only)
534121 1325-1415 M, 1010-1205 Th, 0800-0955 F, ChRC R262, 3 cr

5370 Theory of Occupation (prereq regis OT) (A-F only)
438890 1535-1625 T, ChRC R220, 1430-1625 F, ChRC R262, Anderson D, 3 cr

5375 Community Resources and Health Care Issues (prereq regis OT) (A-F only)
034320 1010-1205 MW, ChRC R262, Meyers C, 4 cr

5393 Kinesiology (prereq OT) (A-F only)
731119 1430-1625 MW, ChRC R262, 3 cr

5394 Orthotics (prereq regis OT) (A-F only)
740967 1415-1625 M, 1220-1415 F, ChRC R255, R262, 1325-1625 W, ChRC R255, R262, R208, Stern E, 4 cr

5395 Independent Study in Occupational Therapy (prereq #)
332063 Reisman J, ar cr

5397 Field Work Education in Occupational Therapy (prereq 5396) (S-N only)
935606 Meyers C, ar cr

5398 Fieldwork Education in Occupational Therapy (prereq reg occup ther prog) (S-N only)
138794 Meyers C, ar cr

5410 Adult Rehabilitation Medicine (prereq regis med)
638340 Dykstra D, others, ar cr

5411 Rehabilitation Medicine: Children (prereq regis med)
136429 Dykstra D, Taniguchi M, others, ar cr

5412 Rehabilitation Medicine for Adults (prereq regis med stu)
529730 4.5-9 cr

5414 Physical Medicine and Rehabilitation for the Family Physician (prereq regis med)
336422 Dykstra D, others, ar cr

5415 Private Practice in Physical Medicine and Rehabilitation (prereq regis med)
329566 Eckman M, 4.5-9 cr

5416 Physical Medicine and Rehabilitation at St. Paul Ramsey (prereq regis med)
834285 Kosiak M, Timming R, others, ar cr

5417 Research in Physical Medicine and Rehabilitation (prereq regis med)
038349 ar cr

5418 Physical Medicine and Rehabilitation at Hennepin County Medical Center (prereq regis med stu)
237868 ar cr

5817 Special Topics in Physical Therapy
130081 DiFabio R, 1-3 cr

8103 Clinic (prereq regis PT)
531770 Ellingham C, ar cr

8130 Seminar: Current Literature in Physical Therapy
939946 Scudder G, DiFabio R, 1 cr

8135 Advanced Kinesiology (prereq kinesiology course)
140679 DiFabio R, 3 cr

8140 Physiological Assessment in Physical Therapy
336288 Thompson L, 1 cr

8170 Special Topics in Physical Therapy (prereq #)
131554 DiFabio R, 1 cr

8181 Physiological Bases for Therapeutic Exercise
737468 Scudder G, 3 cr

8185 Problems in Physical Therapy (prereq regis PT)
535561 DiFabio R, ar cr

8188 Teaching Practicum (max 8 cr; prereq #)
638273 Ellingham C, ar cr

8193 Research Problems in Physical Therapy (prereq 8192 or #)
833301 DiFabio R, others, ar cr

8195 Research in Physical Therapy (prereq #)
834111 DiFabio R, ar cr

8200 Physical Medicine and Rehabilitation Service
533339 Dykstra D, others, ar cr

8205 Readings in Physical Medicine and Rehabilitation (max 2 cr)
831323 0905-1000 M, ChRC R220, Dykstra D, 2 cr

8206 Conference on Physical Medicine and Rehabilitation
833251 0800-0900 F, ChRC R220, Dykstra D, others, 2 cr

8207 Basic and Applied Physiatry
531123 0800-0900 M, ChRC R220, 1400-1600 F, ChRC R208, Dykstra D, others, 2 cr

8210 Research in Physical Medicine
939378 Dykstra D, Patterson R, others, ar cr

8212 Electromyography (prereq #)
334931 1300-1700 MTWThF, Mayo B564, Dykstra D, Weber, others, ar cr

8214 Readings in Electromyography (max 3 cr; prereq #)
266042 0900-1000 F, ChRC R255, Dykstra D, others, 1 cr

8220 Seminar: Physical Medicine and Rehabilitation
537357 0800-0900 W, ChRC R220, Dykstra D, others, 2 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims
730214 1-18 cr

8777 Thesis Credits: Masters
234890 DiFabio R, 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
237756 1-36 cr

PHYSICS (Phys)
Institute of Technology

The policy of the Physics department is to provide access to all physics courses to all qualified students. To facilitate lab and recitation scheduling, it may be necessary for some students to register for "to be assigned" lab sections. These sections are opened as published sections fill and require approval (i.e., magic numbers) from 148 Physics. You *must* attend the first day of lecture to receive your lab assignment or have it confirmed.

R 1001 The Physical World (§any phys courses; no cr for IT stu; prereq 1 yr high school alg) (Phys/NL) (companion lab is 1005)
436511 1220-1310 MTWF, Phys 131, 4 cr

R 1005 Physics Laboratory (no cr for IT students; prereq 1001 or ¶1001) (Phys/L)
133708 —1 LAB 0800-0955 M, Phys, 1 cr
331575 —2 LAB 1430-1625 M, Phys, 1 cr
539545 —3 LAB 0800-0955 T, Phys, 1 cr
029862 —4 LAB 1325-1520 T, Phys, 1 cr
133451 —5 LAB 0800-0955 W, Phys, 1 cr
335478 —6 LAB 1430-1625 W, Phys, 1 cr

R 1041 Introductory Physics (prereq high schl algebra, geometry; trigonometry recommended) (Phys/L)
★LECT 1325-1415 MTWF, Phys 150, 5 cr
★REC 1325-1415 Th, Phys 143
237675 —1 LAB 0800-0955 M, Phys
★REC 1325-1415 Th, Phys 157
939834 —2 LAB 1430-1625 W, Phys
★REC 1325-1415 Th, AkerH 215
539240 —3 LAB 1010-1205 M, Phys
★REC 1325-1415 Th, AmundH 104
133926 —4 LAB 1430-1625 M, Phys
★REC 1325-1415 Th, ChDev 105
136518 —5 LAB 1640-1835 T, Phys
★REC 1325-1415 Th, AmundH 124
934388 —6 LAB 1010-1205 T, Phys
★REC 1430-1520 Th, Arch 45
638161 —7 LAB 0800-0955 W, Phys
★REC 1430-1520 Th, AmundH 156
434600 —8 LAB 1640-1835 M, Phys
★REC 1430-1520 Th, LindH 303
139676 —9 LAB 0800-0955 T, Phys
★REC 1430-1520 Th, VinH 1
532269 —10 LAB 1010-1205 W, Phys
★REC 1430-1520 Th, WullH 220
136933 —11 LAB 1640-1835 W, Phys
★REC 1430-1520 Th, LindH 305
640959 —12 LAB 1430-1625 T, Phys

R 1104 General Physics (no cr for IT stu; prereq high schl calc or Math 1142 or equiv, high schl trig or Math 1008 or Math 1151, ¶1107) (Phys/NL) (companion lab is 1107)
238518 1220-1310 MTWThF, Phys 150, 4 cr

R 1107 General Physics Laboratory (prereq ¶1104 or #) (Phys/L)
731671 —1 LAB 0800-0955 M, Phys, 1 cr
432295 —2 LAB 1325-1520 M, Phys, 1 cr
339126 —3 LAB 1640-1835 M, Phys, 1 cr
540730 —4 LAB 0800-0955 T, Phys, 1 cr
838448 —5 LAB 1325-1520 T, Phys, 1 cr
936934 —6 LAB 1535-1730 T, Phys, 1 cr
035709 —7 LAB 1745-1940 T, Phys, 1 cr
735557 —8 LAB 0800-0955 W, Phys, 1 cr
540811 —9 LAB 1430-1625 W, Phys, 1 cr
536340 —10 LAB 1745-1940 W, Phys, 1 cr
434015 —11 LAB 0800-0955 F, Phys, 1 cr
134770 —12 LAB 1325-1520 F, Phys, 1 cr
332595 —13 LAB 1535-1730 F, Phys, 1 cr
330961 —14 LAB 1745-1940 F, Phys, 1 cr

R 1251 General Physics I (§1451H; prereq Math 1251 or ¶Math 1251) (Phys/L)
★LECT 0800-0850 MTWF, Phys 166, 4 cr
★REC 0800-0850 Th, LindH 325
039744 —1 LAB 1010-1205 F, Phys
★REC 0800-0850 Th, LindH 215
941079 —2 LAB 1220-1415 M, Phys
★REC 0800-0850 Th, Phys 143
736403 —3 LAB 1430-1625 T, Phys
★REC 0800-0850 Th, Phys 236A
835372 —4 LAB 1430-1625 W, Phys
★REC 0800-0850 Th, MurH 311
138740 —5 LAB 1640-1835 M, Phys
★REC 0905-0955 Th, BuH 123
141105 —6 LAB 1430-1625 M, Phys
★REC 0905-0955 Th, Phys 236A
636264 —7 LAB 1430-1625 F, Phys
★REC 0905-0955 Th, Phys 143
638905 —8 LAB 1220-1415 W, Phys
★REC 0905-0955 Th, FordH 50
730536 —9 LAB 1010-1205 T, Phys
★LECT 0905-0955 MTWF, Phys 166, 4 cr
★REC 0800-0850 Th, Phys 157
930132 —10 LAB 1220-1415 M, Phys
★REC 0800-0850 Th, AmundH 158
132462 —11 LAB 1430-1625 W, Phys
★REC 0800-0850 Th, LindH 229
834321 —12 LAB 1430-1625 T, Phys
★REC 0800-0850 Th, AkerH 317
229656 —13 LAB 1220-1415 F, Phys
★REC 0800-0850 Th, FordH 50
236722 —14 LAB 1640-1835 T, Phys
★REC 0905-0955 Th, LindH 203
329891 —15 LAB 1220-1415 T, Phys
★REC 0905-0955 Th, Arch 20
233531 —16 LAB 1430-1625 M, Phys
★REC 0905-0955 Th, NichH 122
932589 —17 LAB 1220-1415 W, Phys
★REC 0905-0955 Th, SmithH 111
638015 —18 LAB 1430-1625 F, Phys
★LECT 1115-1205 MTWF, Phys 150, 4 cr
★REC 1115-1205 Th, Phys 157
129738 —19 LAB 0800-0955 T, Phys
★REC 1115-1205 Th, Phys 143
537262 —20 LAB 1640-1835 T, Phys
★REC 1115-1205 Th, LindH 340
829815 —21 LAB 1430-1625 M, Phys
★REC 1115-1205 Th, AmundH 104
831984 —22 LAB 1640-1835 F, Phys
★REC 1115-1205 Th, PeikH 155
435102 —23 LAB 1220-1415 W, Phys
★REC 1115-1205 Th, AkerH 317
938683 —24 LAB 0800-0955 W, Phys
★REC 1115-1205 Th, CivE 214
932916 —25 LAB 1430-1625 T, Phys
★REC 1220-1310 Th, VinH 301
837414 —26 LAB 1220-1415 M, Phys
★REC 1220-1310 Th, Phys 143
040327 —27 LAB 0800-0955 M, Phys
★REC 1220-1310 Th, BuH 125
034561 —28 LAB 1430-1625 W, Phys
★REC 1220-1310 Th, LindH 203
839664 —29 LAB 1640-1835 W, Phys
★REC 1220-1310 Th, VinH 213
931829 —30 LAB 1430-1625 F, Phys
★REC 1220-1310 Th, Phys 157
833668 —31 LAB 0800-0955 F, Phys
★LECT 1430-1520 MTWF, Phys 166, 4 cr
★REC 1430-1520 Th, MurH 105
633722 —32 LAB 1010-1205 M, Phys
★REC 1430-1520 Th, Phys 236A
939171 —33 LAB 1220-1415 T, Phys
★REC 1430-1520 Th, LindH 315
132638 —34 LAB 0800-0955 W, Phys
★REC 1430-1520 Th, VinH 301
230547 —35 LAB 0800-0955 F, Phys
★REC 1430-1520 Th, PeikH 315
639665 —36 LAB 1220-1415 F, Phys

★REC 1535-1625 Th, ChDev 216
839888 —37 LAB 1640-1835 M, Phys
★REC 1535-1625 Th, WullH 220
437724 —38 LAB 1640-1835 F, Phys
★REC 1535-1625 Th, Phys 236A
635714 —39 LAB 1010-1205 W, Phys
★REC 1535-1625 Th, LindH 315
436931 —40 LAB 0800-0955 T, Phys
★LECT 1535-1625 MTWF, Phys 166, 4 cr
★REC 1535-1625 Th, LindH 320
932639 —41 LAB 1220-1415 T, Phys
★REC 1535-1625 Th, AkerH 317
140200 —42 LAB 1010-1205 M, Phys
★REC 1535-1625 Th, AkerH 211
923942 —43 LAB 0800-0955 W, Phys
★REC 1535-1625 Th, LindH 340
838983 —44 LAB 1640-1835 F, Phys
★REC 1640-1730 Th, SmithH 111
238020 —45 LAB 1640-1835 T, Phys
★REC 1640-1730 Th, LindH 320
433673 —46 LAB 1640-1835 M, Phys
★REC 1640-1730 Th, MurH 311
236803 —47 LAB 1010-1205 W, Phys
★REC 1640-1730 Th, LindH 315
438016 —48 LAB 1220-1415 F, Phys

R 1252 General Physics II (§1452H; prereq 1251, Math 1252 or ¶Math 1252) (Phys/L)
★LECT 1535-1625 MTWF, Phys 133, 4 cr
★REC 1535-1625 Th, LindH 303
523927 —1 LAB 1640-1835 W, Phys
★REC 1640-1730 Th, LindH 303
930731 —2 LAB 1220-1415 W, Phys

R 1253 General Physics III (§1453H; prereq 1252, Math 1261 or ¶Math 1261) (Phys/L)
★LECT 0905-0955 MTWF, Phys 150, 4 cr
★REC 1430-1520 Th, Phys 166
237823 —1 LAB 1430-1625 W, Phys
★REC 1430-1520 Th, Phys 170
833055 —2 LAB 1220-1415 T, Phys
★REC 1430-1520 Th, VinH 2
136499 —3 LAB 1640-1835 W, Phys
★REC 1430-1520 Th, Phys 150
735316 —4 LAB 1430-1625 M, Phys
★REC 1430-1520 Th, SmithH 100
129612 —5 LAB 1220-1415 W, Phys
★REC 1430-1520 Th, Phys 131
323962 —6 LAB 1220-1415 F, Phys
★REC 1535-1625 Th, AkerH 225
630545 —7 LAB 1010-1205 T, Phys
★REC 1535-1625 Th, AmundH 116
634319 —8 LAB 1220-1415 M, Phys
★REC 1535-1625 Th, AmundH 120
731735 —9 LAB 1430-1625 T, Phys
★REC 1535-1625 Th, Phys 143
940966 —10 LAB 1640-1835 M, Phys
★REC 1535-1625 Th, BuH 120
741052 —11 LAB 1430-1625 F, Phys
★REC 1535-1625 Th, AkerH 215
023964 —12 LAB 1640-1835 F, Phys
★REC 1535-1625 Th, FolH 344
639584 —13 LAB 1640-1835 T, Phys

R 1254 General Physics IV (§1454H; prereq 1253)
131232 1010-1100 MTWF, Phys 133, 4 cr

R 1451H Honors Physics I (§1251, 1271, 1311, 1411H; prereq selection for IT hon curr or consent of IT Honors Office) (Phys/L)
134767 —80 LAB 1220-1415 M,
932592 —81 LAB 1430-1625 M,
530540 —82 LAB 1325-1520 T,
140150 —83 LAB 1535-1730 T,
535849 —84 LAB 0800-0955 W,
633669 —85 LAB 1220-1415 W,
530750 —86 LAB 1430-1625 W,
★LECT 1115-1205 MTWF, Phys 131, 4 cr
129321 —80 REC 0800-0850 Th, Arch 30
033670 —81 REC 1010-1100 Th, LindH 215
130542 —82 REC 1115-1205 Th, Arch 45
939123 —83 REC 1115-1205 Th, FolH 208

R 1454H Honors Physics IV (§1254, 1341, 1441H; prereq 1453H, consent of IT Honors office) (Phys/L)
236932 —80 LAB 1325-1520 M, Phys
034768 —81 LAB 1430-1625 T, Phys
030543 —83 LAB 0800-0955 W, Phys
040151 —84 LAB 1325-1520 W, Phys
123977 —85 LAB 1535-1730 W, Phys
★LECT 1115-1205 MTWF, Phys 170, 4 cr
830544 —80 REC 0905-0955 Th, LindH 215
138018 —81 REC 1010-1100 Th, Phys 143
935850 —82 REC 1115-1205 Th, AmundH 124
623983 —83 REC 1115-1205 Th, Arch 20

R 3501 Modern Physics (no cr for phys majs; §3512-3513; prereq 1253 or 1453, Chem 1052, Math 3261)
532711 1700-1850 TTh, Phys 170, 4 cr

R 3601 Special Relativity (prereq 1253 or 1453)
237546 1325-1415 MWF, Phys 170, 3 cr

R 3970 Directed Studies (prereq #, Δ)
931894 1-5 cr

R 5021 Introduction to Analytic Mechanics (prereq Math 3261 or equiv)
741097 0905-0955 MTWF, Phys 133, 4 cr

R 5024 Introduction to Electric and Magnetic Fields (prereq 5023)
233867 1115-1205 MTWF, Phys 210, 4 cr

R 5031 Topics in Mathematical Physics (prereq two 5000-level math courses)
333200 1220-1310 MTWF, Phys 143, 4 cr

R 5051 Classical Physics (prereq 5022, 5024, advanced calculus or #)
436590 1010-1100 MTWF, Phys 210, 4 cr

R 5061 Computational Methods in the Physical Sciences I (§Ast 5061; prereq upper div status or grad stu or #)
033247 1115-1300 Th, Phys 210, 4 cr

R 5101 Introduction to Quantum Mechanics (prereq 3513)
630822 1430-1520 MTWF, Phys 170, 4 cr

R 5121 Methods of Experimental Physics I (prereq 3516 or equiv lab exp or #)
★LECT 1220-1310 MWF, Phys 170, 5 cr
341040 —1 LAB 1325-1520 MW Phys,
531977 —2 LAB 1535-1705 M, 1430-1705 Th, Phys
329888 —3 LAB 0905-1100 TTh Phys,
034091 —4 LAB 1220-1415 TTh Phys,
923987 —5 LAB 1430-1625 TF Phys,

R 5124 Experimental Project (prereq 5123, #)
232315 ar cr

R 5151 Quantum Mechanics (prereq 5102 or equiv, advanced calculus or #)
530859 1115-1205 MTWF, Phys 143, 4 cr

R 5162 Introduction to Plasma Physics (prereq 5022, 5024 or #)
024001 1115-1205 MTWF, Phys 157, 4 cr

R 5201 Thermal and Statistical Physics (prereq 3513 or equiv)
841107 0905-0955 MTWF, Phys 236A, 4 cr

R 5231 Introduction to Solid-State Physics (prereq 1254, 3512 or #, grad or adv undergrad in sci or eng)
340860 1115-1205 MTWF, Phys 133, 4 cr

R 5400H Junior Honors Seminar (prereq IT or CLA upper div honors student, #) (S-N only)
033314 1640-1755 T, Phys 157, 1 cr

R 5410H Senior Honors Seminar (prereq IT or CLA upper div honors student, #) (S-N only)
331298 1640-1755 Th, Phys 157, 1 cr

R 5551 Topics in Physics for Biology and Medicine: Mechanics and Molecular Physics (prereq general physics, calculus)
923990 —1 1115-1205 MTWThF, MechE 108, 5 cr

R 5924 History of 19th-Century Physics (§HSci 5924; prereq general physics or #)
523989 1640-1755 TTh, Phys 236A, 4 cr

R 5950 Colloquium Seminar (prereq beginning grad stu or adv undergrad in physics) (S-N only)
132808 1535-1705 W, Phys 131, ar cr

R 5970 Directed Studies (prereq #, Δ)
239930 1-5 cr

R 5980 Research Seminar (prereq grad stu or upper div phys maj) (S-N only)
630951 1640-1730 Th, Phys 143, 1 cr

R 5990 Directed Research (prereq 3rd yr, Δ)
033023 ar cr

R 8121 Advanced Quantum Mechanics (prereq 5153 or #)
937193 0905-0955 MWF, Phys 157, 3 cr

R 8200 Seminar: Condensed Matter Physics (prereq #) (S-N only)
141007 1325-1500 Th, Phys 210, ar cr

R 8211 Equilibrium Statistical Mechanics (prereq 5153 or #)
439246 1325-1415 MWF, Phys 157, 3 cr

R 8221 Solid-State Physics (prereq ¶5152-5153, 5211 or #)
537732 1430-1625 ThF, Phys 157, 3 cr

R 8300 Seminar: Nuclear Physics (prereq #) (S-N only)
237319 1430-1625 W, ar cr

R 8370 Seminar: Elementary Particle Physics (prereq #) (S-N only)
335142 1325-1500 T, Phys 210, ar cr

R 8381 Modern Quantum Field Theory and Its Applications (prereq 8123 or #) (A-F only)
224005 1220-1310 MWF, Phys 236A, 3 cr

R 8400 Seminar: Space Physics (prereq #) (S-N only)
229611 1430-1625 T, Phys 236A, ar cr

R 8500 Plan B Project (no cr toward PhD; prereq #) (S-N only)
035385 1220-1310 MWF, Phys 210, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
233870 1-18 cr

8777 Thesis Credits: Masters
537777 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
930020 1-36 cr

R 8990 Research in Physics (prereq #)
735025 ar cr

PHYSIOLOGY (Phsl)
Medical School

1001 Human Physiology (prereq high school biology, chemistry or #)
★LECT 1430-1520 MWF, MoosT 2690, Bloom G, 4 cr
838742 —1 DEM 1220-1415 W, MoosT 3110
138463 —2 DEM 1535-1730 W, MoosT 3110

3051 Human Physiology (prereq 1 yr chemistry, biology, primarily for nursing, nutrition, medical technology and physical therapy stu)
★LECT 1800-1900 Th, EE/CSci 3210, Bloom G
733792 —1 LAB 1900-2100 Th, MoosT 3110, 5 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

3052 Principles of Physiology (prereq 1 yr college chemistry, physics, math through integ calculus)
939798 1010-1100 MWF, MoosT 2530, Levitt D, 3 cr

3055 Principles of Physiology (prereq 1 yr college chem, physics, math through integ calculus)
337358 1010-1100 MWF, MoosT 2530, Levitt D, 5 cr

3070 Neurophysiology (prereq biochemistry, human or mammalian anatomy)
829510 —1 LECT 1430-1520 TTh, MoosT 2690, Fohlmeister J, 2 cr (7 week course) (begins Oct 15)
★LAB 1325-1415 TTh, MoosT 3110

3091H Honors Course: Readings in Physiology (prereq honors candidates in physiology, Δ)
030929 Branton W D, ar cr

3092H Honors Course: Problems in Physiology (prereq honors candidates in physiology, Δ)
535530 Branton W D, ar cr

3970 Directed Studies (prereq #, Δ)
336310 ar cr

5113 Problems in Physiology (prereq #)
936450 ar cr

5201 Computational Neuroscience I: Membranes and Channels (prereq 5112 or equiv)
539593 1430-1600 MW, MlrdH 5276, Fohlmeister J, 5 cr

5440 Quantitative Physiology (prereq one yr each: college chemistry, physics, math thru integral calculus, grad stu)
430997 1010-1100 MWF, MoosT 2530, Levitt D, 3 cr

5552 Readings in Physiology
535995 ar cr

5553 Research in Physiology
531073 ar cr

8113 Problems in Physiology (prereq #)
335691 ar cr

8202 Readings in Physiology
140021 ar cr

8203 Research in Physiology
040859 ar cr

8300 Cellular and Molecular Physiology (prereq GCB 5035, GCB 8148, GCB 8149 or equiv, or #)
333908 1500-1700 MW, MlrdH 5270, Branton W D, Lee H, others, 4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
429655 1-18 cr

8777 Thesis Credits: Masters
740516 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
839681 1-36 cr

PLANT BIOLOGY (PBio)
Biological Sciences

3131 Survey of Plant Physiology (§5131; prereq Biol 1103 or Biol 3012 or Biol 3812, 3021 or 5331 or Biol 5001)
538461 1220-1310 MTWF, BorH 365, Soulen T, 4 cr

5001 Basic Botany (prereq Biol 1008 or Biol 1009, #, Δ)
637754 ar cr

5131 Survey of Plant Physiology (§3131; prereq Biol 1103 or Biol 3012 or Biol 3812, BioC 3021 or BioC 5331 or Biol 5001)
★LECT 1220-1310 MTWF, BorH 365, Soulen T
831791 —1 REC 1220-1310 Th, BorH 365, 4 cr

R 5132 Plant Physiology Laboratory (prereq 3131 or ¶3131 or 5131 or ¶5131)
139458 —1 REC 1325-1415 T, BioSci 151, 2 cr
★LAB 1325-1625 Th, BioSci 151

5184 Plant Growth and Development (prereq 3131 or 5131 or equiv)
529694 0945-1100 T, 0945-1130 Th, ClaOff B42, Smith A, Olszewski N, 3 cr

5960 Special Topics (prereq #, Δ)
431275 ar cr

R 5970 Directed Studies (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
131867 ar cr

5990 Directed Research (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
238549 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
034642 1-18 cr

8777 Thesis Credits: Masters
933919 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
634191 1-36 cr

8910 Journal Club (prereq Δ) (S-N only)
023477 Berman J, 1 cr

8950 Seminar (prereq #)
139153 Wick S, 1 cr

8990 Research Problems (prereq #, Δ)
433995 ar cr

PLANT BREEDING (PlBr)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
132302 1-18 cr

8777 Thesis Credits: Masters
133496 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
137460 1-36 cr

PLANT PATHOLOGY (PlPa)
Agricultural, Food, and Environmental Sciences

R 1002 Plant Diseases and Your Garden
★LECT 1820-1910 Th, BorH 365, MacDonald D, 2 cr
431907 —1 LAB 1925-2120 Th, BorH 295, 291, MacDonald D

3090 Research in Plant Pathology (prereq 1001 or equiv or #)
440574 ar cr

5000 Professional Experience Program (prereq #)
737633 Percich J, 4 cr

5201 Biology of Plant Diseases (prereq Biol 3012 or equiv)
★LECT 0800-0850 MWF, BorH 491, Percich J, 5 cr
140097 —1 LAB 0905-1100 MW, BorH 295

5206 Biology of Fungi (prereq Biol 1009 or #)
★LECT 0945-1100 TTh, Hayes A202, Anderson N, Percich J, Groth J, 4 cr
932401 —1 LAB 1115-1230 TTh, BorH 296, Anderson N, Percich J, Groth J

5214 Plant Virology (prereq PBio 3012 or equiv)
★LECT 1220-1310 TTh, BorH 395, Lockhart B
336419 —1 LAB 1325-1520 TTh, BorH 291, AGRPGGH 106, Banttari E, 4 cr

5999 Special Workshop in Plant Pathology (prereq #)
338994 1-4 cr

R 8000 Supervised Teaching Experience (prereq #) (S-N only)
738569 1220-1415 M, BorH 491, Young N, 2 cr

8090 Advanced Procedures and Research in Plant Pathology
937386 ar cr

8200 Current Topics in Plant Pathology: Genetic Engineering of Plant Disease Resistance (prereq #)
737311 1010-1205 F, BorH 491, 2 cr

8201 Seminar
730245 1430-1530 M, BorH 365, 1 cr

8500 Research in Plant Pathology (S-N only)
039940 1-8 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
033295 1-18 cr

8777 Thesis Credits: Masters
836148 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
429994 1-36 cr

POLISH (Plsh)
Linguistics & Asian & Slavic Languages & Literatures
Liberal Arts

R 3001 Intermediate Polish (§1104; prereq 1103 or #)
823500 0905-0955 MTWThF, PeikH 225, Polakiewicz L, 5 cr

5970 Directed Readings (prereq #, Δ, CLA approval)
038769 1-4 cr

POLITICAL SCIENCE (Pol)
Liberal Arts

R 1001 American Government and Politics (SSci; C/PE)
736935 —2 LECT 1430-1520 MTWThF, BlegH 150, 5 cr (this lecture has no recitation sections)
★LECT 1115-1205 MTW, WilleyH 125, Rahn W
934200 —1 REC 0905-0955 Th, BlegH 340, 5 cr
130016 —2 REC 1010-1100 Th, BlegH 125, 5 cr
836764 —3 REC 1010-1100 Th, BlegH 5, 5 cr
138866 —4 REC 1115-1205 Th, BlegH 110, 5 cr
236140 —5 REC 1115-1205 Th, BlegH 225, 5 cr
131464 —6 REC 1115-1205 Th, BlegH 5, 5 cr
736580 —7 REC 1220-1310 Th, BlegH 425, 5 cr
138570 —8 REC 1220-1310 Th, BlegH 435, 5 cr
639536 —9 REC 0905-0955 F, BlegH 115, 5 cr
730083 —10 REC 0905-0955 F, BlegH 230, 5 cr
437500 —11 REC 1010-1100 F, BlegH 230, 5 cr
935525 —12 REC 1115-1205 F, HHHCtr 20, 5 cr
339353 —13 REC 1115-1205 F, BlegH 335, 5 cr
132128 —14 REC 1115-1205 F, BlegH 330, 5 cr
124613 —15 REC 1220-1310 F, HHHCtr 20, 5 cr

R 1001H Honors Course: American Government and Politics (not open to jr, sr)
★LECT 1115-1205 MTW, WilleyH 125, Rahn W
131447 —80 REC 1115-1205 Th, HHHCtr 30, 5 cr
432409 —81 REC 1115-1205 Th, BlegH 245, 5 cr

R 1025 World Politics (SSci; IP)
834965 1010-1100 MWF, AndH 270, Freeman J, 4 cr

R 1026 American Foreign Policy
034771 0905-0955 MWF, BlegH 130, Sampson M, 4 cr

R 1054 Government and Politics in a Changing World (SSci; IP)
740807 1220-1310 MWF, AndH 330, 4 cr

R 1061 Introduction to Political Thought
824162 1115-1230 TTh, AndH 270, Disch L, 4 cr

R 3051 Introduction to Political Analysis (SSci)
632697 1115-1230 TTh, AndH 350, Shively W, 4 cr

3070 Directed Field Studies (prereq #, Δ) (A-F only)
932155 1-4 cr

3080 Internship (!; max 8 cr; prereq Δ) (S-N only)
940398 4 cr

R 3085 Introduction to Political Research (prereq 3051 or #)
038514 —1 0945-1100 TTh, BlegH 145, Richards D, 4 cr (pol sci maj only)
040621 —2 0945-1100 TTh, BlegH 145, Richards D, 4 cr

R 3090 Practicum in Politics with Seminar (prereq concurrent registration in 5610, #)
135104 Farr J, 2 cr

R 3109H Honors Course: Seminar in Political Science Research (!; prereq political science honors program maj) (A-F only)
337179 1115-1230 TTh, BlegH 105, Kelliher D, 4 cr

3110H Honors Work in Selected Fields (max 6 cr; prereq political science honors program maj, 3109H)
639942 1-6 cr

R 3308 The United States Congress (prereq 1001 or equiv or #) (C/PE)
930552 0905-0955 MWF, BlegH 120, 4 cr

R 3331 Minnesota Government and Politics (1001 rec) (C/PE)
624163 1010-1100 MWF, BlegH 250, Backstrom C, 4 cr

R 3766 Political Psychology (prereq 1001 or equiv or #)
424164 1245-1400 TTh, BlegH 250, 4 cr

R 3810 Topics in International Politics and Foreign Policy: The Politics and Law of the European Economic Community
224165 1820-2050 T, BlegH 235, Hedblom M, 4 cr

R 3835 International Relations (SSci; IP)
632781 1115-1205 MWF, AndH 330, 4 cr

R 3873 Global Citizenship and International Ethics (prereq 1025 or #) (C/PE; IP)
638077 1010-1100 MWF, BlegH 415, Price R, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
936433 1-6 cr

R 5461 Western European Government and Politics (prereq 3051 or non-political science grad student or #) (IP)
037167 0800-0850 MTWThF, BlegH 155, 5 cr

R 5479 Latin American Government and Politics (§LAS 5479; prereq 3051 or non-political science grad student or #) (IP)
124166 1010-1100 MWF, BlegH 150, Sikkink K, 5 cr

R 5501 Principles of American Constitution I (prereq 1001 or equiv)
924167 1220-1310 MWF, BlegH 215, Krislov S, 5 cr

R 5610 Topics in Political Theory: Citizen Education (prereq 1061, 3051 or 8 crs in social science, concurrent registration in 3090, or #)
024614 0945-1100 TTh, BlegH 230, Farr, 4 cr

R 5654 Development of Political Thought: Ancient and Medieval (Plato to Aquinas) (1061 or 9 crs social science rec)
724168 1245-1400 TTh, BlegH 155, Dietz M, 4 cr

R 5738 American Political Campaigns and Elections (prereq 1001 or equiv or #) (C/PE)
524169 1325-1415 MWF, BlegH 250, Backstrom C, 4 cr

R 5767 Public Opinion and Voting Behavior (prereq 1001 or equiv or #)
924170 1220-1310 MWF, BlegH 155, Flanigan W, 5 cr

R 5875 U.S. Foreign Economic Policy (prereq 3836 or non-political science grad student or #)
724171 0905-0955 MWF, AndH 350, Duvall R, 4 cr

8103 Political Science as a Profession (prereq pol sci grad stu) (S-N only)
536614 3 cr

8123 Advanced Topics in Regression Analysis (prereq 8121 or equiv or #)
524172 1325-1520 Th, SocSci 1383, Stimson J, 4 cr

8140 Individual Readings and Research in Methodology (prereq pol sci grad maj or #, Δ)
129948 1-3 cr

8200 Understanding Political Theory (prereq pol sci grad maj or Δ)
324173 1230-1500 Th, SocSci 1450, Ball T, 4 cr

8201 Development of Political Thought (prereq pol sci grad maj or #)
124174 1535-1730 T, SocSci 1383, Dietz M, 3 cr

8240 Individual Reading and Research in Political Thought (prereq pol sci grad maj or #, Δ)
537696 1-3 cr

8307 Proseminar in Political Psychology (§Psy 8211, 8212, 8213; prereq grad minor in political psychology) (S-N only)
831094 1200-1300 F, SocSci 1383, Rahn W, 1 cr

8335 Public Policy (prereq pol sci grad maj or #)
024175 1535-1730 M, SocSci 1383, Gray V, 3 cr

8340 Individual Reading and Research in American Politics (prereq pol sci grad maj or #, Δ)
935640 1-3 cr

8402 Conflict Dynamics and Security (prereq pol sci grad stu or #) (A-F only)
824176 1325-1520 T, SocSci 1383, Price R, 3 cr

8412 American Foreign Policy (prereq 8411 or #)
624177 1325-1520 F, SocSci 1383, Sampson M, 3 cr

8440 Individual Reading and Research in International Relations (prereq pol sci grad maj or #, Δ)
134454 1-3 cr

8600 Introduction to Comparative Politics (prereq pol sci grad maj or Δ) (A-F only)
732870 1230-1500 W, SocSci 1450, Kelliher D, 4 cr

6619 Government and Politics of Latin America (prereq pol sci grad maj or #)
424178 1325-1520 M, SocSci 1383, Sikkink K, 3 cr

8637 Comparative Political Economy (prereq pol sci grad maj or #) (A-F only)
224179 1535-1730 Th, SocSci 1383, Freeman J, 3 cr

8640 Individual Readings and Research in Comparative Politics (prereq pol sci grad maj or #, Δ)
036729 1-3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
131982 1-18 cr

6777 Thesis Credits: Masters
337036 1-16 cr

6888 Thesis Credits: Doctoral (max 18 cr per qtr)
737549 1-36 cr

8990 Directed Readings in Political Science (prereq 45 cr in 8XXX-level pol sci courses) (S-N only)
235070 1-7 cr

PORTUGUESE (Port)
Spanish and Portuguese
Liberal Arts

R 1001 Beginning Portuguese
323685 0800-0915 MWF, FolH 426, 5 cr

R 3003 Conversation and Composition (prereq 1006 or equiv)
124507 0800-0915 MWF, FolH 334, 5 cr

R 3501 Foundation of Lusophone Cultures (prereq 1006)
123686 1245-1400 TTh, FolH 214, Arenas F, 5 cr

3970 Directed Studies (prereq #, Δ, ❑)
637091 1-5 cr

5970 Directed Readings (max 15 cr; prereq #, Δ, CLA approval)
634143 1-5 cr

5990 Directed Research (prereq #, Δ, CLA approval)
531686 1-5 cr

8777 Thesis Credits: Masters
833945 1-16 cr

PROSTHODONTICS (Pros)
Dentistry

5200 Fixed Prosthodontics Seminar for Postgraduate Dental Fellows (S-N only)
139475 1 cr

8003 Advanced Technical Restorative Dentistry
136664 1000-1200 F, MoosT 9170, ar cr

8005 Advanced Clinical Prosthodontics I
131991 1300-1700 MTWThF, 0800-1200 MTWThF, MoosT 9139, ar cr

8006 Advanced Clinical Prosthodontics II (prereq #)
833900 0800-1200 MTWThF, 1300-1700 MTWThF, MoosT 9139, ar cr

8010 Seminar: Advanced Restorative Dentistry
734134 0700-0900 W, MoosT 9170, ar cr

8016 Seminar: Prosthodontics II (prereq #)
835470 0700-0900 W, MoosT 9170, ar cr

PSYCHOLOGY (Psy)
Liberal Arts

R 1001 Introduction to Psychology (SSci)
★LECT 1325-1415 MTWTh, WilleyH 175, Peterson G, 5 cr
339823 —1 REC 0905-0955 F, BlegH 105
040909 —2 REC 0905-0955 F, CivE 212
431874 —3 REC 0905-0955 F, FolH 419
134512 —4 REC 0905-0955 F, ChDev 216
536046 —5 REC 1010-1100 F, BlegH 105
841060 —6 REC 1010-1100 F, CivE 212
832875 —7 REC 1010-1100 F, BuH 123
930955 —8 REC 1010-1100 F, FolH 419
031045 —9 REC 1010-1100 F, ChDev 216
035046 —10 REC 1115-1205 F, BlegH 115
730990 —11 REC 1115-1205 F, BuH 123
035113 —12 REC 1115-1205 F, BlegH 250
739463 —13 REC 1115-1205 F, ChDev 216
133904 —14 REC 1220-1310 F, BlegH 250
239281 —15 REC 1220-1310 F, BuH 120
238888 —16 REC 1220-1310 F, BlegH 115
130226 —17 REC 1220-1310 F, BlegH 150
732724 —18 REC 1220-1310 F, ChDev 216
534992 —19 REC 1325-1415 F, BlegH 150
139282 —20 REC 1325-1415 F, BuH 120

R 1004 Introductory Laboratory Psychology (1004-1005†; prereq soph, 1001 or ¶) (SSci)
★LECT 1115-1205 Th, SmithH 100, Ferstl K
738426 —1 LAB 0905-1205 T, EltH 150, 4 cr
637219 —2 LAB 0905-1205 T, EltH 160, 4 cr
437366 —3 LAB 1325-1625 T, EltH 150, 4 cr
030963 —4 LAB 1325-1625 T, EltH 160, 4 cr
131772 —5 LAB 0905-1205 W, EltH 150, 4 cr
935167 —6 LAB 0905-1205 W, EltH 160, 4 cr
139363 —7 LAB 1325-1625 W, EltH 150, 4 cr
632702 —8 LAB 1325-1625 W, EltH 160, 4 cr
640671 —9 LAB 1325-1625 Th, EltH 150, 4 cr
139368 —10 LAB 1325-1625 Th, EltH 160, 4 cr
030851 —11 LAB 0905-1205 F, EltH 150, 4 cr
233495 —12 LAB 0905-1205 F, EltH 160, 4 cr
835050 —13 LAB 1325-1625 F, EltH 150, 4 cr
936089 —14 LAB 1325-1625 F, EltH 160, 4 cr

R 3031 Sensation and Perception (prereq 1004) (Biol/NL)
940451 0945-1100 TTh, EE/CSci 3210, Burkhardt D, 4 cr

R 3135 Introduction to Individual Differences (§5135; prereq 3801 or equiv)
030235 1115-1230 TTh, NichH 211, Bouchard T, 4 cr

R 3604 Introduction to Abnormal Psychology (§5604H; prereq 1001)
131098 1615-1730 TTh, NichH 211, Iacono W, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 3801 Introduction to Statistical Methods (prereq 1001, GC 0631 or equiv) (Math)
★LECT 1220-1335 MW, NichH 45, Cudeck R
835596 —1 REC 1115-1205 M, ChDev 218, 4 cr
133313 —2 REC 1220-1310 T, ChDev 105, 4 cr
131425 —3 REC 1430-1520 W, SmithH 121, 4 cr
639231 —4 REC 1325-1415 Th, PeikH 315, 4 cr
931605 —5 REC 1430-1520 Th, BuH 123, 4 cr
931149 —6 REC 1325-1415 F, ChDev 105, 4 cr

R 3902 Major Project in Psychology (prereq 1005, 3801, jr or sr psychology maj)
529534 —1 1325-1520 M, FordH 70, 4 cr
134499 —2 1010-1205 T, BuH 123, 4 cr
129335 —3 1325-1520 W, PeikH 225, 4 cr
236591 —4 1325-1520 W, ChDev 216, 4 cr

3970 Directed Studies (prereq #, Δ, ⊔)
236137 1-8 cr

3990 Directed Research (prereq #, Δ, ⊔)
439540 —1 1-8 cr

R 5011 Theories of Learning and Cognition (prereq 3011 or #)
133742 0905-0955 MWF, EltH N119, Peterson G, 4 cr

R 5015 Cognitive Processes (prereq 3011 or 3051 or 5014, except for students in honors sequence, grad students)
924606 1115-1205 MWF, EltH N119, 4 cr

R 5031 Perception (§NSc 5031; prereq 3051 or 3031 or #)
633865 0945-1100 TTh, EltH N119, Legge G, 4 cr

R 5061 Biological Psychology (§3061; prereq 1005 or Biol 1009 or #)
330278 1325-1415 MWF, WullH 140, 4 cr

R 5121 History and Systems of Psychology (prereq 8 cr 5xxx-level courses in Psy or equiv, or grad stu or #)
838904 1430-1715 T, EltH N423, Ackerman P, 4 cr

R 5135 Introduction to Individual Differences (§3135; prereq 3801 or equiv, 5862 or #)
532210 1115-1230 TTh, NichH 211, Bouchard T, 4 cr

R 5137 Introduction to Behavioral Genetics (prereq 3135 or 5135 or #)
729791 1430-1600 TTh, EltH N119, McGue M, 4 cr

R 5204 Psychology of Interpersonal Relationships (prereq 3201 or # except for students in honors sequence and grad stu)
030574 1010-1100 MWF, EltH N119, Berscheid E, 4 cr

R 5205 Applied Social Psychology (prereq 3201 or grad stu or #)
936366 1115-1230 TTh, EltH N119, Gonzales M, 4 cr

R 5501 Vocational Psychology (prereq 3801 or #)
834402 0945-1100 TTh, EltH 50, 60, Dawis R, 4 cr

R 5703 Psychology of Organizational Training and Development (prereq 3801 or equiv, 8 cr in psychology or #)
139394 0945-1100 TTh, VinH 16, Campbell J, 4 cr

R 5882 Psychological Measurement: Theory and Methods (prereq 3801 or equiv, honors or grad stu or #)
533907 1115-1230 TTh, VinH 16, 4 cr

R 5900H Honors Seminar: Psychology (prereq psychology honors maj or #) (S-N only)
038920 1430-1625 W, EltH N227, Fletcher C, 1 cr

5901H Honors Project (prereq sr, #) (A-F only)
536578 4-8 cr

R 5960 Topics in Psychology (prereq 1001, #)
633168 1-5 cr

R 8010 Advanced Topics in Learning (prereq 5012-5013 or #) (S-N only)
830575 1330-1500 T, EltH N227, Overmier J, 3 cr

R 8031 Seminar: Visual Perception (§NSc 8031; prereq 5031 or #)
140254 Legge G, Kersten D, 3 cr

R 8070 Seminar: Psychopharmacology (prereq #)
139256 Sparber S, Overmier J, others, 1 cr (MirdH 3260)

R 8120 Personality, Therapy, and Women (prereq 5101, 8 cr in psychology or #)
838207 1325-1600 W, EltH N491, Faunce P, 4 cr

8201 Social Cognition (prereq #)
823688 1000-1200 W, EltH N227, Borgida E, 3 cr

R 8204 Seminar: Research in Social Psychology (prereq PhD candidate in psychology, #)
132422 1200-1400 T, EltH N305, Snyder M, 3 cr

R 8209 Social Psychology and Health Behavior (prereq 5202 or 8201 or #) (A-F only)
724607 Rothman A, 3 cr

R 8211 Proseminar in Political Psychology (§8307; prereq acceptance into the PhD minor in Political Psychology) (S-N only)
136110 1200-1300 F, SocSci 1383, Borgida E, 1 cr

R 8410 Perspectives in Learning, Perception, and Cognition (prereq post-baccalaureate status) (S-N only)
139993 1530-1730 Th, ScottH 4, Overmier J, Van Den Broek P, 1 cr

R 8501 Counseling Psychology I: History and Theories (prereq counseling psychology stu or #)
833685 1300-1430 MWF, EltH N595, Frazier P, 3 cr

R 8514 Practicum in Student Counseling (prereq 8501, 8502, 8503 or equiv) (S-N only)
836201 1430-1625 Th, EddyH 202, Loper R, others, 4 cr

R 8517 Practicum in Counseling Psychology (prereq 8501, 8502, 8503 or equiv or # if not in counseling psy prog) (S-N only)
140732 Hansen J, 1-4 cr

R 8520 Pre-Practicum in Applied Psychology (prereq grad in counseling psych or #) (S-N only)
934830 Pazandak C, 3 cr (EltH N595)

R 8549 Seminar: Research in Counseling Psychology (prereq 8544 or #) (S-N only)
023690 1430-1600 F, EltH N595, Dawis R, 1 cr (alt F)

R 8560 Advanced Practicum/Internship in Counseling Psychology (max 24 cr; prereq #) (S-N only)
031790 —1 1600-1900 W, EltH N595, Hansen J, Frazier P, 1-6 cr

R 8564 Seminar: Vocational Counseling for Work Adjustment (prereq counseling psych stu or #) (S-N only)
823691 1010-1140 M, EltH N595, Dawis R, 2 cr

R 8611 Professional Methods in Clinical Psychology I: Assessment (prereq clinical psychology maj)
★LECT 1445-1730 M, EltH N668, 4 cr
634031 —1 LAB 1315-1500 W, EltH N423

R 8620 Practicum in Clinical Psychology (prereq #) (S-N only)
137457 1-6 cr

R 8621 Professional Methods in Clinical Psychology II: Theories of Intervention (prereq clinical psychology major, 8611, 8612, 8613)
639763 1000-1200 TF, EltH N423, Leon G, 3 cr

R 8631 Professional Methods in Clinical Psychology III: Community Psychology and Crisis Intervention (prereq clinical psychology major, 8611, 8612, 8613)
232248 1600-1800 Th, EltH N423, Ayers J, 3 cr

R 8640 Seminar: Topics in Clinical Psychology (prereq #) (S-N only)
131411 1010-1200 F, EltH N595, Leon G, 1-6 cr

R 8664 Personality Assessment (prereq #)
439893 1400-1630 F, EltH N227, Tellegen A, 4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
538606 1-18 cr

8701 Seminar: Industrial and Organizational Psychology (prereq #)
623689 1325-1625 M, EltH N491, Campbell J, Dunnette M, 4 cr

R 8777 Thesis Credits: Masters
030218 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
236395 1-36 cr

R 8970 Seminar: Special Areas of Psychology and Related Sciences (prereq #)
237062 —1 1215-1315 W, EltH N227, Fox P, Fletcher C, 1-6 cr
131974 —2 1330-1500 Th, EltH N227, Snyder M, 1-6 cr
335996 —3 1430-1600 T, Kersten D, 1-6 cr
931670 —4 McGue M, 1-6 cr
629945 —5 1700-1800 M, EltH N450, Iacono W, 1 cr
338493 —6 1630-1800 T, Mayo D330, Gershenson C, 1 cr
232878 —7 Iacono W, Grove W, 1 cr
135992 —8 1430-1530 F, EltH 204, Legge G, 1 cr
833508 —9 1300-1600 T, EltH N595, Frazier P, LeDray L, 3 cr
623692 —10 1330-1430 F, EltH, Fletcher C, 1 cr

R 8980 Directed Teaching in Psychology (prereq #)
934424 1-6 cr

R 8990 Research Problems (prereq #)
837624 1-6 cr

PSYCHONEUROIMMUNOLOGY (PNI)

R 8026 Neuro-Immune Interactions (§NSc 8026, Psy 8026, VMic 8026; prereq MicB 5218 or equiv, NSc 5111 or equiv) (A-F only)
524639 3 cr

PUBLIC AFFAIRS (PA)

R 5001 Politics, Planning and Decision Making (prereq public affairs or planning or sci/tech pol or public health maj or #) (A-F only)
335805 —1 1535-1720 MW, HHHCtr 25, Kenney S, 4 cr
538377 —2 1535-1720 MW, BlegH 230, 4 cr
433494 —3 1535-1720 MW, BlegH 420, Boyte H, 4 cr

5010 Intermediate Microeconomic Theory (prereq publ aff or plan or sci/tech pol or publ hlth maj, Econ 1101 or equiv, or #) (A-F only)
✦623496—1 LECT 0815-0930 TTh, BlegH 10, Toutkoushian R, 3 cr

R 5021 Quantitative Methods in Public Affairs and Planning I (prereq public affairs or planning or sci/tech pol or publ hlth maj or #) (A-F only)
★LECT 1535-1720 TTh, HHHCtr 25, Luce T, 4 cr
529386 —1 LAB 1215-1345 F, BlegH 90, (computer lab)
★LECT 1535-1720 TTh, BlegH 420, Levison D, 4 cr
136995 —2 LAB 1415-1545 F, BlegH 90, (computer lab)

R 5102 Legal Environment of Public Affairs (prereq grad or publ hlth stu or adult spec or #)
033958 1815-2045 T, HHHCtr 25, Fraser D, 3 cr

5111 Management of Public and Nonprofit Organizations (prereq grad or publ hlth stu or adult spec or #)
423483 1815-2045 M, HHHCtr 25, 3 cr

5114 Conflict Management, Theory and Practice (prereq grad or publ hlth stu or adult spec or #)
824646 1115-1230 TTh, Fiutak T, 3 cr

R 5121 Public Budgeting I (†5121-5122; prereq grad or publ hlth stu or adult spec or #)
★LECT 1325-1505 MW, HHHCtr 25, Brandl J, 4 cr
723487 —1 LAB 0800-0850 F, HHHCtr 30, Brandl J

R 5125 State and Local Public Finance (prereq grad or publ hlth stu or adult spec or #)
032454 0945-1100 TTh, HHHCtr 30, 3 cr

5200 Introduction to Planning (prereq grad or publ hlth stu or adult spec or #)
135434 1815-2045 W, HHHCtr 25, Lukermann B, 3 cr

R 5201 Planning Theory (§5601, 5602; prereq grad or publ hlth stu or adult special or #)
523491 1325-1505 MW, HHHCtr 20, Bolan R, 4 cr

R 5211 Group Techniques in Public Affairs and Planning (prereq grad or publ hlth stu or adult spec or #)
★LECT 1900-2130 T, HHHCtr 30, 4 cr
433740 —1 LAB Bryson J, (1 8 hr lab ar)

R 5291 Topics in Planning: Urban Transportation Policy and Planning (prereq grad or publ hlth stu or adult spec or #)
330099 1900-2130 Th, HHHCtr 20, Rafter D, 3 cr

5301 Population and Policy in Developing Countries and the United States I (prereq grad or publ hlth stu or adult spec or #)
232122 1325-1505 MW, HHHCtr 30, Levison D, 4 cr

5392 Topics in Policy Analysis: Population and Family in China (prereq grad or publ hlth stu or adult spec or #)
823495 0945-1100 TTh, SocSci 101, Yi Z, 3 cr

R 5422 Child Development and Social Policy (prereq grad or publ hlth stu or adult spec or #)
524804 0905-1205 W, HHHCtr 30, Brookins G, 3 cr

R 5441 Survey of Women and Public Policy in the United States (prereq grad or publ hlth stu or adult spec or #)
133739 1010-1150 MW, HHHCtr 20, Kenney S, 4 cr

R 5491 Topics in Social Policy: Education Reform: Policy and Practice (prereq grad or publ hlth stu or adult spec or #)
133943 1640-1910 M, HHHCtr 30, Nathan J, 3 cr

R 5501 Economic Development I (prereq grad stu or adult spec or publ hlth stu or #)
839874 1010-1150 MW, HHHCtr 25, Schuh G, 4 cr

5511 Community-Based Community and Economic Development (prereq grad or publ hlth stu or adult spec or #)
224621 1815-2045 T, BlegH 335, Cantrell R, 3 cr

5601 Land Use (prereq grad or publ hlth stu or adult spec or #)
438761 1325-1505 TTh, HHHCtr 25, Lukermann B, 4 cr

5604 North American Cities (prereq grad or publ hlth stu or adult spec or #)
324805 0800-0940 TTh, BlegH 420, Adams J, 4 cr

R 5611 Housing Policy (prereq grad or publ hlth stu or adult spec or #)
330832 1115-1235 TTh, McNH 10, Goetz E, 3 cr (StP)

5701 Science and State (prereq grad or publ hlth stu or adult special or #)
329714 1115-1255 TTh, BlegH 330, Geesaman D, 4 cr

R 5732 Science, Technology, and International Affairs (prereq grad stu or publ hlth stu or adult spec or #) (A-F only)
530327 1815-2045 M, HHHCtr 20, Keller K, 3 cr

R 5801 U.S. Foreign Policy: Process and Analysis (prereq Econ 3101, grad or publ hlth stu or adult spec or #) (A-F only)
631906 1325-1505 TTh, HHHCtr 30, Kudrle R, Kindley R, 4 cr

R 5901 Computer Applications in Public Affairs (!; prereq grad or publ hlth stu or adult spec or #) (A-F only)
737616 0800-1000 MW, BlegH 90, 1 cr

R 5905 Proposal Writing (prereq grad or publ hlth stu or adult spec or #)
132980 1730-1910 W, HHHCtr 30, Mikelonis-Paraskov V, 2 cr

R 5963 General Topics: Conflict Management Seminar (prereq grad or publ hlth stu or adult spec or #)
735736 1325-1525 Th, SocSci 101, Fiutak T, 1 cr

8701 Technology: Energy and Environmental Policy Plan B Seminar (prereq 1st yr Humphrey Institute grad stu) (S-N only)
323489 Abrahamson D, Archibald S, 1 cr

8704 Technology: Energy and Environmental Policy Plan B Seminar (prereq 2nd yr Humphrey Institute grad stu) (S-N only)
723490 Abrahamson D, Archibald S, 1 cr

8901 Plan B Tutorial (prereq public affairs or planning maj who have completed core crses in PA: 5001, 5002, 5011, 5012, 5021, 5022) (S-N only)
132204 —1 4 cr
137970 —2 Abrahamson D, 4 cr
935802 —3 Adams J, 4 cr
333620 —4 Archibald S, 4 cr
730455 —5 Assaad R, 4 cr
329275 —6 Bolan R, 4 cr
039078 —7 Brandl J, 4 cr
036892 —8 Brookins G, 4 cr
634725 —9 Bryson J, 4 cr
839079 —10 Eustis N, 4 cr
836893 —11 Hoenack S, 4 cr
434726 —12 Kenny S, 4 cr
532546 —13 Kleiner M, 4 cr
530456 —14 Korenman S, 4 cr
940109 —15 Kudrle R, 4 cr
937971 —16 Levison D, 4 cr
735803 —17 Lewis M, 4 cr
133621 —18 Luce T, 4 cr
330457 —19 Lukermann B, 4 cr
836814 —20 Myers S, 4 cr
034656 —21 Schuh G, 4 cr

8910 Independent Study (may be taken once toward master's deg in publ aff or planning; prereq #)
340308 —1 1-3 cr
033622 —2 Abrahamson D, 1-3 cr
130458 —3 Adams J, 1-3 cr
129276 —4 Archibald S, 1-3 cr
139080 —5 Assaad R, 1-3 cr
636894 —6 Bolan R, 1-3 cr
234727 —7 Brandl J, 1-3 cr
332547 —8 Brookins G, 1-3 cr
030459 —9 Bryson J, 1-3 cr
240110 —10 Eustis N, 1-3 cr
132548 —11 Hoenack S, 1-3 cr
330460 —12 Kenny S, 1-3 cr
140111 —13 Kleiner M, 1-3 cr
737972 —14 Korenman S, 1-3 cr
535804 —15 Kudrle R, 1-3 cr
833623 —16 Levison D, 1-3 cr
130461 —17 Lewis M, 1-3 cr
029277 —18 Luce T, 1-3 cr
039081 —19 Lukermann B, 1-3 cr
732481 —20 Myers S, 1-3 cr
730309 —21 Schuh G, 1-3 cr

PUBLIC HEALTH (PubH)

R 3001 Personal and Community Health (§3004, GC 3114)
234436 1220-1310 MWF, PWB 2470, Rothenberger J, 3 cr

R 3003 Fundamentals of Alcohol and Drug Abuse (§3004)
331611 1220-1310 TTh, PWB 2470, Rothenberger J, 2 cr

R 3004 Basic Concepts in Personal and Community Health (§3001, 3003, GC 3114)
836103 1220-1310 MTWThF, PWB 2470, Rothenberger J, 5 cr

R 5004 Field Instruction in Public Health (prereq #)
632019 ar cr

R 5005 Topics in Public Health (prereq #)
835114 ar cr

R 5010 Public Health Approaches to AIDS (prereq upper div or grad stu or #)
923049 1640-1920 W, MoosT 2520, Rothenberger J, 3 cr

R 5015 Topics in Interdisciplinary Studies (prereq #)
129746 ar cr

R 5017 Culture and Health Behavior (prereq grad level student or #)
937114 0905-1205 F, Mayo A270, Williams C, 3 cr

R 5022 Personal and Community Health (§5023; prereq educ maj or #)
133045 1630-1830 Th, MoosT 2690, Rothenberger J, 2 cr

R 5025 Seminar in Community Health Education Research (prereq comm hlth educ maj) (S-N only)
238406 1220-1310 W, Mayo A270, Forster J, 1 cr

R 5026 Psychosocial Approaches to Health Behavior Change (prereq CHE maj or #) (A-F only)
332256 1325-1625 T, Mayo A270, Finnegan J, Lytle L, 3 cr (prereq comm hlth educ maj or #)

R 5035 Applied Research Methods (prereq CHE or PubH nutr stu or #, 5450 or 5414 or equiv, 5806 or 5852 or equiv...5420 rec)
723053 0815-0930 TTh, Mayo A270, French S, 4 cr

R 5044 Topics in Alcohol and Drug Problems (prereq #)
537617 1-4 cr

R 5061 Prevention and Control of Alcohol and Drug Problems (prereq publ hlth stu or #) (A-F only)
136463 1115-1230 TTh, Mayo D262, Wolfson M, 3 cr

R 5084 Internship in Health Education Practice I (prereq health educ maj and community health educ maj or #) (S-N only)
038545 ar cr

R 5085 Internship in Health Education Practice II (prereq health educ maj and community health educ maj or #) (S-N only)
532840 ar cr

R 5090 Research Topics in Health Education (prereq health educ maj and community health educ maj or #)
032700 —1 Finnegan J, 2-8 cr
239099 —2 Forster J, 2-8 cr
035841 —3 French S, 2-8 cr
233660 —4 Garrard J, 2-8 cr
830527 —5 Jeffery R, 2-8 cr
829314 —6 Jones-Webb R, 2-8 cr
839115 —7 Kushi L, 2-8 cr
036925 —8 Lando H, 2-8 cr
134759 —9 Luepker R, 2-8 cr
032583 —10 Lytle L, 2-8 cr
630528 —11 McGovern P, 2-8 cr
740144 —12 Murray D, 2-8 cr
832584 —13 Neumark-Sztainer D, 2-8 cr
430529 —14 Perry C, 2-8 cr
540145 —15 Pirie P, 2-8 cr
138009 —16 Rothenberger J, 2-8 cr
330524 —17 Wagenaar A, 2-8 cr
029313 —18 Williams C, 2-8 cr
123042 —19 Wolfson M, 2-8 cr
023043 —20 2-8 cr

R 5096 Topics: Research (prereq health educ maj and community health educ maj or #)
637205 —1 Finnegan J, ar cr
136910 —2 Forster J, ar cr
139113 —3 French S, ar cr
336923 —4 Garrard J, ar cr
434757 —5 Jeffery R, ar cr
039114 —6 Jones-Webb R, ar cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

136924 —7 Kushi L, ar cr
234758 —8 Lando H, ar cr
132582 —9 Luepker R, ar cr
130525 —10 Lytle L, ar cr
940143 —11 McGovern P, ar cr
338008 —12 Murray D, ar cr
135840 —13 Neumark-Sztainer D, ar cr
933659 —14 Perry C, ar cr
030526 —15 Pirie P, ar cr
739110 —16 Rothenberger J, ar cr
936920 —17 Wagenaar A, ar cr
034754 —18 Williams C, ar cr
823044 —19 Wolfson M, ar cr
623045 —20 ar cr

R 5097 Topics: Selected Readings (prereq grad student in health sciences)
332922 —1 Finnegan J, ar cr
434743 —2 Forster J, ar cr
532580 —3 French S, ar cr
930518 —4 Garrard J, ar cr
140139 —5 Jeffery R, ar cr
138004 —6 Jones-Webb R, ar cr
730519 —7 Kushi L, ar cr
440140 —8 Lando H, ar cr
938005 —9 Luepker R, ar cr
035838 —10 Lytle L, ar cr
133658 —11 McGovern P, ar cr
130520 —12 Murray D, ar cr
329311 —13 Neumark-Sztainer D, ar cr
332578 —14 Perry C, ar cr
536919 —15 Pirie P, ar cr
134753 —16 Rothenberger J, ar cr
132579 —17 Wagenaar A, ar cr
430515 —18 Williams C, ar cr
423046 —19 Wolfson M, ar cr
223047 —20 ar cr

R 5150 Topics: Environmental and Occupational Health (prereq #)
729757 —1 ar cr (prereq #)
634868 —2 1325-1625 T, Mayo A387, Brosseau L, 3 cr
137029 —3 1325-1625 T, Mayo A387, Brosseau L, 3 cr

5151 Environmental Health (prereq PubH stu or #)
030705 1900-2130 T, MoosT 2520, Greaves I, 3 cr

R 5154 Practicum in Environmental and Occupational Health (§Nurs 5882; prereq env hlth maj or grad nurs stu) (S-N only)
133280 1-6 cr

5156 Environmental Health Survey (prereq environmental health maj) (A-F only)
736160 0905-0955 MWF, Mayo 1250, Vesley D, 3 cr

5159 Seminar: Environmental Health (prereq environmental health student) (S-N only)
229902 1325-1520 Th, OwreH 2230, 2 cr

5168 Theory and Practice of Occupational Health: Field Experience (§Nurs 5885; prereq 5167 or Nurs 5680) (S-N only)
137135 Olson D, 1 cr

R 5181 Air Pollution (prereq 2 yrs chemistry, general physics, calculus, or #) (A-F only)
323038 0800-0955 TTh, Mayo 1250, Swackhamer D, 4 cr

R 5197 Topics: Injury Prevention in the Workplace, Community, and Home (§5597; prereq #)
340521 Gerberich S, 1-3 cr

5201 Radiation Protection and Measurement
130086 1325-1415 MW, Mayo D262, Barber D, 2 cr

5202 Radiation Laboratory (prereq 5201 or ¶5201)
236364 1220-1415 F, BoynHS S37, Barber D, 1 cr

R 5216 Properties of Workplace Airborne Contaminants (prereq envir hlth maj or grad stu with bkgrnd in phys sci, engin or envir sci)
634563 0800-0850 F, 1010-1205 F, Mayo 1250, Vincent J, 3 cr

5221 Noise in the Workplace (prereq EH stu)
132686 1430-1630 W, Mayo 1250, Ward D, 2 cr

R 5250 Environmental and Occupational Health Master's Project (prereq env hlth maj, #) (S-N only)
735672 —1 1-4 cr
136446 —2 Barber D, 1-4 cr
237496 —3 Brosseau L, 1-4 cr
632764 —4 Gerberich S, 1-4 cr
336145 —5 Greaves I, 1-4 cr
336274 —6 Johnson R, 1-4 cr
736725 —7 Maldonado G, 1-4 cr
535690 —8 Mandel J, 1-4 cr
530828 —9 McGovern P, 1-4 cr
836098 —10 Olson D, 1-4 cr
829538 —11 Ramachandran G, 1-4 cr
939302 —12 Sexton K, 1-4 cr
140447 —13 Swackhamer D, 1-4 cr
634742 —14 Vesley D, 1-4 cr
836909 —15 Vincent J, 1-4 cr
123039 —16 Wattenberg E, 1-4 cr

R 5261 General Environmental Toxicology (prereq 1 yr each undergrad biol, chem, EH grad stu or #...some biochem, org chem, phsl rec)
429770 1730-1900 TTh, MoosT 2530, Wattenberg E, 3 cr

R 5310 Epidemiology of Zoonoses and Diseases Common to Humans and Animals (prereq crse in microbiol and/or epidemiol or #)
123051 4 cr

R 5326 Research in Animal/Human Health (prereq VPH or Epi maj or #)
834416 —1 Diesch S, ar cr
032566 —2 Pullen M, ar cr
240138 —3 Quigley J, ar cr
238003 —4 Robinson R A, ar cr
135837 —5 ar cr

R 5330 Epidemiology I (prereq publ hlth, pharm, med, nurs, dent, or grad stu or #)
★LECT 1245-1400 TTh, MoosT 2520
036228 —1 LAB 1415-1530 T, Mayo 1250, 4 cr
132736 —2 LAB 1415-1530 T, Mayo D325, 4 cr
641075 —3 LAB 1415-1530 Th, Mayo A367, 4 cr
231245 —4 LAB 1415-1530 Th, Mayo 1250, 4 cr

R 5333 Principles of Human Behavior I (prereq comm hlth educ maj or epid PhD stu or #) (A-F only)
223050 1430-1730 T, Mayo D262, Jeffery R, Lando H, 3 cr

R 5336 Advanced Seminar in Infectious Disease Epidemiology (prereq 5330, 5335, #) (S-N only)
838126 1325-1455 Th, Mayo D262, Lifson A, 1 cr

R 5341 Epidemiology III: Interpretation of Data from Epidemiologic Research (prereq 5340, 5420, 5454, epi maj or #)
130816 0800-1000 MWF, Mayo A387, McGovern P, Murray D, Schreiner P, 4 cr

R 5348 Writing Research Grants (prereq epidemiology PhD stu, post-doctoral stu, or #) (S-N only)
033426 1535-1730 M, Mayo D262, 2 cr

R 5384 Human Physiology (prereq Epi MPH or Epi PhD or #)
129763 1115-1205 TWTh, 1115-1310 F, Mayo A387, Crow R, 4 cr

R 5398 Public Health Policy As a Prevention Strategy (prereq epid, hlth educ, comm hlth educ, publ hlth nutr maj or #)
629380 0945-1100 TTh, Mayo A270, Forster J, 3 cr

R 5399 Seminar: Topics in Epidemiology (prereq basic epidemiology, biometry course or #)
733520 1-4 cr

R 5404 Introduction to Biostatistics and Statistical Decision (prereq hospital and health care administration student)
934276 1415-1605 T, 1010-1205 Th, Mayo C381, Weckwerth V, 4 cr

R 5409 Biostatistics in Clinical Studies (prereq DDS, MD, DVM, PharmD, clinical nursing student)
838403 1220-1310 MWF, Mayo A367, Keenan K, 3 cr

R 5414 Biostatistical Methods I (§5450; prereq MPH or PubH grad stu or #)
232234 1115-1310 TTh, OwreH 2230, Le C, 4 cr

R 5420 Statistical Computing I: Using Statistical Packages (prereq 5450 or ¶5450 or 5414 or ¶5414, hlth sci stu or #) (S-N only)
334914 0905-0955 MW, MoosT 2620, Jeffries D, 2 cr

R 5450 Biostatistics I (§5414; prereq Math 1111 or Math 1201, hlth sci stu or # for undergrads)
832410 —1 1010-1100 MTWTh, OwreH 2210, Jeffries D, 4 cr
739933 —2 1010-1205 MW, OwreH 2230, Thomas W, 4 cr

R 5464 Biostatistical Inference I (§5450; prereq Stat 5131 or ¶Stat 5131, biostat maj or #) (A-F only)
435178 0905-1100 TTh, Mayo A367, Thomas J W, 4 cr

R 5470 Topics in Biostatistics (prereq #)
138432 ar cr

R 5607 Adolescent Health: Issues, Programs, and Policies (prereq grad or PubH stu or #)
824310 0905-1145 F, Mayo A367, Story M, 3 cr

R 5610 Principles of Maternal and Child Health (prereq public health or grad stu or #)
334878 1640-1910 Th, MoosT 2620, Wunderlich M, 3 cr

R 5614 Field Experience in Maternal and Child Health (prereq MCH grad stu, #) (S-N only)
523054 —1 Garwick A, ar cr
638760 —2 Hellerstedt W, ar cr
637222 —3 Patterson J, ar cr
435147 —4 Resnick M, ar cr
739253 —5 Story M, ar cr
439179 —6 Wunderlich M, ar cr

R 5645 Families and Health (prereq publ hlth or hlth sci stu, prof in hlth rel discip, soc or behav sci grad stu or #)
523040 1640-1910 T, Mayo A367, Patterson J, 3 cr

R 5647 Independent Study in Maternal and Child Health (prereq #, MCH or grad stu preferred)
323055 —1 Garwick A, ar cr
832908 —2 Hellerstedt W, ar cr
729497 —3 Patterson J, ar cr
632294 —4 Resnick M, ar cr
533292 —5 Story M, ar cr
636989 —6 Wunderlich M, ar cr

R 5649 Maternal and Child Health Master's Project (prereq MCH grad stu, #) (S-N only)
123056 —1 Garwick A, 3-4 cr
937811 —2 Hellerstedt W, 3-4 cr
531803 —3 Patterson J, 3-4 cr
139404 —4 Resnick M, 3-4 cr
533986 —5 Story M, 3-4 cr
430661 —6 Wunderlich M, 3-4 cr

5700 Foundations of Public Health Administration Practice (prereq student in public health administration or #)
136275 0905-1100 TTh, Mayo A387, Block L, 3 cr

5704 Field Experience: Public Health Administration (prereq student in public health administration or #) (S-N only)
935217 —1 Aroskar M, 1-12 cr
530862 —2 Block L, 1-12 cr
139905 —3 Dornblaser B, 1-12 cr
640606 —4 Johnson G, 1-12 cr
032390 —5 Litman T, 1-12 cr
034625 —6 McBean A, 1-12 cr
429476 —7 Resnick M, 1-12 cr
738166 —8 Veninga R, 1-12 cr
540663 —9 Weckwerth V, 1-12 cr
931846 —10 1-12 cr

5707 Independent Study: Public Health Administration (prereq student in public health administration or #) (S-N only)
337120 —1 Aroskar M, 1-12 cr
133322 —2 Block L, 1-12 cr
241077 —3 McBean A, 1-12 cr
235599 —4 Veninga R, 1-12 cr
933645 —5 1-12 cr

R 5737 Topics: Multidisciplinary Perspectives on Aging (§5520, AdEd 5440, CPsy 5305, HSU 5009, Nurs 5780, PA 5414, Phar 5009, Soc 5960, SW 5024)
640587 1640-1825 MW, MoosT 2690, Kane R, 4 cr

5739 Topics: Public Health Administration (prereq student in public health administration or #)
437738 —1 Aroskar M, ar cr
135409 —2 Block L, ar cr
129819 —3 McBean A, ar cr
338736 —4 Veninga R, ar cr
429297 —5 ar cr

R 5742 Management of Health Care Organizations (prereq MHA student or #)
332371 0905-1100 M, 1325-1520 W, Mayo C381, Reiling J, 3 cr

R 5743 Ethics in Healthcare Administration (prereq MHA or PHA stu or #) (A-F only)
231195 0905-1100 T, Mayo D326, Aroskar M, 2 cr

R 5749 Long Term Care Administration (prereq MHA or PHA students or #)
737700 0800-0850 M, 0800-0955 W, Mayo C381, Grant L, 3 cr

R 5751 Principles of Management in Health Services Organizations (prereq grad level student)
735347 1220-1415 M, 1325-1415 W, OwreH 2230, Veninga R, 3 cr

R 5758 Strategic Financial Planning in Health Care Organizations (prereq 5757, MHA or PHA stu) (A-F only)
838286 1430-1750 Th, Mayo D326, Riley W, 4 cr

R 5766 Applied Field Research I (prereq MHA student or #)
935962 —1 1325-1415 W, Mayo C396, Weckwerth V, 1 cr
133425 —2 1430-1520 W, Mayo C396, Weckwerth V, 1 cr

R 5770 Topics: Hospital and Health Care Administration (prereq hospital administration student or #)
137992 —1 0800-1100 F, Mayo C381, Sommers P, 3 cr
023057 —2 ar cr
735512 —3 ar cr

R 5772 Health Care ISN's (prereq MHA stu or #) (A-F only)
739446 1535-1730 MW, Mayo C381, Johnson G, 3 cr

R 5790 Sociology of Medicine and Health Care: An Introduction to Medical Sociology (§Soc 5855)
130789 1115-1205 MWF, Mayo C381, Litman T, 4 cr

R 5791 Public Health and Medical Care Organizations (prereq School of Public Health student or grad student) (A-F only)
340339 0800-1100 W, HSUnitF 2110, 2140, Resnick M, 3 cr

R 5792 Health Services Organizations in the Community (prereq MHA student or #)
233321 0800-1100 F, Mayo D326, Reiling J, 1 cr (off-campus field trips)

R 5806 Principles of Public Health Research (prereq grad or enrollment School of PubH, compl of or ¶ in course in stat or vital stat)
339725 1535-1730 MW, HSUnitF 2110, 2140, Garrard J, 3 cr

R 5868 Principles of Health Services Research (A-F only)
337859 1535-1815 W, Mayo D326, Kane R, 3 cr

R 5881 Topics in Health Services Research and Policy (prereq #)
541019 ar cr

R 5893 Health Economics I (prereq intro microecon, HA or PHA or HSRP or HSRP/A stu or #)
624440 1115-1230 TTh, MoosT 2520, Nyman J, 3 cr

R 5900 Public Health Nutrition: Principles and Programs (prereq public health nutrition student or #)
334203 0905-1205 MTWThF, Mayo A270, Krinke U B, 3 cr (Sept 10-25)

R 5902 Maternal and Infant Nutrition (prereq 3000 level nutrition course or equiv or #)
736594 1325-1625 T, Mayo A367, Brown J, 3 cr

R 5905 Human Nutrition and Health (prereq jr or sr or grad-level stu)
739883 1220-1415 MW, Mayo 1250, Brown J, 3 cr

R 5906 Field Experience: Public Health Nutrition (prereq public health nutrition maj) (S-N only)
638242 —1 Krinke U, 1-8 cr
331883 —2 Story M, 1-8 cr

R 5909 Topics in Public Health Nutrition (prereq public health nutrition student or #)
135286 —1 Brown J, 1-12 cr
531025 —2 French S, 1-12 cr
137491 —3 Himes J, 1-12 cr
532790 —4 Krinke U, 1-12 cr
429428 —5 Kushi L, 1-12 cr
940255 —6 Neumark-Sztainer D, 1-12 cr
132252 —7 Story M, 1-12 cr
123048 —8 1-12 cr

R 5932 Nutrition: Adults and the Elderly (prereq grad-level stu or #) (A-F only)
330281 1535-1835 Th, Mayo A387, Krinke U, 3 cr

R 8150 Research: Environmental and Occupational Health (prereq #) (S-N only)
731766 1-8 cr

R 8191 Research: Injury Prevention in the Workplace, Community, and Home (prereq #) (S-N only)
832746 Gerberich S, 1-8 cr

R 8192 Occupational Injury Prevention and Safety Research Seminar (prereq environmental hlth grad maj or #) (S-N only)
840829 1200-1300 F, Mayo 1155, Maldonado G, Gerberich S, 1 cr

R 8330 Research in Epidemiology (prereq epi maj or epi grad stu or #)
940952 —1 Anderson K, 1-8 cr
030493 —2 Arnett D, 1-8 cr
433656 —3 Crow R, 1-8 cr
230516 —4 Elmer P, 1-8 cr
129309 —5 Finnegan J, 1-8 cr
233657 —6 Folsom A, 1-8 cr
130517 —7 Gross M, 1-8 cr
739107 —8 Himes J, 1-8 cr
936917 —9 Jacobs D, 1-8 cr
734750 —10 Jeffery R, 1-8 cr
932575 —11 Jones-Webb R, 1-8 cr
330510 —12 Kushi L, 1-8 cr
534751 —13 Lando H, 1-8 cr
732576 —14 Leon A, 1-8 cr
130511 —15 Lifson A, 1-8 cr
840135 —16 Lowry P, 1-8 cr
838000 —17 Luepker R, 1-8 cr
735834 —18 Lytle L, 1-8 cr
833654 —19 McGovern P, 1-8 cr
030512 —20 Murray D, 1-8 cr
529307 —21 Perry C, 1-8 cr
539108 —22 Pirie P, 1-8 cr
137998 —23 Robinson L, 1-8 cr
235831 —24 Schreiner P, 1-8 cr
333651 —25 Sellers T, 1-8 cr
330507 —26 Shahar E, 1-8 cr
129304 —27 Shu X O, 1-8 cr
139105 —28 Wagenaar A, 1-8 cr
236915 —29 Welles S, 1-8 cr
929305 —30 Williams C, 1-8 cr
939106 —31 Wolfson M, 1-8 cr
136916 —32 Zheng W, 1-8 cr
334749 —33 1-8 cr

R 8331 Field Practice in Epidemiologic Investigations (prereq epi maj or epi grad stu or #) (S-N only)
831502 —1 Anderson K, 1-8 cr
740127 —2 Arnett D, 1-8 cr
130508 —3 Crow R, 1-8 cr
040134 —4 Elmer P, 1-8 cr
934746 —5 Finnegan J, 1-8 cr
832570 —6 Folsom A, 1-8 cr
430501 —7 Gross M, 1-8 cr
734747 —8 Himes J, 1-8 cr
632571 —9 Jacobs D, 1-8 cr
230502 —10 Jeffery R, 1-8 cr
540131 —11 Jones-Webb R, 1-8 cr
237997 —12 Kushi L, 1-8 cr
135829 —13 Lando H, 1-8 cr
133649 —14 Leon A, 1-8 cr
130503 —15 Lifson A, 1-8 cr
429302 —16 Lowry P, 1-8 cr
439103 —17 Luepker R, 1-8 cr
435830 —18 Lytle L, 1-8 cr
533650 —19 McGovern P, 1-8 cr
829300 —20 Murray D, 1-8 cr
839101 —21 Perry C, 1-8 cr
636913 —22 Pirie P, 1-8 cr
134745 —23 Robinson L, 1-8 cr
432569 —24 Schreiner P, 1-8 cr
930499 —25 Sellers T, 1-8 cr
740130 —26 Shahar E, 1-8 cr
637995 —27 Shu X O, 1-8 cr
435827 —28 Wagenaar A, 1-8 cr
533647 —29 Welles S, 1-8 cr
437996 —30 Williams C, 1-8 cr
235828 —31 Wolfson M, 1-8 cr
333648 —32 Zheng W, 1-8 cr
630500 —33 1-8 cr

R 8332 Readings in Epidemiology (prereq epi maj or epi grad stu or #)
133960 —1 Anderson K, 1-4 cr
037993 —2 Arnett D, 1-4 cr
629315 —3 Crow R, 1-4 cr
639116 —4 Elmer P, 1-4 cr
836926 —5 Finnegan J, 1-4 cr
429316 —6 Folsom A, 1-4 cr
439117 —7 Gross M, 1-4 cr
636927 —8 Himes J, 1-4 cr
434760 —9 Jacobs D, 1-4 cr
632585 —10 Jeffery R, 1-4 cr
630531 —11 Jones-Webb R, 1-4 cr
340146 —12 Kushi L, 1-4 cr
538010 —13 Lando H, 1-4 cr
635843 —14 Leon A, 1-4 cr
933662 —15 Lifson A, 1-4 cr
338011 —16 Lowry P, 1-4 cr
036911 —17 Luepker R, 1-4 cr
234744 —18 Lytle L, 1-4 cr
832567 —19 McGovern P, 1-4 cr
430496 —20 Murray D, 1-4 cr
540128 —21 Perry C, 1-4 cr
632568 —22 Pirie P, 1-4 cr
230497 —23 Robinson L, 1-4 cr
340129 —24 Schreiner P, 1-4 cr
837994 —25 Sellers T, 1-4 cr
635826 —26 Shahar E, 1-4 cr
733646 —27 Shu X O, 1-4 cr
130498 —28 Wagenaar A, 1-4 cr
129299 —29 Welles S, 1-4 cr
039100 —30 Williams C, 1-4 cr
836912 —31 Wolfson M, 1-4 cr
835842 —32 Zheng W, 1-4 cr
133661 —33 1-4 cr

R 8379 Seminar in Epidemiology: Epidemiology IV (prereq epidemiology grad stu or #) (S-N only)
433558 1220-1415 W, Mayo A387, Arnett D, others, 2 cr

R 8400 Seminar in Biostatistics (prereq biostat maj or #)
134526 ar cr

R 8420 Survival Analysis (prereq 5466 or equiv, Stat 5133, grad stu) (A-F only)
437836 0945-1100 TTh, OwreH 2230, Le C, 3 cr

R 8421 Analysis of Categorical Data (prereq 5466 including SAS, Stat 5133, grad stu) (A-F only)
035399 1245-1400 TTh, Mayo 1250, Waller L, 3 cr

R 8429 Probability Models for Biostatistica (prereq Stat 5131-5133, PubH 8420-8421, biostat grad stu or #) (A-F only)
124636 0945-1100 TTh, Mayo D262, Grambsch P, 3 cr

R 8449 Topics in Biostatistics (prereq 5450, #)
630870 ar cr

R 8450 Research in Biostatistics
133188 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
432989 1-18 cr

Symbols

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- **H** Honors course (follows the course number).
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- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

8763 External Forces Affecting Health Services Delivery (prereq HSRP/A student or #) (A-F only)
236736 Weckwerth V, 3 cr

8777 Thesis Credits: Masters
431860 1-16 cr

8782 Research Practicum (prereq HSRP/A student or #)
030249 —1 Litman T, Weckwerth V, 3 cr
029831 —2 Weckwerth V, Litman T, 3 cr

R 8805 Applications of Sociological Theories to Health (prereq HSRP MS or HSRP/A PhD stu or #) (A-F only)
232685 0945-1100 TTh, Mayo D330, Choi T, 3 cr

R 8810 Seminar: Research Studies in Health Care (8810-8811-8812†; prereq PhD stu in HSRP/A or MS stu in HSRP, or #, Stat 5121, Stat 5122, Stat 5302, or #) (A-F only)
531851 1325-1510 MW, Mayo D330, Finch M, Dowd B, 3 cr

R 8830 Research Project in Health Care (8830-8831-8832†; prereq PhD stu in HSRP/A or MS stu in HSRP, or #, Stat 5121, Stat 5122, Stat 5302, or #) (A-F only)
323041 1325-1415 F, Mayo D330, Finch M, Dowd B, 1 cr

R 8861 Topics in Theory and Principles of Health Services Research, Policy, and Administration (prereq hlth serv res, pol, and adm PhD student or #) (A-F only)
523037 3 cr

8880 Directed Research (prereq PhD stu in HSRP/A, #) (S-N only)
039243 1-8 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
437187 1-36 cr

R 8900 Seminar in Advanced Life Cycle Nutrition (prereq 5902 or 5932 or 5935 or equiv)
923052 0800-1100 Th, Mayo D326, 3 cr

RADIOLOGY (Rad)
Medical School

0120 X-Ray Conference (prereq #)
133005 1600-1800 T, Mayo C231, Thompson W, 0 cr (Todd Amph)

0121 Medical Roentgenologic Conference
032972 1130-1200 T, Mayo C231, Thompson W, 0 cr (Todd Amph)

0123 Surgical Roentgenologic Conference
140299 0900-1100 S, Mayo C231, Thompson W, 0 cr (Todd Amph)

0124 Neurosurgical-Roentgenologic Conference
531722 1300-1430 F, Mayo C231, Truwit C, 0 cr (Todd Amph)

0125 Cardiovascular Roentgenologic Conference
331222 1200-1300 Th, Mayo B167, Amplatz K, 0 cr (Rigler Lib)

0126 Roentgenologic Conference on Chest Diseases
133098 1200-1300 M, Mayo B167, Thompson W, 0 cr (Rigler Lib)

0220 Nuclear Medicine: Clinical Conference
837042 1700-1800 T, Mayo C231, Boudreau R, 0 cr (Todd Amph)

5101 Externship: Diagnostic Radiology-University Hospitals (prereq regis med)
637835 Thompson W, ar cr

5102 Externship: Diagnostic Radiology-Veterans Administration Hospital (prereq regis med)
541005 Reinke D, ar cr

5103 Externship: Diagnostic Radiology-Hennepin County General Hospital (prereq regis med)
631534 Anderson Q, ar cr

5104 Externship: Diagnostic Radiology-St. Paul Ramsey Hospital (prereq regis med)
540582 Krueckeberg S, ar cr

5105 Externship: Diagnostic Radiology-St. Luke's Hospital, Duluth (prereq regis med)
134896 Ahrens C, ar cr

5110 Research Problems in Radiology (prereq regis med)
536287 Thompson W, ar cr

5140 Special Problems: Roentgenology (prereq regis med)
040389 Thompson W, ar cr

5170 Basic Radiological Physics (§BPhy 5170, TRad 5170; prereq #)
739639 1600-1715 MF, UHosp 1243, Ritenour R, 3 cr

5174 Physics of Diagnostic Radiology (§BPhy 5174, TRad 5174; prereq 5170 or #)
138407 1400-1530 TW, Mayo B261, Ritenour R, 3 cr (Rigler Lib)

5240 Special Problems: Nuclear Medicine (prereq regis med)
429803 Boudreau R, ar cr

5511 Roentgen Technique
440977 1700-1800 M, Mayo C231, Ritenour R, 1 cr (Todd Amph)

5530 Externship in Nuclear Medicine at University Hospital (prereq regis med)
230810 Boudreau R, ar cr

5540 Special Problems: Radiological Physics (prereq regis med)
338185 Ritenour R, ar cr

8100 Gastrointestinal Roentgenology
335416 Foshager M, ar cr

8101 Urologic Roentgenology
139850 Goldberg M, ar cr

8102 Neurological Roentgenology
931040 Truwit C, ar cr

8103 Cardiovascular Roentgenology
737289 Amplatz K, ar cr

8104 Pediatric Roentgenology
131836 Carpenter B, ar cr

8105 Pulmonary Roentgenology
637608 Thompson W, ar cr

8150 Research: Roentgenology
737597 Thompson W, ar cr

8200 Nuclear Medicine
639634 Boudreau R, ar cr

8210 Fundamentals of Nuclear Medicine (prereq 1st yr resident)
632179 1600-1700 M, Mayo C231, Boudreau R, 1 cr

8250 Research; Nuclear Medicine
634501 Boudreau R, ar cr

8450 Research: Radiation Biology
330782 Ritenour R, Song C, ar cr

8550 Research: Radiological Physics
730276 Ritenour R, ar cr

RECREATION, PARK, AND LEISURE STUDIES (Rec)
School of Kinesiology & Leisure Studies
Education and Human Development

R 1520 Orientation to Leisure and Recreation (A-F only)
338705 0905-1100 TTh, CookeH 400, 4 cr

R 3150 Leadership in Outdoor Recreation (A-F only)
640301 1325-1600 W, CookeH 215, Pinch K, 3 cr

R 3530 Recreation and Park Areas and Facilities (prereq 1520, recreation maj or #) (A-F only)
133506 0905-1100 TTh, CookeH 206, Paxton T, 4 cr

3700 Senior Internship (prereq sr, recreation maj or minor, #) (S-N only)
537682 Schultz J, 1-15 cr

3900 Directed Study (max 9 cr; prereq recreation maj or #)
029912 1-3 cr

R 5100 Foundations of Recreation (prereq MEd or grad stu or #) (A-F only)
038965 1840-2040 M, CookeH 214, Schultz J, Feldman H, 3 cr

R 5190 Commercial Recreation (prereq 3550 or #) (A-F only)
232847 1730-2000 W, CookeH 400, 3 cr

R 5210 Introduction to Therapeutic Recreation (prereq 1520 or ¶5100, rec maj or #) (A-F only)
930082 1615-1830 M, CookeH 206, Tabourne C, 3 cr

R 5235 Leisure and Mental Health (prereq 5210, Psy 3604 or 5604, or #) (A-F only)
122960 1230-1530 W, CookeH 206, Tabourne C, 4 cr

R 5299 Assessment and Evaluation in Leisure Services (prereq 1520 or #) (A-F only)
022961 1615-1930 T, CookeH 400, Schleien S, 4 cr

R 5460 Foundations of Sport Management (§Kin 5460; prereq rec or kin maj or #) (A-F only)
539352 1115-1230 MW, CookeH 214, Anderson B, 3 cr

5630 Practicum: Therapeutic Recreation (prereq recreation M.Ed. or grad) (S-N only)
033393 Schleien S, Tabourne C, 3-9 cr

5640 Practicum: Leisure Services (prereq recreation M.Ed. or grad) (S-N only)
637866 Kane M, 3-9 cr

5695 Practicum: Sport Management (prereq MEd or grad stu or sport mgmt maj, #) (S-N only)
337506 Anderson B, 3-9 cr

R 5900 Workshop: Contemporary Issues in Leisure Services (max 12 cr) (A-F only)
834089 1615-1830 M, CookeH 400, Anderson B, 3 cr

R 5980 Introduction to Research (§Kin 5980; prereq MEd or grad stu or #) (A-F only)
129724 1615-1845 Th, CookeH 214, 215, Kane M, 3 cr

5981 Problems (prereq MEd or grad stu or #) (A-F only)
438128 ar cr

5983 Readings: Recreation (prereq MEd or grad stu or #) (A-F only)
938618 1-3 cr

8777 Thesis Credits: Masters
138270 1-16 cr

8980 Seminar: Research Problems (max 3 cr; prereq 5980 or #) (S-N only)
438596 1535-1625 W, CookeH 202, Schleien S, 1 cr

8981 Research Problems (prereq 8980 or #) (S-N only)
633249 ar cr

RELIGIONS IN ANTIQUITY (RelA)
Classical and Near Eastern Studies
Liberal Arts

R 1082 Jesus in History (§Clas 1082, RelS 1082) (Hist)
*LECT 1010-1100 MF, NichH 211, Sellew P
130596 —1 REC 0945-1100 T, FordH 50, 4 cr
140178 —2 REC 0945-1100 T, SmithH 111, 4 cr
838045 —3 REC 1115-1230 Th, BuH 120, 4 cr

R 1082H Jesus in History (§Clas 1082H, RelS 1082H)
*LECT 1010-1100 MF, NichH 211, Sellew P
130615 —80 REC 1115-1230 Th, NichH 213, Sellew P, 4 cr

3036 The Religion of Islam (§1036, Arab 3036, MELC 3036, SALC 3036)
124605 1245-1400 TTh, BlegH 215, Farah C, 4 cr

3251 Modern Study of the Old Testament (§ANE 3251, RelS 3251)
924024 0800-0850 MWF, FolH 50, Reisman D, 4 cr

3501 Ancient Israel (§ANE 3501, RelS 3501)
534796 1115-1205 MWF, FolH 208, Paradise J, 4 cr

5501 Ancient Israel (§3501, ANE 3501, ANE 5501)
735901 1115-1205 MWF, FolH 208, Paradise J, 4 cr

RELIGIOUS STUDIES (RelS)
Classical and Near Eastern Studies
Liberal Arts

8777 Thesis Credits: Masters
029196 1-16 cr

RHETORIC (Rhet)
Agricultural, Food, and Environmental Sciences

R 1101 Writing to Inform and Persuade (§Comp 1011) (CD) (A-F only)
337134 —1 0800-0850 MW, ClaOff 17, 0800-0850 F, HckrH 100, 4 cr (computer use)
640749 —2 0800-0850 MW, HckrH 100, 0800-0850 F, ClaOff 17, 4 cr (computer use)
934567 —3 0905-0955 MW, ClaOff 17, 0905-0955 F, HckrH 100, 4 cr (computer use)
836585 —4 0905-0955 MW, HckrH 100, 0905-0955 F, ClaOff 17, 4 cr (computer use)
140665 —5 1325-1415 MW, ClaOff 17, 1325-1415 F, HckrH 100, 4 cr (computer use)
230936 —6 1430-1520 MW, HckrH 100, 1430-1520 F, ClaOff 17, 4 cr (computer use)
234548 —7 0815-0930 T, McNH 305, 0815-0930 Th, HckrH 100, 4 cr (computer use)
532899 —8 0945-1100 T, McNH 305, 0945-1100 Th, HckrH 100, 4 cr (computer use)
033779 —9 1245-1400 T, McNH 305, 1245-1400 Th, HckrH 100, 4 cr (computer use)
130727 —10 1245-1400 T, HckrH 100, 1245-1400 Th, McNH 305, 4 cr (computer use)

R 1104 Library Research Methods (S-N only)
529453 —1 LAB 0905-0955 M, ClaOff 145, Richardson G, 1 cr (orientation meeting, Sept 30 and Dec 2) (computer assisted instruction)
134610 —2 LAB 1430-1520 M, ClaOff 145, Richardson G, 1 cr (orientation meeting, Sept 30 and Dec 2) (computer asstisted instruction)
137197 —3 LAB 1115-1205 T, ClaOff 145, Richardson G, 1 cr (orientation meeting, Oct 1 and Dec 3) (computer assisted instruction)
239247 —4 LAB 1430-1520 T, ClaOff 145, Richardson G, 1 cr (orientation meeting, Oct 1 and Dec 3) (computer assisted instruction)
040991 —5 LAB 1115-1205 W, ClaOff 145, Richardson G, 1 cr (orientation meeting, Oct 2 and Dec 4) (computer assisted instruction)
332094 —6 LAB 1430-1520 W, ClaOff 145, Richardson G, 1 cr (orientation meeting, Oct 2 and Dec 4) (computer assisted instruction)

R 1151 Writing in Your Major (prereq 1104, fr comm req, soph) (A-F only)
429624 —1 0905-0955 MWF, HckrH 302, 4 cr
130954 —2 1325-1415 MWF, HckrH 302, 4 cr
134932 —3 0815-0930 T, ClaOff 135, 0815-0930 Th, HckrH 302, 4 cr (computer use)
736238 —4 0945-1100 T, ClaOff 17, 0945-1100 Th, HckrH 302, 4 cr (computer use)
531705 —5 1115-1230 T, ClaOff 17, 1115-1230 Th, HckrH 100, 4 cr (computer use)
540274 —6 1415-1530 T, ClaOff 135, 1415-1530 Th, HckrH 302, 4 cr (computer use)

R 1200 Information Technology in Scientific and Technical Professions (prereq College of Agriculture undergrad) (A-F only)
832312 0815-0930 TTh, ClaOff 17, 3 cr (computer use)

R 1220 Principles of Human Communication
536001 0800-0900 MWF, HckrH 222, 4 cr

R 1222 Public Speaking (prereq completion of freshman communication requirement) (A-F only)
129570 —1 0905-1045 MW, HckrH 222, Montgomery P, 4 cr
132355 —2 1010-1150 MW, CentLib 6, 4 cr
637382 —3 1220-1400 MW, HckrH 222, 4 cr
339241 —4 1220-1400 MW, CentLib 6, 4 cr
737759 —5 0905-1045 TTh, HckrH 222, 4 cr
234999 —6 1115-1255 TTh, HckrH 222, 4 cr
439537 —7 1325-1505 TTh, CentLib 6, 4 cr
440526 —8 1325-1505 TTh, HckrH 222, 4 cr

R 1303 Humanities: Science, Religion, and the Search for Human Nature (Hist)
132369 0945-1100 TTh, HckrH 312, Marchand W, 4 cr

R 1310 Humanities: The Land in American Experience (AH; CD)
134557 1010-1100 MWF, HckrH 312, Scanlan T, 4 cr

R 1311 Humanities: The Family in American Experience
337635 1325-1415 MWF, HckrH 312, Scanlan T, 4 cr

R 1380 Fictional History: Twentieth Century Through the Eyes of Novelists (Lit; IP)
235327 1115-1230 TTh, HckrH 312, Walzer A, 3 cr

R 1441 College Reading and Learning Skills
832777 1010-1150 TTh, FordH 120, Bennett J, 4 cr (Mpls)

R 3101 Functional Photography (prereq DHA 1300 or Rhet 3562)
938179 1430-1610 MW, CentLib 6, Breneman D, 4 cr

R 3257 Scientific and Technical Presentations (§5257; prereq 1222, 3562 or #)
434807 1325-1505 T, HckrH 302, 1325-1505 Th, ClaOff 17, Gurak L, 4 cr (computer use)

R 3266 Communication, Discussion in Small Group Decision Making (prereq 1222 or #) (C/PE)
134509 —1 1220-1325 MWF, HckrH 210, Schuelke L, 4 cr
630626 —2 1325-1505 TTh, HckrH 111, Bennett J, 4 cr

3270 Speech: Special Problems (prereq #, Δ)
430918 Bennett J, McDowell E, 1-5 cr

3374 Special Problems in Humanities (prereq #, Δ)
432779 Horberg R, Scanlan T, others, 1-2 cr

R 3380 Humanities: The Literature of Social Reflection
530599 1245-1400 T, HckrH 312, Montgomery P, 2 cr

R 3381 Humanities: 20th-Century Culture (AH; IP)
040179 1115-1205 MWF, HckrH 312, Montgomery P, 4 cr

R 3395 In Search of Nature (AH; CD)
935315 1415-1530 TTh, HckrH 312, Marchand W, 4 cr

R 3562 Writing in Your Profession (prereq completion of freshman communication requirement, 1151, jr or sr) (A-F only)
839275 —1 0905-0955 MWF, HckrH 111, 4 cr
131733 —2 1010-1100 MWF, HckrH 302, Horberg R, 4 cr
035533 —3 1115-1205 MWF, HckrH 111, 4 cr
333987 —4 1325-1415 MW, HckrH 100, 1325-1415 F, ClaOff 17, 4 cr (computer use)
837168 —5 1430-1520 MW, ClaOff 17, 1430-1520 F, HckrH 100, 4 cr (computer use)
435231 —6 0815-0930 T, HckrH 100, 0815-0930 Th, McNH 305, 4 cr (computer use)
135448 —7 0945-1100 T, HckrH 100, 0945-1100 Th, McNH 305, 4 cr (computer use)
737082 —8 1115-1230 T, HckrH 100, 1115-1230 Th, ClaOff 17, 4 cr (computer use)
839468 —9 1415-1530 T, HckrH 100, 1415-1530 Th, McNH 305, 4 cr (computer use)

R 3565 Writing for Publication (prereq 3562, #)
634157 1220-1400 MW, McNH 305, Sperbeck J, 4 cr (computer use)

R 3574 Publications Management (prereq 3562) (A-F only)
636801 0945-1100 TTh, HckrH 111, 3 cr

R 3670 Visual Rhetoric: Theories and Applications (prereq 1200 or equiv, 3562 or equiv, STC or pre-STC maj, or #)
438047 1010-1150 MW, ClaOff 17, 4 cr (computer use)

5100 Technical Communication: Special Problems (prereq #, Δ)
439568 ar cr

R 5165 Studies in Organizational Communication, Conflict, and Change (prereq freshman communication or equiv or grad status)
723604 1010-1115 MWF, HckrH 209, Schuelke L, 4 cr

R 5170 Managerial Communications (prereq freshman communication or equiv or grad status) (IP; CD)
138558 1430-1610 MW, HckrH 302, Wharton K, 4 cr

5180 Internship in Scientific and Technical Communication (prereq STC maj or grad stu, #, Δ)
538394 McDowell E, Gross A, 2-6 cr

R 5258 Interviewing: Dynamics of Face-to-Face Communication
734246 1535-1715 TTh, HckrH 222, McDowell E, 4 cr

R 5531 Scientific and Technical Communication Course Development: Philosophy and Methodology (prereq 3562, STC sr or STC or RSTC grad stu or #) (A-F only)
931958 1115-1255 TTh, HckrH 209, Wahlstrom B, 4 cr

R 5533 Scientific and Technical Communication Course Development: Teaching Seminar (prereq 5532, STC or RSTC grad stu, or #) (A-F only)
929367 1220-1310 W, HckrH 301, Marchand W, 1 cr

R 5560 Editing for Technical Communication (prereq STC premaj or maj or grad stu) (A-F only)
523605 1115-1255 TTh, CentLib 4, Mikelonis-Paraskov V, 4 cr

R 5581 Document Design (prereq 3562, STC sr or grad stu) (A-F only)
624616 1700-1925 TTh, CentLib 4, 4 cr (Oct 1-Nov 14)

R 5700 Rhetorical Theory and Scientific and Technical Communication (prereq grad stu or #) (A-F only)
137774 0905-0955 MWF, HckrH 209, Gross A, 4 cr

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❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 8100 Research Methods in Rhetoric and Scientific and Technical Communication (prereq STC or RSTC grad maj or #) (A-F only)
334525 1535-1805 T, HckrH 210, Lay M, 3 cr

R 8101 Rhetoric and Technical Communication Writing Seminar (prereq 8100, RSTC PhD stu or #) (A-F only)
424617 1535-1805 Th, HckrH 111, Walzer A, 3 cr

R 8110 Theory and Research in Audience Analysis (prereq STC or RSTC grad maj or #)
033040 1325-1555 M, HckrH 209, Duin A, 4 cr

8170 Design Project (8170-8171†; prereq STC Plan B grad stu) (A-F only)
224618 4 cr

8171 Design Project (8170-8171†; prereq STC Plan B grad stu, 8170) (A-F only)
124619 4 cr

8181 STC Capstone Project (prereq STC Plan B grad student, #)
540968 4 cr

R 8258 Informational Research Interviewing in Scientific and Technical Communication (prereq STC or RSTC grad maj or #) (A-F only)
323606 1325-1440 WF, HckrH 209, McDowell E, 3 cr

R 8515 Topics in the Rhetoric of Science and Technology: Speech Act Theory and Its Deconstruction (max 12 cr; prereq 5700 or Spch 5611 or equiv) (A-F only)
238048 1535-1805 W, HckrH 209, Gross A, 4 cr

R 8535 Topics in Scientific and Technical Communication Pedagogy: Basic Writing (prereq RSTC/STC grad stu or #) (A-F only)
333701 1220-1450 T, ApH 351, Sirc G, 4 cr (Mpls)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
939431 1-18 cr

8777 Thesis Credits: Masters
133358 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
639505 1-36 cr

8990 Special Problems in Rhetoric and Scientific and Technical Communication (max 6 cr; prereq #, Δ) (A-F only)
033717 1-6 cr

RUSSIAN (Russ)
Linguistics & Asian & Slavic Languages & Literatures
Liberal Arts

R 1101 Beginning Russian
637768 —1 0905-0955 MTWThF, WullH 140, 5 cr
131920 —2 0905-0955 MTWThF, PeikH 165, Jahn G, 5 cr
229429 —3 1115-1205 MTWThF, SmithH 111, 5 cr
340115 —4 1115-1205 MTWThF, NichH 109, 5 cr

R 3001 Intermediate Russian (§1104; prereq 1103 or equiv)
937923 —1 0905-0955 MTWThF, KoltH S135, 5 cr
735753 —2 0905-0955 MTWThF, Arch 15, 5 cr

R 3101 Third-Year Russian (prereq 1106)
835517 —1 1220-1310 MTWTh, PeikH 215, Corten I, 4 cr
724025 —2 1220-1310 MTWTh, NichH 109, 4 cr

R 3111 Fourth-Year Russian (prereq 3103)
035001 —1 1010-1100 MTWTh, WullH 220, Corten I, 4 cr
124028 —2 1010-1100 MTWTh, KoltH S137, 4 cr

R 3311 Major Project in Russian (prereq Russian lang maj or #)
840281 2 cr

R 3311H Honors Course: Major Project in Russian (prereq honors sr, Russian lang maj or #) (A-F only)
538346 2-4 cr

R 3421 Literature: Middle Ages: Dostoevsky in Translation (§5421) (Lit; IP)
134504 1325-1415 MWF, ScottH 4, Jahn G, 4 cr

R 3970 Directed Readings (prereq #)
434970 1-5 cr

R 5021 Russia Study Tour (prereq 1106 or equiv)
331317 6-18 cr

R 5421 Literature: Middle Ages-Dostoevsky in Translation (§3421)
031322 1325-1415 MWF, ScottH 4, Jahn G, 4 cr

R 5970 Directed Readings (prereq #, upper div or grad student)
930258 1-5 cr

RUSSIAN AREA STUDIES (RAS)
Area Studies Programs
Liberal Arts

8061 Scope and Methods of Russian Area Studies (§EAS 8061) (A-F only)
134879 1415-1530 TTh, HHHCtr 60, 4 cr

8777 Thesis Credits: Masters
532403 1-16 cr

SANSKRIT (Skt)
Classical and Near Eastern Studies
Liberal Arts

5201 Intermediate Sanskrit (prereq 5133)
023687 1325-1415 MWF, BuH 125, Malandra W, 5 cr

8970 Directed Studies
133286 Malandra W, ar cr

SCANDINAVIAN (Scan)
German, Scandinavian, and Dutch
Liberal Arts

3342 Major Project (prereq Δ) (A-F only)
640198 4 cr

3342H Major Project (prereq Δ) (A-F only)
738068 4 cr

R 3602 Hans Christian Andersen and the Scandinavian Fairy Tale
123607 1325-1415 MWF, Phys 143, Mishler W, 4 cr

R 3670 Topics in Scandinavian Studies: Autobiography in 20th-Century Scandinavian Literature
023608 1545-1700 TTh, FolH 426, Zagar M, 4 cr

3970 Directed Studies (max 15 cr; prereq #, Δ, ⊿)
840359 1-5 cr

R 5616 Strindberg and the Drama in Revolt and Transition
132445 1115-1230 TTh, FolH 426, Stockenstrom G, 4 cr

R 5670 Topics in Scandinavian Studies: Autobiography in 20th-Century Scandinavian Literature
823609 1545-1700 TTh, FolH 426, Zagar M, 4 cr

R 5701 Old Norse Language and Literature
829281 1415-1530 TTh, FolH 426, Grimstad K, 4 cr

R 5970 Directed Studies (prereq #, Δ, CLA approval)
035502 1-5 cr

R 8631 Seminar; Scandinavian Criticism: Danes Without a Country
023611 1430-1625 W, PeikH 315, Houe P, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
539741 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
438873 1-36 cr

8970 Research: Scandinavian Literature and Language
829782 1-6 cr

SCIENCE AND TECHNOLOGY POLICY (ScTP)

8777 Thesis Credits: Master's
624650 1-16 cr

SCIENCE IN AGRICULTURE (ScAg)
Agricultural, Food, and Environmental Sciences

R 1001 Orientation to Science in Agriculture (S-N only)
438145 1535-1705 M, BorH 335, Hunter A, 1 cr

5009 Undergraduate Senior Thesis: Science in Agriculture (not for grad credit; prereq #) (A-F only)
130220 Hunter A, 1-5 cr

SCIENTIFIC COMPUTATION (SciC)

8001 Parallel and High-Performance Computing (prereq undergrad degree in a field that uses scientific computation) (A-F only)
737518 1010-1205 MW, EE/CSci 2260, Teng S, 4 cr

8101 Supercomputer Research Seminar (may be repeated for up to 4 cr max) (A-F only)
939526 1315-1430 W, Truhlar D, 1 cr (Minnesota Supercomputer Institute, 1200 Washington Ave So, Room E-200)

8500 Scientific Computation Directed Research (prereq #)
424553 1-6 cr

8666 Doctorel Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
737261 1-18 cr

8777 Thesis Credit: Masters
637964 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
435794 1-36 cr

Sign Language, American: See Educational Psychology.

SMALL ANIMAL CLINICAL SCIENCES (SACS)
Veterinary Medicine

5112 Internal Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
032082 4-24 cr

5122 Comparative Ophthalmology/Dermatology (prereq 3rd or 4th yr vet med stu) (S-N only)
737177 4-24 cr

5132 Emergency Rotation (prereq 3rd or 4th yr vet med stu) (S-N only)
331267 4-24 cr

5142 Clinical Nutrition/Internal Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
829720 4-24 cr

5152 Community Practice (prereq 3rd or 4th yr vet med stu) (S-N only)
140682 4-24 cr

5162 Clinical Oncology Rotation (prereq #)
633543 4-24 cr

5171 Small Animal Medicine (prereq 5170 or #) (A-F only)
831600 0900-0950 MWThF, VetS 145, Hardy R, Klausner J, others, 4 cr

5212 Small Animal Surgery (prereq 3rd or 4th yr vet med stu) (S-N only)
531283 Caywood D, Lipowitz A, others, 4-24 cr

5251 Comparative Clinical Veterinary Dermatologic Pathology (prereq grad stu or #) (A-F only)
034267 1 cr

5255 Diseases of the Urinary System (prereq regis 3rd or 4th yr vet med or grad or #)
929899 1300-1450 M, VetTchHsp 308, Osborne C, Polzin D, 2 cr (SACS conf rm)

5312 Anesthesiology (prereq 3rd or 4th yr vet med stu) (S-N only)
039467 Hendrix P, Robinson E, 4-24 cr

5322 Small Animal Critical Care Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
131909 4-24 cr

5330 Wild Bird Medicine (§VB 5330; prereq regis 3rd or 4th yr vet med or grad student or #) (A-F only)
740743 Redig P, Duke G, 2 cr (hrs ar M, AnScVM 164, 168)

R 5342 Large Animal Anesthesiology (prereq 3rd or 4th yr vet med stu) (S-N only)
823612 Hendrix P, Robinson E, 4 cr

5350 Principles of Veterinary Surgery (prereq VPB 5126 or #) (A-F only)
★LECT 1300-1350 M, AnScVM 135, 1100-1150 WThF, AnScVM 125, Wallace L, Caywood D, others, 5 cr
833153 —1 LAB 1300-1550 T, VetTchHos C254
332919 —2 LAB 1300-1550 W, VetTchHos C254

5380 Anesthesiology and Critical Care (prereq 5170 or #) (A-F only)
438260 1100-1150 M, 1000-1050 WTh, AnScVM 125, Raffe M, Hendrix P, others, 3 cr

5398 Independent Research in Veterinary Anesthesiology (prereq registered in veterinary medicine or grad or #)
940417 Robinson E, Hendrix P, 1-6 cr

5412 Radiology (prereq 3rd or 4th yr vet med stu) (S-N only)
540419 Feeney D, Johnston G, others, 4-24 cr

5452 Veterinary Radiology II (prereq 5451 or #) (A-F only)
★LECT 1000-1050 MF, AnScVM 135, Feeney D, Johnston G, others
232864 —1 LAB 1300-1550 W, VetTchHos A325, 3 cr
233416 —2 LAB 1300-1550 T, VetTchHos A325, 3 cr

5453 Special Procedures in Veterinary Radiology (prereq regis 3rd or 4th yr vet med or grad or #) (A-F only)
939977 1500-1650 M, AnScVM 135, Johnston G, Feeney D, others, 2 cr

5502 Clinical Small Animal Theriogenology (prereq vet med stu)
936643 4-24 cr

R 5802 Residency in Veterinary Dermatology (prereq #) (A-F only)
637317 Johnston S, McKeever P, ar cr

5812 Companion Animal Oncology (prereq DVM or equiv)
134518 Klausner J, 2 cr

5902 Zoo, Exotic, Raptor and Companion Birds (prereq regis 4th yr vet med stu or #)
037587 4-12 cr

8180 Advanced Clinical Neurology (prereq #)
638192 Fletcher T, Hardy R, ar cr

8190 Comparative Cardiovascular Diseases (prereq grad)
037590 Ogburn P, 3 cr

8191 Advanced Comparative Electrocardiology (prereq grad, #)
135613 Ogburn P, 3 cr

8192 Special Cardiology Clinics (prereq grad, #)
436461 Ogburn P, ar cr

8196 Internal Medicine in Small Companion Animals (prereq grad, #)
139816 Osborne C, 2 cr

8197 Advanced Dermatologic Clinics (prereq grad, #) (A-F only)
431549 McKeever P, 4 cr

8198 Problems in Veterinary Comparative Dermatology (prereq grad, #)
231424 McKeever P, ar cr

8200 Directed Studies in Veterinary Comparative Dermatology (prereq grad, #) (A-F only)
940868 McKeever P, 2 cr

8290 Advanced Veterinary Medicine (prereq 5172, CAPS 5162, #)
538167 Osborne C, Polzin D, ar cr

8291 Advanced Diagnosis and Therapeutics of Animal Diseases (prereq 5172, CAPS 5162, #)
334928 Osborne C, ar cr

8292 Seminar: Veterinary Medicine (prereq grad, #)
935458 Osborne C, ar cr

8293 Medical Conference (prereq 5172, CAPS 5162, #)
338641 Osborne C, ar cr

8295 Comparative Veterinary Medical Ophthalmology (prereq grad or #)
530988 Bistner S, 3 cr

8296 Comparative Veterinary Surgical Ophthalmology (prereq grad or #)
739303 Bistner S, 3 cr

8297 Advanced Clinical Veterinary Ophthalmology (prereq grad or #)
138253 Bistner S, 3 cr

8298 Research in Veterinary Ophthalmology (prereq grad or #)
236462 Bistner S, 3-5 cr

8299 Research in Veterinary Medicine
531428 ar cr

8390 Seminar: Veterinary Surgery (prereq 5360, 5365 or equiv, #)
832052 Wallace L, Lipowitz A, others, ar cr

8391 Advanced Small Animal Surgery (prereq CVM 5350 or equiv, #)
340289 —1 Wallace L, Lipowitz A, others, ar cr
729483 —2 Wallace L, Lipowitz A, others, ar cr

8394 Surgery of the Gastrointestinal System (prereq CAPS 5160 or #)
437593 Caywood D, Lipowitz A, ar cr

8398 Research in Veterinary Anesthesia (prereq grad of professional veterinary curriculum, 8396, LACS 8397 or equiv, #) (A-F only)
036746 Raffe M, Hendrix P, others, 2-4 cr

8399 Seminar: Veterinary Anesthesia (prereq grad of professional veterinary curriculum, 8396, CAPS 8397 or equiv, #) (A-F only)
136471 Raffe M, Hendrix P, others, 1-4 cr

8410 Surgical Physiology (prereq 8391, #)
833850 Wallace L, Caywood D, 2 cr

8420 Neurosurgery (prereq 8391 or equiv, #) (A-F only)
340499 Wallace L, 2-3 cr

8430 Thoracic and Cardiovascular Surgery (prereq 8391, #)
231777 Caywood D, Lipowitz A, 3 cr

8471 Therapeutic Radiology (max 2 cr; prereq 5452, #)
038934 Feeney D, Johnston G, others, ar cr

8480 Seminar: Veterinary Radiology (prereq 5452, #)
129438 0800-0850 T, VetTchHsp 282, Walter P, Feeney D, others, 1 cr

8490 Advanced Veterinary Radiology (prereq 5450, 5451, 5452 or equiv, #) (A-F only)
335318 Feeney D, Johnston G, others, 1-2 cr

8491 Fundamentals of Nuclear Medicine (prereq #) (A-F only)
732867 Johnston G, Feeney D, others, ar cr

8492 Radiation Biology (max 3 cr; prereq grad, #) (A-F only)
738572 Feeney D, Johnston G, others, 1-3 cr

SOCIAL AND ADMINISTRATIVE PHARMACY (SAPh)

Social, Administrative, and Hospital Pharmacy

Pharmacy

8100 Seminar
831113 —1 1430-1625 Th, HSUnitF 7164, 1 cr
530263 —2 1325-1625 Th, HSUnitF 7193, 1 cr

8200 Research Problems
431051 ar cr

8290 Clinical Clerkship (prereq 8270)
934195 Cloyd J, 2-5 cr

8400 Special Clinical Problems
234498 ar cr

8500 Pharmacy and Its Environment (prereq #)
122434 Strand L, Morley P, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
338834 1-18 cr

8700 Hospital Administration (A-F only)
530621 2 cr

8777 Thesis Credits: Masters
333519 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
834593 1-36 cr

SOCIAL AND PHILOSOPHICAL FOUNDATIONS OF EDUCATION (SPFE)

Educational Policy and Administration

Education and Human Development

8777 Thesis Credits: Masters
135569 1-16 cr

SOCIAL WORK (SW)

Human Ecology

R 1001 Introduction to Social Welfare and Community Services
140738 0905-1100 MW, FordH 115, Macy-Lewis J, 5 cr

3970 Directed Studies
731329 1-15 cr

3990 Directed Research (prereq #)
640797 ar cr

R 5024 Multidisciplinary Perspectives on Aging (§AdEd 5440, CPsy 5305, HSU 5009, PA 5414, PubH 5737, Soc 5960)
634546 1640-1825 MW, MoosT 2690, Quam J, 4 cr

R 5025 International Social Welfare (prereq 1001, 3984 or Δ)
040392 0905-1205 Th, FordH 170, Hollister C D, Menanteau D, 3 cr

R 5100 Youth in the World (§YoSt 5100)
731184 1535-1835 M, McNH 180, Baizerman M, 3 cr (StP)

R 5211 Advanced Theories of Human Growth and Change (prereq grad standing or 12 cr in social sciences)
529727 0800-1100 T, FordH 70, Kivnick H, 3-4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5312 Seminar: Direct Work with Adolescents (§YoSt 5312)
438758 1745-2045 Th, McNH 386, Beker J, 3 cr (StP)

R 5349 Social Welfare in America (§Hist 5349)
034575 0800-1100 M, BlegH 110, Morrissey M, 3-4 cr

R 5498 Child Development and Social Policy (§PA 5498)
934018 0905-1205 W, HHHCtr 30, Brookins G, 3 cr

5970 Independent Study in Social Work
338591 ar cr

8010 Field Instruction I (8010†; 4 cr or ar cr by #) (S-N only)
238440 Sullivan M, ar cr

8020 Field Instruction II (8020†; 4 cr or ar cr by #; prereq 8010) (S-N only)
140309 Sullivan M, ar cr (alt M)

8030 Field Instruction in Social Work III (8030†; prereq 8020) (S-N only)
339935 Sullivan M, ar cr

R 8121 Social Policy and Delivery Systems for Family and Children's Services (prereq 5111)
736613 1220-1520 T, FordH 120, Johnston N, 3 cr

R 8122 Health/Mental Health Policy (prereq 5111)
933936 0800-1100 T, FordH 160, Strom K, 3 cr

R 8150 Special Topics in Social Policy: Contemporary Child Welfare: Policy, Programs, Research, and Emerging Issues
623613 1220-1520 T, AmundH 104, Wattenberg E, Robinson, 3 cr

R 8350 Planned Social Change
438503 —1 1430-1730 M, FordH 60, Long A, 3 cr
338347 —2 1430-1730 M, HckrH 312, 3 cr (StP)

R 8400 Social Work Methods I (prereq ¶8010)
334606 —1 1325-1625 T, FordH 160, Strom K, 3 cr
136681 —2 1325-1625 T, FordH 170, Rooney R, 3 cr

R 8406 Supervision and Consultation in Social Work Practice (prereq 8401, #)
740287 1535-1835 Th, FordH 170, Peterson M, 3 cr

R 8408 Direct Work with Children and Their Families (prereq 8121, 8402 or equiv)
333259 0800-1100 Th, FordH 70, Gearity A, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
630285 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
229799 1-36 cr

8970 Directed Study (prereq #)
040540 —1 ar cr
940983 —2 ar cr

8990 Research Projects (max 6 cr)
833895 ar cr

R 8991 Research Seminar (prereq doctoral student)
737521 0800-1100 Th, FordH 150, Jones L, 3 cr

SOCIOLOGY (Soc)
Liberal Arts

R 1001 Introduction to Sociology (SSci; CD)
836313 —1 1115-1205 MWF, BlegH 5, Reiss I, 4 cr
035354 —2 1325-1415 MWF, BlegH 5, Fulton R, 4 cr
234954 —3 1245-1400 TTh, AndH 210, Kennedy R, 4 cr

R 1001H Honors Course: Introduction to Sociology
639696 1115-1230 TTh, BlegH 335, Nelson J, 4 cr

R 1003 Social Problems
824100 1115-1205 MWF, AndH 350, Fulton R, 4 cr

R 3101 Introduction to American Criminal Justice (SSci; C/PE)
631596 1115-1230 TTh, AndH 210, Samaha J, 4 cr

R 3201 Principles of Social Psychology (prereq 1001)
★LECT 1245-1400 TTh, BlegH 10, Spitzer S
624048 —1 LAB 0800-0940 M, BlegH 260, 5 cr
624051 —2 LAB 0800-0940 T, BlegH 260, 5 cr
224053 —3 LAB 0800-0940 W, BlegH 260, 5 cr
724056 —4 LAB 0800-0940 Th, BlegH 260, 5 cr
524057 —5 LAB 0800-0940 F, BlegH 260, 5 cr

R 3405 Inequality: Introduction to Stratification (prereq 1001)
324187 0945-1100 TTh, BlegH 225, Nelson J, 4 cr

R 3524 America's Sexual Crisis (SSci)
830446 1010-1100 MWF, AndH 210, Reiss I, 4 cr

R 3551 World Population Problems
336503 1415-1530 TTh, AndH 350, Kennedy R, 4 cr

R 3801 Sociological Methods I: Descriptive Statistics (prereq intermediate algebra or GC 0631, soc maj)
★LECT 0945-1100 TTh, BlegH 10, Uggen C
537097 —1 LAB 0800-0850 MW, BlegH 440, 5 cr
533891 —2 LAB 0905-0955 MW, BlegH 440, 5 cr
337067 —3 LAB 1010-1100 MW, BlegH 440, 5 cr
840278 —4 LAB 1115-1205 MW, BlegH 440, 5 cr
140617 —5 LAB 1220-1310 MW, BlegH 440, 5 cr
629962 —6 LAB 0800-0850 TTh, BlegH 440, 5 cr
839941 —7 LAB 0800-0850 TTh, BlegH 90, 5 cr

R 3801H Honors Course: Sociological Methods I: Descriptive Statistics (prereq intermediate algebra or GC 0631 or #, honors soc maj)
★LECT 0945-1100 TTh, BlegH 10, Uggen C
039470 —80 LAB 0800-0850 TTh, BlegH 90, 5 cr

R 3803 Sociological Methods III: Research Methods (prereq 3801, 3802 or equiv or #, soc maj)
★LECT 0945-1100 TTh, BlegH 235, McLeod J
433334 —1 LAB 0800-0850 MW, BlegH 115, 5 cr
829992 —2 LAB 0905-0955 MW, BlegH 115, 5 cr
434208 —3 LAB 1010-1100 MW, BlegH 115, 5 cr
135644 —4 LAB 1115-1205 MW, BlegH 115, 5 cr

R 3811 Computer Usage for Social Statistics (¶3801 rec) (S-N only)
136589 0800-0930 F, BlegH 440, 1 cr

R 3960 Topics in Sociology (prereq 1001 or #)
724106 —1 1325-1415 MWF, BlegH 215, Liu Q, 4 cr (Modern Social Changes in China's Rural Areas) (§Area 3910)
524107 —2 1415-1530 TTh, BlegH 215, Alapuro R, 4 cr (Nationalism, Democracy, and Civil Society in Northeastern and Northern Europe) (§Area 3920, sec 2)

R 5102 Criminology (prereq 3101, 3102 or #)
124104 1245-1400 TTh, BlegH 255, Ward D, 4 cr

R 5104 Community-Based Corrections (prereq 3102 or #)
830995 0815-0930 TTh, BlegH 215, Carlson N, 4 cr

R 5108 Current Issues in Crime Control (prereq 3102 or #)
224098 1115-1230 TTh, BlegH 120, Carlson N, 4 cr

R 5142 Juvenile Justice Law and Organization (prereq 3101, 3102 or #...5161, 5162 rec)
129268 1430-1715 Th, BlegH 120, Malmquist C, 4 cr

R 5147 Sociology of Mental Disorders (prereq 1001 or #)
224103 0945-1100 TTh, BlegH 240, Spitzer S, 4 cr

R 5311 Sociology of Conflict (prereq 3401 or 5401 or equiv or #)
124099 1325-1415 MWF, BlegH 120, Cooperman D, 4 cr

R 5703 Social Life and Cultural Change (prereq 8 cr in social science or #)
624101 1200-1310 WF, BlegH 235, Laslett B, 4 cr

R 5812 Content Analysis Methods (prereq 3803 or equiv or #)
424097 1600-1715 TTh, BlegH 440, McTavish D, 4 cr

R 5855 Sociology of Medicine and Health Care: An Introduction to Medical Sociology (§PubH 5790; prereq jr or sr or grad student)
137208 1115-1205 MWF, Mayo C381, Litman T, 4 cr

R 5960 Topics in Sociology (prereq 1001)
638922 1640-1825 MW, MoosT 2690, 4 cr

R 5966 Advanced Project Seminar (prereq all other required sociology coursework, Comp 3014, Δ) (A-F only)
837767 —1 1245-1400 TTh, HHHCtr 60, McTavish D, 4 cr
530912 —2 1245-1400 TTh, HHHCtr 20, Uggen C, 4 cr

R 5977 Proseminar (5977-5978-5979†; prereq honor or BS Soc maj, 3201, 3401, 3801-2-3, 35 cr min soc crs wrk) (A-F only)
440963 1325-1555 W, BlegH 210, Marini M, 3 cr

8090 Topics in Sociology (prereq #)
437674 ar cr

R 8105 Seminar: Criminal Policy
924105 1325-1600 F, BlegH 350, Ward D, 3 cr

R 8415 Theories of Social Organization (prereq #)
424102 1430-1745 Th, HHHCtr 20, Nelson J, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
637561 1-18 cr

R 8702 Seminar: Contemporary Sociological Theory (prereq 8701 or #) (A-F only)
533289 1325-1645 W, SocSci 101, Pierce J, 4 cr

R 8711 Seminar: Principles of Social Science (prereq 1st yr soc grad stu or #) (A-F only)
239278 1430-1610 WF, BlegH 330, Laslett B, 4 cr

R 8755 Seminar: Research in Political Sociology (prereq 5755 or #)
624096 1010-1310 F, BlegH 350, Brustein W, 4 cr

8777 Thesis Credits: Masters
438534 1-16 cr

R 8813 Data Analysis II (prereq 8812 or #) (A-F only)
★LECT 1245-1400 T, AndH 170, Knoke D
030445 —1 LAB 1245-1400 Th, AndH 170, 4 cr

R 8814 Seminar: Design of Sociological Research I (prereq 1st yr soc grad stu or #) (A-F only)
329700 1415-1530 TTh, BlegH 125, McTavish D, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
532384 1-36 cr

SOIL SCIENCE (Soil)
Soil, Water, and Climate
Agricultural, Food, and Environmental Sciences

R 1425 Introduction to Meteorology (Phys/L)
★LECT 1325-1415 MWF, AndH 330, Baker D, Klink K, (Mpls)
141041 —1 REC 1325-1415 TTh, BlegH 445, 4 cr (Mpls)
739429 —2 REC 1430-1520 TTh, BlegH 445, 4 cr (Mpls)

R 3125 Basic Soil Science (§1020; prereq Chem 1051) (Phys/L; Envt)
★LECT 0905-0955 MWF, BorH 335, Cooper T
632232 —1 REC 0905-0955 Th, Soils S415, Cooper T, 5 cr
432331 —2 REC 1010-1100 Th, Soils S415, Cooper T, 5 cr
440008 —3 REC 1115-1205 Th, Soils S415, Cooper T, 5 cr
440820 —4 REC 1220-1310 Th, Soils S415, Cooper T, 5 cr
129861 —5 REC 1325-1415 Th, Soils S415, Cooper T, 5 cr
★LAB (2 hr lab ar) (open lab times: 0900-1700 M, 0900-2100 TW, BorH 242, M a.m. to W p.m.)

R 3220 Soil Conservation and Land-Use Management (prereq 1020/3125 or #) (A-F only) (course fee)
★LECT 1010-1100 MWF, BorH 365, Bell J
534748 —1 LAB 0905-0955 M, Soils S415, Bell J, 4 cr
432572 —2 LAB 1325-1415 W, BorH 375, Bell J, 4 cr

R 3521 Collegiate Soil Judging (max 3 cr; prereq 5510)
830964 Cooper T, 1 cr

R 5100 Problem Solving in Environmental Science (prereq sr) (A-F only)
423614 1500-1700 TTh, BorH 375, Cooper T, 5 cr

R 5104 Computer Applications in Soil Science (prereq 1020/3125 or equiv, #)
834142 1220-1420 M, BorH 375, Robert P, 2 cr

R 5110 Practicum Internship in Precision Agriculture (prereq sr or grad stu, #) (S-N only)
530506 Robert P, 2-4 cr

R 5114 Special Problems in Soils (I; prereq 3125, #, Δ)
731086 1-7 cr

R 5232 Soil Physics (prereq Math 1142 or equiv or #)
★LECT 0905-0955 MWF, BorH 375, Gupta S
932169 —1 LAB 0905-1205 T, BorH 191, Gupta S, 4 cr

R 5610 Soil Biology (prereq sr or grad student)
436413 1010-1100 MWF, BorH 375, Graham P, 4 cr

R 5611 Soil Biology Laboratory (prereq ¶5610, sr or grad stu)
334086 1325-1520 T, Soils S332, Graham P, 1 cr

R 8000 Supervised Teaching Experience (§Agro 8000, Hort 8000; prereq #) (S-N only)
030848 1220-1415 M, BorH 491, Allan D, 2 cr

R 8111 Colloquia in Soil Science (prereq maj or min or #) (S-N only)
540999 1 cr

R 8112 Colloquia in Soil Science II (prereq maj or min or #)
440462 1-2 cr

8124 Research Problems in Soils
133899 2-5 cr

8128 Seminar: Soils (S-N only)
135997 1500-1550 M, BorH 375, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
635101 1-18 cr

8777 Thesis Credits: Masters
135062 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
131327 1-36 cr

SOUTH ASIAN LANGUAGES & CULTURES (SALC)
Linguistics & Asian & Slavic Languages & Literatures
Liberal Arts

R 3202 Modern Indian Literature in Translation (§SALC 5202, SoAS 3202)
223615 1220-1310 MWF, FolH 38, Junghare I, 4 cr

R 3970 Directed Studies (prereq #, Δ, ❑)
431809 1-15 cr

R 5202 Modern Indian Literature in Translation (§3202)
424505 1220-1310 MWF, FolH 38, Junghare I, 4 cr

R 5970 Directed Studies (prereq #, Δ)
237000 ar cr

R 5990 Directed Research (prereq #, Δ, CLA approval)
539013 Junghare I, ar cr

R 8866 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
232461 1-18 cr

R 8777 Thesis Credits: Masters
935380 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
535463 1-36 cr

SPANISH (Span)
Spanish and Portuguese
Liberal Arts

R 1101 Beginning Spanish
838935 —1 0800-0850 MTWThF, FolH 116, 5 cr
838711 —2 0800-0850 MTWThF, FolH 208, 5 cr
138561 —3 0905-0955 MTWThF, FolH 208, 5 cr
534152 —4 0905-0955 MTWThF, KoltH S138, 5 cr
041042 —5 1010-1100 MTWThF, FolH 138, 5 cr
830057 —6 1010-1100 MTWThF, KoltH S138, 5 cr
431681 —7 1115-1205 MTWThF, KoltH S135, 5 cr
140570 —8 1115-1205 MTWThF, AkerH 309, 5 cr
231214 —9 1220-1310 MTWThF, BlegH 225, 5 cr
640038 —10 1220-1310 MTWThF, FolH 134, 5 cr
532305 —11 1325-1415 MTWThF, KoltH S132, 5 cr
633297 —12 1535-1625 MTWThF, FolH 134, 5 cr
033782 —13 1535-1625 MTWThF, FolH 116, 5 cr

R 1102 Beginning Spanish (prereq 1101)
036648 —1 0800-0850 MTWThF, FolH 340, 5 cr
629847 —2 0800-0850 MTWThF, KoltH S135, 5 cr
629685 —3 0905-0955 MTWThF, FolH 116, 5 cr
034138 —4 0905-0955 MTWThF, NichH 213, 5 cr
939736 —5 1115-1205 MTWThF, FolH 134, 5 cr
537410 —6 1220-1310 MTWThF, KoltH S135, 5 cr
332127 —7 1430-1520 MTWThF, FolH 116, 5 cr

R 1103 Beginning Spanish (prereq 1102)
533812 —1 0800-0850 MTWThF, FolH 306, 5 cr
937310 —2 0905-0955 MTWThF, VinH 206, 5 cr
232217 —3 1010-1100 MTWThF, FolH 116, 5 cr
131277 —4 1115-1205 MTWThF, AkerH 313, 5 cr
236719 —5 1220-1310 MTWThF, FolH 116, 5 cr
635096 —6 1220-1310 MTWThF, AmundH 116, 5 cr
833864 —7 1325-1415 MTWThF, FolH 134, 5 cr
730052 —8 1430-1520 MTWThF, KoltH S132, 5 cr
831371 —9 1430-1520 MTWThF, VinH 213, 5 cr
640461 —10 1535-1625 MTWThF, KoltH S133, 5 cr

R 1104 Intermediate Spanish (prereq 1103 or 3 yrs high school Spanish)
135014 —1 0800-0850 MTWThF, PeikH 225, 5 cr
431941 —2 0800-1100 MTWThF, NichH 109, 5 cr (Intensive Spanish crse) (concurrent registration in 1105, sec 2, 1106, sec 2, is required) (go to FolH 34 for permission)
340504 —3 0800-0850 MTWThF, KoltH S138, 5 cr
731461 —4 0905-0955 MTWThF, FolH 134, 5 cr
234193 —5 1010-1100 MTWThF, VinH 206, 5 cr
437805 —6 1010-1100 MTWThF, AmundH 116, 5 cr
139354 —7 1115-1205 MTWThF, FolH 116, 5 cr
732352 —8 1220-1310 MTWThF, KoltH S133, 5 cr
137734 —9 1220-1310 MTWThF, KoltH S134, 5 cr
135398 —10 1325-1415 MTWThF, AmundH 120, 5 cr
638435 —11 1430-1520 MTWThF, FolH 134, 5 cr
829197 —12 1430-1520 MTWThF, FolH 340, 5 cr
933550 —13 1430-1520 TTh, FolH 318, 1430-1520 MWF, FolH 142, 5 cr
524110 —14 1535-1625 MTWThF, KoltH S132, 5 cr
524124 —15 1535-1625 MTWThF, KoltH S134, 5 cr

R 1105 Intermediate Spanish (prereq 1104 or 4 yrs high school Spanish)
636586 —1 0800-0850 MTWThF, FolH 134, 5 cr
236218 —2 0800-1100 MTWThF, NichH 109, 5 cr (Intensive Spanish crse) (concurrent registration in 1104, sec 2, 1106, sec 2, is required) (go to FolH 34 for permission)
840524 —3 0905-0955 MTWThF, VinH 20, 5 cr
333875 —4 1010-1100 MTWThF, FolH 134, 5 cr
729953 —5 1115-1205 MTWThF, VinH 209, 5 cr
334461 —6 1220-1310 MTWThF, KoltH S132, 5 cr
433138 —7 1325-1415 MTWThF, FolH 116, 5 cr
636328 —8 1430-1520 MTWThF, KoltH S136, 5 cr
324125 —9 1535-1625 MTWThF, KoltH S135, 5 cr

R 1106 Intermediate Spanish (prereq 1105 or 5 yrs high school Spanish)
533048 —1 0800-0915 MWF, AmundH 156, 5 cr
733694 —2 0800-1100 MTWThF, NichH 109, 5 cr (Intensive Spanish crse) (concurrent registration in 1104, sec 2, 1105, sec 2, is required) (go to FolH 34 for permission)
737647 —3 0905-1020 MWF, FordH 40, 5 cr
339675 —4 1010-1125 MWF, VinH 1, 5 cr
234985 —5 1115-1230 MWF, VinH 206, 5 cr
331429 —6 1115-1230 MWF, MurH 311, 5 cr
134090 —7 1325-1440 MWF, AmundH 104, 5 cr
433723 —8 1430-1545 MWF, FordH 130, 5 cr
124126 —9 1430-1545 MWF, AmundH 156, 5 cr

R 3015 Spanish Composition and Communication (prereq 1106 or equiv and Graduation Proficiency Test)
138110 —1 0800-1030 MWF, AmundH 124, 5 cr (Intensive Spanish crse) (concurrent registration in 3016, sec 1, is required) (go to FolH 34 for permission)
835940 —2 0800-0915 MWF, FolH 218, 5 cr
633770 —3 0800-0915 MWF, AmundH 104, 5 cr
930714 —4 0905-1020 MWF, SmithH 111, 5 cr
635941 —5 1115-1230 MWF, FordH 160, 5 cr
433771 —6 1430-1545 MWF, FordH 170, 5 cr

R 3016 Advanced Spanish Composition and Communication (prereq 3015 or equiv and Graduation Proficiency Test)
529405 —1 0800-1030 MWF, AmundH 124, 5 cr (Intensive Spanish crse) (concurrent registration in 3015, sec 1, is required) (go to FolH 34 for permission)
739205 —2 0800-0915 MWF, FordH 120, 5 cr
437013 —3 1010-1125 MWF, VinH 20, 5 cr
324111 —4 1115-1230 MWF, FordH 170, 5 cr
124112 —5 1430-1545 MWF, AkerH 309, 5 cr
024113 —6 1430-1545 MWF, AmundH 124, 5 cr

R 3104 The Art of Reading Literary Texts (prereq 3016)
532062 —1 1220-1310 MWF, FolH 318, 4 cr
638693 —2 0945-1100 TTh, VinH 1, Arenas F, 4 cr

R 3105 Introduction to the Study of Hispanic Cultures (prereq 3016 or #)
035256 —1 0905-0955 MWF, WullH 220, 4 cr
841110 —2 1115-1230 TTh, VinH 20, 4 cr

R 3107 Introduction to the Study of Hispanic Linguistics (prereq 3016 or #)
136955 1115-1205 MWF, LindH 215, 4 cr

R 3211 Spanish Literature: Aspects of Prose and Fiction (prereq 3104)
824114 1010-1100 MWF, ScottH 4, Sullivan C, 4 cr

R 3211H Honors Course: Spanish Literature: Aspects of Prose and Fiction (prereq 3104)
624115 1010-1100 MWF, ScottH 4, Sullivan C, 4 cr

R 3253 Spanish-American Literature: Aspects of Drama (§LAS 3253; prereq 3104)
424116 1220-1310 MWF, FolH 312, Ramos-Garcia L, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 3253H Honors Course: Spanish-American Literature: Aspects of Drama (prereq 3104, honors student or #)
224117 1220-1310 MWF, FolH 312, Ramos-Garcia L, 4 cr

R 3510 Topics in Hispanic Cultures (prereq 3104 or 3105 or 3107)
124118 1115-1230 TTh, FolH 50, Vidal H, 4 cr

R 3701 The Structure of Spanish and Portuguese: Phonology (prereq 3001 or #)
329342 1430-1520 MWF, SmithH 111, Ocampo A, 4 cr

R 3910 Topics in Spanish Peninsular Literature (max 12 cr; prereq 3104 or #)
924119 1325-1415 MWF, FolH 214, Ramos-Garcia L, 4 cr

R 3910H Topics in Spanish Peninsular Literature (max 12 cr; prereq 3104 or #)
224120 1325-1415 MWF, FolH 214, Ramos-Garcia L, 4 cr

3970 Directed Studies (prereq #, Δ, ⊔)
132081 1-5 cr

R 3972 Graduation Seminar (prereq 30 cr Span 3xxx or Span-Port 3xxx courses, Δ) (A-F only)
234792 1220-1335 W, ChDev 105, Sullivan C, 4 cr

R 3972H Honors Graduation Seminar (prereq 30 cr Span 3xxx or SpPt 3xxx crses, honors stu, Δ) (A-F only)
729371 1220-1335 W, ChDev 105, Sullivan C, 4 cr

5106 The Literature of the Reconquest and Feudal Spain (prereq 3xxx or 5xxx literature courses in Span or Port)
124121 1430-1730 W, FolH 426, Mirrer L, 4 cr

5529 National Affirmation and Transnationalization (prereq 3xxx or 5xxx Span or Port lit courses or Δ)
924122 1430-1730 T, FolH 218, Jara R, 4 cr

5715 The Structure of Modern Spanish: Pragmatics (prereq 5713 or #)
724123 1415-1530 TTh, VinH 20, Ocampo F, 4 cr

5970 Directed Readings (max 15 cr; prereq #, Δ, CLA approval)
532787 1-5 cr (FolH)

5990 Directed Research (prereq #, Δ, CLA approval)
637141 1-5 cr (FolH)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
530893 1-18 cr (FolH)

8777 Thesis Credits: Masters
432815 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
029988 1-36 cr

8970 Directed Readings in Romance Languages (prereq Δ)
731587 ar cr

SPANISH-PORTUGUESE (SpPt)
Spanish and Portuguese
Liberal Arts

3980 Directed Instruction (max 8 cr; prereq #, Δ, ⊔) (S-N only)
234310 1-4 cr

5999 The Teaching of College-Level Spanish and Portuguese: Theory and Practice (A-F only)
229558 1325-1455 TTh, FolH 344, Klee C, 4 cr

8920 Cross-Cultural Issues in Hispanic and Luso-Brazilian Literatures (prereq #) (A-F only)
723621 1430-1730 Th, FolH 208, Vidal H, 4 cr

SPEECH-COMMUNICATION (Spch)
Liberal Arts

R 1101 Introduction to Public Speaking
937291 —1 0800-0955 MW, FolH 318, 4 cr
033118 —2 1010-1205 MW, FolH 38, 4 cr
540310 —3 1010-1205 MW, CivE 212, 4 cr
132848 —4 1325-1520 MW, FolH 312, 4 cr
535320 —5 0800-0955 TTh, FolH 50, 4 cr
038187 —6 0800-0955 TTh, FolH 419, 4 cr
938635 —7 1010-1205 TTh, FolH 214, 4 cr
939249 —8 1010-1205 TTh, FolH 334, 4 cr
440381 —9 1220-1415 TTh, FolH 208, 4 cr
137676 —10 1430-1625 TTh, FolH 312, 4 cr
640640 —11 1430-1625 TTh, FolH 334, 4 cr
740046 —12 1430-1625 TTh, FolH 138, 4 cr

R 1313 Analysis of Oral Argument (C/PE)
838823 —1 0800-0955 MW, FolH 419, 4 cr
923634 —2 1325-1520 MW, FolH 419, 4 cr
430871 —3 0800-0955 TTh, FolH 334, 4 cr
539514 —4 1010-1205 TTh, FolH 318, Schiappa A, 4 cr
336064 —5 1220-1415 TTh, FolH 334, 4 cr
935444 —6 1220-1415 TTh, FolH 318, 4 cr

R 3110 Current Topics in Speech-Communication: Communication and Gender (may be repeat for cr with #; §WoSt 3305; prereq 3211, 3401, 3601, whichever relev to topic)
123633 1010-1205 TTh, FolH 419, Sheldon A, 4 cr

R 3191H Honors Course: Tutorial Seminar in Speech (prereq honors candidate in speech-communication, #, Δ)
431535 1325-1520 MW, BuH 120, Rarick D, 4 cr

R 3201 Introduction to Electronic Media Production
130864 —1 1010-1205 MW, RarigC 616, 4 cr
132338 —2 0800-0955 TTh, RarigC 616, 4 cr
138505 —3 1430-1625 TTh, RarigC 616, 4 cr

R 3211 Introduction to Electronic Media in America (SSci) (A-F only)
733100 1200-1400 TTh, FolH 306, 4 cr

R 3291 New Telecommunication Media (prereq 3211 or #)
829653 1010-1205 MW, FolH 318, Rarick D, 4 cr

R 3402 Introduction to Interpersonal Communication
123624 1010-1205 MW, FolH 334, Omdahl B, 4 cr

R 3411 Small Group Communication Processes (prereq 1101 or #) (C/PE)
439859 —1 0800-0955 MW, FolH 312, 4 cr
932351 —2 1010-1205 MW, FolH 312, 4 cr
137502 —3 0800-0955 TTh, FolH 312, 4 cr
934245 —4 1010-1205 TTh, FolH 312, 4 cr
630240 —5 1220-1415 TTh, FolH 312, 4 cr

R 3431 The Role of Persuasion in the Modern World (soph standing rec) (C/PE)
633882 1010-1205 MW, FolH 419, Kinney, 4 cr

R 3441 Communicating in Organizations (prereq 1101 or equiv)
633347 1430-1625 TTh, FolH 419, 4 cr

R 3451 Intercultural Communication: Theory and Practice (prereq planning an intercultural experience)
230032 1325-1520 MW, FolH 334, 4 cr

R 3452 Communication and the Intercultural Reentry (prereq return from an intercultural experience)
129665 1220-1415 TTh, FolH 419, 4 cr

R 3601 Introduction to Rhetorical Theory (prereq 1101) (Hist; C/PE)
933886 1010-1205 TTh, CivE 212, 4 cr

R 3605 Persuasive Speaking (prereq 1101)
031630 —1 1535-1730 MW, FolH 419, Wilson, 4 cr
131495 —2 0800-0955 TTh, FolH 318, 4 cr

3970 Directed Studies (no major program cr for spch-comm maj; prereq at least one spch-comm course, #, Δ, ⊔)
839244 ar cr

3980 Directed Instruction (max 8 cr; no major program cr for speech-communication maj; prereq #, Δ, ⊔) (S-N only)
831063 1-4 cr

R 5211 Contemporary Problems in U.S. Electronic Media (prereq 3211, sr status) (CD)
423628 1535-1730 TTh, FolH 318, 4 cr

R 5231 Comparative Electronic Media Systems (prereq 3211 or #) (IP)
223629 1325-1520 MW, FolH 318, Browne D, 4 cr

R 5421 Quantitative Research in Communication (prereq 3401 or 5403 or #)
333407 1010-1205 TTh, FolH 344, Hewes D, 4 cr

R 5431 The Process of Persuasion (prereq 3431) (C/PE)
623630 1535-1730 MW, FolH 334, Kinney, 4 cr

R 5451 Intercultural Communication (recommend 3401, Anth 1102 or another course in cultural anthropology or #) (IP)
931314 1535-1730 MW, FolH 318, Albert R, 4 cr

R 5461 Conversation Analysis (§Ling 5751; prereq 3401, Ling 3001 or Ling 5001 or #)
723862 1325-1520 MW, FolH 326, Sheldon A, 4 cr

R 5617 History and Criticism of American Public Address (prereq 1101 or 1101H, Psy 1001)
423631 1010-1205 MW, FolH 344, Wilson, 4 cr

5970 Directed Readings (prereq nine upper div speech cr, #, Δ, CLA approval) (S-N only)
935413 ar cr

R 8110 Seminar: Advanced Speech Problems: The Rhetoric of Popular Culture (§CSDS 8910, sec 2; prereq undergrad degree in spch-comm or equiv)
230452 1325-1625 W, FolH 38, Schiappa A, 4 cr

R 8411 Seminar: Small Group Communication (prereq 1101, 5411)
330216 1430-1730 T, FolH 208, Hewes D, 3 cr

8611 Seminar in Rhetoric (prereq 5611 or #)
223632 1325-1625 F, FolH 344, Scott R, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
631677 1-18 cr

8777 Thesis Credits: Masters
037041 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
239345 1-36 cr

8990 Research (prereq #, Δ) (S-N only)
038609 ar cr

STATISTICS (Stat)
Liberal Arts

R 1001 Introduction to Ideas of Statistics (prereq high school algebra) (Math)
★LECT 0905-0955 MWF, ClaOff B35, Oehlert G, (StP)
930776 —1 LAB 0905-0955 T, ClaOff B36, 4 cr (StP)
138732 —2 LAB 1010-1100 T, ClaOff B36, 4 cr (StP)
★LECT 1010-1100 MWF, Phys 170, Posse C
334508 —3 LAB 1010-1100 T, VinH 311, 4 cr
339272 —4 LAB 1010-1100 Th, VinH 311, 4 cr
★LECT 1325-1415 MWF, EE/CSci 3111, Eaton M
132946 —5 LAB 1325-1415 T, VinH 301, 4 cr
723618 —6 LAB 1325-1415 Th, VinH 301, 4 cr

R 3011 Statistical Analysis (prereq college algebra) (Math)
★LECT 0800-0850 MWF, Phys 170, Posse C
639312 —1 LAB 0800-0850 T, VinH 301, 4 cr
733257 —2 LAB 0800-0850 T, VinH 209, 4 cr
930115 —3 LAB 0800-0850 T, VinH 113, 4 cr
★LECT 1010-1100 MWF, PillsH 110, Tierney L
634580 —4 LAB 1010-1100 T, VinH 209, 4 cr
533485 —5 LAB 1010-1100 Th, VinH 209, 4 cr
836134 —6 LAB 1010-1100 Th, VinH 2, 4 cr
★LECT 1325-1415 MWF, PetH 110, Grund B, (StP)
638659 —7 LAB 1220-1310 T, ClaOff B30, 4 cr (StP)
430952 —8 LAB 1325-1415 T, ClaOff B30, 4 cr (StP)
735459 —9 LAB 1430-1520 T, ClaOff B30, 4 cr (StP)

R 3012 Statistical Analysis (prereq 3011)
★LECT 1220-1310 MWF, CivE 212, Geyer C
136082 —1 LAB 1220-1310 T, CivE 213, 4 cr
840300 —2 LAB 1220-1310 Th, CivE 213, 4 cr

R 3091 Introduction to Probability and Statistics (§5121, 5131; prereq differential, integral calculus)
★LECT 0905-0955 MWF, Phys 210, Sudderth W
431924 —1 LAB 0905-0955 T, VinH 207, 4 cr
336243 —2 LAB 0905-0955 Th, VinH 207, 4 cr
★LECT 1115-1205 MWF, FordH 120, Dickey J
534619 —3 LAB 1115-1205 T, VinH 207, 4 cr
431650 —4 LAB 1115-1205 Th, VinH 207, 4 cr
★LECT 1325-1415 MWF, Phys 210, Lindgren B
433950 —5 LAB 1325-1415 T, VinH 207, 4 cr
240527 —6 LAB 1325-1415 Th, VinH 207, 4 cr

R 5021 Statistical Analysis (§3012; prereq college algebra)
★LECT 0905-1005 MWF, AmundH 240, Meeden G
140794 —1 LAB 0905-1005 T, VinH 209, 5 cr
438775 —2 LAB 0905-1005 Th, VinH 209, 5 cr
★LECT 1115-1215 MWF, ClaOff B25, Hawkins D, (StP)
836277 —3 LAB 0905-1005 Th, ClaOff 135, 5 cr (StP)
031921 —4 LAB 1010-1110 Th, ClaOff 135, 5 cr (StP)

R 5121 Theory of Statistics (§5131-5132-5133; prereq Math 1252)
★LECT 1430-1530 MWF, FordH 120, Geyer C
831001 —1 REC 1430-1530 T, VinH 207, 5 cr
339269 —2 REC 1430-1530 Th, VinH 207, 5 cr

R 5131 Theory of Statistics (§5121-5122; prereq Math 3252)
639553 —1 0905-0955 MWF, VinH 2, Lindgren B, 4 cr
733906 —2 1115-1205 MWF, VinH 211, Eaton M, 4 cr
733808 —3 1325-1415 MWF, VinH 311, Geisser S, 4 cr

R 5151 Theory of Statistics (§5121-5122; 5131-5132-5133; prereq Math 3252, stat grad stu)
234551 1325-1425 MWF, VinH 211, Pruitt R, 4 cr

R 5161 Applied Statistical Methods (§5201, 5301, 5302, 5421; prereq ¶5131 or ¶5151, grad stat stu or #) (A-F only)
★LECT 0800-0955 MWF, ClaOff B42, Weisberg S, (StP)
923620 —1 LAB 0905-0955 T, ClaOff B30, 4 cr (StP)

R 5302 Applied Regression Analysis (§5161; prereq 3012 or 5021 or 5133 or #)
★LECT 1325-1425 MWF, ClaOff B25, Hawkins D, (StP)
340258 —1 LAB 1115-1215 Th, ClaOff 135, 5 cr (StP)
534250 —2 LAB 1220-1320 Th, ClaOff 135, 5 cr (StP)

5401 Introduction to Multivariate Methods (prereq 5302 or 5133 or 5153)
236347 1325-1425 MWF, ClaOff B42, Bingham C, 4 cr (StP)

5890 Senior Paper (prereq sr in statistics) (A-F only)
331690 2 cr

5900 Tutorial Course (prereq #)
030042 ar cr

8151 Mathematical Statistics (prereq 5133 or 5153 or #, advanced calculus, matrix algebra)
629802 1115-1215 MWF, VinH 213, Meeden G, 4 cr

8311 Linear Models (prereq 5122 or 5133 or 5153, linear algebra)
233206 1430-1625 MW, ClaOff B26, Martin F, 4 cr (StP)

8321 Linear and Nonlinear Regression (prereq 8312 or #)
523619 1115-1230 TTh, ClaOff B22, Cook R, 3 cr (StP)

8401 Topics in Multivariate Methods (prereq 8312)
434001 1325-1425 MWF, ClaOff B42, Bingham C, 3 cr (StP)

R 8501 Introduction to Stochastic Processes with Applications (prereq 5131 or 5151 or #)
032499 1415-1530 TTh, VinH 206, Sudderth W, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
631369 1-18 cr

8777 Thesis Credits: Masters
238647 1-16 cr

8801 Statistical Consulting (max 3 cr; prereq grad stat maj or #) (S-N only)
731914 1535-1625 F, ClaOff B30, Hawkins D, 1 cr (StP)

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
230922 1-36 cr

8900 Student Seminar (prereq statistics maj or #) (S-N only)
029604 1 cr

8901 Directed Readings and Research (prereq #)
237305 1-3 cr

STUDIES OF SCIENCE AND TECHNOLOGY (SST)

8000 Colloquium (may be repeated for credit) (S-N only)
840877 1530-1730 F, Phys 210, 1 cr

8100 Seminar: Models, Theories, and Reality (prereq Phil 8605 or HSci 8111, or #)
623594 1535-1730 T, FordH 359, Giere R, 4 cr

Study Skills: See Learning and Academic Skills.

SURGERY (Surg)
Medical School

5500 Externship: Surgery at the University and Affiliated Hospitals (prereq regis med)
531445 Dunn D L, ar cr

5502 Externship in the Surgical Intensive Care Unit (prereq regis med)
236252 Dunn D L, 6-9 cr

5503 Research Problems in Surgery (prereq regis med) (S-N only)
137541 Dunn D L, 1-18 cr

5504 Hospital Base Nutrition (prereq medical stu year 3 and 4)
131402 Dunn D L, 4.5-9 cr

5509 Burn Surgery (prereq general surgery)
832469 ar cr

5510 Advanced Surgery Externship: Subinternship (prereq 3rd or 4th yr medical student, 5500)
438839 4.5-9 cr

R 5511 Emergency Medicine-St. Paul Ramsey Medical Center (prereq 5500, 3 or 4 yr medical student)
536726 Dunn D L, 6-9 cr

5522 Plastic and Reconstructive Surgery (prereq 5500)
236509 ar cr

5523 Externship in Colon and Rectal Surgery: Veterans Administration Hospital (prereq regis med)
539674 Rothenberger D, ar cr

5525 Colloquium in Biometry for Surgeons (prereq regis med or grad) (A-F only)
731802 3 cr

5526 Clinical Nutrition Seminar (prereq acceptance to master's prog in nutr support dietetics or Kellogg MD fellowship prog) (S-N only)
934228 Shronts E, 1 cr

5527 Hospital Nutrition Support (prereq acceptance to the master's program in nutrition support dietetics) (S-N only)
340874 Shronts E, 9 cr

8200 Clinical Surgical Problems in Management
137533 Dunn D L, 5 cr

8201 Surgical-Roentgenological Conference
029568 0905-1310 S, Mayo B139, Dunn D L, 1 cr (Todd Amph)

8202 Surgical Research
529923 Dunn D L, 5 cr

8203 Surgery Complications and Research Conference
231701 1600-1700 T, PWB 11157, Dunn D L, 1 cr

8207 Transplantation, Bone Marrow Conference
235246 1630-1700 Th, PWB 11157, Dunn D L, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
132915 1-18 cr

8777 Thesis Credits: Masters
341071 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
036102 1-36 cr

SUSTAINABLE AGRICULTURAL SYSTEMS (SAgr)
Agronomy and Plant Genetics Agricultural, Food, and Environmental Sciences

R 8010 Colloquium in Sustainable Agriculture
738099 0905-1100 Th, BorH 306, Sheaffer C, 2 cr

8020 Field Experience in Sustainable Agriculture (prereq SAgr grad minor, #) (A-F only)
935928 2-4 cr

SWEDISH (Swed)
German, Scandinavian, and Dutch Liberal Arts

R 1101 Beginning Swedish
732111 —1 0905-0955 MTWThF, FolH 344, 5 cr
723635 —2 1430-1520 MTWThF, FolH 50, 5 cr

R 1104 Intermediate Swedish (prereq 1103 or equiv)
138620 1115-1240 MWF, AkerH 317, 5 cr

R 3670 Readings in Swedish Literary Texts (max 28 cr; prereq 1106 or equiv)
039341 0815-0930 TTh, FolH 426, Stockenstrom G, 4 cr

Symbols

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- **H** Honors course (follows the course number).
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- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

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TEACHING ENGLISH AS A SECOND LANGUAGE (TESL)
Linguistics & Asian & Slavic Languages & Literatures
Liberal Arts

R 5721 English as a Second Language: Methods (§ESL 5721; prereq Ling 3001 or Ling 5001 or #)
233755 1430-1600 MW, FordH 150, 4 cr

R 5910 Seminar in Teaching English as a Second Language: ESL and Communication Disorders (§CDis 8590, sec 2; prereq #)
324593 1220-1520 F, Tarone E, Siegel G, 3 cr

THEATRE ARTS (Th)
Liberal Arts

R 1101 Introduction to the Theatre (Vis; CD)
236056 0905-0955 MWF, RarigC 185, Norwood J, 4 cr

R 1102 Drama and Media (Vis)
523636 1220-1310 MWF, RarigC 190, Norwood J, 4 cr

R 1301 Beginning Acting for Non-Theatre Majors (prereq 1101 or ¶1101)
433026 —1 0800-0955 MW, RarigC 90, 4 cr
734506 —2 1325-1520 MW, RarigC 90, 4 cr
135166 —3 1535-1730 MW, RarigC 90, 4 cr
230449 —4 1535-1730 TTh, RarigC 90, 4 cr

R 1321 Beginning Acting (prereq 1101, 1504)
033054 —1 1325-1520 MW, RarigC 20, 4 cr
129271 —2 1325-1520 TTh, RarigC 20, 4 cr

R 1331 Beginning Movement for Actors (§1326; prereq 1321)
333214 —1 1325-1520 MW, RarigC 10, 2 cr
323637 —2 1535-1730 TTh, RarigC 10, 2 cr

R 1341 Beginning Voice Production (§3311; prereq 1321)
531185 —1 1010-1205 TTh, RarigC 185, 2 cr
123638 —2 1535-1730 TTh, RarigC 20, 2 cr

R 1504 Elements of Technical Theatre (prereq 1101 or ¶1101)
137662 1115-1205 TTh, RarigC 190, 4 cr (lab ar)

3171 History of the Theatre: Ancient Greece through Renaissance (prereq 1101, theatre arts maj)
538332 1010-1205 TTh, BlegH 150, Kobialka M, 4 cr

R 3321 Intermediate Acting (prereq 1331, 1341, #)
139248 1010-1205 TTh, RarigC 210, Houfek N, 4 cr

3412H Honors Course: Tutorial Seminar in Theatre Arts (prereq candidate for honors in theatre arts, Δ)
732738 Kolbialka M, 3-6 cr

R 3513 Technical Theatre Production I (prereq 1504)
★LECT 0800-0955 MW, RarigC 190, 275, Gwinup M
023639 —1 LAB 1325-1555 MW, RarigC 30, 130, 5 cr
323640 —2 LAB 1535-1805 MW, RarigC 30, 130, 5 cr
824307 —3 LAB 1325-1555 TTh, RarigC 30, 130, 5 cr
823643 —4 LAB 1535-1805 TTh, RarigC 30, 130, 5 cr
623644 —5 LAB 1100-1230 S, 1300-1700 S, RarigC 30, 130, 5 cr

R 3711 Introduction to Directing (§3701; prereq 1101, 1301 or 1321, 1504, maj or min) (A-F only)
737339 1010-1205 MW, RarigC 185, Kanee S, 4 cr

R 3712 Beginning Stage Direction (§3711 prior to Fall 94; prereq 1504, 3711, jr or sr) (A-F only)
633140 1325-1520 MW, RarigC 210, 4 cr

R 3803 Platform Performance (prereq Management maj)
539688 —1 1325-1520 MW, RarigC 616, 4 cr
332449 —2 1010-1205 TTh, RarigC 616, 4 cr

3950 Topics in Theatre (max 12 cr)
133529 1-5 cr

R 5100 Theatre Practicum (prereq written permission, #, Δ) (A-F only)
132386 —1 1-6 cr
737325 —2 1-6 cr
423645 —3 1325-1520 TTh, RarigC 90, Hennum N, 1-6 cr

R 5110 Theatre Performance (max 9 cr; prereq written permission after casting and/or assignment to a production) (S-N only)
240995 Montgomery J, 1 cr

R 5321 Career Preparation for Actors (prereq 3323 or grad stu)
537648 1010-1205 MW, RarigC 210, Venard S, 4 cr

R 5334 Stage Combat: Unarmed (prereq 3323, grad stu or # by audition)
135555 0905-1100 TTh, RarigC 10, Hennum N, 2 cr

R 5341 Shakespearean Text Analysis (§5823; prereq 3341, 3321-3322 or grad stu)
131819 1115-1205 MTWTh, RarigC 20, Nash E, 4 cr

R 5510 Drawing and Rendering for Theatre Designers (prereq 3513 or 3515 or grad student, #)
331625 0905-1100 TTh, RarigC 275, Brockman C L, 2 cr

R 5520 Scene Design (max 12 cr; prereq 3513, 5511, or #)
532059 0905-1200 F, RarigC 275, Brockman C, 4 cr

5560 Theatre Crafts Practicum (max 6 cr for undergrads; prereq 3513 and/or 3515, Δ, #)
938716 —1 1-4 cr
129643 —2 1-4 cr

R 5716 Stage Management for the Theatre (prereq 3711 or ¶3711 or grad stu)
831709 1535-1730 MW, RarigC 275, Montgomery J, 4 cr

R 5720 Plays in Production and Performance (max 6 cr for undergrads; prereq 5712, #, Δ)
839762 2-4 cr

5760 Advanced Stage Management (max 6 cr for undergrads; prereq 5716 or ¶, #, written permission)
131044 Montgomery J, 1-3 cr

R 5950 Topics in Theatre (max 12 cr)
223646 0905-0955 MTWTh, RarigC 210, Houfek N, Nash E, 1 cr

5970 Directed Readings (prereq 9 cr in theatre, #, Δ, CLA approval)
437531 —1 1-6 cr
936125 —2 1-6 cr
131111 —3 1-6 cr

8100 Theatre Practicum (prereq #, Δ)
033846 —1 1-6 cr
630853 —2 1-6 cr

R 8111 History/Theory of Western Theatre: Origins and Ancient World
123647 1010-1205 MW, BlegH 350, Gadberry G, 4 cr

R 8120 Seminar in Theatre: Advanced Study of Selected Fields of Theatre (max 16 cr)
923648 1325-1625 F, RarigC 275, Kolbialka M, 4 cr

R 8324 MFA Acting II (prereq MFA acting student or # by audition) (A-F only)
937632 1535-1730 MW, 1325-1520 F, RarigC 185, Houfek N, 3 cr

R 8330 Alexander Technique for MFA Actors (prereq MFA acting student or #) (A-F only)
740726 0930-1100 MW, RarigC 45, Lightner B, 1 cr

8560 Theatre Crafts Practicum (prereq #, Δ)
031093 —1 1-4 cr
240561 —2 1-4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
631209 1-18 cr

8730 One-Act Limited Workshop Production (prereq MFA-Directing Program) (A-F only)
436556 2 cr

8740 Supported Workshop Production (prereq MFA-Directing Program) (A-F only)
139976 4 cr

8750 Mainstage Production (prereq MFA-Directing Program) (A-F only)
135417 6 cr

8777 Thesis Credits: Masters
240852 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
336386 1-36 cr

8980 Directed Instruction (prereq Δ)
531462 1-3 cr

8990 Research (prereq #, Δ)
137466 ar cr

THERAPEUTIC RADIOLOGY (TRad)
Medical School

R 3172 Radiobiology (prereq #)
833816 3 cr

R 3190 Introduction and Ethic in Radiation Therapy Technology (prereq #)
131764 1 cr

R 3201 Clinical Radiation Therapy (prereq #)
737356 4 cr

R 3202 Clinical Radiation Therapy (prereq 3201)
533082 5 cr

5170 Basic Radiological Physics (§Rad 5170, BPhy 5170; prereq #)
439571 1600-1715 MF, UHosp 1243, Khan F, others, 3 cr

5340 Special Problems in Radiation Therapy
040828 ar cr

5505 Externship in Radiation Therapy (prereq regis med)
838689 Levitt S, others, ar cr

5507 Advanced Externship in Radiation Therapy (prereq regis med)
034544 Levitt S, others, ar cr

5508 Special Problems in Radiation Biology
139757 Song C, others, ar cr

R 5509 Radiobiological Basis of Radiotherapy (prereq medical school sr)
833394 Song C, others, 9 cr

5511 Interdisciplinary Medicine: Outpatient Diagnosis, Evaluation and Treatment of Adults and Children with Cancer (prereq Med 5500) (A-F only)
535057 9 cr

5512 Dosimetry of Internal and External Radiation Emitters
738930 1200-1300 M, Mayo B141, Khan F, others, 1 cr

5540 Special Problems in Radiological Physics (prereq regis med)
539402 Khan F, others, ar cr

8300 Radiation Therapy
738314 ar cr

8310 Fundamentals of Radiation Therapy
031403 1630-1730 M, UHosp 1243, 1 cr

8315 Radiation Therapy Pathology
637656 1 cr

8320 Radiation Therapy Treatment Planning Problems
130265 1 cr

8325 Radiation Therapy Pediatrics Oncology
632313 1 cr

8350 Research in Radiation Therapy
733856 ar cr

8410 Seminar: Radiation Biology (prereq #)
829569 Song C, others, 1 cr

8450 Research in Radiation Biology
332967 Song C, others, ar cr

8550 Research of Radiation Physics
530117 Khan F, ar cr

THERIOGENOLOGY (Tgen)
Veterinary Medicine

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
840569 1-18 cr

8777 Thesis Credits: Masters
538623 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
340938 1-36 cr

TOXICOLOGY (Txcl)

5164 Toxicology of Poisonous Plants (§VDM 5164; prereq VB 5401 or #)
135675 0900-1150 T, VetTchHos A325, Murphy M, 1 cr (1st 5 weeks) (StP)

R 5215 Organ System Toxicology (prereq 5214, #) (A-F only)
233027 1000-1200 MWF, MoosT 1752, Murphy M, 3 cr (Mpls) (1st 7 weeks)

8101 Toxicology Seminar (8101-8102-8103†; prereq #) (S-N only)
140892 1530-1700 Th, MoosT 1752, Wallace K, 1 cr (Mpls) (alt Th) (1st 7 weeks)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
140035 1-18 cr

8777 Thesis Credits: Masters
434113 Shier W, 1-16 cr

8800 Directed Research (S-N only)
030798 Shier W, ar cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
935542 Shier W, 1-36 cr

UNIVERSITY COLLEGE (UC)

3000 Graduation Project (prereq Δ, student in Degree Completion Program, see PIL) (S-N only)
239586 6 cr

3075 Directed Study (prereq Δ)
530182 ar cr

3075H Honors Course: Directed Study (prereq Δ)
134907 ar cr

3200 Continuing Studies (prereq Δ, student in Program for Individualized Learning) (S-N only)
136034 1 cr

3251 Individualized Study (prereq student in Program for Individualized Learning,Δ) (S-N only)
439506 6 cr

3281 Major Project I (prereqΔ, student in Program for Individualized Learning) (S-N only)
331205 6 cr

3282 Major Project II (prereq Δ, student in Program for Individualized Learning) (S-N only)
837879 6 cr

3283 Major Project: Extended Studies (prereqΔ, student in Program for Individualized Learning) (S-N only)
340096 6 cr

3291 Graduation Preparation I (prereqΔ, student in Program for Individualized Learning) (S-N only)
837722 6 cr

3292 Graduation Preparation II (prereq Δ, student in Program for Individualized Learning) (S-N only)
138682 6 cr

3293 Graduation Preparation: Extended Studies (prereqΔ, student in Program for Individualized Learning) (S-N only)
137958 6 cr

3299 Graduation Review (prereq student in Program for Individualized Learning,Δ) (S-N only)
334170 6 cr

URBAN STUDIES (UrbS)
Liberal Arts

R 3101 Urban Studies Colloquia (prereq #) (A-F only)
136155 1535-1735 W, BlegH 340, 2 cr

R 3104 Introduction to Urban Studies
630061 1415-1530 TTh, BlegH 255, Martin J, 4 cr

R 3301 American Cities: Settings for Cultural Pluralism (A-F only)
338798 1245-1400 TTh, BlegH 235, 4 cr

R 3500 Workshops (prereq jr or sr, #)
732951 1745-2045 M, BlegH 350, 4 cr

R 3900 Internship (prereq jr or sr, #) (A-F only)
240835 1900-2100 W, SocSci 448, Pentel P, 3 cr

R 3970 Directed Studies (prereq #, Δ, ❑)
632361 —1 Martin J, 2-6 cr

UROLOGIC SURGERY (Urol)
Medical School

5200 Surgical Specialty: Urology (prereq regis med)
936738 Pryor J, ar cr

5503 Research Problems in Urology (prereq regis 3rd or 4th yr med stu)
736126 Pryor J, ar cr

8250 Urological Surgery
136236 0800-1200 MWF, 4 cr (Mayo OR Room H)

8251 Cystoscopy and Urological Diagnosis
539450 0800-1200 MTWThF, 4 cr (Cysto Suite)

8252 Urological Conference
338719 0800-0900 S, 4 cr (Sta 57 Conf Room)

8253 Research in Urology
929675 4 cr

8254 Urological Seminar
137273 1300-1400 MWF, Mayo A503, 3 cr

8255 Urological Radiological Conference
139564 1300-1400 MTWThF, Mayo A503, 3 cr

8256 Urological Pathological Conference
033328 1600-1700 W, Mayo A503, 3 cr

VETERINARY DIAGNOSTIC MEDICINE (VDM)
Veterinary Medicine

3001 Basic Environmental Toxicology (prereq Chem 1001, Biol 1005, #) (A-F only)
735929 1800-2000 TTh, ClaOff B36, Singh A, 3 cr

5001 Ecotoxicology (prereq Chem 1001, Biol 1005 or equiv) (A-F only)
724624 3 cr

5012 Veterinary Hospital Necropsy (prereq 3rd or 4th yr vet med stu) (S-N only)
840040 Johnson K, O'Brien T, others, 2-12 cr

5112 Diagnostic Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
038741 2-12 cr

5164 Toxicology of Poisonous Plants (§Txcl 5164; prereq VPB 5401 or #) (A-F only)
433883 0900-1150 T, VetTchHos A325, Murphy M, 1 cr (1st 5 weeks)

5165 Veterinary Toxicology (prereq 5164, VPB 5401) (A-F only)
224604 3 cr

5524 Problems in Diagnostic Pathology (prereq #) (A-F only)
439862 1-4 cr

5612 Advanced Veterinary Toxicology (prereq 5164, 5165 or #)
531932 4-24 cr

5620 Scientific Writing and Speaking (prereq #) (A-F only)
431115 Goyal S, 2 cr

5622 Problems in Diagnostic Virology (prereq #) (A-F only)
031837 Goyal S, 1-4 cr

VETERINARY MEDICINE (CVM)
Veterinary Medicine

1100 Introduction to Veterinary Medicine (S-N only)
740337 1040-1130 T, AnScVM 125, Bjorklund L, 1 cr

5092 Precepteeship (prereq 3rd or 4th yr vet med stu) (S-N only)
232752 Casey C, 4-24 cr

5100 Orientation to Veterinary Medicine (prereq 1st yr DVM stu) (S-N only)
330149 0800-1650 MTW; 1200-1250 F, AnScVM 135, Bjorklund L, 2 cr (0800-1650 MTW, Sept 23, 24, 25, 1200-1250 F, Sept 27, Oct 4, Nov 8, AnScVM 135)

5602 Rotations at Other Institutions (prereq regis 4th yr vet med stu) (S-N only)
136731 Jessen C, 4-24 cr

5800 Problems in Veterinary Research (prereq #) (A-F only)
135488 5 cr

5801 Veterinary Research Survey Seminar (prereq #) (A-F only)
831158 Pijoan C, 1 cr

VETERINARY MEDICINE, GRADUATE (VMed)
Veterinary Medicine

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
335402 1-18 cr

8777 Thesis Credits: Masters
834254 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
633235 1-36 cr

VETERINARY PATHOBIOLOGY (VPB)
Veterinary Medicine

R 3103 General Microbiology (not open to vet med students; prereq 10 cr chem, 4 cr bio-sciences) (Biol/NL or Biol/L)
829670 —2 LECT 0900-1015 TTh, AnScVM 135, Bey R, 3 cr
★LECT 0900-1015 TTh, AnScVM 135, Bey R
032065 —1 LAB 1020-1240 TTh, VetS 325, 5 cr

5022 Clinical Hematology and Cytology (prereq 3rd or 4th yr vet med stu) (S-N only)
939610 Perman V, Weiss D, 2-12 cr

5032 Clinical Microbiology (prereq 3rd or 4th yr vet med stu) (S-N only)
933077 Newman J, 2-12 cr

Symbols

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Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
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5100 Veterinary Anatomy I (prereq #) (A-F only)
★LECT 1100-1150 TTh, AnScVM 135, Gallant E, Fletcher T, Benson
334802 —1 LAB 1300-1550 TTh, 0800-1050 WF, AnScVM 40, Gallant E, Fletcher T, Benson, 6 cr

5103 Veterinary Developmental Anatomy (prereq #) (A-F only)
★LECT 1300-1350 MW, AnScVM 125, 1400-1600 W, AnScVM 135, Cox V, Weber A, others
138052 —1 REC 1400-1650 W, AnScVM 104, Cox V, Weber A, others, 3 cr

5104 Microscopic Anatomy of Domestic Animals (prereq #) (A-F only)
★LECT 0800-0850 MTTh, AnScVM 125, Czarnecki C, Beitz A
039159 —1 LAB 0900-1050 MTTh, AnScVM 104, 0900-0950 MTTh, AnScVM 125, Czarnecki C, Beitz A, 5 cr

5122 Directed Studies (prereq #) (S-N only)
223498 1-24 cr

5149 Topics in Organology (prereq 5104 or equiv, #) (A-F only)
133716 1-5 cr

5210 Veterinary Biochemistry (prereq 1st yr vet med or #) (A-F only)
034804 1100-1150 MWF, AnScVM 135, Louis C, Mickelson J, 3 cr

5310 Animal Physiology (prereq 5308 or #) (A-F only)
132624 0800-0850 MWF, AnScVM 135, Redig P, Hunter A, 3 cr

5400 Veterinary Pharmacology and Therapeutics I (prereq 5310 or equiv or #) (A-F only)
536967 0900-0950 M, AnScVM 135, 0900-0950 WF, AnScVM 125, Larson A, 3 cr

5460 Neurochemical Communication (prereq biochem) (A-F only)
938053 1010-1100 MTWThF, MoosT 2580, Larson A, 4 cr

5502 Systemic Veterinary Pathology (prereq 5501 or #) (A-F only)
★LECT 1000-1050 MWF, 1300-1350 Th, VetS 145, Hayden D, O'Leary T, others, 6 cr
631548 —1 LAB 1440-1450 Th, VetTchHos D224, 1400-1650 Th, 1300-1550 F, VetS 215, 225, 229, Hayden D, O'Leary T, others

5533 Directed Studies in Veterinary Pathobiology (prereq regis vet med, 4th yr, #)
340003 Johnson K, Hayden D, others, ar cr

5601 Veterinary Parasitology I (prereq 5501 or #)
★LECT 1300-1350 MW, 1000-1050 T, VetS 145, Stromberg B, 4 cr
632103 —1 LAB 1400-1450 M, VetS 145, 1400-1650 M, VetS 225, 227, 229
136583 —2 LAB 1400-1450 W, VetS 145, 1400-1650 W, VetS 225, 227, 229

5703 Veterinary Virology (prereq 5701 or equiv or #)
★LECT 1100-1150 MWTh, VetS 145, Sivanandan G, 4 cr
341099 —1 LAB 0800-0950 T, 1100-1150 F, VetS 325

5722 Poultry Health Rotations (prereq 3rd or 4th yr vet med stu) (S-N only)
337716 Halvorson D, Newman J, others, 4-24 cr

5748 Problems in Veterinary Microbiology and Public Health (prereq 5703 or equiv, #) (A-F only)
429459 ar cr

5920 Independent Research in Veterinary Biology (A-F only)
030624 ar cr

5950 Directed Studies (A-F only)
129366 1-5 cr

8112 Research Propositions in Morphology (prereq #)
834805 2 cr

8113 Research Propositions in Morphology (prereq #)
932625 2 cr

8114 Research Propositions in Morphology (prereq #)
830611 2 cr

8134 Comparative Veterinary Neurology (prereq 5100, #)
740189 Beitz A, Fletcher T, 4 cr

8135 Cmparative Veterinary Neurology (prereq 5100, #)
138057 Beitz A, Fletcher T, 4 cr

8136 Experimental Comparative Veterinary Neurology (§NSc 8136; prereq 8135, #)
635888 Beitz A, Fletcher T, 3 cr

R 8149 Research in Veterinary Anatomy (prereq 5149, #)
140190 2-5 cr

8150 Research Problems in Veterinary Anatomy (prereq 8149, #)
038058 Cox V, 1 cr

8349 Research in Physiology (prereq #)
435889 ar cr

8448 Problems in Veterinary Pharmacology (prereq 5401, #)
933709 ar cr

8449 Neurotoxicity of Organophosphorus Insecticides (prereq 5210 or BioC 5002 or MdBc 5100; 5400 or PhcI 5110; 5102 or VDM 5156 or NSc 5211) (A-F only)
630612 Singh A, 2 cr

8500 Seminar: Veterinary Pathology (prereq 5503, #)
230077 O'Leary T, 1-3 cr

8502 Advanced Systemic Pathology (prereq 8501 or Path 5101; #)
★LECT 1000-1050 MWF, 1300-1350 Th, VetS 145, Hayden D, O'Leary T, others
535446 —1 LAB 1400-1450 Th, VetTchHos D224, 1400-1650 Th, 1300-1550 F, VetS 215, 225, 229, Hayden D, O'Leary T, others, 4-6 cr

8504 Seminar: Advanced Veterinary Histopathology (prereq 5502, 5503, #)
031014 1530-1700 M, VetS 215, Hayden D, 1 cr

8531 Hospital Pathology (prereq 5501, 5502, 5503, #)
435679 O'Leary T, Hayden D, others, 1-2 cr

8533 Problems: Pathology (prereq #)
140951 Johnson K, Hayden D, others, ar cr

8534 Problems: Clinical Pathology (prereq #)
438579 Perman V, Weiss D, ar cr

8550 Seminar: Veterinary Biology (prereq #)
129360 1 cr

8648 Problems in Veterinary Parasitology (prereq 5602, #)
833248 Stromberg B, ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims
837803 1-18 cr

8700 Seminar: Veterinary Pathobiology (prereq #)
530067 Weiss D, 1 cr

8720 Advanced Veterinary Microbiology (prereq #)
229771 ar cr

8721 Immunodiagnostic Techniques for Avian Diseases (prereq MicB 5216) (A-F only)
538329 Nagaraja K, Sivanandan V, 2 cr

8724 Advanced Veterinary Diagnostic Microbiology (prereq #)
431065 ar cr

8777 Thesis Credits: Masters
239426 1-16 cr

8888 Thesis Credit: Doctoral (max 18 cr per qtr)
034639 1-36 cr

VETERINARY SURGERY, RADIOLOGY, AND ANESTHESIOLOGY (VSRA)
Veterinary Medicine

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
929501 1-18 cr

8777 Thesis Credits: Masters
932236 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
933094 1-36 cr

Vocational Education: See Work, Community, and Family Education.

WATER RESOURCES SCIENCE (WRS)
Natural Resources

5010 Introduction to Field Research in Water Resources (prereq admission to WRS grad prog or #) (A-F only)
124644 3 cr (Cloquet)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
724641 1-18 cr

8777 Thesis Credits: Masters
524642 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
324643 1-36 cr

WOMEN'S STUDIES (WoSt)
Liberal Arts

R 1001 Introduction to Women's Studies (AH; CD)
★LECT 0945-1100 TTh, SciCB 175, Zita J, (registration in REC sections may be adjusted during the first week of class)
333973 —1 REC 1115-1205 T, FordH 170, 4 cr
732965 —2 REC 1220-1310 T, FordH 175, 4 cr
140522 —3 REC 1325-1415 T, FordH 40, 4 cr
838725 —4 REC 1430-1520 T, FordH 40, 4 cr
731024 —5 REC 1430-1520 T, AmundH 156, 4 cr (MLK stu only)
929708 —6 REC 1535-1625 T, AmundH 156, 4 cr
329583 —7 REC 0800-0850 W, FordH 175, 4 cr
235974 —8 REC 0905-0955 W, FordH 70, 4 cr
031546 —9 REC 1115-1205 W, FordH 60, 4 cr
131349 —10 REC 1220-1310 W, FordH 60, 4 cr
738961 —11 REC 1430-1520 W, FordH 60, 4 cr

R 1001H Honors Course: Introduction to Women's Studies
★LECT 0945-1100 TTh, SciCB 175, Zita J
339398 —80 REC 1115-1205 T, FordH 175, 4 cr

R 3102 Feminist Thought and Theory (Phil; C/PE)
★LECT 1010-1100 MW, FordH 150, Scheman N, 4 cr
430367 —1 REC 1010-1100 F, FordH 150, Scheman N
723649 —2 REC 1010-1100 F, FordH 175
123650 —3 REC 1115-1205 F, FordH 175
923651 —4 REC 1325-1415 F, FordH 60

R 3105 Gender and Geopolitics (A-F only)
732559 1430-1520 MWF, BlegH 215, 4 cr

R 3200 Topics in Women's Studies: Biology, Psychology, and Sexuality: Women's Psychologies: Feminist and Multicultural Perspectives (max 12 cr)
723652 1820-2050 M, FordH 175, Faunce P, 4 cr

R 3300 Topics in Women and the Arts: Quebec Women's Literature and Film in Translation (§Fren 3606; max 12 cr; prereq non-French maj)
523653 1245-1400 TTh, FordH 285, Sivert E, 4 cr

R 3305 Women and Language
323654 1010-1205 TTh, FolH 419, Sheldon A, 4 cr

R 3403 Jewish Women in the U.S.
123655 1115-1230 TTh, FordH 60, Prell R, 4 cr

R 3605 Community, Service, and Self (3605-3606-3607†; §ID 3205; prereq #)
024645 1220-1350 W, AkerH 309, Rubright D, 2 cr

3970 Directed Studies (prereq #, Δ, ❑)
732237 1-15 cr

R 5502 Women and Public Policy (prereq 1001, 1002 or #)
023656 1010-1150 MW, HHHCtr 20, Kenney S, 4 cr

R 5602 Working Class Women's Lives (prereq 12 cr WoSt or #)
823657 1415-1530 TTh, FordH 130, 4 cr

5970 Directed Studies (max 12 cr; prereq #, Δ, CLA approval)
037136 1-5 cr

R 8510 Feminist Theory and Methods (prereq #)
135465 1430-1700 W, FordH 350, Longino H, 4 cr (CAFS minors only)

R 8610 Topics in Feminist Studies
623658 —1 1535-1750 W, WaLib 301, Fradenburg L, 4 cr (The Pleasures of History) (§CSDS 8910, sec 3, Engl 8210, MeSt 8110, sec 2; prereq 8 cr grad level WoSt or substantial work in topic area or #)
423659 —2 1220-1450 Th, FordH 495, Zita J, 4 cr (Proseminar: Foucault's Body) (!; prereq adv grad standing, dissertation work relating to Foucault, #)

R 8710 Feminist Research and Writing (max 8 cr; prereq 8511, passed prelims in degree-granting prog, #)
823660 1430-1700 T, FordH 495, Kaminsky A, 4 cr

8970 Directed Study (prereq completion of courses approved by faculty supervisor and director of grad studies)
936013 1-8 cr

WORK, COMMUNITY, AND FAMILY EDUCATION (WCFE)
Education and Human Development

5027 Practicum: Extension Experiences (§AgEd 5027; max 9 cr)
124149 Norenberg C, 2-9 cr

R 5300 Philosophy and Practice of Vocational Education (§VoEd 5300) (A-F only)
524141 1600-1830 M, VoTech R385, Copa G, 3 cr

R 5602 Teaching Internship: School Setting (prereq WCFE init lic grad prog or undergrad lic spec) (A-F only)
424150 —1 1745-1945 T, VoTech 230, Peterson R, 2-3 cr (AgEd and FE stu only)
224151 —2 1830-2030 T, VoTech R390, Weisensel M, 2 cr (BIE stu only)

R 5900 Using Work, Community, and Family Education Research (§VoEd 5900; prereq admission to grad-level prog or #) (A-F only)
324142 0845-2115 Th, VoTech R280, Leske G, 3 cr

5920 Independent Study (§VoEd 5920; prereq Δ)
124143 1-6 cr

R 8140 History and Philosophy of Education for Work, Community, and Family (§VoEd 8120; PhD and EdD stu in WCFE must reg A-F)
124152 1600-1830 Th, VoTech R285, Thomas R, 3 cr

8666 Doctoral Pre-Thesis Credits (§VoEd 8666; max 18 cr per qtr; prereq EdD stu who has not passed oral prelims)
024144 1-18 cr

8810 Internship (§VoEd 8810; prereq Δ) (S-N only)
824145 1-15 cr

8888 Thesis Credits: Doctoral (§VoEd 8888; max 18 cr per qtr)
624146 1-36 cr

R 8910 Positivistic Research (§VoEd 8910; prereq 5900 or equiv or #)
424147 0845-2115 W, VoTech R285, Lewis T, 3 cr

R 8920 Interpretive and Critical Science Research (§VoEd 8920)
224148 1600-1830 T, VoTech R285, Plihal J, 3 cr

R 8990 Research Seminar (max 9 cr; only 2 cr will apply to doct prog res core req; prereq 8910 or 8920 or Δ) (S-N only)
624468 —1 1900-2100 T, VoTech R250, Hopkins C, 1 cr (alt T)
424469 —2 1220-1410 W, VoTech R390, Leske G, 1 cr (alt W)

Writing: See Composition and Communication; Creative and Professional Writing; English; General College; and Rhetoric.

YOUTH DEVELOPMENT AND RESEARCH (YoSt)
Human Ecology

R 5100 Youth in the World (§SW 5100)
531591 1535-1835 M, McNH 180, Baizerman M, 3 cr

5120 Independent Study in Youth Studies (max 12 cr; prereq #)
132954 Baizerman M, Beker J, others, ar cr

R 5312 Seminar: Direct Work with Adolescents (§SW 5312)
439666 0745-2045 Th, McNH 386, Beker J, 3 cr

ZOOLOGY (Zool)
Biological Sciences

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
435634 1-18 cr

8777 Thesis Credits: Masters
137572 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
433429 1-36 cr

8970 Seminar
933158 0 cr

8980 Special Research
035287 ar cr

8990 Research
634045 ar cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

COURSES OPEN TO EXTENSION STUDENTS

General Information—The following two lists indicate those day school courses which are open to Extension students. You should use these lists with the course listings which start on page 62.

- Currently enrolled day school students may not register through Extension for day school courses.
- Extension students must meet the same prerequisites as day school students.
- No 8000-level courses are available under this program.
- Occasionally, courses not on these lists are also open to Extension students with written permission from the instructor and the department offering the course.

Registration—If you wish to enroll in these courses through Extension Classes, you must follow the steps outlined in the brochure "A Guide for Registering Through Extension for Day School Classes" or the section on registration procedures in the 1996-97 *Extension Classes Bulletin*. Call 624-2388 for a bulletin, registration forms, and permission slips. The general Extension Classes information number is 625-3333. Information on counseling and program advising is available at 625-2500.

A few spaces are available without written permission in any of the courses listed below which are limited. (Limited-enrollment courses have R before the course number in Section 4 of this *Class Schedule*.) After those spaces are taken, written permission from the instructor is required. Courses which are not limited require written permission only after the first week. Call 625-3333 if you have any questions about permission requirements.

Adult Education: All courses *except* 5205
Aerospace Engineering and Mechanics: All courses
Afro-American Studies: All courses
Agricultural Education: All courses *except* 3041, 5090, 5095
Agricultural Engineering Technology: 5027
Agronomy and Plant Genetics: All courses
Akkadian: All courses
American Indian Studies: All courses
American Studies: 1001, 3111, 3112, 3113, 5101
Ancient Near Eastern: All courses
Animal and Plant Systems: All courses
Animal Science: All courses
Anthropology: All courses
Arabic: All courses
Aramaic: All courses
Art History: All courses
Biochemistry: All courses *except* 5025
Biology: 1009, 1101, 1201 (See other list also.)
Biosystems & Agricultural Engineering: 5745
Business and Industry Education: All courses *except* 5500, 5510, 5700, 5900
Central Asian Studies: All courses
Chicano Studies: All courses
Child Psychology: All courses
Chinese: All courses
Classical Civilization: All courses
Classics: All courses
Comparative Literature: All courses
Comparative Studies in Discourse and Society: All courses
Coptic: All courses
Croatian and Serbian: All courses
Cultural Studies and Comparative Literature: All courses
Dutch: All courses
East Asian Languages and Literatures: All courses
Economics: All courses *except* 3101, 3102, 3105, 3501, 3701, 5301, 5331, 5401, 5429, 5531, 5701, 5721
Educational Policy and Administration: All courses
English: Creative & Professional Writing: 1103, 3102
English Language & Literature: All courses *except* 3960
Entomology: All courses
Family Education: All courses *except* 5900
Family Social Science: All courses
Finance: 3601
Finnish: All courses
Fisheries and Wildlife: All courses
Food Science and Nutrition: All courses
Forest Resources: All courses *except* courses offered at Cloquet or Itasca
French: All courses
French and Italian: All courses
Geography: All courses
German: All courses
Greek: All courses
Hebrew: All courses
Hindi: All courses
History: All courses
History of Science and Technology: All courses
Human Resource Development: All courses *except* 5750, 5760
Humanities: All courses
Industrial Engineering/Operations Research: All 1000- and 3000-level courses (See other list for 5000-level courses.)
Insurance: 5100
Interdisciplinary Archeological Studies: All courses
International Relations: 3101, 3900, 5701
Italian: All courses
Japanese: All courses
Jewish Studies: All courses
Language, Teaching, and Technology: All courses
Latin: All courses
Learning and Academic Skills: All courses
Linguistics: All courses
Marathi: All courses
Mathematics: All courses
Mechanical Engineering: All 1000- and 3000-level courses (See other list for 5000-level courses.)
Middle Eastern Languages and Cultures: All courses
Military Science: All courses
Modern Greek: All courses
Natural Resources and Environmental Studies: All courses
Naval Science: All courses
Persian: All courses
Philosophy: All courses
Plant Pathology: All courses
Polish: All courses
Political Science: All courses *except* 3085
Portuguese: All courses
Religions in Antiquity: All courses
Russian: All courses
Sanskrit: All courses
Scandinavian: All courses
Slavic: All courses
South Asian Languages and Cultures: All courses
Spanish: All courses
Spanish-Portuguese: All courses
Statistics: All courses
Swedish: All courses
Theatre Arts: All courses *except* 5100
Turkish: All courses
Urban Studies: All courses
Urdu: All courses
Women's Studies: All courses
Work, Community, and Family Education: All courses *except* 5920
Youth Studies: All courses

A Joint Day/Extension Special Permission slip, signed by the instructor and department office, is required in any of the courses listed below which are limited. (Limited-enrollment courses have R before the course number in Section 4 of this *Class Schedule*.) *Courses which are not limited require written permission only after the first week.* Call 625-3333 if you have any questions about permission requirements.

Applied Economics: All courses
Architecture: All courses
Area Studies: All courses
Art: 1403, 1510, 1520, 1530, 3306, 3430, 3510, 3530, 3810, 5360, 5430, 5510, 5530, 5810
Astronomy: All courses
Biology: All courses *except* 1009, 1101, 1201 (See other list for 1009, 1101, 1201.)
Civil Engineering: All courses
Clinical Laboratory Science: All courses
Communication Disorders: All courses
Composition: All courses
Computer Science: All courses
Dance: All courses
Design, Housing, and Apparel: All courses
East Asian Studies: All courses
Ecology, Evolution, and Behavior: All courses
General College: All courses *except* TRIO-only or CE-only courses, or courses requiring concurrent registration
Genetics and Cell Biology: All courses
Geology: All courses
History of Medicine: All courses
Horticultural Science: All courses
Industrial Engineering/Operations Research: All 5000-level courses (See other list for 1000- and 3000-level courses.)
Industrial Relations: 3002 thru 5006
Interdepartmental Study: All courses *except* 3170, 3180, 3190
Journalism and Mass Communication: 1001, 3745, 3796, 5501
Landscape Architecture: 1401
Latin American Studies: All courses
Mechanical Engineering: All 5000-level courses (See other list for 1000- and 3000-level courses.)
Microbiology: All courses
Mineral Engineering: All courses
Music: All courses (Does not include Applied Music courses.)
Music Education: All courses
Plant Biology: All courses
Psychology: All courses
Public Affairs: All courses *except* 5001, 5010, 5021, 5901
Public Health: All courses *except* 5154, 5156, 5159, 5250, 5614, 5649, 5701-5748, 5750, 5752-5765, 5767-5789, 5792-5799
Rhetoric: All courses
Russian Area Studies: All courses
Social Work: All courses
Sociology: All courses except 3101, 3801
Speech-Communication: All courses

section 7 exams & grades

FINAL EXAMINATION SCHEDULES

To find when the final exam for each of your courses is scheduled, do the following:

1. Determine the **college through which each of your courses is offered.** (To determine the college, see the last line under the department heading in the course offerings.) Remember: It is the college offering the course that is important, not your college of enrollment. Schedule A, on this page, is for all courses offered through Education, Liberal Arts, Health Sciences, Dentistry, and Public Affairs. All other courses use Schedule B, on the next page.
2. Determine the **beginning time** for each of your courses using the following guidelines:
   - Use the lecture beginning time for your course rather than the lab or recitation times.
   - Each range of beginning times (0800-0859, 0900-0959, etc.) is subdivided into MWF and TTh exam times. Use MWF if your course meets for more than three days per week or if it meets on unusual days. For example, courses that meet MWThF or TWTh or TF would all follow the MWF exam time.
   - If your course meets at different times on different days, use the day earliest in the week. A course meeting 0905-1100 T, 0800-0850 Th, for example, would follow the 0900-0959 TTh exam time.
3. Read across to find the time and day for your final examination using the beginning time for the course and the correct schedule (A or B).
4. Check the list of common exams on the next page to see if any of your courses are listed there. Common examination times *always* take precedence over schedules A and B.
5. Ask your instructor for confirmation of your exam time. Instructors may schedule 3-hour examinations for courses meeting four or more days a week. Instructors may also, with college approval in a very limited number of circumstances, request a change in exam time. See Examination Conflicts, on the next page, for information on conflicts in your final exam schedule.

NOTE: These final examination schedules do not apply to courses offered primarily to students registered in the colleges of Dentistry, Pharmacy, and Veterinary Medicine, Law School, and Medical School, or to 8000-level courses that have no regularly scheduled classrooms.

FALL QUARTER EXAMS

SCHEDULE A: Fall 1996
Courses offered in Colleges of Education and Human Development; Liberal Arts; *Health Sciences; *Dentistry; Public Affairs

CLASS BEGINS:	EXAM TIME:	CLASS BEGINS:	EXAM TIME:
0800-0859 MWF	1600-1800 Wednesday, December 11	1200-1259 TTh	0800-1000 Friday, December 13
0800-0859 TTh	1330-1530 Wednesday, December 11	1300-1359 MWF	0800-1000 Wednesday, December 11
0900-0959 MWF	1330-1530 Friday, December 13	1300-1359 TTh	1330-1530 Saturday, December 14
0900-0959 TTh	1030-1230 Tuesday, December 10	1400-1459 MWF	1330-1530 Thursday, December 12
1000-1059 MWF	0800-1000 Saturday, December 14	1400-1459 TTh	1600-1800 Thursday, December 12
1000-1059 TTh	1600-1800 Saturday, December 14	1500-1559 MWF	0800-1000 Thursday, December 12
1100-1159 MWF	1330-1530 Tuesday, December 10	1500-1559 TTh	1030-1230 Thursday, December 12
1100-1159 TTh	0800-1000 Tuesday, December 10	0800-0859 S	0800-1000 Saturday, December 14
1200-1259 MWF	1030-1230 Friday, December 13	1000-1059 S	1030-1230 Saturday, December 14

*Courses offered primarily to students other than medical or dental students.

SCHEDULE B: Fall 1996
Courses offered in Colleges of Agricultural, Food, and Environmental Sciences; Architecture and Landscape Architecture; Biological Sciences; Human Ecology; Natural Resources; General College; Management; Institute of Technology

CLASS BEGINS:	EXAM TIME:	CLASS BEGINS:	EXAM TIME:
0800-0859 MWF	1600-1800 Wednesday, December 11	1200-1259 TTh	0800-1000 Friday, December 13
0800-0859 TTh	1330-1530 Wednesday, December 11	1300-1359 MWF	1030-1230 Wednesday, December 11
0900-0959 MWF	1600-1800 Friday, December 13	1300-1359 TTh	1330-1530 Saturday, December 14
0900-0959 TTh	1030-1230 Tuesday, December 10	1400-1459 MWF	1330-1530 Thursday, December 12
1000-1059 MWF	1030-1230 Saturday, December 14	1400-1459 TTh	1600-1800 Thursday, December 12
1000-1059 TTh	1600-1800 Saturday, December 14	1500-1559 MWF	0800-1000 Thursday, December 12
1100-1159 MWF	1600-1800 Tuesday, December 10	1500-1559 TTh	1030-1230 Thursday, December 12
1100-1159 TTh	0800-1000 Tuesday, December 10	0800-0859 S	0800-1000 Saturday, December 14
1200-1259 MWF	1030-1230 Friday, December 13	1000-1059 S	1030-1230 Saturday, December 14

Fall Common Examinations—All sections of the following courses are examined together at the time indicated.

Monday, December 9
Acct 1050—1030-1230
BFin 3000—1030-1230
Biol 1009, 1009H, 1101—1030-1230
BLaw 3058—0800-1000
GC 0615, 0621, 0623, 0625, 0631, 0643—1030-1230
IDSc 1010, 3030—0800-1000
Math 1008—1330-1530
Math 1001, 1031, 1038, 1051, 1058, 1131, 1142, 1151, 1251, 1252, 1261, 1351, 1551H, 1552H, 1553H, 3221, 3251, 3252, 3261, 3262, 3354, 3551H, 3552H—1330-1630
Psy 1001—1900-2100
PubH 3001—1830-2130

Tuesday, December 10
Econ 1102, 1102H—1830-2130
Ger 1101, 1102, 1103, 1104, 1105, 1106—1830-2030
Span 1101, 1102, 1103, 1104, 1105, 1106—1830-2030

Wednesday, December 11
CSci 3101, 3102—1830-2130
Econ 1101, 1101H—1830-2130
Phys 1251—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: See Regulations Regarding Examinations, below.

Examination Scheduling Conflicts—You 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, an F, 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 13 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 in the *Minnesota Daily.*

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 problem, departments are encouraged to limit final examinations to 2 hours. Courses meeting four or more days a week may give 3-hour examinations, however, *provided the instructor notifies the Scheduling Office* of her or his intention to do so on an A123 form. For this quarter, three hour examinations will be scheduled on the respective day the examinations would be given: December 10 (1330-1630); December 11 (0830-1130, 1330-1630); December 12 (0830-1130, 1330-1630); December 13 (0830-1130, 1330-1630); December 14 (0830-1130).

   Departments are also encouraged to request alternate seating only when it is necessary for proper administration of the exam. Requests for rooms for alternate seating must be submitted by the department office on an A123 form.

   Exam times and rooms for courses which begin from 0700-0759 or anytime after 1600 will not be scheduled unless they are requested on an A123 form.

   All A123 forms must be received in the Scheduling Office (150 Williamson Hall for Minneapolis rooms, 130 Coffey Hall for St. Paul rooms) on or before October 30. Notification of room assignments for all A123 forms received by October 30 will be sent to departments on or before November 22.

7. University Senate policy decrees that no extracurricular events which *require* the participation of students may be scheduled from the beginning of study day to the end of finals week. Exceptions to this policy may be granted by the Senate Committee on Educational Policy. The Senate advises all faculty members that students who are unable to complete course requirements during finals week shall be provided an alternative and timely opportunity to do so.

FALL QUARTER GRADES

Academic Staff—Grades are due in the Office of the Registrar, 150 Williamson Hall (130 Coffey Hall for St. Paul units), within 72 hours after the examination. Grades for this quarter are due beginning Thursday, December 12; the grades for the last examinations are due by 9:30 a.m. on Wednesday, December 18. Messenger service can be requested in Minneapolis by calling 625-5069 when grades are ready. *Do not send grades by mail.*

Students—Grades are available on the Student Access System. See page 4 for information on connecting to the system. Once on the system, use the University Day Coursework and Grades screen to access your grades.

GRADUATION

Undergraduates and students in professional programs (e.g., MEd.) must submit Application for Degree forms to the Student Relations Unit, 150 Williamson Hall (130 Coffey Hall for St. Paul students). Most applications for degree do not require payment of a graduation fee but other applicable fees may apply. Students in colleges that select larger diplomas or other enhancements may also be required to pay for those enhancements.

If you fail to apply by the dates listed below, you will not be able to graduate until the following quarter. For information on Graduate School graduation application and commencement deadlines, see page 17.

NOTE: Students in the colleges of Agricultural, Food and Environmental Sciences, and Human Ecology must meet deadlines earlier than those listed below.

DEGREE APPLICATION DEADLINES

QUARTER OF GRADUATION	APPLICATION DEADLINE
Term I, Summer 1996	June 17, 1996
Term II, Summer 1996	July 24, 1996
Fall 1996	October 2, 1996
Winter 1997	January 13, 1997
Spring 1997	April 11, 1997

GRADING POLICIES AND PRACTICES

Compete grading policies and practices can be found on the World Wide Web at http://www.umn.edu/registrar.

ACCESS TO STUDENT EDUCATIONAL RECORDS

In accordance with regents' policy on access to student records and in accordance with federal law, information about you generally may not be released to a third party without your permission. (Exceptions under the law include state and federal educational and financial aid institutions.) The regents' policy also permits you to review your educational records and to challenge the contents of those records. You also have the right to file a complaint with the U.S. Department of Education.

Some student information—name, address, electronic (e-mail) address, telephone number, dates of enrollment and enrollment status (full-time, part-time, not enrolled, withdrawn

and date of withdrawal), major, adviser, college and class, academic awards and honors received, and in the event of your graduation the degree received—are matters of public record or directory information. University officials and departments may provide this information in answer to inquiries without requiring authorization from you. You may prevent release of public information outside the University. The records office on your campus can provide you with information on the procedures necessary to do so.

Students are advised that disciplinary action will be taken if academic records are forged or altered.

The regents' policy, including a directory of student records, is available for review in 150 Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Registrar, 150 Williamson Hall (612/625-5333).

E-MAIL ADDRESSES

To promote communication and facilitate research at the University, all students are assigned electronic mail (e-mail) addresses. E-mail is simply a method of communication that uses computers linked together by a network. Along with e-mail, you also have access to a worldwide computer network called the Internet.

Before you can use your e-mail account or the Internet, you'll need to activate your e-mail account. You can accomplish this via the campus network from either a computer facility on campus or a Microcomputer Help Line. After your account is activated, you can access your e-mail and the Internet in any of the computer facilities around campus or from home. Software for using the Internet is available from Academic and Distributed Computing Services in 152 Shepherd Labs, 93a Blegen Hall, or 58 Biological Sciences Center. Be sure to bring at least five new high density or six new double density disks for the software. In addition, you are encouraged to attend an e-mail orientation. The E-Mail/Internet Help Line, 626-7676, can provide information on orientation times and locations as well as general assistance in activating and using e-mail and other internet software. Hours for the help line are 9 a.m. to 4 p.m., Monday through Friday. You can also obtain assistance by sending e-mail to help@tc.umn.edu.

Rules for Using E-mail—E-mail addresses are assigned to individuals and are not to be shared. You are encouraged to select an obscure password and change it frequently.

Access to and use of e-mail is a privilege and should be treated as such by all users. Computing services, including e-mail, may not be used for illegal or unauthorized purposes including: harassment; destruction of or damage to equipment, software, or data belonging to others; or the disruption or unauthorized monitoring of electronic communications. Using e-mail to participate in illegal acts is itself illegal and may be subject to prosecution by state and federal authorities. Use of e-mail for private business purposes unrelated to the University is not allowed.

You are responsible for using system resources wisely. If you use the system in ways that are judged excessive or wasteful, your access to the system may be taken away, and you may be subject to University disciplinary procedures.

STUDENT RIGHT-TO-KNOW ACT

Students may receive, on request, information about campus security, and graduation and retention rates at the Twin Cities campus. This information is available from the Office of the Registrar, 150 Williamson Hall and 130 Coffey Hall.

section 8 codes, maps, forms

TWIN CITIES COURSE DESIGNATORS

A

Acct	Accounting
AdEd	Adult Education
AdPy	Adult Psychiatry
AEM	Aerospace Engineering and Mechanics
Afro	Afro-American Studies
AgEd	Agricultural Education
AgET	Agricultural Engineering Technology
Agri	Agriculture
Agro	Agronomy and Plant Genetics
AIM	Agricultural Industries and Marketing
Air	Aerospace Studies
Akka	Akkadian
AmIn	American Indian Studies
AmSt	American Studies
ANE	Ancient Near Eastern
Anes	Anesthesiology
AnPh	Animal Physiology
AnPl	Animal and Plant Systems
AnSc	Animal Science
Anth	Anthropology
ApEc	Applied Economics
Arab	Arabic
Arch	Architecture
Area	Area Studies
Arm	Aramaic
ArtH	Art History
ArtS	Art
Ast	Astronomy

B

BA	Business Administration
BAE	Biosystems and Agricultural Engineering
Ben	Bengali
BFin	Finance
BGS	Business, Government, and Society
BIE	Business and Industry Education
BioC	Biochemistry (College of Biological Sciences)
Biol	Biology
BLaw	Business Law
Bldg	Building Sciences
BMEn	Biomedical Engineering
BMSc	Biomedical Science
BPhy	Biophysical Sciences

C

CAPS	Clinical and Population Sciences
CAPy	Child and Adolescent Psychiatry
CAS	Central Asian Studies
CBio	Conservation Biology
CBN	Cell Biology and Neuroanatomy
CDis	Communication Disorders
CE	Civil Engineering
CgSc	Cognitive Science
Chem	Chemistry
ChEn	Chemical Engineering
Chic	Chicano Studies
Chn	Chinese
ChPh	Chemical Physics
CI	Curriculum and Instruction
CIE	Interfacial Engineering, Center for
Clas	Classics
CICv	Classical Civilization
CLit	Comparative Literature
CLS	Clinical Laboratory Science
Comp	Composition and Communication
Copt	Coptic
CPsy	Child Psychology
CSci	Computer Science
CSCL	Cultural Studies and Comparative Literature
CSDS	Comparative Studies in Discourse and Society
CSDy	Control Science and Dynamical Systems
CVM	Veterinary Medicine

D

Dan	Danish
Dent	Dentistry
Derm	Dermatology
DH	Dental Hygiene
DHA	Design, Housing, and Apparel
Dnce	Dance
DSSC	Development Studies and Social Change
Dtch	Dutch

E

EALL	East Asian Languages and Literatures
EAS	East Asian Studies
Econ	Economics
EdAd	Educational Administration
EdPA	Educational Policy and Administration
Educ	Education
EE	Electrical Engineering
EEB	Ecology, Evolution, and Behavior
EEur	East European Studies
Endo	Endodontics
Engl	English Language and Literature
EngW	English: Creative and Professional Writing
Ent	Entomology
Entr	Entrepreneurship
EPsy	Educational Psychology
ES	Environmental Science
ESL	English as a Second Language

F

FE	Family Education
Fin	Finnish
FlMe	Fluid Mechanics
ForP	Forest Products
Fors	Forestry
FoSt	Foreign Study
FPCH	Family Practice and Community Health
FR	Forest Resources
Fren	French
FrIt	French and Italian
FScN	Food Science and Nutrition
FSMg	Foreign Studies Management
FSoS	Family Social Science
FSSP	Foreign Study—SPAN
FW	Fisheries and Wildlife

G

GC	General College
GCB	Genetics and Cell Biology
Geo	Geology and Geophysics
GeoE	Geological Engineering
Geog	Geography
Ger	German
Gero	Gerontology
GPhl	Germanic Philology
Grad	Graduate School
Grk	Greek

H

HCol	Honors Colloquia
HE	Human Ecology
Hebr	Hebrew
HInf	Health Informatics
Hist	History
HMed	History of Medicine
Hndi	Hindi
Hort	Horticultural Science
HRD	Human Resource Development
HSci	History of Science and Technology
HSem	Honors Seminar
HSU	Health Science Units
Hum	Humanities
HumF	Human Factors

I

ID	Interdepartmental Study
IDSc	Information and Decision Science
IEOR	Industrial Engineering/Operations Research
InAr	Interdisciplinary Archeological Studies
InMd	Interdisciplinary Medicine
Ins	Insurance
IntR	International Relations
IofT	Institute of Technology
IR	Industrial Relations

IRel	Interpersonal Relationships Research
Ital	Italian

J

Jour	Journalism and Mass Communication
Jpn	Japanese
JwSt	Jewish Studies

K

Kin	Kinesiology

L

LA	Landscape Architecture
LaMP	Laboratory Medicine and Pathology
LAS	Latin American Studies
LASk	Learning and Academic Skills
Lat	Latin
Law	Law School
LgTT	Language, Teaching, and Technology
Ling	Linguistics
LM	Logistics Management

M

Mar	Marathi
Math	Mathematics
MatS	Materials Science
MBA	Master of Business Administration
MChm	Medicinal Chemistry, Undergraduate
MdBc	Biochemistry (Medical School)
MdGk	Modern Greek
MCDG	Molecular, Cellular, Developmental Biology and Genetics
ME	Mechanical Engineering
Med	Medicine
MedC	Medicinal Chemistry
MedT	Medical Technology
MELC	Middle Eastern Languages and Cultures
MeSt	Medieval Studies
MetE	Metallurgical Engineering
Mgmt	Management
MicB	Microbiology
MicE	Microbial Engineering
Mil	Military Science
MinE	Mineral Engineering
Mktg	Marketing
Mort	Mortuary Science
MOT	Management of Technology
MSt	Museum Studies
MthE	Mathematics Education
MuEd	Music Education
Mus	Music
MusA	Music Applied

N

Nav	Naval Science
Neur	Neurology
Nor	Norwegian
NRES	Natural Resources and Environmental Studies
NSc	Neuroscience
NSu	Neurosurgery
Nurs	School of Nursing
Nutr	Nutrition

O

OBio	Oral Biology
Obst	Obstetrics and Gynecology
OCS	Off-Campus Study
OMS	Operations and Management Science
OPat	Oral Pathology
Oph	Ophthalmology
ORad	Oral Radiology
OrSu	Orthopaedic Surgery
OSur	Oral and Maxillofacial Surgery
Otho	Orthodontics
Otol	Otolaryngolgy

P

PA	Public Affairs
Path	Pathobiology
PBio	Plant Biology
PE	Physical Education
Ped	Pediatrics
Pedo	Pediatric Dentistry
Per	Persian
Pero	Periodontics
Phar	Pharmacy Practice
Phcl	Pharmacology
Phcy	Pharmacy Interdepartmental
Phil	Philosophy
Phm	Pharmaceutics
Phmc	Pharmaceutics, Undergraduate
Phsl	Physiology
Phys	Physics
PlBr	Plant Breeding
PlPa	Plant Pathology
Plsh	Polish
PMed	Physical Medicine and Rehabilitation
PNI	Psychoneuroimmunology
Pol	Political Science
Port	Portuguese
Pros	Prosthodontics
Psy	Psychology
PubH	Public Health

R

Rad	Radiology
RAS	Russian Area Studies
Rec	Recreation, Park, and Leisure Studies
RelA	Religions in Antiquity
Rhet	Rhetoric
Russ	Russian

S

SACS	Small Animal Clinical Sciences
SAgr	Sustainable Agriculture Systems
SALC	South Asian Languages and Cultures
SALL	South Asian Languages and Literature
SAPh	Social and Administrative Pharmacy
ScAg	Science in Agriculture
Scan	Scandinavian
SciC	Scientific Computation
ScTP	Science and Technology Policy
Skt	Sanskrit
Slav	Slavic
Soc	Sociology
Soil	Soil Science
Span	Spanish
Spch	Speech-Communication
SPFE	Social and Philosophical Foundations of Education
SpPt	Spanish-Portuguese
SST	Studies of Science and Technology
Stat	Statistics
Sum	Sumerian
Surg	Surgery
SW	Social Work
Swed	Swedish

T

TESL	Teaching English as a Second Language
Tgen	Theriogenology
Th	Theatre Arts
TRad	Therapeutic Radiology
Turk	Turkish
Txcl	Toxicology

U

UC	University College
UrbS	Urban Studies
Urdu	Urdu
Urol	Urologic Surgery

V

VDM	Veterinary Diagnostic Medicine
VMed	Veterinary Medicine, Graduate
VPB	Veterinary Pathobiology
VSRA	Veterinary Surgery, Radiology, and Anesthesiology

W

WCFE	Work, Community, and Family Education
WRS	Water Resources Science
WoSt	Women's Studies

Y

YoSt	Youth Development and Research

Z

Zool	Zoology

DIRECTORY FOR DEPARTMENT OFFICES

A

Accounting ..... Mgmt/Econ 645 (624-6506)
Adult Education ..... VoTech 325 (624-1221)
Aerospace Engineering and Mechanics .. AkerH 107 (625-8000)
Aerospace Studies ..... Armory 3 (624-2884)
Afro-American Studies ..... SocSci 808 (624-9847)
Applied Economics ..... ClaOff 231 (625-1222)
Agricultural Education ..... VoTech 325 (624-3010)
Agronomy ..... BorH 411 (625-7773)
American Indian Studies ..... ScottH 102 (624-1338)
American Studies ..... ScottH 104 (624-4190)
Anesthesiology ..... Mayo B515 (624-9990)
Animal Science ..... PetH 120 (624-2722)
Anthropology ..... FordH 215 (625-3400)
Architecture ..... Arch 110 (624-7866)
Art History ..... JonesH 107 (624-4500)
Astronomy ..... Phys 356 (624-0211)

B

Biochemistry (BioC) ..... GortL 140 (624-7755)
Biochemistry (Med) ..... MlrdH 4-225 (625-6100)
Biological Sciences ..... SnH 123 (624-9717)
Biology ..... KoltH P180 (625-6636)
Biosystems and Agricultural Engineering . AgEng 213 (625-7733)
Business and Industry Education ..... VoTech 425 (624-3004)
Business, Government, and Society . Mgmt/Econ 835 (624-5232)
Business Law ..... Mgmt/Econ 645 (624-6506)

C

Cell Biology and Neuroanatomy ..... JacH 4-135 (624-1123)
Chemical Engineering and Materials
Science ..... AmundH 151 (625-1313)
Chemistry ..... SmithH 115 (624-0026)
Chicano Studies ..... ScottH 102 (624-6309)
Child Psychology ..... ChDev 104 (624-1891)
Civil Engineering ..... CivE 122 (625-5522)
Classical and Near Eastern Studies ..... FolH 330 (625-5353)
Clinical and Population Sciences .... VetTchHos 225 (625-7755)
Communication Disorders ..... ShevH 115 (624-3322)
Cultural Studies & Comparative Literature . FolH 350 (624-8099)
Composition and Communication ..... LindH 306B (625-2888)
Computer Science ..... EE/CSci 4-192 (625-4002)
Curriculum and Instruction ..... PeikH 125 (625-6372)

D

Dance ..... NorrisH 106 (624-5060)
Dental Hygiene ..... MoosT 9-436 (625-9121)
Dentistry ..... MoosT 15-209 (625-9982)
Dermatology ..... PWB 4-240 (625-8625)
Design, Housing, and Apparel ..... McNH 240 (624-9700)

E

East Asian Languages and Literatures .... KlaCt 192 (624-3331)
East Asian Studies ..... 232 SocSci (624-8543)
Ecology, Evolution, and Behavior ..... Ecology 100 (625-5700)
Economics ..... Mgmt/Econ 1035 (625-6353)
Educational Administration ..... WullH 330 (624-1006)
Educational Policy and Administration .... WullH 330 (624-1006)
Educational Psychology ..... BuH 202 (624-3543)
Electrical Engineering ..... EE/CSci 4-178 (625-3300)
English ..... LindH 207 (625-3363)
English: Creative and Professional Writing LindH 209 (625-6366)
Entomology ..... HodsonH 219 (624-3636)

F

Family Education ..... VoTech 325 (624-3010)
Family Practice, Community Health ..... PWB 6-240 (624-2622)
Family Social Science ..... McNH 290 (625-1900)
Finance ..... Mgmt/Econ 735 (624-2888)
Fisheries and Wildlife ..... HodsonH 200 (624-3600)
Food Science and Nutrition ..... FScN 225 (624-1290)
Forest Products ..... KaufL 203 (624-9219)
Forest Resources ..... GrnH 115 (624-3400)
French and Italian ..... FolH 260 (624-4308)

G

General College ..... ApH 140 (625-6663)
Genetics and Cell Biology ..... BioSci 250 (624-3003)
Geography ..... SocSci 414 (625-6080)
Geology and Geophysics ..... PillsH 106 (624-1333)
German, Scandinavian, & Dutch ..... FolH 205 (625-2080)

H

Higher Education ..... WullH 330 (624-1006)
History ..... SocSci 614 (624-2800)
History of Medicine ..... DiehlH 510 (624-4416)
History of Science & Technology ..... Phys 342E (624-7069)
Home Economics ..... McNH 32 (624-1717)
Horticultural Science ..... AlderH 305 (624-5300)
Human Resource Development ..... VoTech 425 (624-3004)

I

Industrial Relations ..... Mgmt/Econ 537 (624-2500)
Information and Decision Science ..... HHHCtr 395 (624-8030)
Insurance ..... Mgmt/Econ 537 (624-2500)
Interdepartmental Study (CLA) ..... JohH 220 (624-7577)
International Relations ..... SocSci 214 (624-9007)

J

Journalism, Mass Communication ..... MurH 15 (625-0120)

K

Kinesiology ..... CookeH (625-5300)

L

Laboratory Medicine ..... Mayo D242 (625-9171)
Landscape Architecture ..... Arch 125 (625-6860)
Latin American Studies ..... SocSci 232 (624-8543)
Law School ..... Law 285 (625-1000)
Linguistics ..... KlaCt 192 (624-3331)

M

Marketing ..... Mgmt/Econ 1235 (624-5055)
Mathematics ..... VinH 4 (625-4848)
Mathematics Education ..... PeikH 125 (625-6372)
MBA Program, Carlson School ..... HHH 295 (624-0006)
Mechanical Engineering ..... MechE 125 (625-0705)
Medical Technology ..... PWB 15-170 (625-9490)
Medicine ..... PWB 14-110 (625-3220)
Microbiology ..... Mayo 1460 (624-6190)
Middle Eastern Languages and Cultures ... KlaCt 192 (624-3331)
Middle Eastern Studies ..... 232 SocSci (624-8543)
Military Science ..... Armory 108 (624-7300)
Mineral Engineering ..... CivE 122 (625-5522)
Mortuary Science ..... Mayo A275 (624-6464)
Music ..... FergH 100 (624-5740)
Music Education ..... FergH 100 (624-0071)

N

Naval Science ..... Armory 203 (625-6677)
Neurology ..... PWB 12-100 (625-9900)
Nursing ..... HSUnitF 5-140 (624-9600)

O

Obstetrics and Gynecology ..... MoosT 12-211 (626-3111)
Operations and Management Science Mgmt/Econ 332 (624-7010)
Ophthalmology ..... PWB 9th floor (625-4400)
Otolaryngology ..... PWB 8-240 (625-3200)

P

Pediatrics ..... PWB 13-107 (624-4477)
Pharmacology ..... MlrdH 3-260 (625-9997)
Pharmacy ..... HSUnitF 5-110 (624-9490)
Philosophy ..... FordH 355 (625-6563)
Physical Education ..... CookeH 224 (625-5300)
Physical Medicine and Rehabilitation ..... Mayo 860 (626-5961)
Physics ..... Phys 148 (624-7375)
Physiology ..... MlrdH 6-255 (625-5902)
Plant Biology ..... BioSci 220 (625-1234)
Plant Pathology ..... StakH 304 (625-8299)
Plant Physiology ..... BioSci 220 (625-4222)
Political Science ..... SocSci 1414 (624-4144)
Psychiatry ..... Mayo A605 (626-5400)
Psychology ..... EltH 106 (625-4394)
Public Affairs ..... HHHCtr 225 (625-9505)
Public Health ..... Mayo D305 (626-3500)

R

Radiology ..... Mayo B238 (626-5529)
Recreation, Park, and Leisure Studies .. CookeH 224 (625-5300)
Rhetoric ..... HckrH 202 (624-3445)
Russian Area Studies ..... 232 SocSci (624-8543)
Russian ..... KlaCt 192 (624-3331)

S

Scandinavian ..... FolH 205 (625-2080)
Small Animal Clinical Sciences .... VetTchHos C339 (625-7744)
Social, Philosophical Foundations
of Education ..... WullH 330 (624-1006)
Social Work ..... FordH 400 (624-5888)
Sociology ..... SocSci 909 (624-4300)
Soil Science ..... BorH 439 (625-1244)
South Asian Languages and Literature .... KlaCt 192 (624-3331)
South Asian Studies ..... 232 SocSci (624-8543)
Spanish and Portuguese ..... FolH 34 (625-5858)
Speech-Communication ..... FolH 460 (624-5800)
Statistics ..... VinH 270 (625-8046)
Studio Arts ..... ArtB 208 (625-8096)
Surgery ..... PWB 11-100 (625-1400)

T

Theatre Arts ..... MdbH 204 (625-6699)

U

University College
Intercollege Program (ICP) ..... Armory 107 (624-2004)
Program for Individualized Learning .. Armory 107 (624-4020)

V

Veterinary Biology ..... AnScVM 295K (624-2700)
Veterinary Pathobiology ..... VetS 205g (625-5255)

W

Women's Studies ..... FordH 492 (624-6006)
Work, Community, and Family
Education ..... VoTech 350 (624-1221)

Y

Youth Development and Research ..... McNH 386 (624-3700)

UNDERGRADUATE ADVISING OFFICES

Agricultural, Food, and Environmental Sciences,
College of ..... CofH 277 (624-3009)

Architecture and Landscape Architecture,
College of ..... Arch 110 (626-1000)

Biological Sciences, College of .... SnH 223 (624-9717)
(Please call ahead for an appointment.)

Education and Human Development,
College of ..... 110 Wulling Hall (625-6501)

General College ..... ApH 40 (626-8703)

Human Ecology, College of ..... McNH 32 (624-1717)

Liberal Arts, College of
Premajor Offices:
CLA major& preprofessional . JohH B18 (624-9585)
Pre-health sciences ..... JohH 30 (624-9006)
Upper Division College Offices:
East bank departments, adult special,
interdepartmental ..... JohH 114 (624-4545)
West bank departments ... SocSci 122 (624-5848)
Honors Program ..... JohH 115 ((624-5522)
Martin Luther King Program ..... JohH 19 (625-2300)

Management, Carlson
School of ..... HHHCtr 290 (624-3313)

Natural Resources,
College of ..... NatResAd 135 (624-6768)

Nursing, School of ..... HSUnitF 5-160 (624-4454)

Pharmacy, College of ..... HSUnitF 5-110 (624-9490)

Technology, Institute of
Student Affairs Office ..... LindH 105 (624-8504)
Project Technology Power ..... WaLib 339 (625-0219)

University College
Individualized Learning,
Program for (PIL) ..... Armory 107 (624-4020)
Intercollege Program
(ICP) ..... Armory 107 (624-2004)

BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

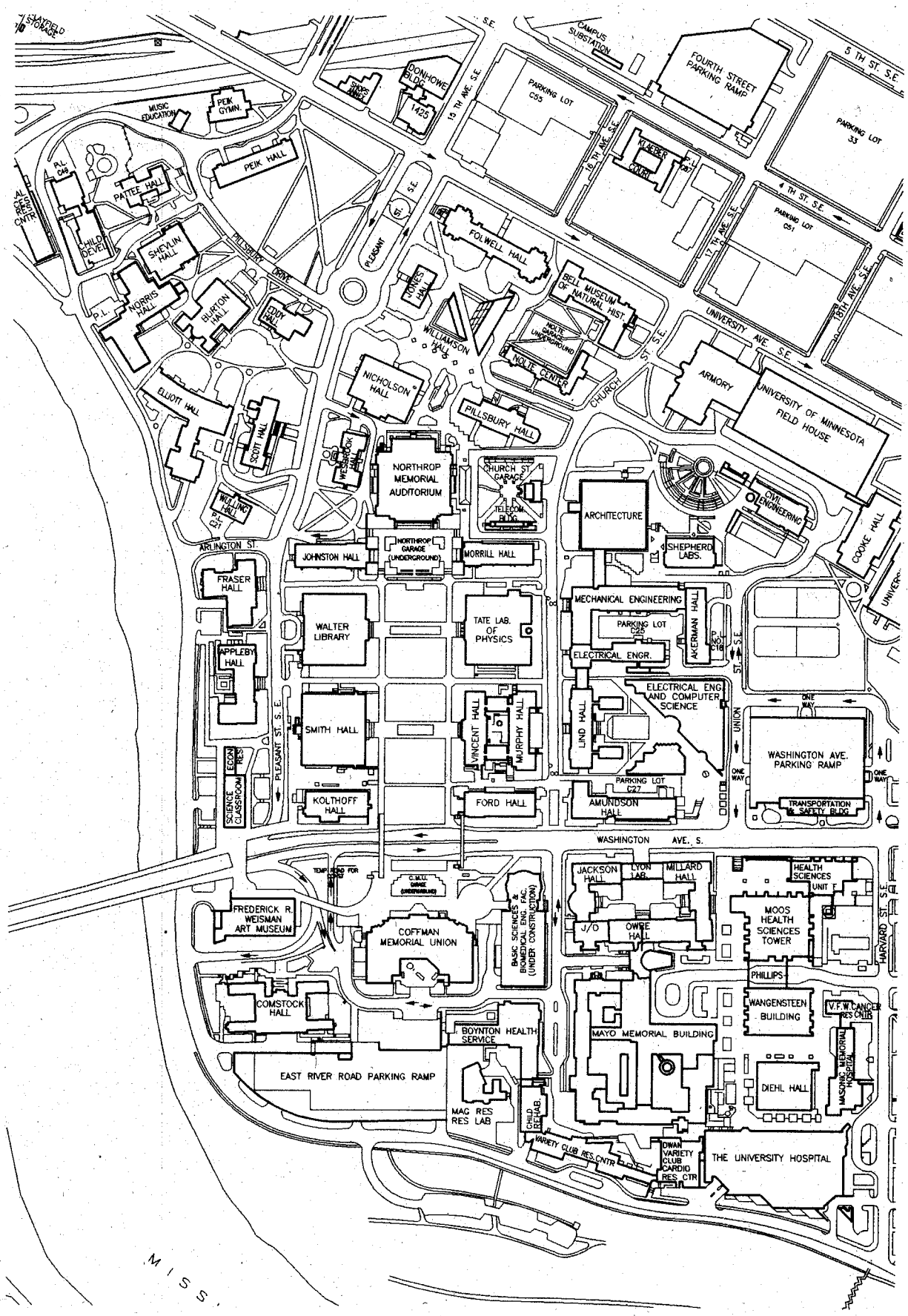
- ○ ABLMS, Andrew Boss Laboratory-Meat Science (SP) *
- ○ AgGhCl, Agronomy Greenhouse Classroom (SP)
- ❑ AgrPGGh, Agronomy/Plant Genetics Greenhouse (SP)
- ❑ AkerH, Akerman Hall (EB)
- ○ AlderH, Alderman Hall (SP) *
- ○ AmundH, Amundson Hall (EB) * R
- ○ AnAren, Animal Arena (SP)
- ❑ AndH, Anderson Hall (WB) * R
- ○ AnScVM, Animal Science, Veterinary Medicine (SP) *
- ○ ApH, Appleby Hall (EB) * R
- ❑ Arch, Architecture (EB) *
- ❑ Armory (EB)
- ❑ ArtB, Art Building (WB)
- ○ BCB, Beef Cattle Barn (SP)
- ○ BellMus, Museum of Natural History (EB) * R
- ❑ Berry, Berry House (SP)
- ○ BFAB, Bierman Field Athletic Building (EB) * R
- ○ BioAgEng, Biosystems and Agricultural Engineering (SP) * R
- ○ BioSci, Biological Sciences Center (SP) * R
- ○ BlegH, Blegen Hall (WB) * R
- ○ BorH, Borlaug Hall (SP) * R
- ○ BoynHS, Boynton Health Service (EB) * R
- ○ BuH, Burton Hall (EB) * R
- ○ CenH, Centennial Hall (EB) * R
- ○ CentLib, St. Paul Campus Central Library (SP) * R
- ❑ ChDev, Child Development (EB) *
- ○ ChRC, Children's Rehabilitation Center (EB) * R
- ○ CivE, Civil Engineering (EB) * R
- ○ ClaOff, Classroom Office Building (SP) * R
- ○ CMU, Coffman Memorial Union (EB) * R
- ○ CofH, Coffey Hall (SP) * R
- ○ ComH, Comstock Hall (EB) *
- ○ CookeH, Cooke Hall (EB) * R
- ○ DiehlH, Diehl Hall (EB) *
- ○ DinC, Dining Center (SP) *
- ○ DVCCRC, Dwan Variety Club Cardiovascular Research Center (EB) * R
- ○ EBCEC, Earl Brown Continuing Education Center (SP) * R
- ○ Ecology, Ecology Building (SP) * R
- ○ EddyH, Eddy Hall (EB) * R
- ○ EdHAn, Eddy Hall Annex (EB)
- ○ EE/CSci, Electical Engineering/ Computer Science Building (EB) * R
- ❑ ElectE, Electical Engineering (EB) * R
- ○ EltH, Elliot Hall (EB) * R
- ○ EngFishL, Engineering and Fisheries Laboratory (SP)
- ○ FBComp, Football Complex, 600 15th Ave. SE (EB) * R
- ○ FergH, Ferguson Hall (WB) * R
- ❑ FieldHse, University Field House (EB)
- ○ FolH, Folwell Hall (EB) * R
- ○ FordH, Ford Hall (EB) * R
- ❑ FraserH, Fraser Hall (EB) R *
- ◆ FronH, Frontier Hall (EB) *
- ○ FScN, Food Science and Nutrition (SP) *
- ○ GorL, Gortner Laboratory of Biochemisty (SP) *
- ○ GrnH, Green Hall (SP) * R
- ○ Gym, Gymnasium (SP) * R
- ◆ HayesH, Hayes Hall (SP)
- ❑ HckrH, Haecker Hall (SP)
- ○ HHHCtr, Humphrey Center (WB) * R
- ○ HodsonH, Hodson Hall (SP) * R
- ❑ HrG, Horticulture Greenhouse (SP)
- ○ HSUnitF, Health Sciences Unit F (EB) * R
- ○ JacH, Jackson Hall (EB) *
- ○ JOAd, Jackson-Owre Addition (EB) *
- ❑ JohH, Johnston Hall (EB) * R
- ◆ JonesH, Jones Hall (EB)
- ○ KaufL, Kaufert Laboratory (SP) * R
- ❑ KlaCt, Klaber Court (EB)
- ❑ KolthH, Kolthoff Hall (EB) * R
- ○ Law, Law Building (WB) * R
- ○ LindH, Lind Hall (EB) * R
- ○ LyonL, Lyon Laboratories (EB)
- ○ MannConc, Ted Mann Concert Hall (WB) * R
- ○ Mayo, Mayo Memorial (EB) * R
- ○ McNH, McNeal Hall (SP) * R
- ○ MdbH, Middlebrook Hall (WB) * R
- ❑ MechE, Mechanical Engineering (EB) * R
- ○ Mgmt/Econ, Management/Economics Building (WB) * R
- ○ MlrdH, Millard Hall (EB) *
- ❑ MMA, Mayo, Memorial Auditorium (EB)
- ○ MoosT, Moos Health Sciences Tower (EB) * R
- ❑ MorH, Morrill Hall (EB) * R
- ○ MurH, Murphy Hall (EB) * R
- ◆ MusEd, Music Education (EB)
- ○ NatResAd, Natural Resources Administration Building (SP) * R
- ○ NichH, Nicholson Hall (EB) * R
- ○ NMA, Northrop Memorial Auditorium (EB) * R
- ○ NorrisH, Norris Hall (EB) * R
- ○ OMWL, O Meredith Wilson Library (WB) * R
- ○ OwreH, Owre Hall (EB) * R
- ❑ PeikG, Peik Gym (EB)
- ○ PeikH, Peik Hall (EB) * R
- ❑ PetH, Peters Hall (SP)
- ○ Phys, Tate Laboratory of Physics (EB) *
- ◆ PiH, Pioneer Hall (EB)
- ◆ PillsH, Pillsbury Hall (EB)
- ◆ PlSci, Plant Sciences (SP)
- ○ PtH, Pattee (EB) * R
- ○ PWB, Phillips Wangensteen Building (EB) * R
- ○ RarigC, Rarig Center (WB) * R
- ❑ SaH, Sanford Hall (EB) *
- ❑ SciCB, Science Classroom Building (EB) * R
- ◆ ScottH, Scott Hall (EB)
- ○ ShepLab, Shepherd Laboratories (EB) *
- ○ ShevH, Shevlin Hall (EB) * R
- ○ SmithH, Smith Hall (EB) * R
- ○ SnH, Snyder Hall (SP) * R
- ○ SocSci, Social Sciences Building (WB) * R
- ○ Soils (SP)
- ❑ Stad, Stadium (EB) R
- ○ StakH, Stakman Hall of Plant Pathology (SP) *
- ○ StCen, Student Center (SP) * R
- ◆ TerH, Territorial Hall (EB)
- ○ UAqCtr, University Aquatic Center (EB) * R
- ○ UHosp, University Hospital (EB) * R
- ◆ VetA, Veterinary Anatomy (SP)
- ○ VetDL, Veterinary Diagnostic Laboratories (SP) * R
- ❑ VetS, Veterinary Science (SP) *
- ○ VetTchHos, Veterinary Teaching Hospitals (SP) * R
- ○ VinH, Vincent Hall (EB) * R
- ○ VoTech, Vocational-Technical Education (SP) * R
- ○ WaLib, Walter Library (EB) * R
- ○ WBOB, West Bank Office Building, 1300 S. Second Street (WB) * R
- ○ WBU, West Bank Union (WB) R
- ◆ Weigley, Weigley House (SP)
- ○ WeismanArt, Frederich R. Weisman Art Museum (EB) * R
- ○ WesH, Wesbrook Hall (EB) * R
- ○ WilleyH, Willey Hall (WB) * R
- ○ WmsA, Williams Arena (EB) * R
- ○ WmsonH, Williamson Hall (EB) * R
- ○ WuH, Wulling Hall (EB) * R

KEY:

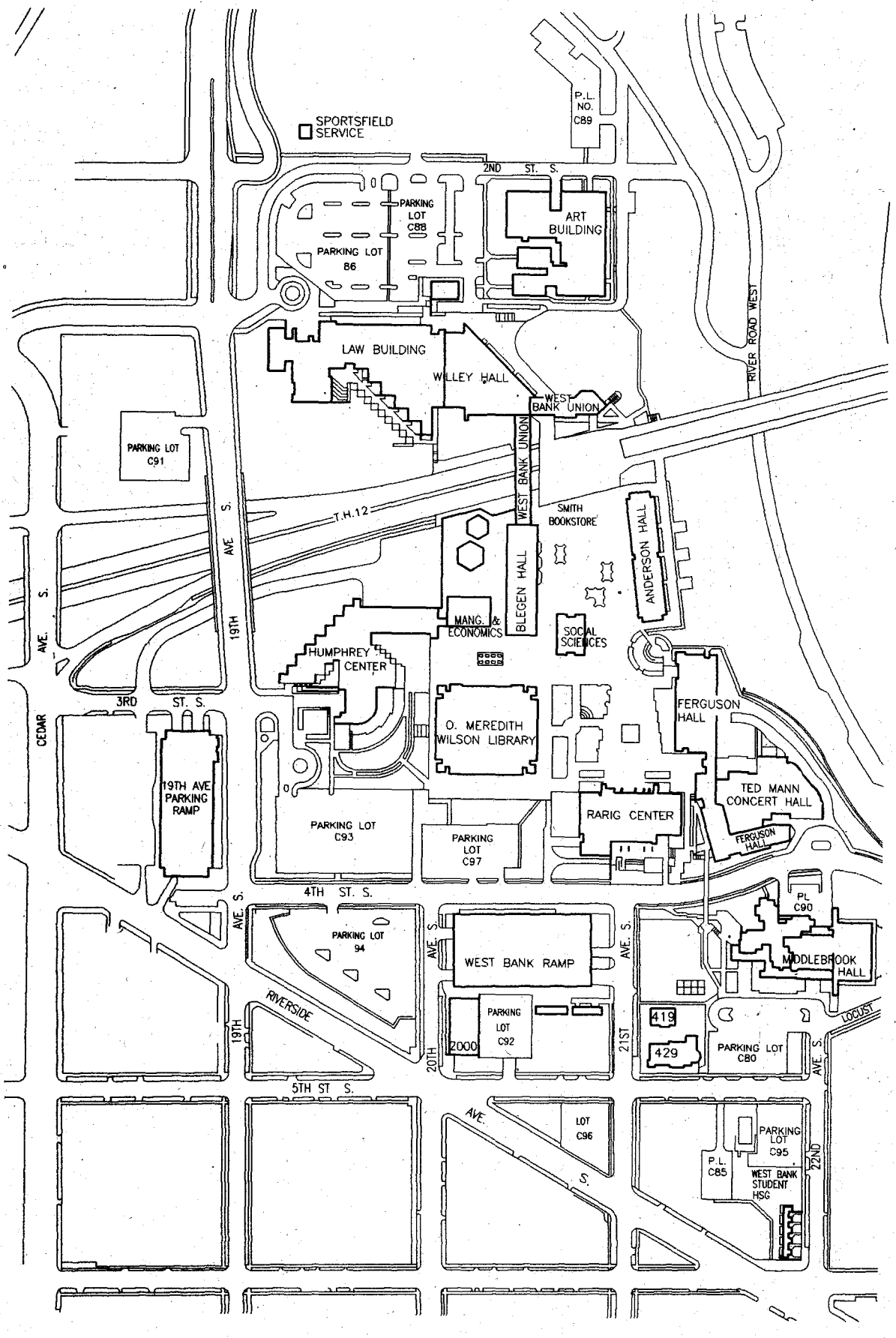
○ = accessible building
❑ = partially accessible
◆ = inaccessible building
* = elevator

R = adapted restroom
(EB) = East Bank, Minneapolis
(WB) = West Bank, Minneapolis
(SP) = St. Paul

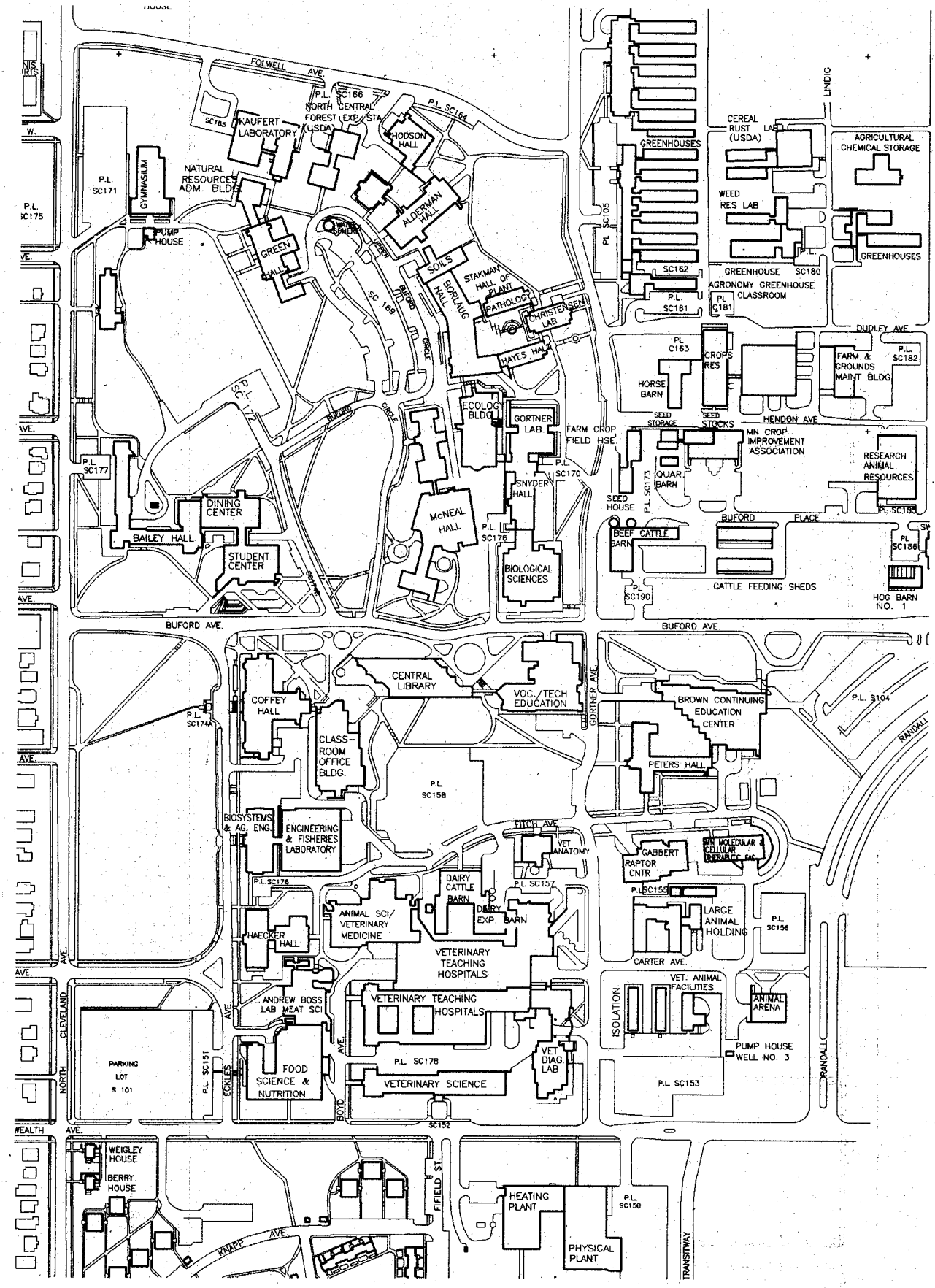
For maps *(Campus Access Guides)* and further information, contact Disability Services at 624-4037 (Voice and TTY).



EAST BANK, MINNEAPOLIS



WEST BANK, MINNEAPOLIS


FOLWELL AVE.
P.L. SC166 NORTH CENTRAL FOREST EXP. STA. (USDA)
P.L. SC164
SC165
KAUFERT LABORATORY
HODSON HALL
NATURAL RESOURCES ADM. BLDG.
GYMNASIUM
P.L. SC171
P.L. SC175
PUMP HOUSE
GREEN HALL
ALDERMAN HALL
WATER SPIGOT
UPPER BUFORD CIRCLE
SOILS
BORLAUG HALL
STAKMAN HALL OF PLANT PATHOLOGY
CHRISTENSEN LAB.
HAYES HALL
SC 169
SC 172
BUFORD CIRCLE
ECOLOGY BLDG.
GORTNER LAB.
FARM CROP FIELD HSE.
P.L. SC170
SNYDER HALL
McNEAL HALL
P.L. SC176
BIOLOGICAL SCIENCES
P.L. SC177
DINING CENTER
BAILEY HALL
STUDENT CENTER
BUFORD AVE.
GREENHOUSES
P.L. SC105
SC162
P.L. SC161
CEREAL RUST LAB (USDA)
LINDIG
AGRICULTURAL CHEMICAL STORAGE
WEED RES LAB
GREENHOUSES
GREENHOUSE SC180
AGRONOMY GREENHOUSE CLASSROOM
PL C181
DUDLEY AVE
PL C163
CROPS RES
HORSE BARN
FARM & GROUNDS MAINT BLDG.
P.L. SC182
SEED STORAGE
SEED STOCKS
HENDON AVE
MN CROP IMPROVEMENT ASSOCIATION
RESEARCH ANIMAL RESOURCES
P.L. SC183
SEED HOUSE
P.L. SC173
QUAR BARN
BUFORD PLACE
BEEF CATTLE BARN
P.L. SC186
P.L. SC190
CATTLE FEEDING SHEDS
HOG BARN NO. 1
BUFORD AVE.
CENTRAL LIBRARY
VOC./TECH EDUCATION
GORTNER AVE.
BROWN CONTINUING EDUCATION CENTER
P.L. S104
RANDALL
COFFEY HALL
P.L. SC174A
CLASS-ROOM OFFICE BLDG.
P.L. SC158
PETERS HALL
BIOSYSTEMS & AG. ENG.
ENGINEERING & FISHERIES LABORATORY
FITCH AVE.
VET ANATOMY
GABBERT RAPTOR CNTR
MN MOLECULAR & CELLULAR THERAPEUTIC FAC.
P.L. SC178
DAIRY CATTLE BARN
P.L. SC157
DAIRY EXP. BARN
P.L. SC155
ANIMAL SCI/ VETERINARY MEDICINE
HAECKER HALL
VETERINARY TEACHING HOSPITALS
LARGE ANIMAL HOLDING
P.L. SC156
CARTER AVE.
VET. ANIMAL FACILITIES
ANIMAL ARENA
ISOLATION
ANDREW BOSS LAB MEAT SCI
VETERINARY TEACHING HOSPITALS
PUMP HOUSE WELL NO. 3
CLEVELAND AVE. NORTH
PARKING LOT S 101
P.L. SC151
ECKLES AVE.
FOOD SCIENCE & NUTRITION
P.L. SC178
VETERINARY SCIENCE
VET DIAG LAB
BOYD
SC152
P.L. SC153
WEALTH AVE.
WEIGLEY HOUSE
BERRY HOUSE
KNAPP AVE.
FIFIELD ST.
HEATING PLANT
PHYSICAL PLANT
P.L. SC150
TRANSITWAY

ST. PAUL

COMPLETING YOUR COURSE REQUEST FORM

UNIVERSITY OF MINNESOTA

COURSE REQUEST

(1) **Term and year:** ☒ Fall ☐ Winter ☐ Spring ☐ Summer session I ☐ Summer session II 19 96

(2) Name of student (last, first, middle): Student Chris H. | ID number or SSN: 1234567 | (3) College and major: CLA-Anthropology

(4) Mailing address (street, city, state, Zip Code): 4312 Main Street St. Paul, MN 55111 | Phone number: 373-4343

ORIGINAL REGISTRATION or additions

(5) Call number (A)	Grade option (B)	Variable credits (C)	Department, course number, and section (D)	Magic number (E)
938472			Anth 5118	
625553		2	Engl 5970	
129970			WoSt 5300	
(6)				
489256	S-N		WoSt 3400-2	
137763			Anth 5131	

CHANGES grade base or credits

Call number	Grade option	Variable credits	Department, course number, and section	Approval (if required)
(7)				(8)

CANCELS

(9) Call number	Department, course number, and section

If you are completely canceling **DAY** classes, simply check here: ☐

(10) **Minnesota Public Interest Research Group (MPIRG).** MPIRG is described in the *Class Schedule*. The MPIRG fee is assessed to those who pay the student services fee. Payment is refundable through MPIRG. If you choose **NOT** to pay, initial here: ☐

(11) **University of Minnesota Coalition for Higher Education (UMCHE).** UMCHE is described in the *Class Schedule*. The UMCHE fee is assessed to those who pay the student services fee. Payment is refundable through UMCHE. If you choose **NOT** to pay, initial here: ☐

OTR22 9/95

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

(2) Print your name and student ID number (or Social Security Number).

(3) Print your major and the college in which you are enrolled.

(4) Print your complete address and phone number.

(5) 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-F and S-N.* See example above and read the paragraph on Grading Option on page 60 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.

(E) Print the magic number for each course for which approval is required.

(6) This section is for your second choice course requests. **Plan alternatives for all parts of the course (e.g., lecture, lab, recitation) in case your first choice requests are closed or otherwise unavailable.**

(7) This section is for courses where you are *changing* your grade base or number of credits.

(8) Required approvals, if needed.

(9) Provide the call number, designator, course, and section numbers for any courses you are cancelling.

(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 $2.50. A statewide advocacy group, MPIRG gives the 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.

(11) UMCHE—see instructions on form. University of Minnesota Coalition for Higher Education (UMCHE) lobbies to express student views on University quality, affordability, and accessibility. The UMCHE fee is $1.81 per quarter (subject to approval by the Board of Regents).

UNIVERSITY OF MINNESOTA

COURSE REQUEST

Term and year: ☐ Fall ☐ Winter ☐ Spring ☐ Summer session I ☐ Summer session II **19**____

Name of student (last, first, middle)	ID number or SSN	College and major

Mailing address (street, city, state, Zip Code)	Phone number

ORIGINAL REGISTRATION or additions

Call number	Grade option	Variable credits	Department, course number, and section	Magic number

CHANGES grade base or credits

Call number	Grade option	Variable credits	Department, course number, and section	**Approval (if required)**

CANCELS

Call number	Department, course number, and section

If you are completely canceling **DAY** classes, simply check here: ☐

Minnesota Public Interest Research Group (MPIRG). MPIRG is described in the *Class Schedule.* The MPIRG fee is assessed to those who pay the student services fee. Payment is refundable through MPIRG. If you choose **NOT** to pay, initial here: ☐

University of Minnesota Coalition for Higher Education (UMCHE). UMCHE is described in the *Class Schedule.* The UMCHE fee is assessed to those who pay the student services fee. Payment is refundable through UMCHE. If you choose **NOT** to pay, initial here: ☐

OTR22 9/95



UNIVERSITY OF MINNESOTA

STUDENT HOSPITALIZATION INSURANCE

Student name (last, first, middle initial)	Student ID number or SSN

☐ Fall quarter ☐ Winter quarter ☐ Spring quarter

☐ Fall semester ☐ Spring semester

If you are taking 6 or more day school credits, you will automatically be charged for University-sponsored hospitalization insurance unless you check the first box below, fill in the name of your insurance company and policy number, and sign the bottom of this form. If you do not provide complete information, you will be charged for insurance when you register. You may receive a full refund by returning to the Registration Center with complete insurance information **by the end of the first week of classes.** (NOTE: If you are taking 6 or more credits and do not have hospitalization insurance, you do not have to fill out this card.)

☐ **I am adequately covered by the hospitalization insurance indicated below.**

Name of insurance company or HMO	Policy or identification number

☐ **I have applied for and am enrolled in the Graduate Assistant Health-Care Plan.**

Student signature	Date

OTR290 8/93

PROGRAM WORK SHEET

EXAMPLE

Course: AmIn 3242
Room/Building: WullH 130

TIME/DAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
0800-0830 (8-8:30 a.m.)					
0830-0900 (8:30-9 a.m.)					
0900-0930 (9-9:30 a.m.)					
0930-1000 (9:30-10 a.m.)					
1000-1030 (10-10:30 a.m.)					
1030-1100 (10:30-11 a.m.)					
1100-1130 (11-11:30 a.m.)					
1130-1200 (11:30-12 noon)					
1200-1230 (12-12:30 p.m.)					
1230-1300 (12:30-1 p.m.)					
1300-1330 (1-1:30 p.m.)					
1330-1400 (1:30-2 p.m.)					
1400-1430 (2-2:30 p.m.)					
1430-1500 (2:30-3 p.m.)					
1500-1530 (3-3:30 p.m.)					
1530-1600 (3:30-4 p.m.)					
1600-1630 (4-4:30 p.m.)					
1630-1700 (4:30-5 p.m.)					
1700-1730 (5-5:30 p.m.)					
1730-1800 (5:30-6 p.m.)					
1800-1830 (6-6:30 p.m.)					
1830-1900 (6:30-7 p.m.)					

registration options

DAY CLASSES

REGISTRATION . . . . . .

Self-registration

In-person Registration

Locations:

202 Fraser, Minneapolis campus
130 Coffey Hall, St. Paul campus

Dual Registration (for admitted students only)

202 Fraser Hall
130 Coffey Hall
101 Wesbrook

See *Class Schedule* or *Summer Session Bulletin* for dates and times of registration.

Note: Certain students need to register in their program office (e.g., MBA, Medical School, Law School, Dentistry, Veterinary Medicine).

PAYMENT . . . . . .

All tuition and fees are billed through Student Accounts Receivable.

EXTENSION CLASSES

REGISTRATION . . . . . .

Mail Registration

Fax Registration

In-person Registration

Locations:

Wesbrook Hall, Minneapolis campus
MacPhail, downtown Minneapolis
St. Paul Skyway, downtown St. Paul

Dual Registration (for admitted students only)

101 Wesbrook
202 Fraser Hall
130 Coffey Hall

See *Extension Classes Bulletin* for dates and times of registration.

Note: Certain students need to register in their program office (e.g., MBT, Neighborhood Programs, ESL, PSEOA).

PAYMENT . . . . . .

Due at time of registration*

Cash
Check/money order
Credit card (Visa, MasterCard, Discover)

**Exceptions:* Students eligible for financial aid, students whose tuition and fees are being billed to an agency, and students using dual registration will have their tuition billed through Student Accounts Receivable.

PROGRAM WORK SHEET

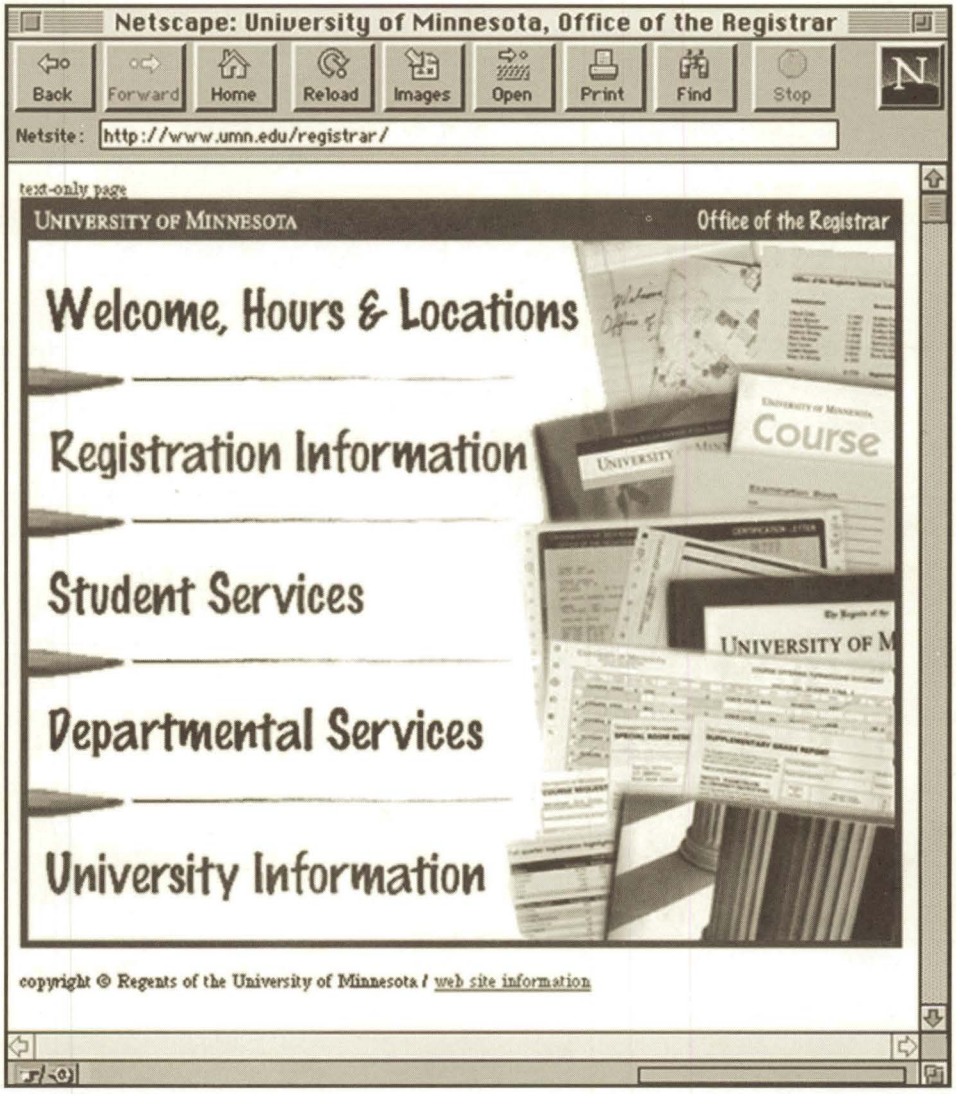
EXAMPLE

Course: AmIn 3242
Room/Building: WullH 130

TIME/DAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
0800-0830 (8-8:30 a.m.)					
0830-0900 (8:30-9 a.m.)					
0900-0930 (9-9:30 a.m.)					
0930-1000 (9:30-10 a.m.)					
1000-1030 (10-10:30 a.m.)					
1030-1100 (10:30-11 a.m.)					
1100-1130 (11-11:30 a.m.)					
1130-1200 (11:30-12 noon)					
1200-1230 (12-12:30 p.m.)					
1230-1300 (12:30-1 p.m.)					
1300-1330 (1-1:30 p.m.)					
1330-1400 (1:30-2 p.m.)					
1400-1430 (2-2:30 p.m.)					
1430-1500 (2:30-3 p.m.)					
1500-1530 (3-3:30 p.m.)					
1530-1600 (3:30-4 p.m.)					
1600-1630 (4-4:30 p.m.)					
1630-1700 (4:30-5 p.m.)					
1700-1730 (5-5:30 p.m.)					
1730-1800 (5:30-6 p.m.)					
1800-1830 (6-6:30 p.m.)					
1830-1900 (6:30-7 p.m.)					

DISCOVER CYBERSPACE

Visit the Office of the Registrar HomePage



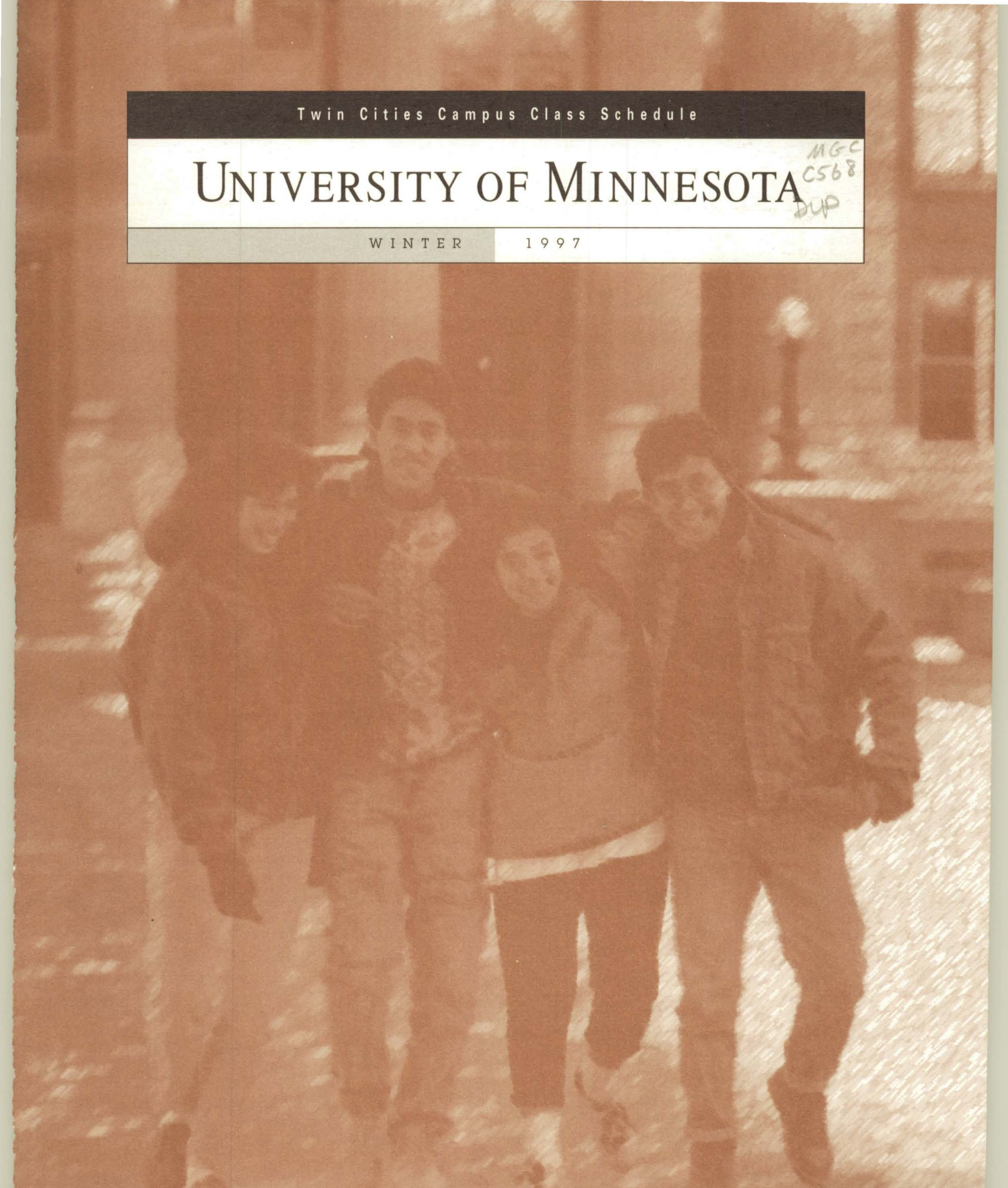
http://www.umn.edu/registrar

Twin Cities Campus Class Schedule

UNIVERSITY OF MINNESOTA

MGC
C568
DUP

WINTER 1997



Winter 1997 | **Class Schedule**

registration services

REGISTRATION CENTERS

202 Fraser Hall, Minneapolis
130 Coffey Hall, St. Paul
Monday-Friday 8-4:30
(January 6-9, 13-16: 8 a.m.-5:30 p.m., Fraser Hall only.)

For turning in scholarships and obtaining duplicate fee statements; processing in-person registrations, cancel/adds, and payroll deductions; resetting passwords; obtaining unofficial copies of student records.

STUDENT SERVICES

150 Williamson Hall, Minneapolis
Transcript Service, 624-4115
Service Center, 625-5333
Monday-Friday 8-4:30
130 Coffey Hall, St. Paul
624-3731
624-4115 (Transcript information only)
Monday-Friday 8-4:30

Transcript Service—For regular service for official transcripts ($4 charge), rush service for official transcripts ($8 charge), and for unofficial copies of student records (limit one copy per day—no charge).

Service Center—For assistance with individual student record problems, questions; registration services for students with mobility impairments; address changes; certification letters; Veterans certification (Minneapolis only); student loan deferments; turning in Application for Degree forms and Application for Change of College or Status forms. For obtaining maps and miscellaneous publications and information.

STUDENT ACCESS SYSTEM

You may view your academic record using the on-line Student Access System on the Gopher Information Server (see page 4 for various ways you can get connected to this system). The Student Access System consists of the following screens:

- The *Basic Student Record Information* screen contains information on your address, college, major and adviser, total credits earned, and GPA. Any holds on your record are also displayed, along with addresses for clearance of those holds.
- The *University Day Coursework and Grades* screen contains information on your day school registrations, including your grades, on a quarter by quarter basis.
- The *CEE and Transfer Coursework and Grades* screen contains information on your CEE registrations and on work transferred to the University from other institutions.
- The *Display Course Enrollment Counts and Status* screen allows you to check the current status (open/closed) of day courses.
- The *Registration* screens allow you to change your current mailing address and certain other demographic information, and to register yourself. See page 5 for self registration instructions.
- The *Financial Aid Main Menu* allows you to display some information on the status of your financial aid awards and holds.
- The *Student Accounts Receivable* screens allow you to view your account transactions and billing statements, and also provide other information on your account.

Only use the system to access your own record. Accessing the records of other students is a violation of University policy and state and federal law.

To use the system, you will need to enter your student ID number or your social security number, and your birthdate (if you have not previously changed it) as your password. If your password is still set as your birthdate, you will immediately be sent to the password screen and required to enter a new password before you can proceed. Continue to change your password periodically as you use the system. (If needed, you can have your password reset at a registration center or by calling 626-HELP.) The system is available Monday-Thursday, 7 a.m.-12 a.m., Friday, 7 a.m.-10 p.m., and Saturday, 8 a.m.-6 p.m *except* official University holidays.

COURSES ON WORLD WIDE WEB

The Office of the Registrar has developed an extensive World Wide Web home page on the internet. The address is: **http://www.umn.edu/registrar**. The following are available at the registrar's web site: *Class Schedule* information, *Course Guide* information, textbook information, section status reports, Liberal Education requirements, building location maps, and an interactive course planner (all linked). See page 5 for information on registering through the web.

Also available at the site are final exam schedules, the registration queue, self registration instructions, ties to the Students Access System, forms for your use, and a GPA computer.

PUBLICATION INFORMATION

Published by the University of Minnesota, Office of the Senior Vice President for Academic Affairs, Office of the Registrar, 150 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455-0213.

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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, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

In adhering to this policy, the University abides by the Minnesota Human Rights Act, Minnesota Statute Ch. 363; by the Federal Civil Rights Act, 42 U.S.C. 2000e; by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by the Americans With Disabilities Act of 1990; by Executive Order 11246, as amended; by 38 U.S.C. 2012, the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Stephanie Lieberman, Office of Equal Opportunity and Affirmative Action, University of Minnesota, 419 Morrill Hall, 100 Church Street S.E., Minneapolis, MN 55455, (612) 624-9547.

ALTERNATIVE FORMATS

This publication is available in alternative formats upon request. Please call the Office of the Registrar, 625-5333, for assistance.

UNIVERSITY CALENDAR
Twin Cities Campus

Fall Quarter 1996

NOVEMBER 1996

11 Winter *Class Schedules* available.

18 Winter quarter registration begins.

28-29 Thanksgiving holiday. Classes excused and University offices closed.

DECEMBER 1996

6 Last day of instruction.

7 Study day.

9-14 Final examinations.

14 *End of fall quarter.*
Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information

15 Graduate School application deadline for spring quarter.

24-25 Christmas holiday. University offices closed.

Winter Quarter 1997

JANUARY 1997

1 New Year's Day, holiday. University offices closed.

4 Last day to register for winter without paying late registration fee.

6 ***Winter quarter classes begin.***
1997-98 financial aid application packets available.

11 Last day to cancel with 100% refund.

13 Last day for most undergraduates and students in professional degree programs to apply for winter quarter graduation (see Graduation in Section 7).

18 Last day to cancel individual course without transcript record.
Last day financial aid recipients can register for winter and have registrations count towards financial aid eligibility. (Students in units that do not follow the regular quarterly schedule should contact their college office for deadlines.)

20 Martin Luther King's Birthday observed. Classes excused and University offices closed.

FEBRUARY 1997

19 Spring *Class Schedules* available.

26 Spring quarter registration begins.

MARCH 1997

14 Last day of instruction.

15 Study day.

17-22 Final examinations.

22 *End of winter quarter.*
Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information.

Spring Quarter 1997

MARCH 1997

28 Floating holiday. University offices closed.

29 Last day to register for spring without paying late registration fee.

31 ***Spring quarter classes begin.***

APRIL 1997

1 Last day for Graduate School students who want to participate in spring commencement ceremony to apply for graduation.

5 Last day to cancel with 100% refund.

11 Last day for most undergraduates and students in professional degree programs to apply for spring quarter graduation (see Graduation in Section 7).

12 Last day to cancel individual course without transcript record.
Last day financial aid recipients can register for spring and have registrations count towards financial aid eligibility. (Students in units that do not follow the regular quarterly schedule should contact their college office for deadlines.)

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

MAY 1997

12 Fall *Class Schedules* available.

15 Summer registration begins for currently enrolled students.
Graduate school application deadline for second term of summer session.

19 Early registration for fall 1997 begins.

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

JUNE 1997

6 Last day of instruction.

7 Study day.

9-14 Final examinations.

14 *End of spring quarter.*
Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information.

Summer Session—First Term 1997

JUNE 1997

17 ***First term classes begin.***

20 Early registration for fall 1997 ends.

23 Last day for most undergraduates and students in professional degree programs to apply for first term graduation (see Graduation in Section 7).

JULY 1997

4 Independence Day, holiday observed. Classes excused and University offices closed.

15 Graduate School application deadline for fall quarter.

22 *End of first term.*

Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information.

Summer Session—Second Term 1997

JULY 1997

24 ***Second term classes begin.***

30 Last day for most undergraduates and students in professional degree programs to apply for second term graduation (see Graduation in Section 7).

AUGUST 1997

27 *End of second term.*

Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information.

SEPTEMBER 1997

2 Registration for fall 1997 reopens.

1996

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

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				

1997

JANUARY

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

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	

MARCH

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					

APRIL

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			

MAY

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

JUNE

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					

JULY

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		

AUGUST

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						

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				

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	

■ First and Last Days of Instruction

□ Final Examination Dates

○ Classes Excused or Holidays



getting connected

CONNECTING TO THE STUDENT ACCESS SYSTEM

The Student Access System is menu item 13 on the Administrative Information Services (AIS) Public Information Menu. There are several ways you can get to that menu.

Directly Connected Terminals—A number of terminals around campus are directly connected to the AIS mainframe and are available for student use. These include terminals in the registration centers (202 Fraser Hall and 130 Coffey Hall), in 150 Williamson Hall, and LUMINA terminals in the campus libraries. (The libraries would like you to use only certain designated terminals for the Student Access System, in order to keep other terminals free for library use.)

Gopher—You can attach via Gopher. From the Home Gopher select *University of Minnesota Campus Information* and then select *Office of the Registrar.* Finally, choose *Student Access System.*

Dial Up—You can dial up from home, using a modem and communication software. Follow either of the procedures outlined below.

① **Dial 626-1920 using slip software.** Once you are connected to the University's modem pool:

- The system will return a long message asking, at the end, for your *user name.*
- Type your complete **e-mail address** and press **Enter** (type vonm0001@gold.tc.umn.edu, for example).
- The system will prompt you to enter your *password.*
- Type your **e-mail password** and press **Enter**.
- The system will prompt you to enter a *slipserver.*
- Type **tn3270 pubinfo.ais.umn.edu** and press **Enter**.
- The system will connect you to the AIS Public Information Menu.

② **Or dial 625-6009 using terminal emulation software** such as Crosstalk, SmartCom, ProComm, TinCan, or MacTerminal to connect directly to the computer at AIS. (If you have a high speed async V32/V42 class modem, dial 624-7539.) Additional parameters include:

data bits: 8
parity: ..... none
stop bits: 1
duplex: ..... full

Once you are connected to the computer at AIS, follow this log-on procedure:

- Press the **Enter** (or **Return**) key. You may need to press the key more than once before you receive a response.
- The system will return a message: *Enter terminal type.*
- Type **vt100** and press **Enter** (or **Return**).
- The system will return a message: *Please type in pa and press enter.*
- Type **pa** and press **Enter** (or **Return**).

Internet—If you have access to the internet, either using a computer connected via ethernet—such as the computers in the Computer and Information Services (CIS) microcomputer labs (see below for a list of labs)—or dialing in using SLIP software, you can connect to the system without going through Gopher. The address of the AIS computer is pubinfo.ais.umn.edu (or 128.101.109.1). If you are using TN3270, choose one of the items identified as "PubInfo" in the TN3270 Settings folder. If you are using Telnet, enter 63 when you are prompted to enter a terminal type.

Telnet users note: Access through the internet works better using TN3270 than using Telnet software. If you use Telnet, your function key will probably not work. Instead, you can use the command field in the lower right hand corner of each registration screen to key in a function type (e.g., F1) and then press Enter. The function type number is listed on the screen (F1-F9 for PF1-PF9, F0 for PF 10, FA for PF11, and FB for PF12). Also check to make sure that the Line Wrap setting is Yes and that the keyboard layout that you are using allows use of the Tab key to move from field to field. You may be able to view the keyboard map by keying #help and pressing Enter.

CIS Lab Locations—You can use any of the following CIS microcomputer and network terminal facilities to connect to the Student Access System:

East bank: DiehlH 278; EE/CSci 3-166 (IT students have priority use); EltH 121; FolH 14; LindH 1, 26 (LindH 26 frequently scheduled for classes); MechE 308; NichH 1; Phys 130 (IT students have priority use); WaLib 9.

West bank: HHHCtr 50; BlegH 455.

St. Paul: CentLib B40, B50; ClaOff 17, 135; McNH 305 (frequently scheduled for classes).

For information on hours and availability of the above facilities, call the E-Mail/Internet Help Line, 626-7676, 9-4 Monday-Friday.

Getting Software—TN3270, Telnet, Gopher, TinCan, ProComm (and other communication software), and SLIP software are available from CIS. TN3270, Telnet, and Gopher for both Macintosh and DOS computers, and SLIP software for DOS, are available on the CIS file servers. SLIP software for the Macintosh and communications software such as TinCan and ProComm must be obtained in person at a CIS Micro Helpline office—be sure to bring 5 high density or 6 double density disks for the software.

Questions?—For help with the Student Access System, call 626-4276.

section 1 registering yourself

GENERAL INFORMATION FOR SELF REGISTRATION

Registration is available on the Student Access System, an option on the Administrative Information Services (AIS) Public Access Information Menu. The system is available Monday-Thursday from 7 a.m.-12:00 a.m., Friday from 7 a.m.-10 p.m., and on Saturday from 8 a.m.-6 p.m. *except* on official University holidays. In-person registration is also available at the registration centers—see page 13 for more information.

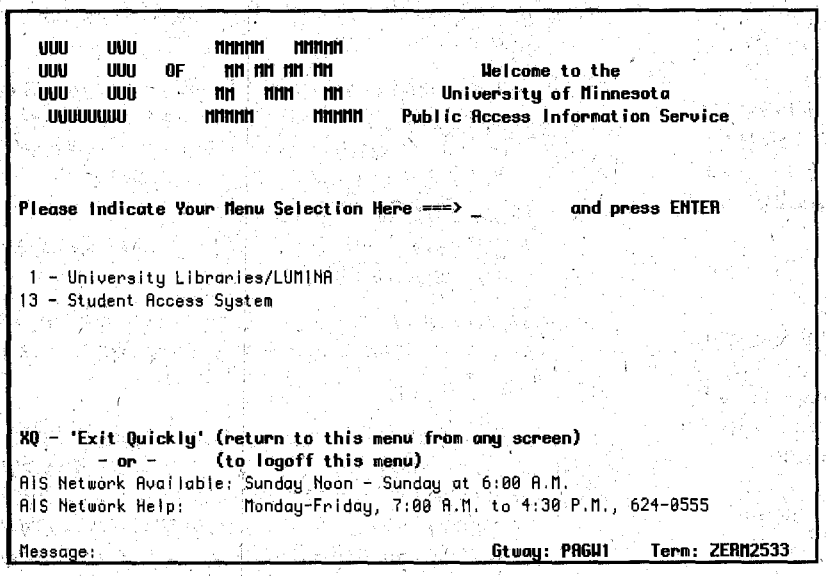
You are responsible for the accuracy of your course enrollment and fee information. When you register yourself you are still subject to all University and college regulations. You must register by January 4 to avoid a late registration fee. Students who register from January 6-18 will be charged a $20 late registration fee. Students who are permitted to register on or after January 19 will be charged a $40 late registration fee. Read the registration information on pages 13-18 in Section 2 of this *Class Schedule* before you begin registration. You may also find it helpful to complete a registration form (page 173) before your start.

You must either complete each registration transaction, by reaching the Event Completion screen, *or* you must back out of the transaction to undo any changes. These instructions and the screens themselves provide the basic information for updating, proceeding to the next screen, or exiting. **READ THEM CAREFULLY.** For additional help, refer to the section General Instructions for the Student Access System beginning on page 12, or call 626-HELP (626-4357), Monday through Friday, 8-4:30, to talk to staff from the Office of the Registrar.

NOTE: If you do not create any activity within a five minute period, you will be logged off the system. Activity is generated when you press **Enter** or a function key. For more information about PF keys, F keys, and using the command fields, refer to the section Entering Data and Moving Between Screens on page 12. For best results, use the **Tab** key on your keyboard (instead of the arrows) to move from field to field. After making changes on any screen press **Enter** to finalize those changes.

Your enrollment statement will be sent to your e-mail address. If you would like a paper copy, refer to the section Selecting a Printer on page 10 for information on selecting an alternate print location.

New Registration Option Coming Winter Quarter!—Web course registration will be offered to selected groups of students during the winter quarter registration period. Check the Office of the Registrar web site (http://www.umn.edu/registrar) for current information.



STARTING OUT

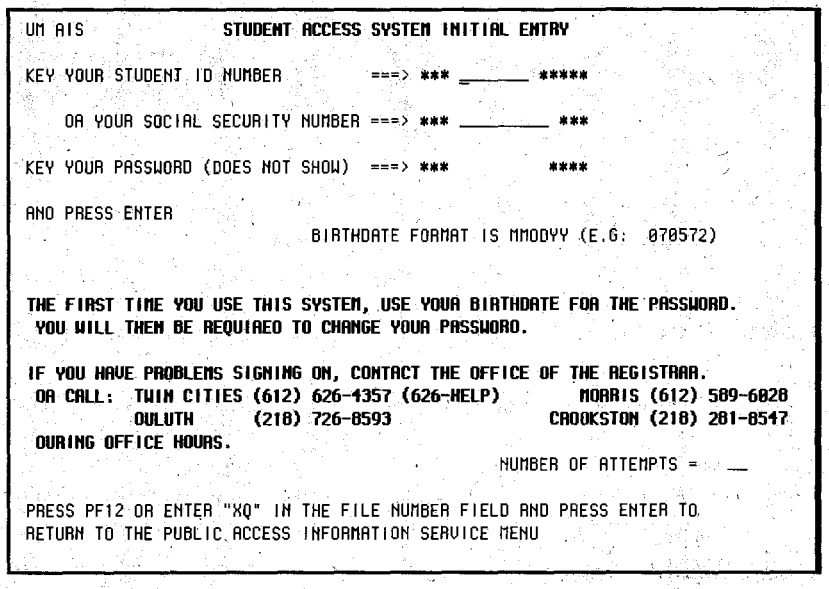
There are a number of ways you can get to the system. See Getting Connected on page 4.

You will see a screen including the message PLEASE TYPE PA AND PRESS ENTER FOR PUBLIC ACCESS (LIBRARIES AND STUDENT ACCESS):

Type **pa** and press **Enter.**

Once you reach the public access screen:

Type **13** and press **Enter.**



ENTERING STUDENT ACCESS

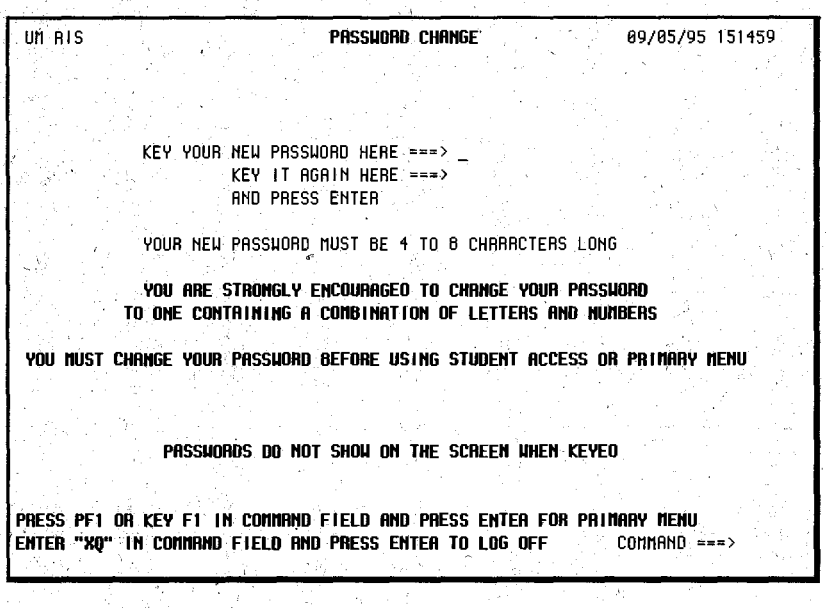
Type:

your **student ID number,**
or your **social security number,**

and your **password.**

Press **Enter.**

NOTE: Your password is originally set to your birthdate, using the MMDDYY format (e.g., 070572). Do not enter dashes or slashes.



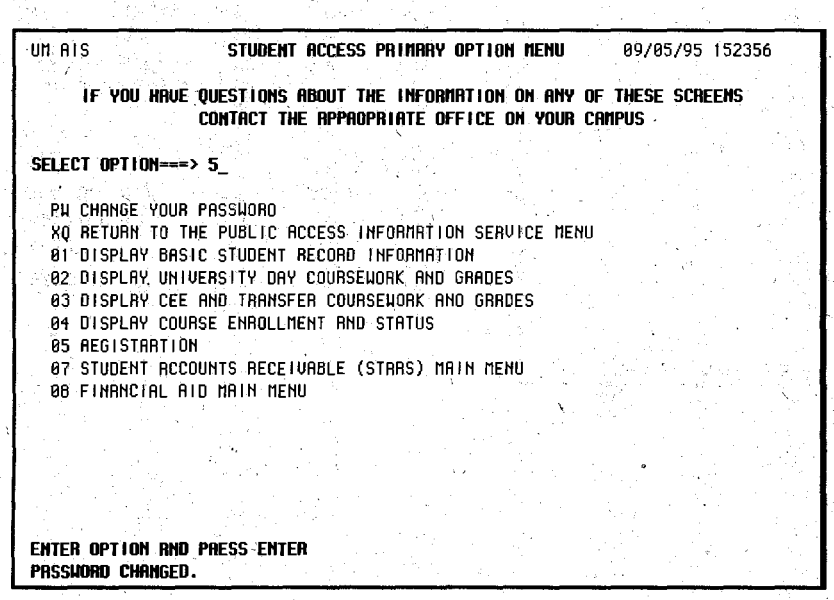
CHANGING YOUR PASSWORD

If you have not yet changed your password (originally set to your birth date), you will automatically go to the Password Change screen.

Type:

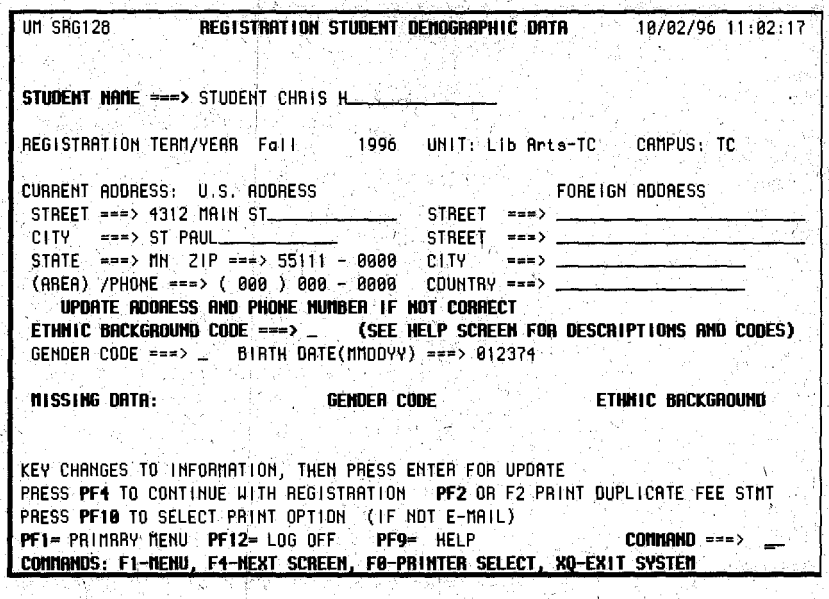
your new password (4-8 characters long),
press **Tab** if necessary to move to the next field, and
type your new password again.
Press **Enter.**

A successful change will send you to the next screen.



SELECTING REGISTRATION ON THE STUDENT ACCESS MENU

Type **05** and press **Enter** to register.



VERIFYING STUDENT DEMOGRAPHIC DATA

Examine the information on this screen closely:

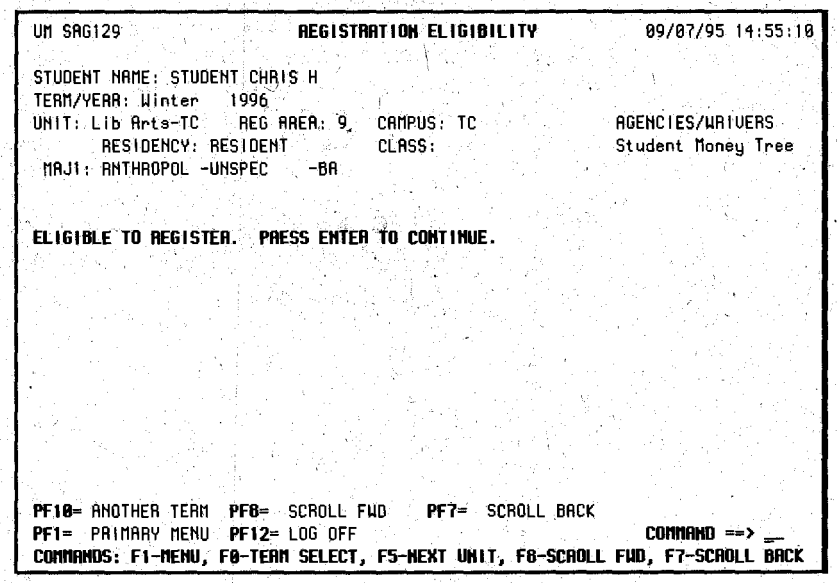
- confirm your registration term/year, unit (college), and campus,
- check your address and update as necessary, and
- check for missing data and update.

If you have made changes to the screen, press **Enter.**

When you are satisfied that the information is correct, press **PF4,** or type the **F4** command and press **Enter,** to continue with registration.

OPTIONAL: If you wish to send your enrollment statement to a location other than e-mail, press **PF10** or type the **F0** command to go to the printer selection screen (see Selecting a Printer, page 10). If you have been admitted to a new college, you may have to press **PF5** or type the **F5** command to change your unit (college).

Proper Format for Dorm Addresses— When you enter a dorm address, you must enter the *street address* of the dorm along with your room number. For example, if you live in room #999 in Sanford Hall, enter 1122 University Avenue, #999, Minneapolis, MN 55455.



CHECKING YOUR REGISTRATION ELIGIBILITY

Check for holds or other approvals required for registration. (If you need to exit at this point, type **XQ** in the command field,)

Press **Enter.**

Or, if you changed your college, press **PF2** or type the **F2** command to continue with registration.

NOTE: You will not be allowed to continue if you have any holds, if you are required to see your adviser, or if you are attempting to register in advance of your queue time. Note the hold codes and clearance addresses.

```
UM SRG130                    COURSE ENROLLMENT                  10/02/96 10:59:41
                        NAME: STUDENT CHRIS H                  TERM/YEAR: Fall  1996
ACTION      GRADING
 CODE  CALL #  OPT  CREDITS  -----COURSE------   MEETING TIMES/DAYS

  _   _____   _    ____
TO ADD A COURSE, KEY THE CALL NUMBER ON THE LINE ABOVE AND PRESS ENTER
TO PROCESS A COURSE BELOW, KEY SELECT CODE NEXT TO COURSE AND PRESS ENTER
  SELECT CODES:  C - CHANGE CREDITS/GRADE OPTION, D - DROP, S - SWAP

SELECT ---CURRENT SCHEDULE---------------------- PAGE 1  OF 1      COMMENT




COMMANDS: F4-FEE SCREEN, F2-COURSE STATUS, F8-NEXT PG, F7-PREV PG, F6-BACK OUT
PRESS PF4 TO CONTINUE TO TUITION/FEES SCREEN        TOT CRS:  0.0
PRESS PF2 FOR COURSE STATUS DISPLAY SCREEN; PF9 OR F9 COMMAND FOR HELP SCREEN
PRESS PF6 TO BACK OUT OF REGISTRATION AND UNDO ANY CHANGES     COMMAND ===> __
```

```
UM SRG134C                  COURSE STATUS DISPLAY              09/15/95 15:31:03
COURSE INFO:  (HIGHLIGHTED FIELDS ARE REQUIRED, OTHERS ARE OPTIONAL)
TERM===> 3 (1=SSI, 2=SSII, 3=FALL, 4=WTR, 5=SPR)  YEAR===> 1995
CAMPUS===> 1 (1=TC, 3=DUL, 4=MOR, 5=CAK)
COURSE DESN===> ENGL (E.G., MATH)    COURSE NO===> _____    SECTION NO===> ___
SECTION TYPE===> _ (BLANK=LECTURE, L=LAB, R=RECITATION, C=CLINIC, D=DRILL)
CALL NUMBER===> _____    SECTIONS (R=ALL, O=OPEN ONLY)===> O

                                                                        WAIT
CALL    CASE   SECT     CLASS      MEETING  SIZE   ---SEATS---          LIST
 NO      NO     NO       TIME       DAYS    LIMIT  USED   OPEN  STATUS  SIZE
764959  1069   001   1325 - 1415  M W  F     40     39      1   OPEN      NO
720413  1591   005   1220 - 1310  M W  F     37     25     12   OPEN      NO
150637  1591H  080   0800 - 0850  M W  F     35     33      2   OPEN      NO
020031  1595   002   1220 - 1310  M W  F     38     32      6   OPEN      NO
456015  1621H  080   1325 - 1415  M W  F     35     12     23   OPEN      NO
820032  1671   002   1430 - 1520  M W  F     38     29      9   OPEN      NO
520025  3006   003   1115 - 1205  M W  F     30     28      2   OPEN      NO
958660  3111   001R  0800 - 0850    W        19     15      4   OPEN      NO
        3111   001   0945 - 1100   T Th             104        AUTOREG   NO
463823  3111   002R  0800 - 0850    W        19      7     12   OPEN      NO
     PAGE  1 OF  5 --PRESS PF7 FOR PREVIOUS PAGE; PRESS PF8 FOR NEXT PAGE
KEY COURSE INFO AND PRESS ENTER TO DISPLAY   (PRESS PF9 FOR HELP SCREEN)
PF3=  EXIT BACK TO COURSE ENROLLMENT                        COMMAND ==> __
KEY F3 IN COMMAND FIELD, PRESS ENTER TO RETURN TO COURSE ENROLLMENT
```

ENROLLING IN COURSES

To add a course, type the **6-digit call number** and press **Enter** for each course. In choosing grading options, use **A** for A-F or **S** for S-N (pass/fail). When a course has variable credits, type the number of credits you want (type 4, for example, if you want to register for 4 credits).

If the course requires special approval and you have received a magic number, type it in the *Magic Number* field, when it appears, and press **Enter.** If you do not have a magic number, and want to add another course, tab to the call # field and type over the previous call number.

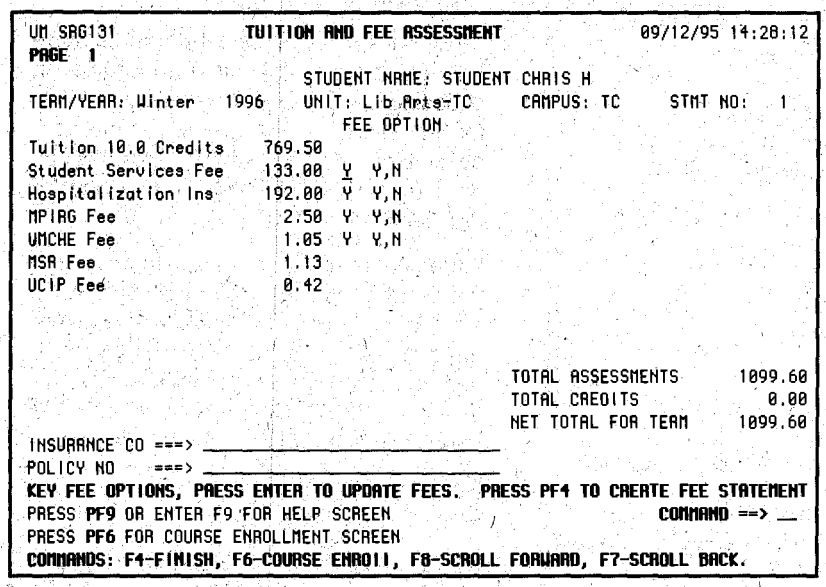
Check your coursework under the current schedule section carefully.

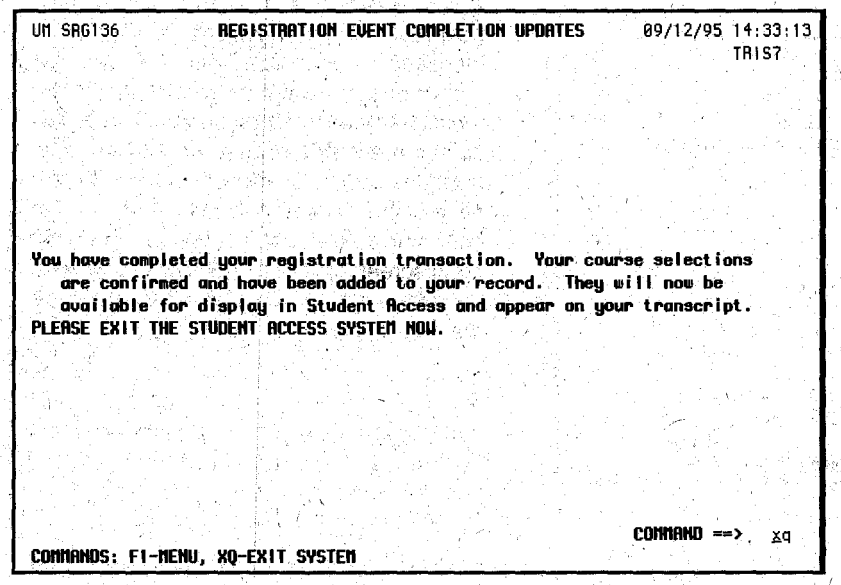
NOTE: Add all your coursework, then proceed by pressing PF4 or type the F4 command to continue with registration and compute your tuition and fees. If you instead press PF6, you will undo all your transactions!

Refer to the section Changing Your Schedule on page 10 if you need to make changes to your current schedule.

USING THE COURSE STATUS DISPLAY

If a course is not available to you (e.g., a closed section or a course for which you do not meet entry requirements), you will get a message requesting a magic number. You may choose an alternate section by viewing the course status display screen. To see this screen press **PF2** or type the **F2** command from the course enrollment screen. Find a section that fits your schedule and note the call number; then return to the course enrollment screen by pressing **PF3** or type the **F3** command. **Tab** to the *Call #* field and type the new call number.





ASSESSING YOUR TUITION AND FEES

Adjust any optional fees by typing **N** or **Y** over the fee option next to the dollar amount. See page 172 for an explanation of the MPIRG and UMCHE fees.

Hospitalization insurance information that was entered for a previous quarter will automatically carry over to the next quarter. A message will appear asking you for verification of your insurance information. You will need to enter a **Y** in the command field to confirm. When you enter an **N**, the previous information will be removed—you can then type in new insurance information, or leave the field blank and have University-sponsored hospitalization insurance assessed. To remove an assessment for hospitalization insurance you must provide insurance company *and* policy number information.

Press **Enter** to activate any changes to your fees.

When finished, you *must* press PF4 or type the F4 command to create your enrollment statement and finish your registration transaction.

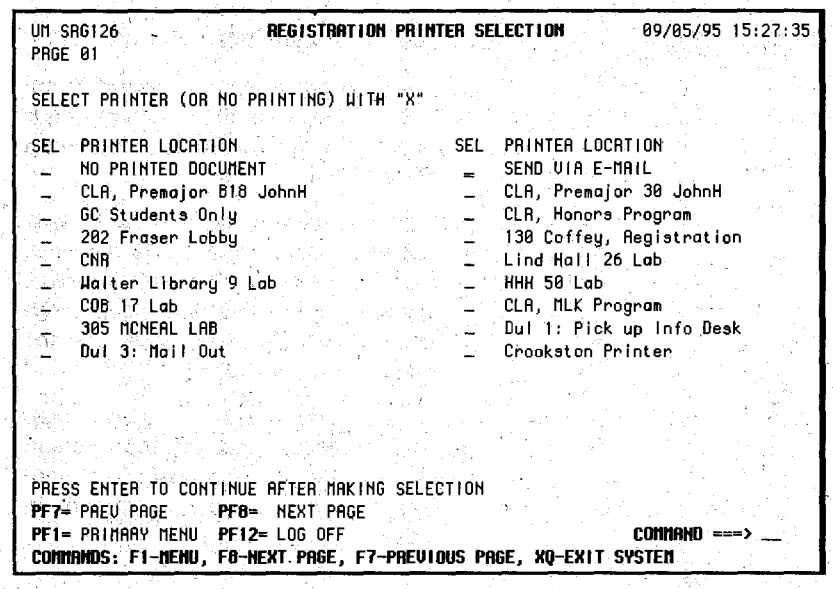
NOTE: With 6 or more credits (or equivalent) you are *required* to take the student services fee.

EXITING REGISTRATION

Congratulations! You have completed your registration. The message on the screen indicates whether your courses will be posted to your record immediately or at the end of the day.

Return to the Student Access menu by pressing **PF1** or typing the **F1** command.

To exit the system, type **xq** in the command field and press **Enter**.



SELECTING A PRINTER

This screen will appear only if your e-mail address has not yet been assigned or is not yet on your student record.

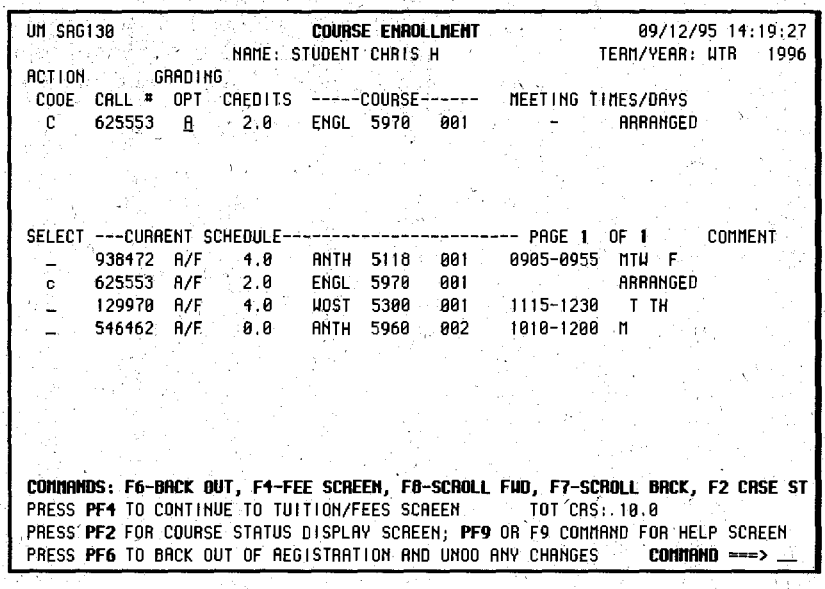
New students: your e-mail address will be assigned in a few days following your initial registration. Call 626-7676 for more information on e-mail.

To choose an alternate printing location, you must press **PF10** or type the **F0** command from the Student Demographic Screen. To then select a printer other than your e-mail address, simply **Tab** to the alternate *Select* (i.e., Sel) field, type **x** and press **Enter.** This new location will be used on this transaction only.

CHANGING YOUR SCHEDULE

On the Course Enrollment Screen you can add, change, drop, or swap your courses. You can stop the process and reset the screen for your next transaction by removing the code in the *Action* field and pressing **Enter**. You can also undo any of the changes you have made by backing out of registration *before* you create your enrollment statement. To back out of registration, press **PF6** or type **F6** in the command field. Then, at the prompt, press **PF6** again.

NOTE: To confirm your change, drop, or swap, you *must* proceed to the tuition and fees screen using PF4 and create a new enrollment statement even if there is no change in your fees.

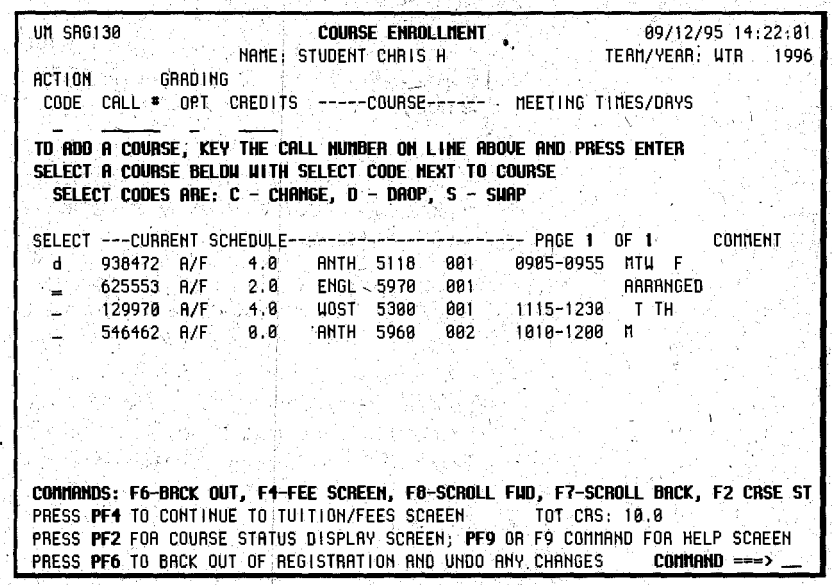


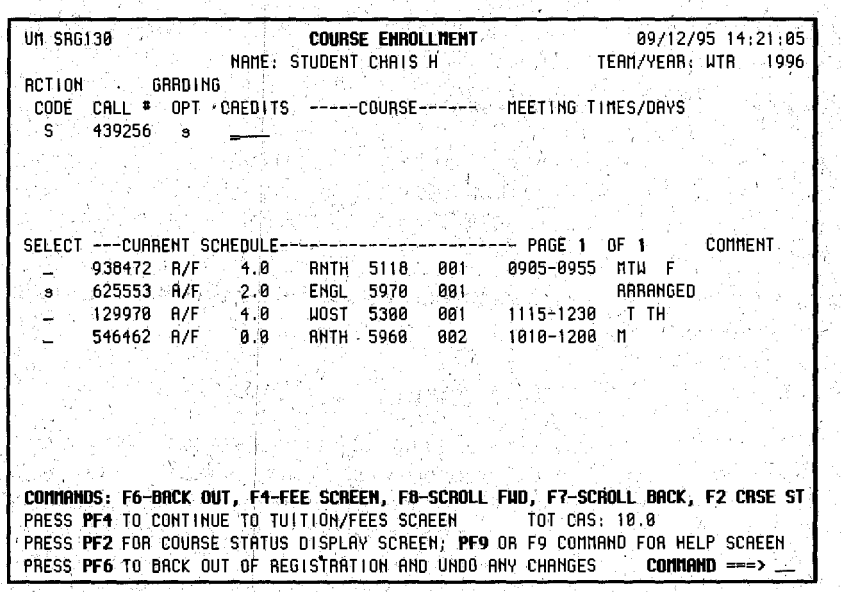
CHANGING A COURSE

To change the credits or the grading option on a course already on your schedule, type **c** in the *Select* field next to the course and press **Enter.** (Do *not* type course information in the top line.) The course will be brought to the top of the screen. Then type the change(s) and press **Enter** to finalize the change.

In choosing grading options, use **A** for A-F or **S** for S-N (pass/fail). When a course has variable credits, type the number of credits you want (type 4, for example, if you want to register for 4 credits). An error message will appear on the bottom of the screen if the grading option or the credits are invalid.

NOTE: To confirm your change you *must* proceed to the tuition and fees screen using PF4 and create a new enrollment statement even if there is no change in your fees.





DROPPING A COURSE

To drop (cancel) a course, type **d** in the *Select* field next to the course and press **Enter.** (Do *not* type course information in the top line.)

NOTE: The course will be dropped immediately if you qualify for a 100% refund of tuition. If you will not receive a 100% refund, a message will give the percentage to be refunded. Press **Enter** again to drop the course at this refund rate.

NOTE: To confirm your drop you *must* proceed to the tuition and fees screen using PF4 and create a new enrollment statement even if there is no change in your fees.

SWAPPING A COURSE

To swap one course for another, type **s** in the *Select* field of the course you want to cancel and press **Enter. S** will appear in the action field. Next, type the call number of the course you want to add and press **Enter** (with grading option or credits typed if necessary).

The courses will cancel/add together. If something prevents the add, the cancel will not be processed.

NOTE: To confirm your swap you *must* proceed to the tuition and fees screen using PF4 and create a new enrollment statement even if there is no change in your fees.

GENERAL INSTRUCTIONS FOR THE STUDENT ACCESS SYSTEM

Entering Data and Moving Between Screens—To enter data (change your address, add a course, etc.), type the appropriate data and press **Enter** (or **Return**). After entry, the screen will return, showing the change or giving a confirmation message. The most common confirmation message is TRANSACTION COMPLETED. If there are several items to enter or change on a screen, you can type all of the data, then press **Enter** once.

To move from one screen to another, press **Enter** or a function type. Function keys are usually referred to as **PF** or **F** keys, with a number associated (such as **F1** or **PF1**). Screen instructions will indicate the keys to press on each screen. Since the location and combination of keys required for function keys varies with different hardware and software, another means of specifying a function type is provided. Every screen contains a **COMMAND** field in the lower right corner. To enter a function type command, type **F**, followed by the function type number or letter (**F1-F9** for PF1-PF9, **F0** for PF10, **FA** for PF 11, **FB** for PF12) in the **COMMAND** field, then press **Enter.**

Exiting and Timing Out—It is extremely important to exit the student access system when you are done using it (whether registering or viewing your record). To exit, type **XQ** and press **Enter.** When registering, you must first complete your transaction by creating your enrollment statement (see above) *or* back out of your changes by pressing **F6** or using the **F6** command from the Course Enrollment screen. You can then enter **XQ.** Unless you exit the system, your record can be accessed by someone else when you leave the terminal. **Protect yourself by always exiting the system when you finish!**

If you do not create any activity within a five minute period, you will be logged off the system. Activity is generated when you press **Enter** or a function type.

SCREEN-SPECIFIC INSTRUCTIONS

Registration Screens (Student Access Menu Option 5)

Problems with Adding Courses—If the system is unable to process your transaction, explanatory messages will appear in the top portion of the screen. Some of the messages you may see include:

- SECTION CLOSED, PRESS PF2 TO DISPLAY OPEN ALTERNATE SECTIONS *or* SECTION CLOSED, NO OPEN ALTERNATE SECTION EXISTS—If you are trying to register for a closed course, the system will determine if there are other sections of the course that are still open and reflect that in the message. If you have been given a magic number by the instructor or department, enter that code in the magic number field (under your name) and press **Enter.** Press **F2** or use the **F2** command and press **Enter** to access alternate sections on the Course Status Display screen.
- TIME CONFLICT WITH OTHER COURSE: USE ACTION OF T TO ADD THIS SECTION ANYWAY—If you are trying to register for a course that overlaps with another course already on your schedule (or comes within 10 minutes of overlapping), the overlapping course will be highlighted. If you still want to register for the course, type **T** over the **A** in the action field (not in the magic number field) and press **Enter.**
- COURSE ENTRY REQUIRES APPROVAL OF (followed by INSTRUCTOR, DEPARTMENT, COLLEGE, or GRAD SCHOOL)—You do not meet the entry requirements for the course, or all students need permission to register for the course. College approval is obtained from the college that *offers* the course, not necessarily the college in which you are enrolled. If you have been given a magic number for the section, enter that code in the magic number field (under your name) and press **Enter.**

Duplicate Enrollment Statement Screen—This screen allows you to print a copy of a enrollment statement that has already been created or send a copy to yourself via e-mail. To print, you will need go to the Printer Selection screen using **F10** or **F0** and select a printer. Then, from the Student Demographic Data Screen, use **F2** to move to the Duplicate Enrollment Statement screen.

TROUBLESHOOTING

The Student Access system rarely goes down, but if the system goes down while you are registering (or you accidently end your connection), you must log back on to complete your registration. Your course selections will be held to give you a chance to complete your registration. Access the system and complete your registration as soon as possible. Wait five minutes, then attempt to log back on. If successful, select registration and proceed to the point at which you lost your connection and complete your registration. You will also be logged off if you are in registration when the system is taken down at the end of the day. If the system has shut down for the day, complete your registration the next day.

If you continue to have problems accessing registration or the Student Access system, contact the Office of the Registrar in one of the following ways:

- By phone: 626-HELP (8 a.m.-4 p.m. weekdays).
- Visit one of the registration centers (202 Fraser Hall or 130 Coffey Hall) to have a staff member help you or to complete your registration.
- E-mail a message to registrar@gold.tc.umn.edu. If you send e-mail, send your name, file number (student ID number), phone number (and a suggested time to reach you), and a thorough explanation of the problem, including the name of the screen on which the problem occurs and any messages on that screen. If your problem seems easy enough to correct with written instructions, you will receive a reply via e-mail.

section 2 registration info

USING THE REGISTRATION CENTER

Step 1 **Complete the registration check list on the next page.**

Step 2 **Bring your Course Request form and this *Class Schedule* to any registration center.** You may register in 202 Fraser Hall or 130 Coffey Hall, whichever is more convenient for you. Students with mobility restrictions (including temporary problems) can also register at 150 Williamson Hall.

Step 3 **Review all information on your enrollment statement for accuracy before you leave the registration center—name, address, course information, and fees.** See pages 29-31 for complete information on paying your fees.

LATE REGISTRATION FEE

You must register by January 4 to avoid a late registration fee. Students who register from January 6-18 will be charged a $20 late registration fee. Students who are permitted to register on or after January 19 will be charged a $40 late registration fee.

STUDENT RESPONSIBILITY

The policies in this *Class Schedule* directly affect your registration. You are responsible for all the information contained in this book: avoid potential problems by reading carefully through the various sections of this schedule and by checking the prerequisites of all your courses. You can receive credit only for those courses for which you are properly registered. Likewise, you must pay for any course for which you register unless you officially cancel on-line (your cancellation is not complete until you create a enrollment statement) or at your registration center. In addition, if you attend a class without registering for it, you will be considered an auditor in the course and will be billed for full tuition and fees.

The general registration instructions in this book apply to all students. Students in the College of Liberal Arts, the College of Education, the Carlson School of Management, and the Graduate School, and *all* international students have specific registration instructions printed on pages 15-18. In addition, your course of study falls under policies established by your college. These policies are contained in your college bulletin and in other publications issued by your college. You are also responsible for knowing and following the policies of your college.

To prevent misunderstandings and errors in registration, you should register yourself. If you cannot register yourself, you can have someone register at a registration center for you with your written permission and student ID card.

REGISTRATION CHECK LIST

☑ **A Registration Check List**—Run through this check list before you register on-line or before you go to your registration center. You will be able to avoid frustrating delays by following these hints:

☐ **Fill out a Course Request form completely.** (A Course Request form can be found on page 173.) Be sure to list a new address on the form if you have moved or have a new local address. List alternate courses in case your first choices are not available. Obtain on-line instructor or college approval as required.

☐ **Do you know the name and policy number of your hospitalization insurance company or HMO?** Unless you provide this information on the Student Hospitalization Insurance Form (on page 173), or provide or verify this information on the tuition and fee assessment screen when registering yourself, you will **automatically** be charged for University-sponsored hospitalization insurance if you take 6 or more credits. See Health Service and Hospitalization Charges, page 24, for more information.

☐ **Have you checked the Section Status Report?** Check the report (available on the Student Access System—see page 4—and posted outside of 16 Johnston Hall) to see if space is available in limited enrollment **(R)** courses. 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.

☐ **Do you need any Magic Numbers?** Is there a # or Δ or ❑ in the prerequisite statement of your course? Are you trying to register in a closed course? After the first week of classes? Remember: You must have a magic number to register in these courses.

☐ **Do you have any holds you need to clear?** You will not be able to register if you have any holds on your record. Clear your holds as soon as possible. See Holds, page 14, for further information.

☐ **Do you have specific college instructions to review?** Students in the College of Liberal Arts, the College of Education, the Carlson School of Management, and the Graduate School, and *all* international students have specific registration instructions printed on pages 15-18.

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:

Web registration coming! . . . . . page 5
Tuition benefits for graduate assistants 34

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.

Because this *Class Schedule* was prepared in October, scheduling changes may also occur before or during registration. Registration terminals always contain the most current and accurate information. Hour and day changes are published in the Official Daily Bulletin, a column in the *Minnesota Daily,* and on the World Wide Web at http://www.umn.edu/registrar. Room changes are posted on classroom doors.

CREDIT LIMITS

Many units restrict the number of credits students may take each quarter without special permission. The table below lists all such restrictions. Contact your college office for informations on approvals required to take more than the maximum number of credits. If your unit is *not* on the table below (i.e., Health Science units), there is no limit to the number of credits you may take each quarter.

CREDIT LIMITS FOR COLLEGES

UNIT	CREDIT LIMITS
General College; University College; Graduate School	18 credits
Architecture and Landscape Architecture; Biological Sciences; Institute of Technology	19 credits
Education and Human Development; Liberal Arts; Management.	20 credits
Agricultural, Food, and Environmental Sciences; Human Ecology; Natural Resources	21 credits

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 tuition or fees, unpaid library fines, 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 the Student Access System (see page 4).

To remove a hold from your record, you must first pay the debt owed, correct the scholastic deficiency, or be cleared by Student Judicial Affairs. 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, the unit imposing the hold will electronically remove the hold from your record. (In some cases, you may be given a paper release. You must then take this release to a registration center.) Units may, on occasion, issue *temporary hold releases.* Temporary releases will allow you to either receive one transcript or to register during the quarter in progress.

If, in order to register, you pay a Student Accounts Receivable hold for a previous quarter with a personal check, and that check does not clear the bank, you will be sent a notice by Student Accounts Receivable. Your current registration may be cancelled if you fail to respond to this notice and pay your debt.

DISABILITY SERVICES

Disability Services can assist disabled students in accessing campus employment, courses, programs, facilities, services, and activities by providing services such as disability documentation, information, referral, and reasonable accommodations (i.e., interpreters, document conversion, readers, exam modifications). For more information, contact Disability Services at 30 Nicholson Hall, 626-1333 (V/TDD).

These procedures should be followed for classroom or registration accessibility:

- *Classroom Changes*—Requests for room changes for courses scheduled in inaccessible locations should be made directly to the department offering the course.
- *Early Registration*—If you need to schedule clustered classes, sign language interpreters, or arrange for taped textbooks, you must contact your college office for permission to register early.
- *Registration*—Students with disabilities that prevent them from standing in lines or who find Fraser Hall inaccessible may register on-line or at the Service Center, 150 Williamson Hall. (130 Coffey Hall on the St. Paul campus is also accessible.)

REGISTRATION INSTRUCTIONS FOR COLLEGE OF LIBERAL ARTS STUDENTS

Before Registering—Check the Student Access System for holds or required registration approvals. To clear CLA holds or receive authorization to register, follow these steps:

ADVISER APPROVAL	Make an appointment to meet with your adviser before you register.
PROBATION 1, FINAL QTR, *or* SUSPENSION	A scholastic committee action. Contact your college office.
MAJ PROG	You must bring an approved program from your major department to your college office.
ORIENT MTG	Contact 49 Johnston Hall.
UD MAJ MTG	Contact your college office, make an appointment, and attend this orientation.
REASSIGN	Students will be asked to confirm or change their intended major. Contact 49 Johnston Hall.

Read official CLA communications, including *The Clarion*—you are responsible for knowing their contents.

Registration Deadlines—CLA strictly enforces registration deadlines. See the cancel/add procedures on pages 18-19. For late registrations, follow procedures for adding a class. If circumstances prevent you from meeting a deadline, you must contact your college advising office *before* the deadline.

Program Approval—Registrations for *independent study, extra credit, directed study, directed research, and directed instruction* require the approval of the instructor, department, and college. Obtain a special permission slip for independent and directed study from the department, get approval of the instructor and department, and bring the form to 49 Johnston Hall for college approval.

Courses not listed in the *CLA Bulletin* may not be applicable towards a CLA degree. Consult your college advising office before registering for courses not listed in the *CLA Bulletin.*

S-N Registration—Changes to or from S-N registration may be made through the first two weeks of the quarter. Follow the cancel/add procedures outlined on pages 18-19.

The number of S-N credits that can be applied 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. Freshmen may take no more than *half* of a quarter's credits S-N.

Ask in your college office about restrictions on the use of S-N credits in premedicine, predentistry, prepharmacy, and all interdepartmental programs (such as American Studies, International Relations, and Urban Studies). If you are in a preprofessional program, you should follow the requirements of the college that you plan to enter.

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT REGISTRATION INSTRUCTIONS

New Students—If you are a *newly admitted student who has never attended the University of Minnesota* and have received official notification of your admission, you must go to 40 Coffman Union to obtain your student ID—the U Card. Students who are newly admitted but who have taken classes at the University of Minnesota before fall 1995 must also go to 40 Coffman Union for their U Card.

Program Approval—*Newly admitted adult special students* must obtain college approval to register by going to Student & Professional Services (SPS), 110 Wulling Hall, or by calling SPS at (612) 625-5815.

Registration Options—There are now three ways to register: (1) self registration by computer either in one of the computer labs on campus or from home following the instructions on pages 5-12; (2) in-person at the registration centers (202 Fraser Hall in Minneapolis or 130 Coffey Hall in St. Paul); and (3) mail registration if you cannot do either of the above.

Mail Registration—Mail registration is available and processed from November 18-December 31 for those students who are admitted M.Ed., M.Ed. initial licensure (postbaccalaureate), or adult special students in the College of Education and Human Development. Mail registrations received after December 31 will be returned. The last day to register without being charged a late registration fee is January 4. Mail registrations are processed according to your spot in the registration queue (see pages 20-21) and according to the availability of space if enrollments are limited. Mail registration does not guarantee that you will be registered for the class(es) you are requesting. It is not possible to register for 8000-level courses by mail without the necessary approvals. For specific information and instructions on registering for 8000-level courses, contact the department offering the course. You are responsible for choosing the courses for which you register: you are encouraged to contact your faculty adviser before you register.

Follow the steps below to register by mail:

1. Complete a Course Request form. (See page 173.) Before you submit your Course Request form, be sure you include magic numbers when a course has a prerequisite that requires instructor (#) or department (Δ) approval. When college approval (❑) is required, that approval can be obtained from SPS. Any holds on your record must be cleared or temporarily removed before your registration can be processed.
2. Complete the Student Hospitalization Insurance form. (See page 173.)
3. Mail your completed forms to the following address: Registration, Student & Professional Services, 110 Wulling Hall, 86 Pleasant Street S.E., Minneapolis, MN 55455,. DO NOT send any payment with your registration materials. Any incomplete or inaccurate registration materials will be returned to you; you may then have to register in person or register on line by computer.

After your registration is processed, you will receive a enrollment statement by mail. You may change your registration by mail only if your original registration was processed by mail. All registration changes must be received by January 10; if they are not, you *must* cancel/add in person.

If you have questions about registration, visit SPS in 110 Wulling Hall, call the registration specialist at (612) 625-5815, or send an e-mail message to m-cope@maroon.tc.umn.edu.

Class Schedules—You may pick up a *Class Schedule* in the east bank, west bank, or St. Paul bookstores. If you are not able to come to campus, you may send your name and address, the quarter requested (fall, winter, or spring), and 8-32¢ postage stamps for each schedule to Student & Professional Services (see address above). (Summer session bulletins can be requested by calling 624-4000.)

Courses—Courses offered by the College of Education and Human Development are found under a number of different designators. See *Education*, in the course sections, for a complete list.

REGISTRATION INSTRUCTIONS FOR CARLSON SCHOOL OF MANAGEMENT COURSES

UPPER DIVISION COURSES

Degree-seeking Students in Approved Majors—If you are a student in an approved unit with 90 or more credits and your GPA is 2.8 or higher, you may register for all 3000- and 5000-level general management courses (excluding practicum, honors, and special sections). You may register for these courses on-line during queued registration or you can go directly to a registration center. Your college office can provide you with a detailed list of general management courses.

Other non-Carlson School of Management Students—Any non-Carlson School student with 90 or more credits and a cumulative GPA of 2.8 or higher may be able to register for open 3000- and 5000-level Carlson School courses during open registration by coming to 290 Humphrey Center for permission.

GRADUATE COURSES

Carlson School of Management and IR Graduate Students—Graduate students enrolled in the Carlson School or the Industrial Relations program may register for most Carlson School courses on or after their queue time. M.B.A. courses are restricted to students enrolled in the M.B.A. program.

Non-Carlson School of Management Graduate Students—Non-Carlson School graduate students may request approval to register for Carlson School graduate courses by completing a petition for entry form. Approval will be given just prior to the first class meeting based on availability of space in courses. Forms and additional information will be available in 295 Humphrey Center beginning December 1. Approval for IR graduate courses must be obtained from the director of graduate studies in Industrial Relations, 537 Management/Economics.

GRADUATE SCHOOL REGISTRATION INSTRUCTIONS

New Students—If you are registering for the first time in the Graduate School, contact your department to make an appointment to see your adviser.

Active Students—If you have registered in the Graduate School at least once in the last two years, follow the steps below to clear any Graduate School holds:

MAST PROG	Take signed master's program to 316 Johnston Hall.
DOCT PROG	Take signed doctoral program to 316 Johnston Hall.
SPEC PROG	Take signed specialist program to 316 Johnston Hall.
THES TITLE	Take signed thesis title to 316 Johnston Hall.
BACH DEGREE	Take bachelor's transcript, showing degree awarded, to 316 Johnston Hall.
GPA	Take letter releasing hold from major field director of graduate studies to 316 Johnston Hall.
INCOMPLETE	Take letter releasing hold from major field director of graduate studies to 316 Johnston Hall.
DEAN'S HLD	Go to 316 Johnston Hall for explanation and instructions for clearing.
GS DEG AWD	Go to 309 Johnston Hall for change of status or readmission information.

Inactive Students—Graduate School policy stipulates that students must register at least once in a twelve month period in order to maintain their active status as graduate students. Those who do not register within a twelve month period are considered to have withdrawn, and must seek readmission—and if readmitted, must register—in order to resume work toward degrees, take examinations, file for graduation, or otherwise participate as Graduate School students.

Thesis Credits—All students are required to register for thesis credits before receiving a Plan A master's or a professional master of engineering degree (at least 16 credits of 8777 required), or a Ph.D. or Ed.D. degree (at least 36 credits of 8888 required). D.M.A. students should consult their department or the Graduate School to determine their requirement. Doctoral students may not register for thesis credits until the quarter after they have passed their preliminary oral examinations. If you are taking your preliminary oral within the first two weeks of the quarter, contact the Graduate School for registration instructions. You must register for all thesis credits under your major field course designator. Consult the course listings in Section 5 for the proper designator and current call numbers.

If you have any questions about registering for thesis credits, contact your director of graduate studies or the Graduate School, 316 Johnston Hall (625-3490).

Graduation—Graduate School degrees are awarded monthly. To graduate at the end of any given month you must:

- *submit your Graduate School Application for Degree form* in 150 Williamson Hall or 130 Coffey Hall on or before the first workday of the month.
- *complete all other requirements* by the last workday of the month.

Graduating before the end of the quarter may affect your eligibility for student loans, housing, etc. Check with the appropriate office if you have questions on eligibility.

Graduate School students obtain the Application for Degree form and detailed graduation instructions from 316 Johnston Hall.

Spring Commencement Ceremony—The spring commencement ceremony will be held on Friday, May 16, 1997. If you wish to attend, submit a completed Commencement Attendance Approval Form (signed by your adviser and Director of Graduate Studies indicating your eligibility to attend the ceremony) to 316 Johnston Hall by April 1, 1997. Forms are available in your program office and in the Graduate School.

INTERNATIONAL STUDENTS

If you hold a non-immigrant visa of any type, have been formally admitted to the University of Minnesota, and are registering for the first time, three holds have been placed on your record—AI (check of non-immigrant status documents), ME (health clearance), and AZ (English proficiency). Please read the following information carefully.

Preregistration Program and Document Check (AI Hold)—Go to International Student and Scholar Services (ISSS), 20 Nicholson Hall. You must sign up for a mandatory Preregistration Program for International Students. During this program, you will receive information about living and studying in the U.S. and at the University. You will also have your non-immigrant status documents checked and your AI and AZ holds released. You must bring your passport and non-immigrant status documents (your I-94 form, and your IAP-66 *or* pages 3-4 of your I-20AB). Sponsored students must also provide documentation of their financial support. If you are a permanent resident, you must present documented evidence of your status.

Mantoux Test (ME Hold)—Noncitizens of the United States registering for the first time at the University of Minnesota must have a Mantoux test, a test for tuberculosis, after which their ME holds will be released. Go directly to Boynton Health Service for this.

If you have had a Mantoux test within the past 12 months and bring proof in English of your testing, this test will not be required. A positive reaction indicates that you have been exposed to tuberculosis but it does not necessarily mean that you have contracted the disease. If your test is positive, you will be allowed to register for classes, but you will be required to have a chest x-ray and to return for the results. Be sure to tell the nurse if you have been recently immunized for tuberculosis, since this could cause a reaction to the Mantoux test.

Other Immunization Requirements—Minnesota law requires that all students provide in writing the month and year when they were immunized against measles, mumps, rubella, tetanus, and diphtheria. You must complete and sign the Student Immunization Form you received with your admission letter. See Immunization Clearance, page 25.

Mandatory Health/Hospitalization Insurance—All international students must carry hospitalization insurance for themselves and their dependents. Insurance coverage must be continuous from the date of arrival in the U.S. through the final date of departure from the U.S. This means that international students must have insurance coverage even if they are registered for fewer than 6 credits or are away from campus for the summer or an academic quarter. See Health Service and Hospitalization Charges, page 24.

English Proficiency (AZ Hold)—New international students who have not met the University's English proficiency requirement have a hold placed on their records. The AZ hold will be released by the Minnesota English Center (MEC) as part of the mandatory Preregistration Program for International Students (see above).

Students with a TOEFL score lower than that required by their college, or for whom the TOEFL was waived at the time of admission, may be required to take the Minnesota Battery English Language Proficiency test. You must pay a $25 testing fee when you register for the test. You can receive information about the test at the Preregistration Program.

If you have not met the English requirements for your college, you will be required to register for 1-3 noncredit English classes each quarter until you achieve the required test score.

If you have questions about the English language requirement, contact the Minnesota English Center, 320 16th Avenue S.E., phone 624-1503.

Full Course of Study—All international students holding F-1 and J-1 visas are required by the Immigration and Naturalization Service (INS) to register for a full course of study each academic quarter. To meet INS requirements, graduate students and adult specials are required to take a minimum of 7 credits per quarter; undergraduates must take a minimum of 12 credits per quarter. (NOTE: Certain academic programs or University offices, as well as exchange and scholarship program sponsors and other private educational funding agencies, may use a different credit requirement for their students. If this credit requirement is higher than that of the INS, it takes precedence over the INS requirement.) Exceptions to this rule are possible only in a limited number of circumstances. In such instances an Application for Exception from the Full Course of Study Requirement must be completed, signed by your adviser, and submitted to International Student and Scholar Services, 20 Nicholson Hall, by the first day of each quarter for undergraduates and adult specials, and by the end of the second week of each quarter for

graduate students. (Forms are available at 20 Nicholson Hall or 130 Coffey Hall.) If you have questions about this requirement, call 626-7100.

THE FIRST WEEK OF CLASS

Winter quarter classes begin Monday, January 6.

Mandatory Attendance—You must attend the first class meeting of every course in which you are registered, unless you obtain approval for your intended absence before the first meeting. Without this prior approval, you may lose your place in class to another student. If you wish to remain in a course from which you have been absent the first day without prior approval, contact your instructor as soon as possible. Instructors have the right to deny you admission if the course is full. You must *officially* cancel any course to which you are denied admission.

Gaining Admission to a Closed Course—In general, you should first go to the department offering the course, where you may be put on a waiting list or be referred to the instructor for permission to register. Attend the first class meeting if you are on a waiting list or need the instructor's permission, to see if more students will be admitted. To register in a closed course you must have a magic number from the instructor.

Senior Citizen Education Program—If you are 62 or older and a Minnesota resident, you may audit courses free of charge or take courses for credit at $6 per credit whenever space is available after the first day of class. (The Section Status Reports, available on the Student Access System and posted outside 16 Johnston Hall, can tell you if a course with limited enrollment—**R** before the course number—is open or closed. If a course is not on the report, it has no limit on enrollment and space will be available.) Under this plan, you will not pay the student services fee, but must pay any required laboratory or materials fees.

Registration for the Senior Citizen Education Program is on the second day of class (Tuesday, January 7, for winter quarter). Attend the *first* day of class, however, to see if space is available and to receive information about class procedures. To register, go to 202 Fraser Hall (150 Williamson Hall for those with mobility impairments) or 130 Coffey Hall with your registration forms and identification to verify age and Minnesota residency. Call 625-5333 for more information.

CHANGE OF REGISTRATION

All-University Policies on Cancel/Adds—All-University policies on cancel/adds apply to all students in all colleges. See the box at the bottom of this page for requirements and dates. Contact your college office for information about committee requirements and procedures when scholastic committee approval is required. NOTE: Such approvals are not routinely given.

Transcript Record of Cancelled Courses—When you cancel an individual course during the first two weeks of the quarter there is no transcript record of that course. If you cancel *all* courses during the first two weeks, a notation of cancellation will appear on your record, although no Ws will be recorded. Cancellation of any course after the second week of the quarter will result in a W on your record.

Change of Grading Option—You may *not* change your grading option after the second week of classes. See page 65 for more information on grading options.

When to Cancel Courses—If you decide before the quarter begins not to attend, cancel before the first day of classes. If you stop attending class for any reason, cancel immediately. On occasion, a course may be cancelled by the department offering the course. Contact the department immediately to see if other arrangements have been made. If no arrangements exist, it is then your responsibility to remove the course from your record by changing your registration.

UNIFORM CANCEL/ADD REQUIREMENTS WINTER QUARTER 1997

Week of Class	Required to Cancel	Required to Add
Week 1: January 6-11	Nothing required	Nothing required
Week 2: January 12-18	Nothing required	Instructor approval
Weeks 3-6: January 19-February 15	Nothing required	Instructor approval and college scholastic committee approval
Weeks 7-10: February 16-March 14	College scholastic committee approval	Instructor approval and college scholastic committee approval

Self registration is available Monday-Thursday from 7 a.m. to 12 a.m., on Friday from 7 a.m. to 10 p.m., and on Saturday from 8 a.m. to 6 p.m. In-person registration is available at the registration centers Monday 9 a.m. to 4 p.m. (8 a.m. to 5:30 p.m. in Fraser Hall during registration queues) and Tuesday-Friday from 8 to 4.

Cancellations are effective the day you *officially* cancel (either by cancelling on-line *or* by taking a completed Course Request form to either registration center—130 Coffey Hall or 202 Fraser Hall) *not* on the date you stopped attending class. If you fail to cancel any course for which you have registered but not paid, you will receive billing statements from Student Accounts Receivable for your tuition and fees, including additional billing charges and late payment fees. If you fail to pay by the due date on your billing statement, a hold will be placed on your record.

Tuition Charges and Refunds for Course Additions and Cancellations—Full 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 16-20 credit undergraduate, or the 7-12 and 13-16 credit graduate plateaus. For example, if you are an undergraduate and add a 4-credit course, increasing your credit load from 14 to 18 credits, you will be charged only for your 15th and 16th credits because your 17th and 18th credits fall within the undergraduate plateau.

No additional tuition is charged when any course addition is balanced *at the same time* by a course cancellation, i.e., a cancellation equal to the number of credits being added *or* a cancellation and course addition that keeps the total number of credits within the undergraduate or graduate plateaus.

Refunds are issued on a per-credit basis according to the refund rate that applies to the date of cancellation. (In a very limited number of circumstances, retroactive cancellations and refunds may be authorized.) For more information on refunds, see page 31. There is no refund for those credits that fall within the undergraduate or graduate plateaus. For example, if you are an undergraduate registered for 16 credits and you cancel a three credit course within the refund period, lowering your credit load to 13, you will receive a refund for 3 credits. If you are registered for 19 credits, however, and cancel 3 credits, you will not be issued a refund because your credit total remains within the plateau.

How to Change Your Registration—To change your course load or grading system, you should:

1. Fill out a Course Request form if cancelling in person. 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.
2. Obtain instructor or college scholastic committee approval if required.
3. Cancel on-line (your cancellation is not complete until you create a enrollment statement—see page 10) *or* turn in your Course Request form (and all required magic numbers) at either registration center, where you will receive a revised enrollment statement. Any assessment or credit amount that results from a change in registration is posted to your account at Student Accounts Receivable. New assessments will appear on your next billing statement. See Payment of Fees, pages 29-31, for more information.

CHANGE OF COLLEGE

Any student who wishes to transfer from one college of the University to another should submit a completed Application for Change of College or Status to the Office of the Registrar (150 Williamson Hall or 130 Coffey Hall) according to the following schedule for admitting colleges. Applications and general information are available from the Office of the Registrar. College offices can provide information on admission requirements.

NOTE: These dates are *not* applicable to programs in the Graduate School.

CHANGE OF COLLEGE DEADLINES

College:	Winter 1997	Spring 1997
Agricultural, Food, and Environmental Sciences	----	January 15
Biological Sciences	----	January 15
Education and Human Development:		
Master of Education	----	February 3
Postbaccalaureate (Agricultural, Business & Marketing, Industry, Early Childhood, and Family Education)	----	February 3
Undergraduates (except Elementary and Mathematics Education)	----	January 15
Human Ecology	----	January 15
Institute of Technology:		
Undergradutes	----	January 15
Adult Specials	January 2	March 28
Liberal Arts:		
Undergraduates	----	January 15
Adult Specials	December 2	March 3
Management:		
Undergraduates	----	January 15
Adult Specials	----	February 17
Medical Technology	----	----
Mortuary Science	November 15	February 17
Natural Resources	----	January 15

REGISTRATION QUEUE—WINTER QUARTER 1997

The registration queue on this page and the next has three parts—stage 1 for graduate, pharmacy, and public health students, and seniors (135 or more credits completed or in progress); stage 2 for juniors, sophomores, and freshmen; and stage 3 for adult and high school 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 Stowers, Jp—Suzuki, Aki in stage 2, and you may register at or after 10:30 a.m. on November 26.

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

	8:00 a.m.	8:30 a.m.	9:00 a.m.	9:30 a.m.	10:00 a.m.	10:30 a.m.	11:00 a.m.
November 18	Kuz, Martin- Lester, Joh	Lester, Joi- Lynham, Sus	Lynham, Sut- McLean, Chr	McLean, Chs- Mueller, Gr	Mueller, Gs- Nystrom, Oa	Nystrom, Ob- Peppe, Ther	Peppe, Thes- Rathi, Vive
November 19	Vang, Kb- Welter, And	Welter, Ane- Wyberg, Bry	Wyberg, Brz- Albertson	Albertsoo- Baker, Carr	Baker, Cars- Bharucha, R	Bharucha, S- Brady, Mark	Brady, Marl- Busch, Shan
November 20	Ewing, Paum- Frehner, Da	Frehner, Db- Godbout, Br	Godbout, Bs- Haenke, Kra	Haenke, Krb- Hazelton, T	Hazelton, U- Holcomb, To	Holcomb, Tp- Hulbert, Ka	Hulbert, Kb- Janke, Anne

Stage 2: Juniors, Sophomores, and Freshmen

	8:00 a.m.	8:30 a.m.	9:00 a.m.	9:30 a.m.	10:00 a.m.	10:30 a.m.	11:00 a.m.
November 21	Kuz, Martin- Landa, Debo	Landa, Debp- Larson, Pat	Larson, Pau- Lea, Kent R	Lea, Kent S- Lelko, Bren	Lelko, Breo- Lien, David	Lien, Davie- Lodahl, Ric	Lodahl, Rid- Lukens, Col
November 22	Mickelberh- Mitchell, L	Mitchell, M- Morgan, Zsa	Morgan, Zsb- Murin, Scot	Murin, Scou- Nelson, Aar	Nelson, Aas- Ngo, Son Ma	Ngo, Son Mb- Nguyen, Tha	Nguyen, Thb- Nordby, Lis
November 25	Peterson, S- Pitzen, Chr	Pitzen, Chs- Premack, Ja	Premack, Jb- Ramanathan	Ramanathao- Reiman, Joe	Reiman, Jof- Rinaldi, An	Rinaldi, Ao- Rogers, Tom	Rogers, Ton- Roy, Michel
November 26	Shatava, Bm- Simpson, Jo	Simpson, Jp- Smith, Jose	Smith, Josf- Soupir, Cam	Soupir, Can- Steffens, L	Steffens, M- Stowers, Jo	Stowers, Jp- Suzuki, Aki	Suzuki, Akj- Tam, Nancy
November 27	Van Somerf- Vignali, Kr	Vignali, Ks- Waks, Jodi	Waks, Jodj- Watkins, La	Watkins, Lb- Welty, Ryan	Welty, Ryao- Wiegand, El	Wiegand, Em- Wilson, Ter	Wilson, Tes- Wood, Erin
December 2	Andrajacl- Austad, Jay	Austad, Jaz- Balsamo, Ni	Balsamo, Nj- Bauer, Greg	Bauer, Greh- Bellandi, D	Bellandi, E- Bertram, Sh	Bertram, Si- Blackmond	Blackmone- Bohanon, Ke
December 3	Chahonyo, N- Christense	Christensf- Cobbins, La	Cobbins, Lb- Cordina, Je	Cordina, Jf- Cusick, Bri	Cusick, Brj- Dauska, Jil	Dauska, Jim- Dell'Accio	Dell'Accip- Dieterle, M
December 4	Felder, Jao- Flashinski	Flashinskj- Foster, Joh	Foster, Joi- Fruland, Be	Fruland, Bf- Gardner, Ni	Gardner, Nj- Gherity, Sh	Gherity, Si- Godlewski	Godlewskj- Grant, Jenn
December 5	Hawley, Ano- Hellmann, G	Hellmann, H- Heuring, Mi	Heuring, Mj- Hodgin, Dan	Hodgin, Dao- Hoover, Eri	Hoover, Erj- Huls, Steve	Huls, Stevf- Hyun, David	Hyun, Davie- Jackson, St
December 6	Kasperovid- Kent, Eliza	Kent, Elizb- Kimitch, Ma	Kimitch, Mb- Klobucar, J	Klobucar, K- Koestanto	Koestantp- Kraai, Kimm	Kraai, Kimn- Kresnawahj	Kresnawahk- Kruswicki

NAME ROTATION THROUGH FUTURE QUEUES

	Spring 1997	Fall 1997	Winter 1998
Registration Starts:	February 26, 1997	May 19, 1997	November 17, 1997
Each Stage Queue Begins:	Shima, Ryan	Flandrick	Tahtinen

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

	11:30 a.m.	1:00 p.m.	1:30 p.m.	2:00 p.m.	2:30 p.m.	3:00 p.m.	3:30 p.m.
November 18	Rathi, Vivf-Rutherford	Rutherfore-Schrimpf, V	Schrimpf, W-Simmons, Ve	Simmons, Vf-Steger, Don	Steger, Doo-Tan, Liang	Tan, Lianh-Tong, Jimmy	Tong, Jimmz-Vang, Ka
November 19	Busch, Shao-Chappell, D	Chappell, E-Clift, Stev	Clift, Stew-Crump, Saun	Crump, Sauo-Delabarre	Delabarrf-Downing, Gr	Downing, Gs-Eighmy, Mel	Eighmy, Mem-Ewing, Paul
November 20	Janke, Annf-Johnson, Ke	Johnson, Kf-Jurek, Andr	Jurek, Ands-Keen, Peter	Keen, Petes-Kim, Jun-Se	Kim, Jun-Sf-Knudson, Pa	Knudson, Pb-Krampf, Mar	Krampf, Mas-Kuz, Martim

Stage 2: Juniors, Sophomores, and Freshmen

	11:30 a.m.	1:00 p.m.	1:30 p.m.	2:00 p.m.	2:30 p.m.	3:00 p.m.	3:30 p.m.
November 21	Lukens, Com-Mages, Step	Mages, Steq-Marcuccio	Marcuccip-Matalamaki	Matalamakj-McCartney	McCartnez-McKey, Anth	McKey, Anti-Melstrom, T	Melstrom, U-Mickelberg
November 22	Nordby, Lit-O'Brien, Pat	O'Brien, Pau-Olson, Jeff	Olson, Jefg-Oswald, Mic	Oswald, Mid-Park, Sang	Park, Sanh-Pearson, Ra	Pearson, Rb-Persaud, Ra	Persaud, Rb-Peterson, R
November 25	Roy, Michem-Sahin, Jaso	Sahin, Jasp-Saybolt, Ja	Saybolt, Jb-Schmaltz, C	Schmaltz, D-Schraber, B	Schraber, C-Schwartz, K	Schwartz, L-Selinske, S	Selinske, T-Shatava, Bl
November 26	Tam, Nancz-Tessum, Kri	Tessum, Krj-Thomas, She	Thomas, Shf-Tischer, Ja	Tischer, Jb-Tran, Hai Q	Tran, Hai R-Truong, Tha	Truong, Thb-Undeberg, C	Undeberg, D-Van Somere
November 27	Wood, Erio-Yang, Leng	Yang, Lenh-Zahn, Jenni	Zahn, Jennj-Zitske, Mic	Zitske, Mid-Agarwal, Sh	Agarwal, Si-Altenbach	Altenbaci-Anderson, G	Anderson, H-Andrajack
December 2	Bohanon, Kf-Boyd, Taya	Boyd, Tayb-Brindley, C	Brindley, D-Brunt, Jona	Brunt, Jonb-Burkhardt	Burkhardu-Campbell, K	Campbell, L-Carlyon, Da	Carlyon, Db-Chahonyo, M
December 3	Dieterle, N-Donley, Meg	Donley, Meh-Dubsky, Cha	Dubsky, Chb-Eames, Pete	Eames, Petf-Elkins, Sha	Elkins, Shb-Erickson, B	Erickson, C-Evenson, An	Evenson, Ao-Felder, Jan
December 4	Grant, Jeno-Groetsch, H	Groetsch, I-Guthrie, Ch	Guthrie, Ci-Haigh, Terr	Haigh, Ters-Hanebuth, C	Hanebuth, D-Hardy, Anit	Hardy, Aniu-Hartwig, He	Hartwig, Hf-Hawley, Ann
December 5	Jackson, Su-Jast, Adam	Jast, Adan-Johannsen	Johannseo-Johnson, Ja	Johnson, Jb-Johnson, Ro	Johnson, Rp-Joyce, Paul	Joyce, Paum-Kamenick, A	Kamenick, B-Kasperovic
December 6	Kruswickj-Kuz, Martim						

Stage 3: Adult and High School Specials

		1:00 p.m.	1:30 p.m.	2:00 p.m.	2:30 p.m.	3:00 p.m.	3:30 p.m.
December 6		Kuz, Martin-Ostertag, L	Ostertag, M-Stopyro, Ja	Stopyro, Jb-Bellows, Ma	Bellows, Mb-Fonkem, Mic	Fonkem, Mid-Howe, Joann	Howe, Joano-Kuz, Martim

section 3 tuition & fees

TWIN CITIES CAMPUS TUITION SCHEDULE 1995-96[1]

Twin Cities Tuition Rates for Undergraduates—The following per-credit tuition rates have been approved for the 1996-97 academic year. Your tuition is always tied to the college in which you registering. If there is only a single set of rates (resident and nonresident) listed below for your college, school, or program, you will pay that rate regardless of your class standing. When there are both lower and upper division rates listed for your college, you will pay lower division rates through the quarter in which *you have registered for your 90th credit. Upper division rates are* assessed thereafter. Adult special students pay upper division rates. **There is a 16-20 credit plateau for all units listed below.** Credits 1 through 16 are assessed on a per-credit basis. There is no charge (except for course fees) for your 17th, 18th, 19th, and 20th credits. Each credit above 20 is assessed on a per-credit basis. NOTE: This plateau includes *only* day school credits and not extension credits, even if the day school and extension credits are both billed through the Student Accounts Receivable system.

There is a base tuition rate of $60.00 that is assessed once each quarter for all students. For example, if your per credit amount is $75, you would pay $135 for 1 credit (1 x $75 + $60), $210 for 2 credits (2 x $75 + $60), $285 for 3 credits (3 x $75 + $60), $810 for 10 credits (10 x $75 + $60), and $1,260 for 16-20 credits (16 x $75 + $60).

College, school, or program:	**Resident**	**Non-Resident**
Agricultural, Food, and Environmental Sciences, College of		
Lower Division	$ 76.45	$225.50
Upper Division	90.45	266.80
Architecture and Landscape Architecture, College of		
Lower Division	76.45	225.50
Upper Division	90.45	266.80
Biological Sciences, College of		
Lower Division	76.45	225.50
Upper Division	90.45	266.80
Dental Hygiene		
(Baccalaureate Program)	90.45	266.80
Education and Human Development, College of		
Lower Division	76.45	225.50
Upper Division	90.45	266.80
General College		
Lower Division	76.45	225.50
Upper Division	86.65	255.60
Human Ecology, College of		
Lower Division	76.45	225.50
Upper Division	86.65	255.60
Liberal Arts, College of		
Lower Division	76.45	225.50
Upper Division	86.65	255.60
Management, Carlson School of		
Lower Division	*76.45*	*225.50*
Upper Division	90.45	266.80
Medical Technology, Program in	90.45	266.80
Mortuary Science, Department of	90.45	266.80
Natural Resources, College of		
Lower Division	76.45	225.50
Upper Division	90.45	266.80
Nursing, School of	90.45	266.80
Occupational Therapy, Physical Therapy, Programs in	90.45	266.80
Technology, Institute of		
Lower Division	76.45	225.50
Upper Division	90.45	266.80
University College		
Lower Division	76.45	225.50
Upper Division	90.45	266.80
Preparatory Instruction (0000-level courses)	$397.50 per course	

ADDITIONAL FEE INFORMATION

Hospitalization insurance charges ..... page 24
Medical plan for graduate assistants 25
Course fees 26
Special fees 27
Computer fees 28
Facility fees 28
Payment dates for this quarter 29
Refunds 31

[1]Fees are subject to change without notice.

Graduate School Tuition Rates—The following rates have been approved for the Graduate School for 1996-97. **In addition, there is a base tuition rate of $60.00 that is assessed once each quarter for all students.** For example, if your per-credit amount is $200, you would pay $260 for 1 credit (1 x $200 + $60), $460 for 2 credits (2 x $200 + $60), $660 for 3 credits (3 x $200 + $60), and so on. All amounts below except per-credit amounts include this base tuition rate.

Part-time rates	**Resident**	**Non-Resident**
1 credit	$ 275.00*	$ 473.00*
2 credits	490.00*	916.00*
3 credits	705.00*	1,359.00*
4 credits	920.00*	1,802.00*
5 credits	1,135.00*	2,245.00*
6 credits	1,350.00*	2,688.00*
Full-time rates		
7-12 credits	1,560.00*	3,130.00*
13-16 credits	1,940.00*	3,890.00*
Each credit over 16	200.00	400.00

Architecture and Landscape Architecture rates		
Per credit	231.50	420.00
7-15 credits	1,680.00*	2,998.00*
Each credit over 15	231.50	420.00
Humphrey Institute masters rates		
Per credit	231.50	398.00
7-15 credits	1,680.00*	2,844.00*
Each credit over 15	231.50	398.00

M.B.A. rates—see Professional School rates, below.

* Includes base tuition assessment.

Professional School Tuition Rates—The following rates have been approved for professional school students and the departmental masters for 1996-97. Some schools have a 14-18 credit plateau. With this plateau there is no charge (except for course fees) for the 15th-18th credits. Each credit above 18 is assessed on a per-credit basis. Departmental masters have a 12-18 credit plateau. Most other schools have term rates for 12 or more credits. **In addition, there is a base tuition rate of $60.00 that is assessed once each quarter for all students.** For example, if your per-credit amount is $150, you would pay $210 for 1 credit (1 x $150 + $60), $360 for 2 credits (2 x $150 + $60), $510 for 3 credits (3 x $150 + $60), $1560 for 10 credits (10 x $150 + $60), and so on. Term and plateau amounts below include this base tuition rate.

College, school, or program:	**Resident**	**Non-Resident**
Dentistry, School of		
Per credit	$ 257.95	$ 383.00
Term (12 or more credits)	3,155.40*	4,656.00*
Departmental Masters, Colleges of Agriculture and Education		
Per credit	117.20	236.50
12-18 credit plateau	1,466.00*	2,898.00*
Law School (semester rates)		
Per credit	347.00	592.70
Term (12 or more credits)	4,224.00*	7,172.00*
M.B.A. rates, Carlson School of Management		
Day program (per credit)	214.25	317.00
Term (12 or more credits)**	2,957.00*	4,364.00*
Evening program (per credit)	214.25	214.25
Medical School		
1-5 credits	1,024.50*	1,864.50*
6-10 credits	1,989.00*	3,669.00*
11-15 credits	2,953.50*	5,473.50*
16 or more credits	3,918.00*	7,278.00*
Medical fellow specialists residency program		
Per term	121.00*	121.00*
Psychology fellow specialists		
Per term	121.00*	121.00*
Nurse Anesthetist		
Per credit	126.00	345.00
14-18 credit plateau	1,824.00*	4,890.00*
Pharmacy, College of		
B.S. seniors		
Per credit	70.00	125.30
Pharm.D. program		
Per credit	182.45	341.85
14-18 credit plateau	2,614.30*	4,846.00*
Public Health, School of		
Per credit	117.20	236.50
12-18 credit plateau	1,466.00*	2,898.00*
Veterinary Medicine, College of		
Per credit	235.40	353.40
Term (12 or more credits)	2,884.80*	4,300.80*
Veterinary fellow specialists, per term	121.00*	121.00*

* Includes base tuition assessment.

** Term rate applies to students entering program fall 1993 or later.

STUDENT SERVICES FEE

All students registered for 6 or more credits must pay a $156.71-per-quarter ($235.07-per-semester) student services fee in addition to tuition. Courses that carry no degree credit (Comp 0011, GC 0401, 0402, 0419, 0611, 0615, 0616, 0617, 0618, 0621, 0623, 0625, 0631, 0643, and all courses in which you register as an auditor) count in the determination of the credit total for the student services fee on a one class hour = one credit basis. The fee is distributed among the following programs:

Africana Student Cultural Center	$ .39
American Indian Student Cultural Center	.38
Asian American Student Cultural Center	.41
Association of Gay/Lesbian/Bisexual Students	.24
Boynton Health Service	62.03
Child Care Consortium	.69
Crisis Point	.30
Disabled Student Cultural Center	.45
International Study and Travel Center	1.58
La Raza Student Cultural Center	.48
Minneapolis Student Union Capitol Fund	8.85
Minneapolis Student Union Operating Fund	19.56
Minnesota Daily	4.89
Minnesota International Student Association	.58
Radio KUOM	1.05
Recreational Sports Building Fund	5.00
Recreational Sports Capitol Fund	2.70
Recreational Sports Operating Fund	17.44
Recreational Sports St. Paul Gym	5.29
St. Paul Board of Colleges	.24
St. Paul Student Center Capitol Fund	4.34
St. Paul Student Center Operating Fund	10.98
Student Activities	1.51
Student Dispute Resolution Center	.89
University Student Legal Service	6.13
University YW	.32
TOTAL	**$156.71**

Students who are registered only for research or other independent work do not need to pay the student services fee if the work is done exclusively outside the 9-county metro area (Hennepin, Ramsey, Dakota, Washington, Scott, Anoka, Carver, Wright, and Chisago). Students meeting the exemption criteria may elect to pay the fee if they wish to use or support the services covered by the fee.

STUDENT ID CARD REPLACEMENT

The University of Minnesota's student photo identification card is called the U Card. The U Card is needed to check out library materials, cash checks, and gain access to the recreation center, golf course, and secured buildings. The U Card

also lets you make Gopher GOLD purchases, reducing the need to carry pocket change. Up to $50 can be deposited into various CASH TO CARD machines located around campus, and then electronic purchases can be made from vending and copy machines, and at restaurants and cafeterias. Look for the Gopher GOLD™ logo to identify locations that accept this method of payment.

The U Card also offers calling card and bank account packages that were negotiated for members of the University community. The U Card calling card offers benefits like low long distance and surcharge rates, and the U Card free checking account lets you make an unlimited number of free ATM transactions every month. You can also use the U Card bank account to directly deposit financial aid credit balances and make debit purchases from University bookstores and at Boynton Health Service.

Your first U Card is free. To get one, go to the U Card Office, 40 Coffman Union, and bring your driver's license or passport. U Card Office hours are 8:30 a.m. to 4 p.m. Monday through Friday. Extended hours are sometimes available at the University Recreational Center. Call 626-9900 for more information.

Report a lost or stolen U Card immediately by calling the U Card Office at 626-9900, and, if applicable, TCF Bank at 823-2265 and AT&T at 1-800-445-6063. If your U Card is lost, stolen, or damaged due to negligence, there is a $10 replacement fee. Lost U Cards that are turned in are destroyed for your protection. No replacement fee is charged in the event of a legal name change; however, name changes must first be initiated through the Office of the Registrar (150 Williamson Hall or 130 Coffey Hall).

HEALTH SERVICE AND HOSPITALIZATION CHARGES

General Information—All students who take 6 or more day school credits must pay the student services fee. By paying the fee, you become eligible to receive most outpatient services at Boynton Health Service at no additional charge and others at reduced cost. Coverage for winter quarter begins Monday, December 16. (Students whose programs do not follow the regular quarterly calendar are usually covered on their first day of class. Call 624-0627 for further information.) If you do not pay the student services fee, you may be eligible to purchase outpatient health coverage through the Extended Coverage Benefits plan available at the Student Insurance Office, N323 Boynton Health Service. Call 624-0627 to determine your eligibility. Students who are not required to pay the student services fee and spouses and children of students may use Boynton Health Service on a fee-for-service basis.

Boynton Health Service in Minneapolis is open 8 a.m.-6 p.m. Monday and 8 a.m.-4:30 p.m. Tuesday through Friday. Boynton Health Service is open in 109 Coffey Hall, St. Paul, from 12:30-4:30 Monday though Friday. Prepaid medical care at Boynton includes general medical services, urgent care, internal medicine, orthopedics, chest clinic, women's clinic, laboratory procedures, and eye exams. Partial fees are charged for routine physical exams, mental health clinic visits, annual dental exams, and some specialty care. Charges for x-rays, minor surgical procedures, and charges remaining after patient copayment for mental health visits must be submitted by you to your hospitalization insurance company; your student services fee will cover the costs that your hospitalization insurance does not. Students without hospitalization insurance will be responsible for full payment of these charges. Full fees are charged for prescriptions, contact lenses, eyeglasses, massage therapy, and most dental care.

During the hours that Boynton is closed, emergency care is available at the University Hospital emergency department.

For detailed information, see *Welcome to Boynton,* a brochure available at Boynton Health Service. General information and a copy of the brochure may be obtained by calling 625-8400.

Hospitalization Insurance—The University requires all students taking 6 or more day school credits per quarter to carry hospitalization insurance. International students must carry hospitalization insurance for themselves and their dependents for the entire time they are in the U.S. If you already have insurance, fill in the name of your insurance company and your policy number on the hospitalization insurance form in the back of this *Class Schedule* and bring the form with you when you register or enter (or verify) the information on-line when you register yourself. For most students if you do not provide your insurance information when you register and you register for 6 or more day school credits, you will automatically be charged for University-sponsored hospitalization insurance. To cancel this assessment and receive a full refund, you must return to your registration center with your insurance information by the end of the *first* week of classes.

Only students who take 6 or more credits and who are degree seeking may purchase University-sponsored hospitalization insurance. Coverage may be purchased at registration or at the Student Insurance Office, N323 Boynton Health Service. You must pay either the student services fee or the extended coverage benefit fee to be eligible to purchase this insurance. Coverage must be purchased by the end of the second full week of classes (January 17 for winter quarter).

For more information on insurance or an insurance booklet, contact the Student Insurance Office at Boynton (624-0627).

Summer Insurance Coverage—If you enroll in the University-sponsored hospitalization insurance plan during spring quarter, you may purchase summer coverage, even if you do not take summer classes. You may also purchase Boynton's Extended Coverage Benefits plan for the summer. (See General Information, above, for details.)

For information about purchasing summer insurance coverage, contact the Student Insurance Office at Boynton Health Service (624-0627).

Permanent Residents—If you hold an immigrant visa, have been formally admitted to the University of Minnesota, and are registering for the first time, an ME (health clearance) hold has been placed on your record. To clear the hold, you must show proof of tuberculosis testing before registering for classes.

This requirement can be met either by having a tuberculosis test or by showing proof that you have taken tuberculosis medication in the past. If your tuberculosis test shows that you have been exposed to tuberculosis, you will be allowed to register, but you will be expected to receive follow-up care as recommended. To get a Tuberculin Screening Record sent to you, call 625-3222, or stop at the main check-in desk, 3rd floor Boynton, with your written proof of tuberculosis testing.

Immunization Clearance—The University requires all students born after December 31, 1956, to provide documentation of two immunizations for measles, mumps, and rubella, and a tetanus-diphtheria immunization within the last 10 years. This documentation must be entered on a Student Immunization Record and must include the month and year each immunization was given. Forms are available at your registration center and at the Boynton Health Service information desk.

Check your medical or high school immunization records. All students are legally required to provide information on immunizations or exemptions; students who fail to provide the required information will have a hold placed on their records and will not be allowed to register for classes. (The law does allow for an exception based on age, or documented medical or conscientious exemptions.) If you need any of the required immunizations, call your family doctor or the Boynton Immunization Clinic (625-3222) for an appointment. Boynton charges a fee for these required immunizations.

GRADUATE ASSISTANT MEDICAL PLAN

University-subsidized health insurance is available to graduate and professional school students who:

- hold appointments of 25% or more (12.5% or more during summer) as teaching assistant, research assistant, or administrative fellow, *or*
- hold appointments in class titles 9561 (Graduate School fellow), 9562 (Graduate School trainee), 9564 (professional school fellow), or 9565 (professional school trainee), and receive a stipend during the academic year (fall, winter, and spring quarters) at least equal to a 9-month 50% graduate assistantship ($8437.50 for 1996-97), provided their college or department agrees to pay the full insurance premium during the academic year.

For graduate assistants, the University pays a portion of the health insurance premium equal to twice their appointment percentage (e.g., 50% for an assistant with a 25% appointment). Eligible fellows and trainees receive 100% subsidies, but during the academic year *only*.

When departments pay for the health care plan as a non-service benefit, that payment is considered taxable income. The amount of the direct departmental contribution is reported as income, and taxes are withheld on that amount.

To receive this coverage you must apply for it during the first quarter of your assistantship, traineeship, or fellowship, and by the enrollment deadline. For most students, this deadline is the end of the second full week of classes (January 17 for winter quarter). Plan members are billed quarterly for any portion of the premium they owe. Those on hourly appointments who work less than the estimated number of hours are billed for their portion of the premium.

Graduate assistant plan members who pay the student services fee will receive a $21 credit to their account *after* the end of each quarter.

Once enrolled, you remain a plan member until your appointment ends or drops below the qualifying level. You can elect to continue coverage for a period of time at your own expense; you are then responsible for the full amount of the health insurance premium. Students receiving continuation coverage who become eligible again *must* contact the GAIO and ask to be reinstated; otherwise they will continue to be billed.

Students enrolled in the plan spring quarter remain eligible for summer but may have to pay some or all of the summer premium. The University will pay a portion of the summer premium based on the quarters during the academic year in which students were enrolled in the plan and the percentage of their appointments. Fellows and trainees enrolled in the plan are responsible for the entire summer premium unless their college or department wishes to pay it for them. Departments wishing to do so must contact the GAIO by the end of spring quarter.

Coverage for dependents of eligible students is available. The cost of dependent coverage is not subsidized by the University.

For further information, contact the GAIO, Boynton Health Service, 625-6936.

TRANSCRIPT FEES

There are three types of service for *official* transcripts: regular service, rush service, and FAX service. (Official transcripts are certified and signed by the University Registrar.) Regular service is available for $4 a copy. Processing time for regular service is 2-3 workdays; after processing, your transcripts will be mailed to the places you have specified. Rush service on your official transcript requests is available for $8 a copy. Rush service guarantees your transcript will either be issued to you in person or put in the mail on the same day it is requested. You must have a picture ID (U of M student ID card, driver's license, or current passport) to receive over-the-counter rush service. FAX service is available for $10 a copy. FAX service guarantees your transcript will be sent to the FAX number you specify and an official copy mailed to the same destination on the same day it is requested. Prepaid courier service may also be requested for both regular and rush service. Visit the transcript service (150 Williamson Hall, Minneapolis, or 130 Coffey Hall, St. Paul) for more information or call 625-5333.

Requests for official transcripts can be submitted by mail or FAX, or dropped off at the locations below. No telephone requests are accepted. Requests should include your full name and signature, a daytime phone number, your student ID number, college, dates of enrollment, and complete address(es) for mailing the transcript(s). You can send your requests to Transcript Service, 150 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455 or to Office of the Registrar—St. Paul, 130 Coffey Hall, 1420 Eckles Avenue, St.

Paul, MN 55108. FAX requests can be sent to either (612) 625-4351 (Minneapolis) or (612) 624-4943 (St. Paul).

Payment options for in-person requests include payment by check, money order, cash, or major credit card (Visa, MasterCard, or Discover). Mail requests can be paid by check, money order, or credit card. FAX requests *must* be paid by credit card. Make your check or money order payable to the University of Minnesota for $4 or $8 per transcript. Include the following credit card information for *all* FAX requests ($10 per copy) or when paying for mail requests by credit card: the type of card you are using, the credit card number, expiration date, your signature, and the signature of the card holder if different. Scanned or computer generated signatures are not accepted.

You may pick up an *unofficial* copy of your record by presenting a picture ID at 150 Williamson Hall, 202 Fraser Hall, or 130 Coffey Hall. There is no charge for an unofficial copy of your record; there is, however, a limit of one copy per day. *Unofficial transcripts are never available the first three days of winter or spring quarters.*

Students are advised that disciplinary action will be taken if academic records are forged or altered.

COURSE FEES[1]

All fees are per quarter unless otherwise indicated.
Students taking the following courses will pay course fees as follows:

ARCHITECTURE
$30—1301, 3311

ART
Materials fees[2]:
$5—1101, 1102, 1404, 5190
$20—1702, 3720
$25—1602, 1701, 3602, 3710, 5710, 5790
$30—3430, 5430, 8360
$35—1510, 1520, 1530, 1540, 3306, 5360
$40—3510, 3520, 3530, 3540, 3550, 5510, 5520, 5530, 5540, 5550, 5590
$45—3830
$50—1301, 1302, 1811, 1812, 3301, 3302, 3303, 3304, 3305, 3307, 5310, 5320, 5330, 5340, 5350, 5370, 8310, 8320, 8330, 8340, 8350, 8370
$55—5830
$60—1802, 3810, 5390
$66—5890
$70—5810
$80—3820, 5821
$95—5820
$225—8810
Arranged (amount adjusted to individual needs of students or particular class project)—3420, 3970, 3980, 5420, 5970, all other 8000-level courses

CELL BIOLOGY AND NEUROANATOMY
$18—5103—Microscope rental fee

CHEMISTRY
Materials and technical services fees:

$24.35—1052H	$24.71—3101
$24.73—1051	$25.17—1052
$25.28—1001	$25.84—1003
$26.26—3306	$27.08—1051H
$27.23—1002	$29.04—5538
$29.96—3305	$36.04—5126
$37.17—5540	$37.69—5131
$39.54—5613	$43.87—5740
$44.49—5140	$45.00—3336
$49.22—3335H, 3336H	$57.46—5127

CLINICAL LABORATORY SCIENCE
$12—5765—Microscope rental fee

DESIGN, HOUSING, AND APPAREL
$8—1641,1642, 3611, 3643, 5644, 5645, 5646—Materials fee for studio courses
$45—1331, 3331, 5331—Materials and dyes fee

ECOLOGY, EVOLUTION, AND BEHAVIOR
$15—5014, 5016, 5132, 5134—Transportation fee

FOREST PRODUCTS
$50—ForP 3300—Wood Industries Tour

GENERAL COLLEGE
Preparatory Mathematics and Composition:
$318[3]—0623, 0643
$397.50[3]—0401, 0402, 0419, 0611, 0615, 0616, 0617, 0618, 0621, 0625, 0631

GEOLOGY AND GEOPHYSICS
Transportation fees:
$10—3201, 5452, 5651, 5655
$20—3402, 5613, 5641
$30—5201, 5251, 5261, sec 2
$100—5010, sec 1, 5252
Field camp fees:
$450—3111, 5111
$600—5112

INTERDEPARTMENTAL STUDY
$15—1011, 3925—Materials fee

LANDSCAPE ARCHITECTURE
$30—1301, 3311
$35—5073, 5107

MATERIALS SCIENCE
$38.39—5613—Materials and technical services fee

MEDICAL TECHNOLOGY
$6—5011, 5077, 5102—Microscope rental fee

MICROBIOLOGY
$10—3103, 5013, 5105, 5234, 5322, 5424—Microscope rental fee

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: $50 per 2 credits
Majors taking extra credits (beyond requirement) or taking lessons on a second instrument: $65 per 2 credits
Students taking lessons for minor in music: $65 per 2 credits
Non-majors, elective credit: $125 (0-2 credits)

NATURAL RESOURCES AND ENVIRONMENTAL STUDIES
$150—3051—Food and lodging fee

PATHOBIOLOGY
Microscope rental fee:
$6—5102, 5103, 5104
$12—5101

PLANT BIOLOGY
$20—1009—Transportation fee

SOIL SCIENCE
$6—3220—Field course
$19—3520, 5510—Transportation fee
$35—5515—Transportation fee

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[1]Fees are subject to change without notice.
[2]Materials fees—assessed at the time of registration. Arranged fees are collected by department.
[3]In lieu of tuition.

SPECIAL FEES[1]

BILLING CHARGE
$7.50 per billing cycle for a maximum of $15 per quarter.

COLLEGE OF EDUCATION—PLACEMENT SERVICE FEE
$48—Registration fee for graduate students, alumni, and others (annual fee).
$30—College of Education students completing a teacher licensing program (annual fee—assessed with graduation fee)
Bachelor of Science degree candidates in the teacher licensing program areas from the College of Education are required to register with the placement section of Student and Professional Services or to secure an official exemption from that office. Graduate students and alumni seeking employment in education positions may also use the placement services.

COUNCIL OF GRADUATE STUDENTS (COGS)
$1.61—Required of *all* students in the Graduate School. (Fee not refundable.)

CREDIT BY SPECIAL EXAMINATION
$30—Check with your college office for further information.

DENTISTRY—INSTRUMENT USAGE FEE
$220—Instrument usage fee for postdoctoral students enrolled in periodontics.
$230—Instrument usage fee for dental hygiene students.
$265—Instrument usage fee for postdoctoral students enrolled in pedodontics.
$275—Instrument usage fee for postdoctoral students enrolled in endodontics and prosthodontics.
$525—Instrument usage fee for predoctoral dental students.

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—replacement fee for most diplomas.
$25—replacement fee for School of Dentistry or Medical School diplomas.

ENGLISH FOR INTERNATIONAL STUDENTS
For international students who are required to take English as a Second Language courses—a fee ranging from $687 (5 hours per week) to $1,719 (25 hours per week) is charged separate from tuition and fees charged for academic classes.

FIELD STUDIES HEALTH SERVICE FEE
$62.03 per quarter—Required of students on University field studies such as Anthropology, Geology, etc. (covers outpatient medical care for emergency illness at nearest facility on approval of the person in charge of the group. Eligible charges which are not collectible from a student's insurance carrier will be paid by Boynton Health Service up to a maximum of $100 per visit).

GRADUATE AND PROFESSIONAL STUDENT ASSEMBLY (GAPSA)
$2.71—Assessed quarterly to students in most professional schools and students in the Graduate School. (Fee not refundable.)

HOSPITALIZATION INSURANCE, UNIVERSITY SPONSORED
$192 per quarter—Available only to students who pay the student services fee or the extended coverage fee.

INTERNATIONAL STUDENT AID FEE
$4 per quarter—Required of *all* students who hold nonimmigrant visas.

I.T. BOARD OF PUBLICATIONS
$4.47—Required of all Institute of Technology students who pay the student services fee—assessed at registration.

LATE PAYMENT FEE
$15-20 per billing cycle for a maximum of $50 per quarter.

LATE REGISTRATION FEE
$20 through the first two weeks of classes and $40 thereafter. (Fee not refundable.)

MINNESOTA PUBLIC INTEREST RESEARCH GROUP (MPIRG)
$2.50 (refusable/refundable)—Assessed with student services fee. 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 $2.50. A statewide advocacy group, MPIRG gives the 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.

MINNESOTA STUDENT ASSOCIATION (MSA)
$2.70—Assessed to *all* undergraduates, adult special students, and departmental masters. (Fee not refundable.)

MUSIC PRACTICE ROOMS
Rooms with upright or grand piano, harp, harpsichord, organ, or percussion as well as rooms with no instrument are available on a quarterly basis. Check in 100 Ferguson Hall for rental information and rates.

ORIENTATION FEE
$39—Required of all new students *except:* high school and adult specials; graduate students who attended the University as undergraduates; students in law, medicine, veterinary medicine, dentistry, public health, and mortuary science; graduate Management students (MBA, Executive MBA, or Business Administration Ph.D. programs); and students in post-baccalaureate education, master of education, and master of agriculture programs. (Fee not refundable.)

RECREATIONAL SPORTS MEMBERSHIP FEES/LOCKER RENTALS
NOTE: All individuals must present necessary indentification every time they enter Recreational Sports facilities.
Currently enrolled students who have been assessed the student services fee will need to provide proof of that assessment (usually by presenting the U Card).
Currently enrolled students who are *not* assessed the student services fee must purchase a quarterly membership to become eligible to use recreational facilities and programs. Similar memberships (at different costs) are available for faculty and staff.
A variety of activities are available, including aquatics, intramurals, fitness programs, aerobic dance, open recreation, sports clubs, plus numerous other activities.
Sports lockers and towels can be rented at the equipment rooms in the University Recreation Center and the St. Paul Gym.
For further information, including the current fee rates, call or visit one of the Recreational Sports offices: University Recreation Center, Minneapolis (625-6800), or 104 St. Paul Gym (625-8283).

SERVICE FEE, INTERNATIONAL PROGRAMS
$250-$400 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.

STUDENT EMERGENCY LOAN FUND (SELF)
$.23—Assessed to *all* students.

UNIVERSITY COALITION FOR HIGHER EDUCATION (UMCHE)
$1.81 (refusable/refundable)—Assessed with student services fee. University of Minnesota Coalition for Higher Education (UMCHE) lobbies to express student views on University quality, affordability, and accessibility.

[1]Fees are subject to change without notice.

COMPUTER FEES

Institute of Technology—A computer fee of $100 per quarter is charged to most students in the Institute of Technology and some students in other colleges. The fee will be assessed at registration to the following groups of students:

- *All IT upper* division, UNITE, and adult special students who are required to pay the student services fee;
- Upper division CLA students majoring in astronomy, chemistry, computer science, geology, mathematics, or physics who are required to pay the student services fee;
- All graduate students in IT graduate programs taking one or more courses who are required to pay the student services fee, except those who have completed 36 credits in graduate school, exclusive of thesis credits. (These programs are aerospace engineering, astrophysics, biomedical engineering, chemical engineering, chemical physics, chemistry, civil engineering, computer and information sciences, control science and dynamical systems, electrical engineering, fluid mechanics, geological engineering, geology, geophysics, industrial engineering, materials science and engineering, mathematics, mechanical engineering, mechanics, mineral engineering, and physics); *and*
- Students (including those in other colleges) who are taking one or more courses that require use of the IT public labs. Most of these courses are indicated in the course sections of this *Class Schedule.*

IT undergraduate or graduate students who have not been required to pay the fee may sign up for a Unix account in the computer lab. They will then be billed the $100 fee through Student Accounts Receivable.

Carlson School of Management—A computer/technology fee of $25 per quarter is assessed at registration to all Carlson School of Management undergraduates, adult specials, and EMBA students.

Ph.D. students in Carlson School graduate programs, day MBA students, and IR graduate students are assessed a $50 per quarter fee.

College of Architecture and Landscape Architecture (CALA)—A technology access fee of $100 per quarter will be assessed for all undergraduates and graduate students in CALA programs. Current course fees have been eliminated but new course fees will be assessed for Arch 1301, 3311, and LA 1301, 3311—drawing courses taken typically by students who are *not* in a CALA degree program and not paying the technology access fee.

College of Biological Sciences (CBS)—A college computing fee of $80 per quarter will be assessed to all students enrolled in the college and taking 6 or more credits.

College of Liberal Arts (CLA)—CLA will have a college computing fee of $45 per quarter for all freshmen, sophomores, juniors, and adult special students who take 6 or more credits. (This fee will not be assessed to seniors this year.) Upper division students (juniors *and* seniors), however, who major in CBS majors or IT majors will *not* pay the CLA computing fee but will instead pay the CBS or IT computing fees respectively.

General College—There is a Instructional Technology fee in General College of $45 per quarter. This fee is assessed to all students required to pay the student services fee (i.e., those taking 6 or more credits or credit equivalents).

Nursing—There is a computer fee of $24 for all undergraduate Nursing students.

Humphrey Institute of Public Affairs—A computer fee of $50 per quarter will be assessed to Humphrey Institute students taking 6 or more credits and a fee of $35 per quarter will be assessed to Humphrey Institute students taking less than 6 credits.

FACILITY FEES[1]

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.

Animal Science 1601 (Horse Equitation): $60
Physical Education 1034 (Judo): $18 maximum
Physical Education 1035 (Karate): $23 maximum
Physical Education 1048 (Bowling): $25 maximum
Physical Education 1043, 1143 (Horsemanship): $95 maximum
Physical Education 1057, 1157, 1257 (Skiing): each $75 maximum
Physical Education 1205 (Scuba and Skin Diving): $35 maximum

[1]Fees are subject to change without notice.

PAYMENT OF FEES

BILLING AND PAYMENT DATES FOR WINTER QUARTER			
STATEMENT	**BILLING DATE**	**PAYMENT DATE**	**BALANCE DUE**
Billing Statement #1	January 10, 1997	February 4, 1997	30%
Billing Statement #2	February 7, 1997	February 27, 1997	60%
Billing Statement #3	March 3, 1997	March 25, 1997	100%

Student Accounts Receivable Billing System for Tuition and Fees—Every student has an account at Student Accounts Receivable and receives a bill for tuition and fees at the beginning of each quarter. Each time you register for, cancel, or add courses, your tuition and fees will be charged to your account. This account, unlike individual enrollment statements, will reflect your *total* charges for tuition and fees.

You will receive enrollment statements, but they will not carry payment due dates. Instead, your tuition due dates will be on your billing statements.

This billing system allows installment payments, with three payments possible over the quarter. Your first billing statement will list both your total tuition charges *and* a minimum payment amount. To make installment payments you need only pay the minimum payment listed. You will receive up to two additional billing statements during the quarter, each indicating a minimum amount due. There is a nominal billing charge ($7.50) for each installment. If you choose to pay less than the *full* amount, you will be assessed this $7.50 billing charge on your next statement. Every time you pay less than the *minimum* amount due, you will be charged $15-20 in late payment fees in addition to the $7.50 billing charge and a hold will be placed on your record. (Billing charges and late payment fees will appear under Charges and Debits on your bill.) Any bill can be paid *in full* by the due date to avoid billing charges.

Installment payments may not be suitable for certain 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, 150 Williamson Hall, for more information.

You can make installment payments only for charges for the current quarter—balances or transactions from previous quarters are always due in full. You will be assessed billing charges for the current quarter if you have a previous balance outstanding. Any payments that you make will *always* be applied to the oldest charge on your account.

The chart on the previous page lists the billing dates and the payment dates for the quarter. For this quarter, your first billing statement will be issued on January 10 and your first payment must be received by February 4. **(NOTE: Allow approximately one week for your billing statements to reach you by mail.)** This first billing statement will list a minimum payment of 30% of all *unpaid* charges for the quarter plus 100% of any previous charges. Your second bill will be issued on February 7 and due by February 27. The minimum payment for the second bill is 60% of your unpaid balance for the quarter (plus 100% of any charges for previous quarters or terms). The final bill for the quarter will be issued on March 3 and due by March 25. With the final bill you will be expected to pay any amount not yet paid. For example, if the unpaid balance of your tuition and fees total $900, the minimum payment on your *first* bill would be $270 (30% of your balance) and this amount would be due by February 4. After you make your first payment of $270, your *second* bill would list a minimum payment of $385.50 (60% of the balance of the $630 remaining on your account plus the $7.50 billing charge) and would be due by February 27. Your final bill would be for $259.50 (your balance of $252 plus a $7.50 billing charge); payment would be due by March 25.

NOTE: Paying more than the minimum payment due on your statements or paying before you receive your statements does *not* reduce the percentage required on your next billing statement—you will still be required to pay the standard percentage of the balance.

Students in units that do not follow the regular quarterly calendar (e.g., Dentistry, Medicine, Law) may have billing and due dates that differ from the above schedule. Contact Student Accounts Receivable, 625-8500, for information on billing schedules for your unit.

You can review your student account detail, current account balance, current minimum payment due, and the next due date on the Student Accounts Receivable screens on the Student Access System. (See page 4 for instructions on how to get connected to this system.) You can also check your billing address and get other information about your account.

It is your responsibility to report any change in address to the University. When you register on-line verify your address on the student demographic data screen or, if you register in person, verify that the address printed on your course confirmation form is correct. (You may report an address change to Student Accounts Receivable by calling 625-8500.) If you do not receive any billing statement, you *must* obtain a payment voucher on or before the payment due dates listed on the

chart at the top of this page. Payment vouchers are available at Student Accounts Receivable, 20 Fraser Hall, or the Bursar's Office (145 Williamson Hall on the east bank, 101a Anderson Hall on the west bank in Minneapolis, or 107 Coffey Hall in St. Paul). If you want to pay your balance *before* you receive your billing statement, go to the Bursar's Office or Student Accounts Receivable where a payment voucher will be prepared for you.

Billing Errors—If you suspect there is an error in your billing statement, contact Student Accounts Receivable as soon as you receive your statement.

When to Pay—For students who register through January 10, the first payment is due by February 4. Students whose registrations occur after the first billing date will be billed in the next billing cycle (February 7) and will have a February 27 due date. Always pay by the due date listed on your bill.

REMEMBER: Initial registrations that occur after January 4 are subject to late registration fees.

Mailing Your Payment—Your billing statement and a check or money order may be mailed, using the envelope enclosed with your billing statement, to the Bursar's Office, PO Box 88, Minneapolis, MN 55440-0088. Write your student ID number on your check or money order and enclose all copies of your statement. Your mailed payment must be received by the billing statement due date, or you will be billed for additional charges on the following statement. Your cancelled check is your receipt.

Where to Pay on Campus—Pay your tuition and fees at the Bursar's Office (145 Williamson Hall on the east bank, 101a Anderson Hall on the west bank in Minneapolis, or 107 Coffey Hall in St. Paul). Credit cards are not accepted. Your billing statement (or enrollment statement) and a check or money order may also be dropped in any of the fee deposit boxes on campus: in the Fraser Hall lobby; 107 Coffey Hall; both concourses of Williamson Hall; Anderson Hall; and Coffman Union Service Center. Payments are picked up at 8 a.m. and are credited to the previous day.

Collection Procedures and Costs—Past due accounts may be subject to handling charges and collection procedures. Collection can include court action or referral to outside collection agencies. You are responsible for any and all costs necessary for the collection of any amount not paid when due.

Enrollment Statements, Course Confirmation Forms—Do not destroy or throw away any enrollment statements. Although your tuition is billed by Student Accounts Receivable, you may use your enrollment statements to pay at the Bursar's Office prior to receiving your billing statement.

The bottom half of your enrollment statement—your course confirmation form—is your proof of enrollment. Keep all copies for the quarter together with your student ID card. Many University facilities such as the libraries, Boynton Health Service, and athletic facilities require your course confirmation form as proof of enrollment.

Duplicate Enrollment Statements—Duplicate unreceipted enrollment statements for the current quarter may be obtained at your registration center or you may print one yourself from the self-registration system. If your fees are paid, Student Accounts Receivable can issue a payment verification letter or validate your unreceipted copy at 20 Fraser Hall (150 Williamson Hall for students with mobility impairments). **Save all your enrollment statements and billing statements: you will be charged for duplication of account information.**

Credit Balance Enrollment Statements—Credit balance enrollment 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 *in full,* you may obtain a refund by presenting the credit balance enrollment statement to Student Accounts Receivable. (See also Refunds, on page 31.) If all of your fees have not been paid and the amount on the credit balance enrollment statement is less than what you owe, this credit will be reflected on your next bill from Student Accounts Receivable. This credit could also lower the minimum amount due on your current billing: for information on your current billing, check the Student Accounts Receivable screens on the Student Access system or call 625-8500. If all of your fees have not been paid and the credit amount is *more* than the amount that you owe, go to Student Accounts Receivable for further information or call 625-8500.

Zero Balance Enrollment Statements—Zero balance enrollment statements have zeros printed in the "Amount Due" box on the enrollment statement. This means that no *additional* tuition and fees have been charged to your account at Student Accounts Receivable. All previous amounts owed remain unchanged. If you have questions about your balance, call 625-8500 for more information.

Credit for Tuition Deposit—If you are registering for the first time at the University and you paid a tuition deposit, you will receive credit for that deposit on your first billing statement from Student Accounts Receivable.

Paying Tuition Holds—After the due date, you must pay the current amount due on your account to receive a hold release. If, in order to register, you pay a Student Accounts Receivable hold for a previous quarter with a personal check and that check does not clear the bank, you will be sent a notice by Student Accounts Receivable. Your current registration may be cancelled if you fail to respond to this notice and pay your debt.

NOTE: If you pay a hold by check, it will be two weeks before you can obtain a transcript. For an immediate transcript release, pay with cash.

Financial Aid Recipients—You must register by January 4, even though you will have not yet received your financial aid. If you register after January 4, you will be charged a late registration fee.

An interface with the Financial Aid system allows most financial aid payments to be credited directly to your account at

Student Accounts Receivable. Some students will, however, continue to receive financial aid checks.

If the total of all your financial aid awards is less than the amount due on your account, or if your award is less than 100% of the amount due, you can make installment payments on the remaining balance. 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 installment payments if your financial aid awards or check are 100% or more of your tuition and fees. Call Student Accounts Receivable (625-8500) for further information.

REMEMBER: If, for any reason, you do not receive your financial aid, you are still responsible for paying your tuition and fees by the due dates listed on page 29.

Tuition and Fees Paid by Various Agencies—If you have authorization for the University to bill a sponsor for your tuition and fees, you should bring your authorization *before the beginning of registration* to a registration center (202 Fraser Hall or 130 Coffey Hall, 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. International students should bring their billing information to the Preregistration Program for International Students.

NOTE: You will have a hold placed on your record if your sponsoring agency falls behind in payment for more than one quarter. You will be held responsible for all unpaid tuition and fees if your sponsoring agency does not fulfill its obligations. It is your responsibility to monitor payments made to your account by your sponsor.

Regents' Scholarships—If you are registering for a course with a Regents' Scholarship, you should bring your authorization to your registration center when you register. If you receive your authorization after you have registered, you must return to your registration center for an adjusted enrollment statement. If you plan to register on-line, you can mail your form to your registration center (202 Fraser Hall or 130 Coffey Hall). However, forms should *never* be mailed to the Bursar. If you fail to receive authorization by the due date on your first billing statement from Student Accounts Receivable, you will be liable for billing charges and late payment fees. Regents' Scholarships cover only tuition for approved courses. You are responsible for all course fees and special fees. If you fail to pay these fees by the due dates on your billing statements, you will be liable for billing charges and late payment fees.

Payroll Deduction for Graduate Assistants—To be eligible for payroll deduction, you must be enrolled in the Graduate School or in a professional post-baccalaureate degree program and hold at least a 25% graduate assistant appointment for the 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 deductible fees must total at least $150. (MPIRG and UMCHE are not deductible fees.) 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).

Application for payroll deduction is *never* possible after the fifth day of the quarter. Request payroll deduction when you register. After you fill out a payroll deduction authorization card, you will be credited directly on your billing statement for the amount to be deducted.

All students must pay all fees not covered by payroll deduction (e.g., MPIRG and UMCHE) by the due dates on their billing statements to avoid billing charges and late payment fees.

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), a billing statement with a new due date will be sent to you. This bill must be paid by the due date to avoid billing charges and late payment fees.

If you cancel/add anytime through the first week of the quarter, go to Student Accounts Receivable (20 Fraser Hall) to have your payroll deduction application adjusted. If you cancel or add courses after the first week, call Student Accounts Receivable (625-8500) for instructions.

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 $400, this amount will be withheld from your last four paychecks in equal installments of $100. To be eligible for payroll deduction, you must net at least $120 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 20 Fraser Hall (625-8500) for a new enrollment statement. If you are ineligible for payroll deduction, you can make installment payments by paying the minimum amount due on your billing statements.

REFUNDS

Tuition and Course Fees—There are two refund schedules: one for new students (students attending the University for the first time) and one for continuing students. Refer to the schedules on the next page for the dates for this quarter.

For *new* students, tuition and course fees are refunded on the following general schedule: if you cancel during the first week of the quarter or before, you will receive a 100% refund; 80% during the second week; 70% during the third week; 60% during the fourth week; 50% during the fifth week; 40% during the sixth week; and 0% thereafter. NOTE: These refund rates apply to your first quarter of enrollment only. After your first quarter, rates for continuing students apply.

For *continuing* students, tuition and course fees are refunded on the following general schedule: if you cancel during the first week of the quarter or before, you will receive a 100% refund; 50% during the second week and the first half of the third week; 25% during the last half of the third week and the fourth and fifth weeks; and 0% thereafter.

Special length courses that begin after the first week of the quarter may be cancelled for a 100% refund through the first day of the course at the registration centers only. Cancellations after the first day of the course but during the second through fifth weeks of the quarter (second through sixth

weeks for new students) follow the refund schedule above. After the fifth week of the quarter (sixth week of the quarter for new students), no refund is available if the course is cancelled after the first day.

Remember: Cancellations are effective the day they are processed and strictly follow the dates listed below (exceptions are *not* made for classes that have not yet met for the week). Your refund will be based on the date you *officially* cancel (by cancelling on-line *or* by taking a completed Course Request form to your registration center) not on the date you stopped attending class. Cancel immediately if you stop attending class for any reason.

In a very limited number of circumstances (e.g., medical, scholastic drop, military duty, attendance at another institution) retroactive cancellation may be possible. If retroactive cancellation is authorized within one quarter of the term in question and no later than June 30 of the current fiscal year, you may be entitled to a tuition refund. Petitions for retroactive tuition refunds based on failure to cancel or nonattendance will not be approved.

Check with the Service Center staff in 150 Williamson Hall (625-5333) or 130 Coffey Hall (624-3731) for more information and a petition form.

If you are receiving financial aid, phone or visit the Office of Scholarships and Financial Aid, 210 Fraser Hall, to find out if retroactive cancellations to the beginning of the quarter require repayment of financial aid.

If your tuition and fees are not paid in full, any refund you receive will be a monetary credit applied to your unpaid balance. Read Payment of Fees, pages 29-31.

Student Services Fee and University-Sponsored Hospitalization Insurance Fee—If you drop your credit load to below 6 credits, you must accept a refund of the University-sponsored hospitalization insurance although you may keep the student services fee. All refunds of these fees are based on the date that the cancellation is processed (see table below for deadlines) and are not affected by retroactive cancellation.

If you receive a refund of the student services fee, you can no longer use the services provided by the fee. To continue using these services, you must continue to be registered and not be issued any refund.

If you cancel *all* courses and qualify for a tuition refund, you must also accept a prorated refund of the student services fee and the University-sponsored hospitalization insurance.

Special Fees—The orientation fee, the late registration fee, and the COGS, GAPSA, MSA, and SELF fees are generally not refunded (the GAPSA and MSA fees are refunded with a 100% refund). MPIRG and UMCHE are not refunded through the registration system—refund instructions are published every quarter in the *Minnesota Daily*. All other special fees assessed at registration are refunded through the fifth week of the quarter (sixth week of the quarter for new students) at the same rate as tuition and course fees. There is no refund of special fees after the refund schedule has ended, even if retroactive cancellation is authorized.

How to Obtain Your Refund—If you have paid your fees in full, you may obtain a refund by presenting your credit balance enrollment statement and picture ID to Student Accounts Receivable, 20 Fraser Hall, Minneapolis, or the Bursar's Office, 107 Coffey Hall, St. Paul. There is a two week waiting period for your refund beyond the last date any payment was receipted, unless your fees were paid only with cash or a University of Minnesota check. You can request a refund be sent to you by mail by calling Student Accounts Receivable,

REFUND SCHEDULE FOR WINTER QUARTER 1997

Continuing Students		New Students	
For refund of:	**Cancel by:**	**For refund of:**	**Cancel by:**
100%	January 11	100%	January 11
50%	January 22	80%	January 18
25%	February 8	70%	January 25
0%	on or after February 9	60%	February 1
		50%	February 8
		40%	February 15
		0%	on or after February 16

Self registration is available Monday-Thursday from 7 a.m. to 12 a.m., on Friday from 7 a.m. to 10 p.m., and on Saturday from 8 a.m. to 6 p.m. In-person registration is available at the registration centers Monday 9 a.m. to 4 p.m. (8 a.m. to 5:30 p.m. in Fraser Hall during registration queues) and Tuesday-Friday from 8 to 4.

625-8500. Allow an additional three to four weeks, beyond the two week waiting period, for a refund by mail.

If you have *not* paid your fees in full, any refund you receive will be a monetary credit applied to your unpaid balance. Read Payment of Fees, pages 29-31.

Refunds for Students on Payroll Deduction—If you cancel courses, call Student Accounts Receivable (625-8500) for refund instructions.

Tuition Refunds for Students on Financial Aid—Financial aid recipients must maintain the same number of credits throughout the quarter. If you cancel courses and are eligible for a tuition refund, federal regulations require that your refund be returned directly to the financial aid account from which you received aid and/or sent to the lender of your student loan to reduce the principal on that loan. If you cancel courses at the 100% refund rate during a quarter, you must repay *all* financial aid received during that quarter. If the amount of your tuition refund is insufficient to repay the appropriate financial aid fund(s), you will be billed for the difference by Student Accounts Receivable, 20 Fraser Hall, and/or the Student Loan Office, 140 Williamson Hall. If you fail to pay these bills by the due dates, you will be liable for billing charges and late payment fees, and a hold will be placed on your record. You will not receive further financial aid until your bill is paid in full. You will be notified by mail of the disposition of your refund.

RESIDENCE REGULATIONS

Because the University is a state institution, residents of Minnesota pay lower tuition than nonresidents, and, in many programs, receive priority consideration for admission. To qualify for resident status, you must reside in Minnesota for at least one calendar year *prior* to the first day of class attendance. During that one year waiting period, your primary reason for living in Minnesota must be something other than school attendance. There are few exceptions to this rule, and these generally apply to veterans, migrant workers, specific federal employees, refugees, and faculty at Minnesota colleges. Students holding temporary international visas (F-1, J-1, H-1, etc.) *do not* qualify for resident tuition.

If you have moved here from another state, resident status is not automatically granted; you must apply and present evidence that: you have abandoned your former domicile; you have made Minnesota your *permanent* home; you are not a tax dependent of a parent or spouse living out-of-state; and you have taken reasonable steps to substantiate your desire to remain in Minnesota. Although acceptance of employment, registration of automobiles, payment of local taxes, etc. may support an application for resident status, these actions, by themselves, do not constitute sufficient evidence of residence.

You may apply for or appeal your resident status by obtaining an application in 240 Williamson Hall or 130 Coffey Hall. An administrative classification will follow a review of the application. You should appeal a nonresident classification that you believe to be incorrect as soon as possible. If the Review Board determines that the nonresident classification was not appropriate, you will receive a refund for the appropriate period and amount of overpayment, if any. No more than one year's retroactive refund will be granted.

RECIPROCITY

The University has reciprocity agreements with Wisconsin, North Dakota, South Dakota, and Manitoba. The University also participates in a reciprocity program with Kansas, Michigan, Missouri, and Nebraska for students in the following undergraduate colleges: Agricultural, Food, and Environmental Sciences; Architecture and Landscape Architecture; Biological Sciences; Education and Human Development; Human Ecology; Liberal Arts; Natural Resources; Carlson School of Management; Dental Hygiene; School of Nursing; and Institute of Technology. If you are a resident of any of these states or provinces, you may qualify for reciprocity tuition rates, which are lower than nonresident tuition rates and, in some cases, comparable to resident rates. There are some exceptions:

- Wisconsin students enrolled in the School of Dentistry, the Medical School, or the College of Veterinary Medicine are not eligible for reciprocity.
- **Students participating in off-campus study or study abroad for an academic year or more must reapply for reciprocity.**

You must apply for reciprocity prior to the quarter in which you wish your reciprocity to begin. **As soon as you receive an approval letter from your home state, take that letter to your registration center and obtain an adjusted enrollment statement.** After your first year, *provided you have earned credits,* your reciprocity will automatically be renewed.

Delays in your reciprocity eligibility will not exempt you from billing charges or late payment fees. For information and application forms, check with your home state reciprocity office. You can also obtain application forms and information in 240 Williamson Hall or 130 Coffey Hall.

CERTIFICATION FOR FULL-TIME OR HALF-TIME STATUS

Occasionally you may be required to have your attendance at the University certified as full time or half time in order to defer payment of your student loan. This certification is especially required of transfer students who received loans at their previous institutions.

For students in undergraduate and professional units (law, dentistry, medicine, and veterinary medicine) full-time status is defined as 12 or more credits per quarter; half-time status is 6-11 credits per quarter.

For students in the Graduate School, master's programs in agriculture and education, and dental and psychology fellow specialist programs, full-time status is defined as 7 or more credits per quarter; half-time status is 3-6 credits per quarter. For students in master's programs in public health, full-time status is 9 credits; half-time status is 4 credits.

Audit registrations are not applicable for certification purposes.

To have your attendance certified, bring your request to 150 Williamson Hall *or* 130 Coffey Hall, or mail it to Office of the Registrar, 150 Williamson Hall, 231 Pillsbury Drive SE, Minneapolis, MN 55455 *or* Office of the Registrar, St. Paul, 130 Coffey Hall, 1420 Eckles Avenue, St. Paul, MN 55108.

Minnesota law allows a student who takes at least 60% of a full-time credit load to qualify as a full time student for purposes of continued insurance coverage on a family policy *if the reduced credit load is due to illness, injury, or mental or physical disability and with appropriate documentation from a physician.* Insurance companies are responsible for informing you of this option if it applies to you. You can receive certification of your credit load and the number of credits required for a 60% credit load in 150 Williamson Hall or 130 Coffey Hall. Your physician should then forward your certification with the appropriate medical documentation to your insurance company.

More information about deferments and other exceptions to the definitions of full-time and half-time status is available at 150 Williamson Hall or 130 Coffey Hall.

VETERANS CERTIFICATION

Students under Chapters 30, 32, 35, 106, and 901—The following is a summary of University and Department of Veteran Affairs (V.A.) procedures and does not include all the information you may need. You can contact the following offices for further information:

- Veterans Certification Office
  150 Williamson Hall, Minneapolis
  625-8076
- Department of Extension Classes
  101 Wesbrook Hall, Minneapolis
  624-3341
- Department of Independent Study
  45 Wesbrook Hall, Minneapolis
  624-0000
- Continuing Education and Extension
  314 Nolte Center, Minneapolis
  625-2500

Only the V.A. can determine an applicant's eligibility for educational assistance. Because eligibility criteria are different for the several educational assistance programs and the benefits for the programs vary, students with specific questions about eligibility should contact the V.A.

If you plan on attending fall, winter, and spring quarters, you can request certification for the entire academic year by going in person to one of the offices listed above. If you enroll for (or drop to) less than half time, you can be certified only for the current term; when you register for the next term you will have to reapply for certification.

You can request continuous enrollment/payment during fall, winter, or spring quarters for the next quarter if you did not initially sign up for the academic year. Continuous enrollment/payment *cannot* be requested in the following instances:

- if you are attending less than half time, are on active duty, or are receiving chapter 901 benefits, *or*
- if you withdrew from all courses in the preceding term.

If you will be enrolling at a half-time rate or more when you enter school initially or reenter, but are not eligible for continuous payment, you may elect to be paid in advance for the first partial (or full) month of training plus the following full month. Payment for the next month, however, will not be available until the very end of that month. This means that if you receive advance payments for January and February for winter, you will not receive your March check until the first week in April. Advance payment for winter can be requested from September 30–December 2, 1996. (Advance payment for spring can be requested from December 23, 1996–February 24, 1997.) Delays in your VA benefit payments will not exempt you from billing charges or late payment fees.

If you do not participate in advance payment or if you are not eligible for continuous pay, you must be officially registered before requesting certification. Certification cannot be sent to the V.A. until the first day of the quarter. You should receive your first check 6-8 weeks after the certification is sent to the V.A.

Whenever you register for extension courses you are required to show a paid enrollment statement by the first day of each quarter to be certified. If you requested certification for the academic year, you must be officially registered by the first day of each quarter. Failure to register by the first day of the quarter will result in notification of the V.A. and cancellation of payments.

If you cancel any or all of your courses, notify one of the offices listed above. Your reduction in credits will be reported to the V.A. The V.A. will adjust your benefits retroactive to the first day of the quarter and may require you to repay all money paid to you for any courses that you cancel.

Any grade of N will be reported to the V.A. The V.A. will adjust your benefits retroactive to the first day of the quarter and require that you repay all money paid to you for that course. Likewise, any grade of I will be reported to the V.A. However, the V.A. will allow one year for completion of the course before repayment is required. You are responsible for notifying the Certifications Office, 150 Williamson Hall, once you receive a grade to replace the I.

Whenever you claim mitigating circumstances for reductions in your credit load, you should present written evidence to the Certifications Office to be included with the report submitted to the V.A.

Chapter 31 Veterans—If you receive vocational rehabilitation assistance, you can refer questions to the scholarship terminal at 202 Fraser Hall. Bring your enrollment statement and course list to the appropriate bookstore to obtain books and supplies.

TUITION BENEFITS FOR GRADUATE ASSISTANTS

NOTE: Effective fall 1996, tuition benefits have been capped at 12 credits per quarter for graduate students. Professional degree programs that set their own tuition will cap tuition benefits at the top of their full time band. Tuition costs (over and under the cap) are assessed at the resident rate for eligible graduate assistants; however, all

tuition costs above the cap are the responsibility of the student.

Important Notice for Graduate Assistants—Students who work *any* number of hours on an assistantship fall, winter, or spring quarters must be registered for those quarters. Registration of one or more credits taken either A-F or S-N (or thesis credits if eligible) will fulfill this requirement. Audit (V) registration by itself is not sufficient to hold an assistantship. **If you do not register for credit or if you cancel all credits, your graduate assistantship will be terminated and you will be billed for all tuition for that quarter.**

To be excluded from FICA withholding, graduate assistants must meet the following exclusion tests:

1. You must be enrolled for a minimum of 6 credits for the quarter or semester, or enrolled for a minimum of 1 credit if you are a doctoral candidate (who has passed the preliminary oral examination for the Ph.D.) *and*
2. You must be employed for no more than 50% time or twenty hours per week.

Graduate students who are paid more than 50% on regular payroll, or more than 40 hours in a biweekly pay period, or any combination of payments and appointments exceeding half-time, and/or who have not met the registration requirements will have taxes withheld at the rate of 6.2% for Social Security and 1.5% for Medicare on total gross salary. Your employing department will be required to pay an equal amount.

The deadline to meet the registration requirement for student exclusion from FICA for winter quarter 1997 is December 23, 1996.

Tuition Benefits—Graduate assistants who hold a minimum 25% appointment for an entire 13 week quarter or 19.5 week semester become eligible for tuition benefits equal to twice the percentage of their appointment. (Hourly equivalents to the minimum percent time are 130 hours per quarter or 195 hours per semester. Tuition benefits for a 25% appointment equal 50%, a 30% appointment equals 60%, and so on. The maximum tuition benefit is 100%. These benefits provide for tuition only (including the $60 base tuition fee) and do not cover the student services fee or course fees.

NOTE: There are two sets of official quarter and semester dates this year, which correspond to the semi-monthly and bi-weekly University payroll cycles. Tuition benefits are awarded to correspond to the official dates of the pay cycle on which you are paid. Winter quarter dates are 12/16/96 to 3/15/97 for the semi-monthly pay cycle and 12/16/96 to 3/16/97 for the bi-weekly pay cycle. Spring semester dates are 1/1/97 to 5/15/97 for the semi-monthly pay cycle and 1/1/97 to 5/16/97 for the bi-weekly pay cycle. Appointments which are shorter than these official quarter or semester dates will be prorated but must be the equvalent of a 25% appointment. Under this system, a 50% appointment for half the quarter or semester would be adjusted to a 25% appointment for benefit purposes, and a 50% tuition benefit would be awarded.

Procedures for Tuition Benefits—Winter tuition benefits will be credited to Student Accounts Receivable beginning December 16, 1996.

If you are taking out student loans, you may contact the GAO one week before financial aid checks are issued to ensure that your tuition benefit has been processed.

*If you are **not** taking out student loans for winter,* you should wait until you receive your first billing statement from Student Accounts Receivable (not your enrollment statement) before questioning your account (see page 29 for billing dates).

To receive tuition benefits for Continuing Educatioand Extension (CEE) classes, you must complete an "Application for Extension Classes Tuition Benefit" form. Complete applications must be submitted to the GAO for approval and accompanied by a current PAF. Copies of this application are available in your department and from the GAO. Tuition benefit rules are more restrictive for CEE classes. (See the application form or *The Handbook for Graduate Assistants* for specific details.) NOTE: the 12-credit tuition benefit cap applies to your combined total of day and CEE classes. In some cases you may be billed later in the quarter for tuition over the cap if the credits above the cap are not reflected on your first billing statement.

Payment of Fees—You must pay your fees (or installment payments), or have your account properly credited by the payment due date to avoid a late payment fee. If you hold an assistantship but the tuition benefit has not been adjusted by the time you receive your bill, you must contact the GAO prior to the payment due date or be assessed late payment fees. You are responsible for all late payment and installment fees if your accounts have not been adjusted by the payment due date. **Do not ignore your bill or assume the adjustments will be made for you automatically.** You can verify that you have received your credit by checking your account detail on the Student Accounts Receivable screens on the Student Access System. Graduate assistants whose remaining tuition and fees total $150 or more may qualify for payroll deduction. See page 31 for application procedures.

If you have paid in full and subsequently receive a graduate assistantship, contact the GAO, 624-7070, for instructions.

Tuition Benefit Reversal—If you do not complete your appointment (i.e., leave in the middle of the quarter, graduate early, or work less than the estimated number of hours), you will be billed for *all or a portion of your tuition.* (Nonresidents would be charged the nonresident tuition rate.)

Information—For more information on graduate assistant benefits, procedures, and policies, refer to *The Handbook for Graduate Assistants,* or contact your department or the GAO. Contact the GAO in person at Suite 1-41, Donhowe Building; by mail to Graduate Assistant Office, Suite 200, Donhowe Building, 319 15th Ave. SE, Minneapolis, MN 55414; by phone at (612) 624-7070; by FAX at (612) 625-9801; and by e-mail at gaoinfo@gold.tc.umn.edu. Office hours are 8-4:30 Monday-Friday. Visit the GAO home page on the World Wide Web at http://www.umn.edu/ohr/gao/ for information and listings of current graduate assistant job openings.

Graduate Assistant Medical Plan—See page 25 for information.

RESIDENT TUITION PRIVILEGES

Graduate Assistants and Immediate Family Members—Non-resident students enrolled in the Graduate School or in another post-baccalaureate degree program who hold at least a 25% time appointment as a teaching assistant, research assistant, or administrative fellow are eligible for resident tuition rates. This eligibility extends also to a parent, spouse, child, or ward.

If you hold such an appointment, and your appointment has cleared the personnel system, you will automatically be charged the resident tuition rate when you register. If you are charged the nonresident tuition rate, you should contact the Graduate Assistant Office (GAO), 200 Donhowe Building, 319 15th Ave. SE, Minneapolis, 625-5001 (Suite 1-41 for in-person assistance).

If you hold such an appointment and you want your family member to receive resident tuition rates, you must contact the GAO quarterly.

Any changes to this policy will be distributed as soon as available.

Graduate School Fellows/Trainees (9561, 9562) and Immediate Family Members—Graduate students who hold fellowships or traineeships are eligible for resident tuition rates, provided the award is administered by the University and the stipend is at least equal to a 25% time graduate assistantship. This eligibility also extends to members of the *immediate* family (i.e., parent, spouse, child, or ward).

If you hold a fellowship or traineeship, codes for resident tuition have, most likely, already been entered into the computerized registration system. If, for some reason, you are charged the nonresident tuition rate when you register, you should contact the Graduate Fellowship Office, 321 Johnston Hall, 625-7579.

Any changes to this policy will be distributed as soon as available.

If you hold a qualifying fellowship or traineeship and you want your family member to receive resident tuition rates, contact the Graduate Fellowship Office for more information.

Professional School Fellows/Trainees (9564, 9565) and Immediate Family Members—Professional school fellows/trainees and immediate family members are also eligible for resident tuition rates, provided the fellowship/traineeship is at least equal to a 25% graduate assistantship. If, for some reason, you are charged the nonresident tuition rate when you register, first contact your department payroll personnel and then the Graduate Assistant Office, 200 Donhowe Building, 319 15th Ave. SE, Minneapolis, 625-5001 (Suite 1-41 for in-person assistance).

Any changes to this policy will be distributed as soon as available.

Former Graduate Assistants, Professional School Trainees/Fellows and Immediate Family Members—If you no longer hold a graduate assistantship or professional school fellowship/traineeship, but *have* held qualifying appointments for three or more quarters, you and your immediate family members may still be eligible for up to six more quarters of resident tuition. (Benefits must be used within 3 years of the last qualifying appointment.) Contact the Graduate Assistant Office, 200 Donhowe Building, 319 15th Ave. SE, Minneapolis, 625-5001 (Suite 1-41 for in-person assistance) for more information.

Academic Appointees and Immediate Families—Academic appointees at the University of Minnesota and their immediate family members are eligible to pay resident tuition rates subject to the following rules concerning class title and percentage of appointment.

Appointees (and their immediate family members) who hold 75% appointments for an entire quarter in the following classes are eligible to pay resident rates during that quarter: 93xx, 94xx, 96xx, 97xx, 9540, 9546, 9548, 9551, 9554, 9556, and 9563.

Appointees (and their immediate family members) who hold at least a 25% appointment in the following classes, with a level of support equal to or greater than that provided by a 25% graduate assistantship, are eligible to pay resident tuition rates during the quarter of their appointment: 9538, 9539, 9545, 9553, 9558, 9561, 9562, 9564, and 9565.

To claim the resident tuition benefit, appointees or immediate family members from both groups listed above should have the appointee's employing department complete a Verification of Appointment for Resident Tuition form. A separate form will be needed for each individual appointee or immediate family member for each quarter in which resident tuition is requested. Completed forms should be taken to a registration center (202 Fraser Hall or 130 Coffey Hall); resident rates will then be assessed. If you are registering on-line, you may mail your form to your registration center.

Appointees to the above class titles do not accrue extended resident tuition credit. Resident tuition privileges are available to appointees and their immediate family members *only* during quarters of qualifying appointment.

Civil Service Employees—Civil service employees of the University of Minnesota who work 75% time or more during an entire quarter and their immediate family members are eligible to pay resident tuition rates. These resident tuition privileges are available *only* during quarters of qualifying employment.

To claim the resident tuition benefit, *employees on regular payroll* or their immediate family members should have the employee's department complete a Verification of Appointment for Resident Tuition form. Every quarter a separate form is needed for each employee and family member. Completed forms should be taken by the student to a registration center (202 Fraser Hall or 130 Coffey Hall); resident rates will then be assessed. If you are registering on-line, you may mail your form to your registration center. *Employees on miscellaneous payroll* and their immediate family members must initially pay nonresident tuition and be reimbursed after the quarter ends. The employment department must certify that the employee worked at least 390 hours during the quarter.

section 4 liberal education

The University of Minnesota—Twin Cities liberal education requirements apply to all students entering a baccalaureate degree program fall 1996 and later. If you entered a degree program before fall 1996 and are uncertain whether the liberal education requirements apply to you, check with your academic adviser.

LIBERAL EDUCATION REQUIREMENTS

Overview—A liberal education introduces you to the modes of inquiry and subject matter of the major branches of knowledge, including the factual information and theoretical or artistic constructs that form their foundations; the "ways of knowing"—the kinds of questions asked and how insight, knowledge, and data are acquired and used; the changes over time of their central ideas or expressive forms; and the interrelationships among them and with human society in general. To these ends, study by all undergraduate students on the Twin Cities campus is guided by a common framework.

THE DIVERSIFIED CORE CURRICULUM

Physical and Biological Sciences—Comprehension of physical and biological principles; understanding of and ability to use the methods of scientific inquiry—the ways in which scientists investigate physical and biological phenomena; and appreciation of the importance of science and the value of a scientific perspective.

Requirement: A minimum of 3 courses totaling at least 12 credits, including 1 course with laboratory or field experience in the physical sciences and 1 course with laboratory or field experience in the biological sciences.

History and Social Sciences—Knowledge of how historians and social scientists describe and analyze human experiences and behavior; study of the interrelationships among individuals, institutions, structures, events, and ideas; understanding of the roles individuals play in their historical, cultural, social, economic, and political worlds.

Requirement: A minimum of 3 courses totaling at least 12 credits, including one course with historical perspective.

Arts and Humanities—Understanding of approaches to the human condition through works of art, literature, and philosophy; knowledge of how artists create and humanistic scholars think; ability to make aesthetic judgments.

Requirement: A minimum of 3 courses totaling at least 12 credits, including courses in two of the following: literature, philosophical perspective, and visual or performing arts.

Mathematical Thinking—Acquisition of mathematical modes of thinking; ability to evaluate arguments, detect fallacious reasoning, and evaluate complex reasoning chains; appreciation of the breadth of applications of mathematics and its foundations.

Requirement: A minimum of 1 course totaling at least 4 credits.

THE DESIGNATED THEMES OF LIBERAL EDUCATION

The designated themes of liberal education offer a dimension to liberal learning that complements the diversified core curriculum. Each of the themes focuses on an issue of compelling importance to the nation and the world, the understanding of which is informed by many disciplines and interdisciplinary fields of knowledge.

Requirement: A minimum of 6 courses (or 5 courses if one includes an approved practicum), including one course in each of the following:

Cultural Diversity—Understanding of the roles gender, ethnicity, and race play in structuring the human experience in and developing the social and cultural fabric of the United States.

International Perspectives—Comprehension of the ways in which you are part of a rapidly changing global environment dominated by the internationalization of most human endeavors.

Environment—Knowledge of the interaction and interdependence of the biophysical systems of the natural environment and human social and cultural systems.

Citizenship and Public Ethics—Reflection on and determination of a clearer sense of your present and future civic relationships and your obligations to the community.

You may satisfy liberal education requirements with a variety of courses and credits because some courses serve multiple goals in the curriculum. For example, some courses will satisfy a diversified core requirement and a designated theme requirement, and other courses will satisfy the requirements for each of two designated themes. Thus, you may satisfy the designated theme requirements with a smaller number of courses than is stated in the requirement.

Guide to Courses—The following charts list the courses that fulfill each of the diversified core curriculum and designated theme areas and the probable quarters that each is offered. Listings for spring quarter are tentative. The *Spring Class Schedule* will contain updated lists.

COURSES THAT SATISFY REQUIREMENTS FOR DIVERSIFIED CORE CURRICULUM

Physical and Biological Sciences

Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
AgET 3025	Engineering Principles and Applications	Phys/NL			p. 69	
Agro 1007	Biology of Plant Food Systems & the Environment	Biol/L	Envt			x
AnPl 3010	Environment and World Food Production	Biol/NL	Envt		p. 71	
AnSc 3510	Introduction to Human and Animal Growth & Development	Biol/NL			p. 71	
Anth 1101	Human Origins	Biol/L	Envt		p. 71	x
Ast 1019	Our Changing Planet	Phys/L	Envt			x
Ast 1021H	Introduction to Astronomy	Phys/L	Envt			
Ast 1031	Exploring the Universe: A	Phys/NL	Envt		p. 75	x
Ast 1032	Exploring the Universe: L	Phys/L	Envt		p. 75	x
BioC 1401	Elementary Biochemistry	Biol/NL			p. 76	x
Biol 1009	General Biology	Biol/L			p. 76	x
Biol 1051	Environmental Studies	Biol/NL	Envt		p. 76	
Biol 1101	Heredity and Human Society	Biol/NL	C/PE		p. 76	
Biol 1103	General Botany	Biol/L			p. 77	
Biol 1106	General Zoology	Biol/L			p. 77	x
Biol 1201	Evolutionary and Ecological Perspectives	Biol/L			p. 77	x
Biol 3051	Environmental Studies	Biol/NL	Envt			
CDis 1304	The Physics and Biology of Spoken Language	Phys/L			p. 85	
Chem 1001	General Principles of Chemistry	Phys/L			p. 80	
Chem 1002	Basic Organic Chemistry	Phys/L				x
Chem 1003	Physical World, Chemistry	Phys/L	Envt			x
Chem 1008	Physical World, Chemistry	Phys/NL	Envt			x
Chem 1051	Chemical Principles I	Phys/L	Envt		p. 80	x
Chem 1052	Chemical Principles II	Phys/L	Envt		p. 80	x
EEB 1019	Our Changing Planet	Phys/L	Envt			x
EEB 3001	Introduction to Ecology	Biol/NL	Envt		p. 93	x
Ent 1005	Economic Entomology	Biol/L	Envt			
Ent 3005	Insect Biology	Biol/NL				x
Ent 3200	Social Insects	Biol/NL			p. 100	
FR 3103	Meteorology and Climatology for Natural Resource Managers	Phys/NL	Envt			
FR 3104	Forest Ecology	Biol/NL	Envt			
FScN 1020	Introductory Microbiology	Biol/L				
FScN 1612	Principles of Nutrition	Biol/NL			p. 103	x
GC 1111	Science in Context: Weather and Climate	Phys/NL			p. 105	x
GC 1112	Ecological Evaluation of Environmental Problems	Biol/NL	Envt		p. 105	x
GC 1131	Biological Science: Principles	Biol/L			p. 105	x
GC 1132	Biological Science: The Human Body	Biol/NL			p. 105	x
GC 1132 & GC 1137	Biological Science: The Human Body Biological Sciences Laboratory: The Human Body	Biol/L			p. 105-6	x
GC 1166	Principles of Chemistry	Phys/NL			p. 106	x
GC 1171	Physical Geology	Phys/L				
GC 1172	Historical Geology	Phys/L			p. 106	
GC 1173	Geology of the National Parks	Phys/L				x

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Abbreviations:

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Biol/L	Biological Science with Laboratory
Biol/NL	Biological Science without Laboratory
CD	Cultural Diversity
C/PE	Citizenship and Public Ethics
Envt	Environment
Hist	Historical Perspective
IP	International Perspective
Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
*	Course listings for spring quarter are tentative and subject to change.

Physical and Biological Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Geo 1001	The Dynamic Earth: An Introduction to Geology	Phys/L	Envt		p. 108	x
Geo 1002	Historical Geology	Phys/L			p. 108	x
Geo 1003	Intro to the Mesozoic: Evolution, Ecology, and Extinction of Dinosaurs	Phys/NL			p. 108	
Geo 1004	Physical and Historical Geology of Minnesota	Phys/NL				
Geo 1005	Geologic Perspectives on Energy	Phys/NL	Envt			
Geo 1011	Volcanoes of the Earth	Phys/NL				x
Geo 1012	Planet Earth	Phys/NL	Envt			x
Geo 1019	Our Changing Planet	Phys/L	Envt			x
Geo 1044	Physical and Historical Geology of Minnesota	Phys/L				
Geo 1601	Oceanography	Phys/NL			p. 108	
Geo 1701	Faces of the Earth	Phys/NL	IP			
Geo 3211H	Honors Earth Science	Phys/NL				
Geog 1402	Geography of Environmental Systems	Phys/NL	Envt		p. 107	
Geog 1425	Introduction to Meteorology	Phys/L				x
Hort 1036	Plant Propagation	Biol/L			p. 112	
Hort 3003	Plant Genetics and Improvement	Biol/L				
MdBc 1030	Elementary Biochemistry	Biol/NL				
NRES 3020	Plant Resource Management & the Environment	Biol/L	Envt		p. 130	
NRES 3060	Water Quality in Natural Resource Management	Biol/NL	Envt			x
PBio 1012	Plants Useful to Humans	Biol/NL	Envt			
Phys 1001	The Physical World	Phys/NL			p. 138	x
Phys 1001 & Phys 1005	The Physical World; Physics Laboratory	Phys/L			p. 138	x
Phys 1041	Introductory Physics	Phys/L			p. 138	
Phys 1042	Introductory Physics	Phys/L			p. 138	x
Phys 1104	General Physics	Phys/NL				
Phys 1104 & Phys 1107	General Physics; General Physics Laboratory	Phys/L				
Phys 1105	General Physics	Phys/NL			p. 139	
Phys 1105 & Phys 1108	General Physics; General Physics Laboratory	Phys/L			p. 139	
Phys 1106	General Physics	Phys/NL				x
Phys 1106 & Phys 1109	General Physics; General Physics Laboratory	Phys/L				x
Phys 1251	General Physics I	Phys/L			p. 139	x
Phys 1252	General Physics II	Phys/L			p. 139	x
Phys 1253	General Physics III	Phys/L			p. 139	x
Phys 1254	General Physics IV	Phys/L			p. 139	
Phys 1451H	Honors Physics I	Phys/L				
Phys 1452H	Honors Physics II	Phys/L			p. 139	
Phys 1453H	Honors Physics III	Phys/L				x
Phys 1454H	Honors Physics IV	Phys/L				
Phys 1911	Laboratory-Based Physics for Teachers	Phys/L			p. 139	
Phys 1912	Laboratory-Based Physics for Teachers	Phys/L				x
Psy 3031	Sensation and Perception	Biol/NL				
Psy 3061	Introduction to Biological Psychology	Biol/NL				
Soil 1020	The Soil Resource	Phys/L	Envt			
Soil 1425	Introduction to Meteorology	Phys/L				x
Soil 3125	Basic Soil Science	Phys/L	Envt		p. 151	
VPB 3103	General Microbiology	Biol/NL				x
WoSt 3202	Biology of Women	Biol/NL			p. 156	

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History and Social Sciences

Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Afro 1021	Introduction to Africa	SSci	IP			
Afro 3001	Intro: West African History: Early Times to 1800	Hist	IP			
Afro 3002	Introduction to West African History: 1800 to the Present	Hist	IP			
Afro 3013	Cities in Africa: African, Islamic, European Tradition	Hist	IP			
Afro 3061	The Black Family	SSci	CD			x
Afro 3072	Racism: Social and Psychological Consequences for Black Americans	SSci	CD			
Afro 3431	History of Africa to 1800	Hist	IP			
Afro 3432	History of Africa: 1800 to Present	Hist	IP		p. 69	
Afro 3864	Afro-American History	Hist	CD			
Afro 3865	Afro-American History	Hist	CD		p. 69	
Afro 3954	Sociological Perspectives on Race, Class, and Gender	SSci	CD			
AmIn 1771	Introduction to American Indian Studies	SSci	CD		p. 70	x
AmIn 3026	Ojibwe Culture and History	Hist	CD		p. 70	x
AmIn 3036	Dakota Culture and History	SSci	CD			x
AmIn 3111	American Indian History from Mid-15th Century to 1830	Hist	CD			
AmIn 3112	American Indian History 1850 to the Present	Hist	CD		p. 70	
AmSt 1001	American Cultures	SSci	CD			
AmSt 1002	American Cultures	SSci	CD		p. 70	
AmSt 1003	American Cultures	SSci	CD			x
ANE 3501	Ancient Israel	Hist				
ANE 3502	Ancient Israel	Hist			p. 70	
ANE 3503	Ancient Israel: Background of the Bible	Hist				
Anth 1102	Understanding Cultures	SSci	IP		p. 71	x
Anth 3003	The Rise of Civilization	SSci	IP		p. 71	
Anth 3116	Ecological Anthropology	SSci	Envt			x
Anth 3303	Women: Anthropological Perspectives	SSci				
ApEc 1101	Principles of Microeconomics	SSci			p. 72	
ApEc 1102	Principles of Macroecomonics	SSci			p. 72	x
ApEc 3040	Economic Development of American Agriculture	Hist				
CAS 3511	Ancient Iran	Hist	IP			
CAS 3512	Modern Iran	Hist	IP			
CAS 3531	Central Asian Culture	Hist	IP			
CAS 3532	Russia and Central Asia	Hist	IP		p. 79	
Chic 3105	Introduction to Chicano Studies: The Beginnings	Hist	IP			x
Chic 3106	Intro to Chicano Studies: Mexico and the U.S.	Hist	CD			
Chic 3107	Introduction to Chicano Studies: Chicano in Contemporary Society	Hist	CD		p. 81	
Chic 3427	History of Cuba and Puerto Rico	Hist	IP			
Chic 3428	History of Relations Between the United States and Mexico: 1821-Present	Hist	IP			
Chic 3441	Chicano History to 1900	Hist	CD		p. 81	
Chic 3442	Chicano History Since 1990	Hist	CD			x
Clas 1001	Age of Homer	Hist				
Clas 1002	Age of Pericles	Hist				
Clas 1003	Age of Alexander	Hist			p. 83	
Clas 1004	Age of Caesar	Hist				
Clas 1005	Age of Augustus	Hist				

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Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
*	Course listings for spring quarter are tentative and subject to change.

History and Social Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Clas 1006	Age of Nero	Hist				x
Clas 1023	Age of Constantine	Hist				
Clas 1024	Age of Saint Augustine of Hippo	Hist				
Clas 1025	Age of Justinian and Muhammad	Hist			p. 83	
Clas 1043	Introduction to Greek and Roman Archaeology	Hist				
Clas 1082	Jesus in History	Hist				
Clas 3023	Age of Constantine	Hist				
Clas 3024	Age of Saint Augustine of Hippo	Hist				
Clas 3025	Age of Justinian and Muhammad	Hist			p. 83	
Clas 3071	Greek and Hellenistic Religions	Hist				
Clas 3072	The New Testament	Hist			p. 83	
Clas 3073	Roman Religion and Early Christianity	Hist				
CPsy 1301	Introductory Child Psychology	SSci			p. 81	x
CPsy 3309	Introductory Child Psychology for the Social Sciences	SSci			p. 82	x
CPsy 3331	Introduction to Social Development	SSci			p. 82	
CSCL 1302	Discourse and Society II: Meaning and History	Hist			p. 88	x
CSCL 3421	Culture and the Production of Modern Identity, I: 1600-1750	Hist				
CSCL 3422	Culture and the Production of Modern Identity, II: 1750-1850	Hist				
CSCL 3472	Gay Men and Homophobia in American Culture	Hist	CD			
EAS 1462	Introduction to East Asia: The Imperial Age	Hist	IP			
EAS 1463	East Asia in Modern Times: 1790-1990	Hist	IP			
EAS 3465	China's Response to the West	Hist	IP			
Econ 1101	Principles of Microeconomics	SSci	IP		p. 94	x
Econ 1102	Principles of Macroeconomics	SSci	IP		p. 94	x
Econ 1104	Principles of Microeconomics	SSci	IP		p. 94	x
Econ 1105	Principles of Macroeconomics	SSci	IP		p. 94	x
EdPA 3120	Childhood Education: Western Civilization	Hist				
Engl 3851	The English Language	SSci			p. 100	x
Engl 3853	Gender and the English Language	SSci	CD			x
EPsy 3119	Learning and Cognitive Bases of Education	SSci			p. 96	
EPsy 3132	Psychology of Multiculturalism in Education	SSci	CD		p. 96	
EPsy 3139	Social and Developmental Psychology in Education	SSci	CD		p. 96	
EPsy 5119	Learning and Cognitive Foundations of Education	SSci			p. 96	
EPsy 5139	Building a Learning Community	SSci	CD		p. 96	
FScN 3472	Food Selection Princliples	SSci				
FSoS 3600	Family Issues Across the Lifespan	SSci	CD		p. 101	
GC 1211	People and Problems	SSci	CD		p. 106	x
GC 1221	Minnesota History	Hist			p. 106	x
GC 1231	United States: Growth of National Power	Hist			p. 106	x
GC 1233	United States: Government and Politics	SSci			p. 106	x
GC 1235	United States: Law in Society	SSci	C/PE		p. 106	x
GC 1281	Psychology in Modern Society	SSci			p. 106	x
GC 1285	Cultural Anthropology	SSci	IP		p. 106	x
GC 1511	Introduction to Business and Society	SSci			p. 106	x
Geog 1301	Human Geography	SSci	IP			
Geog 1302	The World Around Us	SSci	IP			x
Geog 3101	Geography of United States and Canada	SSci	CD			x
Geog 3102	Geographic Issues in the United States, Canada	SSci				
Geog 3141	Africa	SSci	IP		p. 107	
Geog 3161	Europe	SSci	IP			x
Geog 3331	Economic Geography	SSci	IP			
Geog 3371	Introduction to Urban Geography	SSci				x
Geog 3373	The Changing Form of the City	Hist	IP		p. 107	

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History and Social Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Geog 3381	Population in an Interacting World	SSci	IP			
Hist 1011	Introduction to World History	Hist	IP			
Hist 1012	Introduction to World History	Hist	IP		p. 110	
Hist 1013	Introduction to World History	Hist	IP			x
Hist 1017	Introduction to World History	Hist	IP			
Hist 1018	Introduction to World History	Hist	IP			
Hist 1021	Western Civilization	Hist	IP			
Hist 1031	Introduction to European Civilization: The Medieval Centuries	Hist	IP			
Hist 1032	Introduction to European Civilization: Early Modern Europe, 1350-1750	Hist	IP		p. 110	
Hist 1033	Introduction to European Civilization: 1750 to Present	Hist	IP			x
Hist 1301	American History	Hist	CD			
Hist 1302	American History	Hist	CD		p. 110	x
Hist 1307	American History	Hist	CD			
Hist 1308	American History	Hist	CD			
Hist 3101	Introduction to Medieval Studies	Hist				
Hist 3151	History of the British Isles	Hist	C/PE			
Hist 3152	History of the British Isles	Hist	C/PE		p. 110	
Hist 3245	History of Modern East Central Europe	Hist	IP			
Hist 3347	Women in Colonial and Victorian America	Hist	CD			
Hist 3357	Topics in the Social History of the U.S.: 19th-Century Minnesota	Hist	C/PE			
Hist 3401	Survey of Latin American History: Colonial Period to 1800	Hist	IP			
Hist 3402	Survey of Latin American History: 1800-1929	Hist	IP		p. 110	
Hist 3403	Survey of Latin American History: 1929 to Present	Hist	IP			x
Hist 3431	History of Africa to 1800	Hist	IP			
Hist 3432	History of Africa, 1800 to Present	Hist	IP		p. 110	
Hist 3462	Introduction to East Asia: The Imperial Age	Hist	IP			
Hist 3463	Introduction to East Asia in Modern Times	Hist	IP			x
Hist 3465	China's Response to the West	Hist	IP			
Hist 3611	Medieval Cities of Europe	Hist	IP			
Hist 3615	Women in European History, 1500 to Present	Hist				
Hist 3616	France in the High Middle Ages	Hist	IP		p. 110	
Hist 3636	Russian History from the Origins to Peter the Great	Hist	IP			x
Hist 3704	Daily Life in Europe, 1348-1750	Hist	IP			
Hist 3814	The Practice of Citizenship in 19th Century America	Hist	C/PE			
Hist 3864	Afro-American History	Hist	CD			
Hist 3865	Afro-American History	Hist	CD		p. 110	
Hist 3871	American Indian History from Mid-15th Century to 1830	Hist	CD			
Hist 3872	American Indian History: 1830 to the Present	Hist	CD		p. 111	
HMed 3040	Human Disease and the Environment in History	Hist	Envt			
HMed 3401	Early History of Medicine: The Classical Tradition	Hist				
HMed 3402	Health Care in Modern History	Hist			p. 111	
HMed 3403	Health Care in Modern History	Hist				x
HSci 1711	Technology & Western Civilization: Ancient & Medieval	Hist	IP			
HSci 1712	Technology & Western Civilization: Renaissance to Industrial Revolution	Hist	IP		p. 111	

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Math	Mathematical Thinking
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Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
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History and Social Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
HSci 1713	Technology & Western Civilization: 19th, 20th Centuries	Hist	IP			x
HSci 1811	Introduction to the History of Science: Ancient	Hist	IP			
HSci 1812	Introduction to History of Science: The Scientific Revolution	Hist	IP		p. 111	
HSci 1813	Introduction to History of Science: Modern Science	Hist	IP			x
HSci 3202	History of Biology: Biology in the 19th and 20th Century	Hist	IP		p. 111	
HSci 3331	Technology and American Culture	Hist	CD			
HSci 3332	Science and American Culture	Hist	CD		p. 111	
HSci 3333H	Issues in 20th Century American Science	Hist	C/PE			
HSci 3402	Science, Ethics, and Values	Hist	C/PE			
HSci 3711	Technology & Western Civilization: Ancient & Medieval	Hist	IP			
HSci 3712	Technology & Western Civilization: Renaissance to Industrial Revolution	Hist	IP		p. 111	
HSci 3713	Technology & Western Civilization: 19th, 20th Centuries	Hist	IP			x
HSci 3811	Introduction to the History of Science: Ancient	Hist	IP			
HSci 3812	Introduction to History of Science: The Scientific Revolution	Hist	IP		p. 111	
HSci 3813	Introduction to History of Science: Modern Science	Hist	IP			x
HSci 3825	The Nuclear Age	Hist	IP			
Jour 1001	Introduction to Mass Communication	SSci			p. 115	x
Jour 3614	History of Mass Communication Technology	Hist				
Jour 3796	Mass Media and Politics	SSci				
LAS 3401	Survey of Latin American History: Colonial Period to 1800	Hist	IP			
LAS 3402	Survey of Latin American History: 1800-1929	Hist	IP		p. 118	
LAS 3403	Survey of Latin American History: 1929 to Present	Hist	IP			x
Ling 3001	Introduction to Linguistics	SSci			p. 120	x
MELC 3511	Ancient Iran	Hist	IP			x
MELC 3512	Modern Iran	Hist	IP			
MELC 3531	Central Asian Cultural Sphere	Hist	IP			
MELC 3532	Russia and Central Asia	Hist	IP		p. 126	
Nurs 1010	History of the United States Health Care System	Hist				
Pol 1001	American Government and Politics	SSci	C/PE		p. 141	x
Pol 1025	World Politics	SSci	IP		p. 141	x
Pol 1041	Contemporary Political Ideologies	SSci	C/PE		p. 141	x
Pol 1054	Government and Politics in a Changing World	SSci	IP			x
Pol 3051	Introduction to Political Analysis	SSci			p. 141	x
Pol 3835	International Relations	SSci	IP		p. 141	x
Psy 1001	Introduction to Psychology	SSci			p. 142	x
Psy 1004	Introductory Laboratory Psychology	SSci			p. 142	
Psy 1005	Introductory Laboratory Psychology	SSci			p. 142	x
Psy 3011	Introduction to Psychology of Learning	SSci			p. 142	
Psy 3051	Introduction to Cognitive Psychology	SSci			p. 142	
Psy 3101	Introduction to Personality	SSci				x
RelA 1082	Jesus in History	Hist				
RelA 3071	Greek and Hellenistic Religions	Hist				
RelA 3072	The New Testament	Hist			p. 147	
RelA 3073	Roman Religion and Early Christianity	Hist				
RelA 3501	Ancient Israel	Hist				
RelA 3502	Ancient Israel	Hist			p. 147	
RelA 3503	Ancient Israel	Hist				
Rhet 1303	Humanities: Science, Religion, and the Search for Human Nature	Hist			p. 147	x
Soc 1001	Introduction to Sociology	SSci	CD		p. 150	x
Soc 1004	American Race Relations	SSci	CD			
Soc 3101	Introduction to American Criminal Justice	SSci	C/PE		p. 150	
Soc 3481	Modern Japanese Society	SSci	IP		p. 150	

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History and Social Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Soc 3482	Contemporary Chinese Society	SSci	IP			
Soc 3501	The Family	SSci	CD			
Soc 3524	America's Sexual Crisis	SSci				
Soc 3601	Urban Community	SSci	IP			
Soc 3954	Sociological Perspectives on Race, Class, and Gender	SSci	CD		p. 150	
Spch 3211	Introduction to Electronic Media in America	SSci			p. 152	
Spch 3401	Introduction to Communication Theory	SSci			p. 152	x
Spch 3601	Introduction to Rhetorical Theory	Hist	C/PE			x
SW 3202	Interventions in Community and Social Policy	SSci	C/PE			x
UrbS 3104	Introduction to Urban Studies	SSci				
WoSt 1002	Introduction to Women's Studies	SSci	CD			
WoSt 1003	Women in World Cultures	SSci	IP			
WoSt 3002	Introduction to Women's Studies	SSci	CD			
WoSt 3003	Women in World Cultures	SSci	IP		p. 156	
WoSt 3100	Women in Colonial and Victorian America	Hist	CD			
WoSt 3103	Feminist Approaches to History	Hist				
WoSt 3405	Latin American Women's Lives	SSci				
WoSt 3406	Women, Race, and Class in the U.S.	SSci	CD		p. 156	
Arts and Humanities						
Afro 3591	Introduction to Afro-American Literature	Lit	CD			
Afro 3601	Introduction to African Literature	Lit	IP			
Afro 3654	African Cinema	Vis	IP		p. 69	
AmIn 3116	American Indian Literature	Lit	CD		p. 70	
AmIn 3211	American Indian Philosophies	Phil	CD		p. 70	x
AmIn 3242	Survey of American Indian Arts	AH	CD			
ANE 1001	The Bible: Narrative Text	Lit				
ANE 1002	The Bible: Prophecy	Lit				
ANE 3001	The Bible: Narrative Text	Lit				
ANE 3002	The Bible: Prophecy	Lit				
ANE 3251	Modern Study of the Old Testament	Lit				
Arch 1301	Introduction to Architectural Drawing	Vis			p. 72	x
Arch 1401	The Designed Environment	AH	Envt		p. 72	
Arch 3411	History of Architecture to 1750	Vis	IP			
Arch 3412	History of Architecture Since 1750	Vis	IP		p. 72	
Arch 3413	Landscape Architectural History	Vis				
ArtH 1016	Introduction to Asian Art	Vis	IP			
ArtH 3008	Ancient Art	AH	IP			
ArtH 3014	Art of India	Vis	IP			x
ArtH 3015	Art of Islam	Vis	IP			
ArtH 3017	Islamic Culture	AH	IP		p. 75	
ArtH 3142	Arts of Egypt and the Near East	Vis	IP			
ArtH 3411	History of Architecture to 1750	Vis	IP			
ArtH 3412	History of Architecture Since 1750	Vis	IP		p. 75	
ArtS 1101	Drawing I	Vis			p. 73	x

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*	Course listings for spring quarter are tentative and subject to change.

Arts and Humanities--Continued

Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
ArtS 1301	Sculpture	Vis			p. 73	x
ArtS 1302	Sculpture	Vis			p. 73	x
ArtS 1401	Introduction to Studio Arts	Vis	IP		p. 73	x
ArtS 1510	Printmaking: Intaglio	Vis			p. 73	x
ArtS 1520	Printmaking: Lithography	Vis				x
ArtS 1530	Printmaking: Relief	Vis			p. 73	
ArtS 1540	Printmaking: Screen	Vis				x
ArtS 1602	Electronic Art	Vis			p. 73	x
ArtS 1701	Photo Medium	Vis			p. 73	x
ArtS 1811	Ceramics: Handbuilding	Vis			p. 74	x
ArtS 1812	Ceramics: Wheel Throwing	Vis			p. 74	x
CAS 3601	Fiction: Iran and Central Asia	Lit	IP		p. 79	
CAS 3602	Persian Poetry	Lit				
Chic 3212	La Chicana	Lit	CD		p. 81	x
Chic 3213	Chicano Music and Art	Vis	CD			x
Chic 3507	Introduction to Chicano Literature	Lit				
Chic 3508	Introduction to Chicano Literature: Text, Context	Lit			p. 81	
Chn 3091	Filmic Construction of Modern Identity in China	Vis	IP		p. 82	
Chn 3171	Introduction to Chinese Literature in Translation I	Lit	IP			
Chn 3172	Introduction to Chinese Literature in Translation II	Lit	IP			
Clas 1042	Greek and Roman Mythology	AH			p. 83	x
Clas 3001	Greek, Roman Lyric Poetry in Translation	Lit				
Clas 3008	Ancient Art	AH	IP			
Clas 3035	Mythology in Western Art	AH				
Clas 3081	Classical Epic in Translation	Lit			p. 83	x
Clas 3082	Greek Tragedy in Translation	Lit				
Clas 3142	Art of Egypt	Vis	IP			
CSCL 1001	Introduction to Cultural Studies: Rhetoric, Power, Desire	AH			p. 88	
CSCL 1301	Discourse and Society I: Reading Culture	AH			p. 88	x
CSCL 1303	Discourse and Society III: Knowledge, Persuasion, Power	AH			p. 88	x
CSCL 3115	Cinema and Ideology	Vis			p. 88	
CSCL 3132	The Modern Novel in a Comparative Perspective	Lit				
CSCL 3172	Music as Discourse	Vis				
CSCL 3175	Comedy: Text and Theory	AH				x
CSCL 3176	Oppositional Cinemas	Vis	IP			
CSCL 3321	Theories of Culture	AH				x
CSCL 3331	Science and the Humanities	Phil			p. 88	
CSCL 3458	The Body and the Politics of Representation	AH			p. 88	
DHA 1101	Introduction to the Designed Environment	AH				
DHA 1300	Introduction to Design	AH			p. 92	
Dnce 1101	Introduction to Dance	Vis	IP			
Dnce 3401	Dance History I	Vis	IP			
Dnce 3402	Dance History II	Vis	IP			x
Dnce 3486	Ethnic Dance Traditions in American Society	Vis	CD			
Dnce 3666	Dance Philosophy and Esthetics	Vis	IP			
Dnce 5487	World Dance Studies	Vis	IP		p. 90	
Engl 1005	Introduction to Literature	Lit			p. 99	x
Engl 1016	Introduction to American Literature	Lit	CD		p. 99	
Engl 1017	Introduction to Modern Poetry	Lit				x
Engl 1018	Introduction to Modern Fiction	Lit			p. 99	x
Engl 1019	Introduction to Modern Drama	Lit				x
Engl 1241	Introduction to Shakespeare	Lit			p. 99	x

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Arts and Humanities--Continued

Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Engl 1591	Literature of American Minorities	Lit	CD		p. 99	x
Engl 1595	Introduction to "Third World" Literatures in English	Lit	IP			x
Engl 3111	Survey of English Literature	Lit				
Engl 3112	Survey of English Literature	Lit			p. 99	
Engl 3113	Survey of English Literature	Lit				x
Engl 3241	Shakespeare	Lit				x
Engl 3242	Shakespeare	Lit			p. 99	x
Engl 3411	Survey of American Literature to 1850	Lit				
Engl 3412	Survey of American Literature, 1850-1900	Lit			p. 100	
Engl 3413	Survey of American Literature, 1900-1945	Lit				x
Engl 3455	American Short Story	Lit				x
Engl 3591	Introduction to Afro-American Literature	Lit	CD			
Engl 3651	Poetry	Lit			p. 100	
Engl 3671	The Novel	Lit			p. 100	x
EngW 1101	Introduction to Creative Writing	Lit				x
Fren 3101	Introduction to French Literary Texts: Poetry	Lit	IP		p. 104	x
Fren 3103	French Literary Texts: Novel	Lit	IP		p. 105	x
Fren 3606	Quebec: Literature and Film in Translation	Lit	IP			
GC 1311	Art: General Arts	Vis	IP		p. 106	x
GC 1312	Identity, Community, & Culture: Connections in the Arts & Humanities	Vis	CD			
GC 1331	Musical Heritage	Vis	IP		p. 106	x
GC 1357	World Religious Beliefs	Phil	IP			
GC 1365	Literatures of the United States	Lit	CD		p. 106	x
GC 1366	Images of Women in Literature	Lit	CD			
GC 1367	Contemporary Literature: International Perspectives	Lit	IP		p. 106	
GC 1371	Literature: Reading Short Stories	Lit			p. 106	x
GC 1374	The Movies: An Introductory Course	Vis			p. 106	
GC 1375	Film and Society	Vis	CD			x
GC 1481	Creativity: Art Laboratory: Experiences in the Media	Vis			p. 106	x
GC 1816	African-American Literature	Lit	CD		p. 106	x
GC 1836	Asian-American Literature	Lit	CD			x
Geog 3374	The City in Film: Europe and North America	Vis	CD			
Geog 3377	The City in Film: Third World Cities	Vis	IP			
Ger 3104	Reading and Analysis of Prose	Lit			p. 109	
Ger 3105	Reading and Analysis of Drama and Poetry	Lit			p. 109	x
Ger 3604	Literature, History, and the German Film	Vis	IP			
Hist 3621	Renaissance Italy, 1200-1530	AH			p. 110	
Hum 1001	Humanities in the Modern West I: The Enlightenment	AH	IP			
Hum 1002	Humanities in the Modern West II: 19th Century	AH	IP			
Hum 1004	Humanities in the Modern West IV	AH	IP			
Hum 1005	Humanities in the Modern West V	AH	IP		p. 112	
Hum 1111	European Heritage: Greece	AH			p. 112	
Hum 1113	European Heritage: Rome	AH				
Hum 3001	Humanities in the Modern West I: The Enlightenment	AH	IP			
Hum 3002	Humanities in the Modern West II: 19th Century	AH	IP			

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CD	Cultural Diversity
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Envt	Environment
Hist	Historical Perspective
IP	International Perspective
Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
*	Course listings for spring quarter are tentative and subject to change.

Arts and Humanities--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Hum 3004	Humanities in the Modern West IV	AH	IP			
Hum 3005	Humanities in the Modern West V	AH	IP		p. 112	
Hum 3111	European Heritage: Greece	AH			p. 113	
Hum 3113	European Heritage: Rome	AH				
Ital 3201	Italian Literary Tradition	Lit				
Ital 3209	Medieval Italian Literature	Lit				
Ital 3219	Renaissance and Baroque Italian Literature	Lit				
Ital 3289	Modern Italian Literature	Lit				
Ital 3301	Italian Lyric Poetry	Lit				
Ital 3303	Italian Drama	Lit				
Ital 3305	Italian Novel	Lit				
Ital 3501	Italian Civilization and Culture	AH	IP			
Ital 3502	Italian Civilization and Culture	AH	IP		p. 115	
Jpn 3164	Japanese Literature in English Translation	Lit				
JwSt 1034	Introduction to Judaism	AH	IP		p. 115	
JwSt 3034	Introduction to Judaism	AH	IP		p. 115	
LA 1301	Introduction to Landscape Architecture Drawing	Vis			p. 117	x
LA 1401	The Designed Environment	AH	Envt		p. 117	
LA 3411	History of Architecture to 1750	Vis	IP			
LA 3412	History of Architecture Since 1750	Vis	IP		p. 117	
LA 3413	History of Landscape Architecture	Vis				x
MELC 3601	Fiction: Iran and Central Asia	Lit	IP		p. 126	
MELC 3602	Persian Poetry	Lit				
Mus 1001	Fundamentals of Music	Vis			p. 127	x
Mus 1021	Introduction to Music	Vis	IP			
Mus 1051	Piano Class for Non-Music Majors	Vis			p. 127	x
Mus 1052	Piano Class for Non-Music Majors	Vis			p. 127	x
Mus 1053	Piano Class for Non-Music Majors	Vis				
Mus 3021	Introduction to Music	Vis	IP		p. 127	
Mus 3029	Music in the 20th Century	Vis	IP		p. 127	
Mus 3430	Chorus	Vis			p. 127	
Phil 1002	Introduction to Philosophy	Phil			p. 136	x
Phil 1003	Introduction to Ethics	Phil			p. 136	
Phil 1004	Introduction to Political Philosophy	Phil	C/PE		p. 136	x
Phil 1004 & Phil 1007	Introduction to Political Philosophy & Practicum (1007 must be taken concurrently with 1004)	Phil	C/PE (practicum)		p. 136	x
Phil 1005	Scientific Reasoning	Phil				
Phil 1006	Philosophy and Cultural Diversity	Phil	CD		p. 136	
Phil 3001	General History of Western Philosophy	Phil				
Phil 3002	General History of Western Philosophy	Phil			p. 136	
Phil 3003	General History of Western Philosophy	Phil				x
Phil 3004	General History of Western Philosophy	Phil				x
Phil 3302	Moral Problems of Contemporary Society	Phil	C/PE		p. 137	x
Phil 3307	Social Justice and Community Service: Basic Political Values	Phil	C/PE Practicum			
Phil 3308	Social Justice and Community Service: Power and Democracy	Phil	C/PE Practicum		p. 137	
Phil 3502	Introduction to Aesthetics	AH			p. 137	
Phil 3601	Scientific Thought	AH				
RelA 1001	Introduction to Religious Studies	AH				
RelA 1034	Introduction to Judaism	AH	IP		p. 147	
RelA 3034	Introduction to Judaism	AH	IP		p. 147	
RelA 3201	The Bible: Narrative Text	Lit				

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Arts and Humanities--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
RelA 3202	The Bible: Prophecy	Lit				
RelA 3251	Modern Study of the Old Testament	Lit				
RelA 3411	Introduction to Indian Philosophy	Phil				
RelA 3412	Hinduism	AH				
RelA 3413	Buddhism	AH				
RelA 3414	Comparative Religions of South Asia	AH				
Rhet 1310	Humanities: The Land in American Experience (see page 60)	AH	CD		p. 147	x
Rhet 1311	The Family in American Experience	Lit	CD			
Rhet 1380	Fictional History: Twentieth Century Through the Eyes of Novelists	Lit	IP			x
Rhet 3381	Humanities: 20th Century Culture	AH	IP		p. 147	x
Rhet 3382	Humanities: Ethics of Total War	AH	C/PE		p. 147	
Rhet 3395	In Search of Nature	AH	CD			x
Rhet 3690	Scientific Controversy	AH	C/PE			
Russ 1304	Intro to Literature: 19th Century Russian Fiction	Lit	IP			
Russ 3421	Literature: Middle Ages: Dostoevsky in Translation	Lit	IP			
Russ 3422	Literature: Tolstoy to the Present in Translation	Lit	IP		p. 148	
Russ 3512	Russian Art and Culture from Peter I to the Present	Vis	IP			x
SALC 3201	Ancient Indian Literature in Translation	Lit				
SALC 3202	Modern Indian Literature in Translation	Lit				
SALC 3411	Introduction to Indian Philosophy	Phil				
SALC 3412	Hinduism	AH				
SALC 3413	Buddhism	AH				
SALC 3414	Comparative Religions of South Asia	AH				
Scan 3503	Scandinavian Folklore	Lit				
Scan 3601	Great Literary Works of Scandinavia	Lit				
Scan 3660	Isak Dinesen and Scandinavian Women Writers	Lit				
Th 1101	Introduction to the Theatre	Vis	CD		p. 154	x
Th 1102	Drama and Media	Vis			p. 154	x
WoSt 1001	Introduction to Women's Studies	AH	CD		p. 156	
WoSt 3102	Feminist Thought and Theory	Phil	C/PE			
WoSt 3303	Women and Literature	Lit	CD			
WoSt 3304	Women and the Arts	Vis	CD			
WoSt 3306	U.S. Minority Women Writers	Lit	CD			
WoSt 3307	Modern Feminist Novel	Lit	CD			
WoSt 3308	Women Writers of Africa and Latin America	Lit	IP			
WoSt 3309	Contemporary Women's Short Fiction	Lit				
Mathematical Thinking						
Ast 1040	Mathematics and Our Universe	Math			p. 75	
EPsy 3260	Basic and Applied Statistics	Math			p. 96	
GC 1454	Statistics	Math			p. 106	x
GC 1456	Functions and Problems of Logic	Math			p. 106	x
Math 1001	Excursions in Mathematics	Math			p. 121	x
Math 1005	Introduction to Elementary Mathematics	Math				
Math 1031	College Algebra and Probability	Math			p. 121	x
Math 1105	Topics in Elementary Mathematics	Math				

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Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
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Mathematical Thinking--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Math 1106	Topics in Elementary Mathematics	Math				
Math 1131	Finite Mathematics	Math			p. 121	x
Math 1142	Short Calculus	Math			p. 121	x
Math 1151	Precalculus II	Math			p. 121	x
Math 1251 or Math 1551H	One-Variable Differential and Integral Calculus I	Math			p. 121	x
Math 1351	Calculus: Concepts, Explorations, and Applications	Math				
Phil 1001	Introduction to Logic	Math			p. 136	x
Psy 3801	Introduction to Statistical Methods	Math				
Stat 1001	Introduction to Ideas of Statistics	Math			p. 153	x
Stat 3011	Statistical Analysis	Math			p. 153	x
COURSES THAT SATISFY REQUIREMENTS FOR DESIGNATED THEMES						
Citizenship and Public Ethics						
AmSt 1201	Learning Public Ethics Through the Arts and the University		C/PE		p. 70	
AmSt 3302 & AmSt 3303	Proseminar: American Studies		C/PE; CD		p. 70	x
Anth 5117	Natural Resources Anthropology		C/PE; Envt			
ApEc 3920	Agricultural Law		C/PE			x
ApEc 5640	Financing State and Local Governments		C/PE			x
ApEc 5660	Economics of Public Services		C/PE		p. 72	
Arch 1601	Design Professions and Society		C/PE			x
BGS 3002	Business and Society		C/PE			
Biol 1101	Heredity and Human Society	Biol/NL	C/PE		p. 76	
Biol 5931	Environmental Ethics and Citizenship		C/PE			
CPsy 5334	Children and Youth in Society		C/PE			x
CSCL 3361	Visions on Nature: The Natural World and Political Thought		C/PE; Envt			
CSCL 3979	Issues in Cultural Pluralism		C/PE; CD			x
DHA 5485	Homelessness		C/PE			
EEB 3006	Visions of Nature: The Natural World and Political Thought		C/PE			x
Engl 3854	American Literacy and Cultural Diversity		C/PE; CD (practicum)		p. 100	
FScN 1102	Food: Safety, Risks, and Technology		C/PE			x
GC 1235	United States: Law in Society	SSci	C/PE		p. 106	x
GC 1294	Economics in Contemporary Society		C/PE			
Geo 3005	Earth Resources		C/PE; IP		p. 108	
Geog 5605	Geographical Perspectives on Urban Planning I		C/PE; IP			x
Hist 3151	History of the British Isles	Hist	C/PE			
Hist 3152	History of the British Isles	Hist	C/PE		p. 110	
Hist 3348	Women in Modern America, 1890-1980		C/PE		p. 110	
Hist 3357	Topics in the Social History of the U.S.: 19th-Century Minnesota	Hist	C/PE			
Hist 3814	The Practice of Citizenship in 19th-Century America	Hist	C/PE			
Hist 3821	The United States in the 20th Century: 1900-32		C/PE; CD			
Hist 3823	The United States in the 20th Century: 1960 to the Present		C/PE; CD			
Hist 5337	Criminal Justice in American History		C/PE			
HSci 3333H	Issues in 20th Century American Science	Hist	C/PE			
HSci 3401	Engineering Ethics in Historical Perspective		C/PE			
HSci 3402	Science, Ethics, and Values	Hist	C/PE			
HSci 5401	Engineering Ethics in Historical Perspective		C/PE			
ID 3205	Community, Service, and Self		C/PE; CD (practicum)			
ID 3206	Community, Service, and Self		C/PE; CD (practicum)		p. 114	
ID 3207	Community, Service, and Self		C/PE; CD (practicum)			x

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Citizenship and Public Ethics--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Jour 5274	Advertising in Society		C/PE			x
NRES 3010	Ethics and Values in Resource Management		C/PE			x
Nurs	(Successful completion of Nursing program)		C/PE			
PA 5112	Economics of Public Services		C/PE			
PA 5441	Women and Public Policy in the United States		C/PE			
Phil 1004	Introduction to Political Philosophy	Phil	C/PE		p. 136	x
Phil 1004 & Phil 1007	Introduction to Political Philosophy & Practicum (1007 must be taken concurrently with 1004)	Phil	C/PE (practicum)		p. 136	x
Phil 3302	Moral Problems of Contemporary Society	Phil	C/PE		p. 137	x
Phil 3307	Social Justice and Community Service: Basic Political Values	Phil	C/PE (practicum)			
Pol 1001	American Government and Politics	SSci	C/PE		p. 141	x
Pol 1041	Contemporary Political Ideologies	SSci	C/PE		p. 141	x
Pol 1057	Citizenship in Britain (see page 60)		C/PE (practicum)			
Pol 3308	The United States Congress		C/PE			
Pol 3309	Judicial Process		C/PE		p. 141	
Pol 3323	Civil Liberties in America		C/PE; CD		p. 141	
Pol 3331	Minnesota Government and Politics		C/PE			
Pol 3352	Fieldwork in the Legislature		C/PE (practicum)		p. 141	
Pol 3661	Democratic Theory		C/PE		p. 141	
Pol 3873	Global Citizenship and International Ethics		C/PE; IP			
Pol 5303	The American Democracy		C/PE			
Pol 5737	American Political Parties		C/PE			
Pol 5738	American Political Campaigns and Elections		C/PE			
Pol 5766	American Political Culture and Values		C/PE		p. 141	
Rhet 3266	Communication, Discussion in Small Group Decision Making		C/PE		p. 147	x
Rhet 3382	Humanities: Ethics of Total War	AH	C/PE		p. 147	
Rhet 3690	Scientific Controversy	AH	C/PE			
Soc 3101	Introduction to American Criminal Justice	SSci	C/PE		p. 150	
Spch 1313	Analysis of Oral Argument		C/PE		p. 152	x
Spch 3411	Small Group Communication Processes		C/PE		p. 152	x
Spch 3431	The Role of Persuation in the Modern World		C/PE			x
Spch 3601	Introduction to Rhetorical Theory	Hist	C/PE			x
Spch 3625	Ethical Standards in Modern Communication		C/PE			x
Spch 5431	The Process of Persuasion		C/PE			
SW 3202	Interventions in Community and Social Policy	SSci	C/PE			x
SW 5502	Women and Public Policy in the United States		C/PE			
WCFE 5010	Technology and Responsible Citizenship		C/PE			x
WoSt 3102	Feminist Thought and Theory	Phil	C/PE			
WoSt 5502	Women and Public Policy in the United States		C/PE			
Cultural Diversity						
Afro 3061	The Black Family	SSci	CD			x
Afro 3072	Racism: Social and Psychological Consequences for Black Americans	SSci	CD			
Afro 3864	Afro-American History	Hist	CD			

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Cultural Diversity--Continued

Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Afro 3865	Afro-American History	Hist	CD		p. 69	
Afro 3591	Introduction to Afro-American Literature	Lit	CD			
Afro 3954	Sociological Perspectives on Race, Class, and Gender	SSci	CD			
AmIn 1771	Introduction to American Indian Studies	SSci	CD		p. 70	x
AmIn 3026	Ojibwe Culture and History	Hist	CD		p. 70	x
AmIn 3036	Dakota Culture and History	SSci	CD			x
AmIn 3111	American Indian History from Mid-15th Century to 1850	Hist	CD			
AmIn 3112	American Indian History 1830 to Present	Hist	CD		p. 70	
AmIn 3116	American Indian Literature	Lit	CD		p. 70	
AmIn 3211	American Indian Philosophies	Phil	CD		p. 70	x
AmIn 3242	Survey of American Indian Arts	AH	CD			
AmSt 1001	American Cultures	SSci	CD			
AmSt 1002	American Cultures	SSci	CD		p. 70	
AmSt 1003	American Cultures	SSci	CD			x
AmSt 3302 & AmSt 3303	Proseminar: American Studies		CD; C/PE		p. 70	x
Anth 3211	Native Peoples of North America		CD		p. 71	
Anth 3212	Indians of the Greater Southwest		CD			x
CDis 5103	Communication Disorders and Cultural Diversity		CD			x
Chic 3106	Introduction to Chicano Studies: Mexico and the U.S.	Hist	CD			
Chic 3107	Introduction to Chicano Studies: Chicano in Contemporary Society	Hist	CD		p. 81	
Chic 3212	La Chicana	Lit	CD		p. 81	x
Chic 3213	Chicano Music and Art	Vis	CD			x
Chic 3375	Folklore of Greater Mexico		CD; IP		p. 81	
Chic 3441	Chicano History to 1900	Hist	CD		p. 81	
Chic 3442	Chicano History Since 1900	Hist	CD			x
Chic 3712	Chicanos: Psychological Perspectives		CD		p. 81	
CI 5473	Language, Culture, and Education		CD			
Comp 1014	Writing Practice I and Cultural Diversity		CD		p. 86	x
CPsy 5332	Cross-Cultural Child Development		CD		p. 82	
CSCL 3472	Gay Men and Homophobia in American Culture	Hist	CD			
CSCL 3979	Issues in Cultural Pluralism		CD; C/PE			x
Dnce 3486	Ethnic Dance Traditions in American Society	Vis	CD			
Engl 1016	Introduction to American Literature	Lit	CD		p. 99	
Engl 1591	Literature of American Minorities	Lit	CD		p. 99	x
Engl 1621	Introduction to Women Writers		CD		p. 99	
Engl 3591	Introduction to Afro-American Literature	Lit	CD			
Engl 3853	Gender and the English Language	SSci	CD			x
Engl 3854	American Literacy and Cultural Diversity		CD; C/PE (practicum)		p. 100	
Engl 5482	Folklore		CD; IP		p. 100	x
Engl 5483	Folklore		CD; IP			
EPsy 3132	Psychology of Multiculturalism in Education	SSci	CD		p. 96	
EPsy 3139	Social and Developmental Psychology in Education	SSci	CD		p. 96	
EPsy 5139	Building a Learning Community	SSci	CD		p. 96	
FScN 3610	Community Nutrition		CD			
FSoS 3600	Family Issues Across the Lifespan	SSci	CD		p. 101	
FSoS 5252	Aging, Family, and Society		CD; IP			x
FSoS 5500	Racial and Ethnic Diversity in Families		CD		p. 102	
GC 1211	People and Problems	SSci	CD		p. 106	x
GC 1312	Identity, Community, & Culture: Connections in the Arts & Humanities	Vis	CD			
GC 1364	Literature of the American Immigrant Experience		CD			
GC 1365	Literatures of the United States	Lit	CD		p. 106	x
GC 1366	Images of Women in Literature	Lit	CD			

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Cultural Diversity--Continued

Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
GC 1375	Film and Society	Vis	CD			x
GC 1463	Multicultural Oral Communication		CD		p. 106	x
GC 1816	African-American Literature	Lit	CD		p. 106	x
GC 1836	Asian-American Literature	Lit	CD			x
GC 1851	Multicultural Relations		CD		p. 106	x
Geog 3101	Geography of the United States and Canada	SSci	CD			x
Geog 3374	The City in Film: Europe and North America	Vis	CD			
Geog 5374	The City in Film: Europe and North America		CD			
Hist 1301	American History	Hist	CD			
Hist 1302	American History	Hist	CD		p. 110	x
Hist 1307	American History	Hist	CD			
Hist 1308	American History	Hist	CD			
Hist 3347	Women in Colonial, Victorian America: 1600-1890	Hist	CD			
Hist 3801	The People of Early America to 1750		CD		p. 110	
Hist 3821	The United States in the 20th Century: 1900-32		CD; C/PE			
Hist 3822	The United States in the 20th Century: 1932-60		CD		p. 110	
Hist 3823	The United States in the 20th Century: 1960-89		CD; C/PE			
Hist 3861	European Americans: From Immigrants to Ethnics		CD			
Hist 3862	European Americans: From Immigrants to Ethnics		CD			
Hist 3864	Afro-American History	Hist	CD			
Hist 3865	Afro-American History	Hist	CD		p. 110	
Hist 3871	American Indian History: Pre-Contact to 1830	Hist	CD			
Hist 3872	American Indian History: 1830 to the Present	Hist	CD		p. 111	
HSci 3331	Technology and American Culture	Hist	CD			
HSci 3332	Science and American Culture	Hist	CD		p. 111	
HSci 5331	Technology and American Culture		CD			
HSci 5332	Science and American Culture		CD		p. 112	
ID 3205	Community, Service, and Self		CD; C/PE (practicum)			
ID 3206	Community, Service, and Self		CD; C/PE (practicum)		p. 114	
ID 3207	Community, Service, and Self		CD; C/PE (practicum)			x
Jour 3741	Racial Minorities and the Mass Media		CD		p. 115	
Jour 5741	Minorities and Mass Media		CD			
Jpn 3166	Japanese Film		CD; IP			x
Ling 1005	Language and Society		CD; IP		p. 120	
Ling 3812	Ethnic Bilingualism in the United States		CD			
Phil 1006	Philosophy and Cultural Diversity	Phil	CD		p. 136	
Phil 3234	Knowledge and Gender		CD			
Phil 3308	Social Justice and Community Service: Power and Democracy	Phil	CD (practicum)		p. 137	
Pol 3323	Civil Liberties in America		CD; C/PE		p. 141	
Pol 3739	Politics of Race, Class, and Ethnicity		CD			x
Rhet 1101	Writing to Inform and Persuade		CD		p. 147	x
Rhet 1310	Humanities: The Land In American Experience (see page 60)	AH	CD		p. 147	x
Rhet 1311	The Family in American Experience	Lit	CD			

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Abbreviations:

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Biol/L	Biological Science with Laboratory
Biol/NL	Biological Science without Laboratory
CD	Cultural Diversity
C/PE	Citizenship and Public Ethics
Envt	Environment
Hist	Historical Perspective
IP	International Perspective
Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
*	Course listings for spring quarter are tentative and subject to change.

Cultural Diversity--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Rhet 3395	In Search of Nature	AH	CD			x
Rhet 5170	Managerial Communications		CD; IP			x
Rhet 5680	Gender and the Rhetoric of Science, Technology		CD			
Soc 1001	Introduction to Sociology	SSci	CD		p. 150	x
Soc 1004	American Race Relations	SSci	CD			
Soc 3501	The Family	SSci	CD			
Soc 3954	Sociological Perspectives on Race, Class, and Gender	SSci	CD		p. 150	
Spch 5211	Contemporary Problems in U.S. Electronic Media		CD			x
Spch 5404	Language, Culture, and Education		CD			
Spch 5452	Intercultural Interaction: Theory and Application		CD (practicum)			x
Th 1101	Introduction to the Theatre	Vis	CD		p. 154	x
UrbS 3301	American Cities: Settings for Cultural Pluralism		CD		p. 155	
WoSt 1001	Introduction to Women's Studies	AH	CD		p. 156	
WoSt 1002	Introduction to Women's Studies	SSci	CD			
WoSt 3002	Introduction to Women's Studies	SSci	CD			
WoSt 3100	Women in Colonial and Victorian America	Hist	CD			
WoSt 3203	Biology, Race, and Gender		CD			
WoSt 3303	Women and Literature	Lit	CD			
WoSt 3304	Women and the Arts	Vis	CD			
WoSt 3306	U.S. Minority Women Writers	Lit	CD			
WoSt 3307	Modern Feminist Novel	Lit	CD			
WoSt 3403	Jewish Women in America		CD			
WoSt 3406	Women, Race, and Class in the U.S.	SSci	CD		p. 156	
Environment						
Agro 1007	Biology of Plant Food Systems & the Environment	Biol/L	Envt			x
AnPl 3010	Environment and World Food Production	Biol/NL	Envt		p. 71	
Anth 1101	Human Origins	Biol/L	Envt		p. 71	x
Anth 3116	Ecological Anthropology	SSci	Envt			x
Anth 5117	Natural Resources Anthropology		Envt; C/PE			
ApEc 3610	Resource Development, Environmental Economics		Envt			x
ApEc 5650	Economics of Natural Resource & Environmental Policy		Envt		p. 72	
Arch 1401	The Designed Environment	AH	Envt		p. 72	
Ast 1019	Our Changing Planet	Phys/L	Envt			x
Ast 1021H	Introduction to Astronomy	Phys/L	Envt			
Ast 1031	Exploring the Universe: A	Phys/NL	Envt		p. 75	x
Ast 1032	Exploring the Universe: L	Phys/L	Envt		p. 75	x
BGS 3019	Topics in Business, Government, and Society: Comparative Environmental Policies		Envt			
BioC 5301	Ecological Biochemistry		Envt		p. 76	
Biol 1051	Environmental Studies	Biol/NL	Envt		p. 76	
Biol 3051	Environmental Studies	Biol/NL	Envt			
Chem 1003	Physical World, Chemistry	Phys/L	Envt			x
Chem 1008	Physical World, Chemistry	Phys/NL	Envt			x
Chem 1051	Chemical Principles I	Phys/L	Envt		p. 80	x
Chem 1052	Chemical Principles II	Phys/L	Envt		p. 80	x
Comp 1015	Writing Practice: Writing about the Environment		Envt		p. 86	
CSCL 3361	Visions on Nature: The Natural World and Political Thought		Envt; C/PE			
CSCL 3366	Landscape and Ideology, 1600-1875		Envt			
EEB 1019	Our Changing Planet	Phys/L	Envt			x
EEB 3001	Introduction to Ecology	Biol/NL	Envt		p. 93	x

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Environment--continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Ent 1005	Economic Entomology	Biol/L	Envt			
Ent 5320	Ecology of Agriculture		Envt			
ES 1010	Issues in the Environment		Envt			
FR 1201	Conservation of Natural Resources		Envt			
FR 1203	Introduction to Minnesota's Natural Resources		Envt			
FR 3103	Meteorology and Climatology for Natural Resource Managers	Phys/NL	Envt			
FR 3104	Forest Ecology	Biol/NL	Envt			
FR 3250	Role of Renewable Natural Resources in Developing Countries		Envt			x
FR 5104	Forest Ecology		Envt			
FR 5114	Forest Hydrology		Envt		p. 104	
FR 5226	Forest Economics and Planning		Envt			
FR 5231	Range Management		Envt			x
FR 5232	Management of Recreational Lands		Envt			x
FR 5250	Role of Renewable Natural Resources in Developing Countries		Envt			x
FR 5460	Water Quality: The International Dimension		Envt			x
FW 1002	Wildlife: Ecology, Values, and Human Impact		Envt			x
FW 3052	Introduction to Fisheries and Wildlife Conservation		Envt			
FW 5604	Fisheries Ecology and Management		Envt		p. 102	
GC 1112	Ecological Evaluation of Environmental Problems	Biol/NL	Envt		p. 105	x
Geo 1001	The Dynamic Earth: An Introduction to Geology	Phys/L	Envt		p. 108	x
Geo 1005	Geologic Perspectives on Energy	Phys/NL	Envt			
Geo 1012	Planet Earth	Phys/NL	Envt			x
Geo 1019	Our Changing Planet	Phys/L	Envt			x
Geo 3002	Climate Change and Human History		Envt			
Geo 3004	Human Geomorphology		Envt		p. 108	
Geog 1402	Geography of Environmental Systems	Phys/NL	Envt		p. 107	
Geog 5132	South America		Envt; IP			
Geog 5411	Medical Geography		Envt; IP			
HMed 3040	Human Disease and the Environment in History	Hist	Envt			
Hort 5015	Restoration and Reclamation Ecology		Envt			x
IntR 1301	The Global Environment (see page 55)		Envt			
LA 1401	The Designed Environment	AH	Envt		p. 117	
LAS 5132	South America		Envt; IP			
MicB 5611	Microbial Ecology		Envt			x
NRES 1040	Natural Resources as Raw Materials		Envt; IP		p. 130	
NRES 1201	Conservation of Natural Resources		Envt		p. 130	x
NRES 3020	Plant Resource Management & the Environment	Biol/L	Envt		p. 130	
NRES 3060	Water Quality in Natural Resource Management	Biol/NL	Envt			x
NRES 3070	From Local to Global Ecology		Envt; IP		p. 130	
NRES 5020	Plant Resource Management and the Environment		Envt		p. 130	
NRES 5060	Water Quality in Natural Resource Management		Envt			x
NRES 5100	Problem Solving in Natural Resources and Environmental Studies		Envt (practicum)			
PBio 1012	Plants Useful to Humans	Biol/NL	Envt			

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Phys/L	Physical Science with Laboratory
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SSci	Social Science
Vis	Visual or Performing Arts
*	Course listings for spring quarter are tentative and subject to change.

Environment--continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
PlPa 3004	Air Pollution, People, and Plants		Envt		p. 140	
Pol 5441	Politics of Environmental Protection		Envt		p. 141	
ScAg 1500	Biotechnology, Society, and the Environment		Envt		p. 148	
Soil 1020	The Soil Resource	Phys/L	Envt			
Soil 3125	Basic Soil Science	Phys/L	Envt		p. 151	
Soil 5100	Problem Solving in Environmental Science		Envt (practicum)			
Soil 5605	Microbial Ecology		Envt			x
International Perspectives						
Afro 1021	Introduction to African Studies	SSci	IP			
Afro 3001	Intro: West African History: Early Times to 1800	Hist	IP			
Afro 3002	Introduction to West African History: 1800 to the Present	Hist	IP			
Afro 3013	Cities in Africa: African, Islamic, European Tradition	Hist	IP			
Afro 3431	History of Africa to 1800	Hist	IP			
Afro 3432	History of Africa, 1800 to Present	Hist	IP		p. 69	
Afro 3601	Introduction to African Literature	Lit	IP			
Afro 3654	African Cinema	Vis	IP		p. 69	
AgET 5027	Appropriate Technology for International Development		IP			
Agro 5200	World Food Problems		IP			
Anth 1102	Understanding Cultures	SSci	IP		p. 71	x
Anth 3003	The Rise of Civilization	SSci	IP		p. 71	
Anth 3224	Hispanic Cultures of Latin America		IP			
Anth 3261	Indian Culture and Society		IP			
Anth 3293	Peoples and Cultures of the Pacific Islands		IP			
Anth 3294	The Contemporary Pacific		IP			
Anth 5115	Economic Anthropology		IP			
Anth 5118	Political Anthropology		IP			
Anth 5121	Anthropology of Law		IP			
Anth 5325	Gender and Power in South Asia		IP			
ApEc 3007	Applied Macroeconomics: Policy, Trade, and Development		IP			x
ApEc 3070	Agriculture and Economic Growth in Developing Countries		IP			x
ApEc 5730	European Agriculture: Farm, Food, and Environmental Policy		IP			
ApEc 5750	Agricultural Trade and Commercial Policies		IP			
ApEc 5790	World Food Problems		IP			
Arch 3411	History of Architecture to 1750	Vis	IP			
Arch 3412	History of Architecture Since 1750	Vis	IP		p. 72	
Area 1021	Europe Today (see page 60)		IP			
ArtH 1016	Introduction to Asian Art	Vis	IP			
ArtH 3008	Ancient Art	AH	IP			
ArtH 3014	Art of India	Vis	IP			x
ArtH 3015	Art of Islam	Vis	IP			
ArtH 3017	Islamic Culture	AH	IP		p. 75	
ArtH 3142	Arts of Egypt and the Near East	Vis	IP			
ArtH 3411	History of Architecture to 1750	Vis	IP			
ArtH 3412	History of Architecture Since 1750	Vis	IP		p. 75	
ArtS 1401	Introduction to Studio Arts	Vis	IP		p. 73	x
BGS 3004	International Business		IP			x
CAPS 5280	World Food Problems		IP			
CAS 3511	Ancient Iran	Hist	IP			
CAS 3512	Modern Iran	Hist	IP			
CAS 3526	Islam and Communism		IP			
CAS 3531	Central Asian Culture	Hist	IP			

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International Perspectives--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
CAS 3532	Russia and Central Asia	Hist	IP		p. 79	
CAS 3601	Fiction: Iran and Central Asia	Lit	IP		p. 79	
CAS 5526	Islam and Communism		IP			
CAS 5532	Russia and Central Asia		IP		p. 79	
Chic 3105	Introduction to Chicano Studies: The Beginnings	Hist	IP			x
Chic 3375	Folklore of Greater Mexico		IP; CD		p. 81	
Chic 3427	History of Cuba and Puerto Rico	Hist	IP			
Chic 3428	History of Relations Between the United States & Mexico, 1821-Present	Hist	IP			
Chn 3091	Filmic Construction of Modern Identity in China	Vis	IP		p. 82	
Chn 3163	20th Century Chinese Literature in English Translation (Pre-1949 Period)		IP			
Chn 3171	Introduction to Chinese Literature in Translation I	Lit	IP			
Chn 3172	Introduction to Chinese Literature in Translation II	Lit	IP			
Clas 3008	Ancient Art	AH	IP			
Clas 3142	Art of Egypt	Vis	IP			
CSCL 3176	Oppositional Cinemas	Vis	IP			
DHA 3212	Cultural Perspectives in Dress		IP		p. 92	
DHA 5217	International Trade in Textiles and Apparel		IP			
DHA 5465	Housing in World Perspective I		IP			x
Dnce 1101	Introduction to Dance	Vis	IP			
Dnce 3401	Dance History I	Vis	IP			
Dnce 3402	Dance History II	Vis	IP			x
Dnce 3666	Dance Philosophy and Esthetics	Vis	IP			
Dnce 5487	World Dance Studies	Vis	IP		p. 90	
EAS 1462	Introduction to East Asia: The Imperial Age	Hist	IP			
EAS 1463	East Asia in Modern Times: 1790-1990	Hist	IP			
EAS 3211	Geography of East Asia		IP			
EAS 3465	China's Response to the Weat	Hist	IP			
Econ 1101	Principles of Microeconomics	SSci	IP		p. 94	
Econ 1102	Principles of Macroeconomics	SSci	IP		p. 94	
Econ 1104	Principles of Microeconomics	SSci	IP		p. 94	
Econ 1105	Principles of Macroeconomics	SSci	IP		p. 94	
Econ 5307	Comparative Economic Systems		IP			x
Econ 5337	Comparative Economic Systems		IP			
Econ 5401	International Economics		IP		p. 94	x
Econ 5421	Economic Integration in the Americas		IP		p. 94	
Econ 5431	International Trade		IP		p. 94	
Econ 5432	International Finance		IP		p. 94	
Engl 1595	Introduction to "Third World" Literatures in English	Lit	IP			x
Engl 3621	British and American Women Writers		IP			
Engl 5482	Folklore		IP; CD		p. 100	x
Engl 5483	Folklore		IP; CD			
Fren 3101	Introduction to French Literary Texts: Poetry	Lit	IP		p. 104	x
Fren 3103	French Literary Texts: Novel	Lit	IP		p. 105	x
Fren 3279	Francophone Writers of the African Diaspora		IP			
Fren 3511	French Civilization and Culture		IP			

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Math	Mathematical Thinking
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Phys/NL	Physical Science without Laboratory
SSci	Social Science
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International Perspectives--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Fren 3513	French Civilization and Culture		IP			x
Fren 3606	Québec: Literature and Film in Translation	Lit	IP			
FScN 5643	World Food Problems		IP			
FSoS 5252	Aging, Family, and Society		IP; CD			x
GC 1251	World History		IP			x
GC 1285	Cultural Anthropology	SSci	IP		p. 106	x
GC 1311	Art: General Arts	Vis	IP		p. 106	x
GC 1331	Musical Heritage	Vis	IP		p. 106	x
GC 1357	World Religious Beliefs	Phil	IP			
GC 1367	Contemporary Literature: International Perspectives	Lit	IP		p. 106	
Geo 1701	Faces of the Earth	Phys/NL	IP			
Geo 3005	Earth Resources		IP; C/PE		p. 108	
Geog 1301	Human Geography	SSci	IP			
Geog 1302	The World Around Us	SSci	IP			x
Geog 3141	Africa	SSci	IP		p. 107	
Geog 3161	Europe	SSci	IP			x
Geog 3211	East Asia		IP			
Geog 3331	Economic Geography	SSci	IP			
Geog 3373	The Changing Form of the City	Hist	IP		p. 107	
Geog 3377	The City in Film: Third World Cities	Vis	IP			
Geog 3381	Population in an Interacting World	SSci	IP			
Geog 5132	South America		IP; Envt			
Geog 5377	The City in Film: Third World Cities		IP			
Geog 5411	Medical Geography		IP; Envt			
Geog 5605	Geographical Perspectives on Urban Planning I		IP; C/PE			x
Ger 3604	Literature, History, and the German Film	Vis	IP			
Ger 3641	German Folklore		IP			
Hist 1011	Introduction to World History	Hist	IP			
Hist 1012	Introduction to World History	Hist	IP		p. 110	
Hist 1013	Introduction to World History	Hist	IP			x
Hist 1017	Introduction to World History	Hist	IP			
Hist 1018	Introduction to World History	Hist	IP			
Hist 1021	Western Civilization	Hist	IP			
Hist 1031	Introduction to European Civilization: The Medieval Centuries	Hist	IP			
Hist 1032	Introduction to European Civilization: Early Modern Europe, 1350-1750	Hist	IP		p. 110	
Hist 1033	Intro to European Civilization: 1750 to Present	Hist	IP			x
Hist 3245	History of Modern East Central Europe	Hist	IP			
Hist 3401	Survey of Latin American History: Colonial Period to 1800	Hist	IP			
Hist 3402	Survey of Latin American History: 1800-1929	Hist	IP		p. 110	
Hist 3403	Survey of Latin American History: 1929 to the Present	Hist	IP			x
Hist 3431	History of Africa to 1800	Hist	IP			
Hist 3432	History of Africa: 1800 to the Present	Hist	IP		p. 110	
Hist 3462	Introduction to East Asia: The Imperial Age	Hist	IP			
Hist 3463	Introduction to East Asia in Modern Times	Hist	IP			x
Hist 3465	China's Response to the West	Hist	IP			
Hist 3471	Twentieth Century Japan		IP		p. 110	
Hist 3474	Rise of Modern Japan, 1853-1914		IP			
Hist 3475	Japan and World War II		IP			
Hist 3611	Medieval Cities of Europe	Hist	IP			
Hist 3616	France in the High Middle Ages	Hist	IP		p. 110	
Hist 3636	Russian History from the Origins to Peter the Great	Hist	IP			x
Hist 3703	European Cities, 1500-1800		IP			x

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International Perspectives--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
Hist 3704	Daily Life in Europe, 1348-1750	Hist	IP			
Hist 3721	Europe in the Era of World War I		IP			
Hist 3722	Europe in the Era of World War II		IP		p. 110	
Hist 3723	Europe Since 1945		IP			
Hist 3881	History of American Foreign Relations		IP			
Hist 3882	History of American Foreign Relations		IP			
Hist 3883	History of American Foreign Relations		IP			x
Hist 5465	China's Response to the West		IP			
HSci 1711	Technology & Western Civilization: Ancient & Medieval	Hist	IP			
HSci 1712	Technology & Western Civilization: Renaissance to Industrial Revolution	Hist	IP		p. 111	
HSci 1713	Technology & Western Civilization: 19th, 20th Centuries	Hist	IP			x
HSci 1811	Introduction to the History of Science: Ancient	Hist	IP			
HSci 1812	Introduction to History of Science: Scientific Revolution	Hist	IP		p. 111	
HSci 1813	Introduction to History of Science: Modern Science	Hist	IP			x
HSci 3202	History of Biology: Biology in the 19th and 20th Centuries	Hist	IP		p. 111	
HSci 3711	Technology & Western Civilization: Ancient & Medieval	Hist	IP			
HSci 3712	Technology & Western Civilization: Renaissance to Industrial Revolution	Hist	IP		p. 111	
HSci 3713	Technology & Western Civilization: 19th, 20th Centuries	Hist	IP			x
HSci 3811	Introduction to the History of Science: Ancient	Hist	IP			
HSci 3812	Introduction to History of Science: The Scientific Revolution	Hist	IP		p. 111	
HSci 3813	Introduction to History of Science: Modern Science	Hist	IP			x
HSci 3825	The Nuclear Age	Hist	IP			
HSci 5202	History of Biology: Biology in the 19th and 20th Centuries		IP		p. 111	
HSem 3120	Seeking Solutions to Global Health Issues		IP			x
Hum 1001	Humanities in the Modern West I: The Enlightenment	AH	IP			
Hum 1002	Humanities in the Modern West II: 19th-Century	AH	IP			
Hum 1003	Humanities in the Modern West III: 20th Century		IP			
Hum 1004	Humanities in the Modern West IV	AH	IP			
Hum 1005	Humanities in the Modern West V	AH	IP		p. 112	
Hum 1115	European Heritage: Middle Ages		IP		p. 112	
Hum 1117	European Heritage: Renaissance and Reformation		IP			x
Hum 1119	Age of the Baroque		IP			
Hum 3001	Humanities in the Modern West I: The Enlightenment	AH	IP			
Hum 3002	Humanities in the Modern West II: 19th-Century	AH	IP			
Hum 3003	Humanities in the Modern West III: 20th Century		IP			
Hum 3004	Humanities in the Modern West IV	AH	IP			
Hum 3005	Humanities in the Modern West V	AH	IP		p. 112	
Hum 3115	European Heritage: Middle Ages		IP		p. 113	
Hum 3117	European Heritage: Renaissance and Reformation		IP			x
Hum 3119	Age of the Baroque		IP			
Ital 3501	Italian Civilization and Culture	AH	IP			
Ital 3502	Italian Civilization and Culture	AH	IP		p. 115	
Jour 5801	International Communication		IP		p. 116	
Jpn 3166	Japanese Film		CD; IP			x
JwSt 1034	Introduction to Judaism	AH	IP		p. 115	

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Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
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International Perspectives--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring*
JwSt 3034	Introduction to Judaism	AH	IP		p. 115	
LA 3411	History of Architecture to 1750	Vis	IP			
LA 3412	History of Architecture Since 1750	Vis	IP		p. 117	
LAS 5132	South America		IP; Envt			
Ling 1005	Language and Society		IP; CD		p. 120	
MELC 3511	Ancient Iran	Hist	IP			x
MELC 3512	Modern Iran	Hist	IP			
MELC 3526	Islam and Communism		IP			
MELC 3531	Central Asian Cultural Sphere	Hist	IP			
MELC 3532	Russia and Central Asia	Hist	IP		p. 126	
MELC 3601	Fiction: Iran and Central Asia	Lit	IP		p. 126	
MELC 5526	Islam and Communism		IP			
MELC 5532	Russia and Central Asia		IP		p. 126	
Mus 1021	Introduction to Music	Vis	IP			
Mus 3021	Introduction to Music	Vis	IP		p. 127	
Mus 3029	Music in the 20th Century	Vis	IP		p. 127	
Mus 3604	History of Western Music		IP			
Mus 3605	History of Western Music		IP		p. 128	
Mus 3606	History of Western Music		IP			x
NRES 1040	Natural Resources as Raw Materials		IP; Envt		p. 130	
NRES 3070	From Local to Global Ecology		IP; Envt		p. 130	
Nurs 5482H	Seeking Solutions to Global Health Issues		IP			x
Pol 1025	World Politics	SSci	IP		p. 141	x
Pol 1054	Government & Politics in a Changing World	SSci	IP			x
Pol 3835	International Relations	SSci	IP		p. 141	x
Pol 3872	International Organizations and the Environment		IP		p. 141	
Pol 3873	Global Citizenship and International Ethics		IP; C/PE			
Pol 5410	Advanced Topics in Government and Politics		IP		p. 141	x
Pol 5461	Western European Government and Politics		IP			
Pol 5471	Politics of Russia and the Commonwealth of Independent States		IP			
Pol 5473	Chinese Government and Politics		IP		p. 141	
Pol 5477	Middle Eastern Government and Politics		IP			
Pol 5478	Government and Politics of African Countries		IP		p. 141	
Pol 5479	Latin American Government and Politics		IP			
RelA 1031	Introduction to the Religions of South Asia		IP		p. 147	
RelA 1034	Introduction to Judaism	AH	IP		p. 147	
RelA 3034	Introduction to Judaism	AH	IP		p. 147	
Rhet 1380	Fictional History: Twentieth Century through the Eyes of Novelists	Lit	IP			x
Rhet 3381	Humanities: 20th Century Culture	AH	IP		p. 147	x
Rhet 5170	Managerial Communications		IP; CD			x
Rhet 5562	Theory and Practice in International and Intercultural Communication		IP		p. 148	
Russ 1304	Introduction to Literature: 19th Century Fiction	Lit	IP			
Russ 3421	Literature: Middle Ages: Dostoevsky in Translation	Lit	IP			
Russ 3422	Literature: Tolstoy to the Present in Translation	Lit	IP		p. 148	
Russ 3512	Russian Art and Culture from Peter I to the Present	Vis	IP			x
Soc 3481	Modern Japanese Society	SSci	IP		p. 150	
Soc 3482	Comtemporary Chinese Society	SSci	IP			
Soc 3601	Urban Community	SSci	IP			
Spch 5231	Comparative Electronic Media Systems		IP			
Spch 5232	International Broadcasting		IP			
Spch 5233	Broadcasting, National Development		IP			x
Spch 5451	Intercultural Communication		IP		p. 152	

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

International Perspectives--Continued						
Designator and Title		**Diversified Core**	**Designated Themes**	**Offered**		
				fall	**winter**	**spring***
WoSt 1003	Women in World Cultures	SSci	IP			
WoSt 3003	Women in World Cultures	SSci	IP		p. 156	
WoSt 3308	Women Writers of Africa and Latin America	Lit	IP			
WoSt 5301	Women's Autobiographical Narratives		IP			x (honors)

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

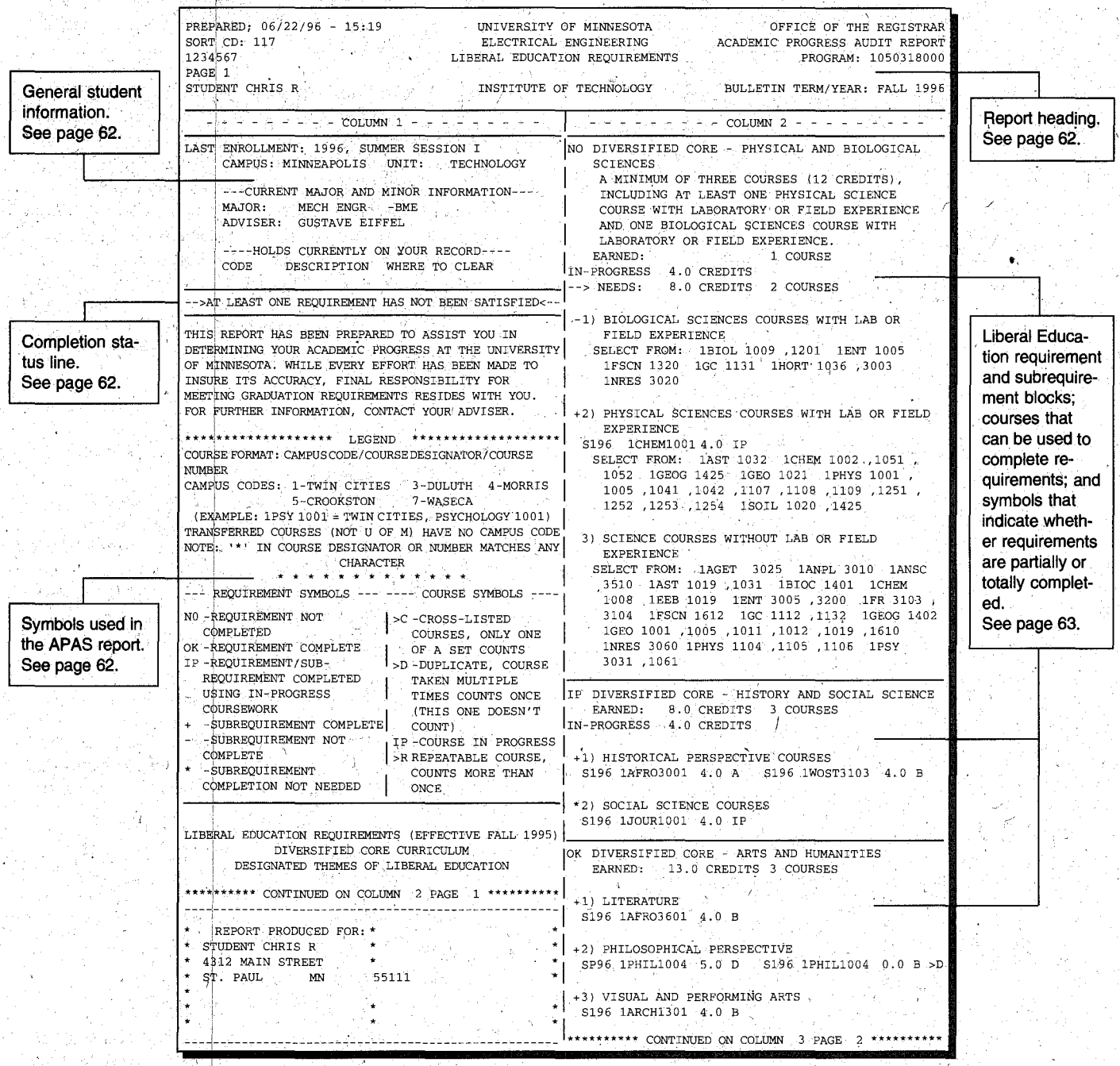
LIBERAL EDUCATION IN ENGLAND: The University offers a 6-week, 10-credit summer study abroad program built around the liberal education requirements. The summer 1997 program will offer Area 1021, IntR 1301, Pol 1057, and Rhet 1310. Successful completion of the program will satisfy five designated theme requirements (in all 4 categories) plus an Arts and Humanities core requirement. Contact the Global Campus office, 106 Nicholson Hall, 625-3379, for further information.

Abbreviations:

AH	Arts and Humanities
Biol/L	Biological Science with Laboratory
Biol/NL	Biological Science without Laboratory
CD	Cultural Diversity
C/PE	Citizenship and Public Ethics
Envt	Environment
Hist	Historical Perspective
IP	International Perspective
Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts
*	Course listings for spring quarter are tentative and subject to change.

section 5 your apas report

SAMPLE ACADEMIC PROGRESS AUDIT SYSTEM (APAS) REPORT



PREPARED; 06/22/96 - 15:19 UNIVERSITY OF MINNESOTA OFFICE OF THE REGISTRAR
SORT CD: 117 ELECTRICAL ENGINEERING ACADEMIC PROGRESS AUDIT REPORT
1234567 LIBERAL EDUCATION REQUIREMENTS PROGRAM: 1050318000
PAGE 1
STUDENT CHRIS R INSTITUTE OF TECHNOLOGY BULLETIN TERM/YEAR: FALL 1996

- - - - - - - - - COLUMN 1 - - - - - - - - -

LAST ENROLLMENT: 1996, SUMMER SESSION I
CAMPUS: MINNEAPOLIS UNIT: TECHNOLOGY

---CURRENT MAJOR AND MINOR INFORMATION---
MAJOR: MECH ENGR -BME
ADVISER: GUSTAVE EIFFEL

----HOLDS CURRENTLY ON YOUR RECORD----
CODE DESCRIPTION WHERE TO CLEAR

-->AT LEAST ONE REQUIREMENT HAS NOT BEEN SATISFIED<--

THIS REPORT HAS BEEN PREPARED TO ASSIST YOU IN DETERMINING YOUR ACADEMIC PROGRESS AT THE UNIVERSITY OF MINNESOTA. WHILE EVERY EFFORT HAS BEEN MADE TO INSURE ITS ACCURACY, FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS RESIDES WITH YOU. FOR FURTHER INFORMATION, CONTACT YOUR ADVISER.

********** LEGEND **********
COURSE FORMAT: CAMPUS CODE/COURSE DESIGNATOR/COURSE NUMBER
CAMPUS CODES: 1-TWIN CITIES 3-DULUTH 4-MORRIS
5-CROOKSTON 7-WASECA
(EXAMPLE: 1PSY 1001 = TWIN CITIES, PSYCHOLOGY 1001)
TRANSFERRED COURSES (NOT U OF M) HAVE NO CAMPUS CODE
NOTE: '*' IN COURSE DESIGNATOR OR NUMBER MATCHES ANY CHARACTER
* * * * * * * * * * * * *

--- REQUIREMENT SYMBOLS --- ---- COURSE SYMBOLS ----

NO -REQUIREMENT NOT COMPLETED
OK -REQUIREMENT COMPLETE
IP -REQUIREMENT/SUB-REQUIREMENT COMPLETED USING IN-PROGRESS COURSEWORK
+ -SUBREQUIREMENT COMPLETE
- -SUBREQUIREMENT NOT COMPLETE
* -SUBREQUIREMENT COMPLETION NOT NEEDED
>C -CROSS-LISTED COURSES, ONLY ONE OF A SET COUNTS
>D -DUPLICATE, COURSE TAKEN MULTIPLE TIMES COUNTS ONCE (THIS ONE DOESN'T COUNT)
IP -COURSE IN PROGRESS
>R REPEATABLE COURSE, COUNTS MORE THAN ONCE

LIBERAL EDUCATION REQUIREMENTS (EFFECTIVE FALL 1995)
DIVERSIFIED CORE CURRICULUM
DESIGNATED THEMES OF LIBERAL EDUCATION

********** CONTINUED ON COLUMN 2 PAGE 1 **********

REPORT PRODUCED FOR:
STUDENT CHRIS R
4312 MAIN STREET
ST. PAUL MN 55111

- - - - - - - - - COLUMN 2 - - - - - - - - -

NO DIVERSIFIED CORE - PHYSICAL AND BIOLOGICAL SCIENCES
A MINIMUM OF THREE COURSES (12 CREDITS), INCLUDING AT LEAST ONE PHYSICAL SCIENCE COURSE WITH LABORATORY OR FIELD EXPERIENCE AND ONE BIOLOGICAL SCIENCES COURSE WITH LABORATORY OR FIELD EXPERIENCE.
EARNED: 1 COURSE
IN-PROGRESS 4.0 CREDITS
--> NEEDS: 8.0 CREDITS 2 COURSES

-1) BIOLOGICAL SCIENCES COURSES WITH LAB OR FIELD EXPERIENCE
SELECT FROM: 1BIOL 1009 ,1201 1ENT 1005 1FSCN 1320 1GC 1131 1HORT 1036 ,3003 1NRES 3020

+2) PHYSICAL SCIENCES COURSES WITH LAB OR FIELD EXPERIENCE
S196 1CHEM1001 4.0 IP
SELECT FROM: 1AST 1032 1CHEM 1002 ,1051 , 1052 1GEOG 1425 1GEO 1021 1PHYS 1001 , 1005 ,1041 ,1042 ,1107 ,1108 ,1109 ,1251 , 1252 ,1253 ,1254 1SOIL 1020 ,1425

3) SCIENCE COURSES WITHOUT LAB OR FIELD EXPERIENCE
SELECT FROM: 1AGET 3025 1ANPL 3010 1ANSC 3510 1AST 1019 ,1031 1BIOC 1401 1CHEM 1008 1EEB 1019 1ENT 3005 ,3200 1FR 3103 , 3104 1FSCN 1612 1GC 1112 ,1132 1GEOG 1402 1GEO 1001 ,1005 ,1011 ,1012 ,1019 ,1610 1NRES 3060 1PHYS 1104 ,1105 ,1106 1PSY 3031 ,1061

IP DIVERSIFIED CORE - HISTORY AND SOCIAL SCIENCE
EARNED: 8.0 CREDITS 3 COURSES
IN-PROGRESS 4.0 CREDITS

+1) HISTORICAL PERSPECTIVE COURSES
S196 1AFRO3001 4.0 A S196 1WOST3103 4.0 B

*2) SOCIAL SCIENCE COURSES
S196 1JOUR1001 4.0 IP

OK DIVERSIFIED CORE - ARTS AND HUMANITIES
EARNED: 13.0 CREDITS 3 COURSES

+1) LITERATURE
S196 1AFRO3601 4.0 B

+2) PHILOSOPHICAL PERSPECTIVE
SP96 1PHIL1004 5.0 D S196 1PHIL1004 0.0 B >D

+3) VISUAL AND PERFORMING ARTS
S196 1ARCH1301 4.0 B

********** CONTINUED ON COLUMN 3 PAGE 2 **********

General student information. See page 62.

Completion status line. See page 62.

Symbols used in the APAS report. See page 62.

Report heading. See page 62.

Liberal Education requirement and subrequirement blocks; courses that can be used to complete requirements; and symbols that indicate whether requirements are partially or totally completed. See page 63.

Your APAS Report—The Academic Progress Audit System (APAS) will provide you and your adviser with accurate, quarterly reports on how well you are meeting all the requirements for your degree. Your APAS report is a individualized, computerized record that compares your past and current coursework with the requirements for your academic program.

Your APAS report is broken down into sections, each addressing a portion of your degree requirement (for example: number of credits to graduate, Liberal Education requirements in each of the categories required, major credits and minor credits, and so on). Some sections will also list courses you can take to complete the requirements for that section. This information can help you and your adviser, plan future quarters by telling you *in detail* just what you need to complete your degree.

See the next two pages for more information on the report.

```
PREPARED; 06/22/96 - 15:19          UNIVERSITY OF MINNESOTA          OFFICE OF THE REGISTRAR
SORT CD: 117                         MECHANICAL ENGINEERING      ACADEMIC PROGRESS AUDIT REPORT
1234567                           LIBERAL EDUCATION REQUIREMENTS          PROGRAM: 1050318000
PAGE 1
STUDENT CHRIS R                        INSTITUTE OF TECHNOLOGY      BULLETIN TERM/YEAR: FALL 1996
```

Report Heading—Information in this heading includes the date and time your APAS report was prepared along with information from your academic record: your name, student ID number, college, and major. The bulletin term/year refers to the degree requirements under which your report was prepared.

```
LAST ENROLLMENT: 1996, SUMMER SESSION I
   CAMPUS: MINNEAPOLIS          UNIT:   TECHNOLOGY

   ---CURRENT MAJOR AND MINOR INFORMATION---
   MAJOR:      MECH ENGR        -BME
   ADVISER:    GUSTAVE EIFFEL

   ----HOLDS CURRENTLY ON YOUR RECORD----
   CODE  DESCRIPTION            WHERE TO CLEAR
```

General Student Information—This section of the APAS report contains general information on your enrollment and information on your major, minor, and adviser. Most freshmen will not have a major or minor indicated on their APAS report. Many students do not declare majors for several quarters and may change their majors several times in the course of their University careers. Once you have declared a major, that information will be added to your report. If you have any holds on your record, they will be listed here along with directions for clearing those holds. See page 14 for more information on holds. Direct any questions about this section or report any inaccuracies to the Office of the Registrar, 150 Williamson Hall or 130 Coffey Hall.

```
-->AT LEAST ONE REQUIREMENT HAS NOT BEEN SATISFIED<--
```

Completion Status Line—This section of your APAS report summarizes at a glance whether you have completed your degree requirements. As long as you have some requirements still unmet, this is the message you will see on your APAS report. When you have courses *in progress* that will complete all requirements, this message will read: PROGRAM COMPLETED IF IN PROGRESS COURSES ARE USED. A final message appears when all requirements have been met: ALL REQUIREMENTS IDENTIFIED BELOW HAVE BEEN MET.

```
******************  LEGEND  ******************
COURSE FORMAT: CAMPUS CODE/COURSE DESIGNATOR/COURSE
NUMBER
CAMPUS CODES: 1-TWIN CITIES  3-DULUTH  4-MORRIS
              5-CROOKSTON    7-WASECA
 (EXAMPLE: 1PSY 1001 = TWIN CITIES, PSYCHOLOGY 1001)
TRANSFERRED COURSES (NOT U OF M) HAVE NO CAMPUS CODE
NOTE: '*' IN COURSE DESIGNATOR OR NUMBER MATCHES ANY
                    CHARACTER
          * * * * * * * * * * * * *

-- REQUIREMENT SYMBOLS --  ---- COURSE SYMBOLS ----
NO -REQUIREMENT NOT        | >C -CROSS-LISTED
   COMPLETED               |    COURSES, ONLY ONE OF
OK -REQUIREMENT COMPLETE   |    A SET COUNTS
IP -REQUIREMENT/SUB-       | >D -DUPLICATE, COURSE
   REQUIREMENT COMPLETED   |    TAKEN MULTIPLE TIMES
   USING IN-PROGRESS       |    COUNTS ONCE (THIS
   COURSEWORK              |    ONE DOESN'T COUNT)
+  -SUBREQUIREMENT         | IP -COURSE IN PROGRESS
   COMPLETE                | >R REPEATABLE COURSE,
-  -SUBREQUIREMENT NOT     |    COUNTS MORE THAN
   COMPLETE                |    ONCE
*  -SUBREQUIREMENT         |
   COMPLETION NOT NEEDED   |
```

Symbols Used in APAS Reports—This example contains the most frequently used symbols in the APAS report. *Requirement* symbols indicate whether your requirements are complete:

- (OK) This requirement (including all subrequirements) is complete
- (NO) This requirement is not complete.
- (IP) This requirement is in progress—it will be complete when current coursework is completed.

Under subrequirements, symbols indicate complete (+), not complete (-), in progress (IP), or not required (*).

Course symbols are attached to some of the courses you have taken and indicate how the course is being counted towards your requirements.

Liberal education requirements are listed on your report, along with subrequirements for each category. See page 57 for a complete explanation of your Liberal Education requirements: the diversified core requirements, the designated themes requirements, and the subrequirements of each. On the next page, a sample of several requirement blocks shows how the symbols appear.

```
LIBERAL EDUCATION REQUIREMENTS (EFFECTIVE FALL 1994)
          DIVERSIFIED CORE CURRICULUM
       DESIGNATED THEMES OF LIBERAL EDUCATION

NO DIVERSIFIED CORE - PHYSICAL AND BIOLOGICAL
   SCIENCES
    A MINIMUM OF THREE COURSES (12 CREDITS),
    INCLUDING AT LEAST ONE PHYSICAL SCIENCE
    COURSE WITH LABORATORY OR FIELD EXPERIENCE
    AND ONE BIOLOGICAL SCIENCES COURSE WITH
    LABORATORY OR FIELD EXPERIENCE.
   EARNED:                    1 COURSE
IN-PROGRESS     4.0 CREDITS
--> NEEDS:      8.0 CREDITS    2 COURSES

 -1) BIOLOGICAL SCIENCES COURSES WITH LAB OR
     FIELD EXPERIENCE
    SELECT FROM:  1BIOL 1009 ,1201  1ENT 1005
     1FSCN 1320  1GC 1131  1HORT 1036 ,3003
     1NRES 3020

 +2) PHYSICAL SCIENCES COURSES WITH LAB OR FIELD
     EXPERIENCE
   S196 1CHEM1001 4.0 IP
    SELECT FROM:  1AST 1032  1CHEM 1002 ,1051 ,
     1052  1GEOG 1425  1GEO 1021  1PHYS 1001 ,
     1005 ,1041 ,1042 ,1107 ,1108 ,1109 ,1251 ,
     1252 ,1253 ,1254  1SOIL 1020 ,1425

   3) SCIENCE COURSES WITHOUT LAB OR FIELD EXPERI-
     ENCE
    SELECT FROM:  1AGET  3025  1ANPL 3010  1ANSC
     3510  1AST 1019 ,1031  1BIOC 1401  1CHEM
     1008  1EEB 1019  1ENT 3005 ,3200  1FR 3103 ,
     3104  1FSCN 1612  1GC 1112 ,1132  1GEOG 1402
     1GEO 1001 ,1005 ,1011 ,1012 ,1019 ,1610
     1NRES 3060 1PHYS 1104 ,1105 ,1106  1PSY
     3031 ,1061

IP DIVERSIFIED CORE - HISTORY AND SOCIAL SCIENCE
   EARNED:      8.0 CREDITS    3 COURSES
IN-PROGRESS     4.0 CREDITS

 +1) HISTORICAL PERSPECTIVE COURSES
   S196 1AFRO3001 4.0 A    S196 1WOST3103 4.0 B

 *2) SOCIAL SCIENCE COURSES
   S196 1JOUR1001 4.0 IP

OK DIVERSIFIED CORE - ARTS AND HUMANITIES
   EARNED:      13.0 CREDITS   3 COURSES

 +1) LITERATURE
   S196 1AFRO3601 4.0 B

 +2) PHILOSOPHICAL PERSPECTIVE
   SP96 1PHIL1004 5.0 D    S196 1PHIL1004 0.0 B >D

 +3) VISUAL AND PERFORMING ARTS
   S196 1ARCH1301 4.0 B

********** CONTINUED ON COLUMN  3 PAGE  2 **********
```

Requirement Blocks—Your APAS report will have a separate block for each of your degree requirements. Each block begins with the name of the requirement and lists subrequirements. To the left of the title, a symbol tells you whether you have completed that requirement (OK for completed, IP [In Progress] for completed with current coursework, and NO for not completed). Subrequirements also have symbols indicating whether or not they are completed (+ for completed, - for not completed, and * indicating that the subrequirement is not mandatory).

All courses that you take to fulfill requirements are listed after the subrequirement with the quarter, the number of credits, and your grade in the course (or IP for any courses in progress). When any subrequirement is not yet complete, SELECT FROM indicates all courses that can be used to complete the subrequirement.

For example, the first block in this sample report is the Liberal Education requirement DIVERSIFIED CORE—PHYSICAL AND BIOLOGICAL SCIENCES. The NO to the left of the title indicates that the student still needs to take courses to complete this requirement. Because this requirement has not been competed, the requirement is summarized after the title.

Although the requirement has not been completed, the subrequirements in this first block are in different stages of completion. The - before 1) Biological Sciences Courses with Lab or Field Experience indicates that this subrequirement has not been completed, and so a list of all courses that can be used to satisfy this subrequirement follows. The next subrequirement, Physical Sciences Courses with Lab or Field Experience, has been completed. Chem 1001 is used to complete this subrequirement: it is listed along with the term it was taken, the number of credits, and the symbol IP (in progress), instead of a grade, showing that the course has not been completed.

The next two requirement blocks show that the requirements are in progress (IP) and completed (OK) respectively. Because the student needs no new courses for these requirements, no courses from which to select are listed under each section.

Who to Contact for Further Information—Your adviser can help you understand the various sections of your APAS report and can help you plan your course of study to satisfy your degree requirements. If you believe your APAS report contains any errors about your program, you should also contact your adviser.

section 6 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 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 0999	noncredit courses
1000 to 1999	introductory courses—primarily for freshmen and sophomores
3000 to 3999	intermediate courses—primarily for juniors and seniors, but sometimes open to others with a C average overall and in prerequisites
5000 to 5999	advanced courses—open to juniors, seniors, and graduate students
8000 to 8999	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.

Class Standing—Your class standing is determined by the number of credits you have completed:

Freshman	1-45 credits
Sophomore	46-90 credits
Junior	91-135 credits
Senior	136 or more credits

Symbols—The following symbols are used throughout this schedule:

- **!** Work for this course will extend past the end of the term. A grade of K will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college 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 you are 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. You must select and register for one of each of the parts of the course.

Duplicate Courses, Registering for—References in prerequisite statements to old courses that had the same course content (e.g., '§PE 1990' or '§1431') are deleted after 2 years. To avoid registering for a course that duplicates work you have previously completed, check with your college office.

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. (Extra credit is sometimes possible, however, through X registration. See below.) 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. You usually may not register for the same course 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 your total registrations in the course may not exceed a maximum total of 12 credits.

Directed or Independent Study—Most colleges permit directed or independent study (X and Y registration) 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 the course 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, place a V in the grading option column for that course.

Grading Option—If either A-F 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-F 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.

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 in the *Minnesota Daily*. Room changes are posted on classroom doors.

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
✦ 873302 —1 LECT 0815-0900 T
✦ 637303 —2 LECT 0914-1000 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

Course Descriptions—Courses are listed in this *Class Schedule* with a minimum of information—title, prerequisites, day and time, location, and sometimes instructor. You should not choose your classes on the basis of title alone. For more information about undergraduate courses (expanded course descriptions, required books, use of class time, workload, grade requirements, and type of exams), pick up a copy of the *Course Guide* for the current quarter at one of the bookstores. College bulletins also provide descriptions of course content. Course information is also available on the World Wide Web (at http://www.umn.edu/registrar). College bulletins are available on Gopher. Departments can provide information on recent changes to course content. Department addresses are listed in Section 7.

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 continue for 50 minutes after the start time. Because there is a 15-minute break between classes, start times for classes are staggered throughout the hours. For example, the first class of the day starts at 8:00 a.m. and ends at 8:50; the second class starts at 9:05 and ends at 9:55; the third class starts at 10:10 and ends at 11:00.

Beginning winter quarter, 1996, classes in Minneapolis and St. Paul meet on the same schedule. Standard class periods for both Minneapolis and St. Paul are: 0800-0850, 0905-0955, 1010-1100, 1115-1205, 1220-1310, 1325-1415, 1430-1520, 1535-1625, and 1640-1730.

The University Senate approved the above 50-minute class periods with the understanding that classes may continue for 55 minutes after the starting time whenever students' schedules permit.

There are also standard approved 75-minute Tuesday and Thursday periods for both Minneapolis and St. Paul. Times for these classes are: 0815-0930, 0945-1100, 1115-1230, 1245-1400, 1415-1530, and 1545-1700.

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.

schedule of classes

ACCOUNTING (Acct)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 1050 Introduction to Financial Reporting (§8050; prereq 40 or more credits) (A-F only)
★LECT 1245-1400 TTh, AndH 370, Duke G
046337 —1 LAB 0800-0850 WF, BlegH 420, 5 cr
551386 —2 LAB 0905-0955 WF, BlegH 420, 5 cr
347291 —3 LAB 1010-1100 WF, BlegH 420, 5 cr
945844 —4 LAB 1115-1205 WF, BlegH 420, 5 cr
★LECT 1415-1530 TTh, BlegH 10, Allen C
246036 —5 LAB 1220-1310 WF, BlegH 420, 5 cr
946427 —6 LAB 1325-1415 WF, BlegH 420, 5 cr
946797 —7 LAB 1430-1520 WF, BlegH 420, 5 cr

R 3101 Intermediate Financial Reporting (prereq 1050) (A-F only)
052526 —1 1010-1155 TTh, BlegH 420, Caliendo C, 4 cr
642887 —2 1220-1405 TTh, BlegH 420, Caliendo C, 4 cr

R 3199 Internship in Public Accounting (prereq 5125; for accounting majors only) (S-N only)
043972 Biondich N, 3 cr

R 3201 Intermediate Management Accounting (prereq 3001, acct maj or gen mgmt maj with finance emphasis) (A-F only)
352412 —1 1010-1155 MW, BlegH 110, Amershi A, 4 cr
748177 —2 1220-1405 MW, BlegH 110, Amershi A, 4 cr
842161 —3 1430-1615 MW, BlegH 110, Amershi A, 4 cr

R 3299 Internship in Management Accounting (prereq 3102; for accounting majors only) (S-N only)
051750 Biondich N, 3 cr

R 5101 Corporate Financial Reporting (prereq 1050 or MBA 8030, MBA stu) (A-F only)
274628 —1 1010-1155 TTh, BlegH 420, Caliendo C, 4 cr
174629 —2 1220-1405 TTh, BlegH 420, Caliendo C, 4 cr

R 5102 Advanced Financial Reporting I (prereq 3101 or 5101, mgmt or grad mgmt student) (A-F only)
645966 —1 1430-1615 MW, BlegH 145, Tranter T, 4 cr
551176 —2 1430-1615 MW, BlegH 145, Tranter T, 4 cr (MBA stu only)

R 5135 Income Tax Accounting (prereq 1025 or 1050) (A-F only)
149486 —1 1010-1155 MW, BlegH 145, Gutterman P, 4 cr
141699 —2 1010-1155 MW, BlegH 145, Gutterman P, 4 cr (MBA stu only)
643179 —3 1010-1155 TTh, BlegH 145, Carter G, 4 cr

R 5160 Financial Statement Analysis (prereq 1050 or MBA 8030) (A-F only)
849952 —1 1220-1405 TTh, BlegH 415, Rayburn J, 4 cr
649628 —2 1430-1615 TTh, BlegH 415, Rayburn J, 4 cr
141976 —3 1730-2100 Th, BlegH 420, Caliendo C, 4 cr (MBA students only)

R 5180 Advanced Financial Reporting II (prereq 5102, mgmt or MBA student) (A-F only)
344021 —1 1220-1405 TTh, BlegH 110, Tranter T, 4 cr
348389 —2 1220-1405 TTh, BlegH 110, Tranter T, 4 cr (MBA stu only)

R 5310 International Accounting (prereq 3001, SMgt stu)
347646 —1 0800-0945 TTh, BlegH 110, Duke G, 4 cr
645496 —2 0800-0945 TTh, BlegH 110, Duke G, 4 cr (MBA stu only)

R 8810 Seminar II (prereq PhD student or grad SMgt approval) (A-F only)
549170 1430-1730 T, HHHCtr 20, Dickhaut J, 4 cr

R 8990 Readings in Accounting (prereq #, grad SMgt approval) (A-F only)
241645 Kanodia C, ar cr

R 8995 Research in Accounting (prereq PhD student, grad SMgt approval) (A-F only)
741374 1430-1630 F, HHHCtr 20, Dickhaut J, ar cr

ADULT EDUCATION (AdEd)
Work, Community, and Family Education
Education and Human Development

R 5104 Survey: Human Resource Development and Adult Education (§HRD 5104) (A-F only)
550805 1845-2205 T, VoTech 230, Peterson S, 4 cr

R 5202 Adult Literacy: Diagnosis and Prescription (prereq 5201 or #) (A-F only)
248384 1600-1830 M, VoTech 135, Park R, 3 cr

R 5205 Field Experience in Adult Education (max 8 cr; prereq #) (A-F only)
748549 4-8 cr

R 5301 Designing the Adult Education Program (A-F only)
171357 1600-1830 M, VoTech R385, Rohde N, 3 cr

R 5401 Adult Learning and Development through the Life Span (A-F only)
971358 1600-1830 W, VoTech 230, Peterson S, 3 cr

R 5411 Strategies for Teaching Adults (A-F only)
145896 1600-1830 Th, VoTech 135, Park R, 3 cr

R 8302 Problems: Adult Education (prereq #)
949165 1-9 cr

ADULT PSYCHIATRY (AdPy)
Medical School

R 5109 Externship in Clinical Psychiatry: Duluth Hospital (prereq regis med)
245033 Olson C R, 9 cr

R 5110 Contemporary Hospital Psychiatry: St. Luke's Hospital, Duluth (prereq regis med)
652576 Cowan G, 9 cr

5121 Descriptive Psychiatry (prereq regis OT or PT)
447315 1430-1625 T, Mayo D230, Reisman J, 2 cr (Todd Amph)

5500 Psychiatry Externship (prereq regis med)
743500 Eckert E, 9 cr

5501 Elective Rotation in Alcohol Problems Clinics (prereq 3rd or 4th yr med stu)
952051 Willenbring M, 4.5-9 cr

5502 Elective Rotation in Addiction Medicine (prereq 5500, regis med)
543224 Willenbring M, 9 cr

5503 Elective Experience in Research Addiction Medicine (prereq course director permission, regis med stu)
151626 Willenbring M, 4.5-9 cr

5512 Medical-Surgical Psychiatry: Consultation-Liaison (prereq 3rd or 4th yr med stu)
941860 Popkin M, ar cr

R 5514 Substance Abuse and Associated Psychiatric Disorders (prereq regis med)
948629 Halikas J, 9 cr

R 5515 Neuropsychology: University Hospitals (prereq regis med)
545085 Meier M, 9 cr

R 5516 St. Mary's Extended Care Center, Alcoholic Treatment Unit (prereq regis med)
947254 Hiers D, 4.5-9 cr

R 5518 Community Psychiatry: Braham, MN (prereq regis med)
643361 Walton J L, 9 cr

5530 Independent Study (prereq Δ)
041705 Mackenzie T, ar cr

5602 Clinical Psychopharmacology Seminar (prereq regis med)
246375 Abuzzahab F S, ar cr

5800 Case Conference: Psychiatry in Medicine (prereq MD or #)
243217 1 cr

5801 Consultation-Liaison Psychiatry (prereq MD)
145714 ar cr

5910 Internship: Hennepin County Medical Center Psychiatry (prereq PGY-1 psychiatry resident) (S-N only)
247381 Koch M, 12-48 cr

5911 Psychiatry PGY-1 Internship at VA Medical Center (prereq PGY-1 psychiatry resident) (S-N only)
741679 Dean C, 12-48 cr

5912 Psychiatry PGY-1 Internship at St. Paul Ramsey Medical Center (prereq PGY-1 psychiatric resident) (S-N only)
851698 Zander J, 12-48 cr

5924 Practical Psychotherapy, Crisis Intervention and Emergency Management (prereq #) (S-N only)
345718 1300-1430 Th, Mayo C608, Mitchell J, 3 cr

5925 Biological Psychiatry I (prereq #) (S-N only)
041364 1430-1600 Th, Mayo C608, Faris P, 3 cr

Symbols

R The letter R preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
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¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
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Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

5934 Cognitive Behavioral Therapy (prereq #) (S-N only)
146210 1300-1430 T, Mayo C608, Evans M, 3 cr

5935 Advanced Group and Family Therapy (prereq #) (S-N only)
248000 1300-1430 W, Mayo C608, Smith-Lebow A, 3 cr

5944 Administrative Psychiatry (prereq #) (S-N only)
450148 1300-1430 Th, PWB 3165, Malecha M, 6 cr

5951 Inpatient Psychiatry (prereq psychiatric resident) (S-N only)
147065 Meller W, 6 cr

5952 VA Medical Center Inpatient Psychiatry (prereq psychiatry resident) (S-N only)
441627 Dean C, 6 cr

5953 Clinical Chemical Dependency (prereq psychiatric resident) (S-N only)
641903 Halikas J, 3-6 cr

5954 Clinical Eating Disorder Treatment (prereq psychiatric resident) (S-N only)
042174 Mitchell J, 3-6 cr

5955 Emergency Psychiatric Management and ECT (prereq psychiatric resident) (S-N only)
945164 Meller W, 3-6 cr

5961 Clinical Child Psychiatry (prereq psychiatry resident) (S-N only)
543417 Jensen J, 6 cr

5962 Clinical Consultation Liaison Psychiatry (prereq psychiatric resident) (S-N only)
945827 6 cr

5963 Clinical Outpatient Psychiatry (prereq psychiatric resident) (S-N only)
546785 MacKenzie T, 6 cr

5971 Consultation Liaison Psychiatric Fellowship (prereq C-L fellow/psychiatric resident) (S-N only)
445192 6-24 cr

5972 Psychiatric Child Fellowship: Year I (prereq psychiatric resident/fellow) (S-N only)
850342 Jensen J, 6-24 cr

5973 Chemical Dependency Fellowship (prereq psychiatric resident/fellow) (S-N only)
744937 Halikas J, 6-24 cr

5974 Eating Disorder Fellowship (prereq psychiatric resident/fellow) (S-N only)
247316 Mitchell J, 6-24 cr

5975 Advanced Clinical Psychiatry (prereq psychiatry resident/fellow) (S-N only)
152226 Meller W, 6-24 cr

5981 Psychiatric Child Fellowship: Year II (prereq psychiatric resident/fellow) (S-N only)
951398 Jensen J, 6-24 cr

8244 Comparative Theories of Psychotherapy (prereq #)
743402 3 cr

8249 Neuropsychophsrmacology (prereq resident)
052767 Abuzzahab F S, 2 cr

8264 Presentations on Current, Appropriate Literature Pertaining to all Phases of Medical Health Care (prereq #)
847201 Magraw R, 1 cr

8265 Readings in Psychosomatic Medicine, Consultation-Liaison Psychiatry (max 3 cr; prereq MD, #)
347114 ar cr

8970 Directed Studies (max 9 cr)
146099 Halikas J, ar cr

AEROSPACE ENGINEERING AND MECHANICS (AEM)
Institute of Technology

An IT computer fee is assessed at the time of registration for AEM 5206, 5244, 5250, 5321, 5329, 5330, 5331, 5516, 5632, and 8251. See page 28 for more information on this fee.

R 1015 Statics (prereq IT stu or pre-BAE maj, Phys 1251, Math 1261) (A-F only)
★LECT 1325-1415 MWF, Arch 25, Wilson T A
852334 —1 REC 1325-1415 TTh, AkerH 225, 4 cr
444947 —2 REC 1325-1415 TTh, AkerH 215, 4 cr
743626 —3 REC 1325-1415 TTh, AkerH 211, 4 cr
943673 —4 REC 1325-1415 TTh, AkerH 317, 4 cr

R 3016 Deformable Body Mechanics (prereq IT stu or pre-BAE maj, 1015, ¶Math 3261) (A-F only)
★LECT 1010-1100 MWF, FordH 55, James R
150287 —1 REC 1010-1100 TTh, AkerH 319, 4 cr
651010 —2 REC 1010-1100 TTh, AkerH 225, 4 cr
541697 —3 REC 1010-1100 TTh, AkerH 215, 4 cr
252337 —4 REC 1010-1100 TTh, AkerH 211, 4 cr
052493 —5 REC 1010-1100 TTh, AkerH 317, 4 cr

R 3036 Dynamics (prereq IT stu or pre-BAE maj, 1015, ¶Math 3261) (A-F only)
★LECT 1220-1310 MWF, Arch 25
649421 —1 REC 1220-1310 TTh, AkerH 225, 4 cr
344665 —2 REC 1220-1310 TTh, AkerH 309, 4 cr
149656 —3 REC 1220-1310 TTh, AkerH 215, 4 cr
044622 —4 REC 1220-1310 TTh, AkerH 211, 4 cr

R 3200 Introduction to Engineering Fluid Mechanics (prereq IT stu or pre-BAE maj, 1015, Math 3261, Phys 1251) (A-F only)
★LECT 1325-1415 MTWTh, AkerH 309, Webster D
943091 —1 LAB 1430-1730 M, AkerH 211, 4 cr
549685 —2 LAB 1430-1730 T, AkerH 313, 4 cr
345296 —3 LAB 1430-1730 Th, AkerH 313, 4 cr

R 5205 Aerospace Propulsion (prereq upper div IT, 5204, ME 3301)
950851 0905-0955 MTWF, AkerH 209, Beavers G, 4 cr

R 5206 Aerodynamics of Lifting Surfaces (prereq upper div IT stu, 5200, CSci 3101)
249003 1220-1415 MW, AkerH 209, Candler G, 4 cr

R 5300 Flight Mechanics (prereq 3005 or 5206, grad or IT student) (A-F only)
073537 1430-1625 TTh, AkerH 309, 4 cr

R 5321 Automatic Control (prereq 3401 or equiv) (A-F only)
751841 1115-1310 TTh, AkerH 317, 4 cr

R 5330 Design of Aerospace Elements and Systems (prereq AEM sr or Δ)
449307 1325-1520 TTh, FordH 55, Vano A, 4 cr

R 5515 Aerospace Structures I (prereq 3016, IT stu)
249485 1430-1625 MW, Arch 25, Leo P, 4 cr

R 5632 Aeromechanics Laboratory III: Dynamics and Control (prereq IT upper div stu, 3016, 3036, 5200)
★LECT 0600-0850 MW, AkerH 227, Balas G
171365 —1 LAB 0800-1205 T, AkerH 30A, 30B, 30, 4 cr
071366 —2 LAB 0800-1205 Th, AkerH 30A, 30B, 30, 4 cr
871367 —3 LAB 1220-1625 F, AkerH 30A, 30B, 30, 4 cr

5801 Problems in Mechanics and Materials (prereq Δ)
443863 1-4 cr

5811 Problems in Fluid Mechanics (prereq Δ)
145106 1-4 cr

R 5821H Aerospace Engineering and Mechanics Honors Thesis I (prereq #, upper div AEM honors program stu) (A-F only)
842483 4 cr

R 5822H Aerospace Engineering and Mechanics Honors Thesis II (prereq upper div AEM honors program student, #) (A-F only)
942104 4 cr

5838 Summer Engineering Employment (prereq completion of 3rd yr, Δ)
151612 1-4 cr

5839 Summer Engineering Employment (prereq completion of 3rd yr, Δ)
347257 1-4 cr

5840 Industrial Assignment (prereq regis in engineering intern program, Δ)
952227 2 cr

5841 Industrial Assignment (prereq regis in engineering intern program, Δ)
052302 2 cr

5842 Induetrial Assignment (prereq regis in engineering intern program, Δ)
847053 2 cr

5843 Industrial Assignment (prereq regis in engineering intern program, Δ)
749068 2 cr

8002 Seminar: Aerospece Engineering and Mechanics (prereq consent of director of graduate studies) (S-N only)
744274 1325-1520 F, AkerH 209, 1 cr

R 8202 Fluid Mechenics II (prereq 8201)
051778 0905-0955 MTWTh, AkerH 227, Alving A, 4 cr

R 8217 Theory of Turbulence II (prereq 8216)
371364 1010-1100 MWF, AkerH 227, Lundgren T, 3 cr

R 8420 Trajectory Optimization Techniques (prereq 5321 or #)
771362 1115-1310 TTh, AkerH 227, Zhao Y, 4 cr

8502 Research Seminar in the Mechanics of Materials
947478 1325-1520 T, AkerH 227, Fosdick R, James R, Truskinovsky L, 2-4 cr

R 8511 Continuum Mechanics II (prereq 8510 or #)
647250 1535-1730 MW, AkerH 227, Fosdick R, 4 cr

R 8570 Fracture Mechenics (prereq Δ)
671368 1430-1625 MW, Truskinovsky L, 4 cr

R 8594 Elastostatics I (prereq 8510 or 5580 or #...6511 rec)
541764 1535-1730 TTh, AkerH 227, Shield T, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not yet passed oral prelims)
243749 1-18 cr

8777 Thesis Credits: Masters
649354 1-16 cr

8801 Selected Topics in Mechanics and Materials (prereq Δ)
743545 1-4 cr

R 8811 Selected Topics in Fluid Mechanics (prereq Δ)
144420 1115-1205 MWF, AkerH 227, Joseph D, 3 cr

8880 Plan B Project (max 4 cr; prereq grad aerospace engineering or mechanics maj, Δ)
847599 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
047505 1-36 cr

AEROSPACE STUDIES (Air)

0100 Leadership Laboratory (prereq Air Force ROTC Cadets only) (S-N only)
144134 1800-1930 W, Armory 100, Campbell W, 0 cr

1105 U.S. Air Force II (A-F only)
674710 —1 0905-0955 T, Armory 12, Lamatsch P, 1 cr
474711 —2 1325-1415 T, Armory 12, Lamatsch P, 1 cr

1205 Development of Modern Employment of Air Power, Introduction to Leadership, Ethics, and Values (A-F only)
045561 —1 0905-0955 Th, Armory 12, Lamatsch P, 1 cr
142402 —2 1325-1415 Th, Armory 12, Lamatsch P, 1 cr

3302 Total Quality Management in the Air Force (A-F only)
247431 —1 0800-0850 MWF, Armory 12, Campbell W, 3 cr
943690 —2 1430-1520 MWF, Armory 12, Campbell W, 3 cr

3402 Military Law and Service Orientation (prereq all 33XX crses) (A-F only)
443345 —1 0815-0930 TTh, Armory 105, Homan J, 3 cr
741844 —2 1115-1230 TTh, Armory 105, Homan J, 3 cr

AFRO-AMERICAN STUDIES (Afro)
Afro-American & African Studies
Liberal Arts

R 3141 Africa (§Geog 3141)
174632 1220-1325 MW, BlegH 215, Samatar A, 4 cr

R 3301 The Music of Black Americans
075126 0800-0850 MWF, FergH 90, 4 cr

R 3432 History of Africa: 1800 to Present (§Hist 1432, Hist 3432) (Hist; IP)
★LECT 0945-1100 TTh, AndH 230, Allman J
944919 —1 REC 1220-1310 T, BlegH 340, 4 cr
052249 —2 REC 0905-0955 W, BlegH 245, 4 cr
045463 —3 REC 1115-1205 W, BlegH 125, 4 cr
942040 —4 REC 1220-1310 Th, BlegH 340, 4 cr
749409 —5 REC 0800-0850 F, BlegH 260, 4 cr
974633 —6 REC 1010-1100 F, BlegH 225, 4 cr

R 3592 Introduction to Black Women Writers (§5592, Engl 3592)
173769 1415-1530 TTh, RarigC 616, Reyes A, 4 cr

R 3654 African Cinema (Vis; IP)
171374 1325-1600 T, AndH 350, 1325-1440 Th, BlegH 105, Pike C, 4 cr

3865 Afro-American History (§Hist 3865) (Hist; CD)
971375 1010-1100 MWF, AndH 350, Dillard A, 4 cr

3910 Topics in Afro-American/African Studies
242598 1245-1400 MW, SocSci 815, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
551484 1-15 cr

3991 Senior Project in Afro-American and African Studies (3991-3992-3993†; prereq completed CLA advanced composition requirement, permission of undergrad adviser) (A-F only)
343029 2 cr

3992 Senior Project in Afro-American and African Studies (3991-3992-3993†; prereq 3991) (A-F only)
047407 2 cr

3993 Senior Project in Afro-American and African Studies (3991-3992-3993†; prereq 3992) (A-F only)
443524 2 cr

R 5182 Contemporary Black Theatre, 1960-Present (§Th 5182)
771376 1325-1520 TTh, RarigC 275, Bellamy L, 4 cr

R 5352 Black Families in Comparative Perspectives (prereq jr or sr or grad stu)
571377 1325-1520 W, BlegH 245, Brewer R, 4 cr

R 5800 African Studies Interdisciplinary Seminar: Contemporary Sudanese Literature and Culture (A-F only)
473770 1325-1520 W, BlegH 350, AshShareef T, 4 cr

R 5864 Afro-American History (§Hist 5864)
974695 1325-1520 M, BlegH 245, Dillard A, 4 cr

R 5910 Topics: Afro-American/African Studies
544454 1245-1400 TTh, MurH 311, Johnson L, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
249664 1-6 cr

8101 Seminar: Introduction to Studies in Africa and the African Diaspora (A-F only)
774634 1325-1525 Th, SocSci 815, Atkins, 3 cr

AGRICULTURAL EDUCATION (AgEd)
Work, Community, and Family Education
Education and Human Development

R 1002 Principles of Career Planning in Agriculture (A-F only)
148239 1220-1310 W, VoTech R385, Peterson R, 1 cr

R 1042 Current Technical Competencies
144045 1535-1735 TTh, VoTech 120, Bracewell E, 3 cr

R 3001 Experiential Learning: Production Agriculture (max 14 cr; no more than 20 cr of 3001, 3002 combined; prereq #) (S-N only)
143176 1-14 cr

R 3002 Experiential Learning: Agricultural Business (max 14 cr; no more than 20 cr of 3001, 3002 combined; prereq #) (S-N only)
647846 1-14 cr

R 3029 Directed Experience in Agricultural Education (A-F only)
652464 1220-1310 F, VoTech R375, 1-3 cr

R 3041 Practicum: Agricultural Education Technology (max 5 cr) (A-F only)
342804 Peterson R, 1-3 cr

R 5010 Rural Leadership Development (A-F only)
952762 0905-0955 MWF, VoTech R385, Peterson R, 3 cr

R 5055 Methods in Farming Systems Research and Extension (A-F only)
547144 0905-0955 TTh, VoTech R385, Warner A, 3 cr

R 5061 Program Planning and Evaluation (prereq sr or grad stu) (A-F only)
948940 1325-1415 MWF, VoTech R385, Bracewell E, 3 cr

R 5072 Practicum: Agricultural Business and Industry (max 9 cr; prereq 5071 or #) (A-F only)
571766 Norenberg C, 3 cr

R 5090 Independent Study (prereq sr) (A-F only)
147356 1-3 cr

R 5095 Integrating Paper: Master of Education (prereq MEd student in agricultural education) (A-F only)
043938 3 cr

R 8001 Research in Agricultural Education (prereq 15 cr educ)
847926 ar cr

R 8091 Field Problems
643523 3 cr

AGRICULTURAL ENGINEERING TECHNOLOGY (AgET)
Biosystems and Agricultural Engineering
Agricultural, Food, and Environmental Sciences

R 3025 Engineering Principles and Applications (prereq Math 1111 or Math 1142 or equiv, 5 cr in phys or chem) (Phys/NL)
846145 1115-1205 MTWF, ClaOff B35, Janni K, 4 cr

5091 Special Problems in Agricultural Engineering (prereq #)
548939 2-5 cr

5200 Health and Safety Issues in Agricultural Work Environments (A-F only)
573940 1545-1700 TTh, BioAgEng 308, Shutske J, 3 cr

R 5410 Hydrology and Water Quality (prereq Math 1111, Phys 1041, Chem 1004, 1005)
★LECT 1010-1100 MWThF, BioAgEng 106, Wilson B
848445 —1 LAB 1430-1730 W, BioAgEng 106, Wilson B, 5 cr

AGRICULTURAL INDUSTRIES AND MARKETING (AIM)
Agricultural, Food, and Environmental Sciences

5002 Marketing Practicum II (prereq 5001) (A-F only)
641691 1430-1630 W, HckrH 111, Nefstead W, 2 cr

AGRICULTURE (Agri)
Agricultural, Food, and Environmental Sciences

1000H Honors Colloquium (prereq honors program registration, ❑) (A-F only)
246148 1430-1610 W, HodsonH 495, Orf J, 2 cr

3100H Honors Experience (prereq approved proposal by Coll of Agri Honors Prog Comm) (A-F only)
550996 3-4 cr

AGRONOMY AND PLANT GENETICS (Agro)
Agricultural, Food, and Environmental Sciences

R 1010 Principles of Agronomy (§3010, 3020, 3030)
★LECT 1115-1205 MWThF, BorH 335, Sheaffer C
346481 —1 LAB 0905-1100 T, AgGhCl 103, Sheaffer C, 5 cr
049464 —2 LAB 1325-1520 T, AgGhCl 103, Sheaffer C, 5 cr

1020 Special Problems (prereq 5 cr agronomy, #)
646485 Cardwell V, 1-3 cr

3130 Seed Technology (prereq 1010 or #)
144179 1220-1415 TTh, Hayes A104, Cardwell V, 2 cr

Symbols

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# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

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R 3200 Seminar (prereq jr or sr)
150234 1535-1705 Th, BorH 306, Hardman L, 1 cr

5001 Problems in Agronomy for Advanced Students (prereq 20 cr agronomy, #)
148421 Cardwell V, 1-5 cr

R 5020 Introduction to Plant Breeding (prereq GCB 3022 or Hort 3003 or equiv)
643313 —1 0905-0955 MWThF, Hayes A202, Orf J, 4 cr
944841 —2 0905-0955 MTWThF, Hayes A202, Orf J, 4 cr (grad stu only)

R 5050 Management Technologies for Crop Production in Minnesota (prereq agro crse)
★LECT 1325-1415 MWF, Hayes A202, Sheaffer C, Hardman L
748700 —1 REC 1115-1310 T, Hayes A202, Sheaffer C, Hardman L, 4 cr

R 5330 Plant Biotechniques (prereq genetics and biochemistry courses at the 3000 level) (S-N only)
851636 1325-1415 TTh, BorH 306, Phillips R, 2 cr

8010 Research in Agronomy (prereq #)
041915 ar cr

R 8240 Cellular and Molecular Genetics of Plant Improvement (prereq GCB 5034)
541442 1010-1205 TTh, BorH 213, Gengenbach B, Somers D, 3 cr

8270 Seminar: Plant Breeding
652643 1535-1635 M, BorH 306, Rasmusson D, 1 cr

8330 Research in Plant Genetics
251348 ar cr

8340 Directed Studies for Thesis Research (prereq agronomy or plant breeding PhD stu or #) (S-N only)
544101 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
147907 1-18 cr

8777 Thesis Credits: Masters
642839 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
745716 1-36 cr

Algebra: See General College, Mathematics

AMERICAN INDIAN STUDIES (AmIn)
Liberal Arts

R 1022 Beginning Ojibwe (prereq 1021)
047598 1115-1205 MTWThF, ScottH 4, Jones D, 5 cr

R 1032 Beginning Dakota (prereq 1031)
941499 1220-1310 MTWThF, NichH 109, Firesteel F, 5 cr

R 1771 Introduction to American Indian Studies (§AmSt 1771) (SSci; CD)
450988 —1 1115-1205 MWF, WullH 140, Buffalohead E, 4 cr
342091 —2 1325-1415 MWF, WullH 140, Buffalohead E, 4 cr
343449 —3 1115-1230 TTh, WullH 140, Danforth R, 4 cr
051215 —4 1615-1730 TTh, ScottH 4, Danforth R, 4 cr

R 3025 Intermediate Ojibwe (prereq 3024)
145266 1325-1415 MTWThF, NichH 122, Jones D, 5 cr

R 3026 Ojibwe Culture and History (Hist; CD)
771426 —1 0945-1100 TTh, NichH 122, Jones D, 4 cr
474630 —2 1245-1400 TTh, WullH 220, 4 cr

R 3035 Intermediate Dakota (prereq 3034)
648124 1325-1415 MTWThF, NichH 209A, Firesteel F, 5 cr

R 3112 American Indian History: 1850 to the Present (§Hist 3872) (Hist; CD)
748406 —1 1115-1205 MWF, AndH 230, Rayson D, 4 cr
971425 —2 1245-1400 TTh, BlegH 5, O'Brien-Kehoe J, 4 cr

R 3116 American Indian Literature (Lit; CD)
851670 1245-1400 TTh, ScottH 4, Miller C, 4 cr

R 3211 American Indian Philosophies (Phil; CD)
442793 1245-1400 TTh, WullH 140, Buckanaga J, 4 cr

R 3221 Contemporary American Indian Art
171424 1615-1730 TTh, NichH 122, Chapman J, 4 cr

3810 Field Practice: Indian Studies (prereq soph or jr or sr, #)
042143 3-9 cr

3970 Directed Studies (prereq #, Δ, or ❑)
151545 1-15 cr

3980 Directed Instruction (prereq #, Δ, ❑)
150136 5 cr

R 5341 Contemporary Indian Movements
373793 1615-1730 TTh, WullH 220, Means W, 4 cr

5970 Directed Studies (prereq #, Δ, or ❑)
573792 1-15 cr

5990 Directed Research (prereq by petition only, #, Δ, CLA approval)
546897 1-15 cr

AMERICAN STUDIES (AmSt)
Liberal Arts

R 1002 American Cultures (SSci; CD)
★LECT 0945-1100 TTh, NichH 211, Miller C, Prell R
046130 —1 REC 1010-1100 M, ScottH 4, 4 cr
642775 —2 REC 1115-1205 T, NichH 109, 4 cr
152315 —3 REC 1115-1205 T, SmithH 121, 4 cr
347176 —4 REC 1220-1310 T, SmithH 121, 4 cr
648382 —5 REC 0905-0955 W, WullH 220, 4 cr
743481 —6 REC 1010-1100 W, ScottH 4, 4 cr
143767 —7 REC 1115-1205 Th, NichH 109, 4 cr
047875 —8 REC 1220-1310 Th, FolH 426, 4 cr
246845 —9 REC 1220-1310 Th, FolH 114, 4 cr

R 1002H American Cultures (prereq honors stu or #)
★LECT 0945-1100 TTh, NichH 211, Miller C, Prell R
844329 —80 REC 1325-1415 Th, ScottH 2, 4 cr

R 1201 Learning Public Ethics Through Arts and the University (prereq Residential College stu) (C/PE) (A-F only)
473607 0945-1100 TTh, NichH 209, Yates G, 4 cr

R 3111 Creative Americans and Their Worlds: Reading Popular Culture
149723 1115-1230 TTh, NichH 213, Laslett S, 4 cr

R 3112 American Everyday Life: At Home in TV Land: Television and Everyday Life
371381 0905-0955 MWF, ScottH 4, Drown E, 4 cr

R 3113 American Cultural Diversity: African American/Jewish American Relations in the U.S.
348408 1430-1520 MWF, ScottH 4, Prell R, 4 cr

R 3299 Proseminar: Classics in American Studies (prereq AmSt maj) (A-F only)
445497 —1 1700-1950 Th, ScottH 2, Noble D, 4 cr
147647 —2 1325-1555 Th, ScottH 2, Noble D, 4 cr

R 3302 Proseminar: American Studies (prereq 3301) (CD; C/PE)
549606 —1 1820-2050 T, ScottH 2, Mizelle B, 4 cr
743450 —2 1700-1950 W, ScottH 2, 4 cr

R 3575 The Art of Walt Disney (§ArtH 3575)
174282 0905-0955 MWF, WilleyH 125, Marling K, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
952468 1-15 cr

R 5102 Religion and American Culture: Religion in American History (§RelS 5151)
673945 1115-1230 TTh, WullH 220, Delattre R, 4 cr

R 8202 Theory, Current Research, and Practice in American Studies (prereq admission to AmSt grad program) (A-F only)
145146 1325-1525 M, ScottH 2, Johnson L, 4 cr

R 8230 The United States in International Perspective: U.S. Southern and Southern African Women's Literature and Culture (max 12 cr; prereq 8229 or # or Δ) (A-F only)
071383 1325-1525 T, ScottH 2, Yates G, 4 cr

R 8240 Gender, Race, Class, Ethnicity, and Sexuality in America: U.S. in Race and Gender in the Media (max 12 cr; prereq 8239 or # or Δ) (A-F only)
473946 1010-1210 M, ScottH 2, Johnson L, 4 cr

R 8269 Politics, Economics and/or the Law (prereq # or Δ) (A-F only)
872857 1325-1525 T, CivE 214, Valdes D, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
148208 1-18 cr

8777 Thesis Credits: Masters
644185 1-16 cr

R 8801 Dissertation Seminar (prereq #) (A-F only)
245498 1325-1525 Th, ScottH 103, Prell R, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
352085 1-36 cr

R 8920 Topics in American Studies
273947 4 cr

8970 Readings in American Civilization: Popular Culture: Building Disney's Lands: Post Modernism and Theme Parks
751595 1325-1525 M, JonesH 202, Marling K, 4 cr

ANCIENT NEAR EASTERN (ANE)
Classical & Near Eastern Studies
Liberal Arts

3101 Ancient Near Eastern Texts in English
171391 0800-0850 MWF, FolH 426, Reisman D, 4 cr

3502 Ancient Israel: Background of the Bible (§5502, RelS 3502; no knowl of Hebr req) (Hist)
148709 0905-0955 MWF, FolH 306, Reisman D, 4 cr

5502 Ancient Israel (§3502, RelS 3502; no knowl of Hebr req; prereq grad stu or #)
152016 0905-0955 MWF, FolH 306, Reisman D, 4 cr

5970 Directed Studies (prereq #)
148192 1-4 cr

ANESTHESIOLOGY (Anes)
Medical School

R 3105 Respiratory Therapy Procedures (prereq #)
650262 1010-1205 TTh, 1115-1205 W, Mayo C565, Larsen R, 5 cr

R 3107 Individual Study in Respiratory Therapy (prereq #)
752617 1430-1520 W, Mayo C559, Larsen R, ar cr

5181 Externship in Clinical Practice of Anesthesiology (prereq regis med)
951501 Anderson W, 4.5-9 cr,

5182 Independent Study, Anesthesiology (prereq regis med)
049643 ar cr

5186 Clinical Practice in Anesthesia (prereq CRNA, regis B.S. in nurs anes, 5086, #)
147057 Palahniuk R, 15 cr

5268 Seminar in Anesthesia (prereq CRNA, regis B.S. in anes)
151004 1500-1700 F, Mayo B580, Palahniuk R, 2 cr

8265 General Anesthesia
150676 Palahniuk R, 12 cr

8266 Regional Anesthesia
946007 Palahniuk R, 4 cr

8267 Pre-Postanesthetic Evaluation
249583 1530-1800 MTWTh, Mayo B580, Palahniuk R, 2 cr

8268 Seminar: Anesthesia
144272 1500-1700 F, Mayo B580, Palahniuk R, 2 cr

8269 Research in Anesthesia
951014 Palahniuk R, ar cr

ANIMAL AND PLANT SYSTEMS (AnPl)

Agricultural, Food, and Environmental Sciences

R 3010 Environment and World Food Production (prereq Biol 1008 or Biol 1009) (Biol/NL; Envt)
943074 —1 1220-1400 TTh, CentLib 4, Simmons S, White M, 4 cr (ITV to Mpls)
951384 —2 1220-1400 TTh, PeikH 165, Simmons S, White M, 4 cr (Mpls) (ITV)

ANIMAL PHYSIOLOGY (AnPh)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
548052 1-18 cr

8777 Thesis Credits: Masters
945004 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
942071 1-36 cr

ANIMAL SCIENCE (AnSc)

Agricultural, Food, and Environmental Sciences

1100 Introductory Animal Science
743707 0905-0955 MTWThF, ABLMS 125, Seykora A, others, 5 cr

1302 Management Techniques: Sheep (prereq #) (S-N only)
043700 —1 LAB 1325-1600 M, Christians C, 1 cr
449503 —2 LAB 1325-1600 T, Christians C, 1 cr

1303 Management Techniques: Beef (prereq #) (S-N only)
049822 1430-1645 T, BCB, Woodward B, DiCostanzo A, 1 cr

1520 Milk Production (prereq 1100 or #)
★LECT 1535-1625 MF, HckrH 312, Seykora A
149253 —1 LAB 1535-1725 W, HckrH 312, Seykora A, 3 cr

R 1530 Stable Management (prereq 1306 or equiv) (A-F only)
574506 1000-1050 MWF, CentLib 4, 3 cr (ITV from Crookston)

R 3111 Introduction to Animal Behavior (§EEB 3111; prereq Biol 1008 or Biol 1009 or #)
★LECT 1800-2000 TTh, KaufL 302, Phillips R
442504 —1 REC 2010-2100 T, AlderH 415, 4 cr
541277 —2 REC 2010-2100 Th, AlderH 415, 4 cr

R 3120 Advanced Meat Animal, Carcass Evaluation (prereq 1120, #...3130 or 3131, 3142, 3143 rec)
649998 1010-1100 TTh, ABLMS 125, Hawton J, Epley R, 1 cr

R 3220 Principles of Animal Breeding (prereq GCB 3022 rec)
★LECT 1325-1415 MTWF, HckrH 100, Seykora A
046516 —1 LAB 1115-1230 T, ClaOff 135, Seykora A, 5 cr
547449 —2 LAB 1245-1400 T, ClaOff 135, Seykora A, 5 cr
146216 —3 LAB 1415-1530 T, ClaOff 135, Seykora A, 5 cr

R 3510 Introduction to Human and Animal Growth and Development (prereq Biol 1009) (Biol/NL)
452711 1010-1100 MWF, FScN 15, White M, Dayton W, others, 4 cr

5327 General Endocrine Physiology (prereq 3301 or #)
543191 1430-1520 MWF, HckrH 210, Wheaton J, 3 cr

R 5403 Ruminant Nutrition (prereq 1401 or 3401)
★LECT 1010-1100 MWF, AnScVM 125, Stern M, Linn J
347498 —1 LAB 1115-1310 W, HckrH 70, Stern M, Linn J, 4 cr
851345 —2 LAB 1430-1555 Th, HckrH 70, Stern M, Linn J, 4 cr

5609 Principles of Farm Animal Environment (prereq jr, 3301 or #)
947125 0905-0955 MTWF, HckrH 209, El Halawani M, 4 cr

5710 Special Problems (prereq #)
748440 ar cr

5715 Tutorial (prereq #)
041803 ar cr

6230 Linear Model Methods (prereq Stat 5021, GCB 5033...Math 3142 rec)
173794 0905-0955 MTWTh, HckrH 111, Hansen L, 2-4 cr

8325 Physiology of Fertilization and Gestation (prereq 5322 or #) (A-F only)
070914 1355-1555 TTh, HckrH 209, Hunter A, 4 cr

8603 Graduate Seminar (prereq #)
547404 1640-1730 M, PetH 108, Hunter A, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
245761 1-18 cr

8740 Concepts and Developments in Ruminant Nutrition (prereq #)
951062 1325-1525 Th, HckrH 120, Stern M, 2 cr

6750 Concepts and Developments in Meat Science and Technology (prereq #)
151075 Dayton W, 1 cr

8777 Thesis Credits: Masters
441756 1-16 cr

8810 Research in Animal Science (prereq #)
350689 ar cr

8820 Research in Animal Genetics (prereq #)
649080 ar cr

8830 Research in Animal Physiology (prereq #)
544244 ar cr

8840 Research in Animal Nutrition (prereq #)
743206 ar cr

8850 Research in Muscle Chemistry and Physiology (prereq #)
143372 ar cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
242083 1-36 cr

ANTHROPOLOGY (Anth)

Liberal Arts

R 1101 Human Origins (Biol/L; Envt)
★LECT 1115-1205 MWF, FordH 55
673539 —1 REC 0800-0850 T, FordH 20, 5 cr
071769 —2 REC 0905-0955 T, FordH 20, 5 cr
371770 —3 REC 1010-1100 T, FordH 20, 5 cr
171771 —4 REC 1115-1205 T, FordH 20, 5 cr
071772 —5 REC 1220-1310 T, FordH 20, 5 cr
871773 —6 REC 1325-1415 T, FordH 20, 5 cr

R 1102 Understanding Cultures (§5102) (SSci; IP)
★LECT 0905-0955 MWF, WilleyH 175, Barlow K
943611 —1 REC 0800-0850 T, FordH 15, 5 cr
341622 —2 REC 0905-0955 T, FordH 15, 5 cr
949487 —3 REC 0905-0955 T, FordH 50, 5 cr
745179 —4 REC 1010-1100 T, FordH 50, 5 cr
150225 —5 REC 1010-1100 T, FordH 15, 5 cr
151125 —6 REC 1115-1205 T, FordH 15, 5 cr
443832 —7 REC 1220-1310 T, FordH 15, 5 cr
651539 —8 REC 0800-0850 Th, FordH 15, 5 cr
547869 —9 REC 0905-0955 Th, FordH 15, 5 cr
044118 —10 REC 0905-0955 Th, FordH 50, 5 cr
445855 —11 REC 1010-1100 Th, FordH 15, 5 cr
843634 —12 REC 1010-1100 Th, FordH 50, 5 cr
652061 —13 REC 1115-1205 Th, FordH 15, 5 cr
245842 —14 REC 1220-1310 Th, FordH 15, 5 cr

R 1102H Honors Course: Understanding Cultures (prereq GPA 3.0 or #)
★LECT 0905-0955 MWF, WilleyH 175, Barlow K
050260 —80 REC 0905-0955 Th, FordH 235, Barlow K, 5 cr

R 3003 The Rise of Civilization (SSci; IP)
251480 1115-1205 MWF, AndH 210, Wells P, 4 cr

R 3211 Native Peoples of North America (CD)
746834 1010-1100 MWF, EE/CSci 3210, Dunnigan T, 4 cr

R 3222 Peoples and Cultures of Middle America (§LAS 3222)
671774 0945-1100 TTh, FordH 130, Ingham J, 4 cr

R 3960 Anthropology Proseminar: Archaeology of the Near East
471775 1115-1230 TTh, FordH 130, McCorriston J, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
743836 ar cr

3992H Honors Tutorial (cannot be applied toward any CLA degree; prereq #) (S-N only)
141839 1 cr

R 5201 Contemporary Perspectives in Anthropology (S-N for non-maj only; crse req for sr cult anth maj; prereq 1102)
171777 1115-1230 TTh, FordH 150, Gudeman S, 4 cr

R 5301 Advanced Methods and Theory in Archaeology (prereq 3111 or #)
144837 1415-1530 TTh, FordH 150, Johnston K, 4 cr

R 5392 Philosophical Anthropology (prereq 1102 or 5102)
771779 0945-1100 TTh, FordH 150, Penn M, 4 cr

R 5910 Topics in Anthropology
048797 —1 1115-1230 TTh, FordH 130, McCorriston J, 4 cr ((Archaeology of the Near East)
271776 —2 1430-1625 W, FordH 175, Miller F, 4 cr

R 5960 Senior Seminar (prereq sr maj)
846677 1430-1625 W, FordH 50, Dunnigan T, 4 cr

5961 Senior Research Project (prereq sr maj, #) (A-F only)
350546 4 cr

5970 Directed Readings (prereq #, Δ, CLA approval)
641481 2-4 cr

8002 Foundations of Social and Cultural Anthropology II (prereq anth grad stu or #)
149415 1325-1610 Th, FordH 50, Ingham J, 3 cr

8122 Problems in Applied Anthropology and Policy Analysis
949733 1430-1625 W, FordH 175, Miller F, 3 cr

Symbols

R The letter R preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

8390 Seminar: Philosophical Anthropology
249468 1430-1615 T, FordH 50, Penn M, 3 cr

8420 Seminar: Cultural Change
971778 1220-1415 M, FordH 290E, Gerlach L, 3 cr

6666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
551730 1-18 cr

8777 Thesis Credits: Masters
052459 1-16 cr

6810 Seminar: Special Topics: Archaeology of Agricultural Systems
971781 1415-1600 Th, FordH 175, McCorriston J, 3 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
646390 1-36 cr

8950 Directed Studies (prereq #)
349123 ar cr

APPLIED ECONOMICS (ApEc)
Agricultural, Food, and Environmental Sciences

R 1101 Principles of Microeconomics (§Econ 1101) (SSci)
147776 —1 0800-0850 MTWTh, McNH 33, Welsch D, 4 cr
845626 —2 0905-0955 MTWTh, KaufL 302, Welsch D, 4 cr

R 1102 Principles of Macroeconomics (§Econ 1102) (SSci)
642551 —1 1115-1205 MTThF, ClaOff B45, Peterson W, 4 cr
041302 —2 1325-1415 MTThF, ClaOff B45, Peterson W, 4 cr

R 3001 Applied Microeconomics: Consumers and Markets (§Econ 3101; prereq 1101 or Econ 1101, Math 1142 or Math 1211, Stat 1001 or IDSc 1010, OMS 1020 or #)
★LECT 0905-1100 TTh, ClaOff B25, Liu D
048833 —1 LAB 1325-1525 M, ClaOff B36, 4 cr (ClaOff B36 1st five wks, ClaOff 17 2nd five wks)
346710 —2 LAB 1430-1630 M, ClaOff B42, 4 cr (ClaOff B42 1st five wks, ClaOff 17 2nd five wks)
150928 —3 LAB 1430-1630 Th, ClaOff B36, 4 cr (ClaOff B36 1st five wks, ClaOff 17 2nd five wks)

R 3002 Applied Microeconomics: Managerial Economics (prereq 3001, 1250 or Acct 1024 or #)
★LECT 1245-1400 TTh, ClaOff B25, Apland J
146711 —1 LAB 1220-1420 W, ClaOff 17, 4 cr
944547 —2 LAB 1630-1800 W, ClaOff 135, 4 cr

3006 Applied Macroeconomics: Government and the Economy (§Econ 3102; prereq 1101, 1102 or Econ 1101, Econ 1102)
051974 0800-0850 MTWTh, VoTech R280, Pederson G, 4 cr

3240 Strategic Management of Agribusinesses (prereq 3002, 3500 or #)
149844 1115-1255 TTh, VoTech R285, Eidman V, 4 cr

3990 Independent Study in Agricultural and Applied Economics (prereq #)
645627 ar cr

R 5480 Futures Markets and Prices (prereq 3002 or Econ 3101 or #)
242553 1545-1700 TTh, ClaOff B35, Liu D, 4 cr

5500 Financial Markets and Agricultural Credit Institutions (prereq 3500 or BFin 3000 or grad stu or #)
173836 1325-1415 MTThF, ClaOff B26, 4 cr

5550 Food Marketing Economics (prereq 3001 or Econ 3101 or #)
851975 1630-1810 TTh, McNH 33, 180, Senauer B, Asp E, 4 cr

5600 Land and Water Economics (prereq 3002 or Econ 3101 or #)
949845 1415-1530 TTh, VoTech R280, Taff S, 3 cr

5630 Regional Development Systems (prereq 3006 or Econ 3102 or #)
574358 1630-1745 MW, ClaOff B26, Morse G, 3 cr

5650 Economics of Natural Resource and Environmental Policy (prereq 3002 or Econ 3101 or 3610 or #) (Envt)
445628 1010-1125 MWF, VoTech R285, Easter K W, 4 cr

5660 Economics of Public Services (prereq 3002 or Econ 3101 or #) (C/PE)
142554 1630-1900 W, ClaOff B25, Honadle B, 3 cr

5710 U.S. Agriculture: Farm, Food, and Environmental Policy (prereq 3002 or Econ 3101, 3006, 3007 or Econ 3102 or #)
841303 1430-1610 MW, ClaOff B25, Runge F, 3 cr

5720 Economics of World Agriculture (prereq 3002 or Econ 3101, 3006 or Econ 3102 or #)
950929 1545-1700 TTh, ClaOff B30, Ruttan V, 3 cr

5890 Independent Study: Advanced Topics in Farm Management (prereq #)
648835 1-6 cr

5990 Special Topics and Independent Study in Applied Economics (prereq #)
046712 ar cr

8110 Master's Paper: Plan B Project (max 9 cr; prereq #) (S-N only)
744548 1-9 cr

8200 Advanced Topics in Agricultural and Applied Economics
448836 1-9 cr

6231 Agricultural Prices (prereq Econ 5151, 5152)
846713 1220-1310 MWF, ClaOff B26, Smith R, 3 cr

8245 Agricultural Marketing Economics (prereq Econ 5151, 5152 or #)
974616 1010-1125 MW, ClaOff 143, Liu D, 3 cr

8278 Agricultural and Economic Development (prereq Econ 8101 or #)
544549 1245-1400 TTh, ClaOff B36, Roe T, 3 cr

8364 Seminar: Environmental Economics and Policy
942555 1430-1600 TTh, ClaOff B26, Easter W, Coggins J, 3 cr

8382 Seminar: Production Economics
651976 1115-1230 TTh, VoTech R275, King R, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
749846 1-18 cr

8777 Thesis Credits: Masters
647779 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
245629 1-36 cr

ARABIC (Arab)
Afro-American & African Studies
Liberal Arts

R 1102 Beginning Arabic (prereq 1101)
750432 1115-1205 MTWThF, BlegH 245, Kadi S, 5 cr

R 3102 Intermediate Arabic (prereq 3101)
750883 1325-1520 MW, BlegH 210, Kadi S, 5 cr

R 3213 The Qur'an as Literature (§MidE 3213, RelS 3213)
273768 1415-1530 TTh, BlegH 245, AshShareef T, 4 cr

3505 Survey: The Middle East (§5505, Hist 3505, MELC 5505)
274631 0945-1100 TTh, BlegH 235, Farah C, 4 cr

R 5102 Advanced Arabic (prereq 3102 or #)
671791 1245-1400 TTh, RarigC 616, Kadi S, 5 cr

R 5730 Proseminar in Middle East History, 18th to 19th Century (§Hist 5730)
671788 1300-1500 T, HHHCtr 60, Farah C, 4 cr

ARCHITECTURE (Arch)
Architecture and Landscape Architecture

R 1301 Introduction to Architectural Drawing (§1010, 1041, LA 1301) (Vis) (A-F only) (course fee)
247283 —1 0905-1205 MW, Arch 40, 4 cr
649676 —2 1220-1520 TTh, Arch 40, 4 cr
973790 —3 1325-1625 TTh, JonesH 2, 4 cr

R 1401 The Designed Environment (AH; Envt) (A-F only)
★LECT 1535-1700 T, SmithH 100
144439 —1 REC 0905-1035 Th, 4 cr
842306 —2 REC 1115-1245 Th, 4 cr
249745 —3 REC 1325-1455 Th, 4 cr
074770 —4 REC 1535-1705 Th, 4 cr

R 3311 Drawing for Design (§LA 3311; prereq pre-arch or arch or env dsgn or landscape arch maj, Arch/LA 1301, or #) (A-F only) (course fee)
343919 —1 1220-1520 TTh, Arch 55, 4 cr
742170 —2 1325-1625 TTh, Arch 50, 4 cr

R 3412 History of Architecture Since 1750 (Vis; IP) (A-F only)
★LECT 1115-1230 TTh, NichH 45, Solomonson K, 4 cr
747255 —1 REC 0800-0850 M, Arch 20
142707 —2 REC 0800-0850 M, Arch 15
341877 —3 REC 0905-0955 M, Arch 20
741407 —4 REC 0905-0955 M, Arch 30
250264 —5 REC 0800-0850 W, Arch 20
448562 —6 REC 0905-0955 W, Arch 20
042823 —7 REC 0800-0850 F, Arch 20
949618 —8 REC 0905-0955 F, Arch 20

R 3970 Directed Study (prereq 3081 or #)
548309 —1 Anderson L, ar cr
446942 —2 Clemence R, ar cr
245727 —3 Dittmar G, ar cr
041445 —4 Fisher T, ar cr
451462 —5 Grebner D, ar cr
048086 —6 Guzowski M, ar cr
349610 —7 Jara C, ar cr
643344 —8 LaVine L, ar cr
747949 —9 Morrish W, ar cr
552537 —10 Mulfinger D, ar cr
948422 —11 Piotrowski A, ar cr
741648 —12 Rauma J, ar cr
744324 —13 Robinson J, ar cr
247879 —14 Rockcastle G, ar cr
249020 —15 Satkowski L, ar cr
148273 —16 Solomonson K, ar cr
874771 —17 Weeks S, ar cr

R 5122 Architectural Design (prereq 5121, arch maj)
★LECT 1325-1730 MWF, Arch 30, 6 cr
041879 —1 LAB 1325-1730 MWF, Arch 240
447105 —2 LAB 1325-1730 MWF, Arch 240

R 5123 Architectural Thesis (!; prereq 5122, submit thesis plan qtr prior to wrtg, 800 hrs practical exp, 36 lab hrs, Δ) (A-F only)
552697 1325-1730 MTWThF, Arch 220, 230, 12 cr

R 5241 Principles of Design Programming (prereq Arch maj or grad Arch stu, 5111/8253)
942393 1010-1205 M, Arch 15, 1010-1205 F, Arch 40, 4 cr

R 5281 Architecture Studio I: Fundamentals of Space and Form (prereq 3311, 3412, arch maj, or #) (A-F only)
★LECT 1325-1730 MWF, Arch 60, 6 cr
049111 —1 LAB 1325-1730 MWF, Arch 230

R 5282 Architecture Studio II: Structure and Order (prereq 3311, 3412, 5281, arch maj, or #) (A-F only)
★LECT 1325-1730 MWF, Arch 15, 6 cr
952115 —1 LAB 1325-1730 MWF, Arch 230
046290 —2 LAB 1325-1730 MWF, Arch 230
846291 —3 LAB 1325-1730 MWF, Arch 230

R 5283 Architecture Studio III: Site, Context and Form (prereq 5282, arch maj, or #) (A-F only)
150881 —1 LECT 1325-1730 MWF, Arch 230
✦248790 —1 LAB 1325-1730 MWF, Arch 230, 6 cr

R 5292 Architectural Design (prereq 5291, Arch maj or #) (A-F only)
★LECT 1325-1730 MWF, Arch 45, 6 cr
450814 —1 LAB 1325-1730 MWF, Arch 220

R 5351 AutoCAD I (prereq arch maj, 3081 or 8251 or #)
149746 1810-2120 W, Arch 145, 4 cr

R 5352 AutoCAD II (prereq arch maj, 5351 or #)
344441 0900-1230 S, Arch 145, 4 cr

R 5372 Intermediate Computer Methods in Architecture (prereq 5371, grad arch maj) (S-N only)
173786 Peterssen L, 1 cr

R 5375 Advanced Computer Methods in Architecture (prereq 5374, grad arch maj) (S-N only)
274774 Peterssen L, 1 cr

R 5382 Computer-Aids for Architectural Design (prereq arch or BED or LA maj) (A-F only)
★LECT 1325-1520 T, Arch 20, Anderson L, 4 cr
051280 —1 LAB 1325-1520 Th, Arch 145

R 5401 Principles of Design Theory (prereq grad arch maj or #) (A-F only)
573789 1535-1730 TTh, Arch 15, Jara C, 4 cr

R 5424 Renaissance Architecture in Italy (§5054; prereq 3411, arch maj or #) (A-F only)
171348 1010-1205 MW, Arch 30, Satkowski L, 4 cr

R 5452 Architecture: Thought and Design Process (prereq B.Arch or M.Arch or #) (A-F only)
945522 1535-1730 TTh, Arch 20, Dittmar G, 4 cr

R 5531 Lighting and Acoustic Design (§3065; prereq B Arch or BED or M Arch stu or #) (A-F only)
★LECT 1010-1205 M, Arch 35, 1010-1205 W, Arch 15, Guzowski M, 4 cr
947724 —1 LAB 1010-1205 F, Arch 35
851913 —2 LAB 1010-1205 F, Arch 30

R 5542 Building Energy Systems (§5966; prereq 5541, grad arch maj or #) (A-F only)
051912 0800-0955 TTh, Arch 20, Herzog P, 4 cr

R 5572 Theory and Design of Architectural Structures: Space, Span, Order (prereq 5511, 5521, B.Arch, M.Arch, or #) (A-F only)
750933 0800-0955 TTh, Arch 40, Franck B, 4 cr

R 5621 Professional Practice in Architecture (prereq arch or grad arch maj or #) (A-F only)
152704 0800-0955 WF, Arch 30, Scherer J, 4 cr

R 5970 Directed Study (prereq #)
151150 —1 Anderson L, ar cr
052655 —2 Clemence R, ar cr
042899 —3 Dittmar G, ar cr
349557 —4 Fisher T, ar cr
550724 —5 Grebner D, ar cr
050372 —6 Guzowski M, ar cr
147308 —7 Jara C, ar cr
244030 —8 LaVine L, ar cr
447962 —9 Morrish W, ar cr
844783 —10 Mulfinger D, ar cr
443538 —11 Piotrowski A, ar cr
341930 —12 Rauma J, ar cr
241693 —13 Robinson J, ar cr
551307 —14 Rockcastle G, ar cr
047214 —15 Satkowski L, ar cr
050257 —16 Solomonson K, ar cr
474773 —17 Weeks S, ar cr

R 8101 Seminar: Subjects and Methods in Architecture
171351 1220-1310 W, 1010-1205 F, Arch 20, Robinson J, 2 cr

R 8252 Graduate Architectural Design I (prereq grad status in architecture) (A-F only)
★LECT 1325-1730 MWF, Arch 45, 6 cr
843617 —1 LAB 1325-1730 MWF, Arch 220
151397 —2 LAB 1325-1730 MWF, Arch 220
342463 —3 LAB 1325-1730 MWF, Arch 220

R 8255 Graduate Architectural Design II (prereq grad status in architecture) (A-F only)
★LECT 1325-1730 MWF, Arch 20, 6 cr
148600 —1 LAB 1325-1730 MWF, Arch 210
650374 —2 LAB 1325-1730 MWF, Arch 210
946668 —3 LAB 1325-1730 MWF, Arch 210

R 8258 Graduate Architectural Design III (prereq grad status in architecture) (A-F only)
971800 —1 LECT 1325-1730 MWF, Arch 30
✦771801 —1 LAB 1325-1730 MWF, Arch 240, 6 cr
✦571802 —2 LAB 1325-1730 MWF, Arch 240, 6 cr

R 8777 Thesis Credits: Masters
151780 Anderson L, 1-16 cr

AREA STUDIES (Area)

Liberal Arts

3970 Directed Studies (prereq #, Δ, ❑)
050517 1-15 cr

3990 Directed Research (prereq #, Δ, ❑) (A-F only)
743061 1-15 cr

5504 Senior Project (prereq sr in department or #) (A-F only)
448609 1325-1510 M, BlegH 350, 4 cr

5504H Senior Project (prereq sr in department or #) (A-F only)
950347 1325-1510 M, BlegH 350, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
251155 1-15 cr

5990 Directed Research (prereq #, Δ, CLA approval) (A-F only)
347338 1-15 cr

ART (ArtS)

Liberal Arts

Materials fees are assessed at the time of registration for many Art courses. See page 26 for course numbers and fee amounts.

You must be on time for your first class meeting. If you are more than 15 minutes late, your instructor can assign your place in the course to another student.

NOTE: You must have permission from the instructor when you register for an Art course *after* the first class meeting.

R 1101 Drawing I (Vis)
★LECT 0905-1100 MW, ArtB 141, 4 cr
446939 —1 LAB 1100-1205 MW, ArtB 141, (ArtS, premaj ArtS, or MLK stu only)
847084 —2 LAB 1100-1205 MW, ArtB 141
★LECT 0905-1100 MW, ArtB 150, 4 cr
549489 —3 LAB 1100-1205 MW, ArtB 150, (ArtS, premaj ArtS, or MLK stu only)
651136 —4 LAB 1100-1205 MW, ArtB 150
★LECT 1325-1520 MW, ArtB 160, 4 cr
148894 —6 LAB 1520-1625 MW, ArtB 160
★LECT 0905-1100 TTh, ArtB 150, 4 cr
352667 —7 LAB 1100-1205 TTh, ArtB 150, (ArtS, premaj ArtS, or MLK stu only)
848462 —8 LAB 1100-1205 TTh, ArtB 150
★LECT 0905-1100 TTh, ArtB 160, 4 cr
750138 —10 LAB 1100-1205 TTh, ArtB 160
★LECT 1325-1520 TTh, ArtB 141, 4 cr
649130 —11 LAB 1520-1625 TTh, ArtB 141, (ArtS, premaj ArtS, or MLK stu only)
549024 —12 LAB 1520-1625 TTh, ArtB 141
674402 —7 LECT 1800-2200 M, ArtB 140, Caglioti, 4 cr
474403 —8 LECT 1800-2200 T, ArtB 140, Caglioti, 4 cr
274404 —9 LECT 1800-2200 W, ArtB 141, 4 cr
074400 —10 LECT 1800-2200 Th, ArtB 150, 4 cr
874401 —11 LECT 0830-1230 S, ArtB 160, 4 cr

R 1102 Drawing II (prereq 1101)
★LECT 0905-1100 TTh, ArtB 140, Cowette T, 4 cr
843648 —1 LAB 1100-1205 TTh, ArtB 140, Cowette T, (ArtS, premaj ArtS, or MLK stu only)
447007 —2 LAB 1100-1205 TTh, ArtB 140, Cowette T

R 1301 Sculpture (Vis)
★LECT 1325-1520 MW, ArtB 65, Baldwin G, 4 cr
849384 —1 LAB 1520-1625 MW, ArtB 65, Baldwin G, (ArtS, premaj Arts, or MLK stu only)
345041 —2 LAB 1520-1625 MW, ArtB 65, Baldwin G
★LECT 0905-1100 TTh, ArtB 65, Lucey S, 4 cr
245730 —3 LAB 1100-1205 TTh, ArtB 65, Lucey S, (ArtS, premaj ArtS, or MLK stu only)
251009 —4 LAB 1100-1205 TTh, ArtB 65, Lucey S
★LECT 1325-1520 TTh, ArtB 65, Lucey S, 4 cr
652237 —5 LAB 1520-1625 TTh, ArtB 65, Lucey S, (ArtS, premaj ArtS, or MLK stu only)
541425 —6 LAB 1520-1625 TTh, ArtB 65, Lucey S

R 1302 Sculpture (Vis)
★LECT 0905-1100 MW, ArtB 30, Rose T, 4 cr
142070 —1 LAB 1100-1205 MW, ArtB 30, Rose T, (ArtS, premaj ArtS, or MLK stu only)
248093 —2 LAB 1100-1205 MW, ArtB 30, Rose T
★LECT 1325-1520 TTh, ArtB 30, 4 cr
142688 —4 LAB 1520-1625 TTh, ArtB 30

R 1401 Introduction to Studio Arts (Vis; IP)
441594 —1 LECT 1430-1625 TTh, WilleyH 125, Lyon J, 4 cr

R 1404 Color (prereq 1101)
★LECT 0905-1100 MW, ArtB 140, 4 cr
345797 —1 LAB 1100-1205 MW, ArtB 140, (ArtS, premaj ArtS, or MLK stu only)
649368 —2 LAB 1100-1205 MW, ArtB 140

R 1510 Printmaking: Intaglio (max 8 cr) (Vis)
★LECT 0905-1100 TTh, ArtB 170, Bethke K, 4 cr
843326 —1 LAB 1100-1205 TTh, ArtB 170, Bethke K, (ArtS, premaj ArtS, or MLK stu only)
949067 —2 LAB 1100-1205 TTh, ArtB 170, Bethke K

R 1530 Printmaking: Relief (max 8 cr) (Vis)
★LECT 1325-1520 TTh, ArtB 170, Bethke K, 4 cr
543644 —1 LAB 1520-1625 TTh, ArtB 170, Bethke K, (ArtS, premaj ArtS, or MLK stu only)
746137 —2 LAB 1520-1625 TTh, ArtB 170, Bethke K

R 1602 Electronic Art (Vis)
★LECT 1325-1520 MW, AndH 250, 4 cr
648043 —1 LAB 1520-1625 MW, AndH 250, (ArtS, premaj ArtS, or MLK stu only)
544972 —2 LAB 1520-1625 MW, AndH 250
174405 —2 LECT 1800-2200 W, AndH 250, 4 cr
974406 —3 LECT 1800-2200 Th, AndH 250, 4 cr

R 1701 Photo Medium (Vis)
★LECT 1325-1520 MW, ArtB 120, Henkel J, 4 cr
747871 —1 LAB 1520-1625 MW, ArtB 120, Henkel J, (ArtS, premaj ArtS, or MLK stu only)
144165 —2 LAB 1520-1625 MW, ArtB 120, Henkel J
★LECT 0800-0955 MW, ArtB 120, 4 cr
173875 —4 LAB 0800-0955 F, ArtB 120
774407 —3 LECT 1800-2200 M, ArtB 120, 4 cr
574408 —4 LECT 1800-2200 T, ArtB 120, 4 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 1811 Ceramics: Handbuilding (Vis)
★LECT 1010-1205 MW, ArtB 10, 4 cr
550593 —1 LAB 0905-1010 MW, ArtB 10, (ArtS, premaj ArtS, or MLK stu only)
148371 —2 LAB 0905-1010 MW, ArtB 10

R 1812 Ceramics: Wheel Throwing (Vis)
★LECT 0905-1100 TTh, ArtB 10, Pharis M, 4 cr
046872 —1 LAB 1100-1205 TTh, ArtB 10, Pharis M, (ArtS, premaj ArtS, or MLK stu only)
042790 —2 LAB 1100-1205 TTh, ArtB 10, Pharis M

R 3105 Introduction to Painting (prereq 1101, 1102, 1401, 1404)
★LECT 1325-1520 MW, ArtB 151, 4 cr
147924 —1 LAB 1520-1625 MW, ArtB 151, (ArtS, premaj ArtS, or MLK stu only)
146000 —2 LAB 1520-1625 MW, ArtB 151
★LECT 1325-1520 TTh, ArtB 151, 4 cr
942314 —3 LAB 1520-1625 TTh, ArtB 151, (ArtS, premaj ArtS, or MLK stu only)
141184 —4 LAB 1520-1625 TTh, ArtB 151
374409 —3 LECT 1800-2200 W, ArtB 151, Caglioti, 4 cr

R 3110 Drawing (max 12 cr; prereq 1102, 1401)
★LECT 1325-1520 MW, ArtB 150, Morgan C, 4 cr
847957 —1 LAB 1520-1625 MW, ArtB 150, Morgan C, (ArtS, premaj ArtS, or MLK only)
442082 —2 LAB 1520-1625 MW, ArtB 150, Morgan C
774410 —2 LECT 1800-2200 Th, ArtB 141, 4 cr

R 3111 Imaging the Human Form (prereq 1102 or #)
★LECT 1325-1520 TTh, ArtB 161, Cowette T, 4 cr
173609 —1 LAB 1520-1625 TTh, ArtB 161, Cowette T, (ArtS, premaj ArtS, or MLK stu only)
073876 —2 LAB 1520-1625 TTh, ArtB 161, Cowette T

R 3120 Painting (max 12 cr; prereq 1101, 1102, 1401, 1404, 3105, 4 cr of 3110 or ¶3110)
★LECT 0905-1100 MW, ArtB 161, Roode W, 4 cr
447329 —1 LAB 1100-1205 MW, ArtB 161, Roode W, (ArtS, premaj ArtS, or MLK stu only)
543868 —2 LAB 1100-1205 MW, ArtB 161, Roode W

R 3160 Drawing and Electronic Media (max 12 cr; prereq 1401, 1602, 4 cr of 3110)
★LECT 0905-1100 MW, AndH 250, Katsiaficas D, 4 cr
972168 —1 LAB 1100-1205 MW, AndH 250, Katsiaficas D, (Arts, premaj Arts or MLK)
772169 —2 LAB 1100-1205 MW, AndH 250, Katsiaficas D

R 3301 Sculpture: Direct Metal (prereq 1301, 1302, 1401)
★LECT 0905-1100 MW, ArtB 65, Baldwin G, 4 cr
151772 —1 LAB 1100-1205 MW, ArtB 65, Baldwin G, (ArtS, premaj ArtS, or MLK stu only)
545720 —2 LAB 1100-1205 MW, ArtB 65, Baldwin G

R 3302 Sculpture: Spatial Projects and Problems (prereq 1301, 1302, 1401)
★LECT 1325-1520 MW, ArtB 30, Rose T, 4 cr
772172 —1 LAB 1520-1625 MW, ArtB 30, Rose T, (Arts, premaj Arts or MLK)
472148 —2 LAB 1520-1625 MW, ArtB 30, Rose T

R 3303 Sculpture: Cast Metal (prereq 1301, 1302, 1401)
574411 1800-2200 T, ArtB 185, 4 cr

3411H Honors: Tutorial (prereq honors program candidate, Δ) (A-F only)
147317 2-4 cr

3412H Honors: Tutorial (prereq honors program candidate, Δ) (A-F only)
150296 2-4 cr

3413H Honors: Cross-Media Project (prereq honors program candidate, Δ) (A-F only)
644042 2-4 cr

3414H Honors: Cross-Media Project (prereq honors program candidate, Δ) (A-F only)
149665 2-4 cr

3415H Honors: Thesis (prereq honors program candidate, Δ) (A-F only)
044751 2 cr

3416H Honors: Thesis (prereq honors program summa candidate, Δ) (A-F only)
545037 2 cr

R 3420 Studio Arts Workshop: Artists' Books: From Structure to Content
374412 1800-2200 T, ArtB 160, 4 cr

3444 Senior Project (prereq sr art studio maj, #, Δ) (S-N only)
052834 —1 Baldwin G, 2 cr
445371 —2 Bethke K, 2 cr
146703 —3 Cowette T, 2 cr
243542 —4 Feinberg D, 2 cr
844539 —6 Hallman G, 2 cr
151312 —7 Henkel J, 2 cr
045897 —8 Hoard C, 2 cr
847859 —9 Katsiaficas D, 2 cr
649435 —10 Krepps J, 2 cr
852284 —11 Lane T, 2 cr
352393 —12 Lucey S, 2 cr
143350 —13 Lyon J, 2 cr
172158 —14 Morgan C, 2 cr
842533 —15 Pharis M, 2 cr
448030 —17 Roode W, 2 cr
751581 —18 Rose T, 2 cr
949490 —19 2 cr

R 3510 Printmaking: Intaglio (max 12 cr; prereq 1401, 4 cr of 1510 or #)
★LECT 0905-1100 TTh, ArtB 170, Bethke K, 4 cr
742315 —1 LAB 1100-1205 TTh, ArtB 170, Bethke K

R 3530 Printmaking: Relief (max 12 cr; prereq 1401, 4 cr of 1530 or #)
★LECT 1325-1520 TTh, ArtB 170, Bethke K, 4 cr
445127 —1 LAB 1520-1625 TTh, ArtB 170, Bethke K

R 3602 Electronic Art (prereq 1401, 1602)
★LECT 0905-1100 TTh, AndH 250, 4 cr
472151 —1 LAB 1100-1205 TTh, AndH 250
174413 —2 LECT 1800-2200 M, AndH 250, 4 cr

3655 Video as an Art Form
174923 1800-2100 T, 3 cr (Walker Art Center Auditorium)

R 3710 Photography (max 16 cr; prereq 1401, 1701)
★LECT 1325-1520 TTh, ArtB 120, Hallman G, 4 cr
242794 —1 LAB 1520-1625 TTh, ArtB 120, Hallman G, (ArtS, premaj ArtS, or MLK stu only)
743982 —2 LAB 1520-1625 TTh, ArtB 120, Hallman G, (CLA students only)

R 3810 Intermediate Ceramics (max 12 cr; prereq 1401, 1811, 1812 or #)
★LECT 1325-1520 MW, ArtB 10, Hoard C, 4 cr
041624 —1 LAB 1520-1625 MW, ArtB 10, Hoard C, (ArtS, premaj ArtS, or MLK stu only)
952230 —2 LAB 1520-1625 MW, ArtB 10, Hoard C

R 3830 Glass: Introduction to Neon (max 12 cr; prereq 1401)
★LECT 1325-1520 MW, ArtB 186, Lane T, 4 cr
149351 —1 LAB 1520-1625 MW, ArtB 186, Lane T

3970 Directed Study (max 8 cr; prereq 24 cr studio arts, #, Δ, ❑)
051716 —1 Baldwin G, 1-5 cr
843567 —2 Bethke K, 1-5 cr
745618 —3 Cowette T, 1-5 cr
747093 —4 Feinberg D, 1-5 cr
642534 —6 Hallman G, 1-5 cr
747319 —7 Henkel J, 1-5 cr
152850 —8 Hoard C, 1-5 cr
146420 —9 Katsiaficas D, 1-5 cr
151254 —10 Krepps J, 1-5 cr
747580 —11 Lane T, 1-5 cr
347274 —12 Lucey S, 1-5 cr
442146 —13 Lyon J, 1-5 cr
072159 —14 Morgan C, 1-5 cr
247767 —15 Pharis M, 1-5 cr
147941 —17 Roode W, 1-5 cr
851281 —18 Rose T, 1-5 cr
147172 —19 1-5 cr

3980 Directed Instruction (max 8 cr; prereq #, Δ, ❑)
546303 —1 Baldwin G, 1-5 cr
744615 —2 Bethke K, 1-5 cr
545619 —3 Cowette T, 1-5 cr
442535 —6 Hallman G, 1-5 cr
442180 —7 Henkel J, 1-5 cr
543093 —8 Hoard C, 1-5 cr
946914 —9 Katsiaficas D, 1-5 cr
741293 —11 Lane T, 1-5 cr
149438 —12 Lucey S, 1-5 cr
242715 —13 Lyon J, 1-5 cr
372160 —14 Morgan C, 1-5 cr
350918 —15 Pharis M, 1-5 cr
751032 —17 Roode W, 1-5 cr
145454 —18 Rose T, 1-5 cr
550531 —19 1-5 cr

R 5110 Drawing (max 16 cr; prereq 12 cr of 3110 or #)
148175 —1 1325-1520 MW, ArtB 141, Roode W, 4 cr
074414 —2 1800-2200 Th, ArtB 141, 4 cr (no grad credit)

R 5120 Painting (max 16 cr; prereq 12 cr of 3120 or #)
048234 1010-1205 MW, ArtB 151, Morgan C, 4 cr

R 5160 Drawing and Electronic Media (max 16 cr; prereq 12 cr of 3160)
172170 0905-1100 MW, AndH 250, Katsiaficas D, 4 cr

5190 Advanced Entry: Drawing and Painting (max 16 cr; prereq #, Δ)
946704 —3 Cowette T, 4 cr
144540 —9 Katsiaficas D, 4 cr
242536 —13 Lyon J, 4 cr
172161 —14 Morgan C, 4 cr
951966 —17 Roode W, 4 cr

R 5310 Sculpture: Direct Metal (max 16 cr; prereq 3301)
548326 0905-1100 MW, ArtB 65, Baldwin G, 4 cr

R 5320 Sculpture: Spatial Projects and Problems (max 16 cr; prereq 3302)
272149 1325-1520 MW, ArtB 30, Rose T, 4 cr

R 5330 Sculpture: Cast Metal (max 16 cr; prereq 3303)
874415 1800-2200 T, ArtB 185, 4 cr (no grad credit)

5390 Advanced Entry: Sculpture (max 16 cr; prereq #, Δ)
147432 —1 Baldwin G, 4 cr
044541 —12 Lucey S, 4 cr
751967 —18 Rose T, 4 cr

R 5420 Studio Arts Workshop: Artists' Books: From Structure to Content
674416 1800-2200 T, ArtB 160, 4 cr (no grad credit)

R 5510 Printmaking: Intaglio (max 16 cr; prereq 12 cr of 3510 or #)
048721 0905-1100 TTh, ArtB 170, Bethke K, 4 cr

R 5530 Printmaking: Relief (max 16 cr; prereq 12 cr of 3530 or #)
343239 1325-1520 TTh, ArtB 170, Bethke K, 4 cr

5590 Advanced Entry: Printmaking (max 16 cr; prereq #, Δ)
944659 Bethke K, 4 cr

R 5710 Photography (max 16 cr; prereq 12 cr of 3710 or #)
150699 1010-1205 MW, ArtB 120, Henkel J, 4 cr

5790 Advanced Entry: Photography (max 16 cr; prereq #, Δ)
147768 —6 Hallman G, 4 cr
641478 —7 Henkel J, 4 cr

R 5810 Advanced Ceramics (max 16 cr; prereq 12 cr of 3810 or #)
444043 1325-1520 TTh, ArtB 10, Pharis M, 4 cr

R 5830 Glass: Neon (max 16 cr; prereq 12 cr of 3830)
149939 1325-1520 MW, ArtB 186, Lane T, 4 cr

5890 Advanced Entry: Ceramics/Glass (max 16 cr; prereq #, Δ)
945620 —8 Hoard C, 4 cr
942538 —11 Lane T, 4 cr
946167 —16 Pharis M, 4 cr

5970 Directed Studies (max 12 cr; prereq 24 cr studio arts, #, Δ, CLA approval)
745876 —1 Baldwin G, 1-5 cr
341362 —2 Bethke K, 1-5 cr
541294 —3 Cowette T, 1-5 cr
744307 —4 Feinberg D, 1-5 cr
150919 —6 Hallman G, 1-5 cr
948906 —7 Henkel J, 1-5 cr
043289 —8 Hoard C, 1-5 cr
149169 —9 Katsiaficas D, 1-5 cr
850051 —10 Krepps J, 1-5 cr
044667 —11 Lane T, 1-5 cr
343953 —12 Lucey S, 1-5 cr
347355 —13 Lyon J, 1-5 cr
072162 —14 Morgan C, 1-5 cr
748826 —15 Pharis M, 1-5 cr

041509 —17 Roode W, 1-5 cr
145910 —18 Rose T, 1-5 cr
043342 —19 1-5 cr

8110 Drawing (max 12 cr)
341295 —3 Cowette T, 4 cr
341619 —4 Feinberg D, 4 cr
550920 —9 Katsiaficas D, 4 cr
548827 —13 Lyon J, 4 cr
472165 —14 Morgan C, 4 cr
746705 —17 Roode W, 4 cr

8120 Painting (max 24 cr)
844542 —3 Cowette T, 4 cr
747322 —4 Feinberg D, 4 cr
742539 —9 Katsiaficas D, 4 cr
551968 —13 Lyon J, 4 cr
272166 —14 Morgan C, 4 cr
849837 —17 Roode W, 4 cr

R 8400 Concepts in Contemporary Art (prereq art studio grad or #)
841186 0905-1310 F, Lane T, 4 cr

8510 Printmaking (max 36 cr)
546270 —2 Bethke K, 4 cr
947769 —10 Krepps J, 4 cr

R 8710 Photography (max 24 cr)
745621 1010-1205 TTh, ArtB 120, Hallman G, 4 cr

R 8810 Ceramics (max 24 cr)
447041 1325-1520 TTh, ArtB 10, Pharis M, 4 cr

ART HISTORY (ArtH)
Liberal Arts

R 3009 History of Medieval Art
771393 —1 1010-1100 MWF, FolH 306, Steyaert J, 4 cr
973952 —2 1820-2050 M, JonesH 207B, Steyaert J, 4 cr

R 3013 Introduction to East Asian Art (§EAS 3013)
571394 —1 0945-1100 TTh, AndH 310, Poor R, 4 cr
773953 —2 1820-2050 Th, JonesH 207B, Poor R, 4 cr

R 3017 Islamic Culture (AH; IP)
371395 1415-1530 TTh, JonesH 207A, Asher C, 4 cr

R 3412 History of Architecture Since 1750 (§Arch 3412) (Vis; IP)
★LECT 1115-1230 TTh, NichH 45, Solomonson K, 4 cr
146930 —1 REC 0800-0850 M, Arch 20
341491 —2 REC 0800-0850 M, Arch 15
142710 —3 REC 0905-0955 M, Arch 20
850518 —4 REC 0905-0955 M, Arch 30
250412 —5 REC 0800-0850 W, Arch 20
749569 —6 REC 0905-0955 W, Arch 20
873958 —7 REC 0800-0850 F, Arch 20
673959 —8 REC 0905-0955 F, Arch 20

R 3422 History of Nineteenth-Century Graphic Arts (§5422)
171396 0945-1100 TTh, FolH 306, Weisberg G, 5 cr

R 3575 The Art of Walt Disney in American Culture
747742 0905-0955 MWF, WilleyH 125, Marling K A, 4 cr

3595 American Folk Art in the Twentieth Century
573954 1630-1700 Th, JonesH 207A, Foster H, 4 cr

R 3921 Art of the Film
045494 1325-1415 MW, 1325-1600 F, AndH 310, Silberman R, 4 cr

3940 Topics: Video as an Art Form (§5940, ArtS 3655)
373955 1800-2100 T, Jenkins B, 4 cr (Walker Art Center Auditorium)

3960 Topics: Modern Art in Europe: 1900-1940 (max 12 cr)
173956 1730-2000 W, FolH 306, Hancock J, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
643067 1-5 cr

3971 Major Project (prereq ArtH maj, #...Comp 3013 rec) (A-F only)
147429 1 cr

R 5104 Roman Architecture (§Clas 5104; prereq jr or sr or #)
071397 1325-1415 MWF, FolH 306, McNally S, 5 cr

R 5113 Archaic and Classical Greek Art and Archaeology (§Clas 5113; prereq jr or sr or #)
871398 1245-1400 TTh, JonesH 207A, Cooper F, 4 cr

R 5463 Early 20th-Century Painting (prereq one modern art course or #)
671399 1415-1530 TTh, JonesH 207B, Weisberg G, 5 cr

R 5766 Chinese Painting
171401 1245-1400 TTh, JonesH 207B, Poor R, 5 cr

R 5781 Age of Empire: The Mughals, Ottomans, Safivids
071402 1115-1230 TTh, JonesH 207B, Asher C, 4 cr

R 5925 History of Photography as Art (prereq 3012 or #)
871403 1115-1205 MWF, JonesH 207B, Silberman R, 4 cr

5940 Topics: Video As An Art Form (§3940, ArtS 3655; prereq 3921-3922 or #)
073957 1800-2100 T, Jenkins B, 4 cr (Walker Art Center Auditorium)

5970 Directed Readings (prereq sr, #, Δ, CLA approval)
150080 1-5 cr

5990 Directed Research (prereq sr, #, Δ, CLA approval)
651234 1-5 cr

R 8190 Seminar: Computer Applications in Art History and Archaeology (§Clas 8190; prereq #) (A-F only)
371400 1500-1700 Th, JonesH 202, Cooper F, 4 cr

R 8340 Seminar: Caravaggio (prereq #)
671404 1415-1615 T, JonesH 202, Stoughton, 4 cr

R 8520 Seminar: American Art: Building Disney's Lands: Postmodernism and Theme Parks (§AmSt 8970; prereq #)
471405 1325-1525 M, JonesH 202, Marling K A, 4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
152629 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
141458 1-36 cr

8970 Directed Studies (prereq #)
342172 1-5 cr

8975 Directed Museum Studies (prereq #)
344326 1-3 cr

ASTRONOMY (Ast)
Institute of Technology

R 1015 Descriptive Astronomy Laboratories (§1025H; prereq high school algebra...high school trigonometry rec)
745070 —1 LAB 1710-1855 M, Phys 450, 1 cr
350580 —2 LAB 2020-2205 M, Phys 450, 1 cr
442809 —3 LAB 1900-2045 T, Phys 450, 1 cr

R 1031 Exploring the Universe: A (Phys/NL; Envt)
✦843892 —1 LECT 0905-0955 MTW, Phys 166, Humphreys R M, 4 cr
✦447217 —2 LECT 1010-1100 MTW, Phys 150, Kuhi L, 4 cr
✦443281 —3 LECT 1115-1205 MTW, Phys 166, Kuhi L, 4 cr
✦172189 —4 LECT 1900-2015 MW, Phys 150, Davidson K, 4 cr
Registration in one of the following REC sections is also required:
448206 —1 REC 1800-1850 M, Phys B49
344827 —2 REC 2025-2115 M, Phys B49
949974 —3 REC 1325-1415 W, Phys B49
347369 —4 REC 1800-1850 W, Phys B49
247218 —5 REC 2025-2115 W, Phys B49
947528 —6 REC 0905-0955 Th, Phys B49
843102 —7 REC 1010-1100 Th, Phys B49
743741 —8 REC 1115-1205 Th, Phys B49
243430 —9 REC 1220-1310 Th, Phys B49
144828 —10 REC 1325-1415 Th, Phys B49
872194 —11 REC 0905-0955 F, Phys B49
672195 —12 REC 1010-1100 F, Phys B49
472196 —13 REC 1115-1205 F, Phys B49
272197 —14 REC 1220-1310 F, Phys B49

R 1032 Exploring the Universe: L (Phys/L; Envt)
✦148502 —1 LECT 0905-0955 MTW, Phys 166, Humphreys R M, 4 cr
✦850275 —2 LECT 1010-1100 MTW, Phys 150, Kuhi L, 4 cr
✦545457 —3 LECT 1115-1205 MTW, Phys 166, Kuhi L, 4 cr
✦072193 —4 LECT 1900-2015 MW, Phys 150, Davidson K, 4 cr
Registration in one of the following LAB sections is also required:
172198 —1 LAB 1010-1155 M, Phys 450
852706 —2 LAB 1220-1405 M, Phys 450
447296 —3 LAB 1430-1615 M, Phys 450
044989 —4 LAB 1710-1855 M, Phys 450
344200 —5 LAB 2020-2205 M, Phys 450
541960 —6 LAB 1010-1155 T, Phys 450
745456 —7 LAB 1220-1405 T, Phys 450
541568 —8 LAB 1600-1745 T, Phys 450
944354 —9 LAB 1900-2045 T, Phys 450
243282 —10 LAB 1010-1155 W, Phys 450
451199 —11 LAB 1220-1405 W, Phys 450
042112 —12 LAB 1430-1615 W, Phys 450
345914 —13 LAB 1710-1855 W, Phys 450
972199 —14 LAB 2020-2205 W, Phys 450
672200 —15 LAB 1010-1155 Th, Phys 450
472201 —16 LAB 1220-1404 Th, Phys 450
372272 —17 LAB 1010-1155 F, Phys 450
172273 —18 LAB 1220-1405 F, Phys 450

R 1040 Mathematics and Our Universe (Math)
★LECT 1010-1100 WThF, Phys 131, Rudnick L, 4 cr
947738 —1 REC 0905-0955 M, Phys B49
045589 —2 REC 1010-1100 M, Phys B49
142464 —3 REC 0905-0955 T, Phys B49
747739 —4 REC 1010-1100 T, Phys B49

R 3970 Directed Studies (prereq #, Δ)
544891 1-5 cr

R 5062 Computational Methods in the Physical Sciences II (§Phys 5062; prereq IT/CLA upper div or grad, 5061 or Phys 5061 or #)
550321 1115-1300 Th, Phys 210, Woodward P, 4 cr

R 5165 Cosmology (prereq Phys 3513 or #)
572190 1325-1430 MWF, Phys 143, Olive K, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5299H Senior Honors Astrophysics Research Seminar (prereq IT or CLA upper div honors stu, #) (S-N only)
650133 1430-1630 F, Phys 131, 1 cr

R 5970 Directed Studies (prereq #, Δ)
144773 1-5 cr

R 5990 Directed Research (prereq #, Δ)
944340 ar cr

R 8200 Seminar
145932 1430-1630 F, Phys 131, 1-3 cr

R 8482 Topics in Astrophysics: Astrophysical Fluid Dynamics (prereq #)
851832 1415-1530 TTh, Phys 143, Jones T W, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
346142 1-18 cr

8777 Thesis Credits: Masters
250541 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
346271 1-36 cr

8990 Research in Astronomy and Astrophysics (prereq #)
843259 ar cr

BIOCHEMISTRY (BioC)
Biological Sciences

R 1401 Elementary Biochemistry (§3001; prereq Chem 1001 or 1 qtr college chem) (Biol/NL)
646146 1430-1520 MTWF, ClaOff B45, Lovrien R, 4 cr

R 3021 Biochemistry (§Biol 5001; prereq Biol 1009, 8 cr organic chem)
652397 —1 0800-0905 MWF, ClaOff B45, Anderson J, 4 cr
448805 —2 1220-1325 MWF, BorH 335, Anderson J, 4 cr
245677 —3 1730-1910 MW, ClaOff B45, Arneson M, 4 cr

3960 Research Topics in Biochemistry (S-N only)
442969 1535-1625 Th, GorL 342, Raftery M, 1 cr

R 5025 Laboratory in Biochemistry (prereq 3021 or ¶3021 or 5331 or ¶5331 or Biol 5001 or ¶Biol 5001)
★LECT 1145-1235 T, HodsonH 495
150315 —1 LAB 0800-1140 T, BioSci 192, 198, Fuchs J, 2 cr
952566 —2 LAB 1240-1620 T, BioSci 192, 198, Fuchs J, 2 cr
★LECT 1730-1820 T, ClaOff B25, Conti-Fine B
243377 —3 LAB 1830-2210 T, BioSci 192, 198, 2 cr

5301 Ecological Biochemistry (prereq 3021 or 5331 or #) (Envt)
642937 1010-1100 MWF, GorL 239, Wackett L, 3 cr

5332 Energy and Signal Transduction in Biological Systems (prereq 5331 or #)
249163 1325-1430 MWF, ClaOff B35, Barry B, Bernlohr D, 4 cr

5970 Directed Studies (max 10 cr may count toward maj req; prereq #, Δ) (S-N only)
142917 ar cr

5990 Directed Research (max 10 cr may count toward maj req; prereq #, Δ) (S-N only)
650391 ar cr

8002 Advanced Biochemistry II: Molecular Biology (§5753, MdBc 8002; prereq 8001 or McBc 8001 or #)
745845 —1 LECT 0800-0920 MWF, FScN 15, Siliciano P, Das A, 4 cr (non-biochem maj only)
047245 —2 LECT 0800-0920 MWF, FScN 15, Siliciano P, Das A, 5 cr
★REC 0800-0920 Th, ClaOff B35

8094 Research and Literature Reports (S-N only)
151262 1200-1300 F, GorL 239, Bloomfield V, 1 cr

8194 Graduate Seminar (S-N only)
341605 1600-1730 W, BorH 335, Das A, 1 cr

R 8214 Advanced Molecular Biology II (§MdBc 8214, GCB 8214; prereq 8002 or MdBc 8002 or GCB 8132 or #)
648494 0905-1045 MW, BioSci 406, Rougvie A, Bernlohr D, others, 4 cr

8230 Membrane Biochemistry (§MdBc 8230; prereq 8001 or #)
051165 1535-1715 TTh, MoosT 2571, 2585, Thomas D, Barry B, 3 cr (Mpls)

8290 Current Research Techniques (prereq grad maj in biochem) (S-N only)
345282 1-3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
145459 1-18 cr

8777 Thesis Credit: Masters
845108 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
342169 1-36 cr

BIOCHEMISTRY, MEDICAL (MdBc)
Medical School

5053 Problems in Biochemistry (prereq Δ; biochem grad maj must register S-N)
052395 Towle H, 1-10 cr

5101 Human Nutrition (prereq 5100) (S-N only)
743979 1 cr (Jan 2-Mar 16)

5202 Biochemistry for Dental Students (prereq regis dent stu) (A-F only)
150368 0905-0955 MWF, MoosT 2620, Roon R, Oegema T, others, 3 cr

5301 Biochemistry of Physiological Processes (prereq 5300 or #, recommended for med tech grad stu)
142781 1010-1100 MWF, OwreH 2230, Roon R, Oegema T, others, 3 cr

R 5461 Cellular and Molecular Neuroscience (§GCB 5461, NSc 5461, Phcl 5461, Phsl 5461, VB 5461; prereq 5460)
773838 1010-1100 TWF, MoosT 2580, Boland L, Koerner J, 3 cr

5526 Physical Biochemistry: Spectroscopic Methods I (§BioC 5526, Chem 5526; prereq 2 qtrs physical chemistry)
651153 1325-1520 TTh, PWB 6210, Mayo K, Armitage I, 4 cr

R 5528 Physical Biochemistry: Enzyme Kinetics (§BioC 5528; prereq 2 qtrs of phys chem ...8001 or BioC 8001 or BioC 5331 or equiv desirable)
973837 0945-1100 TTh, PWB 6210, Lipscomb J, 4 cr

5532 Macromolecular Crystallography: Techniques (prereq 5531) (S-N only)
346979 1535-1625 F, MoosT 2672, Ohlendorf D, 1 cr

8002 Advanced Biochemistry II: Molecular Biology (§5753, BioC 8002; prereq 8001 or BioC 8001 or #)
449033 —1 LECT 0800-0920 MWF, FScN 15, Siliciano P, Das A, 4 cr (StP) (non-biochem maj only)
941941 —2 LECT 0800-0920 MWF, FScN 15, Siliciano P, Das A, 5 cr (StP)
★REC 0800-0920 Th, ClaOff B35, Siliciano P, Das A, (StP)

8094 Research and Literature Reports (prereq biochem grad stu or #) (S-N only)
745344 1220-1310 T, OwreH 4218, 1 cr

R 8214 Advanced Molecular Biology II (§BioC 8214, GCB 8214; prereq 8002 or BioC 8002 or GCB 8132 or #)
341653 0905-1045 MW, BioSci 406, Livingston D, Rougvie A, 4 cr (StP)

8230 Membrane Biochemistry (§BioC 8230; prereq 8001 or BioC 8001 or #)
652674 1545-1715 TTh, MoosT 2571, 2585, Thomas D, others, 3 cr

8290 Current Research Techniques (prereq grad maj in biochem, #) (S-N only)
946458 1-3 cr

BIOLOGY (Biol)
Biological Sciences

R 1009 General Biology (prereq high schl chem recommended) (Biol/L)
★LECT 0800-0850 MWF, WilleyH 175, Schottel J
847893 —1 LAB 0800-0945 TTh, KoltH S160, 5 cr
441532 —2 LAB 0800-0945 TTh, KoltH S167, 5 cr
448450 —3 LAB 0800-0945 TTh, KoltH S170, 5 cr
451770 —4 LAB 1010-1155 TTh, KoltH S160, 5 cr
342690 —5 LAB 1010-1155 TTh, KoltH S167, 5 cr
843018 —6 LAB 1220-1405 TTh, KoltH S167, 5 cr
652500 —7 LAB 1220-1405 TTh, KoltH S170, 5 cr
951689 —8 LAB 1430-1615 TTh, KoltH S160, 5 cr
348165 —9 LAB 1010-1155 WF, KoltH S160, 5 cr
947416 —10 LAB 1010-1155 WF, KoltH S167, 5 cr
842936 —11 LAB 1220-1405 WF, KoltH S160, 5 cr
252578 —12 LAB 1220-1405 WF, KoltH S167, 5 cr
★LECT 1220-1310 MWF, MoosT 2650, Hoover E
450134 —13 LAB 0800-0945 TTh, KoltH S177, 5 cr
045009 —14 LAB 1010-1155 TTh, KoltH S170, 5 cr
346965 —15 LAB 1010-1155 TTh, KoltH S177, 5 cr
048251 —16 LAB 1220-1405 TTh, KoltH S177, 5 cr
851524 —17 LAB 1430-1615 TTh, KoltH S167, 5 cr
950364 —18 LAB 1430-1615 TTh, KoltH S170, 5 cr
944189 —19 LAB 1430-1615 TTh, KoltH S177, 5 cr
347971 —20 LAB 0800-0945 WF, KoltH S160, 5 cr
048394 —21 LAB 0800-0945 WF, KoltH S167, 5 cr
245372 —22 LAB 1010-1155 WF, KoltH S170, 5 cr
143209 —23 LAB 1010-1155 WF, KoltH S177, 5 cr
271891 —24 LAB 1430-1615 WF, KoltH S160, 5 cr
★LECT 1800-1915 TTh, MoosT 2620, Olfelt J
573839 —25 LAB 1930-2115 TTh, KoltH S160, 5 cr

R 1009H General Biology (prereq honors division or 3-4 yrs high school math, high school chem or Δ)
★LECT 1220-1310 MWF, MoosT 2650, Hoover E
145163 —81 LAB 1220-1405 TTh, KoltH S160, 5 cr

R 1051 Environmental Studies (§3051, ES 1051) (Biol/NL; Envt)
★LECT 1325-1415 MW, FScN 15, Cunningham W, (StP)
449260 —1 REC 1220-1310 Th, BioSci 260, Cunningham W, 4 cr (StP)
742119 —2 REC 1220-1310 Th, GorL 342, 4 cr (StP)
150113 —3 REC 1325-1415 Th, BioSci 260, 4 cr (StP)
152114 —4 REC 1640-1730 Th, BioSci 260, 4 cr (StP)
851734 —5 REC 1325-1415 F, BioSci 260, 4 cr (StP)
152632 —6 REC 1325-1415 F, GorL 342, 4 cr (StP)
446147 —7 REC 1430-1520 F, BioSci 260, 4 cr (StP)
751287 —8 REC 1430-1520 F, GorL 342, 4 cr (StP)

1101 Heredity and Human Society (§GCB 3002, no cr if taken after 5003 or GCB 3022) (Biol/NL; C/PE)
751676 1220-1310 MTWTh, WilleyH 125, Fan D, 4 cr

R 1103 General Botany (§3012; prereq 1009) (Biol/L)
★LECT 1220-1310 MWF, ClaOff B35, Wetmore C, (StP)
851152 —1 LAB 1010-1310 T, BioSci 176, 5 cr (StP)
947500 —2 LAB 1325-1625 T, BioSci 176, 5 cr (StP)
247347 —3 LAB 1325-1625 W, BioSci 176, 5 cr (StP)
351552 —4 LAB 1010-1310 Th, BioSci 176, 5 cr (StP)
047391 —5 LAB 1325-1625 Th, BioSci 176, 5 cr (StP)

R 1106 General Zoology (§1806; prereq 1009 or 1202) (Biol/L)
★LECT 0800-0850 MWF, BorH 335, Schmid W, (StP)
945021 —1 LAB 0800-1100 T, BioSci 182, 5 cr (StP)
150144 —2 LAB 1220-1520 T, BioSci 182, 5 cr (StP)
145316 —3 LAB 0905-1205 W, BioSci 182, 5 cr (StP)
044927 —4 LAB 1220-1520 W, BioSci 182, 5 cr (StP)
352345 —5 LAB 0800-1100 Th, BioSci 182, 5 cr (StP)
147163 —6 LAB 1220-1520 Th, BioSci 182, 5 cr (StP)

R 1201 Evolutionary and Ecological Perspectives (§1008; no chem background required) (Biol/L)
★LECT 1220-1310 MWF, WilleyH 175, Corbin K
147146 —1 LAB 0905-1205 T, KoltH S179, 5 cr
651198 —2 LAB 0905-1205 T, KoltH S183, 5 cr
346285 —3 LAB 0905-1205 T, KoltH S187, 5 cr
649404 —4 LAB 1325-1625 T, KoltH S179, 5 cr
846436 —5 LAB 1325-1625 T, KoltH S183, 5 cr
943429 —6 LAB 1325-1625 T, KoltH S187, 5 cr
144675 —7 LAB 0905-1205 W, KoltH S183, 5 cr
441658 —8 LAB 0905-1205 W, KoltH S187, 5 cr
351728 —9 LAB 1325-1625 W, KoltH S179, 5 cr
149097 —10 LAB 1325-1625 W, KoltH S183, 5 cr
247607 —11 LAB 1325-1625 W, KoltH S187, 5 cr
247297 —12 LAB 0905-1205 Th, KoltH S179, 5 cr
545149 —13 LAB 0905-1205 Th, KoltH S187, 5 cr
241659 —14 LAB 1325-1625 Th, KoltH S179, 5 cr
652240 —15 LAB 1325-1625 Th, KoltH S183, 5 cr
342298 —16 LAB 1325-1625 Th, KoltH S187, 5 cr
944435 —17 LAB 0905-1205 F, KoltH S179, 5 cr
142299 —18 LAB 1325-1625 F, KoltH S179, 5 cr
641173 —19 LAB 1325-1625 F, KoltH S183, 5 cr

R 1202 Molecular and Cellular Perspectives (§1009; prereq 1201, Chem 1051 or equiv)
★LECT 1220-1310 MWF, HodsonH 495, Gleason F, Berman J, (StP)
★REC 1325-1415 F, HodsonH 495, (StP)
448576 —1 LAB 0905-1205 MW, BioSci 192, 5 cr (StP)
343015 —2 LAB 1325-1625 MW, BioSci 192, 5 cr (StP)
951367 —3 LAB 1325-1625 MW, BioSci 198, 5 cr (StP)
348862 —4 LAB 1730-2030 MW, BioSci 192, 5 cr

R 1952 Biology Colloquium (S-N only)
447427 —1 1430-1625 M, Phys 131, Hanna K, 1 cr
146465 —2 1535-1730 T, Phys 210, Hanna K, 1 cr
144036 —3 1430-1625 W, BorH 365, Hanna K, 1 cr (StP)

R 1960 Biology Colloquium Project (prereq 1951 or 1952 or 1953, ¶1951 or ¶1952 or ¶1953, #) (S-N only)
849823 Hanna K, 1 cr

R 1961 Careers in Biology (prereq 1951 or 1952 or 1953) (S-N only)
646583 1430-1600 Th, GorL 239, Peterson K, Winkel A, 1 cr

R 3003 Introduction to Computing in Biology (prereq 1009 or 1202 or equiv, declared biosci maj) (S-N only)
845058 —1 1430-1625 Th, BioSci 406, Phillips J, 2 cr (StP)
550688 —2 1430-1625 F, BioSci 406, Phillips J, 2 cr (StP)

R 3008 Ecology and Evolution (§5041, 5841; prereq 1009 or 1201, Math 1142 or Math 1251) (A-F only)
★LECT 1010-1100 MWF, ClaOff B45, Shaw R, (StP)
973546 —1 LAB 0800-1100 T, BioSci 6, 4 cr (StP)
773547 —2 LAB 1115-1415 T, BioSci 6, 4 cr (StP)
573548 —3 LAB 1220-1520 W, BioSci 6, 4 cr (StP)
373549 —4 LAB 0800-1100 Th, BioSci 6, 4 cr (StP)
773550 —5 LAB 1220-1520 Th, BioSci 6, 4 cr (StP)
573551 —6 LAB 1220-1520 F, BioSci 6, 4 cr (StP)

R 3011 Animal Biology (§1106, 1806; prereq 1009 or 1202, Chem 1052)
★LECT 0905-0955 MWF, BorH 335, (StP)
043471 —1 LAB 0905-1045 TTh, BioSci 107, 5 cr (StP) (labs begin T, Jan 7)
151562 —2 LAB 1220-1400 TTh, BioSci 107, 5 cr (StP) (labs begin T, Jan 7)
950090 —3 LAB 1430-1610 TTh, BioSci 107, 5 cr (StP) (labs begin T, Jan 7)
342124 —4 LAB 1800-1940 TTh, BioSci 107, 5 cr (StP) (labs begin T, Jan 7)
643859 —5 LAB 1010-1150 WF, BioSci 107, 5 cr (StP) (labs begin W, Jan 8)
952213 —6 LAB 1325-1505 WF, BioSci 107, 5 cr (StP) (labs begin W, Jan 8)

R 3012 Plant Biology (§1103, 3812; prereq 1009 or 1202, Chem 1052)
★LECT 1115-1205 MWF, GrnH 110, Charvat I, (StP)
345752 —1 LAB 0905-1100 MW, BioSci 163, 5 cr (StP)
542980 —2 LAB 0905-1100 MW, BioSci 151, 5 cr (StP)
652058 —3 LAB 1220-1415 MW, BioSci 163, 5 cr (StP)
346917 —4 LAB 1220-1415 MW, BioSci 151, 5 cr (StP)
652092 —5 LAB 1430-1625 MW, BioSci 163, 5 cr (StP)

3111 Animal Biology (§3011; prereq 1106 or 1806 and Chem 1052)
146166 0905-0955 MWF, BorH 335, 4 cr (StP) (addtl 1 hr ar)

R 3950H Undergraduate Seminar (S-N only)
552120 —81 1325-1505 T, BioSci 260, 2 cr (GCB) (StP)
246196 —82 1325-1505 M, BioSci 260, Herman W, 2 cr (GCB) (StP)
051022 —83 1430-1610 T, BioSci 70, McNaught D, 2 cr (EEB) (StP)
974924 —84 1430-1610 W, BioSci 648, Wick S, 2 cr (StP)

3980 Directed Instruction (max 8 cr; prereq #) (S-N only)
349414 Hanna K, 1-3 cr

5003 Genetics (§GCB 3022, GCB 5022; prereq 5001 or BioC 3021 or BioC 5331)
648396 1325-1430 MWF, McNH 33, Snustad P, 4 cr (StP)

5004 Cell Biology (prereq 5001 or BioC 3021 or BioC 5331, 5003 or BioC 5333)
743240 1800-1940 TTh, BorH 335, Brambl R, 4 cr (StP)

R 5013 Microbiology (§MicB 3103, 5105, VPB 3103; prereq 5001 or BioC 3021 or Bioc 5331)
★LECT 1245-1400 TTh, MoosT 2530, Sherman D, 5 cr
043003 —1 LAB 0905-1100 TTh, MoosT 2252, Sherman D

R 5950 Special Topics in Biology
745893 1245-1400 TTh, Ecology 505, Naeem S, 5 cr (StP)

BIOMEDICAL ENGINEERING (BMEn)

Institute of Technology and Medical School

R 5002 Biomaterials II (§MatS 5483; prereq upper div IT or grad or med stu or #) (A-F only)
152064 1430-1630 MW, MechE 221, Hubel A, 3 cr

5950 Bioelectric Measurements (prereq Phsl 5441, calculus, college physics)
750334 1010-1130 TTh, ChRC R208, Patterson R, 3 cr

8002 Internship in Biomedical Engineering (prereq biomed engineering grad stu or Δ) (S-N only)
647099 Tirell M, 3 cr

R 8100 Biomedical Engineering Seminar (S-N only)
449937 —1 1535-1635 T, MechE 108, Finkelstein S, 1 cr

R 8200 Biomedical Engineering Seminar (S-N only)
852754 —1 1535-1635 T, MechE 108, Finkelstein S, 1 cr

R 8300 Biomedical Engineering Seminar (S-N only)
145722 —1 1535-1635 T, MechE 108, Finkelstein S, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
749541 1-18 cr

8770 Plan B Project (no cr toward PhD; prereq #) (A-F only)
551016 4 cr

8777 Thesis Credit: Masters
445774 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
945276 1-36 cr

8970 Independent Study (prereq #) (A-F only)
147969 Tirrell M, 1-4 cr

8990 Directed Research (prereq #) (A-F only)
644719 Tirrell M, 1-4 cr

BIOMEDICAL SCIENCE (BMSc)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
845903 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
749913 1-36 cr

8990 Research: Biomedical Science (prereq student enrolled in MD/PhD Program)
646471 ar cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

BIOPHYSICAL SCIENCES (BPhy)
Medical School

R 5138 Seminar: Biophysical Sciences
551548 —1 1600-1705 F, MoosT 5125, Geise R, ar cr

5156 Biophysics (prereq 28 cr between physics, biology, #...physical chemistry, physiology rec)
050498 1325-1520 TTh, MusEd 2, Schmitt O, 3 cr

R 5171 Physics of Nuclear Medicine (§Rad 5171, TRad 5171; prereq 5170, #)
741830 —1 0905-1035 TTh, MoosT 1752, Ritenour E, 3 cr

5173 Physics of Radiation Therapy (§Rad 5173, TRad 5173; prereq 5170 or #)
848039 1600-1715 M, 0730-0845 W, Khan F, 3 cr

8222 Research
152467 ar cr

8297 Seminar
743674 1430-1625 F, MusEd 2, Schmitt O, ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
344357 1-18 cr

8777 Thesis Credits: Masters
651542 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
644283 1-36 cr

BIOSYSTEMS AND AGRICULTURAL ENGINEERING (BAE)
Institute of Technology

3031 Computations in Biosystems and Agricultural Engineering (prereq IT stu or pre-BAE maj, CSci 3101, CSci 3102, or CSci 3113, Math 3261 or ¶Math 3261)
★LECT 0815-0930 TTh, BioAgEng 308, Morey R
249843 —1 LAB 1535-1730 W, BioAgEng 105, Morey R, 4 cr

3970 Directed Studies in Biosystems and Agricultural Engineering (prereq #)
347761 1-5 cr

5050 Intern Reports (prereq IT or CAFES stu in BAE, #) (S-N only)
445614 Chaplin J, 2 cr

5140 Thermal Processes for Food (prereq IT upper div or grad IT maj, ME 5342 or ChEn 5103)
642517 1325-1515 TTh, LindH 216, Bhattacharya M, 4 cr (Mpls)

5191 Special Problems in Biosystems and Agricultural Engineering (prereq #)
841284 1-5 cr

5192 Special Problems in Biosystems and Agricultural Engineering (prereq 5191, #)
850907 1-5 cr

R 5550 Water Management Engineering (prereq 3052 or CE 3300, CE 3400, IT upper div or grad IT)
★LECT 1115-1245 MW, BioAgEng 308, Nieber J
046693 —1 LAB 1220-1450 T, BioAgEng 308, Nieber J, 4 cr

R 5560 Mechanics of Flow in the Unsaturated Zone (prereq upper div IT or grad IT or grad CAFES stu, Soil 5232, Math 3261, or #)
442518 1800-2130 M, BioAgEng 106, Nieber J, 4 cr

5892 Senior Design II (prereq 5891)
641285 1535-1730 MTh, BioAgEng 106, Chaplin J, 3 cr

R 5910 Agricultural Waste Management Engineering (prereq IT upper div or grad IT maj, 3052)
★LECT 0945-1100 TTh, BioAgEng 308, Clanton C
048816 —1 LAB 1430-1730 W, BioAgEng 315, Clanton C, 4 cr

8190 Advanced Problems and Research (prereq 5191, 5192, Δ)
846694 2-6 cr

8191 Advanced Problems and Research (prereq 5191, 5192, Δ)
944533 2-6 cr

8192 Advanced Problems and Research (prereq 5191, 5192, Δ)
242519 2-6 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
851958 1-18 cr

8777 Thesis Credits: Masters
949831 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
147762 1-36 cr

BUILDING SCIENCES (Bldg)

8000 Topics in Building Science (prereq bldg sci minor or #)
141579 1415-1530 TTh, 1425Univ 255, Grimsrud D, 3 cr

BUSINESS ADMINISTRATION (BA)
Management

R 1001 Information Technology Skills (prereq Carlson SMgmt stu) (S-N only)
274886 1325-1505 F, BlegH 230, 2 cr

R 1350 Introduction to Business and Business Careers (prereq 45 crs, CSOM stu) (A-F only)
★LECT 0905-1020 MW, BlegH 155
274287 —1 LAB 0815-0905 Th, BlegH 225, 4 cr
174288 —2 LAB 0945-1035 Th, BlegH 240, 4 cr

R 1550 Business Statistics: Data Sources, Presentation, and Analysis (prereq 30 cr completed, Math 1111 or equiv) (A-F only)
973966 —1 1010-1155 MW, BlegH 235, 4 cr
773967 —2 1325-1510 MW, BlegH 235, 4 cr

R 3000 Professional Skills (prereq soph, completion of 39 cr) (S-N only)
673962 1245-1425 Th, BlegH 230, 2 cr

R 3040 International Environment of Business (prereq Mgmt 3001, 90 cr completed) (A-F only)
672505 —1 1010-1155 TTh, BlegH 230, 4 cr
472506 —2 1325-1510 TTh, BlegH 215, 4 cr

R 3998 Independent Study (prereq SMgt approval)
542090 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
444916 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
442020 1-36 cr

BUSINESS AND INDUSTRY EDUCATION (BIE)
Work, Community, and Family Education
Education and Human Development

R 1100 Technical Drawing (§Ind 1000) (A-F only)
874558 1220-1320 TTh, VoTech 110, 3 cr

R 1302 Supervised Vocational-Technical Teaching (§Ind 1302; prereq #) (S-N only)
173688 3 cr

R 3060 Professional Sales Management (§BME 3260, BME 5260) (A-F only)
943284 0815-1100 T, VoTech R285, 3 cr

R 3140 Transportation Systems (§Ind 3032) (A-F only)
471419 0815-1100 MW, VoTech 120, 3 cr

3150 Technical Development: Advanced (§Ind 3200; max 18 cr; prereq #) (A-F only)
742038 1-12 cr

3900 Independent Study (§Ind 3900; prereq #)
143436 3 cr

R 5020 Spreadsheet Analysis Using Microcomputers in Business and Industry Education (prereq 5010 or equiv) (A-F only)
947299 1535-1805 W, ClaOff 17, 3 cr

R 5025 Teaching Microcomputer Graphics in Business and Industry (§BME 5335; prereq 5010 or equiv) (A-F only)
348053 1535-1805 T, ClaOff 135, 3 cr

5150 Technical Development: Specialized (§Ind 5200; max 18 cr; prereq #) (A-F only)
044832 Nilsen G, 1-12 cr

R 5300 Organizational Needs Assessment (§HRD 5300) (A-F only)
151052 1600-1830 Th, PeikH 165, Stone J, 3 cr (Mpls)

R 5301 Student and Trainee Evaluation Systems (§HRD 5301, Ind 5301) (A-F only)
149334 1600-1830 M, VoTech 220, Pucel D, 3 cr

R 5365 Curriculum Development in Technology Education (§Ind 5516) (A-F only)
871420 1440-1630 Th, VoTech R250, Lewis T, 4 cr

R 5457 Methods of Teaching for Business Employment (A-F only)
346593 1440-1630 M, VoTech 230, Lambrecht J, 4 cr

R 5463 Teaching Keyboarding and Word Processing
451963 1600-1830 Th, VoTech 230, McLean G, 3 cr

R 5500 Occupational Experience (max 15 cr; prereq #) (S-N only)
642114 1-5 cr

R 5510 Internship: Business and Industry Education (§BME 8600; max 12 cr) (S-N only)
447220 1-12 cr

R 5605 Critical Issues (§Ind 5305; prereq educ maj or grad student) (A-F only)
241662 1600-1830 T, VoTech 220, Hopkins C, 3 cr

R 5700 Field-Based Projects (§BME 5600; max 12 cr; prereq # or advisor approval) (S-N only)
752780 1-6 cr

R 5900 Directed Study (§Ind 5901; max 12 cr; prereq # or advisor approval) (S-N only)
951658 1-6 cr

R 8900 Research Problems: Business and Industry (§Ind 8900; max 9 cr; prereq advisor approval) (S-N only)
145302 4-9 cr

BUSINESS LAW (BLaw)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3058 Introduction to Law, the Law of Contracts and Sales Contracts (§8158; prereq Econ 1002) (A-F only)
149303 —1 0800-0930 TTh, BlegH 255, Andrews A, 4 cr
448223 —2 1010-1140 TTh, BlegH 105, Andrews A, 4 cr

R 3078 Agency, Partnerships, Corporations and Commercial Paper (§8278; prereq 3058)
646941 1800-2100 M, BlegH 350, Troyer J, 4 cr

BUSINESS, GOVERNMENT AND SOCIETY (BGS)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 8017 Organizational Politics and Management (prereq grad mgmt student or grad SMgt approval)
244111 —1 1730-2100 M, BlegH 415, Erickson W B, 4 cr

CELL BIOLOGY AND NEUROANATOMY (CBN)
Medical School

5101 Human Gross Anatomy B (5100-5101†; §5109; prereq regis med fr or grad stu with #, 5100)
★LECT 1010-1205 TTh, PWB 2470, Shew R, 4 cr (Jan 2-Mar 16)
250054 —1 LAB 1325-1625 TThF, JacH 5161, 5163

5109 Gross Anatomy for Dental Students: Head and Neck (§5101; prereq 5107, 5108, regis dent fr) (A-F only)
★LECT 1010-1205 TTh, PWB 2470, Shew R, 4 cr (Jan 2-Mar 16)
744033 —1 LAB 1325-1625 TThF, JacH 5165, 5169

5111 Human Neuroscience A (CBN 5111-Phsl 5112†, §NSc 5111; prereq regis med fr or grad, #)
★LECT 0905-0955 TThF, 0905-1100 W, PWB 2470, Giesler G J, (Jan 2-Mar 16)
748602 —1 LAB 1010-1205 M, OwreH 2112, 2114, 2116, JOAd 2118, 2120, 3-4 cr
849398 —2 LAB 1010-1205 W, OwreH 2112, 2114, 2116, JOAd 2118, 2120, 3-4 cr

5190 Advanced Anatomy (prereq regis med, #)
147589 Robertson D, 1-10 cr

5500 General Gross Anatomy (prereq Phase D medical student or #)
652609 Robertson D, ar cr

5501 The Extremities (prereq Phase D medical student or #)
651170 Robertson D, ar cr

5502 Head and Neck (prereq Phase D medical student or #)
445029 Robertson D, ar cr

5504 The Endocrine System (prereq Phase D or #)
148306 Hamilton D, ar cr

5508 The Thorax (prereq Phase D or #)
448013 Robertson D, ar cr

5509 The Abdomen (prereq Phase D or #)
145373 Robertson D, ar cr

5510 Perineum, Genital-Urinary System and Pelvis (prereq Phase D or #)
648897 Robertson D, ar cr

8148 Advanced Cell Biology I (§GCB 8148; prereq Biol 5004 or #)
349509 1010-1150 TTh, KaufL 302, 4 cr (StP)

8154 Advanced Anatomy (prereq #)
045284 Robertson D, 1-6 cr

8200 Research (max 20 cr; prereq #) (S-N only)
949456 1-10 cr

8206 Seminar: Cell Biology and Neuroanatomy (prereq #) (S-N only)
342138 1220-1310 F, MoosT 2520, Letourneau P, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
147530 1-18 cr

8777 Thesis Credits: Masters
650990 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
443717 1-36 cr

CENTRAL ASIAN STUDIES (CAS)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 3532 Russia and Central Asia (§3541, 5532, 5541, MELC 3532, MELC 5532) (Hist; IP)
572500 1010-1100 MWF, VinH 364, Bashiri I, 4 cr

R 3601 Fiction: Iran and Central Asia (§5601, MELC 3601) (Lit; IP)
172502 1430-1520 MWF, NichH 213, Bashiri I, 4 cr

R 5532 Russia and Central Asia (§3532, 3541, 5541, MELC 3532, MELC 5532) (IP)
372501 1010-1100 MWF, VinH 364, Bashiri I, 4 cr

R 5601 Fiction: Iran and Central Asia (§3601, MELC 5601)
072503 1430-1520 MWF, NichH 213, Bashiri I, 4 cr

CHEMICAL ENGINEERING (ChEn)
Chemical Engineering and Materials Science
Institute of Technology

R 3001 Programming for Computational Methods (prereq chem eng or mat sci maj) (A-F only)
★LECT 1115-1205 W, AmundH B75
246912 —1 REC 0800-0850 TTh, LindH 26, 2 cr
942975 —2 REC 0905-0955 TTh, LindH 26, 2 cr
847571 —3 REC 1010-1100 TTh, LindH 26, 2 cr
650097 —4 REC 1115-1205 TTh, LindH 26, 2 cr
246246 —5 REC 1220-1310 TTh, LindH 26, 2 cr
044121 —6 REC 1325-1415 TTh, LindH 26, 2 cr

R 5102 Principles of Chemical Engineering II (prereq 5001, 5101, upper division chem engr or mat sci maj)
★LECT 1220-1310 MWF, AmundH B75, Dahler J
145728 —1 REC 0800-0850 TTh, AmundH 162, 4 cr
347081 —2 REC 0905-0955 TTh, AmundH 158, 4 cr
951451 —3 REC 0905-0955 TTh, AmundH 162, 4 cr
943561 —4 REC 1010-1100 TTh, AmundH 162, 4 cr
143923 —5 REC 1220-1310 TTh, AmundH 158, 4 cr
041400 —6 REC 1430-1520 TTh, AmundH 120, 4 cr

R 5201 Thermodynamics and Materials States (prereq 5001, 5101, Chem 5534, upper division chem engr or mat sci maj)
★LECT 0905-0955 MWF, AmundH B75, Frisbie D
541618 —1 REC 0800-0850 TTh, AmundH 156, 4 cr
945942 —2 REC 0905-0955 TTh, AmundH 120, 4 cr
252371 —3 REC 1010-1100 TTh, AmundH 116, 4 cr
152539 —4 REC 1010-1100 TTh, AmundH 124, 4 cr
543420 —5 REC 1010-1100 TTh, AmundH 120, 4 cr
943043 —6 REC 1220-1310 TTh, AmundH 124, 4 cr
047830 —7 REC 1220-1310 TTh, AmundH 104, 4 cr

R 5302 Applied Reactor Analysis (prereq 5301)
148791 1115-1205 MWF, AmundH 162, Schmidt L, 4 cr

R 5501 Process Evaluation and Design (prereq upper div ChEn maj, 5104, 5301, 5402)
★LECT 1010-1100 MWF, FordH 155, Scriven L
950560 —1 REC 1430-1625 T, AmundH 158, 4 cr
849630 —2 REC 1430-1625 T, AmundH 162, 4 cr
744226 —3 REC 1430-1625 Th, AmundH 156, 4 cr
243637 —4 REC 1430-1625 Th, AmundH 158, 4 cr
344214 —5 REC 1430-1625 Th, AmundH 162, 4 cr

R 5601 Process Control (prereq 4th yr or #, upper division chem engr or mat sci maj)
★LECT 0800-0850 MWF, AmundH B75
851538 —1 REC 0800-0850 TTh, AmundH 158, 4 cr
052414 —2 REC 0905-0955 TTh, AmundH 156, 4 cr
652383 —3 REC 1010-1100 TTh, AmundH 158, 4 cr
348036 —4 REC 1115-1205 TTh, AmundH 162, 4 cr
743304 —5 REC 1220-1310 TTh, AmundH 120, 4 cr
550335 —6 REC 1220-1310 TTh, AmundH 156, 4 cr

R 5753 Biochemical Engineering III (prereq 5001, grad or sr in chemical engineering or #)
649161 1430-1625 MW, AmundH 156, Hu W, 3 cr

R 5754 Food Processing Technology (prereq 5103 or #)
847117 1325-1520 MW, AmundH 162, Valentas K, 4 cr

R 5756 Biochemical Engineering Laboratory (prereq 5751 dr 5752)
★LECT 1325-1415 F, AmundH 162, Hu W
950882 —1 LAB 1430-1745 F, AmundH 61, 2 cr

R 5810 Processing of Electronic Materials (prereq MatS 5011 or #)
471355 1325-1415 MWF, AmundH 158, Carr R, 3 cr

R 5902 Special Topics
151352 ar cr

R 5903 Special Topics
750530 ar cr

R 8005 Physical Rate Processes (prereq 8004)
671354 0800-0850 MWF, 1220-1310 TTh, AmundH 162, Cussler E, 3 cr

R 8202 Advanced Mathematics for Chemical Engineers (prereq 8201)
948890 0800-0955 TTh, AmundH 116, Derby J, 3 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 8301 Physical and Chemical Thermodynamics (prereq 5202 or #)
649483 1010-1205 TTh, AmundH 156, Fredrickson A, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
341572 1-18 cr

R 8702 Advanced Topics in Chemical Engineering
744629 1325-1520 Th, AmundH 104, Scriven L, 1 cr

8777 Thesis Credits: Masters
449985 1-16 cr

8802 Seminar (S-N only)
443958 1325-1520 TTh, AmundH B75, 1 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
242911 1-36 cr

8902 Research in Chemical Engineering
752309 1430-1730 MWF, AmundH 104, ar cr

8903 Research in Chemical Engineering
050503 1640-1835 F, AmundH 162, ar cr

CHEMICAL PHYSICS (ChPh)

8101 Chemical Physics Seminar (prereq chem phys grad stu) (S-N only)
142540 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
641738 1-18 cr

8777 Thesis Credits: Masters
047522 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
147866 1-36 cr

CHEMISTRY (Chem)
Institute of Technology

NOTE: You must take a chemistry placement exam if you intend to register for 1051. You may register for the course prior to taking the exam. But by the first day of class you must have completed the exam with a passing score or have sucessfully completed Chem 1001. Students who receive a non-passing score must start in Chem 1001. Placement exams are given during the summer, during fall orientation, and a *limited* number of times during winter and spring registration. (There is no fee for taking this exam: however, you may take the exam only once.) Call the Chemistry Student Services Office, 624-0026, for further information.

The Department of Chemistry strictly enforces the University's mandatory attendance rule. All students must attend the **first** meeting of their laboratory section to hold their place. After the first 15 minutes of each lab, open spaces are given to students on the waiting list. (Students in Chem 1001 must attend the first lecture period as well to hold their place.)

Every student who checks into a lab must check out of the lab before the end of the quarter, even if she or he drops the course: otherwise a $25 check-out fee will be charged.

Materials and technical services fees are assessed at the time of registration for many Chemistry courses. See page 26 for course numbers and fee amounts.

R 1001 General Principles of Chemistry (§1003, 1008; for students not passing chem placement exam; prereq high schl chem or equiv, 2 yrs high schl math (4 yrs rec)...high schl physics rec) (Phys/L)
★LECT 0800-0850 MWF, SciCB 325, Britton D, 4 cr
★REC 0800-0850 T, SmithH 331
646986 —1 LAB 0905-1150 T, SmithH 249
944676 —2 LAB 1325-1610 T, SmithH 249
443894 —3 LAB 1325-1610 W, SmithH 249
★REC 0800-0850 Th, SciCB 175
842810 —4 LAB 0905-1150 Th, SmithH 249
★LECT 1010-1100 MWF, SciCB 325, Britton D, 4 cr
★REC 1010-1100 T, SmithH 331
150581 —5 LAB 1325-1610 T, SmithH 249
147298 —6 LAB 1325-1610 W, SmithH 249
★REC 1010-1100 Th, SmithH 331
948503 —7 LAB 1325-1610 Th, SmithH 249

R 1051 Chemical Principles I (primarily for stu majoring in sci or eng; prereq 1001 or passing placement exam) (Phys/L; Envt)
★LECT 0800-0850 MWF, SmithH 100, Swofford H, 4 cr
★REC 0800-0850 T, SciCB 175
747529 —1 LAB 0905-1150 T, SmithH 110
★REC 0800-0850 T, SmithH 231
046287 —2 LAB 1325-1610 T, SmithH 110
350191 —3 LAB 1325-1610 W, SmithH 110
★REC 0800-0850 Th, SmithH 231
047648 —4 LAB 1325-1610 Th, SmithH 110
044829 —5 LAB 1325-1610 F, SmithH 110
★REC 0800-0850 Th, SmithH 111
845500 —6 LAB 1325-1610 W, SmithH 110
★LECT 1220-1310 MWF, SmithH 100, Stankovich M, 4 cr
★REC 0800-0850 Th, SciCB 125
243895 —7 LAB 0905-1150 Th, SmithH 110
★REC 1220-1310 T, SmithH 231
549332 —8 LAB 1325-1610 T, SmithH 110
248661 —9 LAB 1325-1610 W, SmithH 110
★REC 1220-1310 Th, SciCB 125
443443 —10 LAB 1325-1610 F, SmithH 110
★REC 1220-1310 Th, SmithH 231
172329 —11 LAB 1325-1610 Th, SmithH 110

R 1051H Honors Chemical Principles I (§1051-1052; prereq IT honors stu or IT Honors Office permission, 1001 or passing placement exam) (Phys/L) (A-F only)
★LECT 0905-0955 MWF, SciCB 375, Leopold K, 4 cr
541599 —80 REC 1325-1415 M, SmithH 121
★LAB 1325-1610 T, SmithH 249A
143932 —81 REC 1325-1415 T, SmithH 121
★LAB 1325-1610 W, SmithH 249A
247137 —82 REC 1325-1415 W, SmithH 121
★LAB 1325-1610 Th, SmithH 249A
245159 —83 REC 1325-1415 Th, SmithH 121
★LAB 1325-1610 F, SmithH 249A

R 1052 Chemical Principles II (prereq 1051) (Phys/L; Envt)
★LECT 0905-0955 MWF, SmithH 100, Evans J, 4 cr
★REC 0800-0850 T, SciCB 125
243105 —1 LAB 0905-1150 T, SmithH 210
★REC 0905-0955 T, SmithH 331
344049 —2 LAB 1325-1610 T, SmithH 210
052557 —3 LAB 1325-1610 W, SmithH 210
★REC 0905-0955 Th, SmithH 231
445760 —4 LAB 1325-1610 M, SmithH 210
352779 —5 LAB 1325-1610 Th, SmithH 210
★LECT 1010-1100 MWF, SmithH 100, Roberts J, 4 cr
★REC 0800-0850 Th, SmithH 331
772480 —6 LAB 0905-1150 Th, SmithH 210
★REC 1010-1100 T, SciCB 175
849725 —7 LAB 1325-1610 W, SmithH 210
★REC 1010-1100 Th, SciCB 175
641660 —8 LAB 1325-1610 Th, SmithH 210
★REC 1010-1100 Th, SmithH 231
942037 —9 LAB 1325-1610 T, SmithH 210
143744 —10 LAB 1325-1610 F, SmithH 210

R 3301 Organic Chemistry I (§3331; prereq 1052 or equiv) (A-F only)
952728 —1 1115-1205 TWThF, SciCB 375, Cornille J, 4 cr
151729 —2 1430-1520 TWThF, SciCB 375, Cramer K, 4 cr

R 3302 Organic Chemistry II (prereq 3301, 3305 or ¶3305) (A-F only)
448545 —1 1010-1100 TWThF, SciCB 375, Tabakovic I, 4 cr
242679 —2 1325-1415 TWThF, SciCB 375, Noland W, 4 cr

R 3303 Organic Chemistry III (prereq 3302, 3306 or ¶3306) (A-F only)
146286 0905-0955 TWThF, SciCB 175, Gray G, 4 cr

R 3305 Organic Chemistry Laboratory I (prereq 3301 or ¶3301) (A-F only)
★LECT 1115-1205 M, SciCB 375, Cornille J, 2 cr
449257 —1 LAB 1220-1610 M, SmithH 349
750110 —2 LAB 1220-1610 T, SmithH 349
652111 —3 LAB 1220-1610 W, SmithH 349
249616 —4 LAB 1220-1610 Th, SmithH 349
250510 —5 LAB 1220-1610 F, SmithH 349
★LECT 1430-1520 M, SciCB 175, Cornille J, 2 cr
946153 —6 LAB 0800-1150 T, SmithH 349
551517 —7 LAB 0800-1150 W, SmithH 349
645000 —8 LAB 0800-1150 Th, SmithH 349
472330 —9 LAB 0800-1150 F, SmithH 249

R 3306 Organic Chemistry Laboratory II (prereq 3302 or ¶3302, 3305) (A-F only)
★LECT 1010-1100 M, SciCB 375, Noland W, 2 cr
449310 —1 LAB 1220-1610 M, SmithH 349
243198 —2 LAB 1220-1610 T, SmithH 349
647510 —3 LAB 1220-1610 W, SmithH 349
148323 —4 LAB 1220-1610 Th, SmithH 349
751452 —5 LAB 1220-1610 F, SmithH 349
★LECT 1325-1415 M, SciCB 375, Noland W, 2 cr
252449 —6 LAB 0800-1150 T, SmithH 349
172332 —7 LAB 0800-1150 W, SmithH 349
373535 —8 LAB 0800-1150 Th, SmithH 349
772334 —9 LAB 0800-1150 F, SmithH 349

R 3336 Organic Chemistry Laboratory III (prereq 3302, 3306) (A-F only)
647748 1220-1310 T, SmithH 111, Hoye T, 3 cr (apprx 10 hrs lab ar per wk)

3970 Directed Study (prereq #)
045821 ar cr

3992 Special Topics in Chemistry (prereq 1 qtr 1000-level chem or #) (S-N only)
446116 1220-1310 Th, SmithH 331, 1 cr

5122 Advanced Analytical Chemistry (prereq 3302, 5501 or 5534)
041610 1010-1100 MWF, SmithH 331, Swofford H, 4 cr

R 5140 Chemical Instrumentation and Analysis Laboratory (prereq 5133, chem maj) (A-F only)
★LECT 1220-1310 M, SmithH 331, Evans J
749961 —1 LAB 1220-1610 TTh, SmithH 310, 3 cr
149432 —2 LAB 1220-1610 WF, SmithH 310, 3 cr

5312 Organic Synthesis II (§8312; prereq 5311 or #)
141296 1415-1530 TTh, SmithH 111, O'Doherty, 4 cr

R 5502 Introduction to Quantum Theory and Spectroscopy (§5521; prereq 1052, Math 3251, Phys 1253 or Phys 1106)
847649 1010-1100 MTWF, SmithH 231, Leopold D, 4 cr

5526 Physical Biochemistry: Spectroscopic Methods I (§BioC 5526, MdBc 5526; prereq 2 qtrs physical chemistry)
346335 1325-1520 TTh, PWB 6210, 4 cr

R 5533 Quantum Chemistry (prereq 1052, Math 3252 or ¶Math 3252 or Math 3261 or ¶Math 3261, Phys 1253 or ¶Phys 1253)
645501 1115-1205 MTWF, SciCB 325, 4 cr

R 5534 Chemical Thermodynamics (§5501; prereq IT up div or CLA chem maj or Δ, 1052, Math 3251, Phys 1253 or ¶Phys 1253 or 1106 with #)
551162 1430-1520 MTWF, SmithH 231, Miller W, 4 cr

R 5535 Statistical Mechanics and Reaction Kinetics (prereq 5501 or 5534)
850406 —1 1115-1205 MTWF, SciCB 175, Piotrowska J, 4 cr
672326 —2 1430-1520 MTWF, SciCB 125, Piotrowska J, 4 cr

R 5538 Physical Chemistry Laboratory (prereq 5501 or 5535 or ¶5535, non-chem maj)
847361 —1 LAB 1325-1625 T, KoltH 284, 1 cr
644784 —2 LAB 1325-1625 W, KoltH 284, 1 cr
343208 —3 LAB 1325-1625 Th, KoltH 284, 1 cr

R 5702 Intermediate Inorganic Chemistry (§5732; prereq 3701, 5501 or ¶5501 or 5534 or ¶5534)
844492 0905-0955 MTWF, SmithH 231, Mann K, 4 cr

5970 Directed Study in Chemistry (prereq any 5xxx chem course, #)
541411 ar cr

8003 Computational Chemistry (prereq chem grad stu or #) (A-F only)
747479 0905-0955 MWF, SmithH 111, Cramer C, 4 cr

R 8104 Spectroscopic Methods of Analysis (prereq 5133 or equiv or #) (A-F only)
073988 0800-0850 MWF, SmithH 331, Munson E, 4 cr

8190 Seminar: Modern Problems in Chemical Instrumentation and Analysis (prereq chem grad stu or #) (S-N only)
142019 1430-1815 F, SmithH 331, 1 cr

8191 Seminar Presentation: Modern Problems in Chemical Instrumentation and Analysis (prereq chem grad stu, #) (A-F only)
951756 1430-1815 F, SmithH 331, 1 cr

8290 Seminar: Materials Chemistry (prereq chem grad stu or #) (S-N only)
342012 1640-1900 Th, SmithH 331, 1 cr

8291 Seminar Presentation: Materials Chemistry (prereq chem grad stu, #) (A-F only)
751306 1640-1900 Th, SmithH 331, 1 cr

8312 Organic Synthesis II (prereq 8311 or #) (A-F only)
848459 1415-1530 TTh, SmithH 111, O'Doherty G, 4 cr

8321 Physical Organic Chemistry I (prereq 8002 or #) (A-F only)
044250 1115-1205 MWF, SmithH 331, Kass S, 4 cr

8390 Seminar: Organic Chemistry (prereq chem grad stu or #) (S-N only)
652349 1535-1800 F, SciCB 375, 1 cr

8391 Seminar Presentation: Organic Chemistry (prereq chem grad stu, #) (A-F only)
548522 1535-1800 F, SciCB 375, 1 cr

8403 Bioorganic Chemistry III (prereq 3303 or equiv)
173987 0945-1100 TTh, SmithH 111, Musier-Forsyth, 4 cr

8532 Introductory Quantum Mechanics and Spectroscopy (prereq 8531)
743710 1430-1520 MWF, SmithH 111, Lipsky S, 4 cr

8547 Elements of Statistical Mechanics (prereq undergrad physical chemistry) (A-F only)
852480 1325-1415 MWF, SmithH 111, Siepmann I, 4 cr

8560 Seminar: Biological Systems (prereq chem grad stu or #) (S-N only)
149312 1535-1700 Th, SciCB 325, 1 cr

8561 Seminar Presentation: Biological Systems (prereq chem grad stu, #) (A-F only)
249230 1535-1700 Th, SciCB 325, 1 cr

8590 Seminar: Physical Chemistry (prereq chem or chem phys grad stu) (S-N only)
745263 1535-1800 M, SmithH 331, 1 cr

8591 Seminar Presentation: Physical Chemistry (prereq chem or chem phys grad stu or #) (A-F only)
852849 1535-1800 M, SmithH 331, 1 cr

8611 Introduction To Polymer Properties (prereq 5534 or #)
549296 1430-1615 TTh, SmithH 121, Lodge T, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
249406 1-18 cr

8751 Physical Inorganic Chemistry I (prereq chem grad stu or #)
243119 1220-1310 MWF, SmithH 111, Stein A, 4 cr

8765 Bioinorganic Chemistry (prereq chem grad stu or #) (A-F only)
146362 1325-1415 MWF, SmithH 331, 4 cr

8777 Thesis Credits: Masters
741391 1-16 cr

8790 Seminar: Modern Problems in Inorganic Chemistry (prereq chem grad stu or #) (S-N only)
852186 1640-1900 Th, SmithH 231, 1 cr

8791 Seminar Presentation: Modern Problems in Inorganic Chemistry (prereq chem grad stu, #) (A-F only)
348294 1640-1900 Th, SmithH 231, 1 cr

8881 M.S. Plan B Project I (prereq grad chem or grad chem phys maj, Δ) (A-F only)
748101 4 cr

8882 M.S. Plan B Project II (prereq grad chem or grad chem phys maj, Δ) (A-F only)
451011 4 cr

8883 M.S. Plan B Project III (prereq grad chem or grad chem phys, Δ) (A-F only)
544034 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
441675 1-36 cr

8990 Research in Chemistry (prereq chem grad stu or Δ) (S-N only)
041493 ar cr

8992 Special Topics in Chemistry (prereq Δ)
873989 1010-1100 MWF, SmithH 111, Gladfelter W, ar cr

CHICANO STUDIES (Chic)
Liberal Arts

R 3107 Introduction to Chicano Studies: Chicano in Contemporary Society (Hist; CD)
850311 0800-0850 MWF, ScottH 4, Green S, 4 cr

R 3212 La Chicana (§LAS 3212) (Lit; CD)
073795 1415-1530 TTh, ScottH 4, 4 cr

R 3375 Folklore of Greater Mexico (CD; IP)
171284 1245-1400 TTh, NichH 209, 4 cr

R 3441 Chicano History to 1900 (§Hist 3441) (Hist; CD)
971280 1115-1230 TTh, AndH 330, Valdes D, 4 cr

R 3508 Introduction to Chicano Literature: Text, Context (Lit)
649726 0945-1100 TTh, ScottH 4, Rodriguez R, 4 cr

R 3712 Chicanos: Psychological Perspectives (CD)
873801 0945-1100 TTh, WullH 220, Torres E, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
646969 ar cr

5970 Directed Studies (prereq #, Δ, CLA approval)
050307 ar cr

CHILD AND ADOLESCENT PSYCHIATRY (CAPy)
Medical School

5201 Diagnostic Practicum in Child and Adolescent Psychiatry (prereq #) (A-F only)
543577 ar cr

R 5203 Child and Adolescent Psychiatry for Psychology Interns (prereq #)
051117 1-5 cr

R 5204 Diagnostic Methods in Child and Adolescent Psychiatry (prereq med student, #)
741780 1 cr

R 5520 Outpatient Clinical Child and Adolescent Psychiatry for Primary Care Physicians (prereq regis med student) (A-F only)
041798 Realmuto G, 4.5-9 cr

R 5603 Inpatient Clinical Child Psychiatry for Primary Care Physicians (prereq med student, #)
645112 Jensen J, ar cr

5629 Disruptive Behavioral Disorders IV: Medication and Behavioral Therapies
073716 0830-1600 S, MoosT 2620, August G, 1 cr (Feb 1)

5635 Disruptive Behavioral Disorders V: Cognitive-Behavioral Therapies for Children and Adolescents
873717 0830-1600 S, MoosT 2620, Bloomquist M, 1 cr (Feb 22)

5641 Prevention Science I: Risk Factors, Protective Factors, and Models of Disorder
774617 0830-1600 S, MoosT 2620, August G, 1 cr (Mar 8)

R 8100 Readings in Child, Adolescent, and Family Psychiatry (prereq MD, #)
649595 1 cr

R 8110 Diagnostic Methods in Child, Adolescent, and Family Psychiatry (prereq MD, #)
547161 1 cr

R 8120 Therapeutic Methods in Child and Adolescent Psychiatry (prereq MD, #)
451171 1 cr

R 8200 Outpatient Clinical Child and Adolescent Psychiatry (prereq MD, #)
646227 Jensen J, 3 cr

R 8212 Clinical Inpatient Child Psychiatry (prereq MD, #)
152050 Jensen J, 3 cr

R 8223 Family Therapy (prereq MD, #)
850289 1 cr

R 8228 Research in Child and Adolescent Psychiatry (prereq MD, #)
352619 Jensen J, 1 cr

R 8233 Mental Health Administration and Training Seminar (prereq MD, #)
248188 Jensen J, 1 cr

R 8248 Residential Child and Adolescent Treatment (prereq MD, #)
044877 Jensen J, 3 cr

R 8253 Child and Adolescent Community Psychiatry (prereq MD, #)
241998 Jensen J, 2 cr

R 8301 Seminar in Child, Adolescent, and Family Psychiatry (prereq MD, #)
049321 Jensen J, 1 cr

CHILD PSYCHOLOGY (CPsy)
Education and Human Development

R 1301 Introductory Child Psychology (§3309, 5301; prereq 5 cr introductory psychology) (SSci)
★LECT 1010-1100 MWF, NichH 45, Sroufe A, 4 cr
550643 —1 REC 1115-1205 M, ChDev 105
451168 —2 REC 1430-1520 T, ChDev 105
450716 —3 REC 1115-1205 W, ChDev 105
143221 —4 REC 1010-1100 Th, ChDev 105
444141 —5 REC 0905-0955 F, ChDev 105
243816 —6 REC 1115-1205 F, ChDev 105

R 3308 Research Methods in Child Psychology (prereq 1301, Psy 1001) (A-F only)
742833 1820-2050 Th, ChDev 105, Lawrence C, 4 cr (addtl hr ar)

Symbols

R The letter R preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
I Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 3309 Introductory Child Psychology for the Social Sciences (§1301, 5301; prereq Psy 1001) (SSci)
★LECT 1010-1100 MWF, NichH 45, Sroufe A, 4 cr
647989 —1 REC 1115-1205 M, ChDev 105
042952 —2 REC 1430-1520 T, ChDev 105
444091 —3 REC 1115-1205 W, ChDev 105
343810 —4 REC 1010-1100 Th, ChDev 105
049920 —5 REC 0905-0955 F, ChDev 105
445368 —6 REC 1115-1205 F, ChDev 105

R 3330 Directed Experiences (prereq 1301 or equiv) (A-F only)
941762 1820-2050 T, NichH 213, Bales D, 4 cr (4 addtl daytime hrs per wk req)

3331 Introduction to Social Development (§5331; prereq 1301 or equiv) (SSci)
547659 1010-1150 MW, NichH 211, Collins A, 4 cr (addtl hr ar)

3960 Senior Project in Child Psychology (3960†, 2 qtr reg req; max 4 cr; prereq 1301, sr, #) (A-F only)
251673 —1 1820-1910 M, ChDev 105, Ramirez M, 2 cr
152369 —2 0905-0955 W, BuH 123, Ramirez M, 2 cr (1st qtr only)
343063 —3 1010-1100 F, PeikH 335, Ramirez M, 2 cr (2nd qtr only)

R 3980 Directed Instruction (max 4 cr; prereq #) (S-N only)
945343 1-4 cr

5303 Adolescent Psychology (§3303; prereq 5 cr introductory psychology)
241855 1820-2050 M, NichH 213, Anderson F, 4 cr (addtl hr ar)

R 5311 Introduction to Developmental Psychopathology (§3311; prereq 1301 or equiv, 3308 or Psy 1005)
974714 1700-2030 W, NichH 216, Masten A, 4 cr

5315 Introduction to Mental Retardation (§EPsy 5620; prereq 1301 or equiv)
243038 1640-2030 W, BuH 120, Turnure J, 4 cr

5319 Introduction to Clinical Child Psychology (prereq 12 cr psychology or educational psychology or sociology or child psychology)
046502 0900-1220 S, BuH 120, Gross S, 4 cr

R 5322 Motor Development (§Kin 5132; prereq Kin 3132 or #) (A-F only)
848798 1615-1815 W, CookeH 206, Wade M, 3 cr

5329 Genetics, Ethology, and Development (prereq 1301 or equiv)
172354 1535-1755 MW, SmithH 231, Maratsos M, 4 cr

5332 Cross-Cultural Child Development (prereq 4 cr in child psy) (CD)
545510 1115-1230 TTh, FolH 306, Pick H, 4 cr

5336 Development and Interpersonal Relations (§5339; prereq 1301 or equiv, 3308 or Psy 1005, 3331 or 5331)
842273 0905-0955 MWF, NichH 213, Hartup W, 4 cr

5343 Cognitive Development (prereq 3343, 3308 or Psy 1005)
644770 1640-1910 T, BuH 120, Bauer P, 4 cr (addtl hr ar)

R 5970 Directed Study in Child Psychology (prereq #)
050243 ar cr

R 5990 Directed Research in Child Psychology (prereq #)
042840 ar cr

5990H Directed Research in Child Psychology (prereq #)
142828 0-8 cr

8302 Developmental Psychology: Cognitive Processes (prereq doctoral stu or #)
646678 1325-1500 TTh, ChDev 172, Sera M, Yonas A, 4 cr

R 8304 Research Methods in Child Psychology
774715 1220-1335 MW, ChDev 102, Pick A, 3 cr

8310 Seminar: History of Child Development (S-N only)
846775 0830-1000 Th, ChDev 172, Weinberg R, 1 cr

8330 Directed Field Experiences (prereq #) (S-N only)
143333 1-6 cr

R 8360 Seminar: Developmental Psychology
273933 —6 0905-1225 W, ChDev 172, Gunnar M, 3 cr (Topics in Developmental Neuropsychobiology)
473932 —7 1545-1730 T, ChDev 172, 3 cr (Topics in Applied Child Development)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
141808 1-18 cr

8777 Thesis Credit: Masters
543210 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
352202 1-36 cr

8970 Independent Study
946430 ar cr

8990 Research Problems
052087 ar cr

CHINESE (Chn)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 1012 Beginning Modern Chinese (prereq 1011)
851202 —1 LECT 0905-0955 TTh, FolH 138, Chen Y
049254 —2 LECT 1010-1100 TTh, FolH 208, Chen Y
Registration in one of the following REC sections is also required:
✦345458 —1 REC 1010-1100 MTWThF, FolH 214, 5 cr
✦949540 —2 REC 1115-1205 MTWThF, VinH 209, 5 cr
✦351289 —3 REC 1115-1205 MTWThF, Phys 236A, 5 cr
✦149981 —4 REC 1325-1415 MTWThF, LindH 217, 5 cr

R 1014 Accelerated Beginning Chinese (A-F only)
341250 1325-1415 MTWThF, AmundH 156, 5 cr

R 3022 Intermediate Modern Chinese (prereq 3021)
★LECT 0905-0955 TTh, FolH 142
047472 —1 REC 1010-1100 MWF, FolH 142, 5 cr
048329 —2 REC 1010-1100 MWF, Phys 157, 5 cr
342530 —3 REC 1430-1520 MWF, FolH 142, 5 cr

R 3032 Introductory Classical Chinese (prereq 3031 or #)
743075 1325-1415 MWF, LindH 203, Wang S, 4 cr

R 3042 Third Year Modern Chinese (prereq 3041)
945178 —1 1325-1415 MWF, FolH 142, 4 cr
272376 —2 1115-1230 TTh, FolH 142, 4 cr

R 3090H Honors Tutorial (prereq Δ)
549511 1-4 cr

R 3091 Filmic Construction of Modern Identity in China (Vis; IP) (A-F only)
873975 1640-1800 TTh, FolH 306, 4 cr

R 3176 Chinese Fiction in Translation II (§3162; prereq 3175)
472375 1220-1310 MWF, FolH 334, 4 cr

R 3970 Directed Studies (prereq #, Δ, ❑)
845139 1-15 cr

R 5042 Third Year Modern Chinese (prereq 3031)
352135 —1 1325-1415 MWF, FolH 142, 4 cr
172377 —2 1115-1230 TTh, FolH 142, 4 cr

R 5101 Contemporary Chinese Writing (prereq 3041)
972378 1430-1710 T, CivE 213, Chen Y, 4 cr

R 5970 Directed Studies (prereq #, Δ, CLA approval)
145437 1-4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
241886 1-18 cr

R 8777 Thesis Credits: Masters
546026 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
752651 1-36 cr

CIVIL ENGINEERING (CE)
Institute of Technology

R 1001 Orientation (S-N only)
372191 —1 1430-1625 T, CivE 210, Johnson G, 1 cr
172192 —2 1430-1625 Th, CivE 210, Johnson G, 1 cr

R 3200 Introduction to Transportation Engineering (prereq Phys 1251, IT stu) (A-F only)
★LECT 1010-1205 T, 1010-1100 Th, CivE 210, Davis G
449680 —1 REC 1325-1415 M, CivE 202, Davis G, 4 cr
143629 —2 REC 1325-1415 T, CivE 202, Davis G, 4 cr
051330 —3 REC 1325-1415 W, CivE 202, Davis G, 4 cr
744677 —4 REC 1325-1415 Th, CivE 202, Davis G, 4 cr

R 3300 Soil Mechanics (prereq AEM 3016, IT student) (A-F only)
★LECT 1430-1625 TTh, CivE 212, Drescher A
441661 —1 LAB 1430-1625 M, CivE 350, Drescher A, 4 cr
946217 —2 LAB 0905-1100 T, CivE 350, Drescher A, 4 cr
544356 —3 LAB 1430-1625 W, CivE 350, Drescher A, 4 cr
845299 —4 LAB 0905-1100 Th, CivE 350, Drescher A, 4 cr

R 3400 Fluid Mechanics (§AEM 5200; prereq Math 3261, AEM 1015 or AEM 3016, IT stu or ForP or pre-BAE maj) (A-F only)
★LECT 0800-0955 TTh, CivE 210, Reid K
750804 —1 LAB 1010-1310 M, CivE 277, Reid K, 4 cr
348716 —2 LAB 1010-1310 T, CivE 277, Reid K, 4 cr
246585 —3 LAB 1010-1310 W, CivE 277, Reid K, 4 cr
344438 —4 LAB 1010-1310 Th, CivE 277, Reid K, 4 cr
★LECT 1010-1205 M, 1115-1205 W, CivE 210, Voller V
974888 —5 LAB 1325-1625 W, CivE 277, 4 cr

R 5002 Engineering Economics (prereq jr or sr IT stu or adult special or grad) (A-F only)
351843 1325-1415 TTh, Arch 35, Reid K, 2 cr

R 5021 Computer Applications in Civil Engineering II (prereq 3020, Math 3261, or #, upper div civil engr, geo-engr or mining engr maj) (A-F only)
147020 0800-0955 TTh, CivE 205, Voller V, 4 cr

R 5098 Advanced Design, Analysis, Research or Tutorial in Civil Engineering (prereq approval of faculty adviser) (A-F only)
044507 ar cr

R 5102 Site and Route Engineering (prereq 3100, IT or grad stu) (A-F only)
★LECT 1010-1100 W, 1010-1205 F, CivE 210, Johnson G
844508 —1 REC 1115-1205 W, CivE 194, Johnson G, 4 cr
842466 —2 REC 1325-1415 W, CivE 194, Johnson G, 4 cr
251933 —3 REC 1430-1520 W, CivE 194, Johnson G, 4 cr
449808 —4 REC 1535-1640 W, CivE 194, Johnson G, 4 cr

R 5301 Applied Soil Mechanics (prereq 3300 or #, IT upper div stu or grad) (A-F only)
542896 1220-1415 TTh, CivE 210, Labuz J, 4 cr

R 5401 Water Resources Engineering (prereq 3400 or #, IT or grad stu) (A-F only)
★LECT 1220-1310 MWF, CivE 210, Gulliver J
150055 —1 REC 1430-1730 M, CivE 202, Gulliver J, 4 cr
945939 —2 REC 1430-1730 T, CivE 202, Gulliver J, 4 cr
846419 —3 REC 1430-1730 W, CivE 202, Gulliver J, 4 cr
250149 —4 REC 1430-1730 Th, CivE 202, Gulliver J, 4 cr

R 5405 Hydrology and Hydrologic Design (prereq IT stu or grad) (A-F only)
★LECT 0905-0955 MWF, CivE 210, Foufoula E
771684 —1 REC 1010-1205 M, CivE 202, Foufoula E, 4 cr
571685 —2 REC 1010-1205 T, CivE 202, Foufoula E, 4 cr
371686 —3 REC 1010-1205 W, CivE 202, Foufoula E, 4 cr
171687 —4 REC 1010-1205 Th, CivE 202, Foufoula E, 4 cr

R 5426 Computer Modeling of Groundwater Flow (prereq IT or grad stu, 5425 or #) (A-F only)
441885 1430-1625 MW, CivE 210, Barnes R, 4 cr

R 5501 Analysis and Design of Wastewater Systems (prereq Chem 1052, 3400, or #; IT or grad stu) (A-F only)
★LECT 0800-0850 MWF, CivE 210, Maier W
871689 —1 LAB 1220-1415 M, CivE 205, Maier W, 4 cr
171690 —2 LAB 1220-1415 T, CivE 205, Maier W, 4 cr
071691 —3 LAB 1220-1415 W, CivE 205, Maier W, 4 cr
871692 —4 LAB 1220-1415 Th, CivE 205, Maier W, 4 cr

R 5506 Environmental Water Chemistry (prereq IT or grad stu, Chem 1052 or #) (A-F only)
743433 1010-1205 TTh, CivE 212, Brezonik P, 4 cr

R 5512 Solid and Hazardous Waste Processing I (prereq IT upper div and/or 5510, grad stu, or #) (A-F only)
048430 0800-0955 TTh, CivE 202, Hepworth M, 4 cr

R 5515 Water and Wastewater Microbiology (prereq IT or grad stu, Chem 1052 or #) (A-F only)
047911 1430-1625 MW, CivE 212, Dwyer D, 4 cr

R 5602 Topics in Structural Mechanics (prereq 5600, AEM 3036, IT upper div stu or grad) (A-F only)
943107 1010-1205 TTh, CivE 205, Shield C, 4 cr

R 5603 Introduction to Construction Materials (prereq IT upper div stu, AEM 3016) (A-F only)
★LECT 0800-0955 T, CivE 212, Newcomb D
649225 —1 LAB 1325-1625 M, CivE 380, Newcomb D, 4 cr
849532 —2 LAB 1325-1625 T, CivE 380, Newcomb D, 4 cr
851443 —3 LAB 1325-1625 W, CivE 380, Newcomb D, 4 cr
849577 —4 LAB 1325-1625 Th, CivE 380, Newcomb D, 4 cr

R 5611 Design of Reinforced Concrete Structures (prereq 5600, 5603, upper division IT stu or grad) (A-F only)
★LECT 1010-1205 MW, AkerH 209, Schultz A
942278 —1 REC 1220-1310 T, CivE 202, Schultz A, 4 cr
151844 —2 REC 1220-1310 Th, CivE 202, Schultz A, 4 cr
749734 —3 REC 1325-1415 Th, CivE 213, Schultz A, 4 cr

R 5612 Design of Metal Structures: Intermediate (prereq 5610, IT or grad stu) (A-F only)
346013 1640-1835 MW, CivE 205, Hajjar J, 4 cr

R 5700 Systems Analysis for Civil Engineers (§GeoE 5700; prereq IT upper div or grad) (A-F only)
641500 1640-1835 TTh, CivE 212, Smith K, 4 cr

R 5702 Components, Properties and Design of Portland Cement Concrete (prereq IT upper div or grad stu, 5603) (A-F only)
★LECT 1640-1835 MW, CivE 210, Snyder M
742279 —1 LAB 0905-1205 M, CivE 380, Snyder M, 4 cr
051845 —2 LAB 0905-1205 W, CivE 380, Snyder M, 4 cr

8098 Civil Engineering Research (prereq #)
948159 1-5 cr

R 8201 Urban Traffic Operations (prereq #)
671693 1535-1730 MW, CivE 213, Michalopoulos P, 4 cr

R 8320 Thermoporoelasticity (§GeoE 8320; prereq AEM 5580 or #) (A-F only)
471694 0905-1100 TTh, CivE 214, Detournay E, 4 cr

R 8401 Introduction to Environmental Boundary Layer Theory (prereq 5435 or #)
749300 1010-1205 WF, CivE 213, Parker G, 4 cr

R 8407 Stochastic Hydrology (prereq 5021 or #) (A-F only)
271695 1325-1520 TTh, Arch 15, Foufoula E, 4 cr

R 8418 Computational Hydrodynamics I (prereq 5401 or #)
171696 0800-0955 MW, CivE 213, Song C, 4 cr

R 8500 Physical and Chemical Processes for Water and Wastewater Treatment (prereq 5500, 5501 or #)
547662 0800-0955 TTh, CivE 213, Semmens M, 3 cr

R 8550 Analysis and Modeling of Aquatic Environments (prereq #) (A-F only)
349994 1220-1415 TF, CivE 213, Stefan H, 4 cr

R 8605 Finite Element Method (prereq 5601 or #)
773791 1010-1205 MW, CivE 205, Stolarski H, 4 cr

R 8625 Behavior of Reinforced Concrete Structure (prereq 5611, 5613, 5615) (A-F only)
771698 1430-1625 MW, CivE 205, French C, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
148426 1-18 cr

8698 Seminar: Structures (S-N only)
247056 0905-0955 F, CivE 205, French C, 1 cr

8777 Thesis Credits: Masters
743416 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
950218 1-36 cr

CLASSICAL CIVILIZATION (ClCv)

Classical and Near Eastern Studies Liberal Arts

3510 Great Books (prereq jr or sr or Δ)
672388 1415-1545 TTh, FolH 50, Clayton T, 4 cr

R 3950 Topics in Classical Civilization
472389 —1 1010-1100 MWF, Phys 133, Akehurst F, 4 cr (European Heritage: Middle Ages) (§Hum 1115, Hum 3115)
274709 —2 1415-1530 TTh, JonesH 207A, Asher C, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
347890 1-15 cr

3980 Directed Instruction (prereq #)
143638 ar cr

3990 Directed Research (prereq #, Δ or ❑)
152520 1-15 cr

CLASSICS (Clas)

Classical & Near Eastern Studies Liberal Arts

1003 Age of Alexander (Hist)
872535 1325-1415 MWF, FolH 50, Krevans N, 4 cr

1025 The Age of Justinian and Muhammad (c 500-700 A.D.) (§3025) (Hist)
672536 1115-1230 TTh, FolH 208, Nicholson O, 4 cr

R 1042 Greek and Roman Mythology (AH)
★LECT 1115-1205 MF, NichH 45, Hershbell J
452210 —1 REC 1115-1230 T, CivE 214, 4 cr
345010 —2 REC 1115-1230 T, NichH 209, 4 cr
851099 —3 REC 1115-1230 T, FolH 344, 4 cr
545703 —4 REC 0905-1020 W, ChDev 105, 4 cr
149267 —5 REC 1115-1230 W, BuH 125, 4 cr
841754 —6 REC 1115-1230 W, LindH 320, 4 cr
351700 —7 REC 1115-1230 Th, VinH 213, 4 cr
241614 —8 REC 1115-1230 Th, LindH 303, 4 cr
448156 —9 REC 1115-1230 Th, NichH 209, 4 cr

R 1042H Greek and Roman Mythology (prereq regis honors div) (AH)
★LECT 1115-1205 MF, NichH 45, Hershbell J
541473 —80 REC 1115-1230 W, FolH 344, Hershbell J, 4 cr

1045 Basic Program in Technical Terminology and Word Study
245324 1535-1700 TW, NichH 211, 3 cr

1048 Greek and Latin Terminology in the Medical and Biological Sciences (§1141; prereq 1045 or ¶)
345346 1535-1700 TW, NichH 211, 2 cr

1141 Greek and Latin Terminology for Nursing (§1048)
043616 1535-1700 TW, NichH 211, 3 cr

3025 The Age of Justinian and Muhammad (§1025; prereq soph) (Hist)
472537 1115-1230 TTh, FolH 208, Nicholson O, 4 cr

3046 Advanced Etymology: Vocabulary of the Sciences and Humanities (prereq 1045 or ¶)
152582 1535-1700 TW, NichH 211, 2 cr

R 3072 The New Testament (§3072H, 5072, RelS 3072, RelS 5072) (Hist)
272538 1010-1100 MWF, Arch 25, Sellew P, 4 cr

3081 Classical Epic in Translation (§5081) (Lit)
173973 1415-1545 TTh, FolH 50, Clayton T, 4 cr

3145 Greek and Roman Mythology II-Analysis and Tradition (§5145; prereq 1042 or #)
472540 0945-1100 TTh, EE/CSci 3125, Lardinois A, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
550366 1-5 cr

R 5072 The New Testament (§3072, 3072H, RelA 3072, RelA 5072, RelS 3072, RelS 5072)
172539 1010-1100 MWF, Arch 25, Sellew P, 4 cr

5081 Classical Epic in Translation (§3081)
073974 1415-1545 TTh, FolH 50, Clayton T, 4 cr

R 5104 Roman Architecture (§ArtH 5104; prereq jr or #)
172542 1325-1415 MWF, FolH 306, McNally S, 5 cr

5113 Archaic Greek Art (§ArtH 5113; prereq jr or #)
972543 1245-1400 TTh, JonesH 207A, Cooper F, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
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❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

5145 Greek and Roman Mythology II (§3145; prereq 1042 or #) (A-F only)
272541 0945-1100 TTh, EE/CSci 3125, Lardinois A, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
251401 1-5 cr

5980 Directed Instruction (prereq #, Δ, CLA approval)
051246 4 cr

5990 Directed Research (prereq #, Δ, CLA approval)
352698 4 cr

R 8190 Seminar: Problems in Ancient Art: Computer Applications in Art History and Archaeology (§ArtH 8190; prereq #) (A-F only)
074509 1500-1700 Th, JonesH 202, Cooper F, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
442812 1-18 cr

8777 Thesis Credits: Masters
844119 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
346898 1-36 cr

CLINICAL AND POPULATION SCIENCES (CAPS)
Veterinary Medicine

3502 Animal Health and Disease
942085 1325-1415 MTWThF, VoTech R285, Olson W, 5 cr

5013 Veterinary Public Health (VPH) Clinic Rotation (prereq 3rd or 4th yr vet med stu) (S-N only)
944337 Pullen M, 4-24 cr

5015 Advanced Veterinary Public Health (VPH) Clinic Rotation (prereq CAPS regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
044197 Pullen M, 4 cr

5113 Large Animal Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
745277 Ames T, 4-24 cr

5115 Advanced Large Animal Medicine (prereq CAPS regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
145218 Ames T, 4 cr

5151 Diagnostic and Therapeutic Techniques I (prereq CVM 5150 or #)
852348 —1 LAB 1430-1520 W, 1535-1725 W, VetS 145, Ames T, Morrison R, others, 1 cr
641495 —2 LAB 1430-1520 Th, 1535-1725 Th, VetS 145, Ames T, Morrison R, others, 1 cr

5162 Large Animal Medicine (prereq 5161 or #) (A-F only)
348232 1010-1100 MTWThF, 1115-1205 M, AnScVM 135, Pijoan C, Ames T, others, 6 cr

5182 Sheep and Goat Herd Health Management (prereq regis 3rd or 4th yr vet med or grad stu or #) (A-F only)
247414 1500-1700 M, AnScVM 125, Wolf C, 1 cr (2nd 5 weeks)

R 5190 Large Animal Internal Medicine I (prereq DVM, enrolled in SACS or CAPS Clinical Residency Program) (A-F only)
746316 1325-1515 M, VetTchHsp 225K, Ames T, 3 cr

5213 Large Animal Surgery (prereq 3rd or 4th yr vet med stu) (S-N only)
148970 Turner T, Santschi L, 4-24 cr

5215 Advanced Large Animal Surgery (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
043583 Turner T, Santschi L, 4 cr

5223 Equine Lameness (prereq 3rd or 4th yr vet med stu) (S-N only)
043518 Turner T, 4-24 cr

5225 Advanced Equine Lameness (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
344911 Turner T, 4 cr

5233 Equine Podiatry (prereq 3rd or 4th yr vet med stu) (S-N only)
346495 Turner T, 4-24 cr

5235 Advanced Equine Podiatry (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
444818 Turner T, 4 cr

5243 Bovine Surgery (prereq 3rd or 4th yr vet med stu) (S-N only)
743268 Trent A, 4-24 cr

5245 Advanced Bovine Surgery (prereq regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
746512 Trent A, 4 cr

5253 Equine Surgery (prereq #) (S-N only)
172203 4-24 cr

5274 Orientation to the Job Market (prereq 5270 or #) (S-N only)
141850 1300-1500 M, AnScVM 135, 1 cr (1st 5 weeks)

5275 Diseases of Zoo Animals and Exotic Pets (prereq regis 3rd or 4th yr vet med or grad or #) (A-F only)
246344 1325-1415 M, VetTchHos A325, Farnsworth R, 1 cr

5355 Equine Colic Management (prereq 1st yr vet med stu) (S-N only)
645868 1700-1850 M, AnScVM 125, Santschi L, 2 cr

5513 Equine Theriogenology (prereq 3rd or 4th yr vet med stu) (S-N only)
547872 Troedsson M, 4-24 cr

5533 Dairy Palpation (prereq 3rd or 4th yr vet med stu) (S-N only)
547323 Fahning M, 4-24 cr

5535 Advanced Dairy Palpation (prereq regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
552702 Fahning M, 4 cr

5543 Dairy Theriogenology Management (prereq 5533, regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
152749 Olson J, 4-24 cr

5545 Advanced Dairy Theriogenology Management (prereq regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
748633 Olson J, 4 cr

5570 Reproductive Diseases of Domestic Animals (prereq 5550 or #)
648608 0800-0850 MTWThF, AnScVM 135, Fahning M, 5 cr (1 hr ar)

5603 Analytical Techniques in Veterinary Medicine I (prereq #) (S-N only)
341152 Marsh W, 4-24 cr

5605 Analytical Techniques in Veterinary Medicine I (prereq regis vet med 3rd or 4th yr or grad or # or IV track)
352104 Marsh W, 3 cr

5613 Swine Disease Diagnostics, Therapeutics, and Prevention (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
249938 Joo H, 4-24 cr

5615 Advanced Swine Disease Diagnostics, Therapeutics, and Prevention (prereq IV track or grad or #) (A-F only)
352796 Joo H, 4 cr

5623 Swine Production Systems (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
646891 Dial G, 4-24 cr

5625 Advanced Swine Production Systems (prereq grad stu or IV track or #) (A-F only)
444348 Dial G, 4 cr

5633 Swine Nutrition (prereq regis 3rd or 4th yr vet med or grad stu or #)
344908 Dial G, 4-24 cr

5635 Advanced Swine Nutrition (prereq grad stu or # or IV track) (A-F only)
550576 Dial G, 4 cr

5643 Swine Economics, Financial Management and Marketing (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
546480 Marsh W, 4-24 cr

5645 Advanced Swine Economics, Financial Management and Marketing (prereq IV track or grad stu or #) (A-F only)
150418 Marsh W, 4 cr

5665 Monitoring and Surveillance of Disease (prereq #)
151536 Robinson R, Pullen M, ar cr

5680 Problems in Veterinary Epidemiology and Public Health (prereq 5650 or equiv or #)
643618 Pullen M, Robinson R, ar cr

5683 Swine Virology and Immunology (prereq 3rd or 4th yr vet med stu) (S-N only)
952308 Molitor T, 4-24 cr

5693 Epidemiology and Biostatistics (prereq #) (S-N only)
450781 Marsh W, 4-24 cr

5695 Advanced Epidemiology and Biostatistics (prereq regis vet med 3rd or 4th yr or grad or # or IV track)
746980 Marsh W, 4 cr

5713 Equine Sports and Preventive Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
243170 Turner T, 4-24 cr

5715 Advanced Equine Sports and Preventive Medicine (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
051053 Turner T, 4 cr

5813 Dairy Disease Control, Parasitology, Youngstock Management (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
549640 Ames T, 4-24 cr

5815 Advanced Dairy Disease Control, Parasitology, Youngstock Management (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
143422 Ames T, 4 cr

5823 Mastitis, Milking Machines, and Milk Quality (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
247848 Farnsworth R, 4-24 cr

5825 Advanced Mastitis, Milking Machines, and Milk Quality (prereq grad stu or # or IV track) (A-F only)
443085 Farnsworth R, 4 cr

5833 Ruminant Nutrition (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
151391 Olson W, 4-24 cr

5835 Advanced Ruminant Nutrition (prereq CAPS regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
941924 Olson W, 4 cr

5843 Applied Dairy Nutrition (prereq 5833, regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
143557 Olson J, 4-24 cr

5845 Advanced Dairy Nutrition (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
345363 Olson J, 4 cr

5853 Dairy Record Analysis, Epidemiology, and Economics (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
650021 Fetrow J, 4-24 cr

5855 Advanced Dairy Record Analysis, Epidemiology, and Economics (prereq IV track or grad stu or #) (A-F only)
449968 Fetrow J, 4 cr

5913 Advanced Building Design and Total Herd Evaluation (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
944709 Pijoan C, 4-24 cr

5915 Advanced Building Design and Total Herd Evaluation (prereq regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
948582 Pijoan C, 4 cr

5923 Beef Production Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
050324 Fetrow J, 4-24 cr

5925 Advanced Beef Production Medicine (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
143887 Fetrow J, 4 cr

5943 Small Ruminant Health and Production (prereq 3rd or 4th yr vet med stu) (S-N only)
847845 Wolf C, 4-24 cr

5945 Advanced Small Ruminant Health and Production (prereq CAPS regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
648589 Wolf C, 4 cr

5953 Directed Studies (prereq #) (S-N only)
847828 1-12 cr

5955 Advanced Directed Studies (prereq #) (A-F only)
272202 1-8 cr

8193 Advances in Clinical Immunobiology (prereq grad or #)
943320 Molitor T, ar cr

8194 Problems in Diagnostic Virology, Serology and Immunology (prereq grad or #)
947481 Molitor T, ar cr

8195 Preventive Veterinary Medicine
143817 ar cr

8197 Metabolic and Nutritionally Induced Diseases of Cattle (prereq grad student, #)
746879 2 cr

8199 Problems in Economics of Animal Health
148404 1-3 cr

8290 Advanced Veterinary Medicine (prereq 5162, SACS 5172, #)
151223 ar cr

8291 Advanced Diagnosis and Therapeutics of Animal Diseases (prereq 5162, SACS 5172, #)
141945 ar cr

8292 Seminar: Veterinary Medicine (prereq #)
345928 Ames T, Valberg S, ar cr

8293 Medical Conference (prereq 5162, SACS 5172, #)
251222 Wilson J, ar cr

8299 Research in Veterinary Medicine
146921 ar cr

8390 Seminar: Veterinary Surgery (prereq DVM degree or equiv)
044037 Trent A, Turner T, ar cr

8392 Advanced Large Animal Surgery (prereq DVM degree or equiv, #)
547922 Trent A, Turner T, ar cr

8393 Problems in Large Animal Orthopedics (prereq 5365, #)
748115 Turner T, Trent A, 3 cr

8397 Large Animal Anesthesia (prereq SACS 5380, #)
444656 Raffe M, Robinson E, ar cr

8590 Advanced Diagnostic Methods in Reproductive Diseases (prereq 5570 or #)
549671 Fahning M, others, ar cr

8592 Advanced Endocrinology of Reproduction (prereq grad student) (A-F only)
249907 Seguin B, others, 2 cr

8594 Special Problems in Animal Reproduction (prereq 5570, #)
345864 Seguin B, ar cr

8595 Seminar: Veterinary Obstetrics (prereq #)
148295 Fahning M, 1 cr

R 8790 Problems in Veterinary Clinical Pharmacology and Therapeutics (prereq grad or #)
445337 3 cr

CLINICAL LABORATORY SCIENCE (CLS)
Laboratory Medicine and Pathology
Medical School

5078 Hematology II: Hemostasis/Instrumentation (prereq 5077, MedT 5077, 5078, Δ)
★LECT 1115-1205 TTh, MoosT 2530, Swinehart C D
951627 —1 LAB 0905-1205 W, MoosT 3349, Swinehart C D, 3 cr
244304 —2 LAB 1220-1520 W, MoosT 3349, 3 cr

5090 Special Laboratory Methods (§MedT 5090; prereq #)
241726 2 cr

5120 Seminar: Clinical Laboratory Science (prereq #) (S-N only)
650326 1220-1320 W, PWB 15194, Hallgren H M, 1 cr

5125 Practicum Teaching (§MedT 5125; prereq #)
443149 1-3 cr

5135 Advanced Clinical Microbiology (§MedT 5135; prereq #)
847389 Wells C L, 1-5 cr

5138 Clinical Microbiology Seminar (§MedT 5138; prereq #)
145011 1115-1205 F, PWB 15194, Wells C L, Ferrieri P, 1 cr

5155 Advanced Clinical Hematology (§MedT 5155; prereq #)
245095 5 cr

5165 Advanced Clinical Immunohematology (§MedT 5165; prereq #)
543045 Hallgren H M, 5 cr

5175 Advanced Clinical Chemistry (§MedT 5175; prereq #)
741505 5 cr

5179 Chemistry Seminar (§MedT 5179; prereq #)
445810 1 cr

5180 Advanced Chemistry (prereq #)
846260 1-5 cr

5198 Computer Methodology in the Delivery of Health Care III: Operations Research and Control Systems for Hospitals (§HInf 5435; prereq HInf 5432 or #)
351132 1010-1205 T, 1010-1100 Th, WDH 2120, 2130, Potthoff S, 3 cr

5273 Immunohematology II: Blood Group Systems (A-F only)
043860 Polesky H, 3 cr

5281 Advanced Immunohematology Practicum II (prereq #) (S-N only)
750995 Polesky H, 2 cr

5320 Clinical Chemistry II (§MedT 5320; prereq Chem 3301, Chem 3302, Chem 3305, Chem 3306, MdBc 5300, MdBc 5301) (A-F only)
241287 1010-1100 TTh, MoosT 2520, 2 cr

5321 Clinical Chemistry II: Laboratory Applications (§MedT 5321; prereq Chem 3301, Chem 3302, Chem 3305, Chem 3306, MdBc 5300, MdBc 5301) (A-F only)
450909 1300-1700 TTh, MoosT 3238, 2 cr

5768 Advanced Hematology (prereq #)
449579 Brunning R, ar cr

5864 Research Seminar (prereq #)
044619 1220-1320 M, Mayo C231, 1 cr (Todd Amph)

5865 Departmental Seminar (prereq #)
244979 0800-0900 W, Mayo D230, Steffes M W, 1 cr (Eustis Amph)

8236 Research on Clinical Laboratory Problems
452157 1-10 cr

8777 Thesis Credits: Masters
541554 1-16 cr

COGNITIVE SCIENCE (CgSc)
Liberal Arts

8001 Proseminar in Cognitive Science (prereq CgSc minor) (S-N only)
571718 1900-2100 Th, ElH 204, Fletcher C R, 1 cr

COMMUNICATION DISORDERS (CDis)
Liberal Arts

1304 The Physics and Biology of Spoken Language (Phys/L)
173397 1115-1205 MWThF, ShevH 3, Speaks C, 4 cr

R 3100 Clinical and Research Observation (S-N only)
146202 —1 0800-1200 W, MoosT 6274, Starr C, Moller K, 2 cr
551470 —2 1700-1900 W, 0905-1030 F, ShevH 125, Haroldson S, 2 cr
451140 —3 1230-1600 Th, MoosT 6274, Starr C, Moller K, 2 cr
242844 —4 Doyle S, 2 cr (ShevH 220)
343127 —5 van Deusen D, 2 cr (ShevH 119)
049657 —6 Hinderscheit L, 2 cr (off-campus)
771720 —7 Carlstrom J, 2 cr

3101 Introduction to Communication Disorders (§1301)
245582 0905-1100 TTh, ShevH 3, Haroldson S, 4 cr

5304 Speech Science (prereq 5301, 5302, 5303 or #)
246165 0905-1100 MW, ShevH 3, Van Tasell D, 4 cr

5508 Voice Disorders (prereq 5304 or #)
448366 1430-1625 TTh, ShevH 3, Starr C, Haroldson S, 4 cr

5509 Motor Speech Disorders (prereq 5304 or ¶5304)
145879 1325-1520 MW, ShevH 3, Solomon N, 4 cr

5606 Language Assessment, Intervention: Early Stages (prereq CDis 5305 or #)
652805 1325-1415 Th, 1220-1520 F, ShevH 3, Reichle J, 4 cr

R 5701 Hearing Loss and Audiometry (prereq 5301, 5302, or #)
★LECT 1535-1730 MW, ShevH 3, Carney A
641917 —1 LAB 0800-0955 F, ShevH 119, Carney A, 5 cr
150595 —2 LAB 1010-1205 F, ShevH 119, Carney A, 5 cr
549928 —3 LAB 1220-1415 F, ShevH 119, Carney A, 5 cr
346447 —4 LAB 1430-1625 F, ShevH 119, Carney A, 5 cr

5900 Topics in Communications Disorders: Diagnosis of Hearing Loss in Infants and Children (prereq 5701 or #)
473686 1430-1625 TTh, ShevH 125, Carney A, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
247185 ar cr

8502 Seminar: Stuttering (prereq 5502 or #)
751354 1220-1520 F, ShevH 125, Siegel G, 3 cr

8520 Clinical Education in Speech-Language Pathology (prereq communication disorders grad stu)
547418 1-6 cr

8521 Clinical Education in Speech-Language Pathology (prereq communication disorders grad stu)
149150 1-6 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
943589 1-18 cr

8718 Seminar: Hearing
873703 1325-1625 M, ShevH 125, Schlauch R, 3 cr

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❑ Approval of the college offering the course is required for registration.
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8720 Clinical Education in Audiology (prereq CDis grad stu)
347954 1-6 cr

8721 Clinical Education in Audiology (prereq CDis grad maj)
950140 1-6 cr

8777 Thesis Credits: Masters
852317 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
943883 1-36 cr

8990 Research
751340 —1 ar cr
141193 —2 ar cr
273687 —3 ar cr

COMPARATIVE LITERATURE (CLit)

Cultural Studies and Comparative Literature
Liberal Arts

R 5555 Introduction to Semiotics
171794 1415-1530 TTh, FolH 138, Mowitt J, 4 cr

5970 Directed Readings (prereq #, Δ, CLA approval)
941549 1-4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
145378 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
050341 1-36 cr

R 8910 Advanced Comparative Literature Seminar (prereq 8001-8002-8003 or #)
645434 —1 1545-1715 TTh, FolH 138, Brewer D, 4 cr (Disciplining History: Writing the French Revolution) (§Fren 8150) (taught in French)
944287 —2 1640-1835 T, FolH 326, Zipes J, 4 cr (German-Jewish Novelists) (§Ger 8340)
451414 —3 1325-1625 W, FolH 350, Jha P, 4 cr (Nation and Narration)

8970 Directed Reading (prereq grad student in comparative lit, Δ)
447010 1-4 cr

COMPARATIVE STUDIES IN DISCOURSE AND SOCIETY (CSDS)

Cultural Studies and Comparative Literature
Liberal Arts

R 5910 Topics in Comparative Studies in Discourse and Society (prereq jr or sr maj or grad stu)
150024 —1 1220-1310 MWF, FolH 38, Schulte-Sasse J, 4 cr (Aesthetics, Ideology, Valuation of Art)
973840 —2 1430-1730 W, FordH 160, Arenas F, 4 cr (Sexuality Discourses in the Lusaphone and Hispanic Worlds) (§SpPt 5930)

5970 Directed Studies (prereq grad student, #)
646373 ar cr

R 8002 Basic Research Seminar in Comparative Studies in Discourse and Society (prereq Δ) (A-F only)
052090 1325-1625 M, FolH 350, Leppert R, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
449100 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
845321 1-36 cr

R 8910 Advanced Topics in the Comparative Study of Discourse and Society: Popular Culture, Power, and Resistance (§Pol 8450, sec 1, Soc 8090, sec 1)
146840 1325-1600 W, BlegH 205, Duvall R, Laslett B, 3 cr

8970 Directed Studies (prereq grad student or #)
846209 ar cr

COMPOSITION AND COMMUNICATION (Comp)

Liberal Arts

R 1011 Writing Practice I (§Rhet 1101; prereq assignment to category 2 or 3)
149625 —1 0800-0955 MW, LindH 340, 5 cr
743030 —2 0800-0850 MF, 0800-0955 Th, LindH 303, 5 cr
343676 —3 0800-0850 MF, 0800-0955 Th, LindH 315, 5 cr (non-native English speakers only) (go to KlaCt 127 for permission)
152355 —4 0800-0955 MW, LindH 320, 5 cr
750057 —5 0905-0955 MF, 0905-1100 T, LindH 303, 5 cr
850471 —6 0905-0955 MF, 0905-1100 W, LindH 315, 5 cr
452093 —7 0905-0955 MWThF, AkerH 215, 5 cr
750642 —8 0905-0955 MTWF, AkerH 211, 5 cr
044894 —9 0905-0955 MF, 0905-1100 T, LindH 325, 5 cr
046824 —10 1010-1100 MF, 1010-1205 T, LindH 315, 5 cr
948419 —11 1010-1100 MTWF, LindH 340, 5 cr
844976 —12 1010-1100 MF, LindH 303, 1010-1205 Th, LindH 315, 5 cr
445340 —13 1010-1100 MF, 1010-1205 T, LindH 320, 5 cr
743920 —14 1115-1205 MF, 1115-1310 T, LindH 303, 5 cr
172024 —15 1115-1205 MF, 1115-1310 Th, LindH 320, 5 cr
846212 —16 1220-1310 MTWF, Arch 15, 5 cr
151335 —17 1220-1310 MF, 1220-1415 T, LindH 320, 5 cr
951692 —18 1220-1310 MF, 1220-1415 W, LindH 303, 5 cr
244173 —19 1220-1310 MF, 1220-1415 W, LindH 315, 5 cr
842693 —20 1220-1310 MF, 1220-1415 W, LindH 325, 5 cr
449162 —21 1220-1310 MF, Arch 20, 1220-1415 W, FordH 160, 5 cr
850714 —22 1220-1415 MW, LindH 340, 5 cr
748907 —23 1325-1415 MTWF, Phys 236A, 5 cr (non-native English speakers only) (go to KlaCt 127 for permission)
152606 —24 1325-1415 MF, 1325-1520 T, LindH 303, 5 cr
044278 —25 1325-1415 MF, LindH 325, 1325-1520 Th, LindH 303, 5 cr
446777 —26 1325-1520 MW, CivE 213, 5 cr
148183 —27 1325-1415 MF, 1325-1520 T, LindH 315, 5 cr
951157 —28 1325-1520 MW, AkerH 319, 5 cr
851264 —29 1325-1415 MWThF, LindH 320, 5 cr
373843 —30 1430-1520 MWThF, FordH 40, 5 cr
073845 —31 1430-1625 MW, LindH 315, 5 cr
873846 —32 1430-1520 MTWF, Phys 236A, 5 cr
673847 —33 1430-1520 MWThF, VinH 209, 5 cr
473848 —34 1430-1520 MF, 1430-1625 W, LindH 340, 5 cr
173844 —35 1430-1625 MW, LindH 303, 5 cr

R 1011H Writing Practice I (prereq assignment to category 2 or 3, honors student)
051487 1010-1100 MWThF, LindH 325, 5 cr

R 1013 Writing Practice II (prereq grade of X in 1011 or 1012, Δ)
050078 —1 1325-1415 MWF, FordH 130, 4 cr (non-native English speakers only) (go to KlaCt 127 for permission)
742766 —2 4 cr

R 1014 Writing Practice I and Cultural Diversity (CD)
672018 —1 0800-0850 MF, AkerH 211, 0800-0955 T, AkerH 317, 5 cr
472019 —2 0905-0955 MF, FordH 170, 0905-1100 T, MechE 221, 5 cr
872020 —3 1010-1100 MF, AkerH 313, 1010-1205 T, Arch 15, 5 cr
672021 —4 1220-1310 MF, Arch 30, 1220-1415 W, FordH 175, 5 cr
472022 —5 1325-1415 MF, AmundH 116, 1325-1520 T, Arch 30, 5 cr
272023 —6 1430-1625 MW, LindH 325, 5 cr

R 1015 Writing Practice and the Environment (Envt) (A-F only)
773841 —1 1325-1520 MW, AkerH 215, 5 cr
573842 —2 0800-0850 MF, 0800-0955 W, LindH 325, 5 cr

R 1027 Intermediate Expository Writing (prereq fulfillment of Writing Practice req)
141940 —1 1010-1100 MWF, LindH 217, 4 cr
972025 —2 1430-1520 MWF, LindH 320, 4 cr
042935 —3 1115-1230 TTh, LindH 340, 4 cr
450084 —4 1245-1400 TTh, LindH 325, 4 cr

R 3011 Writing about Literature (prereq fulfillment of Writing Practice req, jr)
947271 —1 0800-0850 MWF, AkerH 215, 4 cr
048640 —2 0905-0955 MWF, FordH 160, 4 cr
643358 —3 0945-1100 TTh, SmithH 121, 4 cr
150905 —4 1115-1230 TTh, LindH 325, 4 cr
574747 —5 1415-1530 TTh, LindH 325, 4 cr

R 3012 Writing in the Humanities (prereq fulfillment of Writing Practice req, jr)
052817 —1 0800-0850 MWF, LindH 203, 4 cr
143761 —2 0905-0955 MWF, FordH 70, 4 cr
872017 —3 1010-1100 MWF, AkerH 225, 4 cr
548813 —4 1115-1230 TTh, AkerH 209, 4 cr
174749 —5 1415-1530 TTh, LindH 215, 4 cr

R 3013 Writing for the Arts (prereq fulfillment of Writing Practice req, jr)
651721 —1 0905-0955 MWF, FordH 60, 4 cr
143193 —2 1325-1415 MWF, LindH 229, 4 cr
151531 —3 1430-1520 MWF, MurH 308, 4 cr
346691 —4 0945-1100 TTh, Arch 25, 4 cr
574750 —5 1115-1230 TTh, ChDev 105, 4 cr

R 3014 Writing in the Social Sciences (prereq fulfillment of Writing Practice req, jr)
743870 —1 0800-0850 MWF, Arch 45, 4 cr
748986 —2 0905-0955 MWF, Arch 25, 4 cr
246926 —3 1010-1100 MWF, AkerH 309, 4 cr
352538 —4 1220-1310 MWF, AkerH 313, 4 cr
549430 —5 1220-1310 MWF, AkerH 317, 4 cr
451459 —6 1325-1415 MWF, WullH 220, 4 cr
246988 —7 1430-1520 MWF, BlegH 125, 4 cr
452577 —8 1430-1520 MWF, LindH 217, 4 cr
450702 —9 0815-0930 TTh, LindH 340, 4 cr
644803 —10 0815-0930 TTh, LindH 320, 4 cr
772026 —11 0945-1100 TTh, Arch 60, 4 cr
644414 —12 0945-1100 TTh, Arch 45, 4 cr
444530 —13 1115-1230 TTh, Arch 45, 4 cr
542512 —14 1245-1400 TTh, LindH 340, 4 cr
148832 —15 1415-1530 TTh, LindH 340, 4 cr

R 3015 Writing about Science (prereq fulfillment of writing practice req, jr)
152279 —1 0905-0955 MWF, AkerH 319, 4 cr
550125 —2 1010-1100 MWF, AkerH 215, 4 cr
271938 —3 1245-1400 TTh, Arch 60, 4 cr
273849 —4 1415-1530 TTh, VinH 206, 4 cr

R 3022 Critical Reading and Writing for Management (prereq 1011 or equiv, Mgmt or Pre-Mgmt stu with more than 60 credits)
544700 —1 0800-0850 MWF, Arch 60, 4 cr
145261 —2 0905-0955 MWF, AkerH 309, 4 cr
551288 —3 1325-1415 MWF, AkerH 225, 4 cr
244531 —4 1245-1400 TTh, Arch 45, 4 cr
342513 —5 1415-1530 TTh, Phys 157, 4 cr

R 3027 Advanced Expository Writing (prereq fulfillment of Writing Practice req, jr)
145364 —1 0905-0955 MWF, Arch 60, 4 cr
747336 —2 1010-1100 MWF, AkerH 211, 4 cr
841527 —3 1430-1520 MWF, LindH 302, 4 cr (non-native English speakers only) (go to KlaCt 127 for permission)
544096 —4 0815-0930 TTh, Arch 30, 4 cr
049531 —5 1115-1230 TTh, Arch 30, 4 cr
649841 —6 1415-1530 TTh, VinH 213, 4 cr

R 3031 Technical Writing for Engineers (prereq fulfillment of Writing Practice req, jr, IT stu)
345105 —1 0800-0850 MWF, AkerH 309, 4 cr
944242 —2 0905-0955 MWF, Arch 15, 4 cr
052381 —3 1220-1310 MWF, AkerH 211, 4 cr (non-native English speakers only) (go to KlaCt 127 for permission)
847991 —4 1325-1415 MWF, AkerH 211, 4 cr
649399 —5 1430-1520 MWF, LindH 229, 4 cr
572027 —6 0815-0930 TTh, AkerH 313, 4 cr
151956 —7 0945-1100 TTh, Arch 30, 4 cr
374751 —8 1415-1530 TTh, Arch 60, 4 cr

R 3032 Preprofessional Writing for Business (prereq fulfillment of Writing Practice req, School of Mgmt or BIS stu, jr)
372028 —1 0905-0955 MWF, BlegH 260, 4 cr
950493 —2 1010-1100 MWF, BlegH 260, 4 cr
348926 —3 0945-1100 TTh, BlegH 260, 4 cr
146157 —4 1115-1230 TTh, BlegH 260, 4 cr
673850 —5 1415-1530 TTh, BlegH 260, 4 cr

R 3033 Writing for the Health Sciences (prereq fulfillment of Writing Practice req, more than 60 credits)
744095 —1 1010-1100 MWF, AkerH 317, 4 cr
146801 —2 1220-1310 MWF, AkerH 215, 4 cr
350403 —3 1430-1520 MWF, AkerH 309, 4 cr
072016 —4 1245-1400 TTh, LindH 229, 4 cr
174752 —5 1415-1530 TTh, Arch 45, 4 cr.

R 3051 Feminist Expository Writing (§WoSt 3104; prereq fulfillment of writing practice requirement, jr, WoSt maj or min or Δ)
845612 0905-0955 MWF, AmundH 116, 4 cr

COMPUTER SCIENCE (CSci)
Institute of Technology

An IT computer fee is assessed at the time of registration for *all* CSci courses except 1001, 3311, 3327, 5201, 5211, 5400, 5421, 8102, 8163, 8360, 8403, 8404, and 8571. See page 28 for more information on this fee.

R 1001 Introduction to Computers for Non-Computer Science Majors (no degree cr for IT stu)
★LECT 1010-1100 TTh, EE/CSci 3210, Mobasher B
073912 —1 REC 0800-0955 W, EE/CSci 2120, 4 cr
873913 —2 REC 1010-1205 W, EE/CSci 2120, 4 cr
673914 —3 REC 1220-1415 W, EE/CSci 2120, 4 cr
473915 —4 REC 1430-1625 W, EE/CSci 2120, 4 cr

R 3101 An Introduction to Computer Applications for Scientists and Engineers (prereq 1 qtr calculus)
★LECT 0905-0955 MWF, SciCB 325, Teng S
247901 —1 REC 0905-0955 T, Arch 15, 4 cr
947514 —2 REC 0905-0955 T, EE/CSci 3210, 4 cr
952521 —3 REC 1010-1100 T, EE/CSci 3230, 4 cr
852205 —4 REC 1010-1100 T, EE/CSci 3111, 4 cr

R 3113 Introduction to Procedural Programming in C (§3121, 3322, 5113; prereq precalc or #)
★LECT 0800-0850 MWF, Phys 150, Dovolis C
542610 —1 LAB 1325-1725 M, EE/CSci 2120, 4 cr
341328 —2 LAB 0800-1200 T, EE/CSci 2120, 4 cr
650956 —3 LAB 1325-1725 T, EE/CSci 2120, 4 cr
348859 —4 LAB 1730-2130 T, EE/CSci 2120, 4 cr
146739 —5 LAB 0800-1200 Th, EE/CSci 2120, 4 cr
744579 —6 LAB 1325-1725 Th, EE/CSci 2120, 4 cr
342611 —7 LAB 1010-1410 F, EE/CSci 2120, 4 cr
546740 —8 LAB 0900-1300 S, EE/CSci 2120, 4 cr

R 3311 Discrete Structures of Computer Science (§3400; prereq 3317, 3321)
★LECT 1010-1100 MWF, EE/CSci 3210, Fox D
573484 —1 REC 0800-0850 Th, Phys 210, 4 cr
373485 —2 REC 0905-0955 Th, EE/CSci 3210, 4 cr
173486 —3 REC 1010-1100 Th, LindH 203, 4 cr

R 3316 The Structure of Computer Programming I (prereq 1 qtr calc or #)
★LECT 1325-1415 MWF, Phys 166, Shekhar S
551534 —1 REC 0800-0850 T, EE/CSci 1260, 4 cr
341846 —2 REC 0905-0955 T, EE/CSci 1260, 4 cr
750558 —3 REC 1220-1310 T, EE/CSci 1260, 4 cr
243590 —4 REC 1325-1415 T, EE/CSci 1260, 4 cr

R 3317 The Structure of Computer Programming II (prereq 3316)
★LECT 1810-2040 M, EE/CSci 3210, Boley D
841382 —1 REC 1010-1100 T, EE/CSci 1260, 4 cr
652593 —2 REC 1115-1205 T, EE/CSci 1260, 4 cr
550545 —3 REC 1430-1520 T, EE/CSci 1260, 4 cr
546768 —4 REC 1535-1625 T, EE/CSci 1260, 4 cr

R 3321 Algorithms and Data Structures I (§3105, 3121; prereq knowledge of C or 3113 or #)
★LECT 1115-1205 MWF, EE/CSci 3210, Barry P
050291 —1 REC 0800-0850 Th, EE/CSci 1260, 4 cr
046810 —2 REC 0905-0955 Th, EE/CSci 1260, 4 cr
341376 —3 REC 1010-1100 Th, EE/CSci 1260, 4 cr
443751 —4 REC 1115-1205 Th, EE/CSci 1260, 4 cr
848509 —5 REC 1220-1310 Th, EE/CSci 1260, 4 cr
042188 —6 REC 1325-1415 Th, EE/CSci 1260, 4 cr

R 3322 Algorithms and Data Structures II (§5121; prereq 3311)
★LECT 1220-1310 MWF, EE/CSci 3210, Papanikolopoulos N
151035 —1 REC 0905-0955 T, LindH 302, 4 cr
752813 —2 REC 1010-1100 T, LindH 302, 4 cr
447525 —3 REC 1115-1205 T, EE/CSci 3115, 4 cr
244609 —4 REC 1115-1205 T, EE/CSci 3230, 4 cr

R 3327 Introduction to the Organization of Computer Systems (§3107, 5101; prereq 3121 or 3316 or 3321 or #)
★LECT 1010-1100 MWF, AmundH B75
043597 —1 REC 0800-0850 Th, EE/CSci 3111, 4 cr
049187 —2 REC 0905-0955 Th, EE/CSci 3111, 4 cr
648432 —3 REC 1010-1100 Th, EE/CSci 3111, 4 cr
273916 —4 REC 1115-1205 Th, Phys 166, 4 cr

3977 Industrial Student Coop Assignment (may be repeated for cr 4 times; prereq CSci maj, regis in dept coop prog or #) (S-N only)
374894 2 cr

R 5090 History of Computing (§HSci 5321)
871725 1115-1230 TTh, FordH 115, Norberg A, 4 cr

R 5101 Introduction to the Organization of Computer Systems (§3327; prereq non-CSci maj, 3316 or 3121 or #)
★LECT 1010-1100 MWF, AmundH B75
141811 —1 REC 0800-0850 Th, EE/CSci 3111, 4 cr
547077 —2 REC 0905-0955 Th, EE/CSci 3111, 4 cr
143123 —3 REC 1010-1100 Th, EE/CSci 3111, 4 cr
173917 —4 REC 1115-1205 Th, Phys 166, 4 cr

R 5110 User Interface Design, Implementation and Evaluation (prereq 3322, 3327 or #; informal lab)
144207 1640-1755 TTh, EE/CSci 3230, Konstan J, 4 cr

R 5121 Algorithms and Data Structures II (§3322; prereq 3311; CSci maj should take 3322)
★LECT 1220-1310 MWF, EE/CSci 3210, Papanikolopoulos N
144053 —1 REC 0905-0955 T, LindH 302, 4 cr
250426 —2 REC 1010-1100 T, LindH 302, 4 cr
250278 —3 REC 1115-1205 T, EE/CSci 3115, 4 cr
948887 —4 REC 1115-1205 T, EE/CSci 3230, 4 cr

R 5151 Introduction to Parallel Computing (prereq 3121 or 3322 or #)
373471 —1 1640-1755 MW, MechE 212, Kumar V, 4 cr

R 5161 Introduction to Compilers (§5504; prereq 5106 or #; informal lab)
671726 —1 1245-1400 TTh, MechE 212, Li Z, 4 cr

R 5201 Computer Architecture (no grad cr for CSci maj; prereq 3327 or #)
471727 1810-2040 Th, MechE 108, 202, Yew P C, 4 cr

R 5280 Computer Aided Design I (prereq 3311 or #)
073487 1545-1700 TTh, AkerH 319, Shragowitz E, 4 cr

R 5301 Numerical Computation (prereq Math 3261,knowledge of a prog lang or #; informal lab; no grad cr for CSci maj)
★LECT 1640-1755 MW, EE/CSci 3111, Fox D
973918 —1 REC 1640-1810 Th, EE/CSci 1260, 4 cr
773919 —2 REC 0905-1035 F, EE/CSci 1260, 4 cr
173920 —3 REC 1325-1455 F, EE/CSci 1260, 4 cr

R 5305 Numerical Methods for Ordinary Differential Equations (prereq 5302 or #)
842287 1115-1230 TTh, LindH 215, Petzold L, 4 cr

R 5320 Introduction to Linear Programming (§5001; prereq 5301 or #)
873488 1415-1530 TTh, VinH 113, Park H, 4 cr

R 5400 Introduction to Automata Theory (no grad cr for CSci maj; prereq 3311 or #)
743044 0945-1100 TTh, Phys 210, Du D Z, 4 cr

R 5422 Advanced Data Structures (§5122; prereq 3322 or 5121 or #)
548780 —1 1415-1530 TTh, MechE 212, Janardan R, 4 cr

R 5512 Artificial Intelligence II (prereq 5511 or #)
073473 —1 1415-1530 TTh, MechE 102, Gini M, 4 cr

R 5571 Expert Systems (prereq 5511 or #) (A-F only)
446651 1245-1400 TTh, EE/CSci 3230, Slagle T, 4 cr

R 5702 The Principles of Database Systems (prereq 3322 or #; informal lab)
547385 —1 1640-1755 TTh, MechE 212, Carlis J, 4 cr

5990 Advanced Project Laboratory (no grad cr; may be repeated for cr; prereq 5102, upper div CSci stu, #)
174895 4 cr

R 8180 Advanced Software Engineering (prereq 5180 or #)
171729 —1 1640-1930 W, EE/CSci 3125, Tsai W T, 3 cr

R 8199 Seminar: Languages and Systems (prereq #)
673489 Heimdahl M, 1-3 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 8205 Parallel Computer Organization (§EE 8363; prereq 5201 or #)
273446 —1 1545-1700 TTh, MechE 102, Lee G H, 3 cr

R 8299 Seminar: Machine Design (prereq #)
771734 —1 Yew P C, 1 cr
973921 —2 Zhang Z L, 1-3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
150192 1-18 cr

8760 Plan B Project (prereq #, CSci maj) (S-N only)
949666 3 cr

8777 Thesis Credits: Masters
043356 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
047441 1-36 cr

R 8899 Computer Science Colloquium (prereq grad) (S-N only)
842029 —1 1430-1530 M, MechE 108, Riedl J, 1 cr

CONSERVATION BIOLOGY (CBio)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed prelim orals)
743108 1-18 cr

8777 Thesis Credits: Masters
850129 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
551789 1-36 cr

CONTROL SCIENCE AND DYNAMICAL SYSTEMS (CSDy)
Institute of Technology

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
548133 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
148264 1-36 cr

R 8899 Seminar in Control and Dynamical Systems (prereq #) (S-N only)
351325 —1 1430-1530 F, MechE 108, Georgiou T, 1-3 cr

COPTIC (Copt)
Classical & Near Eastern Studies
Liberal Arts

R 5012 Elementary Coptic (prereq some knowledge of another ancient language, preferably Greek)
571752 1325-1415 MWF, FolH 426, Sellew P, 4 cr

CULTURAL STUDIES AND COMPARATIVE LITERATURE (CSCL)
Liberal Arts

R 1001 Introduction to Cultural Studies: Rhetoric, Power, Desire (AH)
144988 1010-1100 MWF, SciCB 175, Thomas G, 4 cr

R 1301 Discourse and Society I: Reading Culture (AH)
144019 —1 0905-0955 MWF, FolH 218, Wilkins C, 4 cr
344147 —2 1010-1100 MWF, BuH 125, 4 cr
050694 —3 1115-1205 MWF, FolH 50, 4 cr
241872 —4 0815-0930 TTh, FolH 38, Jenemann D, 4 cr
742346 —5 1245-1400 TTh, FolH 138, 4 cr

R 1302 Discourse and Society II: Meaning and History (Hist)
649449 —1 0905-0955 MWF, FolH 50, Marcus C, 4 cr
043969 —2 1415-1530 TTh, FolH 326, 4 cr

R 1303 Discourse and Society III: Knowledge, Persuasion, and Power (AH)
045799 —1 0905-0955 MWF, FolH 334, Knighton A, 4 cr
543059 —2 1010-1100 MWF, FolH 50, Jha P, 4 cr
742685 —3 1430-1545 TTh, FolH 234, 4 cr

R 3115 Cinema and Ideology (Vis)
273964 1820-2050 M, FolH 214, Beckwith S, 4 cr

R 3198 Social and Aesthetic Production of Space (§Hum 3198)
173965 1820-2050 W, FolH 214, Mottahedeh N, 4 cr

R 3331 Science and the Humanities (prereq jr or sr or #) (Phil)
171754 1115-1230 TTh, BuH 120, Sarles H, 4 cr

R 3458 The Body and the Politics of Representation (AH)
573968 1820-2050 T, FolH 334, 4 cr

R 3910 Topics in Cultural Studies and Comparative Literature (prereq jr or sr or #)
373969 —1 1820-2050 Th, FolH 214, Falla J, 4 cr (The Beat Generation: The Politics of Be-Bop)
773970 —2 1820-2050 Th, FolH 326, Gram O, Macek S, 4 cr (Berlin: The City and Modern Life)

R 5302 Aesthetics, Ideology, Valuation of Art (§CSDS 5302, Hum 5302; prereq jr or sr or grad stu)
871756 1220-1310 MWF, FolH 38, Schulte-Sasse J, 4 cr

R 5910 Topics in Cultural Studies and Comparative Literature: Drama of the American Minorities (§Engl 5920; prereq jr or sr or grad stu or #)
342348 1535-1625 MWF, FolH 38, Lee J, 4 cr

5970 Directed Studies (prereq jr or sr or grad stu, #)
546138 ar cr

5970H Directed Studies: Honors (prereq jr or sr or grad stu, #)
373972 ar cr

R 5990 Senior Workshop (prereq sr maj or jr maj with Δ)
573971 1245-1400 TTh, FolH 326, Archer J, 4 cr

CURRICULUM AND INSTRUCTION (CI)
Education and Human Development

R 3001 Survey of Art Activities (§ArEd 3001; prereq non-art ed maj) (A-F only)
442308 0905-1205 TTh, PeikH 46, Frenzel M, 4 cr

R 3045 Contemporary Crafts (§ArEd 3020) (A-F only)
548424 1010-1310 TTh, PeikH 40, Ellenbecker T, 4 cr

3680 Student Teaching in Second Languages and Cultures (§SeEd 3631; prereq #) (S-N only)
648205 Tedick D, Walker C, others, 3 cr

R 5008 Theory and Practice of Teaching Art in Elementary Schools (§ArEd 5308) (A-F only)
546284 1325-1535 TTh, PeikH 40, DiBlasio M, 2 cr (Art postbac only)

R 5045 Advanced Contemporary Crafts (§ArEd 5020; prereq 3045 or ArEd 3020 or #) (A-F only)
046435 1010-1310 TTh, PeikH 40, Ellenbecker T, 4 cr

R 5065 Improving Art Programs in the Schools (§ArEd 5386; prereq teaching exp or #)
243587 0800-1100 MTWTh, PeikH 40, Freedman-Norberg K, 4 cr (postbac stu only) (Jan 6-23; Mar 10-14)

5080 Internship in Art Education (§ArEd 5600; prereq #)
574022 2-9 cr

5085 Practicum: Art Education (§ArEd 5605; prereq #)
043101 DiBlasio M, 3 cr

R 5110 Introduction to Elementary School Teaching (§Elem 3101, Elem 5000; prereq ¶5183, elem educ maj or CLA music educ maj or ❑)
447671 1325-1415 MWF, PeikH 28, Buggey J, 3 cr

R 5130 Introduction to Curriculum Studies (§CISy 5600) (A-F only)
145901 1630-2000 W, PeikH 28, Courtney M, 4 cr

R 5138 Multicultural and Moral Perspectives on Classroom Instruction (prereq MEd or grad stu or #)
371445 1630-2000 Th, PeikH 28, Narvaez D, 4 cr

R 5155 Classroom Instruction and Assessment (§CISy 5902; prereq MEd or grad stu)
644364 1630-2000 Th, PeikH 48, Golez F, 4 cr

R 5160 Supervision of Elementary, Secondary, and Post-Secondary Instruction (§CISy 5800; prereq 5130 or CISy 5600) (A-F only)
671449 1700-1945 T, PeikH 165, 3 cr

5180 Clinical Experience in Elementary School Teaching (§Elem 5212) (S-N only)
173424 Buggey J, 6-12 cr

R 5183 Applying Instructional Methods in the Elementary School (max 4 cr; §Elem 5211) (S-N only)
543899 Buggey J, 2 cr

5186 School-Related Projects in Curriculum and Instruction (§5090, 5480, 5583, 5669, 5764; prereq CI MEd stu or #)
549833 —1 Avery P, 1-12 cr
171429 —2 Balli S, 1-12 cr
571427 —3 Beach R, 1-12 cr
371428 —4 DiBlasio M, 1-12 cr
871479 —5 Finley F, 1-12 cr
071450 —6 Freedman-Norberg K, 1-12 cr
871451 —7 Golez F, 1-12 cr
671452 —8 Graves M, 1-12 cr
471453 —9 Heller P, 1-12 cr
271454 —10 Hooper S, 1-12 cr
171455 —11 Jorstad H, 1-12 cr
971456 —12 Lambrecht J, 1-12 cr
771457 —13 Lawrenz F, 1-12 cr
571458 —14 Narvaez D, 1-12 cr
071464 —15 Orton R, 1-12 cr
871465 —16 Post T, 1-12 cr
671466 —17 Stochl J, 1-12 cr
471467 —18 Tedick D, 1-12 cr
271468 —19 Walker C, 1-12 cr

R 5187 Practicum: Improvement of Teaching in Elementary or Pre-Kindergarten Schools (§Elem 5602; prereq MEd student in elem educ or early childhood educ) (S-N only)
274029 —1 Hansen H, 4 cr
149102 —2 Heller P, 4 cr
674030 —3 Johnson R, 4 cr
474031 —4 Lawrenz F, 4 cr
552781 —5 Manning J, 4 cr
548276 —6 Orton R, 4 cr
947075 —7 Phinney M, 4 cr
249101 —8 Post T, 4 cr
750737 —9 Stochl J, 4 cr
546219 —10 Taylor B, 4 cr
043437 —11 Watts S, 4 cr

5190 Directed Individual Study in Curriculum and Instruction (§CISy 5509; max 6 cr; prereq #)
842113 —1 Freedman-Norberg K, 1-6 cr
948050 —2 Hooper S, 1-6 cr
543742 —3 Lambrecht J, 1-6 cr
741570 —4 Narvaez D, 1-6 cr
544213 —5 Taylor B, 1-6 cr

5195 Directed Study in Elementary and Secondary Education (max 6 cr; §SeEd 5351; prereq educ or grad student)
645899 —1 Avery P, ar cr
245758 —2 Beach R, ar cr
049612 —3 Finley F, ar cr
551582 —4 Heller P, ar cr
641805 —5 Johnson R, ar cr
044913 —6 Lawrenz F, ar cr
341264 —7 Taylor B, ar cr

R 5252 Contemporary Programs for Young Children (§Elem 5378; prereq MEd student in early childhood educ)
374023 1515-1645 TTh, PeikH 215, Carlson L, 3 cr

5280 Student Teaching in the Kindergarten (prereq 5250, 6 cr elem stu tchg or current elem license) (S-N only)
348747 Buggey J, 3-6 cr

R 5281 Student Teaching in the Nursery School (§Elem 3604; prereq approval of maj advisor and director of student teaching) (S-N only)
174024 1630-1815 W, PeikH 225, Galle L, 3-6 cr

R 5300 Technology for Teaching and Learning (A-F only)
349834 1630-2010 W, PeikH 46, Balli S, 2 cr

R 5335 Introduction to Instructional Systems and Technology (§CISy 5151) (A-F only)
745523 1630-2000 M, EddyH 62, Lambrecht J, 4 cr

R 5351 Topics: Computer-Based Tools for Teachers (§CISy 5208)
642307 1630-2000 Th, EddyH 62, Balli S, 4 cr

R 5364 Computer-Based Instruction: Design and Development (§CISy 5212; prereq 5362 or CISy 5205 or #) (A-F only)
074025 1630-2000 T, PeikH 355, Hooper S, 4 cr

R 5400 Survey of Children's Literature (§Elem 5210; prereq educ student or #) (A-F only)
571430 1115-1205 MWF, PeikH 46, Monson D, 3 cr (concurrent registration in 5410, sec 1, 5425, sec 1 is required)

R 5410 Teaching Reading in the Elementary School (§Elem 5331; prereq 9 cr educ) (A-F only)
271471 1010-1100 MWF, PeikH 46, 3 cr (concurrent registration in 5400, sec 1, 5425, sec 1 is required)

R 5415 Literacy Development in the Intermediate Grades (§Elem 5338; prereq 3410 or elem tchg exp or #) (A-F only)
345380 1630-2010 M, PeikH 48, Watts S, 4 cr (TC-Inservice)

R 5420 Teaching Writing in the Elementary School (§Elem 5315; prereq postbac or MEd or grad student)
246067 1630-2010 T, PeikH 28, Phinney M, 4 cr (TC-Inservice)

R 5425 Teaching Language Arts in the Elementary School (§Elem 5316; prereq 3420 or elem tchg exp) (A-F only)
171472 0905-0955 MWF, PeikH 46, Phinney M, 3 cr (concurrent registration in 5400, sec 1, 5410, sec 1 is required)

5440 Teaching Literature in Secondary Schools (§SeEd 5321) (A-F only)
648429 1220-1415 MW, PeikH 48, Scapple S, 4 cr (postbac stu only)

R 5450 Teaching Reading in Content Areas (§SeEd 5344) (A-F only)
971473 1630-2000 T, PeikH 315, Graves M, 4 cr

R 5491 Current Developments in English Education (§SeEd 5350; max 12 cr) (A-F only)
141816 1430-1625 MW, PeikH 28, 3 cr

R 5500 Teaching Science in the Elementary School (§Elem 5346; prereq elem educ postbac or #)
048427 —1 1010-1100 MWF, PeikH 385, Johnson, Buggey J, 3 cr
743285 —2 1010-1100 MWF, PeikH 215, 3 cr

R 5501 Workshop: Elementary School Science Education (§Elem 5347; max 16 cr)
142531 Johnson R, 3 cr (Winter Field Biology) (Woodlake ¶ Longlake Centers)

R 5506 Teaching Health in the Elementary Schools (§Elem 5213; prereq elem postbac student or #)
946993 —1 0905-0955 MWF, PeikH 385, Buggey J, Johnson, 1 cr
942815 —2 0905-0955 MWF, PeikH 215, Lawrenz F, 1 cr

5531 Teaching Secondary School Science: A Constructivist Approach (§SeEd 5702; prereq 5530 or SeEd 5700, 5580 or SeEd 5701, adm to postbac sci ed prog, or #, ¶5581)
147527 1430-1600 MWF, PeikH 365, Heller P, 4 cr (postbac stu only)

5533 Studies in Science Education (§SeEd 5397; prereq MEd or grad stu or #) (A-F only)
846064 1630-2000 W, PeikH 365, Lawrenz F, 4 cr

5631 Second Language Curriculum (§SeEd 5801; prereq postbac student)
452479 1325-1520 MWF, PeikH 215, Tedick D, 3 cr (SLC postbac stu only)

5632 Second Language Instruction (§SeEd 5802; prereq postbac student)
443099 1325-1520 TTh, PeikH 225, Walker C, 3 cr (SLC postbac stu only)

5633 Second Language Research (§SeEd 5803; max 6 cr; prereq SLC postbac licensure graduate; 6 cr taken after compl of lic)
571475 1640-1810 T, PeikH 155, Walker C, 2 cr

R 5652 Teaching Culture: Theory and Application (§SeEd 5122; prereq postbac or grad student)
150105 1640-2010 T, PeikH 225, Paige M, 4 cr (MEd stu only)

R 5657 Speaking and Listening in a Second Language (§SeEd 5385)
948047 0900-1230 S, PeikH 215, Jorstad H, 4 cr

R 5658 Second Language Testing, Assessment, and Evaluation (§SeEd 5382)
941180 1640-2010 M, PeikH 215, Jorstad H, 4 cr

R 5660 Special Topics in the Teaching of Second Languages and Cultures (§SeEd 5191; max 10 cr)
874026 0900-1500 S, EBCEC, Tedick D, 1 cr (StP)

5680 Practicum: Teaching Second Languages and Cultures in Elementary Schools (§Elem 5320; prereq 5619 or Elem 5319 or ¶5619, #) (S-N only)
046841 Jorstad H, Tedick D, others, 3 cr

5684 Clinical Experiences in Second Languages (max 12 or 18 cr; prereq MEd/init lic stu)
473655 1535-1625 TTh, PeikH 225, Fortune T, Guderyon S, 6 cr (SLC postbac stu only)

5690 Directed Study in Second Languages and Cultures (§SeEd 5351; prereq educ or grad student)
145154 —1 Jorstad H, ar cr
146071 —2 Paige M, ar cr
648057 —3 Tedick D, ar cr
851054 —4 Walker C, ar cr

R 5700 Teaching Social Studies in the Elementary School (§Elem 5361; prereq 5110 or Elem 3101 or equiv, postbac student)
841575 —1 1115-1205 MWF, PeikH 215, 3 cr (postbac stu only)
852852 —2 1115-1205 MWF, PeikH 385, Buggey J, 3 cr (postbac stu only)

R 5741 Advanced Methods for Teaching the Social Studies (§SeEd 5150; prereq postbac student)
149973 0800-0850 MTWThF, PeikH 48, Avery P, 4 cr (postbac stu only)

R 5742 The Social Sciences and the Social Studies (§SeEd 5153; max 6 cr; prereq postbac student)
674027 Sandell E, 3 cr

R 5780 Practicum: Secondary Social Studies Education (§SeEd 3152; max 7 cr; prereq postbac student)
374779 1010-1100 MTWThF, PeikH 48, Johnson T, 1-7 cr

R 5821 Teaching Mathematics in the Elementary School (§Elem 3391; prereq 5110 or Elem 3100, Elem 3101, Math 1005, Math 1006)
652559 —1 0800-0850 MWF, PeikH 385, 3 cr (IIIA) (prereq #)
452403 —2 0800-0850 MWF, PeikH 215, Stochl J, 3 cr (IIIA) (prereq #)

8099 Problems: Art Education (§ArEd 8900; prereq #)
943740 —1 DiBlasio M, ar cr
347145 —2 Freedman-Norberg K, ar cr

R 8131 Curriculum and Instruction Core: Teaching Theory and Research (§CISy 8102; prereq PhD student or #) (A-F only)
048718 1630-1915 M, PeikH 46, Manning J, 3 cr

R 8160 Planning a Research Experience (prereq 8132, concurrent reg in 1 cr ind stdy crse with faculty in area of spec)
371476 1630-1915 W, PeikH 215, Graves M, 3 cr

R 8190 Problems: Improvement of Instruction (§Elem 8991; prereq #)
146143 —1 Avery P, ar cr
641576 —2 Finley F, ar cr
948663 —3 Heller P, ar cr
041297 —4 Johnson R, ar cr
251205 —5 Lawrenz F, ar cr
646518 —6 Manning J, ar cr
345301 —7 Phinney M, ar cr
074283 —8 Post T, ar cr
141887 —9 Stochl J, ar cr
841964 —10 Taylor B, ar cr
044054 —11 Watts S, ar cr

8199 Problems: Curriculum Studies (§CISy 8501; prereq PhD student)
843603 Freedman-Norberg K, 3-9 cr

8390 Problems: Instructional Systems (§CISy 8501; prereq #)
752326 —1 Hooper S, ar cr
643103 —2 Lambrecht J, ar cr

R 8412 Research in Reading (§Elem 8332; prereq #)
071478 1630-1915 Th, PeikH 46, Watts S, 4 cr

R 8471 Special Topics in Literacy (§SeEd 8899; max 9 cr; prereq #)
574778 1-9 cr

8492 Readings in English Education and Reading (§SeEd 8895)
448660 Beach R, 1-3 cr

8493 Problems: Teaching English and Reading (§SeEd 8896)
543739 —1 Beach R, ar cr
143428 —2 Manning J, ar cr
151732 —3 Phinney M, ar cr
943902 —4 Taylor B, ar cr
142621 —5 Watts S, ar cr

R 8570 Advanced Topics in Science Education (§SeEd 8899; max 16 cr)
474028 1630-2000 W, PeikH 385, Heller P, 4 cr

8590 Problems: Science Education (§SeEd 8871; prereq #)
547368 —1 Finley F, ar cr
550349 —2 Heller P, ar cr
243279 —3 Johnson R, ar cr
947223 —4 Lawrenz F, ar cr

8694 Problems: Second Languages and Cultures Education (§SeEd 8894; max 8 cr)
741567 —1 Jorstad H, ar cr
250734 —2 Paige M, ar cr
544048 —3 Tedick D, ar cr
050422 —4 Walker C, ar cr

8698 Readings in Second Languages and Cultures Education (§SeEd 8898)
851197 —1 Jorstad H, 1-4 cr
351051 —2 Paige M, 1-4 cr
545376 —3 Tedick D, 1-4 cr
345220 —4 Walker C, 1-4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 8750 Problems: Social Studies Education (§SeEd 8801; prereq 5741, 5740, or SeEd 5150, SeEd 5152, SeEd 5156, SeEd 8104 or #)
941664 —1 Avery P, 3-9 cr
043115 —2 Cogan J, 3-9 cr

DANCE (Dnce)
Theatre Arts
Liberal Arts

R 1001 Fundamental Modern I (prereq Δ)
973689 0750-0920 TTh, NorrisH 67, Maddux M, 1 cr

R 1002 Fundamental Modern II (prereq # or Δ)
550416 1115-1245 TTh, NorrisH M153, Maddux M, 1 cr

R 1005 Fundamental Ballet II (prereq 1004 or # or Δ)
152694 0750-0920 MW, NorrisH 67, Gilliland L, 1 cr

R 1008 Fundamentals of Jazz II (prereq 1007)
442258 0750-0920 TTh, NorrisH M153, Young C, 1 cr

R 1020 Beginning Modern II (max 4 cr; prereq 1010 or # or Δ)
050632 1325-1455 MTThF, NorrisH 67, Mann P, 2 cr

R 1031 Ballroom I
871434 —1 1010-1100 MW, NorrisH M151, Sealy Z, 1 cr (men only)
671435 —2 1010-1100 MW, NorrisH M151, Sealy Z, 1 cr (women only)

R 1050 Beginning Ballet II (max 4 cr; prereq 1040 or # or Δ)
344083 0750-0920 MWF, NorrisH M153, Mathis B, 2 cr

R 1080 Beginning Jazz II (max 2 cr; prereq 1070 or # or Δ)
050016 1115-1245 TTh, NorrisH 80, Sealy Z, 1 cr

R 3020 Intermediate Modern II (max 4 cr; prereq 3010 or # or Δ)
752102 1325-1455 MTThF, NorrisH 80, Smith J, 2 cr

R 3050 Intermediate Ballet II (max 4 cr; prereq 3040 or # or Δ)
947206 0930-1100 MWF, NorrisH M153, Gilliland L, 2 cr

R 3080 Intermediate Jazz II (max 2 cr; prereq 3070 or # or Δ)
544857 0930-1100 TTh, NorrisH M153, Young C, 1 cr

R 3312 Composition II (prereq 3311 or # or Δ)
★LECT 1115-1245 MF, NorrisH M153, Shapiro D
146409 —1 LAB 1115-1245 W, NorrisH M153, Shapiro D, 3 cr

R 3330 Topics in Dance Theory (prereq 1030)
646065 —1 0750-0920 M, NorrisH 201, Cheng M, 2 cr (Dance Production I)
648768 —2 1325-1455 W, NorrisH 80, Loeb B, 2 cr (Laban Movement Analysis I) (prereq Δ)
171432 —3 0750-0920 F, NorrisH 201, Cheng M, 2 cr (Dance Production II)

R 3333 The Articulate Body: Kinesiology and Biodynamics of Dance (§1111; prereq dance maj or min, Δ)
273690 0750-0920 TTh, NorrisH 201, Gleason P, 4 cr

R 3700 Dance Repertory Theatre and Reconstruction (prereq concurrent enrollment in a technique class, audition, #) (A-F only)
642159 1510-1710 MTWThF, NorrisH 67, Smith J, 3 cr (addtl hrs ar)

R 5020 Advanced Modern II (max 9 cr; prereq 5010 or # or Δ)
148202 1325-1455 MTWThF, NorrisH M153, 3 cr

R 5050 Advanced Ballet II (max 6 cr; prereq 5040 or # or Δ)
452224 0930-1100 MWF, NorrisH 67, Mathis B, 2 cr

R 5080 Advanced Jazz II (max 3 cr; prereq 5070 or # or Δ)
752360 0930-1100 TTh, NorrisH 67, Sealy Z, 1 cr

5100 Dance Practicum
141422 Cheng M, 1-6 cr

R 5313 Composition V (prereq Δ or 5312)
★LECT 1115-1245 MF, NorrisH 67, Smith J
141372 —1 LAB 1115-1245 W, NorrisH 67, Smith J, 3 cr

R 5487 World Dance Studies (Vis; IP)
371431 0930-1100 TTh, NorrisH 201, Maddux M, 4 cr

R 5700 Workshop: Dance Performance (prereq concurrent registration in a technique class, Δ) (A-F only)
746333 1510-1710 MTWThF, NorrisH M153, Smith J, 3 cr (addtl hrs ar)

R 5950 Topics in Dance (max 12 cr)
449551 Cheng M, 2 cr

5970 Directed Studies (prereq 9 cr in dance, #, Δ, CLA approval)
445421 —1 Cheng M, 1-6 cr

DANISH (Dan)
German, Scandinavian, and Dutch
Liberal Arts

R 1102 Beginning Danish (prereq 1101)
048492 1600-1730 MWTh, FolH 326, Petersson T, 5 cr

R 1105 Intermediate Danish (prereq 1104)
941776 1325-1450 MWF, FolH 214, Petersson T, 5 cr

R 3670 Advanced Danish (max 28 cr; prereq 1106 or equiv)
144269 1415-1530 TTh, FolH 142, Houe P, 4 cr

DENTAL HYGIENE (DH)
Dentistry

1002 Head and Neck Anatomy (prereq DH stu) (A-F only)
374622 1010-1150 M, MoosT 5125, Blue, 2 cr

1092 Introduction to Dental Hygienist-Patient Relationships (prereq 1190) (A-F only)
★LECT 1010-1205 F, MoosT 6410, Ingebritson M, 3 cr
250698 —1 LAB 1020-1200 W, MoosT 4160, Ingebritson M

1191 The Dental Hygiene Care Process: Clinical Application I (prereq 1190) (S-N only)
★LECT 0800-0850 Th, MoosT 6410, Stoltenberg J, 3 cr
045415 —1 CLN 1315-1615 MTWF, Stoltenberg J

1202 Introduction to Biomaterials (A-F only)
★LECT 1005-1055 F, 1110-1200 F, MoosT 6410, 3 cr
347596 —1 LAB 1325-1520 F, MoosT 4160, Dittmar S, Romero E

3061 Community Outreach (A-F only)
244660 0930-1200 W, MoosT 6410, Bryan P, 3 cr

3096 Ethics, Jurisprudence, and Principles of Practice (prereq dent hyg student) (A-F only)
351387 1100-1215 T, 0800-0915 W, MoosT 6410, Newell K, 3 cr

3175 Oral Histology and Embryology (A-F only)
141153 0800-0850 TWF, MoosT 2620, Meyers S, 3 cr

3194 The Dental Hygiene Care Process: Clinical Application IV (prereq 3193) (A-F only)
★LECT 0815-0910 F, MoosT 6410, Osborn J, 4 cr
150993 —1 CLN 0930-1215 MW, 1315-1615 MTW, Stoltenberg J, others

3197 The Dental Hygiene Care Process: Clinical Application VII (prereq 3196) (A-F only)
★LECT 0800-0850 M, MoosT 6410, Newell K, 5 cr
049576 —1 CLN 0930-1215 MT, 1315-1615 MTWF, 1700-1945 T, 0730-1215 Th, MoosT, Stoltenberg J

3203 Dental Hygiene Care for the Older Adult Patient (prereq 3193) (A-F only)
451395 0745-0925 M, MoosT 5125, Smith B, 2 cr

3277 Oral Radiology III: Radiographic Analysis (prereq dent hyg jr) (A-F only)
745960 0800-0850 W, MoosT 5125, Kuba R, 1 cr

3279 Clinical Oral Radiology (3278-3279-3280-3281-3282-3283†; prereq 3278, dent hyg jr or sr) (A-F only)
441255 Kuba R, 0 cr

3282 Clinical Oral Radiology (3278-3279-3280-3281-3282-3283†; prereq 3281, dent hyg jr or sr) (A-F only)
450876 Kuba R, 0 cr

R 3300 Local Anesthesia and Pain Management (prereq DH stu) (A-F only)
★LECT 1020-1200 T, MoosT 5125, Anderson J, 3 cr
144585 —1 CLN 1300-1500 Th, MoosT 8327, Anderson J

3480 Independent Study (prereq #) (S-N only)
948291 ar cr

DENTISTRY (Dent)
Dentistry

5002 Fixed Prosthodontics Techniques Lectures (A-F only)
550027 1325-1415 W, MoosT 2690, 1 cr

5005 Fixed Prosthodontics Laboratories (A-F only)
548603 1430-1700 MW, MoosT 4210A, 3 cr

5006 Fixed Prosthodontics I (A-F only)
850390 0840-0930 W, MoosT 2530, 1 cr

5008 Porcelain Veneers
546494 1 cr

5009 Fixed Prosthodontics: Independent Study
850633 ar cr

5011 Fixed Prosthodontics Clinic (prereq 5010) (A-F only)
045818 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 8150, 3 cr (Jan 6-Mar 14)

5016 Fixed Prosthodontics Clinic (prereq 5015) (A-F only)
150046 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 8150, 2 cr (Jan 6-Mar 14)

R 5017 Fixed Prosthodontics Clinic (prereq 5016) (A-F only)
345668 2 cr

5026 Introduction to Dental Care Delivery and Preventive Dentistry (A-F only)
145669 3 cr

5036 Organization and Management of Dental Practice I (S-N only)
873720 0840-0930 MWF, MoosT 2530, 2 cr (Jan 6-Mar 14)

5052 Dental Auxiliary Utilization Clinic (DAU I, II) (S-N only)
944953 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 8150, 0 cr (Jan 6-Mar 14)

5054 Dental Auxiliary Utilization Clinic (DAU I, II) (prereq 5053) (S-N only)
545667 2 cr

5055 Health Ecology: Independent Study
249597 ar cr

5070 Health Ecology Elective
448481 ar cr

5073 Advanced General Dentistry Elective
447413 ar cr

5075 Health Ecology: Dental Associateships
942927 ar cr

5092 Professional Problem Solving (prereq 5091) (A-F only)
947464 0800-0850 T, MoosT 2520, 0 cr (Jan 7)

5095 Professional Problem Solving (prereq 5094) (A-F only)
142103 0 cr (Jan 6-Mar 14)

5098 Professional Problem Solving (prereq 5097) (A-F only)
352300 0 cr (Jan 6-Mar 14)

5099 Professional Problem Solving (prereq 5098) (A-F only)
942636 1 cr

5100 Genetics: An Introduction for Dental Students (S-N only)
041381 0900-0950 M, 1325-1415 M, MoosT 2690, 1 cr (Jan 6-Feb 10)

5152 Operative Dentistry III (prereq 5151) (A-F only)
747028 0900-0950 T, MoosT 2690, 1 cr

5154 Operative Dentistry Lab II (†5154-5155; prereq 5153) (A-F only)
946489 4 cr

5155 Operative Dentistry Lab III (†5154-5155; prereq 5154) (A-F only)
048458 1000-1230 TTh, MoosT 4210A, 3 cr

5158 Operative Dentistry: Independent Study
451610 ar cr

5160 Operative Dentistry IV (A-F only)
646910 1430-1520 Th, MoosT 2530, 1 cr

5162 Operative Dentistry Clinic (prereq 5161) (A-F only)
052137 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 8150, 3 cr

5164 Operative Dentistry V (A-F only)
844167 1115-1205 T, MoosT 2520, 1 cr

5166 Operative Dentistry Clinic (†5165-5166-5167; prereq 5165) (A-F only)
747465 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 8150, 3 cr (Jan 6-Mar 14)

5167 Operative Dentistry Clinic (†5165-5166-5167; prereq 5166) (A-F only)
141341 4 cr

5170 Seminar: Operative Dentistry
647118 1 cr

5172 Esthetic Direct Anterior Restoratives (prereq 5160)
845335 1 cr

5173 Clerkship in Operative Dentistry (prereq 5160, 5165) (S-N only)
843875 2 cr

5175 Esthetic Dentistry Clinic (prereq 5172)
546091 1 cr

5181 Patient Management III (prereq 5180) (S-N only)
541862 0930-1215 MTWThF, 1315-1615 MTWThF, 1 cr (Jan 6-Mar 14)

5185 Patient Management IV (prereq 5184) (S-N only)
948811 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 4108A, 4215F, 1 cr (Jan 6-Mar 14)

5186 Patient Management IV (prereq 5185) (S-N only)
150967 1 cr

5200 Current Literature Seminar (S-N only)
247459 1430-1625 M, 1000-1200 WF, 2 cr

5201 Current Literature Seminar (S-N only)
346304 2 cr

5210 Introduction to Clinical Preventive Dentistry I (S-N only)
541280 1430-1625 M, 1000-1200 WF, 2 cr

5250 Oral Pathology: Independent Study
043857 ar cr

5311 Oral and Maxillofacial Surgery II (A-F only)
050355 0745-0835 F, MoosT 2530, 1 cr

5318 Oral and Maxillofacial Surgery Clinic Rotation (A-F only)
549668 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 7407, 1 cr (Jan 6-Mar 14)

5319 Oral Surgery Clinic Rotation (A-F only)
148872 1 cr

5320 Oral and Maxillofacial Surgery: Independent Study
049996 ar cr

5328 Medical Emergencies in the Dental Office (A-F only)
148337 1115-1205 T, OwreH 2210, 1 cr

5330 Nitrous Oxide Inhalation Analgesia/Emergency Drug Utilization (S-N only)
445211 1 cr

5335 Oral and Maxillofacial Surgery Clinic Elective Rotation (prereq 5310, 5311, 5315) (S-N only)
645174 ar cr (Jan 6-Mar 14)

5371 Orthodontics I (A-F only)
948405 0745-0835 MW, MoosT 2530, 1325-1415 Th, OwreH 2230, 3 cr

5377 Orthodontic Clinic Rotation (5377-5378†) (S-N only)
546964 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 6345, 0 cr (Jan 6-Mar 14)

5378 Orthodontic Clinic Rotation (5377-5378†; prereq 5377) (S-N only)
746753 1 cr

5380 Orthodontics
746106 2 cr

5385 Orthodontics: Independent Study
944256 ar cr

5402 Pediatric Dentistry II (A-F only)
647054 0800-0850 M, MoosT 2690, 1 cr

5404 Dental Care for the Handicapped (S-N only)
344701 0745-0835 W, MoosT 2690, 1 cr

5407 Minor Tooth Movement
650651 1 cr

5410 Clinical Pediatric Dentistry (prereq 5409) (A-F only)
151013 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 6125, 0 cr (Jan 6-Mar 14)

5413 Clinical Pediatric Dentistry (prereq 5412) (A-F only)
145784 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 6125, 0 cr (Jan 6-Mar 14)

5414 Clinical Pediatric Dentistry (prereq 5413) (A-F only)
444592 5 cr

5420 Pediatric Dentistry: Independent Study
742637 2 cr

5425 Treatment of the Difficult Pediatric Patient
444009 1 cr

5451 Periodontology I Lecture (A-F only)
546771 0800-0850 TTh, MoosT 2690, 2 cr

5460 Periodontology: Independent Study
345931 ar cr

5464 Periodontology Technique (Lab) (A-F only)
143669 —1 LAB 1000-1230 M, MoosT 4210A, 2 cr
045074 —2 LAB 1325-1535 F, MoosT 4210A, 2 cr

5465 Periodontology Clinic (A-F only)
347825 1 cr

5466 Periodontology Clinic (prereq 5465) (A-F only)
049626 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 8127, 2 cr (Jan 6-Mar 14)

5469 Periodontology Clinic (prereq 5468) (A-F only)
451574 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 8127, 2 cr (Jan 6-Mar 14)

5475 Clinical Seminar in Periodontology
050534 1 cr

5476 Periodontology Seminar
848610 2 cr

5477 Bacteriology and Immunology of Periodontal Disease
444723 1 cr

5478 Treatment of More Complicated Periodontal Patients
846954 ar cr

5550 Removable Prosthodontics I Lecture (A-F only)
748292 0900-0950 WF, MoosT 2690, 2 cr

5553 Removable Prosthodontics: Independent Study
751600 ar cr

5554 Removable Prosthodontics I Laboratory (A-F only)
148340 1000-1230 WF, MoosT 4210A, 3 cr

5559 Special Prosthodontics (A-F only)
546690 —1 1000-1230 M, MoosT 9227, 1 cr (Jan 27-Mar 14)
144529 —2 1325-1625 F, MoosT 9227, (Jan 27-Mar 14)

5562 Removable Prosthodontics Clinic (A-F only)
143646 3 cr

5563 Removable Prosthodontics Clinic (prereq 5562) (A-F only)
841673 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 8150, 4 cr (Jan 6-Mar 14)

5566 Removable Prosthodontics Clinic (A-F only)
147463 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 8150, 2 cr (Jan 6-Mar 14)

5567 Removable Prosthodontics (A-F only)
546754 2 cr

5568 Review: Partial Removable Prosthetics
146040 1 cr

5569 Removable Prosthetics
447069 ar cr

5570 Seminar: Restorative Dentistry
247512 ar cr

5573 Treatment of the Difficult Prosthodontic Patient
851121 1 cr

5575 Overview of Implants Used in Dentistry
649497 1 cr

5577 Advanced Complete Denture Prosthetics (prereq 3rd yr dent stu) (A-F only)
148581 1 cr

5600 Introduction to Biomaterials I (A-F only)
151769 1430-1520 W, MoosT 2650, 1 cr

5602 Biomaterials: Independent Study
142702 ar cr

5627 Endodontics Clinic (prereq 5626) (S-N only)
651315 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 8127, 1 cr (Jan 6-Mar 14)

5628 Endodontics Clinic (prereq 5627) (S-N only)
244593 2 cr

5630 Endodontics: Independent Study (S-N only)
751760 ar cr

5643 Hospital Dentistry (prereq 5642) (S-N only)
143839 0845-1200 MTWThF, PWB 7302, 0 cr (Jan 6-Mar 14)

5644 Hospital Dentistry (prereq 5643) (S-N only)
542638 1 cr

5649 Oral Anatomy II (†5648-5649; prereq 5648) (A-F only)
★LECT 0800-0850 M, MoosT 2620
747515 —1 LAB 0900-1220 M, MoosT 4160, 4170, 2 cr (Jan 6-11)

5654 Oral Anatomy: Independent Study
552344 ar cr

5675 Oral Biology: Fundamental and Applied (A-F only)
242696 0745-0835 MF, MoosT 2520, 2 cr

Symbols

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❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

5677 Dental Research Training
346464 3 cr

5680 Oral Biology: Independent Study
349512 ar cr

5725 Oral Histology and Embryology (A-F only)
447749 0800-0850 TWF, MoosT 2620, 4 cr (begins Jan 6)

5753 Temporomandibular Disorders: Diagnosis and Treatment (prereq 5751) (A-F only)
948002 1325-1415 Th, MoosT 2620, 1 cr

5755 Occlusion: Independent Study (prereq #) (S-N only)
150203 ar cr

5777 Oral Radiology III (A-F only)
647359 1220-1315 T, MoosT 2520, 1 cr

5779 Oral Radiology Clinic (A-F only)
342057 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 7221, 0 cr (Jan 6-Mar 14)

5780 Oral Radiology Clinic (A-F only)
549881 2 cr

5781 Advanced Clinical Roentgenology
142683 ar cr

5784 TMJ Pathology and Facial Pain
545426 1 cr

5785 Oral Radiology: Independent Study
552442 ar cr

5787 Oral Radiology Preclinical Laboratory (prereq 5786) (S-N only)
047892 0 cr

5801 Oral Medicine/Diagnosis (prereq 5800) (A-F only)
250085 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 9139, 1 cr (Jan 6-Mar 14)

5805 Emergency Clinic (prereq 5804) (S-N only)
143534 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 7336, 0 cr (Jan 6-Mar 14)

5806 Emergency Clinic (prereq 5805) (S-N only)
952017 2 cr

5807 Treatment Planning: Independent Study
944113 ar cr

5809 Patient Management I (A-F only)
348537 0900-0950 M, 1325-1425 M, MoosT 2690, 1 cr (Feb 17-Mar 10)

5811 Physical Evaluation II (A-F only)
050002 0800-0850 W, MoosT 2520, 0900-0950 Th, MoosT 2620, 3 cr (Jan 7-Feb 14)

5815 Oral Medicine Elective
344794 2 cr

5850 Treatment Planning Clinic (5850-5851-5852†) (A-F only)
547760 1 cr

5851 Treatment Planning Clinic (5850-5851-5852†; prereq 5850) (A-F only)
045611 1 cr

5853 Treatment Planning Clinic (A-F only)
349882 1 cr

5900 Dental Clinic (S-N only)
146250 ar cr

5901 Dental Clinic Elective (S-N only)
842080 ar cr (Jan 3-March 26)

5945 Geriatric Hospital Dentistry
046449 ar cr

5952 Advanced General Dentistry Seminar III (S-N only)
351602 ar cr

5957 Advanced General Dentistry Clinical Administration III (S-N only)
451266 ar cr

5962 Advanced General Dentistry Clinic III (S-N only)
548147 ar cr

5966 Advanced General Dentistry Clinic VII (S-N only)
048556 ar cr

5972 General Practice Seminar III (S-N only)
544129 ar cr

5976 General Practice Clinical Administration III (S-N only)
144238 ar cr (Anoka Metro Regional Treatment Center)

5982 General Practice Clinic III (S-N only)
951028 ar cr

5986 General Practice Clinic VII (S-N only)
543515 ar cr (Anoka Metro Regional Treatment Center)

5989 Advanced Clinical Geriatric Dentistry
343371 ar cr (Wilder Senior Health Center)

5990 Field Experience: Administration in a Multidisciplinary Health Center
452580 ar cr (Wilder Senior Health Center)

5993 Oral Health Services for Older Adults II
942149 ar cr

8126 Teaching and Evaluation: Dentistry I (prereq #)
649256 3 cr

8400 Craniomandibular Disorders: Selected Topics (prereq 8440) (A-F only)
441921 0730-0900 TTh, MoosT 2580, 3 cr

8441 Seminars in TMJ and Craniofacial Pain (prereq #) (A-F only)
941700 1 cr

8442 Advanced Clinical TMJ and Craniofacial Pain (prereq #) (A-F only)
348084 1-4 cr

8443 Current Literature in TMJ and Craniofacial Pain (prereq #) (A-F only)
049061 1 cr

8777 Thesis Credits: Masters
345945 1-16 cr

DERMATOLOGY (Derm)
Medical School

5182 Preceptorship in Dermatology (prereq regis med)
650214 1325-1415 W, 1430-1520 W, 1535-1625 W, DiehlH 220, PWB 4274, Dahl M, Bloom K, others, ar cr

5183 Advanced Dermatology (prereq 5181 or 5182)
750513 Dahl M, ar cr

5184 Special Course in Dermatology
846016 Bloom K, ar cr

5185 Research in Dermatology (prereq 5182)
449436 Dahl M, Hordinsky M, ar cr

8225 Clinical Dermatology
752228 Bloom K, Dahl M, others, ar cr

8226 Clinical Seminar
850034 1325-1415 WF, PWB 4272, Dahl M, ar cr

8227 Histology of the Skin
148080 1535-1625 WF, PWB 4272, Rest B, ar cr

8228 Research: Dermatology and Related Basic Sciences
842998 Dahl M, Nelson R, others, ar cr

8229 Electron Microscopy in Dermatology
647264 Zelickson A, ar cr

8230 Functional Biology of the Skin
246781 Dahl M, ar cr

8231 Clinics in Dermatology for Non-Dermatologists
050176 ar cr

8232 Seminar: Dermatologic Histopathology and Mycology
248966 Rest B, ar cr

DESIGN, HOUSING, AND APPAREL (DHA)
Human Ecology

R 1231 Clothing Design Studio I (prereq 1328, pass sewing proficiency exam)
171463 0905-1100 MWF, McNH 205, 212, Amir Fazli H, 4 cr

1300 Introduction to Design (§1501) (AH)
341524 0905-0955 MWF, McNH 33, 3 cr

R 1301 Introduction to Visual Communication and Graphic Design
974292 1830-2120 TTh, McNH 197, 4 cr

R 1323 Design Process: Drawing I (§1523; prereq dsgn or hsg or apparel maj or pre-maj)
742301 —1 LAB 1115-1415 MW, McNH 258, 4 cr
173861 —2 LAB 1115-1415 TTh, McNH 258, 4 cr

R 1325 Design Process: Two-Dimensional Design I (§1525; prereq dsgn or hsg or apparel maj or pre-maj)
646793 1115-1415 MW, McNH 262, 4 cr

R 1328 Design Process: Color (§1528; prereq 1300, 1323, 1325, or equiv, dsgn or hsg or apparel maj or pre-maj)
945018 —1 LAB 1535-1825 MW, McNH 262, 4 cr
073862 —2 LAB 0800-1100 TTh, McNH 262, 4 cr

R 1331 Surface Design I (prereq 1300, 1323, 1325, DHA maj or premaj) (course fee)
873863 0800-1100 MW, McNH B9, 4 cr (addtl hrs ar)

R 1334 Introduction to Computer Applications to Design (prereq DHA premaj, basic keyboarding exp, or #) (A-F only)
673864 —1 1530-1820 T, McNH 305, 2 cr
473865 —2 1530-1820 Th, McNH 305, 2 cr

R 1400 Introduction to Housing (§1851)
141413 1010-1205 MW, McNH 376, Ziebarth A, 4 cr

R 1641 Interior Design Studio I (§1554; prereq 1300, 1323, 1328, 1621, dsgn or hsg or apparel maj or pre-maj) (course fee)
273866 1535-1825 M, 1535-1725 WF, McNH 480, 4 cr

R 3117 History of Costume: Origins Through 18th-Century (§3517; prereq general art hist course)
371462 1325-1455 MW, McNH 376, 3 cr

3203 Field Experience in Apparel Sciences and Design (§3003; prereq soph, HE 1003, #) (S-N only)
550013 —1 1-3 cr

3212 Cultural Perspectives in Dress (§TexC 3212, TexC 3661; prereq 1101) (IP)
643196 1115-1310 MW, McNH 216, Eicher J, 4 cr

R 3213 Fashion Trend Analysis
173867 1325-1520 MW, McNH 10, Johnson K, 4 cr

R 3214 Apparel Industries (§1643; prereq Econ 1101 or AgEc 1101)
973868 1535-1715 TTh, McNH 10, 4 cr

R 3217 Aesthetics of Clothing (prereq 1101)
★LECT 1220-1310 TTh, McNH 376
752097 —1 LAB 1325-1445 T, McNH 376, 4 cr
542302 —2 LAB 1325-1445 Th, McNH 376, 4 cr

R 3218 Pattern Development II (prereq 3211 or TexC 3211)
773869 1530-1820 MW, McNH 205, 212, 4 cr

R 3232 Clothing Design Studio III (prereq 1231, 3211, pass portfolio review)
151505 0905-1205 TTh, McNH 205, 212, Amir-Fazli H, 4 cr

R 3241 Merchandising Principles (§TexC 3643; prereq 1211 or TexC 1211, Math 1031)
151948 0905-1100 MW, McNH 10, Johnson K, 4 cr

R 3323 Design Process: Drawing II (prereq 1323, DHA maj) (A-F only)
951854 0800-1100 TTh, McNH 258, 4 cr

R 3325 Design Process: Two-Dimensional Design II (§3525; prereq 1325 or 1525, dsgn or hsg or apparel maj, pass dsgn comm portfolio rev or Δ)
173870 1115-1415 TTh, McNH 305, 4 cr

R 3327 Packaging Design (prereq pass portfolio review for degree prog or #)
973871 1115-1415 MW, McNH B3, 4 cr

R 3328 Design Process: Color II (§3528; prereq 1323 or 1523, 1328 or 1528, dsgn or hsg or app maj, pass des com port rev or Δ)
773872 0800-1100 MW, McNH 262, 4 cr

R 3334 Computer Application to Design Problems (prereq 1323, 1325, 1328, 1334 or #) (A-F only)
473851 1830-2120 TTh, McNH 305, 4 cr

R 3350 Typographic Design (prereq pass dsgn comm portfolio review for degree program or Δ)
273852 1535-2125 MW, McNH 258, 4 cr

R 3352 Graphic Design II (prereq 3351, pass portfolio review for degree prog, or #)
173853 1535-2125 TTh, McNH B3, 4 cr

R 3381 Portfolio and Professional Development (prereq 3353 or ¶3353)
973854 1535-1825 MW, McNH 146, 4 cr

R 3633 Lighting Design for Environmental Spaces (§3548; prereq pass int dsgn portfolio review or #)
144148 1325-1515 TTh, McNH 10, Ginthner D, 3 cr

R 5107 History of Decorative Arts: Textiles (§5507; prereq Arch 3411, Arch 3412, or ArtH 1002, or #)
449744 1115-1205 MWF, McNH 33, Erickson A, 3 cr

R 5114 History of American Furniture and Interiors (§5514; prereq 5112 or Dsgn 5112 or #)
647975 1220-1310 MWF, McNH 33, 3 cr

R 5213 Advanced Textile Analysis (§5621; prereq 5215 or 5631 or 5254 or 5627)
571461 1250-1520 TTh, McNH 340, LaBat K, 5 cr

R 5216 Textile and Apparel Consumer (§5662; prereq 3216 or 3621, AgEc 1101 or Econ 1101, or #)
951269 1010-1205 TTh, McNH 10, Williams G, 4 cr

R 5334 Computer Applications to Design Problems II (prereq 3334, or #) (A-F only)
373857 1530-1820 MW, McNH 305, Hokanson B, 4 cr

R 5467 Housing and the Social Environment (prereq 1101, 3463 or #)
144196 1220-1415 MW, McNH 198, Yust B, 4 cr

R 5482 The Family and Energy Issues (§5801; prereq 1400 or 1851, 1401 or 1801, or #)
173858 1535-1700 TTh, McNH 376, 3 cr

R 5646 Interior Design Studio VI (§5554; prereq 3216 or TexC 3621, 3631 or Dsgn 3557, 3633 or Dsgn 3548, 3643 or Dsgn 3553, #) (course fee)
141176 0905-1155 TTh, McNH 475, Ginthner D, 4 cr

R 5647 Interior Design Thesis (§5555; prereq 5612 or 5575, 5645 or 5552, 5646 or 5554)
147320 —1 1535-1625 MW, McNH 10, Erickson A, 6 cr
549248 —2 1535-1625 MW, McNH 10, Ginthner D, 6 cr
950803 —3 1535-1625 MW, McNH 10, Guerin D, 6 cr

8180 Directed Study in Design, Housing, and Apparel (max 8 cr; prereq #) (A-F only)
873037 1-4 cr

8190 Readings in Design, Housing, and Apparel (max 8 cr; prereq #) (A-F only)
473039 1-4 cr

R 8263 Literature of Dress II (§TexC 8663)
073859 0905-1135 M, McNH 146, Williams G, 3 cr

R 8266 Aesthetic Concepts Related to Apparel Design (§TexC 8666; prereq 3217 or TexC 3662 or #)
371459 1325-1555 M, McNH 216, 3 cr

R 8323 Design Process: Drawing (§8523; prereq #)
373860 1115-1415 TTh, McNH B3, Martinson B, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
950736 1-18 cr

8777 Thesis Credits: Masters
145177 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
641772 1-36 cr

DEVELOPMENT STUDIES AND SOCIAL CHANGE (DSSC)

R 8211 Field Research Methodology in Development Studies and Social Change (prereq DSSC minor or #, 8210)
144845 1535-1705 W, Kelliher D, Aminzade R, 1 cr

R 8311 Topics in Development Studies and Social Change (prereq DSSC minor or #)
848963 1430-1630 F, Roediger D, Johnson L, 2 cr

DUTCH (Dtch)
German, Scandinavian, and Dutch
Liberal Arts

R 1102 Beginning Dutch (§1110; prereq 1101)
441367 1115-1240 MWF, FolH 306, Van der Sanden, 5 cr

R 1105 Intermediate Dutch (prereq 1104)
052333 0905-1030 MWF, AmundH 162, Van der Sanden, 5 cr

R 3012 Conversation and Composition (prereq 3011)
841169 1415-1530 TTh, NichH 213, Van der Sanden, 4 cr

3970 Directed Studies (prereq 1105, #, Δ, ❑)
151464 1-5 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
171486 1-5 cr

EAST ASIAN STUDIES (EAS)
Area Studies Programs
Liberal Arts

R 1461 Introduction to East Asia: Early Civilization (§Hist 1461, 3461)
★LECT 1115-1205 MWF, AndH 370, Farmer E
273561 —1 REC 1010-1100 M, HHHCtr 30, 4 cr
173562 —2 REC 1220-1310 M, BlegH 245, 4 cr
973563 —3 REC 1325-1415 M, BlegH 420, 4 cr
773564 —4 REC 1010-1100 T, BlegH 240, 4 cr
573565 —5 REC 1220-1310 T, BlegH 105, 4 cr
373566 —6 REC 1220-1310 T, BlegH 230, 4 cr

R 3013 Introduction to East Asian Art (§ArtH 3013)
147219 0945-1100 TTh, AndH 310, Poor R, 4 cr

3468 People's Republic of China: The Communist Revolution, 1900 to Present (§Hist 3468, Hist 5468)
071495 0905-0955 MWF, AndH 350, Farmer E, 4 cr

R 3471 20th-Century Japan (§Hist 3471)
174654 1245-1400 TTh, BlegH 130, Davidann J, 4 cr

R 3481 Modern Japanese Society (§Soc 3481; prereq introductory sociology or #)
151858 1325-1415 MWF, AndH 230, Broadbent J, 4 cr

8777 Thesis Credits: Masters
142982 1-16 cr

ECOLOGY, EVOLUTION AND BEHAVIOR (EEB)
Biological Sciences

R 3001 Introduction to Ecology (open to jrs and above but not to biol majs) (Biol/NL; Envt)
★LECT 1010-1100 MWF, McNH 33, Tester J
146806 —1 REC 1220-1310 T, AlderH 415, 4 cr
148631 —2 REC 1115-1205 W, AlderH 415, 4 cr
752312 —3 REC 1220-1310 Th, AlderH 415, 4 cr
346920 —4 REC 1220-1310 F, AlderH 415, 4 cr

R 3111 Introduction to Animal Behavior (§3811, AnSc 3111; prereq Biol 1008 or Biol 1009 or Biol 1201 or Biol 1202 or #)
★LECT 1800-2000 TTh, KaufL 302, Phillips R
945603 —1 REC 2010-2100 T, AlderH 415, 4 cr
142495 —2 REC 2010-2100 Th, AlderH 415, 4 cr

R 5008 Quaternary Ecology (prereq Biol 5041 or Biol 5841 or #)
471856 0945-1135 TTh, Ecology 505, Davis M, 4 cr

R 5064 The Process of Evolution (prereq Biol 5041 or Biol 5841 or #) (A-F only)
★LECT 0815-0955 TTh, BorH 365, Alstad D
342155 —1 REC 1220-1520 W, Ecology 170, 4 cr

R 5136 Ichthyology (prereq 15 cr incl Biol 1106 or Biol 3011)
★LECT 1245-1415 MW, Ecology 150C
345394 —1 LAB 1245-1545 T, Ecology 160, 4 cr
947920 —2 LAB 1245-1545 Th, Ecology 160, 4 cr

R 5157 Animal Physiology Laboratory (prereq Biol 3011 or Biol 3111 or 5156 or 5323 or Ent 5030 or FW 5459 or GCB 5114 or AnSc 3301 or ¶ or #) (A-F only)
141274 1325-1625 MW, SnH 28, Phillips R, Schmid W, 3 cr

R 5325 Behavioral Ecology (prereq 3111 or 5321 or Biol 5041 or Biol 5841 or #)
★LECT 0945-1130 T, 0945-1100 Th, Ecology 150C
845383 —1 REC 1115-1230 Th, Ecology 150C, 4 cr

R 5601 Limnology (§Geo 5601; prereq Chem 1005 or #)
★LECT 1010-1100 MWF, PillsH 110, Megard R (Mpls)
142321 —1 REC 1220-1310 Th, PillsH 110, Megard R, 4 cr (Mpls)
051859 —2 REC 1430-1520 Th, PillsH 110, Megard R, 4 cr (Mpls)

R 5608 Ecosystems: Form and Function (prereq 5601 or Biol 5041 or Biol 5841 or equiv, adv writ crse such as Comp 3015, Comp 3027, Comp 3033, Comp 3085 or Rhet 3562, Δ)
151674 1010-1100 MWF, AlderH 415, Gorham E, 4 cr

R 5652 Community and Ecosystem Processes (prereq 2 qtr calc, Biol 5041 or Biol 3041 or equiv, ecol crse in pop, comm, or ecosys or #) (A-F only)
★LECT 1325-1415 MWF, ClaOff B30, Sterner R
673816 —1 REC 1430-1625 M, Ecology 170, 4 cr

R 5965 Decision Analysis (prereq conservation biol grad prog or #) (A-F only)
651279 1415-1615 TTh, Ecology 150C, Starfield A, 4 cr

5970 Directed Studies (max 10 cr may count toward maj req; prereq #, Δ) (S-N only)
344259 ar cr

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- **§** Credit will not be granted if credit has been received for the course listed after this symbol.
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- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
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- **✦** This symbol will precede the call numbers of a course with multiple section types (e.g., LECT, LAB, REC) without automatic registration. You must select and register for one of each of the parts of the course.

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5990 Directed Research (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
650083 ar cr

R 8061 Social Systems (prereq 5321 or equiv, #)
271857 McKinney F, 3 cr

R 8162 Winter Ecology (prereq #)
073831 Schmid W, 2 cr

R 8390 Graduate Seminar (prereq #)
850485 —1 ar cr
941437 —2 1 cr
952261 —3 Starfield A, 2 cr

8391 Advanced Work in Ecology and Behavioral Biology (prereq #)
642081 ar cr

R 8510 Behavioral Biology Seminar (prereq #) (S-N only)
473817 —1 Packer C, Pusey A, 1 cr
073814 —2 McKinney F, 1 cr

R 8602 Advanced Limnology (§Geo 8602; prereq 5601 or Geo 5601 or equiv) (A-F only)
550478 1325-1600 T, Ecology 200, Megard R, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
947531 1-18 cr

8777 Thesis Credits: Masters
652271 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
748938 1-36 cr

8990 Graduate Research (prereq #)
245212 ar cr

ECONOMICS (Econ)
Liberal Arts

R 1101 Principles of Microeconomics (§1104; prereq plane geometry and interm algebra at GC 0623 and GC 0631 level) (SSci; IP)
★LECT 1115-1205 MWF, WilleyH 175
152212 —1 REC 0905-0955 M, BlegH 420, 4 cr
744193 —2 REC 0905-0955 M, BlegH 115, 4 cr
142769 —3 REC 1010-1100 M, BlegH 225, 4 cr
145423 —4 REC 1010-1100 M, BlegH 255, 4 cr
846470 —5 REC 1220-1310 M, BlegH 225, 4 cr
252094 —6 REC 1220-1310 M, BlegH 260, 4 cr
250135 —7 REC 1325-1415 M, BlegH 115, 4 cr
241421 —8 REC 1325-1415 M, BlegH 105, 4 cr
★LECT 0815-0930 TTh, WilleyH 175
746560 —9 REC 1010-1100 W, BlegH 255, 4 cr
846355 —10 REC 1010-1100 W, BlegH 225, 4 cr
347565 —11 REC 1115-1205 W, BlegH 260, 4 cr
551128 —12 REC 1115-1205 W, BlegH 225, 4 cr
943303 —13 REC 1220-1310 W, BlegH 240, 4 cr
852740 —14 REC 1325-1415 W, BlegH 125, 4 cr
471498 —15 REC 1325-1415 W, AndH 210, 4 cr

R 1102 Principles of Macroeconomics (§1105; prereq 1101 or equiv, plane geom, interm alg at GC 0623, GC 0631 level) (SSci; IP)
★LECT 1010-1100 MWF, WilleyH 175
146272 —1 REC 1115-1205 W, BlegH 255, 4 cr
642761 —2 REC 1220-1310 W, BlegH 230, 4 cr
742153 —3 REC 1220-1310 W, BlegH 220, 4 cr
844184 —4 REC 1220-1310 W, BlegH 260, 4 cr
950591 —5 REC 1325-1415 W, AndH 370, 4 cr
344648 —6 REC 1325-1415 W, AndH 270, 4 cr
548925 —7 REC 1325-1415 W, AndH 350, 4 cr
★LECT 0945-1100 TTh, WilleyH 175
052610 —8 REC 1220-1310 F, BlegH 140, 4 cr
444222 —9 REC 1220-1310 F, BlegH 110, 4 cr
752794 —10 REC 1325-1415 F, BlegH 205, 4 cr
945861 —11 REC 1325-1415 F, BlegH 260, 4 cr
046564 —12 REC 1430-1520 F, BlegH 225, 4 cr
751001 —13 REC 1430-1520 F, BlegH 260, 4 cr

R 1104 Principles of Microeconomics (§1101; prereq 1 qtr calc) (SSci; IP)
645109 1325-1415 MWF, BlegH 220, 4 cr

R 1105 Principles of Macroeconomics (§1102; prereq 1104 or equiv, 1 qtr calc) (SSci; IP)
746946 1430-1520 MWF, BlegH 120, 4 cr

R 3101 Microeconomic Theory (§3105; prereq 1101, 1102 or equiv, 1 qtr calc)
650388 —1 0905-0955 MWF, BlegH 205, 4 cr
145140 —2 1010-1100 MWF, BlegH 205, 4 cr
841916 —3 1115-1205 MWF, BlegH 105, 4 cr

R 3101H Honors Course: Microeconomic Theory (prereq 1101, 1102, or equiv, 1 qtr calc...B avg rec)
250782 1220-1310 MWF, BlegH 115, 5 cr

R 3102 Macroeconomic Theory (prereq 3101 or equiv)
848980 —1 1115-1205 MWF, BlegH 135, 4 cr
150323 —2 1245-1400 TTh, BlegH 260, 4 cr

R 3103 Welfare Economics (prereq 3101 or equiv)
843035 —1 1325-1415 MWF, BlegH 255, 4 cr
343998 —2 1415-1530 TTh, BlegH 150, Richter M, 4 cr

R 3611 Environmental Economics (prereq 1101, 1102, or equiv, non-econ maj)
445600 1010-1100 MWF, BlegH 150, Sotkiewicz P, 4 cr

R 3701 Money and Banking (§5701, 5721; not open to Econ maj; prereq 1101, 1102 or equiv)
★LECT 1115-1230 TTh, AndH 350, Hatch J
145020 —1 REC 0800-0850 M, BlegH 105, 4 cr
643697 —2 REC 0905-0955 M, BlegH 105, 4 cr
745361 —3 REC 1010-1100 M, BlegH 115, 4 cr
350286 —4 REC 1115-1205 M, BlegH 260, 4 cr

R 3752 Financial Economics II (§5752H; prereq 3751)
942491 1325-1415 MWF, BlegH 225, Lin F, 4 cr

R 3801 Elements of Public Economics (§5821; not open to Econ maj; prereq 1101, 1102 or equiv)
741455 1430-1520 MWF, BlegH 240, Higgins M, 4 cr

3951 Major Project Seminar (prereq 3101, 3102, 3103 or equiv)
849465 2 cr

R 3960 Topics in Economics: The Chinese Economy (prereq 1101, 1102 or equiv)
943446 1415-1530 TTh, BlegH 235, Ma S, 4 cr

3970 Directed Studies (prereq #, Δ, ⊔)
648480 ar cr

R 5113 Introduction to Mathematical Economics (prereq 3101, 3102, 3103, or equiv, Math 1251-1252, 1261, 3251 or equiv)
950459 1415-1530 TTh, AndH 210, McLennan A, 4 cr

R 5152 Elements of Economic Analysis: Income and Employment (prereq 3101, 3102 or equiv, 1 qtr calc, 1 qtr linear algebra, grad stu or #)
042692 1415-1530 TTh, BlegH 5, Kiyotaki N, 3 cr

5162 Microeconomic Analysis (§8002; prereq 5161)
★LECT 0945-1100 TTh, BlegH 115, Hurwicz L
846971 —1 REC 1545-1700 Th, BlegH 135, Park T, 5 cr

5165 Macroeconomic Theory (prereq 5164)
★LECT 1415-1530 TTh, BlegH 250, Prescott E
852270 —1 REC 1545-1700 T, BlegH 135, Krueger D, 5 cr

5262 Introduction to Econometrics (no grad cr; prereq 5261)
★LECT 1430-1545 MW, BlegH 215
952342 —1 REC 1430-1545 F, BlegH 205, Quinn J, 5 cr

R 5301 Economic Development (§5331; not open to Econ maj; prereq 1101, 1102 or equiv)
042885 1325-1415 MWF, BlegH 135, Matheson V, 4 cr

R 5312 Technology and Development (prereq 3101, 3102 or equiv or #)
648950 1325-1440 WF, BlegH 335, Ruttan V, 4 cr

R 5313 The Russian Economy (prereq 3101, 3102 or equiv)
148510 1430-1520 MWF, BlegH 220, Kosyakovsky B, 4 cr

R 5401 International Economics (§5431, 5432; not open to Econ maj; prereq 1101, 1102 or equiv) (IP)
645269 —1 1010-1100 MWF, BlegH 10, 4 cr
443216 —2 1220-1310 MWF, BlegH 135, 4 cr

R 5421 Economic Integration in the Americas (prereq 3101, 3102, 3103 or equiv or #) (IP)
173819 1115-1230 TTh, BlegH 125, Kehoe T, 4 cr

R 5431 International Trade (§5401; prereq 3101, 3102, 3103 or equiv) (IP)
651945 1115-1230 TTh, BlegH 130, Sahi S, 4 cr

R 5432 International Finance (§5401; prereq 3101, 3102, 3103 or equiv; 5431 or equiv recommended) (IP)
046807 1220-1310 MWF, BlegH 105, Bangs J, 4 cr

R 5631H Honors Course: Industrial Organization and Antitrust Policy (prereq 3101, 3103 or equiv, 1 qtr calculus...B avg rec)
245601 —80 1245-1400 TTh, BlegH 255, Holmes T, 5 cr (undergrads only)
742492 —81 1245-1400 TTh, BlegH 255, Holmes T, 4 cr (grad stu only)

R 5731H Honors Course: Macroeconomic Policy (prereq 3101, 3102 or equiv, 1 qtr calculus...B avg rec)
551601 —80 0945-1100 TTh, BlegH 215, Huang X D, 5 cr (undergrads only)
443779 —81 0945-1100 TTh, BlegH 215, Huang X D, 4 cr (grad stu only)

R 5821 Introduction to Public Economics (§3801; prereq 3101, 3103 or equiv)
773824 0945-1100 TTh, BlegH 120, Merlo A, 4 cr

R 5960 Topics in Economics: Topics in Public Economics (§3801, 5821; prereq 3101, 3103 or equiv)
274290 1415-1530 TTh, AndH 370, Hurwicz L, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
750169 ar cr

8002 Microeconomic Analysis (prereq 8001)
★LECT 1115-1230 TTh, HHHCtr 60, Hurwicz L
373826 —1 REC 1545-1700 Th, BlegH 210, Park T, 4 cr

8102 Microeconomic Theory (prereq 8101)
★LECT 0945-1100 TTh, BlegH 115, Jordan J
043230 —1 REC 1545-1700 Th, BlegH 135, Aswal N, 4 cr

8105 Macroeconomic Theory (prereq 8104)
★LECT 1415-1530 TTh, BlegH 250, Prescott E
944015 —1 REC 1545-1700 T, BlegH 135, Krueger D, 4 cr

8117 Non-Cooperative Game Theory (prereq Math 5614 or equiv or #)
944211 1245-1400 TTh, BlegH 235, McLennan A, 3 cr

8182 Advanced Topics in Microeconomics (prereq 8181)
047200 0945-1100 TTh, BlegH 125, Gowrisankaran G, 3 cr

8185 Advanced Topics in Macroeconomics
473820 0945-1100 TTh, BlegH 245, Ohanian L, 3 cr

8192 Workshop in Mathematical Economics (prereq 8191)
651038 1535-1730 M, BlegH 350, ar cr

8202 Econometric Analysis (prereq 8201)
★LECT 1430-1545 MW, BlegH 215
144294 —1 REC 1430-1545 F, BlegH 205, Quinn J, 4 cr

8205 Applied Econometrics (prereq 8204)
★LECT 1115-1230 TTh, RarigC 616, Geweke J
973823 —1 REC 1115-1230 F, BlegH 210, Hora M, 3 cr

8212 Econometrics (prereq 8211)
941678 1115-1230 MW, HHHCtr 30, Chipman J, 3 cr

8292 Workshop in Econometrics
249647 1535-1705 T, BlegH 255, ar cr

8312 Technology and Development (prereq 8103, 8105)
943124 1115-1230 TTh, BlegH 210, 3 cr

8402 International Trade and Payments Theory (prereq 8401)
351020 1245-1400 TTh, BlegH 245, Kehoe T, 3 cr

8482 Advanced Topics in International Trade Theory (prereq 8481)
447752 1115-1230 TTh, BlegH 135, 3 cr

8492 Workshop in Trade and Development (prereq 8491)
146045 1535-1705 W, BlegH 235, ar cr

8502 Wages and Employment (prereq 8501)
646339 1615-1830 M, BlegH 210, Keane M, 3 cr

8602 Industrial Organization and Government Regulation (prereq 8601)
244321 1415-1530 TTh, BlegH 220, Holmes T, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
544051 1-18 cr

8692 Workshop in Applied Microeconomics (prereq 8691)
641559 1535-1705 W, BlegH 260, ar cr

8702 Monetary Economics (prereq 8701)
447136 1115-1230 TTh, BlegH 350, Chari V V, 3 cr

8705 Financial Economics (prereq 8102, 8105)
750396 1245-1400 TTh, HHHCtr 30, Werner J, 3 cr

8777 Thesis Credits: Masters
950302 1-16 cr

8782 Advanced Topics in Monetary Economics
273821 1245-1400 TTh, BlegH 210, Kiyotaki N, 3 cr

8792 Workshop in Macroeconomics (prereq 8791)
151472 1535-1705 Th, BlegH 115, ar cr

8802 Public Economics (prereq 8801)
151617 1545-1700 TTh, BlegH 350, Chari V V, 3 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
148927 1-36 cr

8990 Individual Research
743366 ar cr

Education: See also Adult Education; Agricultural Education; Business and Industry Education; Child Psychology; Curriculum and Instruction; Educational Policy and Administration; Educational Psychology; Family Education; Kinesiology; Mathematics Education; Recreation, Park, and Leisure Studies; and Work, Community, and Family Education.

EDUCATION (Educ)
Education and Human Development

3001 Exploring the Teaching Profession (max 6 cr; prereq early admission for Initial Licensure MEd Program) (S-N only)
170894 1535-1835 T, WullH 250, Bents M, 1 cr (Jan 14, Feb 4, 25)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
844203 1-18 cr

8777 Thesis Credits: Masters
945889 1-16 cr (Work, Community, and Family Education)

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
944631 —1 1-36 cr (Curriculum and Instruction)
049481 —2 1-36 cr (Work, Community, and Family Education)
551467 —3 1-36 cr (Recreation, Park, and Leisure Studies)

EDUCATIONAL ADMINISTRATION (EdAd)
Educational Policy and Administration
Education and Human Development

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq EdD stu who has not passed oral prelims)
446066 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
945780 1-36 cr

EDUCATIONAL POLICY AND ADMINISTRATION (EdPA)
Educational Policy and Administration
Education and Human Development

3155 History of Western Educational Thought (§5155, Hum 3155, Hum 5155)
944483 1640-1910 T, WullH 140, Bagley A, 4 cr

R 5090 School and Society (§3090, SPFE 5090; prereq FoE stu or sr or post BA in ed or CLA mus ed maj or tchg maj or ❑) (A-F only)
049514 —1 1220-1350 MW, BuH 123, Nunneley R, 3 cr
948730 —2 1640-1910 T, NichH 109, 3 cr

5099 Directed Study (max 9 cr; prereq #)
746025 ar cr

5128 Workshop: Educational Administration
244920 —1 1535-1805 T, PeikH 375, Mestenhauser J, 1 cr (Jan 7, 14, 21, 28) (Cross-Cultural and Comparative Perspectives on the Brazilian Educational System) (§WCFE 5102)
873202 —2 1640-1840 Th, WullH 140, 1 cr (Jan 9, 23, Feb 6, Mar 6, 13)
673203 —3 1535-1805 W, NichH 209A, Bracewell E, 1 cr (Feb 5, 12, 19, 26) (Rebuilding the Educational System in Pakistan: Case Study of Sird Agricultural University) (§WCFE 5101)

R 5142 Racial and Ethnic Diversity in Higher Education (A-F only)
252242 1430-1630 T, WullH 140, 3 cr

5155 History of Western Educational Thought (§3155, Hum 3155, Hum 5155)
142182 1640-1910 T, WullH 140, Bagley A, 4 cr

5167 The American Middle School
147552 0800-1030 S, WullH 220, 3 cr

R 5173 Case Studies for Policy Research (prereq educ or grad student or #) (A-F only)
050212 1430-1700 Th, ChDev 105, 3 cr

R 5174 Ethnographic Research Methods (prereq 5171 or Anth 5145 or Anth 5144)
945150 1535-1805 T, ChDev 105, Lundy-Dobbert M, 4 cr

5176 Ethnographic Research Skills Laboratory (prereq ¶5174) (S-N only)
749183 —1 LAB 1325-1455 T, BuH 125, Lundy-Dobbert M, 2 cr
143106 —2 LAB 1430-1600 Th, WullH 220, Lundy-Dobbert M, 2 cr

5202 Politics of Education
074039 —1 1640-1910 W, WullH 140, Mazzoni T, 3 cr

5204 Financing Elementary and Secondary Schools
646602 1640-1910 W, PeikH 375, Sederberg C, 3 cr

5210 Social Forecasting and Educational Futures
747286 1640-1910 Th, PeikH 335, Harkins A, 3 cr

5213 Financial Resource Management
244870 1640-1910 Th, PeikH 375, Sederberg C, 3 cr

5216 Recent Research in Elementary School Administration (prereq 5215)
952096 1640-1910 T, NichH 209A, Alkire G, 3 cr

5222 Introduction to Policy Research (!; only grad stu may reg S-N, all others must reg A-F)
951594 1640-1910 T, BuH 123, Anderson M, 3 cr

5224 Legal Implications of Acts by School Boards, Administrators, and Teachers (A-F only)
051263 1640-1910 M, BlegH 140, Hooker C, 3 cr

5240 Seminar: Clinical Experiences in Educational Administration (§8240) (S-N only)
647443 1640-1910 Th, PeikH 335, Schultz T, 1-9 cr

5245 Ethics, Morality and Values in Education
274354 1640-1910 M, NichH 109, Orton R, 3 cr

R 5260 Introduction to Educational Planning
352846 1640-1910 W, BuH 123, Schultz T, 3 cr

5272 Problems: Educational Policy and Administration (§8272)
946508 1-3 cr

R 5285 Principles and Methods of Evaluation (§EPsy 5240)
047374 —1 0945-1100 TTh, WullH 140, 3 cr (undergrad only)
849756 —2 1640-1940 W, NichH 213, 3 cr

5420 Leadership and Administration of Student Affairs (§EPsy 5420)
771622 1535-1805 W, PeikH 335, Bailey J, 3 cr

5605 Research Topics: International Development Education (§AdEd 5605) (A-F only)
542705 1640-2010 T, SmithH 111, Cogan J, 4 cr

5609 Critical Issues in International Education and Educational Exchanges (prereq #) (A-F only)
047746 1430-1630 TTh, BuH 123, Mestenhauser J, 4 cr

8228 Problems: Higher Education (prereq #)
641920 ar cr

8229 Seminar: Higher Education (!; prereq #)
543398 —1 1-4 cr
250586 —2 1430-1700 M, WullH 220, Paige R M, 1 cr (Jan 6, 13, 27, Feb 3)
071612 —3 1430-1700 W, WullH 220, Mestenhauser J, 1 cr (Feb 5, 12, 19, 26)

8241 Seminar: Internship in Educational Administration (S-N only)
252550 1640-1910 Th, BuH 123, Schultz T, 0-9 cr

8252 Instruction and Learning in Higher Education (prereq 5250)
741438 1640-1910 M, WullH 140, Anderson M, 3 cr

R 8261 Problems: Social and Philosophical Foundations of Education (prereq #)
948372 —1 ar cr
142545 —2 1430-1600 W, WullH 140, Lundy-Dobbert M, 1 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

8268 Seminar: Social and Educational Futures (max 6 cr; prereq 5209 or 5210 or 5211 or #)
145812 0905-1135 S, HHHCtr 30, Harkins A, 1-6 cr

8270 Problems: Elementary School Administration (prereq #)
251429 ar cr

8271 Problems: Secondary School Administration (prereq #)
644929 ar cr

8273 Field Study (prereq #)
147485 0-10 cr

8341 Simulation Analysis of Educational Policy Systems (§EdAd 8341; prereq 8340) (S-N only)
349042 1640-1910 Th, ClaOff 135, Ammentorp W, 3 cr (StP)

8603 Seminar: International Development Education (prereq 5603)
549637 3 cr

8605 Problems: International Education Research (prereq 5605)
143386 1535-1805 T, PeikH 335, Paige R M, 3-6 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
344830 1-18 cr

8777 Thesis Credits: Masters
244996 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
345024 1-36 cr

EDUCATIONAL PSYCHOLOGY (EPsy)

Education and Human Development

R 1601 American Sign Language I
852074 1010-1205 MW, PeikH 335, 5 cr

R 1602 American Sign Language II (prereq 1601 or #)
041834 0800-0955 TTh, BuH 123, 5 cr

R 1603 American Sign Language III (prereq 1602 or #)
149205 1010-1205 WF, PeikH 375, 5 cr

R 3119 Learning and Cognitive Bases of Education (prereq educ stu or CLA math maj...psy crse recommended) (SSci) (A-F only)
★LECT 1220-1415 T, 1220-1310 Th, Phys 166, Samuels S
847750 —1 LAB 1325-1415 Th, Phys 166, 4 cr

R 3132 Psychology of Multiculturalism in Education (SSci; CD) (A-F only)
846601 1010-1205 MW, BuH 123, Puncochar J, 4 cr

R 3139 Social and Developmental Psychology in Education (§5139) (SSci; CD) (A-F only)
671676 1640-1840 MW, Phys 131, Narvaez D, 3 cr

R 3260 Basic and Applied Statistics (Math)
442485 1220-1400 TTh, BuH 123, Garfield J, 4 cr

R 3601 American Sign Language IV (prereq 1603)
343466 0800-0955 TTh, PeikH 215, 5 cr

R 3602 American Sign Language V (prereq 3601)
349221 0800-0955 TTh, ChDev 105, 5 cr

R 5113 Introduction to Instructional Psychology and Technology
449954 1640-1910 T, BuH 125, Tennyson R, 3 cr

R 5114 Psychology of Student Learning (A-F only)
544227 1640-1910 W, NichH 109, van den Broek P, 3 cr

R 5116 Behavior Analysis in Education (A-F only)
244447 1640-2030 M, PeikH 325, 4 cr

R 5119 Learning and Cognitive Foundations of Education (prereq CEHD stu or CLA mus ed maj or Δ...psy crse rec) (SSci) (A-F only)
★LECT 1220-1415 T, 1220-1310 Th, Phys 166, Samuels S
950154 —1 LAB 1325-1415 Th, PeikH 155, 4 cr
149933 —2 LAB 1325-1415 Th, Phys 133, 4 cr
752049 —3 LAB 1325-1415 Th, Phys 131, 4 cr
174055 —4 LAB 1325-1415 Th, Phys 166, 4 cr

R 5135 Human Relations Workshop (S-N only)
★LECT 1700-1930 M, BuH 120, Puncochar J
145073 —1 REC 1945-2200 M, BuH 120, 6 cr

R 5139 Building a Learning Community (§3139; prereq College of EHD stu or CLA mus ed maj or Δ, one psy crse) (SSci; CD) (A-F only)
542333 1640-1840 MW, Phys 131, Narvaez D, 4 cr

R 5151 Structuring Learning: Social Psychological Approaches (A-F only)
844007 0800-1600 S, PeikH 28, Johnson D W, 3 cr (Jan 11, 18, 25, Mar 15)

R 5155 Small Group Dynamics and Shared Decision Making (§EdPA 5267; prereq 5150 or equiv rec) (A-F only)
471677 1325-1625 M, BuH 120, Johnson D W, 3 cr

R 5217 Proseminar in Educational Psychology (max 3 cr) (A-F only)
374054 1115-1310 Th, PeikH 325, Bart W, 1 cr (Jan 9, 23, Feb 6, 20, Mar 6)

R 5229 Classroom Assessment Methods (prereq concurrent participation in practice tchg or similar field exp) (A-F only)
641898 1640-1830 TTh, NichH 45, Marston D, Allen D, 2 cr (Jan 7-Feb 6)

R 5240 Principles and Methods of Evaluation (§EdPA 5285)
950235 —1 0945-1100 TTh, WullH 140, 3 cr (undergraduates only)
047679 —2 1640-1940 W, NichH 213, Stockdill S, 3 cr

5243 Practicum: Survey and Observational Research Methods
845531 1640-1755 TTh, NichH 213, Garfield J, 3 cr

R 5246 Evaluation Colloquium (max 6 cr) (S-N only)
342334 1640-1840 Th, WullH 140, McKendall V, 1 cr (Jan 9, 23, Feb 6, 20, Mar 6, 13)

R 5260 Introductory Statistical Methods
146460 —1 1010-1205 TTh, BuH 125, Kinne L, 4 cr
141646 —2 1640-1820 TTh, LindH 302, 4 cr

R 5261 Applied Matrix and Vector Concepts (S-N only)
148466 1220-1400 W, PeikH 325, Davenport E, 1 cr (Jan 8-Feb 5)

R 5263 Statistics for Preprofessional Students (A-F only)
351941 1640-1820 TTh, AmundH 116, Anderson R, 4 cr

5281 Introduction to Statistical Computing (S-N only)
574909 1220-1310 MTWThF, LindH 26, 1 cr (Jan 13-27)

5400 Workshop: Counseling Psychology (max 12 cr)
242150 1545-1700 TTh, ComH, Rickgarn R, 3 cr (East conf rm)

R 5401 Counseling Procedures (A-F only)
147270 1640-1910 T, NichH 209, 3 cr

R 5417 Clinical Use of Tests in Psychological Services (prereq 5260 or equiv, 5221 or equiv, CSPP maj) (A-F only)
744811 1415-1530 TTh, BuH 120, Hummel T, 3 cr

5420 Leadership and Administration of Student Affairs (§EdPA 5420)
374703 1535-1805 W, ChDev 216, Bailey J, 3 cr

R 5431 Career Development: Theory and Counseling Applications (prereq CSPP maj) (A-F only)
652531 1010-1140 TTh, PeikH 215, Huck C, 3 cr (counseling maj only)

R 5531 Career Skills (prereq CSPP student or #) (S-N only)
449615 1535-1715 T, ApH 103, Huck C, 2 cr

R 5607 Collaboration for Inclusive School Communities (§EdPA 5716) (A-F only)
746428 1640-1930 T, York Barr J, 3 cr (Capitol View Ctr)

R 5608 Parent and Professional Planning for Handicapped Students (A-F only)
441191 1640-1930 Th, BuH 120, 3 cr

R 5609 Family-Professional Planning for Persons with Severe Handicaps (A-F only)
852320 1640-1930 Th, BuH 120, 3 cr

R 5612 Education of Learning-Disabled Children (A-F only)
943480 1640-1930 Th, PeikH 225, Robinson S, 3 cr

R 5615 Educational Interventions for Learning Disabilities (prereq 5612) (A-F only)
645871 1640-1930 T, FolH 214, Espin C, 3 cr

R 5620 Introduction to Mental Retardation (§CPsy 5315; prereq 5601 or PsyS 5101 or #) (A-F only)
143039 1640-2030 W, BuH 120, Turnure J, 4 cr

R 5626 Instruction for Learners with Moderate to Severe Disabilities (prereq 5116, 5622)
349526 1640-2000 T, FolH 38, Colond J, 4 cr

R 5636 Education of Multihandicapped Learners with Sensory Impairments (prereq 5601)
574926 1615-1845 M, PeikH 375, 3 cr

R 5642 Classroom Communication Through ASL (max 6 cr; prereq educ or grad stu, fingerspelling skills and conversational sign skills, #)
148760 —1 Holte D, 2 cr
774925 —2 1640-1840 T, FolH 104, 2 cr

R 5644 Language Programming for Children with Hearing Loss (prereq 5643 or #) (A-F only)
848901 1325-1600 M, PeikH 325, Rose S, 3 cr

R 5646 Reading and Instructional Practices with Students Who Are Deaf or Hard of Hearing (prereq 5643 or #) (A-F only)
749085 1640-2030 T, FolH 312, Schultz M, 4 cr

R 5648 Modes of Communication for Persons with Disabilities (A-F only)
548519 1640-1930 Th, PeikH 325, Rose S, 3 cr

R 5656 Educational Needs of Students with Emotional Disturbances or Behavioral Disorders (A-F only)
748910 1640-1930 M, PeikH 375, Wilderson F, 3 cr

R 5657 Educational Interventions for Students with Emotional Disturbances or Behavioral Disorders (prereq 5656) (A-F only)
349316 1640-1930 W, PeikH 155, Davis C, 3 cr

R 5671 Literary Braille (prereq 5670 or PsyS 5170) (A-F only)
547211 1640-1930 Th, BuH 125, Knowlton M, 3 cr

R 5700 Assessment and Decision Making in Special Education (A-F only)
750186 1640-1930 W, PeikH 325, Deno S, 3 cr

R 5704 Workshop: Interventions and Practices in Educational and Human Service Programs (S-N only)
047553 Abery B, ar cr

R 5751 Student Teaching: Deaf, Hard-of-Hearing (prereq #) (S-N only)
972073 Rose S, ar cr

R 5752 Student Teaching: Learning Disabled (prereq #) (S-N only)
772074 Espin C, ar cr

R 5753 Student Teaching: Early Childhood Special Education (prereq #) (S-N only)
572075 McEvoy M, ar cr

R 5754 Student Teaching: Emotional Behavioral Disorders (prereq #) (S-N only)
372076 Wilderson F, ar cr

R 5755 Student Teaching: Mild to Moderate Intellectual Disabilities (prereq #) (A-F only)
172077 Turnure J, ar cr

R 5756 Student Teaching: Moderate to Severe Disabilities (prereq #) (A-F only)
072078 Hupp S, ar cr

R 5757 Student Teaching: Physical and Health-Related Disabilities (prereq #) (S-N only)
872079 Knowlton M, ar cr

R 5758 Student Teaching: Visual Impairments (prereq #) (S-N only)
172080 Knowlton M, ar cr

5850 Creating Family-School-Community Partnerships for Educational Success (A-F only)
271678 1640-2000 M, PeikH 335, Buerkle K, Hurley C, 4 cr

R 5900 Independent Study (max 12 cr; prereq #) (A-F only)
446312 —1 ar cr (special ed maj only)
352295 —2 ar cr (counseling maj only)
649211 —3 ar cr (school psych maj only)
846176 —4 ar cr (psych foundations)
645532 —5 Weinsheimer J, ar cr

8129 Research Problems: Learning and Cognition (prereq #)
652853 —1 1220-1450 Th, ElthH 204, van den Broek P, 3 cr
542641 —2 Bart W, Samuels J, others, ar cr

8130 Personality Development and Socialization (§5130; prereq one grad course in personality or child psychology)
841270 1115-1300 MW, BuH 120, 4 cr

8169 Research Problems: Social Psychology (prereq #)
543658 Johnson D W, Maruyama G, ar cr

8239 Problems: Measurement (max 9 cr)
548228 Davenport E, 1-3 cr

8247 Internship: Evaluation (max 12 cr; prereq #)
549654 3 cr

8259 Problems: Evaluation (prereq 5243 or 8245 or PsyF 5621 or 8525)
148653 ar cr

R 8260 Statistical Methods (prereq 5260 or PsyF 5110 or Psy 3801 or equiv)
252130 —1 0800-0850 MWF, BuH 123, MacEachern D, 3 cr
446410 —2 1640-1755 TTh, SmithH 121, Friedman L, 3 cr

R 8261 Statistical Methods (prereq 8260)
050128 —1 1640-1755 MW, BuH 125, Hummel T, 3 cr
641450 —2 0905-0955 MWF, NichH 109, MacEachern D, 3 cr
145065 —3 0945-1100 TTh, PeikH 335, Edwards L, 3 cr

R 8264 Multiple Regression Analysis (prereq 5261, 8261 or ¶5261 or PsyF 5111, 8111 or #)
547886 1010-1155 MW, PeikH 325, Davenport E, 3 cr

8279 Problems: Statistics for Students in Education and Psychology
545250 MacEachern D, Davenport E, others, ar cr

R 8411 Seminar: Advanced Counseling Theory (prereq CSPP PhD stu or #) (A-F only)
171679 1010-1205 MW, BuH 239, Skovholt T, 4 cr

8435 Integrative Seminar: School Counseling (max 9 cr; prereq CSPP stu in schl counselor licensure prog; not open to sr or MEd stu) (A-F only)
471680 1535-1800 W, BuH 240, Cognetta P, 3 cr

R 8503 Counseling Practicum II (prereq CSPP MA stu or #) (A-F only)
849661 1010-1205 Th, BuH 123, 4 cr

R 8505 Field Placement in Counseling and Student Personnel Psychology (max 9 cr; prereq CSPP MA stu or #) (S-N only)
143266 —1 2 cr
946265 —2 Hummel T, 2 cr
141727 —3 Kroeger S, 2 cr
149553 —4 Nutter K, 2 cr
144327 —5 Romano J, 2 cr
746915 —6 Skovholt T, 2 cr
544339 —7 Thomas K, 2 cr
148328 —8 Weinsheimer J, 2 cr

8509 Supervision Practicum (prereq 8450, CSPP doctoral student or #) (A-F only)
050436 2 cr

8510 Internship: CSPP (max 9 cr for MA and spec stu, 18 cr for PhD stu) (A-F only)
251026 —1 Romano J, 1-6 cr
950686 —2 Romano J, 1-6 cr
543014 —3 Hansen L, 1-6 cr

8514 Counseling Practicum: University Counseling Services (8513-8514-8515†; max 12 cr; prereq 8513) (S-N only)
841804 1430-1625 Th, EddyH 202, Levin J, Loper R, 4 cr

8520 Counseling Practicum: Advanced (max 9 cr; prereq CSPP doctoral student) (S-N only)
949070 —1 1430-1625 Th, EddyH 202, Levin J, Loper R, 3 cr
549265 —2 1010-1205 Th, BuH 239, Skovholt T, 1-3 cr

R 8521 Practice in Student Personnel Work (max 9 cr; prereq 8404, 8504, 5420, 5451 or #) (A-F only)
946055 1-3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
041963 1-18 cr

8706 Single Case Designs for Intervention Research (A-F only)
271681 1325-1600 Th, PeikH 325, Deno S, 3 cr

8777 Thesis Credits: Masters
144330 1-16 cr

R 8811 Assessment Approaches in School Psychology II (A-F only)
751628 1325-1625 T, PeikH 155, Spicuzza R, 3 cr

R 8813 Assessment Practicum in School Psychology (prereq school psy student or #, ¶8810, ¶8811, ¶8812) (A-F only)
446844 1535-1735 Th, PeikH 315, Spicuzza R, 2 cr (prereq ¶8811)

8816 Instructional Intervention and Consultation (prereq EPsy maj) (A-F only)
242486 1430-1730 M, BuH 123, Ysseldyke J, 3 cr

R 8818 Intervention Practicum in School Psychology (prereq school psy stu or #, ¶8815 or ¶8816 or ¶8817) (A-F only)
144448 0905-1100 M, ChDev 105, Casey A, 1 cr (prereq ¶8817) (school psych major only)

R 8820 Seminar: Research in School Psychology (max 6 cr) (S-N only)
042336 1430-1625 W, BuH 123, McConnell S, 1 cr (school psych maj only)

8831 Practicum: School Psychological Services (!; prereq EPsy maj with schl psych subprog or #)
745778 0830-0930 Th, ElthH 303, Casey A, 1-5 cr

8832 Clinical Practice in School Psychology (!; prereq 8810)
441899 0830-0930 Th, ElthH 303, Casey A, 1-5 cr

8840 Internship: School Psychological Services (!; prereq EPsy maj with schl psych subprog or #) (S-N only)
950994 —1 Casey A, 1-15 cr
652514 —2 Casey A, 1-15 cr

8841 Internship: Instruction and Supervision in School Psychology (prereq EPsy maj with schl psych subprog or #) (A-F only)
650455 Spicuzza R, 3 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
252600 1-36 cr

8900 Research Problems
741634 —1 ar cr (special ed maj only) (prereq #)
751046 —2 ar cr (counseling maj only) (prereq #)
243718 —3 ar cr (school psych maj only)
141833 —4 ar cr (psych foundations) (prereq #)

8910 Directed Study (prereq #)
147902 —1 ar cr (special ed maj only)
752648 —2 ar cr (counseling maj only)
242987 —3 ar cr (school psych maj only)
442986 —4 ar cr (psych foundations)
171682 —11 Rose S, Turnure J, ar cr

ELECTRICAL ENGINEERING (EE)
Institute of Technology

An IT computer fee is assessed at the time of registration for EE 5505, 5506, 5511, 5512, 5571, 5572, 5666, 5852, 5853, 5860, 5863, 5874, 8362, 8363, 8364, and 8451 (8451 spring quarter, Harjani, only). See page 28 for more information on this fee.

R 1400 Circuits Laboratory (prereq 3009 or ¶3009, IT maj or pre-BAE maj)
752147 —1 LAB 1325-1520 M, EE/CSci 3160, Chou S, 1 cr
441546 —2 LAB 0800-0955 T, EE/CSci 3160, Chou S, 1 cr
845318 —3 LAB 1535-1730 T, EE/CSci 3160, Chou S, 1 cr
251446 —4 LAB 1325-1520 W, EE/CSci 3160, Chou S, 1 cr
850213 —5 LAB 0800-0955 Th, EE/CSci 3160, Chou S, 1 cr
852687 —6 LAB 1325-1520 Th, EE/CSci 3160, 1 cr

R 3005 Electronic Circuits and Systems (not for EE maj; prereq 3009) (A-F only)
142089 0815-0930 TTh, EE/CSci 3230, Holte J, 4 cr

R 3006 Circuits and Electronics Laboratory (prereq non-EE maj, IT stu, 3005 or ¶3005) (A-F only)
552683 —1 LAB 0800-0955 M, EE/CSci 3160, Holte J, 1 cr
846033 —2 LAB 1010-1205 M, EE/CSci 3160, 1 cr
851426 —3 LAB 1325-1520 T, EE/CSci 3160, 1 cr
146197 —4 LAB 0800-0955 W, EE/CSci 3160, 1 cr
142831 —5 LAB 0800-0955 F, EE/CSci 3160, 1 cr

R 3009 Linear Circuits I (prereq IT stu, Math 3261, Phys 1253) (A-F only)
★LECT 1115-1205 MTThF, AmundH B75, Harjani R, 4 cr
451767 —1 REC 1325-1415 T, EE/CSci 3111
043664 —2 REC 1430-1520 T, EE/CSci 2260
552845 —3 REC 1325-1415 W, LindH 302
141461 —4 REC 1430-1520 W, EE/CSci 3210, (prereq elec engr maj only)
150516 —5 REC 1535-1625 W, EE/CSci 2260
150497 —6 REC 1325-1415 Th, Arch 20

R 3010 Linear Circuits II (prereq IT stu, grade of C or better in 3009; Math 3261, Phys 1253 or ¶Phys 1253) (A-F only)
★LECT 1220-1310 MTThF, EE/CSci 3111, Lee T S
350031 —1 REC 1430-1520 M, LindH 215, 4 cr
052820 —2 REC 1535-1625 M, EE/CSci 3111, 4 cr

R 3011 Signal Analysis (prereq 3010, upper division elec engr maj)
★LECT 0905-0955 MTWF, EE/CSci 3111, 4 cr
045754 —1 REC 1325-1415 M, LindH 302
544017 —2 REC 1430-1520 M, AkerH 317

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 3012 System Design (prereq upper div EE maj, 3011) (A-F only)
★LECT 0800-0850 MWThF, EE/CSci 3210, Lee E B, 4 cr
545961 —1 REC 1325-1415 M, EE/CSci 3115
943009 —2 REC 1430-1520 M, EE/CSci 3210
450666 —3 REC 1220-1310 T, EE/CSci 3115

R 3021 Probability in Engineering Systems (prereq upper div EE maj, 3011) (A-F only)
972221 0905-0955 MTWF, LindH 203, Kaveh M, 4 cr

R 3061 Analog Electronics (prereq upper div IT, 3010, ¶3400) (A-F only)
★LECT 1115-1205 MWThF, EE/CSci 3230, Peria W, 4 cr
872213 —1 REC 1325-1415 W, EE/CSci 3115, Peria W
672214 —2 REC 1430-1520 W, EE/CSci 3111, Peria W
972218 —3 REC 1325-1415 Th, EE/CSci 3115, Higman T

R 3062 Analog and Digital Electronics (prereq upper div IT, 3061, 3351, ¶3401) (A-F only)
★LECT 1115-1205 MWThF, EE/CSci 3115, Higman T, 4 cr
272216 —1 REC 1325-1415 W, EE/CSci 3111, Higman T
172217 —2 REC 1430-1520 W, EE/CSci 2260, Higman T

R 3110 Electric and Magnetic Fields (prereq upper div IT stu, Phys 1254, Math 3252) (A-F only)
★LECT 1010-1100 MWThF, EE/CSci 3230, Zhu J, 4 cr
152427 —1 REC 1325-1415 M, EE/CSci 3111
944192 —2 REC 1430-1520 M, EE/CSci 3111
345976 —3 REC 1535-1625 M, EE/CSci 2260

R 3351 Introduction to Logic Design (prereq IT soph or jr or sr) (A-F only)
★LECT 1010-1100 MWF, EE/CSci 2260, Cherkassky V, 4 cr
142859 —1 LAB 0800-0955 T, EE/CSci 2178
751483 —2 LAB 1325-1520 T, EE/CSci 2178
851510 —3 LAB 1535-1730 W, EE/CSci 2178
Registration in one of the following REC sections is also required:
451476 —1 REC 1325-1415 W, EE/CSci 2260
247610 —2 REC 1325-1415 Th, EE/CSci 3111

R 3352 Introduction to Microprocessors (prereq IT soph, CSci 3113) (A-F only)
★LECT 0905-0955 MWF, CivE 212, 4 cr
849496 —1 LAB 0800-0955 T, EE/CSci 3130
152775 —2 LAB 1010-1205 T, EE/CSci 3130
952406 —3 LAB 1325-1520 W, EE/CSci 3130
444415 —4 LAB 0905-1100 Th, EE/CSci 3130
242259 —5 LAB 1325-1520 Th, EE/CSci 3130
Registration in one of the following REC sections is also required:
141467 —1 REC 1325-1415 M, EE/CSci 2260
450361 —2 REC 1430-1520 M, EE/CSci 2260
451249 —3 REC 1325-1415 T, EE/CSci 2260

R 3400 Junior Electrical Engineering Laboratory (prereq EE maj, 1400, ¶3061) (A-F only)
148838 —1 LAB 0800-1100 Th, EE/CSci 3136, Chou S, 2 cr
646714 —2 LAB 1115-1415 Th, EE/CSci 3136, Chou S, 2 cr
944550 —3 LAB 1430-1730 F, EE/CSci 3136, Chou S, 2 cr

R 3401 Junior Electrical Engineering Laboratory (prereq 3400, ¶3062) (A-F only)
142562 —1 LAB 1430-1730 M, EE/CSci 3136, Chou S, 2 cr
251978 —2 LAB 0800-1100 T, EE/CSci 3136, Chou S, 2 cr (EE Honors stu)
349848 —3 LAB 1115-1415 T, EE/CSci 3136, Chou S, 2 cr
447783 —4 LAB 1430-1730 T, EE/CSci 3136, Chou S, 2 cr
151979 —5 LAB 1430-1730 W, EE/CSci 3136, Chou S, 2 cr
149849 —6 LAB 1430-1730 Th, EE/CSci 3136, Chou S, 2 cr

R 3476 Industrial Assignment I (prereq regis in co-op program)
648110 Champlin K, 2 cr

3477 Industrial Assignment II (prereq 3476)
247557 Champlin K, 2 cr

R 5002 Digital Signal Processing (prereq upper division elec engr maj or grad IT maj, 3012 or #)
342978 1415-1530 TTh, EE/CSci 3230, Moon J, 3 cr

R 5055 Instrumentation and Control Electronics (prereq upper division elec engr maj or grad IT maj, 3012 or ¶, 3062 or #)
141265 1115-1205 MTWF, EE/CSci 3111, Champlin K, 4 cr

R 5056 Electronic Circuits Laboratory (prereq IT stu or grad IT maj, 3402 or ¶3402, ¶5055) (A-F only)
150886 —1 LAB 1325-1730 T, EE/CSci 3144, Champlin K, 1 cr
142473 —2 LAB 1325-1730 Th, EE/CSci 3144, Champlin K, 1 cr

R 5203 Introduction to Digital Communication (prereq upper div EE maj or grad IT maj, 3012, 5202, 3021 or #) (A-F only)
942765 1325-1415 MWF, EE/CSci 3230, 3 cr

R 5241 Data Communications Laboratory (prereq 3402 or ¶3402, ¶5203) (A-F only)
848087 1 cr (EE/CSci 2164)

R 5253 Linear Control Systems (prereq upper division elec engr maj or grad IT maj, 3012 or #) (A-F only)
543935 0905-0955 MWF, EE/CSci 3115, Teel A, 3 cr

R 5291 Linear Control Systems Laboratory (prereq 3402 or ¶3402, ¶5253) (A-F only)
843651 Teel A, 1 cr (EE/CSci 2188)

R 5310 Electric Power Systems (prereq IT stu or grad IT maj, 3402 or ¶3402, 5300 or #) (A-F only)
143834 —1 LECT 0815-0930 TTh, EE/CSci 2260, Albertson V, 4 cr (lab ar)
★LAB (EE/CSci 2270)

R 5355 Microprocessor Interfacing and System Design (prereq upper division elec engr maj or grad IT maj, 3351, 3352, 3402 or ¶3402, or #) (A-F only)
★LECT 1430-1520 MWF, EE/CSci 3115, O'Keefe M
042563 —1 LAB 1115-1310 M, EE/CSci 2182, 4 cr
741309 —2 LAB 1535-1730 M, EE/CSci 2182, 4 cr
550934 —3 LAB 1325-1520 T, EE/CSci 2182, 4 cr
948839 —4 LAB 1535-1730 W, EE/CSci 2182, 4 cr
446715 —5 LAB 0800-0955 Th, EE/CSci 2182, 4 cr
744551 —6 LAB 1010-1205 Th, EE/CSci 2182, 4 cr

R 5450 Senior Design Project (prereq elec engr sr, 3012, 3062, 3110, 3351, 3352, 3402; first-day attendance is mandatory)
043681 1430-1730 T, EE/CSci 3111, Peria W, 2 cr

R 5470 Directed Study (prereq Δ)
144120 ar cr

R 5478 Industrial Assignment III (prereq 3477, regis in co-op program)
350241 Champlin K, 2 cr

R 5479 Industrial Assignment IV (prereq 5478)
750236 Champlin K, 2 cr

R 5491H Honors Project (prereq 5490H)
144344 1325-1625 Th, EE/CSci 2260, Kaveh M, 3 cr

R 5506 Analog Circuits for Signal Processing (prereq 5505 or #, grad stu or #) (A-F only)
152372 —1 1115-1205 MWF, EE/CSci 3125, Harjani R, 3 cr

R 5512 Adaptive Digital Filter Theory (prereq grad IT maj, 5511, 5702 or #)
643084 —1 1535-1650 MW, MechE 102, Radich W, 3 cr

R 5514 Real-Time Digital Signal Processing Lab (prereq EE sr or IT grad stu or adult spec, 3352, 5002 or 5511 or #) (A-F only)
★LECT 1430-1520 Th, EE/CSci 3111, Buckley K, 3 cr
572223 —1 LAB 1535-1730 M, EE/CSci 4144, Buckley K
372224 —2 LAB 1535-1730 T, EE/CSci 4144, Buckley K

R 5516 Digital Signal Processing Structures for VLSI (prereq 5002 or 5511 or ¶) (A-F only)
974017 0945-1100 TTh, EE/CSci 2260, Lucke L, 3 cr

R 5572 VLSI Design II (prereq 5571 or #)
144742 —1 1220-1310 MWF, MechE 108, Vinnakota B, 3 cr

R 5574 Computer-Aided VLSI Design Laboratory (5574-5575†; prereq #, 5571 or ¶, IT sr, IT adult special or grad IT maj)
845402 1535-1735 MWF, EE/CSci 3115, Sobelman G, 3 cr

R 5605 Microwave Devices and Circuit Applications (prereq 3111, 5604 or equiv, or #, IT sr or IT grad stu)
041154 —1 1115-1205 MWF, MechE 102, Champlin K, 3 cr

5630 Contemporary Optics (prereq 3111 or Phys 5024 or #) (A-F only)
644834 1430-1615 TTh, EE/CSci 3115, Leger J, 4 cr

R 5635 Optical System Design (prereq IT sr or grad IT maj)
649564 —1 1245-1400 TTh, MechE 102, Nussbaum A, 3 cr

R 5636 Optical Fiber Communication (prereq 3011, 3111, or #)
072226 0945-1100 TTh, EE/CSci 3115, Gopinath A, 3 cr

R 5662 Semiconductor Properties and Devices II (prereq EE sr or grad stu or adult special, 5661)
772219 —1 0945-1100 TTh, MechE 212, Ruden P, 3 cr

R 5667 Magnetic Properties of Materials and Applications (prereq 5666)
252841 —1 0945-1100 TTh, MechE 102, Judy J, 3 cr

R 5670 Basic Microelectronics (5670-5672†; prereq IT sr or grad stu or adult special) (A-F only)
147910 0800-0850 MWF, EE/CSci 2260, Campbell S, 3 cr

R 5672 Basic Microelectronics Laboratory (5670-5672†; prereq 5670 or ¶5670, IT sr or grad stu or adult special) (A-F only)
941969 —1 LAB 1325-1625 M, EE/CSci 1165, Campbell S, 1 cr
447914 —2 LAB 1325-1625 T, EE/CSci 1165, Campbell S, 1 cr
742122 —3 LAB 1325-1625 W, EE/CSci 1165, Campbell S, 1 cr
646292 —4 LAB 1325-1625 Th, EE/CSci 1165, 1 cr

R 5751 Linear Optimal Control (prereq grad IT maj, 5750, Math 5243 or ¶Math 5243 or #)
051019 —1 1220-1310 MWF, MechE 102, Georgiou T, 3 cr

R 5815 Switched Mode Power Electronics II (prereq 5814 or #, IT sr, adult special or grad IT maj)
852804 —1 0905-0955 MWF, MechE 102, Robbins W, 3 cr

R 5816 Switched Mode Power Electronics Laboratory (prereq ¶5815 or #, IT sr, IT adult special or grad IT maj)
847974 Mohan N, 2 cr (EE/CSci 2270)

R 5820 Electromechanical System Dynamics (prereq #)
872227 0800-0850 MWF, EE/CSci 3111, Riaz M, 3 cr

R 5853 Computer Organization and Design II (prereq 5852)
945052 —1 1325-1415 MWF, MechE 108, Dutt S, 3 cr

R 5952 Special Topics in Electrical Engineering (prereq IT grad or adult special or #)
046368 —1 1640-1930 T, EE/CSci 3125, Soltis F, 3 cr

8090 Electronics Seminar (prereq #) (S-N only)
943026 Nathan M, Higman T, 1 cr

R 8111 Plasma Physics (prereq 8110)
672228 0945-1100 TTh, AkerH 313, Ernie D, 3 cr

8190 Seminar: Quantum Electronics (prereq #) (S-N only)
242472 Gopinath A, Leger J, 1 cr

R 8192 Seminar: Magnetics (prereq #) (S-N only)
041431 —1 1325-1415 F, MechE 102, Judy J, ar cr

R 8251 Advanced Control Topics (prereq 8250)
472229 0945-1100 TTh, LindH 216, Tannenbaum A, 3 cr

8290 Seminar: Control Theory (prereq #) (S-N only)
542171 1430-1530 F, EE/CSci 2260, Balas G, ar cr

8305 Sparse Matrix Methods in Power System Analysis (prereq IT grad stu, 5802 or #) (A-F only)
872230 1535-1800 T, EE/CSci 2260, Wollenberg B, 3 cr

8340 Seminar: Electric Power (prereq IT grad stu or #) (S-N only)
672231 Wollenberg B, ar cr

R 8342 Power Electronics: Utility Applications (prereq IT grad stu, 5814 or #) (A-F only)
152783 0815-0930 TTh, EE/CSci 3115, Mohan N, 3 cr

R 8363 Parallel Processing I (prereq IT grad stu, 5858 or #) (A-F only)
148622 —1 1545-1700 TTh, MechE 102, 3 cr

R 8451 Advanced Topics in Electrical Engineering (prereq #)
346562 —1 1115-1230 TTh, EE/CSci 2260, Cohen P, 3 cr (EE/CSci)
546737 —2 Vinnakota B, 1 cr

8460 Plan B Project (prereq EE grad maj) (A-F only)
544809 4 cr

8491 Graduate Seminar (prereq 8490) (S-N only)
444673 1535-1705 Th, EE/CSci 3210, Vinnakota B, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
943897 1-18 cr

8777 Thesis Credits: Masters
849224 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
745747 1-36 cr

ENDODONTICS (Endo)
Dentistry

5301 Advanced Clinical Endodontics (A-F only)
146871 ar cr

5305 Advanced Clinical Endodontics (A-F only)
243461 ar cr

5311 Advanced Endodontic Emergency (S-N only)
043387 1 cr

5315 Advanced Endodontic Emergency (S-N only)
148619 1 cr

5331 Review of Cases (S-N only)
144974 1 cr

5335 Review of Cases (S-N only)
947870 1 cr

5400 Advanced Endodontics for Postgraduate Dental Fellows (S-N only)
042126 1 cr

8006 Research in Endodontics
143856 ar cr

8311 Seminar: Endodontics (A-F only)
451252 2 cr

8315 Seminar: Endodontics (A-F only)
245744 2 cr

8321 Advanced Endodontic Lectures (A-F only)
241502 1 cr

ENGLISH AS A SECOND LANGUAGE (ESL)
Liberal Arts

0201 Basic Grammar (prereq high schl graduate, non-native Engl speaker, see Minnesota English Center for override) (S-N only)

0206 Beginning Oral Skills (prereq high schl graduate, non-native Engl speaker with lower level proficiency in Engl; see Minnesota English Center for override) (S-N only)

0207 Basic Reading and Composition (prereq high schl graduate, non-native Engl speaker with lower level proficiency in Engl; see Minnesota English Center for override) (S-N only)

0211 Lower Intermediate Grammar (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0216 Lower Intermediate Oral Skills (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0217 Lower Intermediate Reading and Composition (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0221 Upper Intermediate Grammar (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0226 Upper Intermediate Oral Skills (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0227 Upper Intermediate Reading and Composition (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0231 Advanced Grammar (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0232 The Written Word (prereq non-native Engl speakers; see Minnesota English Center for override) (S-N only)

0233 Advanced Composition (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0234 Advanced Listening Comprehension (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0235 Advanced Speaking/Pronunciation (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0237 Advanced Reading/Composition (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0238 Pronunciation (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0241 Grammar through Writing (prereq non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0254 Current Issues: English Through the Media (prereq non-native Engl speakers; see Minnesota English Center for override) (S-N only)

R 8777 Thesis Credits: Masters
452370 1-16 cr

ENGLISH LANGUAGE AND LITERATURE (Engl)
Liberal Arts

R 1005 Introduction to Literature (Lit)
147754 1115-1205 MWF, AkerH 317, Berman J, 4 cr

R 1016 Introduction to American Literature (Lit; CD)
272071 1220-1310 MWF, LindH 302, Solotaroff R, 4 cr

R 1018 Introduction to Modern Fiction (Lit)
649693 0905-0955 MWF, LindH 302, Vander Leeuw T, 4 cr

R 1241 Introduction to Shakespeare (Lit)
146563 0800-0850 MWF, LindH 215, Anderson D, 4 cr

R 1591 Literature of American Minorities (Lit; CD)
★LECT 1220-1310 MW, Phys 166
449727 —1 REC 1220-1310 F, LindH 215, Drake B, 4 cr
847652 —2 REC 1220-1310 F, LindH 229, Wanyama M, 4 cr
642260 —3 REC 1220-1310 F, LindH 203, Wilbur A, 4 cr
272118 —4 REC 1220-1310 F, FordH 150, Winduo S, 4 cr

R 1621 Introduction to Women Writers (CD)
474725 1115-1230 TTh, LindH 305, Janette M, 4 cr

R 3008 Techniques of Literary Study (prereq pre-Engl or Engl maj or min only)
841155 —1 0945-1100 TTh, FordH 170, Luke D, 4 cr
674755 —2 0945-1100 TTh, LindH 215, Bennett J, 4 cr

R 3009 Modern Literary Theory (prereq English maj or minor, 3008 or 16 cr lit or Δ)
172072 1415-1530 TTh, LindH 229, Damon M, 4 cr

R 3112 Survey of English Literature (prereq 46 or more credits) (Lit)
★LECT 0905-0955 MW, FordH 155, Leyasmeyer A I, Haley D
547354 —1 REC 0905-0955 F, FordH 150, Daigre E, 4 cr
148703 —2 REC 0905-0955 F, AkerH 317, Lewis M, 4 cr
048041 —3 REC 0905-0955 F, AkerH 313, Mead L, 4 cr
052462 —4 REC 0905-0955 F, LindH 229, Wharram C, 4 cr

R 3218 Medieval Literature in Translation
572089 1245-1400 Th, LindH 302, Kendall C, 4 cr

R 3242 Shakespeare (§3243) (Lit)
141654 —1 1415-1530 TTh, LindH 203, Garner S, 4 cr (Engl maj/premaj only)
652688 —2 1415-1530 TTh, LindH 203, Garner S, 4 cr

R 3242H Honors Course: Shakespeare (prereq honors reg or Δ)
474756 0815-0930 TTh, NichH 209, Berg J, 4 cr

R 3251 The King James Bible as Literature
372109 1115-1230 MWF, LindH 217, Haley D, 4 cr

R 3390 Major British Writers (max 12 cr)
174078 0815-0930 TTh, LindH 215, Reed P, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 3412 Survey of American Literature, 1850-1900 (Lit)
★LECT 1010-1100 MW, MechE 18, Ross D
572111 —1 REC 1010-1100 F, LindH 229, Roggenkamp K, 4 cr
372112 —2 REC 1010-1100 F, LindH 203, Wadsworth S, 4 cr
172113 —3 REC 1010-1100 F, FordH 115, Jones D, 4 cr

R 3592 Introduction to Afro-American Literature: Black Women Writers (§Afro 3592)
248773 1415-1530 TTh, RarigC 616, Reyes A, 4 cr

R 3651 Poetry (Lit)
772091 0945-1100 TTh, AkerH 309, Ostrem W, 4 cr

R 3671H Honors Course: The Novel (prereq honors registration or Δ)
072114 1545-1700 TTh, LindH 315, Hirsch G, 4 cr

R 3711 Classics of Literary Criticism (§5711, ClCv 3711, ClCv 5711)
872115 1545-1700 TTh, LindH 325, Weinsheimer J, 4 cr

R 3851 The English Language (§5851) (SSci)
147499 1535-1625 MWF, AkerH 209, Bridwell-Bowles, 4 cr

R 3854 American Literacy and Cultural Diversity (C/PE; CD; practicum) (tutoring at community service agency, 2 hrs per week required)
572092 1220-1310 MWF, FordH 60, Anson C, 4 cr

R 3910 Topics in English and North American Literature: Recent American Novel
151755 1430-1520 MWF, LindH 203, Solotaroff R, 4 cr

R 3960 Junior-Senior Seminar (prereq Engl maj jr or sr, Comp 3011 or Comp 3012 or Comp 3013, Δ)
749555 —1 1115-1205 MWF, LindH 203, Leyasmeyer A, 4 cr
050873 —2 1245-1400 TTh, LindH 203, Escure G, 4 cr
172119 —3 1545-1700 TTh, LindH 303, Clayton T, 4 cr

3961 Senior Paper (prereq Engl maj, sr, 3960 or ¶3960 or EngW 3960 or ¶EngW 3960, maj advisor permission) (S-N only)
051182 1 cr

3961H Honors Senior Paper (prereq honors candidacy Engl maj, sr, 3960 or ¶ or EngW 3960 or ¶, Engl hon adv permission) (S-N only)
243444 1 cr

3963H Honors Thesis (prereq honors candidacy in Engl, consent of Engl honors adviser)
948615 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
250667 1-15 cr

3980 Directed Instruction (prereq #, Δ, ❑)
650696 ar cr

3980H Honors Directed Instruction (prereq CLA honors stu, #, Δ, honors div, ❑) (A-F only)
649824 3-4 cr

R 5134 20th-Century British Poetry
372093 1115-1230 TTh, LindH 203, Browne M, 4 cr

R 5152 19th-Century English Novel
744792 1115-1230 TTh, LindH 229, Luke D, 4 cr

R 5174 Modern Drama, 1880-1920
249728 1325-1420 MWF, PillsH 110, Lee J, 4 cr

R 5212 Readings in Old English Prose and Verse (prereq 5211)
172094 0945-1100 TTh, LindH 229, Kendall C, 4 cr

R 5431 American Poetry: Beginnings to 1890
872096 1430-1520 MWF, MechE 18, Geffen A, 4 cr

R 5451 American Novel (prereq grad stu or Engl maj or Δ)
672097 1010-1100 MWF, LindH 215, Roth M, 4 cr

R 5482 Folklore (IP; CD)
274080 1415-1530 TTh, LindH 305, Stekert E, 4 cr

R 5853 Modern Irish Language (prereq 5852)
174081 0905-0955 MTWThF, FordH 115, Stenson N, 5 cr

R 5910 Topics in English and North American Literature: Gender, Ethnicity, and the Fictional Female Body
174744 0815-0930 TTh, SmithH 121, Janette M, 4 cr

R 5920 Topics in Anglophone Literature: Drama of the American Minorities
072100 1535-1625 MWF, FolH 38, Lee J, 4 cr

5970 Directed Studies
448447 1-4 cr

R 8012 Problems in Literary History and Theory
872101 1820-2050 M, LindH 202, Mowitt J, 4 cr

R 8050 Studies in Special Subjects
774746 —1 1535-1735 T, AmundH 120, McNaron T, 2-4 cr (Jan 7,21,Feb 4,18,Mar 4)
374748 —2 Ross D, 2-4 cr

R 8240 Shakespeare: Private and Public Self in Shakespeare
272104 1535-1750 W, LindH 202, Haley D, 4 cr

R 8510 Studies in Early American Literature: The Jeremiad Tradition
172105 1220-1435 M, LindH 202, Griffin E, 4 cr

R 8590 Studies in Afro-American Literature
747868 1220-1435 F, BlegH 350, Wright J, 4 cr

R 8650 Seminar: Studies in Poetry
972106 1820-2035 T, LindH 202, Damon M, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
144831 1-18 cr

R 8720 Studies in Feminist Criticism: Gender, Ethnicity, and the Fictional Female Body
074753 1535-1750 T, SmithH 231, Janette M, 4 cr

R 8810 Studies in the English Language
951465 —1 1220-1435 W, LindH 202, Brown R, 4 cr
472120 —2 1535-1750 Th, LindH 216, Escure G, 4 cr (Language and Gender)

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
651377 1-36 cr

8970 Independent Reading (prereq #, Δ)
648026 —1 1-15 cr

ENGLISH: CREATIVE AND PROFESSIONAL WRITING (EngW)
English Language and Literature
Liberal Arts

Students who want to register in those 5000-level courses with a Δ in the prereq statement must submit an application form, a letter of introduction to the instructor, and, in most cases, a 10-page manuscript to the Creative Writing Office, 209 Lind Hall by Friday, November 22, 1996. For more information call 625-6366.

R 3102 Intermediate Fiction Writing (prereq 1102)
574716 1115-1230 TTh, LindH 217, Raffa E, 4 cr

R 3103 Intermediate Poetry Writing (§Engl 3104; prereq 1101 or 1103)
871580 1245-1400 TTh, LindH 215, Cox J, 4 cr

R 3104 Intermediate Literary Nonfiction Writing (prereq 1104 or equiv)
573873 1415-1530 TTh, LindH 302, Olson S, 4 cr

R 5102 Advanced Fiction Writing (prereq Δ)
373874 1615-1845 W, LindH 320, Fitzgerald M, 4 cr

R 5110 Topics in Advanced Fiction Writing (prereq Δ)
374717 1615-1845 T, LindH 216, Benitez S, 4 cr

R 5310 Reading as Writers: Endings (prereq Δ)
671581 1615-1845 M, LindH 320, Geffen A, 4 cr

5970 Directed Study in Writing (prereq #, Δ, CLA approval)
950008 1-4 cr

8150 Poetry: Manuscript Preparation (prereq 8120, Creative Writing candidate, #)
742542 1615-1845 Th, LindH 202, Browne M, 4-8 cr

8990 Creative Project Credits: MFA (prereq 8140 or 8150 or 8160, Creative Writing MFA candidate, #)
646650 1-16 cr

ENTOMOLOGY (Ent)
Agricultural, Food, and Environmental Sciences

3200 Social Insects (prereq college level general biology course) (Biol/NL)
★LECT 0905-0955 MWF, HodsonH 485, Spivak M
546253 —1 LAB 1010-1205 F, HodsonH 485, 4 cr

5030 Insect Physiology (prereq 5010, 1 biochem crse or #) (A-F only)
948520 1220-1310 MWF, HodsonH 490, Kurtti T, Mesce K, 3 cr

5210 Insect Pest Management (prereq 1005 or #)
251754 1535-1640 MWF, HodsonH 490, Radcliffe E, 4 cr

5280 Livestock Entomology (A-F only)
145339 0905-0955 MWF, 0815-0930 T, HodsonH 490, Moon R, 4 cr

5310 Sampling Biological Populations (prereq Stat 5021 or equiv)
471243 1430-1520 MWF, HodsonH 284, Moon R, 4 cr (Commons Rm) (addtl hr ar)

5480 Invertebrate Neurobiology (§NSc 5480)
848302 1325-1520 W, HodsonH 490, Mesce K, 2 cr

5900 Basic Entomology (prereq #)
550786 ar cr

5910 Special Problems in Entomology (prereq #)
847358 —1 ar cr
850955 —2 Spivak M, 3 cr
152024 —3 1 cr

5920 Special Lectures in Entomology
048704 ar cr

8040 Advanced Insect Genetics (prereq basic genetics course, 5030 or #) (A-F only)
271244 1245-1335 TTh, HodsonH 485, Fallon A, 3 cr

8200 Colloquium in Social Insects (prereq 3020 or 3200)
045222 Spivak M, 1-3 cr

8210 Colloquium in Insect Evolution (prereq 5370 or #)
475115 1400-1600 Th, Ecology 505, 2 cr

8240 Colloquium in Insect Ecology (prereq 5040 or #) (S-N only)
852155 Andow D, 1-2 cr

8300 Graduate Seminar (prereq #) (S-N only)
252743 1430-1530 Th, HodsonH 490, Ragsdale D, 1 cr

8500 Research in Entomology (prereq #) (S-N only)
343631 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
045379 1-18 cr

8777 Thesis Credits: Masters
648088 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
445418 1-36 cr

ENTREPRENEURSHIP (Entr)
Management

R 8087 New Product/Business Design and Development (§MBA 8500; prereq MBA stu or ❑) (A-F only)
074638 1115-1245 TTh, BlegH 115, 4 cr

ENVIRONMENTAL SCIENCE (ES)
Soil, Water, and Climate
Agricultural, Food, and Environmental Sciences

3050 Field or Work Experience in Environmental Science (A-F only)
241161 Underwood J, 1-4 cr

FAMILY EDUCATION (FE)
Work, Community, and Family Education
Education and Human Development

R 5002 Thinking, Learning, and Teaching in Work, Family, and Community (§VoEd 5002, WCFE 5002) (A-F only)
046984 1600-1830 Th, VoTech R380, Thomas R, 3 cr

R 5300 Family Education Curriculum (A-F only)
173691 1600-1830 W, VoTech R380, Thomas R, 3 cr

R 5310 Methods of Teaching Family Education (§HEEd 5310) (A-F only)
647071 1600-1830 M, VoTech R380, McClelland J, 3 cr

R 5404 Introduction to Early Childhood Family Education Programs (§HEEd 5404)
148659 0800-1730 S, VoTech R380, Rossman M, 1 cr (Jan 18)

R 5405 Child Development and Parent Education (§HEEd 5405) (A-F only)
849093 1600-1920 T, VoTech R380, McClelland J, 4 cr

R 5408 Work-Family Relationships (§HEEd 5408) (A-F only)
571606 1845-2115 W, VoTech R380, Rossmann M, 3 cr

R 5409 Group Methods for Parent and Family Education (§HEEd 5409) (A-F only)
448500 1600-1745 Th, VoTech 220, Rossmann M, 2 cr

R 5600 Practicum: Adult Education (§HEEd 5600; prereq 5320 or AdEd 5411, #) (S-N only)
144912 1800-2000 Th, VoTech R390, 3 cr

R 5900 Independent Study in Family Education (max 12 cr; §HEEd 5900; prereq #)
648348 1-3 cr

R 8900 Problems: Family Education (§HEEd 8900)
347534 1-9 cr

FAMILY PRACTICE AND COMMUNITY HEALTH (FPCH)
Medical School

5137 Leadership in Family Medicine (prereq G-2 or G-3 resident)
151528 Anderson S, ar cr

5138 Community Medicine Workshop (prereq G-2 or G-3 resident)
745084 Lindblom M, Yeazel M, ar cr

5139 Colposcopy (prereq G-2 or G-3 resident)
548889 Fontaine P, ar cr

5345 Analysis of Instruction and Educational Evaluation (prereq #) (A-F only)
152072 3 cr

5346 Analysis of Instruction and Educational Evaluation (prereq #) (A-F only)
252225 3 cr

5500 Preceptorship in Clinical Family Practice (prereq regis med)
451526 Seim H, ar cr

5501 Rural Physician Associate Program (†5501; prereq completion of 8 academic quarters of medical school)
145817 —1 0-18 cr
548164 —2 Swentko W, 0-18 cr

5516 Research in Human Sexuality (prereq #)
745389 ar cr

5518 In-Patient Family Medicine (prereq clinical rotation in Internal Medicine) (S-N only)
074655 Newman N, Gjerdingen D, ar cr

5519 Clinical Practice of Occupational Medicine (prereq 4th yr med stu) (S-N only)
670897 Seim H, ar cr

5520 Rural Rotation in Family Practice (prereq regis med)
545040 Seim H, 4.5-9 cr

5521 Clinical Practice Preceptorship: Kenai, Alaska (prereq regis med) (S-N only)
750253 9 cr

5525 Cardiovascular Medicine in the Community Hospital (prereq regis med)
643537 Current D, Gjerdingen D, ar cr

5530 Clinical Problems in Family Practice (prereq regis med)
145731 Lagace E, 9 cr

5537 Primary Care Sports Medicine (prereq 3rd or 4th yr regis med stu) (S-N only)
148541 Johnson R, 4.5-9 cr

5538 Sports Medicine in Duluth (prereq 3rd or 4th yr med stu)
874656 Webb D, 6 cr

5560 Alcohol and Drug Addiction Treatment Center (prereq regis med)
750723 Current D, Briggs T, 4.5 cr

5564 Family Practice Seminar (prereq med stu) (S-N only)
952616 1-3 cr

5569 Obstetrics in Family Practice (prereq 3rd or 4th yr med stu) (S-N only)
674657 Seim H, ar cr

5570 Practicum in Counseling Techniques (prereq compl of 1st yr residency)
241869 1 cr

5580 Community Emergency Medicine
941826 Seim H, ar cr (StP)

5582 Practice Management Workshop (prereq 2nd or 3rd yr of residency)
949229 Lindblom M, 2 cr (StP)

5585 Sexual Problems in Clinical Practice (prereq med student, #)
250362 Coleman E, ar cr

5595 Research in Family Practice: Independent Study
943012 Seim H, ar cr

5597 Clinical Decision Making (prereq # or 2nd or 3rd yr resident)
851460 Daly M, 2 cr

5599 Undergraduate Independent Study
749345 Seim H, ar cr

5651 Principles of Geriatrics
645255 0800-1000 T, PWB 6210, Pacala J, 1 cr

5903 Community Health Rotation (prereq #)
750320 Ciriacy E W, ar cr

5955 Directed Study (prereq #)
543255 Coleman E, 1-15 cr

5960 Basic Research Methods Seminar and Practicum
642128 Ciriacy E W, others, 4 cr

5965 Seminar on Psychological Medicine: Principles of Human Development Through Life Cycles (prereq 1st yr family practice residency)
543000 —1 Houge D, ar cr
745781 —2 Houge D, ar cr

5969 Independent Study
045396 Nelson, ar cr

5970 Psychological Crisis Intervention Workshop (prereq 1st yr resident in family practice)
246232 Ireton H, others, 2 cr

8201 Clinical Family Medicine
049450 Ciriacy E W, ar cr

8205 Medical Records Systems
744761 Asp D, 2 cr

8207 Seminar: Common Diseases Seen in Family Practice
352720 Seim H, 1 cr

8208 Family Medicine Conferences
443412 Seim H, 1 cr

8209 Family Medicine X-Ray Conference
544261 Ciriacy E W, 1 cr

8210 Family Medicine Grand Rounds
152377 1220-1310 W, MoosT 2690, Asp D, others, 0-1 cr (3rd W per month)

8212 Clinical Psychiatry Rounds (prereq 1st yr resident in family practice)
444320 Kelly J, 1 cr

8225 Medical Sociology
148905 Kelly J, 3 cr

8226 Seminar: Medical Sociology
345170 Kelly J, 2 cr

8228 Seminar: Interdisciplinary Health (prereq #)
042966 Kelly J, 2 cr

8240 Community Resources
146510 Kelly J, 2 cr

8243 Family Medicine in Rural Area
851572 ar cr

8253 Research Problems
749989 ar cr

FAMILY SOCIAL SCIENCE (FSoS)
Human Ecology

R 1001 Introduction to Family Relationships
346805 —1 1010-1150 MW, FolH 38, Oswald R, 4 cr (Mpls)
673976 —2 1700-1840 TTh, GrnH 110, 4 cr

R 3260 Family Resource Management (prereq intro course in econ, psy, soc, cult anth, pol sci recommended)
473977 0815-0955 TTh, BorH 335, Zuiker V, 4 cr

R 3600 Family Issues Across the Lifespan (prereq intro course in psy, soc) (SSci; CD) (A-F only)
273978 0905-1110 TTh, VoTech R285, 5 cr (Mpls)

R 5001 Human Sexual Behavior (prereq 90 cr, 3600 or grad stu in social, behavioral, educational, health science, human service program, or #)
173979 0800-1010 MW, VoTech R280, Meyer C, 5 cr

R 5025 Parenting (prereq 5200 or 5202)
147373 1640-2015 M, McNH 197, Budd L, 4 cr

Symbols

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- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5200 Family Systems (prereq intro course in psy, soc)
973983 1730-1935 TTh, HodsonH 495, Hagemeister A, 5 cr

R 5205 Introduction to Family Research Methods (prereq 3260, 5200)
150483 1430-1610 M, HodsonH 495, Brothen T, 4 cr (addtl 2 hrs ar)

5206 Undergraduate Research Internship (max 15 cr; prereq 5205, #)
847019 3-6 cr

R 5210 Family in World Perspective (prereq 3600 or 5200, intro cult anth course or #)
874687 0905-1045 TTh, VoTech R280, Daneshpour M, 4 cr

R 5218 Family Financial Management (prereq 3260 or equiv)
074686 0905-1045 MW, McNH 197, Zuiker V, 4 cr

R 5220 Family Economics (prereq 3260 or #)
371638 0815-0955 TTh, McNH 197, Rettig K, 4 cr

5230 Independent Study in Family Social Science (max 16 cr)
243024 1-5 cr

R 5240 Special Topics in Family Social Science (max 16 cr)
171639 0800-1730 F, McNH 377, Boss P, 3 cr (Jan 17, 24, 31)

R 5249 Fieldwork: Directed Community Work Experience (max 15 cr; prereq 3231, FSoS or human relationships maj, #) (S-N only)
245291 1115-1255 W, VoTech R280, Goodman W, 5-15 cr

R 5253 Humanities, Aging and Family Living (prereq 3600 or 5200 or SW 5024 or #)
752245 1545-1905 W, McNH 197, Yahnke R, 4 cr

R 5255 Approaches to Family Policy (prereq 3260 or 3600 and SW 3202 or #)
351034 1010-1150 TTh, McNH 146, Zimmerman S, 4 cr

R 5500 Racial and Ethnic Diversity in Families (prereq 3600) (CD)
371641 1545-1725 TTh, BorH 335, Allen W, 4 cr

R 8203 Family Stress, Coping and Adaptation (A-F only)
273981 1325-1505 TTh, McNH 198, Boss P, 4 cr

R 8205 Qualitative Family Research (prereq 8255)
173982 0945-1100 TTh, McNH 198, Tubbs C, 3 cr

R 8214 Theories of Marital and Family Therapy (prereq 8255) (A-F only)
051649 0905-1045 MW, McNH 198, Tubbs C, 4 cr

8221 Internship in Teaching College Level Family Courses I (prereq 12 cr FSoS)
171642 0905-1225 F, McNH 375, 4 cr

8222 Internship in Teaching College Level Family Courses II (prereq 8221, #) (S-N only)
444866 2 cr

8223 Internship in Teaching College Level Family Courses III (prereq 8222, #) (S-N only)
247400 2 cr

8230 Directed Study in Family Social Science (prereq #)
148127 1-7 cr

8258 Family Research from Economic Perpectives (prereq 1 grad crse in soc sci theories, 1 res meth crse)
071643 1115-1255 TTh, McNH 375, Rettig K, 4 cr

8270 Practicum in Family Research (prereq #) (S-N only)
642906 —1 1-5 cr
143954 —2 Grotevant H, 1-5 cr (Adoptive Family Relationships)
951563 —3 Rosenblatt P, 1-5 cr (Qualitative Family Research)
541750 —4 Stum M, 1-5 cr (Decision Making in Aging Families)
942877 —5 Zimmerman S, 1-5 cr (Family Policy)
141517 —6 Hogan M, 1-5 cr (Family-Child Ecology)
046483 —7 Danes S, 1-5 cr (Family Business Issues)
641464 —8 Maddock J, 1-5 cr ((Power/Control in Close Relationship)
146782 —9 Maddock J, 1-5 cr (Sexual Meaning Survey)
647149 —10 Boss P, 1-5 cr (Ambiguous Loss)
550108 —11 Rettig K, 1-5 cr (Consequences of Divorce Decisions)
346366 —12 Bauer J, 1-5 cr (Family Economic Well-Being)
742184 —13 Detzner D, 1-5 cr (Aging Families in Crisis)
146068 —14 Doherty W, 1-5 cr (Families and Health)
745537 —15 Olson D, 1-5 cr (Healthy and Problem Families)
074994 —16 Maddock J, 1-5 cr (Child and Family Sexual Abuse)

8317 Family of Origin I (prereq family therapy intern only) (S-N only)
773984 1325-1505 M, McNH 197, Goodman W, 2 cr

8551 Internship in Marital and Family Therapy (8551-8552-8553†; prereq 8214, 8215, #) (S-N only)
871644 1-7 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
050582 1-18 cr

8777 Thesis Credits: Masters
152055 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
746249 1-36 cr

FINANCE (BFin)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3000 Finance Fundamentals (prereq Acct 1050) (A-F only)
152766 —1 1010-1140 MW, BlegH 140, Rosko P, 4 cr
446164 —2 1430-1600 MW, BlegH 140, Rosko P, 4 cr
147382 —3 0800-0945 TTh, BlegH 220, Gibson S, 4 cr (Carlson Plan stu only)

R 3100 Financial Management (prereq 3000) (A-F only)
052784 1535-1705 MW, BlegH 115, Hu J, 4 cr

R 3300 Securities Analysis and Portfolio Management (§8300; prereq 3000) (A-F only)
146605 1010-1140 MW, BlegH 220, Legg T, 4 cr

R 3400 International Financial Management (prereq 3000...3100 rec) (A-F only)
441272 1010-1140 TTh, BlegH 220, Rosko P, 4 cr

R 3501 Futures: Markets and Uses (prereq 3300 or #) (A-F only)
843438 1325-1455 TTh, FolH 234, Dothan M, 4 cr

R 8200 Financial Markets and Interest Rates (prereq MBA 8040 or #, grad mgmt student or grad SMgt approval)
643117 1730-2100 M, BlegH 420, Stutzer M, 4 cr

R 8601 Corporate Investment and Financial Strategy (prereq MBA 8230 or #, grad mgmt student or grad SMgt approval) (A-F only)
848736 1010-1155 MW, BlegH 425, Gahlon J, 4 cr

R 8811 Mathematical Methods in Finance (§8802; prereq 8801, Stat 5121 or equiv or #, PhD stu) (A-F only)
146918 1535-1835 T, RarigC 610, Dothan M, 4 cr

R 8812 Econometric Methods in Finance (prereq 8801, Stat 5121-5122 or 5131-5132, or #, PhD stu) (A-F only)
174637 1535-1835 Th, BlegH 340, Jagannathan R, 4 cr

8850 Independent Study in Finance (prereq #, grad mgmt student or grad SMgt approval)
943348 1-4 cr

8900 Directed Research in Finance (max 24 cr; prereq PhD stu in finance, completion of coursework for PhD degree) (S-N only)
846159 ar cr

FINNISH (Fin)
German, Scandinavian, and Dutch
Liberal Arts

R 1102 Beginning Finnish (prereq 1101)
643408 —1 1115-1240 MWF, FolH 138, Sinks T, 5 cr
741178 —2 1535-1700 MWF, FolH 214, 5 cr

R 1105 Intermediate Finnish (prereq 1104 or equiv)
641822 1325-1450 MWF, FolH 138, Sinks T, 5 cr

R 3670 Advanced Finnish (max 28 cr; prereq 1106 or equiv)
646194 4 cr

FISHERIES AND WILDLIFE (FW)
Natural Resources

5393 Special Problems: Fisheries Biology (prereq #)
648320 —1 Adelman I, ar cr
152251 —2 Kapuscinski A, ar cr
142822 —3 Newman R, ar cr
852785 —4 Sorensen P, ar cr
847375 —5 Spangler G, ar cr

5398 Special Problems: Wildlife Biology (prereq #)
143212 —1 Cohen Y, ar cr
650116 —2 Cooper J, ar cr
744369 —3 Cuthbert F, ar cr
649547 —4 Kitts J, ar cr
547225 —5 Smith J, ar cr
352328 —6 Weisbrod R, ar cr

5601 Fisheries Population Analysis (prereq Stat 3011, Stat 3012 or Stat 5021, 1 qtr intro calc, NRES 1020 or comput competency) (A-F only)
★LECT 0815-0930 TTh, HodsonH 495, Spangler G
449601 —1 LAB 1325-1520 Th, NatResAd 35, Spangler G, 4 cr
251110 —2 LAB 1430-1625 F, NatResAd 35, Spangler G, 4 cr

R 5604 Fisheries Ecology and Management (prereq EEB 5601 or equiv or #, NRES 1020 or comput competency) (Envt) (A-F only)
★LECT 0905-0955 MW, AlderH 415, Newman R
942961 —1 LAB 0905-1100 F, HodsonH 495, Newman R, 3 cr

5702 Senior Project (5701-5702†; prereq 5701) (A-F only)
145180 1430-1625 W, KaufL 302, Cooper J, 2 cr

8200 Seminar (S-N only)
650309 —1 ar cr
949036 —2 ar cr

8364 Research in Fisheries Biology (prereq fisheries grad) (S-N only)
446472 ar cr

8377 Research in Wildlife Biology (prereq wildlife grad) (S-N only)
547158 ar cr

R 8579 Ecosystem Analysis and Simulations: A Numerical Approach (prereq 1 qtr calculus, 1 qtr statistics, some exposure to computers) (A-F only)
★LECT 1220-1310 MF, GrnH 326, Cohen Y
171598 —1 LAB 1220-1415 W, GrnH 326, 5 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
149407 1-18 cr

8777 Thesis Credits: Masters
449002 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
149592 1-36 cr

FLUID MECHANICS (FlMe)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
951434 1-18 cr

8777 Thesis Credits: Masters
847098 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
844959 1-36 cr

FOOD SCIENCE AND NUTRITION (FScN)

Agricultural, Food, and Environmental Sciences; Human Ecology

R 1612 Principles of Nutrition (prereq high school chemistry and biology) (Biol/NL)
★LECT 1220-1310 MWF, ClaOff B45, Slavin J
642016 —1 REC 1220-1310 T, McNH 146, 4 cr
743335 —2 REC 1220-1310 T, McNH 198, 4 cr
547337 —3 REC 1115-1205 W, McNH 146, 4 cr
647233 —4 REC 1115-1205 W, McNH 198, 4 cr
346318 —5 REC 1325-1415 W, McNH 146, 4 cr
243332 —6 REC 1325-1415 W, ClaOff B42, 4 cr
242035 —7 REC 1220-1310 Th, McNH 198, 4 cr
145350 —8 REC 1115-1205 F, McNH 146, 4 cr

R 3112 Food Analysis (prereq 3102)
★LECT 0800-0850 MWF, ABLMS 125, Bastian E
050646 —1 LAB 0905-1205 M, ABLMS 135, 4 cr
946380 —2 LAB 0905-1205 W, ABLMS 135, 4 cr
941194 —3 LAB 0905-1205 F, ABLMS 135, Bastian E, 4 cr

3135 Food Processing I (prereq 1102, 3102, Math 1111)
★LECT 0800-0850 TTh, FScN 23, Reineccius G
246991 —1 LAB 0905-1205 T, FScN 150, 4 cr
573775 —2 LAB 0915-1205 T, FScN 150, 4 cr

3612 Life Cycle Nutrition (prereq 1612, Chem 3302)
248899 1325-1520 TTh, FScN 15, Slavin J, 4 cr

3703 Field Experience in Foodservice Management (prereq regis in coordinated undergrad program in dietetics or #)
★LECT 1355-1545 M, ABLMS 222, Hutchins A
343323 —1 LAB 0700-1215 TTh, 3 cr (off-campus) (CUP students only)

3730 Quantity Food Production Management (prereq 3102, 3472)
041476 0800-1205 TTh, FScN 15, Mullan L, 3 cr

3732 Lecture in Quantity Food Production Management (prereq 3102, 3472)
647197 1220-1310 TTh, ABLMS 125, Mullan L, 2 cr

R 5100 General Seminar (prereq sr or #) (A-F only)
948517 —1 1220-1310 T, ABLMS 222, Brady L, 1 cr
050551 —2 1355-1445 T, JOAd 3127, Kahn M, 1 cr (Mpls) (Coordinated Program Section)
647782 —3 1220-1310 W, ABLMS 222, Brady L, 1 cr

5111 Independent Study in Food Science and Nutrition (prereq Δ)
545314 1-5 cr

R 5120 Food Microbiology (prereq 1102, 3112, VPB 3103 or MicB 5105 or #)
★LECT 1220-1310 MWF, ABLMS 125, Tatini S
151715 —1 LAB 1010-1205 MWF, FScN 218, Tatini S, 5 cr
741469 —2 LAB 1325-1520 MWF, FScN 218, Tatini S, 5 cr

5314 Physiochemistry of Foods (prereq 5110)
171925 1325-1415 MTWTh, ABLMS 125, Csallany A, 4 cr

5474 Food Marketing Economics (§AgEc 5550; prereq AgEc 3101 or AgEc 3001 or Econ 3101 or #)
951448 1630-1810 TTh, McNH 33, 144, Asp E, Senauer B, 4 cr

5524 Sensory Evaluation of Dairy Products (prereq 3102)
744162 1730-1930 W, FScN 150, Smith D, 1 cr

5555 Freezing and Dehydration of Foods (prereq 1102, 5135)
971926 0905-1205 T, 1010-1205 Th, FScN 23, Labuza T, 5 cr

5623 Vitamin and Mineral Biochemistry (prereq 3612, Biol 5001, Phsl 3051)
642078 1630-1810 MW, ABLMS 125, Gallaher D, 4 cr

R 5664 Field Experience in Clinical Nutrition (prereq course in human nutrition, #)
★LECT 1010-1140 M, ABLMS 222, Hanson M, Hutchins A, (CUP students only)
050310 —1 LAB 0800-1650 WTh, 3 cr (off-campus) (CUP students only)

5666 Applied Medical Nutrition Therapy II (prereq 5665, 5662 or ¶5662)
548987 1700-1930 Th, ABLMS 125, Hanson M, 3 cr

5705 Field Experience in Foodservice Management (prereq regis in coordinated undergrad prog in dietetics or #)
★LECT 1220-1310 M, FScN 255
546916 —1 LAB 0800-1650 F, 3 cr (off-campus)

5732 Principles of Foodservice Organization snd Management (prereq sr, 3732, Mgmt 3001, regis in coordinated undergrad program in dietetics)
341460 1535-1730 T, 1325-1505 M, FScN 255, Mullan L, 4 cr

8101 Research Seminar (prereq #) (S-N only)
346450 Gallaher D, 1 cr (hrs ar T, FScN 23)

8205 General Seminar (prereq #) (S-N only)
842757 1605-1700 M, FScN 15, Asp E, 1 cr

8401 Independent Study: Food Science (prereq Δ)
747921 1-5 cr

8403 Advanced Topics in Food Science (prereq #)
151447 1-4 cr

8603 Advanced Topics in Nutrition (prereq #)
774939 0800-1050 W, FScN 255, Kotz C, Levine A, 3 cr

R 8621 Independent Study: Nutrition (prereq #)
149043 1-9 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
846517 1-18 cr

R 8777 Thesis Credits: Masters
950073 —1 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
344858 1-36 cr

FOREIGN STUDY (FoSt)

Liberal Arts

R 0010 Study Abroad (prereq Δ) (S-N only)
049478 0 cr (Global Campus)

R 0020 Study Abroad (prereq Δ) (S-N only)
842662 0 cr (Global Campus)

R 3000 Study Abroad (prereq Δ) (S-N only)
141436 1-15 cr (Global Campus)

R 3020 Study Abroad (prereq Δ) (S-N only)
652030 1-15 cr (Global Campus)

R 3110 HECUA Programs (prereq Δ)
151738 1-24 cr (Global Campus)

R 3120 CIC-Sponsored Study Abroad Programs (prereq Δ)
147379 1-40 cr (Global Campus)

R 3130 IES/IAS-Sponsored Study Abroad Programs (prereq Δ)
145082 1-54 cr (Global Campus)

R 3140 CIEE-Sponsored Study Abroad Programs (prereq Δ)
352331 1-54 cr (Global Campus)

R 3180 Bologna Cooperative Studies Program: Italy (prereq Δ)
645921 1-54 cr (Global Campus)

R 3310 Denmark's International Study Program (prereq Δ)
844377 1-54 cr (Global Campus)

R 3320 Kansas Program in Costa Rica (prereq Δ)
649550 1-54 cr (Global Campus)

R 3910 Integrated Studies in France (prereq Δ)
445158 1-54 cr (Global Campus)

R 3920 International Program in Toledo, Spain (prereq Δ)
948212 1-50 cr (Global Campus)

R 3930 German and Austrian Studies in Graz (prereq Δ)
447458 1-30 cr (Global Campus)

R 3940 Venezuelan Semester/Summer Program in Merida (prereq Δ)
343760 1-30 cr (Global Campus)

FOREST PRODUCTS (ForP)

Wood and Paper Science
Natural Resources

R 1303 Wood Structure and Identification (prereq 1301 or #)
★LECT 1325-1415 T, KaufL 125, Seavey R
243931 —1 LAB 1430-1730 T, KaufL 125, Seavey R, 2 cr

3301 Industrial Internship (!; prereq forest products cooperative educ stu) (A-F only)
449243 —1 Bowyer J, 2 cr
743903 —2 Massey J, 2 cr
248062 —3 Ramaswamy S, 2 cr
071660 —4 Seavey R, 2 cr
671659 —5 Tschirner U, 2 cr

3303 Forest Products Marketing
248563 0800-0850 MWF, KaufL 125, Bowyer J, 3 cr

3325 Directed Study Experience (prereq #)
644297 —1 Bowyer J, 1-5 cr
847456 —2 Gertjejansen R, 1-5 cr
550433 —3 Massey J, 1-5 cr
241743 —4 Petersen H, 1-5 cr
545913 —5 Ramaswamy S, 1-5 cr
173908 —6 Seavey R, 1-5 cr
874754 —7 Tschirner U, 1-5 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5304 Wood Drying and Preservation Processes (prereq 5300, 5303)
★LECT 0945-1100 T, 0905-0955 F, KaufL 125, Petersen H
846288 —1 LAB 0945-1100 Th, KaufL 30, Petersen H, 4 cr

5307 Wood Base Panel Technology (prereq 5300, 5301 or #)
★LECT 0800-0915 TTh, KaufL 125, Gertjejansen R
446018 —1 LAB 0915-0945 TTh, KaufL 125, Gertjejansen R, 4 cr

5313 Pulp and Paper Process Operations I (prereq 5305, 5312, 5353, CE 3400, ME 3301, ME 5342 or ChEn 5102, or #)
★LECT 0905-0955 MWF, ClaOff B26, Ramaswamy S
047357 —1 REC 0800-0850 M, KaufL 302, Ramaswamy S, 4 cr

5320 Biological and Environmental Science of Pulp and Paper (prereq ForP jr or sr or grad stu)
846324 1220-1310 MWF, KaufL 125, Schmidt E, 3 cr

5321 Material Science of Paper: Paper and Fiber Physics and Properties (prereq 5305, 5310, 5311-5312, 5315, CE 3400, ME 3301, ME 5342, ¶Chem 5520, or #)
242164 1115-1205 MWF, KaufL 302, Muvundamina M, 4 cr

5353 Wood Chemistry II (prereq 5302)
245419 0945-1100 TTh, NatResAd 100, Sarkanen S, 3 cr

5401 Senior Topics (prereq sr, #)
543921 —1 Bowyer J, ar cr
350661 —2 Gertjejansen R, ar cr
343130 —3 Massey J, ar cr
651055 —4 Ramaswamy S, ar cr
073909 —5 Seavey R, ar cr
549878 —6 Tschirner U, ar cr

8300 Research Problems
752195 —1 Bowyer J, ar cr
145227 —2 Gertjejansen R, ar cr
445077 —3 Larson T, ar cr
250197 —4 Massey J, ar cr
641335 —5 Ramaswamy S, ar cr
250961 —6 Schmidt E, ar cr
448867 —7 Seavy R, ar cr
373907 —8 Tschirner U, ar cr

8301 Research Problems
549119 —1 Massey J, ar cr
150962 —2 Ramaswamy S, ar cr
248868 —3 Tschirner U, ar cr

8302 Research Problems
943317 —1 Massey J, ar cr
644588 —2 Ramaswamy S, ar cr
642629 —3 Tschirner U, ar cr

FOREST RESOURCES (FR)
Natural Resources

3225 Directed Study Experience (prereq fr or soph, #)
750415 —1 Anderson D, 1-5 cr
841608 —2 Bauer M, 1-5 cr
941583 —3 Baughman M, 1-5 cr
050744 —4 Blinn C, 1-5 cr
445306 —5 Bolstad P, 1-5 cr
248353 —6 Brooks K, 1-5 cr
048668 —7 Burk T, 1-5 cr
444060 —8 Carlson S, 1-5 cr
346223 —9 Ek A, 1-5 cr
251365 —10 Ellefson P, 1-5 cr
150914 —11 Gregersen H, 1-5 cr
671872 —12 Grigal D, 1-5 cr
471873 —13 Johnson G, 1-5 cr
271874 —14 Lime D, 1-5 cr
171875 —15 Mohn C, 1-5 cr
971876 —16 Perry J, 1-5 cr
771877 —17 Puettmann K, 1-5 cr
571878 —18 Reich P, 1-5 cr
371879 —19 Rose D, 1-5 cr
771880 —20 Splett P, 1-5 cr
571881 —21 Sucoff E, 1-5 cr

R 5100 Silviculture (prereq for FR maj, 1100, 3104, Itasca Session; for non-maj, 3104 or equiv, #)
051764 1115-1230 TTh, 1325-1415 M, GrnH 110, Puettmann K, 4 cr

R 5114 Forest Hydrology (prereq 3103, Geo 1001, Math 1142, Chem 1052, Biol 1009 Phys 1001 or #) (Envt)
942054 1220-1310 M, 0815-0930 TTh, GrnH 110, Brooks K, 4 cr

5120 Tree Biology (prereq Chem 1001 or Chem 1051, 10 cr biology) (A-F only)
548231 0800-0850 MWF, GrnH 203, Sucoff E, 3 cr

R 5142 Tropical Forest Ecology (prereq one ecol course at 3000 level or higher)
173142 0945-1100 TTh, GrnH 203, Reich P, 3-4 cr

R 5152 Forest Genetics (prereq Biol 1103, Stat 3011)
741584 1115-1205 MWF, GrnH 326, Furnier G, 3 cr

5225 Directed Study Experience (prereq jr or sr or grad stu, #)
752262 —1 Anderson D, 1-5 cr
751211 —2 Bauer M, 1-5 cr
048959 —3 Baughman M, 1-5 cr
446441 —4 Blinn C, 1-5 cr
043910 —5 Bolstad P, 1-5 cr
343600 —6 Brooks K, 1-5 cr
648138 —7 Burk T, 1-5 cr
647376 —8 Carlson S, 1-5 cr
552487 —9 Ek A, 1-5 cr
345993 —10 Ellefson P, 1-5 cr
143131 —11 Gregersen H, 1-5 cr
952857 —12 Grigal D, 1-5 cr
045690 —13 Johnson G, 1-5 cr
371882 —14 Lime D, 1-5 cr
171883 —15 Mohn C, 1-5 cr
071884 —16 Perry J, 1-5 cr
871885 —17 Puettmann K, 1-5 cr
671886 —18 Reich P, 1-5 cr
471887 —19 Rose D, 1-5 cr
174301 —20 Sucoff E, 1-5 cr

5228 Advanced Topics in Resource Assessment and Modeling (prereq NRES 5210 or equiv, Stat 5021 or equiv, 5218 or equiv) (A-F only)
871871 Burk T, 4 cr

R 5259 Analysis of Outdoor Recreation Behavior (prereq 5232, RRM maj or grad student or #)
071870 0945-1100 TTh, GrnH 203, Lime D, 3 cr

R 5262 Remote Sensing of Natural Resources (A-F only)
★LECT 0905-0955 MWF, GrnH 110, Bauer M
743755 —1 LAB 0905-1205 T, GrnH 203, Bauer M, 4 cr
145616 —2 LAB 1325-1625 T, GrnH 203, Bauer M, 4 cr
542526 —3 LAB 0905-1205 Th, GrnH 203, Bauer M, 4 cr
141291 —4 LAB 1325-1625 Th, GrnH 203, Bauer M, 4 cr

R 5703 Colloquium in Forest Biology
849353 1220-1400 F, NatResAd 100, Brooks K, 2 cr

8100 Research Problems: Silviculture
048265 Puettmann K, ar cr

8101 Research Problems: Forest-Tree Physiology
848168 Sucoff E, ar cr

8103 Research Problems: Forest Hydrology
342768 Brooks K, Perry J, ar cr

8104 Research Problems: Forest Ecology
447475 Reich P, Sucoff E, others, 1-8 cr

8107 Seminar: Forest Resources
242889 1430-1520 MW, GrnH 203, Furnier G, Ek A, others, 1 cr

8112 Research Problems: Physiological Ecology
247476 Reich P, Sucoff E, 1-8 cr

8200 Research Problems: Forest Management
447492 Rose D, Blinn C, others, ar cr

8201 Research Problems: Forest Economics
147292 Blinn C, Ellefson P, others, ar cr

8202 Research Problems: Forest Biometry
452451 Ek A, Burk T, ar cr

8203 Research Problems: Forest Recreation
641402 Anderson D, Lime D, ar cr

8204 Research Problems: Forest Policy
850986 Ellefson P, Baughman M, others, ar cr

8205 Research Problems: Remote Sensing
343354 Bauer M, Bolstad P, ar cr

8207 Economic Analysis of Forestry Projects (prereq #)
349073 Gregersen H, 3 cr

8301 Teaching Practicum (prereq #, Δ) (S-N only)
052235 2-4 cr

FORESTRY (Fors)
Natural Resources

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
148662 1-18 cr

8777 Thesis Credits: Masters
145941 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
850017 1-36 cr

FRENCH (Fren)
French and Italian
Liberal Arts

R 1101 Beginning French
543630 —1 0800-0850 MTWThF, FolH 214, 5 cr
843522 —2 0905-0955 MTWThF, FolH 246, 5 cr
149477 —3 1115-1205 MTWThF, LindH 302, 5 cr
047228 —4 1430-1520 MTWThF, FolH 246, 5 cr

R 1102 Beginning French (prereq 1101 or equiv)
545359 —1 0800-0850 MTWThF, FolH 246, 5 cr
446486 —2 0800-0850 MTWThF, FolH 240, 5 cr
144652 —3 0905-0955 MTWThF, FolH 214, 5 cr
141864 —4 1115-1205 MTWThF, FolH 246, 5 cr
249356 —5 1220-1310 MTWThF, FolH 246, 5 cr
552215 —6 1325-1415 MTWThF, FolH 246, 5 cr
444379 —7 1325-1415 MTWThF, FolH 340, 5 cr
750978 —8 1430-1520 MTWThF, FolH 240, 5 cr

R 1103 Beginning French (prereq 1102 or equiv)
242777 —1 0905-0955 MTWThF, FolH 208, 5 cr
145039 —2 1115-1205 MTWThF, FolH 340, 5 cr
750477 —3 1430-1520 MTWThF, PeikH 335, 5 cr

R 1104 Intermediate French (prereq 1103 or Entrance Proficiency Test)
248420 —1 0905-0955 MTWThF, AmundH 104, 5 cr
942751 —2 1010-1100 MTWThF, FolH 246, 5 cr
443703 —3 1115-1205 MTWThF, AkerH 313, 5 cr
149320 —4 1430-1520 MTWThF, VinH 301, 5 cr

R 1105 Intermediate French (prereq 1104 or Entrance Proficiency Test)
241791 —1 0800-0850 MTWThF, FolH 326, 5 cr
351860 —2 0905-0955 MTWThF, LindH 217, 5 cr
349106 —3 0905-0955 MTWThF, FolH 340, 5 cr
345198 —4 1010-1100 MTWThF, FolH 240, 5 cr
051747 —5 1115-1205 MTWThF, SmithH 111, 5 cr
552134 —6 1220-1310 MTWThF, FolH 340, 5 cr
643716 —7 1430-1520 MTWThF, FordH 60, 5 cr

R 1106 Intermediate French (prereq 1105 or Entrance Proficiency Test; end-of-qtr proficiency test will be required)
944290 —1 0905-0955 MTWThF, AkerH 225, 5 cr
747112 —2 1115-1205 MTWThF, FolH 214, 5 cr
351535 —3 1430-1520 MTWThF, FolH 208, 5 cr

R 3015 French Composition and Communication (prereq 1106)
349915 —1 0905-1020 MWF, FolH 426, Liu C, 4 cr
144983 —2 0945-1140 TTh, FolH 334, Noakes S, 4 cr

R 3016 Advanced French Composition and Communication (prereq 3015 or #)
448271 —1 1010-1110 MWF, FordH 60, Waldauer J, 4 cr
552067 —2 0905-1035 TTh, FolH 426, Robinson P, 4 cr

R 3017 Stylistics Through Translation (prereq 3016 or superior achievement in 3015 or #)
343564 1010-1100 MWF, ApH 103, Brewer M, 4 cr

R 3101 Introduction to French Literary Texts: Poetry (prereq 3016 or equiv) (Lit; IP)
144991 —1 1220-1310 MWF, FolH 419, Robinson P, 4 cr
541778 —2 1325-1415 MWF, FolH 131, Waldauer J, 4 cr

R 3103 French Literary Texts: Novel (prereq 3101 or above) (Lit; IP)
644106 1325-1440 TTh, PeikH 215, Paganini M, 4 cr

R 3239 Topics in 17th-Century French Literature (prereq 3101, 3103)
274306 1245-1400 TTh, Phys 157, Liu C, 4 cr

R 3290 Topics in French Literature (prereq 3101, 3103)
148779 1010-1100 MWF, Phys 236A, Preckshot J, Sivert E, 4 cr

R 3512 French Civilization and Culture (prereq 3015) (IP)
951031 1115-1230 TTh, FolH 38, Brewer D, 4 cr

3800 CIEE Language/Culture Program in Brittany (prereq 1105)
743237 1-54 cr

3970 Directed Readings (prereq undergrad student, #, Δ, ❑)
948260 —1 1-5 cr
552229 —2 1-5 cr

3980 Directed Instruction (prereq 3015, #, Δ, ❑)
851006 3-5 cr

R 5105 Topics in Criticism (prereq 3209 or above)
171592 1430-1520 MWF, LindH 305, Liu C, 4 cr

R 5701 Structure of French: Phonology (prereq 3014 or 3016 or #)
071593 1325-1555 TTh, FolH 214, Barnes B, 4 cr

5800 CIEE Contemporary Film Program in Paris (prereq 1105 or #)
541604 1-45 cr

R 8050 Seminar in Fiction (max 15 cr)
871594 1325-1625 W, VinH 2, Preckshot J, Sivert E, 3-5 cr

R 8150 Seminar in Problems of 18th Century Writing (max 15 cr)
671595 1545-1715 TTh, FolH 138, Brewer D, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
452708 1-18 cr

R 8701 History of the French Language
471596 1325-1455 MW, FolH 344, Akehurst F, 4 cr

8777 Thesis Credits: Masters
241824 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
152422 1-36 cr

8970 Directed Readings
146160 1-5 cr

8980 Directed Teaching (prereq #, Δ)
143042 1-5 cr

8990 Ph.D. Topics (prereq PhD stu in French) (S-N only)
641514 1-7 cr

FRENCH AND ITALIAN (FrIt)

French and Italian
Liberal Arts

R 3604 Cinemas of the Real
749944 1810-2030 MW, FolH 138, Conway K, 4 cr

R 5219 Humanism and Italianism in the Literature of the 16th Century (§Fren 5219, Ital 5219; prereq 3209 or above)
371557 1415-1530 TTh, VinH 313, Noakes S, 4 cr

GENERAL COLLEGE (GC)

Sections and courses marked BC (Base Curriculum) are recommended for students who are in their first year of enrollment and have not had prior college work in that subject area. Sections and courses marked TC (Transition Curriculum) are recommended for students who are in their second year of enrollment and have completed freshman composition. Credit equivalents for noncredit courses in GC are as follows: 0401, 0402, 0623, 0643—4-credit equivalent; 0611, 0615, 0616, 0617, 0618, 0621, 0625, 0631—5-credit equivalent. For further information, go to 25 Appleby Hall.

For GC 0401, 0402, 0419, 0611, 0615, 0616, 0617, 0618, 0621, 0623, 0625, 0631, and 0643, course fees are assessed instead of tuition. See page 26 for fee amounts. Credits for these courses will *not* count in the tuition plateau but will count towards the assessment of the student services fee.

NOTE: The restriction *GC stu only* is enforced through December 6, 1996. After December 6, other students may register for these courses.

R 0611 Introduction to Basic Mathematics (§0615; prereq GC math placement)
671807 1430-1625 MWF, ApH 102, 0 cr

R 0616 Algebraic Problem Solving I (§0621; prereq 0615)
148550 1010-1205 MWF, ApH 223, Koch L, 0 cr (BC) (prereq #)

R 0621 Elementary Algebra (prereq GC math placement or arithmetic with C grade or better)
047469 —1 0800-0850 M, 0800-0950 WF, ApH 223, 0 cr (BC)
448318 —2 1430-1520 M, 1430-1625 WF, VinH 207, 0 cr (BC)

R 0623 Plane Geometry: Programmed Study (prereq GC math placement or elem algebra, #)
749197 —1 1430-1625 MWF, ApH 223, 0 cr (BC)
349977 —2 1220-1415 TThF, ApH 223, 0 cr (BC)

R 0625 Intermediate Algebra, Part I (prereq GC math placement or elem algebra with grade of C or better)
052736 —1 0800-0850 M, 0800-0955 WF, NichH 216, 0 cr (BC)
852656 —2 1115-1205 M, 1010-1205 WF, NichH 216, 0 cr (BC)
151049 —3 1220-1310 M, 1220-1415 WF, NichH 216, 0 cr (BC)
051585 —4 1430-1520 M, 1430-1625 WF, FolH 104, 0 cr (BC)

R 0631 Intermediate Algebra, Part II (prereq GC math placement or 0625 with grade of C or better)
843343 —1 0800-0850 M, 0800-0955 TTh, FolH 104, 0 cr (BC)
851393 —2 0905-0955 M, 0905-1100 TTh, NichH 216, 0 cr (BC)
447508 —3 1010-1100 M, 1010-1205 TTh, FolH 104, 0 cr (BC)
148037 —4 1220-1310 M, 1220-1415 TTh, FolH 104, 0 cr (BC)
043339 —5 1430-1520 M, NichH 216, 1430-1625 TTh, FolH 104, 0 cr (BC)
247171 —6 0905-0955 M, 0800-0955 WF, FolH 104, 0 cr
449484 —7 1115-1205 M, 1010-1205 WF, FolH 104, 0 cr
643828 —8 1325-1415 M, 1220-1415 WF, FolH 104, 0 cr
641948 —9 1535-1625 M, 1430-1625 WF, NichH 216, 0 cr (BC)

R 0643 Mathematics: Programmed Study (prereq #)
046306 —1 1430-1625 MWF, ApH 223, 0 cr (BC)
547984 —2 1220-1415 TThF, ApH 223, 0 cr (BC)

R 1041 Developing College Reading (prereq Commanding English enrollment)
043874 —1 0800-0955 TTh, ApH 302, 3 cr (BC) (Commanding English stu only)
642890 —2 1010-1205 TTh, ApH 223, 3 cr (BC) (Commanding English stu only)
246327 —3 1325-1520 TTh, NichH 216, 3 cr (BC) (Commanding English stu only)
941907 —4 1430-1625 TTh, ApH 223, 3 cr (BC) (Commanding English stu only)

R 1076 Career Planning
147566 —1 1220-1415 M, ApH 223, Neiman P, 2 cr (BC)
073991 —2 1220-1415 W, ApH 41, 2 cr (BC) (TRIO stu only)

R 1086 Supplemental Instruction Seminar (max 6 cr) (A-F only)
873992 —1 1220-1350 TTh, ApH 41, Neil S, 1 cr (concurrent reg in 1132, sec 2 or 4 is required) (BC) (TRIO stu only)
773998 —2 1010-1100 MWF, ApH 41, Neil S, 1 cr (concurrent reg in 1166, sec 2 is required) (GC stu only)
573999 —3 1010-1140 TTh, ApH 41, 1 cr (concurrent reg in 1231, sec 2 or 4 is required) (BC) (GC stu only)
474000 —4 1430-1600 TTh, ApH 41, 1 cr (concurrent reg in 1851, sec 1 is required) (BC) (GC stu only)

R 1111 Science in Context: Weather and Climate (Phys/NL)
144109 1325-1415 MTWThF, SciCB 125, Johnson A, 5 cr (lab time assigned first two days of class) (BC)

R 1112 Ecological Evaluation of Environmental Problems (Biol/NL; Envt)
751063 —1 0800-0955 MW, 0800-0850 F, ApH 319, Hatch J, 5 cr (BC) (GC stu only)
149472 —2 0800-0955 TTh, 0905-0955 F, ApH 319, Hatch J, 5 cr (BC) (GC stu only)

R 1131 Biological Science: Principles (Biol/L)
★LECT 1115-1205 MTWTh, SciCB 125, Wilcox K, 5 cr
746722 —1 LAB 0800-0955 MW, ApH 309, (TC)
244562 —2 LAB 0905-1100 MW, ApH 309, (TC)
642582 —3 LAB 1220-1415 MW, ApH 309, (TC)
551985 —4 LAB 1325-1520 MW, ApH 309, (TC)
649855 —5 LAB 1430-1625 MW, ApH 309, (TC)
147793 —6 LAB 0800-0955 TTh, ApH 309, (TC)
045642 —7 LAB 0905-1100 TTh, ApH 309, (TC)
442583 —8 LAB 1220-1415 TTh, ApH 309, (TC)
845643 —9 LAB 1325-1520 TTh, ApH 309, (TC)
171830 —10 LAB 1430-1625 TTh, ApH 309, (TC) (TRIO stu only)

R 1132 Biological Science: The Human Body (Biol/NL; Biol/L with 1137)
750026 —1 1010-1205 MW, 1010-1100 F, ApH 319, Jensen M, 5 cr (BC) (GC stu only)
542901 —2 1010-1205 MW, 1010-1100 F, ApH 319, Jensen M, 5 cr (concurrent reg in 1086, sec 1 is required) (BC) (TRIO stu only)
748129 —3 1220-1415 MW, 1325-1415 F, ApH 319, Jensen M, 5 cr (BC) (GC stu only)
842256 —4 1220-1415 MW, 1325-1415 F, ApH 319, Jensen M, 5 cr (concurrent reg in 1086, sec 1 is required) (BC) (TRIO stu only)
673993 —5 1430-1625 MW, 1430-1520 F, ApH 319, Wilcox K, 5 cr
973997 —6 1430-1625 MW, 1430-1520 F, ApH 319, Wilcox K, 5 cr (BC) (Commanding English stu only)

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 1137 Biological Science Laboratory: The Human Body (prereq 1132 or ¶1132) (Biol/L with 1132)
049917 —1 LAB 1220-1415 MW, ApH 311, Jensen M, 2 cr (BC)
444799 —2 LAB 0800-0955 TTh, ApH 311, Jensen M, 2 cr (BC)
441515 —3 LAB 1010-1205 TTh, ApH 311, Neil S, 2 cr (BC) (TRIO stu only)
845917 —4 LAB 1220-1415 TTh, ApH 311, Jensen M, 2 cr (BC)

R 1160 Investigations in Physical Science (prereq 1 yr high school algebra or 0616 or 0621 or equiv)
650049 1220-1415 MWF, ApH 322, Uthe R, 5 cr (BC) (addtl 2 hrs ar)

R 1166 Principles of Chemistry (prereq 0621 or Math Level D or high schl algebra or equiv) (Phys/NL)
851247 —1 0905-0955 MTWThF, SciCB 125, Snowden F, 5 cr (BC)
647166 —2 0905-0955 MTWThF, SciCB 125, Snowden F, 5 cr (BC) (GC stu only) (conc reg in 1086, sec 2 is required)

R 1172 Historical Geology (Phys/L)
643862 1010-1100 MTWThF, SciCB 125, Uthe R, 5 cr (addtl 3-4 hr lab ar) (BC)

R 1211 People and Problems (SSci; CD)
143307 —1 0800-0850 MTWThF, ApH 103, Johnson F, 5 cr (BC)
043194 —2 0800-0850 MTWThF, ApH 103, Johnson F, 5 cr (BC) (Commanding English stu only)
946928 —3 1220-1415 MW, 1220-1310 F, ApH 3, Latts S, 5 cr (BC)
844833 —4 1010-1205 TTh, 1115-1205 F, ApH 319, Thoen G, 5 cr

R 1221 Minnesota History (Hist)
650780 —1 0800-0955 TTh, 0905-0955 F, ApH 226, Buckley T, 5 cr (TC)
471808 —2 1220-1415 TTh, 1325-1415 F, ApH 226, Buckley T, 5 cr

R 1231 United States: Growth of National Power (Hist)
348702 —1 1010-1205 MW, 1010-1100 F, ApH 3, Ghere D, 5 cr (BC)
573985 —2 1010-1205 MW, 1010-1100 F, ApH 3, Ghere D, 5 cr (GC stu only) (concurrent reg in 1086, sec 3 is required)
250880 —3 1430-1625 MW, 1430-1520 F, ApH 3, Ghere D, 5 cr (BC)
373986 —4 1430-1625 MW, 1430-1520 F, ApH 3, Ghere D, 5 cr (BC) (GC stu only) (concurrent reg in 1086, sec 3 is required)

R 1233 United States: Government and Politics (SSci)
648530 1220-1415 MW, 1220-1310 F, ApH 103, Kahn P, 5 cr (BC)

R 1235 United States: Law in Society (SSci; C/PE)
847005 —1 1430-1520 MTWThF, ApH 103, Johnson F, 5 cr (BC)
271826 —2 1220-1415 TTh, 1325-1415 F, ApH 103, Kahn P, 5 cr (BC)
171827 —3 1430-1625 MW, 1430-1520 F, ApH 226, Kahn P, 5 cr

R 1281 Psychology in Modern Society (SSci)
★LECT 1115-1205 F, SciCB 125, Brothen T, 5 cr (BC) (addtl 3 hrs ar)
971828 —1 REC 0905-0955 MW, ApH 128, Brothen T, (BC)
771829 —2 REC 1115-1205 MW, ApH 128, Brothen T, (BC)
271809 —3 REC 1220-1310 MW, ApH 128, Brothen T
671810 —4 REC 1325-1415 MW, ApH 128, Brothen T

R 1283 Psychology of Human Development
650648 1220-1415 TTh, 1325-1415 F, ApH 3, Latts S, 5 cr (TC)

R 1285 Cultural Anthropology (SSci; IP)
146790 —1 1115-1205 MTWThF, ApH 103, Johnson F, 5 cr (BC)
471811 —2 1115-1205 MTWThF, ApH 103, Johnson F, 5 cr (BC) (Commanding English stu only)

R 1311 Art: General Arts (Vis; IP)
343936 —1 1430-1625 MW, ApH 302, 4 cr (BC)
543384 —2 1220-1415 TTh, ApH 302, 4 cr
446097 —3 1220-1415 TTh, ApH 302, 4 cr (Commanding English stu only)

R 1331 Musical Heritage (Vis; IP)
552795 0800-0955 MW, ApH 302, 4 cr (TC)

R 1365 Literatures of the United States (Lit; CD)
046256 —1 0800-0955 MW, ApH 303, Gidmark J, 4 cr (BC) (GC stu only)
943060 —2 1010-1205 MW, ApH 303, Noble G, 4 cr (BC) (GC stu only)
371817 —3 1220-1415 MW, ApH 303, Gidmark J, 4 cr (BC) (GC stu only)
171818 —4 1220-1415 TTh, ApH 303, Noble G, 4 cr (BC) (GC stu only)

R 1367 Contemporary Literature: International Perspectives (Lit; IP)
★LECT 1325-1415 MW, NichH 213, Collins T, 4 cr (BC)
845237 —1 REC 0800-0955 Th, ApH 303, (BC)
952390 —2 REC 1430-1625 Th, NichH 207, (BC)
748454 —3 REC 0800-0955 F, ApH 102, (BC)
652495 —4 REC 1010-1205 F, ApH 303, (BC)

R 1371 Literature: Reading Short Stories (Lit)
646048 —1 1430-1625 MW, ApH 303, Adamson D, 4 cr (BC) (GC stu only)
049660 —2 1010-1205 TTh, ApH 303, Adamson D, 4 cr (BC) (GC stu only)

R 1374 The Movies: An Introductory Course (Vis)
744212 1010-1205 MW, 1115-1205 F, ApH 302, Yahnke R, 4 cr (BC)

R 1421 Writing Laboratory: Basic Writing
345413 —1 0800-0955 MWF, ApH 321, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
652545 —2 0800-0955 MWF, ApH 219, 4 cr (microcomoputer instruction, uses Macintosh PC) (BC)
252368 —3 0800-0955 MWF, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC) (Commanding English stu only)
052347 —4 0800-0955 MWF, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
643005 —5 0800-0955 MWF, ApH 117, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
943723 —6 1010-1205 MWF, ApH 321, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
947383 —7 1010-1205 MWF, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
651296 —8 1010-1205 MWF, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC)
143792 —9 1010-1205 MWF, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC) (Commanding English stu only)
247039 —10 1220-1415 MWF, ApH 321, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
643621 —11 1220-1415 MWF, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
447850 —12 1220-1415 MWF, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC) (Commanding English stu only)
945374 —13 1430-1625 MWF, ApH 128, 4 cr (microcomputer instruction, uses IBM PC) (BC)
845285 —14 1430-1625 MWF, ApH 321, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
552361 —15 1430-1625 MWF, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC) (Commanding English stu only)
844721 —16 1430-1625 MWF, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC)
071819 —17 1430-1625 MWF, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)

R 1422 Writing Laboratory: Communicating in Society (prereq 1421)
344620 —1 0800-0955 TTh, ApH 227, 4 cr (BC) (TRIO stu only) (microcomputer instruction, uses Macintosh PC)
249437 —2 0800-0955 TTh, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
448903 —3 0800-0955 TTh, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC)
243525 —4 1010-1205 TTh, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
844718 —5 1010-1205 TTh, ApH 117, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
652724 —6 1010-1205 TTh, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
042109 —7 1010-1205 TTh, ApH 204, 4 cr (BC) (TRIO stu only) (microcomputer instruction, uses IBM PC).
146885 —8 1010-1205 TTh, ApH 321, 4 cr (microcomputer instruction, uses Macintosh PC)
742881 —9 1220-1415 TTh, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC)
343712 —10 1220-1415 TTh, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
341684 —11 1220-1415 TTh, ApH 219, 4 cr (BC) (microcomputer instruction, uses Macintosh PC)
642257 —12 1430-1625 TTh, ApH 204, 4 cr (BC) (microcomputer instruction, uses IBM PC)
651833 —13 1430-1625 TTh, ApH 227, 4 cr (BC) (microcomputer instruction, uses Macintosh PC)
274757 —14 1430-1625 TTh, ApH 219, 4 cr (BC) (microcomputer instruction, uses Macintosh PC)

R 1454 Statistics (prereq intermediate algebra or 0631) (Math)
948632 1220-1415 MW, 1325-1415 F, ApH 117, Loch, 5 cr (microcomputer instruction, uses Macintosh PC) (TC)

R 1456 Functions and Problems of Logic (Math)
173990 1010-1205 TTh, ApH 3, 4 cr (TC)

R 1461 Oral Communication: Speaking and Creative Thinking
750611 —1 0800-0955 MW, ApH 102, 4 cr (BC)
650438 —2 1010-1205 MW, ApH 102, Owen-Cruise S, 4 cr (BC)
947867 —3 1220-1415 MW, ApH 102, Owen-Cruise S, 4 cr (BC)

R 1463 Multicultural Oral Communication (CD)
444771 0800-0955 TTh, ApH 102, 4 cr (BC)

R 1464 Oral Communication: Group Process and Discussion
671824 1010-1205 TTh, ApH 102, Amram F, 4 cr (BC)

R 1481 Creativity: Art Laboratory: Experiences in the Media (Vis)
845030 0905-1100 TThF, ApH 201, James P, 4 cr (BC)

R 1511 Introduction to Business and Society (SSci)
647281 —1 1010-1205 TTh, 1115-1205 F, ApH 226, Kroll P, 5 cr (BC)
471825 —2 1430-1625 MW, 1430-1520 F, NichH 207, 5 cr (BC)

R 1571 Introduction to Microcomputer Applications (prereq elem algebra)
952650 1010-1205 MW, ApH 117, 5 cr (addtl hr ar) (TC) (microcomputer instruction, uses Macintosh PC) (GC stu only)

R 1733 Contemporary Sex Roles
651444 1010-1205 MW, 1010-1100 F, ApH 226, Thoen G, 5 cr (TC)

R 1816 African-American Literature (prereq 1421, 1422) (Lit; CD)
544289 1430-1625 TTh, ApH 226, 4 cr (TC)

R 1851 Multicultural Relations (CD)
749684 —1 1220-1415 MW, ApH 302, Gardner L, 4 cr (BC) (GC stu only) (concurrent reg in 1086, sec 4 is required)
174758 —2 0800-0955 TTh, ApH 3, 4 cr
044412 —3 1220-1415 TTh, ApH 102, 4 cr (BC)

GENETICS AND CELL BIOLOGY (GCB)
Biological Sciences

3022 Genetics (§Biol 5003; prereq Biol 1009 or Biol 1202)
245274 1730-1910 TTh, ClaOff B45, Rubenstein I, 4 cr

3960 Research Topics (prereq 15 cr biology) (S-N only)
549041 1430-1520 M, ClaOff B35, Fan D, 1 cr

5034 Intermediate Molecular Genetics (prerq Biol 5003, 5004)
848932 1115-1220 MWF, HodsonH 495, Shaw J, 4 cr

R 5043 Human Genetics (prereq 3022 or Biol 5003 or #)
373938 1220-1310 MWF, WDH 2110, Oetting W, 3 cr (Mpls)

5061 Developmental Biology (prereq Biol 3011 or 3111, 5004)
173939 1325-1430 MWF, BioSci 12, Rougvie A, 4 cr

5970 Directed Studies (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
350613 ar cr

5990 Directed Research (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
848185 ar cr

8131 Advanced Genetics I (prereq 3022 or Biol 5001, 5003 or BioC 5751 or #)
046211 1330-1435 MWF, BioSci 70, Herman R, Simon J, 4 cr

8148 Advanced Cell Biology I (§CBN 8148; prereq Biol 5004 or #)
142948 1010-1150 TTh, KaufL 302, 4 cr

8214 Advanced Molecular Biology II (§BioC 8214, MdBc 8214; prereq BioC/MdBc 8002 or 8132 or #)
442745 0905-1045 MW, BioSci 406, Simmons M, 4 cr

8900 Seminar (S-N only)
546866 —1 1115-1300 Th, MoosT 2520, King R, 1 cr (Mpls)
143341 —2 1535-1705 Th, ClaOff B45, Iwanij V, 1 cr

8910 Journal Clubs (S-N only)
548472 1200-1250 T, BioSci 260, Johnson R G, 1 cr

8914 Ethical and Legal Issues in Genetic Counseling (prereq admission to genetic counseling emphasis within genetics master's program or #) (A-F only)
149284 1010-1150 F, MoosT 16104, LeRoy B, 3 cr (Mpls)

8970 Directed Studies (prereq #)
448612 ar cr

8990 Research (prereq #) (S-N only)
946962 ar cr

Geometry: See General College; Mathematics.

GEOGRAPHY (Geog)
Liberal Arts

R 1402 Geography of Environmental Systems (§1401) (Phys/NL; Envt)
★LECT 1010-1100 MWF, AndH 310, Brown D
271969 —1 REC 0800-0850 TTh, BlegH 445, 5 cr
671970 —2 REC 0905-0955 TTh, BlegH 445, 5 cr
471971 —3 REC 1010-1100 TTh, BlegH 445, 5 cr
271972 —4 REC 1115-1205 TTh, BlegH 445, 5 cr
171973 —5 REC 1220-1310 TTh, BlegH 445, 5 cr
971974 —6 REC 0800-0850 WF, BlegH 445, 5 cr
771975 —7 REC 0905-0955 WF, BlegH 445, 5 cr
571976 —8 REC 1115-1205 WF, BlegH 445, 5 cr
371977 —9 REC 1220-1310 WF, BlegH 445, 5 cr

1973 Geography of the Twin Cities (§3973)
149603 1820-2100 W, AndH 210, Adams J, 4 cr

R 3121 Latin America (§LAS 3121)
171978 1010-1100 MWF, BlegH 250, Weil C, 4 cr

R 3141 Africa (§Afro 3141) (SSci; IP)
071979 1220-1335 MW, BlegH 215, Samatar A, 4 cr

3362 Land Use and State Government
941731 1415-1530 TTh, BlegH 445, Squires R, 4 cr

3373 The Changing Form of the City (Hist; IP)
050100 0945-1100 TTh, BlegH 415, Miller R, 4 cr

3421 Climatology (prereq 1401 or 1425 or Soil 1262 or Phys 1071 or #)
747904 0945-1100 TTh, HHHCtr 60, Klink K, 4 cr

3530 Cartography Internship (max 10 cr; prereq #) (S-N only)
449646 2-5 cr

3940 Directed Field Study (prereq #) (A-F only)
950462 2-4 cr

3970 Directed Readings (prereq #, Δ, ❑)
342141 1-15 cr

3973 Geography of the Twin Cities (§1973)
449226 1820-2100 W, AndH 210, Adams J, 4 cr

3990 Directed Research (prereq #, Δ, ❑)
650536 1-15 cr

5177 Scandinavia in the Early Modern Period (§Hist 3272) (A-F only)
171981 1010-1125 MW, BlegH 120, Rice J, 4 cr

5372 Metro Analysis I: Population and Housing
071982 0800-1000 TTh, BlegH 145, Adams J, 4 cr

5393 Look of the Land
871983 1010-1100 MWF, BlegH 330, Hart J, 4 cr

5423 Climate Models and Modeling (prereq 3421 or #)
671984 1415-1530 TTh, BlegH 430, Klink K, 4 cr

5530 Cartography Internship (max 10 cr; prereq #) (S-N only)
949277 2-5 cr

R 5562 Introduction to Geographic Information Systems (§LA 5562; prereq jr or sr in Geog or LA or grad or #)
★LECT 1800-1915 TTh, AndH 230, Veregin H
147955 —1 REC 1430-1630 T, BlegH 455, 4 cr
144893 —2 REC 1930-2130 T, BlegH 455, 4 cr
550058 —3 REC 1115-1310 W, BlegH 455, 4 cr
647183 —4 REC 1830-2030 W, BlegH 455, 4 cr
242830 —5 REC 1430-1630 Th, BlegH 455, 4 cr
471985 —6 REC 1930-2130 Th, BlegH 455, 4 cr

5565 Geographical Analysis of Environmental Systems and Global Change (prereq 5562 or LA 5562 or FR 5130, sr or grad stu or #)
273950 1325-1520 MW, BlegH 445, Brown D, 4 cr

5775 Geographical Education (prereq 3 crses in geog, backgrnd in soc std or hist of educ, or #)
851894 1010-1510 S, BlegH 445, Gersmehl P, 4 cr

5801 Development of Geographic Thought (§3801; prereq 3 courses in geog)
271986 1245-1400 TTh, BlegH 330, Miller R, 4 cr

R 5900 Topics in Geography (prereq sr or grad)
243086 —1 1415-1530 TTh, BlegH 330, Veregin H, 4 cr (Earth Imagery I)
551792 —2 1325-1505 WF, BlegH 330, Brustein W, Leitner H, 4 cr (International Migration and the Politics of Immigration and Xenophobia: The U.S. and the E.C.) (§Soc 5960)

8005 Proseminar: Population Geography (prereq #)
446360 1325-1520 W, BlegH 460, Hsu M, Rice J, 3 cr

8140 Seminar: Africa (prereq #)
973949 1700-1930 M, BlegH 430, Samatar A, 3 cr

8335 Agrarian Change in the Third World
845464 1535-1730 M, BlegH 430, Samatar A, 4 cr

8345 Seminar: Public Land Policy (8344-8345†; prereq 8344, #)
449758 1325-1525 W, BlegH 430, Squires R, 3 cr

8380 Seminar: Medical Geography (prereq 5411 or #)
171987 1220-1450 M, BlegH 430, Weil C, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
351583 1-18 cr

8777 Thesis Credits: Masters
643800 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
143381 1-36 cr

8970 Directed Readings
544146 1-5 cr

8990 Research Problems
946377 ar cr

GEOLOGICAL ENGINEERING (GeoE)
Civil Engineering
Institute of Technology

R 5260 Drilling, Blasting, and Comminution (prereq CE 3300 or #, IT stu) (A-F only)
847344 1220-1415 MW, CivE 212, Fairhurst C, 4 cr

R 5437 Computer Applications in Geological Engineering (prereq CE 3020, Math 3221 or equiv or #) (A-F only)
846386 0800-0955 TTh, CivE 205, Voller V, 4 cr

R 5661 Special Geo-Engineering Problems (prereq IT sr or #) (A-F only)
245775 ar cr

R 5700 Systems Analysis for Geological Engineers (prereq IT upper division or grad) (A-F only)
547189 1640-1835 TTh, CivE 212, Smith K, 4 cr

R 8320 Thermoporoelasticity (§CE 8320; prereq AEM 5580 or #) (A-F only)
371784 0905-1100 TTh, CivE 214, Detournay E, 4 cr

R 8602 Seminar: Geo-Engineering (prereq #) (S-N only)
745036 1115-1205 F, CivE 205, ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
644204 1-18 cr

R 8777 Thesis Credits: Masters
850678 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
247428 1-36 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
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Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

GEOLOGY AND GEOPHYSICS (Geo)

Institute of Technology

R 1001 The Dynamic Earth: An Introduction to Geology (Phys/L; Envt)
★LECT 1115-1205 MWF, SmithH 100, Stout J, 4 cr
674108 —1 LAB 0905-1100 M, FordH 180
474109 —2 LAB 0905-1100 M, FordH 185
874110 —3 LAB 1220-1415 M, FordH 180
674111 —4 LAB 1430-1625 M, FordH 180
474112 —5 LAB 1430-1625 M, FordH 185
274113 —6 LAB 0800-0955 T, FordH 180
174114 —7 LAB 0800-0955 T, FordH 185
974115 —8 LAB 1010-1205 T, FordH 180
774116 —9 LAB 1010-1205 T, FordH 185
574117 —10 LAB 1220-1415 T, FordH 180
374118 —11 LAB 1220-1415 T, FordH 185
174119 —12 LAB 1430-1625 T, FordH 180
574120 —13 LAB 1430-1625 T, FordH 185
374121 —14 LAB 0905-1100 W, FordH 180
174122 —15 LAB 0905-1100 W, FordH 185
674125 —16 LAB 1220-1415 W, FordH 180
474126 —17 LAB 1430-1525 W, FordH 180
274127 —18 LAB 1430-1625 W, FordH 185
174128 —19 LAB 0905-1100 Th, FordH 180
974129 —20 LAB 0905-1100 Th, FordH 185
274130 —21 LAB 1115-1310 Th, FordH 180
174131 —22 LAB 1115-1310 Th, FordH 185
974132 —23 LAB 1325-1520 Th, FordH 180
774133 —24 LAB 1325-1520 Th, FordH 185
574134 —25 LAB 0905-1100 F, FordH 180
374135 —26 LAB 1220-1415 F, FordH 185
★LECT 1325-1415 MWF, SmithH 100, Housen B, 4 cr
174136 —27 LAB 0905-1100 M, FordH 180
074137 —28 LAB 0905-1100 M, FordH 185
874138 —29 LAB 1115-1310 M, FordH 185
674139 —30 LAB 1430-1625 M, FordH 180
074140 —31 LAB 1430-1625 M, FordH 185
874141 —32 LAB 0800-0955 T, FordH 180
674142 —33 LAB 0800-0955 T, FordH 185
474143 —34 LAB 1010-1205 T, FordH 180
274144 —35 LAB 1010-1205 T, FordH 185
174145 —36 LAB 1220-1415 T, FordH 180
974146 —37 LAB 1220-1415 T, FordH 185
774147 —38 LAB 1430-1625 T, FordH 180
574148 —39 LAB 1430-1625 T, FordH 185
374149 —40 LAB 0905-1100 W, FordH 180
774150 —41 LAB 0905-1100 W, FordH 185
574151 —42 LAB 1115-1310 W, FordH 185
374152 —43 LAB 1430-1625 W, FordH 180
174153 —44 LAB 1430-1625 W, FordH 185
074154 —45 LAB 0905-1100 Th, FordH 180
874155 —46 LAB 0905-1100 Th, FordH 185
674156 —47 LAB 1115-1310 Th, FordH 180
474157 —48 LAB 1115-1310 Th, FordH 185
274158 —49 LAB 1325-1520 Th, FordH 180
174159 —50 LAB 1325-1520 Th, FordH 185
474160 —51 LAB 0905-1100 F, FordH 180
274161 —52 LAB 1115-1310 F, FordH 185
★LECT 1010-1205 TTh, McNH 33, Pfannkuch H O, 4 cr (StP)
174162 —53 LAB 0905-1100 M, FordH 180
974163 —54 LAB 0905-1100 M, FordH 185
774164 —55 LAB 1115-1310 M, FordH 185
574165 —56 LAB 1220-1415 M, FordH 180
374166 —57 LAB 1430-1625 M, FordH 180
174167 —58 LAB 1430-1625 M, FordH 185
074168 —59 LAB 1430-1625 T, FordH 180
874169 —60 LAB 1430-1625 T, FordH 185
174170 —61 LAB 0905-1100 W, FordH 180
074171 —62 LAB 0905-1100 W, FordH 185
874172 —63 LAB 1115-1310 W, FordH 185
674173 —64 LAB 1220-1415 W, FordH 180
874673 —65 LAB 1430-1625 W, FordH 180
674674 —66 LAB 1430-1625 W, FordH 185
474675 —67 LAB 1325-1520 Th, FordH 180
274676 —68 LAB 1325-1520 Th, FordH 185
174677 —69 LAB 0905-1100 F, FordH 180
974678 —70 LAB 1115-1310 F, FordH 180
774679 —71 LAB 1220-1415 F, FordH 185

R 1002 Historical Geology (Phys/L)
★LECT 1220-1310 MWF, PillsH 110, Sloan R
772396 —1 LAB 1325-1520 M, FordH 85, 4 cr
572397 —2 LAB 1010-1205 T, FordH 85, 4 cr
372398 —3 LAB 1430-1625 T, FordH 85, 4 cr
172399 —4 LAB 1115-1310 Th, FordH 85, 4 cr

R 1003 Introduction to the Mesozoic: Evolution, Ecology, and Extinction of Dinosaurs (Phys/NL)
972400 1010-1205 TTh, Phys 133, Kirkby K, 4 cr

R 1601 Oceanography (Phys/NL)
★LECT 1430-1520 MWF, Phys 133, Leventer A, Barnwell F, others, 4 cr
545748 —1 LAB 0905-0955 Th, PillsH 207C
642050 —2 LAB 1220-1310 Th, PillsH 207C
351759 —3 LAB 1325-1415 Th, PillsH 207C
447248 —4 LAB 1430-1520 Th, PillsH 207C
547192 —5 LAB 1535-1625 Th, PillsH 207C
445838 —6 LAB 1640-1730 Th, PillsH 207C

R 3004 Human Geomorphology (prereq 1001 or 1004 or 1012 or 1019 or #) (Envt)
974101 0945-1100 TTh, PillsH 110, Hooke R, Paola C, 3 cr

R 3005 Earth Resources (prereq 1001 or 1004 or 1012 or 1019 or #) (IP; C/PE)
★LECT 0905-0955 MWF, PillsH 110, Alexander E C, Paola C, 4 cr
374104 —1 REC 0905-0955 T, PillsH 207C
174105 —2 REC 1220-1310 T, PillsH 207C
074106 —3 REC 1325-1415 T, PillsH 207C
874107 —4 REC 1430-1520 T, PillsH 207C

R 3202 Geodynamics II: The Fluid Earth (prereq 3201)
★LECT 1115-1205 MWF, PillsH 110, Kohlstedt D, Paola C, 4 cr
748650 —1 REC 1535-1625 MW, PillsH 100
947559 —2 REC 1325-1415 TTh, PillsH 100

R 3401 Introductory Mineralogy (§5004; prereq 1001, Chem 1051, Math 1252, or #)
★LECT 1430-1520 MWF, PillsH 110, Edwards R L, Ito E, 4 cr
141985 —1 LAB 1115-1310 MW, PillsH 100
141704 —2 LAB 1010-1205 TTh, PillsH 100

3990 Problems in Geology and Geophysics (prereq #, Δ)
247980 1-6 cr

R 5004 Mineralogy (§3401; prereq Chem 1051, Math 1252, or #)
★LECT 1430-1520 MWF, PillsH 110, Edwards R L, Ito E, 4 cr
545927 —1 LAB 1115-1310 MW, PillsH 100

R 5101 Geochronology and Stratigraphy (prereq 3301)
★LECT 0905-0955 MWF, PillsH 121, Sloan R, Kirkby K, 4 cr
950350 —1 LAB 1325-1520 T, PillsH 105

R 5108 Advanced Environmental Geology (prereq geology core curriculum through 5201 for maj or #)
174680 1325-1500 TTh, PillsH 121, Pfannkuch H O, 4 cr

R 5154 Vertebrate Paleontology I (prereq 5151 or EEB 5114)
772401 1430-1520 MWF, PillsH 105, Sloan R, 5 cr

R 5255 Glaciology (prereq Math 3261 or #)
349400 Hooke R, 4-5 cr

R 5321 Isotope Geology (prereq 3301 or #)
572402 Edwards R, Ito E, 4 cr

R 5405 Optical Mineralogy (prereq 3401)
★LECT 1535-1625 MF, PillsH 125, Weiblen P, 2 cr
945388 —1 LAB 1640-1730 MF, PillsH 125

R 5452 Igneous and Metamorphic Petrology (prereq 3102, Chem 5520, Math 3261 or #)
★LECT
175084 —1 LAB 5 cr

R 5454 Electron Microprobe Theory and Practice (prereq 3401, 1 yr chem and phys or #)
672407 McSwiggen P, 2-4 cr

R 5506 Solid-Earth Geophysics II (prereq 3201, Phys 1253)
345749 1325-1500 TTh, PillsH 125, Karato S, Yuen D, 4 cr

R 5507 Solid-Earth Geophysics III (prereq 3201, Phys 1253)
372403 Kohlstedt D, 4 cr

R 5515 Principles of Geophysical Exploration (prereq 1253)
550237 0905-0955 MWF, PillsH 207C, Moskowitz, Chandler V, 4 cr

R 5543 Paleomagnetism (prereq 3201, Math 1251, Phys 1251 or #)
172404 0945-1100 TTh, PillsH 125, Moskowitz B, 4 cr

R 5601 Limnology (§EEB 5601; prereq Chem 1052 or equiv)
★LECT 1010-1100 MWF, PillsH 110, Megard R, 4 cr
146684 —1 REC 1220-1310 Th, PillsH 110, Megard R
344522 —2 REC 1430-1520 Th, PillsH 110, Megard R

R 5603 Geological Limnology (prereq 5601 or EEB 5601)
072405 —1 Kelts K, 4 cr
574103 —2 1000-1200 TTh, PillsH 207C, Kelts K, 4 cr

R 5643 Chemical Hydrogeology (prereq 1001, Chem 1052, Math 1252, Phys 1105; Geo maj: core curriculum thru 3402; or #)
★LECT 1630-1800 MW, PillsH 110, Alexander E, 4 cr
751872 —1 REC 1630-1730 T, PillsH 110

R 5980 Seminar: Current Topics in Geology and Geophysics (prereq #)
841897 1-6 cr

R 5990 Senior Thesis (max 6 cr; prereq sr geology or geophysics maj, #)
441403 2 cr

R 8098 Seminar: Current Topics in Geology and Geophysics (prereq #) (S-N only)
243203 —1 Hudleston P, 1-6 cr
144577 —2 Hooke R, 1-6 cr

8099 Research in Geology and Geophysics (prereq #) (S-N only)
352149 1-6 cr

R 8262 Quaternary Paleoecology and Climate (prereq 5261 or #)
452739 Kelts K, 4 cr

R 8602 Advanced Limnology (§EEB 8602; prereq 5601 or EEB 5601, #)
851233 1325-1600 T, Ecology 200, Megard R, 3 cr (StP)

R 8612 Analytical Geohydrology (4 cr with term paper; prereq Math 3261, CE 3400 or #)
974681 1010-1130 MW, PillsH 121, Pfannkuch H O, 3-4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
543109 1-18 cr

8777 Thesis Credits: Masters
146952 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
741925 1-36 cr

GERMAN (Ger)

German, Scandinavian, and Dutch Liberal Arts

R 1101 Beginning German (§1000)
845965 —1 0905-0955 MTWThF, KoltH S132, 5 cr
252516 —2 0905-0955 MTWThF, KoltH S133, 5 cr
551033 —3 1115-1205 MTWThF, KoltH S135, 5 cr
144022 —4 1220-1310 MTWThF, FolH 214, 5 cr
250202 —5 1325-1415 MTWThF, KoltH S136, 5 cr

R 1102 Beginning German (§1110; prereq 1101 or 1000)
151707 —1 0905-0955 MTWThF, KoltH S134, 5 cr
247008 —2 0905-0955 MTWThF, KoltH S135, 5 cr
152517 —3 1010-1100 MTWThF, KoltH S132, 5 cr
446357 —4 1115-1205 MTWThF, KoltH S134, 5 cr
251639 —5 1220-1310 MTWThF, KoltH S132, 5 cr
251866 —6 1325-1415 MTWThF, KoltH S135, 5 cr

R 1103 Beginning German (§1110; prereq 1102 or 5 cr of 1110)
549492 —1 1115-1205 MTWThF, KoltH S133, 5 cr
244044 —2 1325-1415 MTWThF, KoltH S134, 5 cr

R 1104 Intermediate German (prereq 1103 or 10 cr of 1110 or Entrance Standard proficiency test)
044166 —1 0800-0850 MTWThF, FolH 234, 5 cr
942703 —2 1010-1100 MTWThF, KoltH S133, 5 cr
543241 —3 1325-1415 MTWThF, FolH 240, 5 cr

R 1105 Intermediate German (prereq 1104 or placement)
350255 —1 0905-0955 MWF, FolH 234, 0900-0955 TTh, BuH 120, 5 cr
144076 —2 1010-1100 MWF, FolH 234, 1010-1100 TTh, BuH 120, 5 cr
552828 —3 1115-1205 MTWThF, FolH 234, 5 cr
350644 —4 1220-1310 MTWThF, FolH 234, 5 cr
347548 —5 1325-1415 MTWThF, FolH 234, 5 cr

R 1106 Intermediate German (prereq 1105 or placement)
349493 —1 0905-0955 MTWThF, FolH 240, 5 cr
146961 —2 1115-1205 MTWThF, FolH 240, 5 cr
842337 —3 1325-1415 MTWThF, KoltH S133, 5 cr

R 3011 Conversation and Composition (prereq graduation proficiency test)
048802 1430-1520 MTWF, NichH 209A, 4 cr

R 3012 Conversation and Composition (prereq 3011)
144322 —1 0800-0850 MWThF, FolH 344, 4 cr
143171 —2 1715-1900 TTh, FolH 426, 4 cr

R 3015 German for the Social Sciences (prereq 3012)
151867 1415-1530 TTh, FolH 306, Metcalf E M, 4 cr

R 3104H Honors Course: Reading and Analysis of Prose (prereq 3012 or ¶3012)
474658 1415-1530 TTh, AmundH 116, Teraoka A, 4 cr

R 3105 Reading and Analysis of Drama and Poetry (prereq 3012 or ¶3012) (Lit)
250359 1220-1310 MWF, FolH 208, Duroche L, 4 cr

R 3342 Major Project in German (max 5 cr; prereq jr or sr) (A-F only)
844962 1010-1205 W, FolH 334, McCormick R, 4 cr

R 3342H Major Project in German: Honors (max 5 cr; prereq honors stu, jr or sr) (A-F only)
948551 1010-1205 W, FolH 334, McCormick R, 4 cr

R 3424 Faust (prereq 3104, 3105)
772043 1430-1520 MWF, FolH 234, Schulte-Sasse J, 4 cr

R 3501 Contemporary Germany: The Federal Republic (prereq 1106 or graduation proficiency test)
372045 0945-1100 TTh, FolH 234, Schissler H, 4 cr

R 3512 German Civilization and Culture: Reformation to 1800
445533 1325-1415 MWF, PeikH 335, Parente J, 4 cr

3590 Directed Studies: German-Speaking Countries (prereq 3501, #)
745022 5 cr

R 3704 German Dialects (prereq 1106) (A-F only)
473879 1545-1700 TTh, FolH 426, Fullerton G, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
344780 1-5 cr

R 5722 Middle High German Language
246652 1545-1700 TTh, FolH 426, Fullerton G, 4 cr

R 5740 Readings in Philology: Middle Low German (max 12 cr)
072047 1545-1700 TTh, FolH 426, Fullerton G, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
841933 1-5 cr

R 8002 Basic Seminar in German Literature (prereq 8001, German grad maj or #) (A-F only)
873880 1325-1520 Th, FolH 344, Teraoka A, 4 cr

R 8321 The 19th-Century Drama
872048 1535-1730 M, KoltH S132, Duroche L, 4 cr

R 8331 The 18th-Century Novel
672049 1430-1625 W, FolH 426, Joeres, R E, 4 cr

R 8340 Topics in 20th-Century German Literature: German-Jewish Novelists (max 12 cr)
544583 1640-1835 T, FolH 326, Zipes J, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
348134 1-18 cr

R 8742 Gothic and Methods of Comparative Germanic Linguistics (prereq #)
072050 1325-1520 M, FordH 50, Liberman A, 4 cr

8777 Thesis Credits: Masters
152038 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
046340 1-36 cr

8990 Reading and Research (prereq #)
344617 3-6 cr

GERMANIC PHILOLOGY (GPhl)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
249471 1-18 cr

8777 Thesis Credits: Masters
343726 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
344925 1-36 cr

GRADUATE SCHOOL (Grad)

R 8100 Teaching in Higher Education (prereq #)
741794 —1 Smith J, 3 cr
142358 —2 Smith J, 3 cr (StP)
051876 —3 Smith J, 3 cr

R 8150 Practicum for Instructors in Higher Education (prereq 8100 or #) (S-N only)
048864 —1 Smith J, 3 cr
446746 —2 Smith J, 3 cr
044586 —3 Smith J, 3 cr

GREEK (Grk)
Classical and Near Eastern Studies Liberal Arts

1102 Beginning Classical Greek (§1020; prereq 1101)
846906 0905-0955 MTWThF, FolH 344, 5 cr

3105 Greek Drama (prereq 1104 or Δ)
747725 0905-0955 MWF, FolH 326, Belfiore E, 5 cr

3951 Major Project (prereq Grk-Lat or Grk maj, three 3xxx courses in Greek or #) (A-F only)
643019 5 cr

3960H Honors Tutorial (prereq Δ)
445354 5 cr

3970 Directed Studies (prereq #, Δ, ❑)
645417 1-5 cr

5370 Greek Literature: Epic (max 12 cr)
571945 1415-1530 TTh, VinH 207, Lardinois A, 4 cr

5715 Introduction to Classical Philology (§Lat 5715)
371946 1220-1310 MWF, FolH 50, Sheets G, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
851555 1-5 cr

5980 Directed Teaching (prereq #, Δ, CLA approval)
944807 ar cr

5990 Directed Research (prereq #, Δ, CLA approval)
143378 ar cr

8120 Greek Text Course (prereq 3052 or Δ, non-maj)
147194 0905-0955 MWF, FolH 326, Belfiore E, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
349333 1-18 cr

8777 Thesis Credits: Masters
445967 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
143811 1-36 cr

8910 Seminar: Plato
646681 1325-1600 W, BuH 125, Belfiore E, 4 cr

HEALTH INFORMATICS (HInf)
Laboratory Medicine and Pathology Medical School

5431 Health Informatics II: Methods and Systems (prereq 5430, elem algebra, prog, stat, or #)
448321 1115-1205 MTWTh, PWB 6210, Finkelstein S, 4 cr

5435 Computer Methodology in the Delivery of Health Care III: Systems Analysis and Operations Research Methods for Health Services (§PubH 5760; prereq PubH 5404 or #) (A-F only)
051313 1010-1205 T, 1010-1100 Th, WDH 2120, 2130, Potthoff S, 3 cr

R 5436 Seminar: Health Informatics (S-N only)
251477 —1 1535-1625 Th, Mayo C231, Ellis L, 1 cr (Todd Amph)

5446 Professional Studies in Health Informatics (prereq health informatics maj, 5432, PubH 5454 or #) (A-F only)
674688 1415-1505 Th, PWB 6224, Gatewood L, 1 cr

5470 Topics in Health Informatics (prereq #)
645188 ar cr

8406 Advanced Topics in Health Informatics II (prereq 5432, 5435, 5452 or #)
673685 1320-1450 MW, PWB 6210, 3 cr

8449 Advanced Readings in Health Informatics (prereq 5432, PubH 5434, #)
343869 1-3 cr

8450 Research in Health Informatics (prereq #)
048945 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
745988 1-18 cr

8777 Thesis Credits: Masters
143484 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
646082 1-36 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
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¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
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✦ This symbol will precede the call numbers of a course with multiple section types (e.g., LECT, LAB, REC) without automatic registration. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

HEALTH SCIENCE UNITS (HSU)

Health Sciences

R 5031 Biology of Aging
447251 1640-1825 Th, PWB 2470, Thompson L V, 2 cr

5040 Dying and Death in Contemporary Society (§PubH 5040, Mort 5040; prereq hlth sci maj, school of public hlth maj, educ sr, mort sci maj or #)
050839 1640-1920 W, MoosT 2690, Rothenberger J, Mathews M, 3 cr

5210 Terminology of the Health Sciences
952647 Zaske D, 2 cr (for information go to HSUnitF 5-120 before first day of quarter or call 624-2442)

HEBREW (Hebr)

Classical and Near Eastern Studies
Liberal Arts

R 1013 Beginning Hebrew for Students with Prior Exposure (prereq 1012)
852527 1325-1415 MTWThF, PeikH 375, Paradise J, 5 cr

R 1102 Beginning Hebrew (prereq 1101)
752827 —1 1325-1415 MTWThF, FolH 208, Reinberg M, 5 cr
473994 —2 1810-2015 TTh, 5 cr (Beth-El Synagogue, St Louis Pk)

R 3012 Intermediate Hebrew (prereq 3011)
345086 1010-1100 MTWThF, FolH 138, Shendar J, 5 cr

R 3016 Advanced Modern Hebrew (prereq 3015)
244691 0905-0955 MWF, FolH 142, Shendar J, 4 cr

3203 Readings in Biblical Hebrew (prereq 1103 or 1104 or #)
471520 1220-1310 MWF, FolH 142, Paradise J, 4 cr

3980 Directed Instruction (prereq #, Δ, ⊔)
343077 1-5 cr

5970 Directed Readings (prereq 3013, #, Δ, CLA approval)
349025 ar cr

HINDI (Hndi)

Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 1102 Beginning Hindi (prereq 1101)
941244 0905-0955 MTWThF, VinH 209, 5 cr

R 5132 Intermediate Hindi (prereq 5131)
442731 1325-1455 MWF, FolH 334, 5 cr

HISTORY (Hist)

Liberal Arts

R 1012 Introduction to World History (Hist; IP)
★LECT 0945-1100 TTh, AndH 210, Maynes M J, Waltner A
752388 —1 REC 0800-0850 MW, BlegH 350, 5 cr
850079 —2 REC 1220-1310 MW, BlegH 140, 5 cr
146281 —3 REC 1325-1415 MW, BlegH 250, 5 cr
141498 —4 REC 0800-0850 TTh, BlegH 350, 5 cr
843312 —5 REC 0800-0850 TTh, BlegH 210, 5 cr
641383 —6 REC 1220-1310 TTh, BlegH 145, 5 cr
946086 —7 REC 1220-1310 TTh, BlegH 140, 5 cr
646180 —8 REC 1325-1415 TTh, HHHCtr 25, 5 cr
947187 —9 REC 0800-0850 WF, BlegH 210, 5 cr
951790 —10 REC 0905-0955 WF, BlegH 210, 5 cr (MLK only)
450165 —11 REC 1115-1205 WF, BlegH 340, 5 cr
147348 —12 REC 1220-1310 WF, BlegH 255, 5 cr
041333 —13 REC 1325-1415 WF, BlegH 155, 5 cr

R 1012H Honors: Introduction to World History
★LECT 0945-1100 TTh, AndH 210, Maynes M J, Waltner A
948128 —80 REC 1115-1205 TTh, BlegH 120, 5 cr

R 1032 Introduction to European Civilization: Early Modern Europe, 1350-1750 (§1022, 1023) (Hist; IP)
★LECT 0945-1100 TTh, AndH 270, Phillips C
947657 —1 REC 0800-0850 MW, BlegH 245, 5 cr
345508 —2 REC 1010-1100 MW, BlegH 245, 5 cr
042269 —3 REC 1115-1205 MW, BlegH 335, 5 cr
574179 —4 REC 1220-1310 MW, BlegH 210, 5 cr
342270 —5 REC 1220-1310 MW, BlegH 330, 5 cr
974180 —6 REC 1325-1415 MW, BlegH 120, 5 cr
141159 —7 REC 0800-0850 TTh, BlegH 245, 5 cr
350790 —8 REC 0800-0850 TTh, HHHCtr 30, 5 cr
174176 —9 REC 0800-0850 WF, HHHCtr 30, 5 cr

R 1032H Honors Course: Introduction to European Civilization
★LECT 0945-1100 TTh, AndH 270, Phillips C
343094 —80 REC 1115-1230 TTh, BlegH 235, 5 cr

R 1302 American History (§1302H) (Hist; CD)
★LECT 1115-1205 MWF, WilleyH 125, Roediger D
252385 —1 REC 0800-0850 MW, BlegH 260, 5 cr
043731 —2 REC 0800-0850 MW, BlegH 205, 5 cr
652335 —3 REC 0800-0850 MW, BlegH 115, 5 cr
448240 —4 REC 0800-0850 MW, BlegH 330, 5 cr
250006 —5 REC 0905-0955 MW, BlegH 350, 5 cr
748437 —6 REC 1220-1310 MW, BlegH 350, 5 cr
341703 —7 REC 1220-1310 MW, SocSci 101, 5 cr (MLK only)
245792 —8 REC 1325-1415 MW, BlegH 240, 5 cr
041526 —9 REC 0800-0850 TTh, BlegH 105, 5 cr
841785 —10 REC 0800-0850 TTh, BlegH 260, 5 cr
145199 —11 REC 0905-0955 TTh, HHHCtr 30, 5 cr
249910 —12 REC 0905-0955 TTh, BlegH 350, 5 cr
348442 —13 REC 1010-1100 TTh, BlegH 350, 5 cr
344245 —14 REC 0800-0850 WF, BlegH 110, 5 cr
643974 —15 REC 0800-0850 WF, BlegH 140, 5 cr
447816 —16 REC 0905-0955 WF, HHHCtr 30, 5 cr
645661 —17 REC 1220-1310 WF, BlegH 225, 5 cr
542624 —18 REC 1220-1310 WF, BlegH 245, 5 cr

R 1302H Honors Course: American History (§1302) (Hist; CD)
★LECT 1115-1205 MWF, WilleyH 125, Roediger D
144689 —80 REC 1325-1415 MF, SocSci 1383, Roediger D, 5 cr

3052 Ancient Civilization (§1052)
842807 0945-1100 TTh, BlegH 5, Kelly T, 4 cr

R 3152 History of the British Isles (Hist; C/PE)
★LECT 1115-1205 MWF, BlegH 250, Altholz J
751080 —1 REC 1220-1310 T, BlegH 225, 4 cr
149441 —2 REC 1220-1310 Th, BlegH 225, 4 cr
947965 —3 REC 1010-1100 F, BlegH 255, 4 cr

3272 Early Modern Scandinavia to 1807
472828 1010-1125 MW, BlegH 120, Metcalf M, Rice J, 4 cr

3282 Intellectual and Cultural History of Modern Europe (§Hum 3282)
643053 1010-1100 MWF, BlegH 215, Thayer J, 4 cr

3348 Women in Modern America, 1890-1980 (C/PE)
149729 0945-1100 TTh, BlegH 155, Evans S, 4 cr

R 3402 Survey of Latin American History, 1800-1929 (§1402, LAS 3402) (Hist; IP)
★LECT 0945-1100 TTh, AndH 350, McCaa R
643277 —1 REC 0800-0850 M, BlegH 420, 4 cr
452238 —2 REC 1115-1205 T, BlegH 140, 4 cr
144353 —3 REC 1010-1100 W, HHHCtr 30, 4 cr
952325 —4 REC 1220-1310 W, BlegH 250, 4 cr
250104 —5 REC 1220-1310 Th, BlegH 105, 4 cr
242181 —6 REC 1325-1415 Th, AndH 350, 4 cr

R 3432 History of Africa: 1800 to Present (§1432, Afro 3432) (Hist; IP)
★LECT 0945-1100 TTh, AndH 230, Allman J
147423 —1 REC 1220-1310 T, BlegH 340, Allman J, 4 cr
648091 —2 REC 0905-0955 W, BlegH 245, 4 cr
952101 —3 REC 1115-1205 W, BlegH 125, 4 cr
949537 —4 REC 1220-1310 Th, BlegH 340, 4 cr
851376 —5 REC 0800-0850 F, BlegH 260, 4 cr
842564 —6 REC 1010-1100 F, BlegH 225, 4 cr

3441 The Spanish-Mexican Borderlands and the Chicano Experience to 1900 (§Chic 3441, LAS 3441)
272829 1115-1230 TTh, AndH 330, Valdes D, 4 cr

3452 Survey of Asian Civilizations in the Middle Period (§1452, 1452H)
672830 1245-1400 TTh, BlegH 205, Kopf D, 4 cr

R 3461 Introduction to East Asia: Early Civilization (§1461, EAS 1461)
★LECT 1115-1205 MWF, AndH 370, Farmer E
473218 —1 REC 1010-1100 M, HHHCtr 30, 4 cr
273219 —2 REC 1220-1310 M, BlegH 245, 4 cr
673220 —3 REC 1325-1415 M, BlegH 420, 4 cr
473221 —4 REC 1010-1100 T, BlegH 240, 4 cr
273222 —5 REC 1220-1310 T, BlegH 105, 4 cr
173223 —6 REC 1220-1310 T, BlegH 230, 4 cr

3468 People's Republic of China: The Communist Revolution, 1900 to Present (§5468, EAS 3468)
472831 0905-0955 MWF, AndH 350, Farmer E, 4 cr

R 3471 Twentieth Century Japan (§5471, EAS 3471) (IP)
074736 1245-1400 TTh, BlegH 130, Davidann J, 4 cr

3484 History of Southeast Asia
272832 0815-0930 TTh, BlegH 115, Kopf D, 4 cr

3489 Modern India
172833 0945-1100 TTh, BlegH 210, Kopf D, 4 cr

3505 Survey of the Middle East (§MELC 3505, MELC 5505)
972834 0945-1100 TTh, BlegH 235, Farah C, 4 cr

3552 History of Ancient Egypt
772835 1115-1230 TTh, BlegH 330, Evans J, 4 cr

3616 France in the High Middle Ages (Hist; IP)
772799 0945-1100 TTh, BlegH 135, Reyerson K, 4 cr

3621 Renaissance Italy, 1200-1530 (AH)
374927 0800-0850 MWF, BlegH 145, Tracy J, 4 cr

3637 Russian History from Peter the Great to the Present (§5133)
572867 0800-0850 MWF, BlegH 135, Stavrou T, 4 cr

R 3715 Spain Under the Habsburgs, 1516-1701
572836 1115-1230 TTh, AndH 270, Phillips C, 4 cr

3722 Europe in the Era of World War II (IP)
372837 0905-0955 MWF, AndH 230, Munholland K, 4-5 cr

3747 Habsburg Austria from 1526 to World War I
774178 1245-1400 TTh, AndH 210, Wright W, 4 cr

3767 Eastern Orthodoxy: History and Culture
172838 1010-1100 MWF, BlegH 105, Stavrou T, 4 cr

3801 The People of Early America to 1750 (CD)
646566 1220-1310 MWF, BlegH 120, Menard R, 4 cr

R 3812 Civil War and Reconstruction
150788 0815-0930 TTh, BlegH 340, Howe J, 4 cr

3822 United States in the 20th Century, 1932-1960 (CD)
145719 1010-1100 MWF, AndH 270, Berman H, 4 cr

3852 American Labor History in the 20th Century
072839 1115-1205 MWF, BlegH 5, Berman H, 4 cr

3865 Afro-American History (§Afro 3865) (Hist; CD)
572805 1010-1100 MWF, AndH 350, Dillard A, 4 cr

R 3872 American Indian History: 1830 to the Present (§Amin 3112) (Hist; CD)
151187 —1 1115-1205 MWF, AndH 230, Rayson D, 4 cr
842547 —2 1245-1400 TTh, BlegH 5, O'Brien-Kehoe J, 4 cr

R 3952H Honors Course: History (prereq 3951H)
372868 0905-1100 M, HHHCtr 25, Samaha J, 4 cr

R 3955 Introduction to Historical Research (prereq Δ, to be taken prior to 3961)
746462 —1 1325-1520 M, BlegH 205, Thayer J, 4 cr
443197 —2 1325-1520 T, BlegH 225, Reyerson K, 4 cr
550206 —3 1010-1205 W, BlegH 115, 4 cr

R 3961 Major Paper (prereq Δ)
044717 —1 1325-1520 M, BlegH 260, 5 cr
844279 —2 1325-1520 T, AndH 330, 5 cr
951742 —3 1010-1205 W, BlegH 350, Bachrach B, 5 cr

3970 Directed Studies (prereq #, Δ, ❑)
148452 —1 1-15 cr

3990 Directed Research (prereq #, Δ, ❑)
246313 1-15 cr

5062 History of Greece, 600-400 B.C.
050274 1115-1230 TTh, BlegH 155, Kelly T, 4 cr

R 5073 History of Rome: 31 B.C. to A.D. 180
172807 0945-1100 TTh, BlegH 330, Evans J, 4 cr

5285 Diplomatic History of Europe, 1900-1945
247655 1115-1230 TTh, BlegH 250, Kieft O, 4 cr

5379 Problems in Colonial American History (prereq 3801, #)
672844 1535-1735 Th, BlegH 105, O'Brien J, 4 cr

5468 People's Republic of China: The Communist Revolution, 1900 to Present (§3468, EAS 3468)
772866 0905-0955 MWF, AndH 350, Farmer E, 4 cr

R 5617 Proseminar: Spain in the Early Modern Period, 1450-1750 (prereq #)
272846 1325-1520 F, BlegH 340, Phillips C, 4 cr

R 5642 Proseminar: Medieval English History (prereq 1 yr of medieval history, reading knowledge of Fren or Ger, #)
342267 1325-1520 T, WaLib, Hanawalt B, 4 cr

R 5652 Proseminar: English History: Tudor and Stuart Periods (5651-5652-5653†; prereq 5651,#)
172847 1325-1520 Th, BlegH 225, Lehmberg S, 4 cr

R 5672 Proseminar: Modern England, 1763 to Present (5671-5672-5673†; prereq 5671)
874740 1535-1730 W, BlegH 210, Altholz J, 4 cr

R 5715 Readings on European Women's History 1450-1750 (prereq #) (A-F only)
972848 1325-1520 Th, AndH 330, 4 cr

R 5720 Introductory Proseminar in Contemporary Europe: Nationalism: The German Case (prereq #)
050789 1535-1735 Th, BlegH 225, Schissler H, 4 cr

R 5722 Proseminar: Europe in the 20th Century (5721-5722†; prereq 5721)
772849 1535-1720 T, BlegH 230, Munholland K, 4 cr

R 5765 New Interpretations and Approaches in Russian History (prereq #)
972851 1325-1520 W, BlegH 115, Noonan T, Stavrou T, 4 cr

R 5777 Austrian and Habsburg History: Social History of the Habsburg Lands (5777-5778†; prereq #)
772852 1325-1520 Th, BlegH 115, Rudolph R, 4 cr

R 5817 Proseminar: 19th Century U.S. Political History (5817-5818†; prereq #)
372854 1535-1735 T, BlegH 340, Howe J, 4 cr

R 5841 Proseminar: American Economic History (prereq #)
172855 1430-1625 W, BlegH 255, Green G, 4 cr

R 5858 Proseminar: Social History of American Women (5857-5858†; prereq 5857, #)
551839 1325-1520 T, BlegH 115, Evans S, 4 cr

R 5854 Proseminar: Afro-American History (prereq #)
672858 1325-1520 M, BlegH 245, Dillard A, 4 cr

R 5871 Proseminar: Intellectual History of the United States in the 19th and 20th-Centuries (5871-5872; prereq #)
472859 1800-2000 T, ScottH 2, Noble D, 4 cr

R 5903 Proseminar: Latin American History (prereq reading knowledge of Span, #)
872860 1325-1520 T, ScottH 2, Valdes D, 4 cr

R 5939 Proseminar: Methodology for the Study of African History (prereq #)
674769 1325-1520 W, BlegH 230, Isaacman A, 4 cr

R 5961 Proseminar: Expansion of Europe (prereq #)
672861 1325-1520 M, OMWL 462, Phillips W, Urness C, 4 cr (Bell Library)

5970 Directed Studies (prereq #, Δ, CLA approval)
141508 1-15 cr

5990 Directed Research (prereq #, Δ, CLA approval)
448965 1-15 cr

8112 Medieval History (8111-8112-8113†; prereq 8111, #)
472862 1535-1730 W, SocSci 680, Bachrach B, 3 cr

8465 Research in Late Imperial China: Yuan, Ming and Qing (prereq reading knowledge of Chinese, #)
972865 1430-1620 F, SocSci 1383, Waltner A, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
152243 1-18 cr

8777 Thesis Credits: Masters
741701 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
147110 1-36 cr

8970 Directed Studies (prereq #)
849644 1-15 cr

8990 Directed Research (prereq #)
350028 1-15 cr

HISTORY OF MEDICINE (HMed)
Medical School

R 3402 Health Care in Modern History (Hist)
★LECT 1010-1100 MW, LindH 302, Eyler J
551727 —1 REC 1325-1415 W, LindH 216, Eyler J, 4 cr
747367 —2 REC 1010-1100 Th, LindH 303, Eyler J, 4 cr
948274 —3 REC 1115-1205 Th, LindH 216, Eyler J, 4 cr

R 5002 Public Health Issues in Historical Perspective (§PubH 5002)
570911 1330-1530 T, FordH 175, Eyler J, 4 cr

8631 Directed Study (prereq #)
750222 Wilson L, 3-15 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
144358 1-18 cr

8777 Thesis Credits: Masters
548360 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
149598 1-36 cr

HISTORY OF SCIENCE AND TECHNOLOGY (HSci)
Institute of Technology

R 1712 Technology and Western Civilization: Renaissance to Industrial Revolution (§3712) (Hist; IP)
★LECT 1325-1415 MWF, Phys 131, Layton E
047567 —1 REC 1325-1415 T, Phys 131, 4 cr
747160 —2 REC 0905-0955 W, LindH 303, 4 cr
747241 —3 REC 1220-1310 W, FordH 70, 4 cr
151299 —4 REC 1325-1415 Th, LindH 315, 4 cr
543725 —5 REC 1430-1520 Th, LindH 315, 4 cr
544292 —6 REC 1115-1205 F, LindH 325, 4 cr

R 1812 Introduction to History of Science: The Scientific Revolution (§3812) (Hist; IP)
★LECT 0905-0955 MWF, EE/CSci 3210, Shapiro A
245825 —1 REC 1010-1100 M, LindH 229, 4 cr
445001 —2 REC 0905-0955 T, LindH 315, 4 cr
649287 —3 REC 1325-1415 T, Phys 210, 4 cr
745943 —4 REC 1325-1415 W, AmundH 124, 4 cr
342849 —5 REC 0905-0955 Th, LindH 325, 4 cr
448187 —6 REC 1115-1205 Th, AmundH 124, 4 cr

3202 History of Biology: Biology in the 19th and 20th Centuries (§5202) (Hist; IP)
151939 1245-1400 TTh, FordH 155, Beatty J, 4 cr

3321 History of Computing (§5321)
574697 1115-1230 TTh, FordH 115, Norberg A, 4 cr

3332 Science and American Culture (Hist; CD)
472067 0945-1100 TTh, FordH 120, Kohlstedt S, 4 cr

3502 History of High Tech Weapons (§5502) (A-F only)
374295 1010-1100 MWF, FordH 120, Seidel R, 4 cr

R 3712 Technology and Western Civilization: Renaissance to Industrial Revolution (§1712) (Hist; IP)
★LECT 1325-1415 MWF, Phys 131, Layton E
348540 —1 REC 1325-1415 T, Phys 131, 4 cr
944032 —2 REC 0905-0955 W, LindH 303, 4 cr
146183 —3 REC 1220-1310 W, FordH 70, 4 cr
844704 —4 REC 1325-1415 Th, LindH 315, 4 cr
846940 —5 REC 1430-1520 Th, LindH 315, 4 cr
843164 —6 REC 1115-1205 F, LindH 325, 4 cr

R 3812 Introduction to History of Science: The Scientific Revolution (§1812) (Hist; IP)
★LECT 0905-0955 MWF, EE/CSci 3210, Shapiro A
146434 —1 REC 1010-1100 M, LindH 229, 4 cr
750382 —2 REC 0905-0955 T, LindH 315, 4 cr
950610 —3 REC 1325-1415 T, Phys 210, 4 cr
450540 —4 REC 1325-1415 W, AmundH 124, 4 cr
249521 —5 REC 0905-0955 Th, LindH 325, 4 cr
143419 —6 REC 1115-1205 Th, AmundH 124, 4 cr

5202 History of Biology: Biology in the 19th and 20th Centuries (§3202) (IP)
749815 1245-1400 TTh, FordH 155, Beatty J, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

5321 History of Computing (§3321)
672066 1115-1230 TTh, FordH 115, Norberg A, 4 cr

5332 Science and American Culture (CD)
272068 0945-1100 TTh, FordH 120, Kohlstedt S, 4 cr

5502 History of High Tech Weapons (§3502) (A-F only)
174296 1010-1100 MWF, FordH 120, Seidel R, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
847585 1-15 cr

5990 Directed Research (prereq #, Δ, CLA approval)
451560 1-15 cr

8122 Foundations for Research in the Scientific Revolution (prereq grad major or minor in HSci or #) (A-F only)
942135 1535-1705 M, WaLib 435, Shapiro A, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
651797 1-18 cr

8777 Thesis Credits: Masters
642131 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
347503 1-36 cr

8930 Seminar: History of Technology (prereq #)
342351 Layton E, 4 cr

8950 Seminar: Science and Technology in Cultural Settings (prereq HSci grad stu or #)
874012 1430-1520 W, LindH 215, Kohlstedt S, McCook S, Eyler J, 4 cr

8970 Directed Study (max 15 cr; prereq #)
352751 1220-1310 W, FordH 349, Kohlstedt S, 1 cr

8990 Directed Research (max 15 cr; prereq #)
244755 1-5 cr

HONORS COLLOQUIA (HCol)
Honors Program
Liberal Arts

R 1010 Free Speech in America: A Venerable Tradition? (prereq fr or soph, regis honors div)
450098 1415-1600 T, BlegH 205, Robert W T Martin, 2 cr

R 1030 Knowledge and Difference (prereq fr or soph, regis honors div)
647121 1010-1205 M, JohH 101, Amanda Vizedom, 2 cr

R 1040 Public Sector Economics (prereq fr or soph, regis honors div)
344987 1415-1615 Th, McNH 197, Beth Walter Honadle, 2 cr (StP)

R 1050 Order in Chaos (prereq fr or soph, regis honors div)
★LECT 1325-1415 M, VinH 313, Yutaka Hosotani,
273432 —1 LAB 1430-1520 M, LindH 26, 2 cr

R 1060 Women and Leadership (prereq fr or soph, regis honors div)
174623 1415-1600 T, WaLib 301, Barbara Pillinger, 2 cr

1970 Honors Colloquium: Directed Studies (prereq fr or soph, regis honors div, #, Δ)
347601 1-4 cr

HONORS SEMINAR (HSem)
Honors Program
Liberal Arts

R 3020 Percussion Traditions of the World (prereq jr or sr, reg honors div)
849188 1430-1615 TTh, FergH 123, Fernando Meza, 4 cr

R 3030 Autobiographical Memory: Construction and Maintenance of an Historical Self (prereq jr or sr, reg honors div)
044460 0945-1100 TTh, JohH 101, Patricia Bauer, 4 cr

R 3050 American Philosophy in American Culture (prereq jr or sr, reg honors div)
173433 1115-1230 TTh, JohH 101, Ronald Giere, 4 cr

R 3060 The Frankenstein Syndrome (prereq jr, sr, reg honors div)
074624 0800-0955 W, PWB B144, Raymond Sicard, 2 cr

3970 Honors Seminar: Directed Studies (prereq jr, sr, reg honors div, #, Δ)
149463 1-5 cr

HORTICULTURAL SCIENCE (Hort)
Agricultural, Food, and Environmental Sciences

R 1023 Indoor Plants and Landscapes
042045 1430-1625 MW, HrG 172, 174, Brown D, 3 cr (4 hr field trip ar)

R 1036 Plant Propagation (Biol/L)
★LECT 1115-1205 TTh, HrG 172, 174, Hoover E
945441 —1 LAB 0905-1100 TTh, HrG 172, 174, Hoover E, 5 cr
643392 —2 LAB 1220-1415 TTh, HrG 172, 174, Hoover E, 5 cr
★LECT 1710-1800 TTh, HrG 172, 174, Ascher P
642498 —3 LAB 1500-1655 TTh, HrG 172, 174, Ascher P, 5 cr

R 3001 Growth Regulation of Horticulture Plants (prereq Biol 1103 or equiv)
★LECT 0905-1100 MWF, HrG 172, 174, Markhart A, (addtl 3 hrs ar)
749247 —1 LAB 5 cr

R 3004 Applications of Plant Biotechnology (prereq 3003 or GCB 3022, Chem 1002 or Chem 1005, or BioC 3001)
★LECT 1115-1205 WF, ClaOff B26, Smith A
051232 —1 LAB 1220-1520 WF, BioSci 245, Smith A, 4 cr

3097 Horticulture Practicum (prereq upper division horticulture emphasis or sequence, Δ) (S-N only)
744100 2-4 cr

3099 Seminar (max 2 cr; prereq jr)
041977 1115-1205 TTh, AlderH 415, Smith A, 1 cr

5000 Professional Experience Program (prereq #) (S-N only)
050615 4 cr

5030 Landscape Design of Residential and Small Commercial Sites (§3030; prereq 1021, 1022, LA 1301 or #)
★LECT 1220-1310 TTh, AlderH 405, Pedersen B
574683 —1 LAB 1325-1520 TTh, AlderH 405, 3 cr

5047 Nursery Scheduling and Enterprise Development (5046-5047-5048†; prereq 5046) (A-F only)
944628 0800-0955 TTh, AlderH 415, Calkins, 2 cr

5091 Directed Studies (prereq 8 cr upper division hort course, Δ)
849045 2-6 cr

8007 Extension Horticulture Practicum (max 6 cr; prereq 12 grad cr)
144966 1-5 cr

8042 Horticultural Seminar (S-N only)
142909 1535-1700 W, AlderH 415, 1 cr

8051 Advanced Problems in Horticultural Crop Breeding (prereq #)
547130 3-9 cr

8052 Advanced Problems in Physiology of Horticultural Crops (prereq #)
141640 3-9 cr

8060 Discussions in Potato Research
252080 1 cr

8062 Discussions in Plant Hardiness (prereq #)
841723 1220-1310 F, AlderH 398, Li P, 1 cr

8063 Discussions in Plant Breeding (prereq #)
349302 1 cr

8065 Discussions in Postharvest Physiology (prereq #)
946329 Tong C, 1 cr

8066 Discussions in Horticultural Research (S-N only)
147592 1545-1700 Th, AlderH 394, Smith A, 1 cr

8090 Graduate Horticultural Research (prereq Δ) (S-N only)
846792 1-18 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
748504 1-18 cr

8777 Thesis Credits: Masters
447055 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
942832 1-36 cr

HUMAN ECOLOGY (HE)
Human Ecology

5003 Field Experience (max 15 cr; prereq #)
650732 Yust B, 1-5 cr

5130 Independent Study in Home Economics (max 16 cr; prereq #)
451302 Yust B, 1-5 cr

HUMAN RESOURCE DEVELOPMENT(HRD)
Work, Community, and Family Education
Education and Human Development

R 5104 Survey: Human Resource Development and Adult Education (§AdEd 5104) (A-F only)
750866 1845-2205 T, VoTech 230, Peterson S, 4 cr

R 5300 Organizational Needs Assessment (§BIE 5300) (A-F only)
443118 1600-1830 Th, PeikH 165, Stone J, 3 cr (Mpls)

R 5301 Student and Trainee Evaluation Systems (§BIE 5301, Ind 5301) (A-F only)
644056 1600-1830 M, VoTech 220, Pucel D, 3 cr

R 5750 Personnel Training and Development (A-F only)
046063 1845-2205 W, VoTech R280, Swanson R, 4 cr

R 5760 Organization Development (§VoEd 5760) (A-F only)
649094 1845-2205 Th, VoTech R280, 4 cr

R 5761 Team Building in Organizations
445757 1845-2115 M, VoTech R285, 3 cr

R 5780 Internship: Human Resource Development (max 15 cr; prereq 5750)
143890 Swanson R, ar cr

R 5790 Strategic Planning in Human Resource Development (prereq 5750 or 5760) (A-F only)
545538 1845-2205 Th, VoTech R385, 4 cr

R 5795 Quality Improvement: Human Resource Development Approach
647216 1845-2205 T, VoTech 220, 4 cr

R 5808 Diversity Issues and Practices (§VoEd 5808, WCFE 5808) (A-F only)
342818 1845-2115 W, VoTech R385, Brown J, 3 cr

HUMANITIES (Hum)
Liberal Arts

1005 Humanities in the Modern West V (§3005) (AH; IP)
543305 1115-1230 TTh, FordH 55, Kliger G, 4 cr

1111 European Heritage: Greece (AH)
172489 0945-1100 TTh, FordH 55, Tracy J, 4 cr

1115 European Heritage: Middle Ages (§3115, ClCv 3950, Rhet 3322) (IP)
472490 1010-1100 MWF, Phys 133, Akehurst F, 4 cr

3005 Humanities in the Modern West V (§1005; prereq jr or sr or #) (AH; IP)
152548 1115-1230 TTh, FordH 55, Kliger G, 4 cr

R 3029 Music in the 20th Century (§Mus 3029; prereq non-music maj)
272491 0905-1100 TTh, FergH 105, Jackson D, 4 cr

3111 European Heritage: Greece (§1111, Rhet 3321; prereq jr or sr or #) (AH)
172492 0945-1100 TTh, FordH 55, Tracy J, 4 cr

3115 European Heritage: Middle Ages (§1115, ClCv 3950, Rhet 3322) (IP)
972493 1010-1100 MWF, Phys 133, Akehurst F, 4 cr

3155 History of Western Educational Thought (§5155, EdPA 3155, EdPA 5155)
142442 1640-1910 T, WullH 140, Bagley A, 4 cr

3282 Intellectual and Cultural History of Modern Europe (§Hist 3282)
144182 1010-1100 MWF, BlegH 215, Thayer J, 4 cr

3878 The Modern Greek Experience
772494 1115-1205 MWF, BlegH 215, Stavrou T, 4 cr

3970 Directed Studies (prereq #, Δ)
350885 ar cr

5155 History of Western Educational Thought (§3155, EdPA 3155, EdPA 5155)
141251 1640-1910 T, WullH 140, Bagley A, 4 cr

5970 Directed Studies (prereq jr or sr or grad student, #, Δ)
951420 ar cr

INDUSTRIAL ENGINEERING/ OPERATIONS RESEARCH (IEOR)

Mechanical Engineering Institute of Technology

R 5030 Quality Engineering (prereq IT or grad stu, Math 1261, ME 3900...3000 rec)
971862 —1 1220-1415 TTh, MechE 108, Dooley K, 4 cr

R 5030H Honors: Quality Control and Reliability (§5030; prereq Math 1231, ME 3900, ME upper div honors stu...3000 rec)
673833 1220-1415 TTh, MechE 108, Dooley K, 4 cr

R 5040 Introduction to Operations Research (prereq IT or grad stu, Math 1261...3000 rec)
473834 0905-0955 MWThF, MechE 221, Arora S, 4 cr

R 5050 Engineering Economic Analysis (prereq 3000 or #, IT or grad)
771863 0800-0850 MWThF, MechE 221, Arora S, 4 cr

R 5180 Applied Industrial Engineering (prereq 3000, 5010, 5020, 5030, 5040, #, Δ)
343404 3-5 cr

R 5181 Applied Industrial Engineering (prereq 3000, 5010, 5020, 5030, 5040, #, Δ)
750592 3-5 cr

5198H Industrial Engineering Upper Division Honor Thesis I (5198H-5199H†; prereq upper div ind eng honors stu)
947013 4 cr

5199H Industrial Engineering Upper Division Honor Thesis II (5198H-5199H†; prereq 5198H, upper div ind eng honors stu)
146238 4 cr

R 5254 Design Morphology with Applications (prereq completion of sequences ME 3201/3 or 5, ME 3303 or 5342, upper div mech engr maj)
★LECT 1325-1415 TTh, MechE 18, AkerH 319, 4 cr
046273 —1 LAB 1325-1730 TTh, MechE 18

R 5255 Engineering Design Project (prereq ME upper div stu, 5254)
★LECT 1325-1415 TTh, MechE 18, AkerH 319, 4 cr
251849 —1 LAB 1325-1730 TTh, MechE 18

R 5361 Inventory and Production Control (prereq 3000, 5040, ME 3900, IT stu or grad)
441966 1010-1205 TTh, Arch 20, Benjafaar S, 4 cr

R 5442 Operations Research III (prereq 5441, IT stu or grad)
374684 1800-2100 M, LindH 217, Benjaafar S, 4 cr

8110 Advanced Industrial Engineering (prereq #)
552196 3 cr

8111 Advanced Industrial Engineering (prereq 8110)
045169 3 cr

8310 Production Engineering Problems (prereq #)
144112 3-5 cr

8311 Production Engineering Problems (prereq 8310)
649029 3-5 cr

8410 Industrial Engineering Research (prereq #)
651072 3-5 cr

8411 Industrial Engineering Research (prereq 8410)
145311 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
746364 1-18 cr

8773 Graduate Seminar (S-N only)
944855 1535-1635 W, MechE 108, 1 cr

8774 Graduate Seminar (S-N only)
151576 1535-1635 W, MechE 108, 1 cr

8775 Graduate Seminar (S-N only)
249048 1535-1635 W, MechE 108, 1 cr

8777 Thesis Credits: Masters
847523 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
143980 1-36 cr

INDUSTRIAL RELATIONS (IR)

Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3002 Personnel and Industrial Relations (prereq 90 cr completed or in progress, Econ 1101, Econ 1102, Psy 1001) (A-F only)
243069 —1 0800-0945 MW, BlegH 225, 4 cr
250619 —2 0800-0945 TTh, BlegH 205, 4 cr
250703 —3 1010-1155 TTh, BlegH 255, 4 cr

R 3010 The Individual in the Organization
752164 1010-1155 MW, BlegH 210, 4 cr

R 5006 Labor Policy (§PA 5430)
245615 1115-1230 TTh, HHHCtr 20, Kleiner M, 3 cr

R 5990 Independent Study in Personnel and Industrial Relations (prereq SMgt or grad SMgt approval)
546317 1-8 cr

R 8003 Staffing, Training and Development (prereq 8002 or #, IR grad maj or Δ, IR grad maj must reg A-F)
746011 —1 1325-1510 MW, HHHCtr 15, 4 cr
245985 —2 1010-1155 TTh, HHHCtr 15, 4 cr

R 8005 Compensation and Reward Theory and Programs (prereq 8002 or #, IR grad maj or Δ, IR grad maj must reg A-F)
543997 —1 1535-1720 MW, HHHCtr 15, 4 cr
446682 —2 1730-2100 M, HHHCtr 15, 4 cr

R 8006 Introduction to Labor Market Analysis (prereq 8002 or #, IR grad maj or Δ, IR grad maj must reg A-F)
846856 1535-1720 TTh, HHHCtr 15, 4 cr

R 8007 Collective Bargaining: Private and Public Sectors (prereq 8002 or #, IR grad maj or Δ, IR grad maj must reg A-F)
648804 0800-0945 MW, HHHCtr 15, 4 cr

R 8011 Intermediate Quantitative Methods and Techniques for Industrial Relations (prereq 8001, IR grad stu, or Δ) (A-F only)
★LECT 1010-1155 MW, HHHCtr 15
548620 —1 LAB 1010-1155 F, HHHCtr 35, 4 cr
★LECT 1325-1510 TTh, HHHCtr 15
052722 —2 LAB 1325-1510 F, HHHCtr 35, 4 cr

R 8012 Industrial Relations Systems (prereq complet of core sequence in IR or #, IR grad maj or Δ, IR grad maj mus reg A-F)
844749 —1 1730-2100 W, BlegH 260, 4 cr
141565 —2 1730-2100 Th, BlegH 210, 4 cr

R 8023 Employee Training: Creating a Learning Organization (prereq 8003 or #, IR grad maj or Δ, IR grad maj must reg A-F)
450389 1730-2100 Th, HHHCtr 15, 4 cr

R 8024 Organization Design and Change (prereq 8004 or #, IR grad maj or Δ, IR grad maj must reg A-F)
373941 1730-2100 Th, HHHCtr 30, 4 cr

R 8027 Dispute Resolution Practices: Mediation, Fact Finding, and Arbitration (prereq 8007 or #, IR grad maj or Δ, IR grad maj must reg A-F)
549427 1730-2100 T, BlegH 415, 4 cr

R 8042 Human Resource Information Systems (prereq core course seq in IR or #, IR grad maj or Δ, IR grad maj must reg A-F)
073943 1730-2100 T, HHHCtr 15, 4 cr

R 8045 Public Policy and Employee Benefits (prereq 8005 or #, IR grad maj or Δ, IR grad maj must register A-F)
650584 1730-2100 W, BlegH 205, 4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
643750 1-18 cr

R 8777 Thesis Credits: Masters
642758 1-16 cr

R 8803 Seminar: Staffing, Training, and Development (prereq 8003 or #, IR PhD maj or Δ)
172242 1525-1710 TTh, SocSci 101, 4 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
244089 1-36 cr

R 8990 Independent Study in Industrial Relations (prereq #, IR grad maj must reg A-F)
245047 ar cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

INFORMATION AND DECISION SCIENCES (IDSc)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3030 Information Systems and Information Management (prereq BA 1001 or exp using Windows and Internet) (A-F only)
★LECT 0815-0930 TTh, BlegH 130
645935 —1 LAB 1015-1115 Th, BlegH 90, 4 cr
148967 —2 LAB 1130-1230 Th, BlegH 90, 4 cr
★LECT 0945-1100 TTh, BlegH 130
251642 —3 LAB 1245-1345 Th, BlegH 90, 4 cr (Carlson Plan stu only)
646177 —4 LAB 1400-1500 Th, BlegH 90, 4 cr (Carlson Plan stu only)

R 3110 Information Systems Application Development I (prereq 3030) (A-F only)
074297 1325-1510 MW, AndH 330, 4 cr

R 3420 Financial Information Systems (prereq 3030 or Acct 1050 or BFin 3000) (A-F only)
142571 1115-1300 MW, BlegH 205, Kauffman R, 4 cr

R 5410 Decision Support and Expert Systems (prereq 3030 or MBA 8225 or equiv; open to non-degree stu with equiv exp) (A-F only)
141203 —1 1730-2100 M, BlegH 225, 4 cr
874639 —2 1730-2100 M, BlegH 225, 4 cr (MBA stu only)

R 8130 Information Systems Analysis, Design, and Development (§8103; prereq 8110 or #) (A-F only)
548665 1010-1155 MW, BlegH 415, 4 cr

R 8450 Telecommunications (prereq MBA 8225 or equiv or #) (A-F only)
746817 1730-2100 Th, BlegH 230, 4 cr

R 8601 System Development Seminar (prereq PhD stu or #) (A-F only)
472246 1325-1655 Th, 4 cr

R 8990 Readings in Information and Decision Sciences (prereq PhD stu, #) (A-F only)
444186 ar cr

R 8995 Graduate Research in Information and Decision Sciences (prereq PhD stu, #) (A-F only)
952809 ar cr

INSTITUTE OF TECHNOLOGY (IofT)
Institute of Technology

R 1312 Exploration and Management of Careers in Science and Engineering (prereq IT stu or prospective IT stu) (S-N only)
173827 1220-1310 TTh, FordH 120, Nutter K, 2 cr

INSURANCE (Ins)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 5100 Risk Management and Insurance (A-F only)
448061 1535-1720 MW, BlegH 120, 4 cr

R 5231 Life Contingencies II (§Math 5058; prereq 5230 or #)
047178 1325-1415 MWF, AmundH 240, 4 cr

8990 Readings in Risk Management and Insurance (prereq consent of advisor, #, grad SMgt approval)
251074 ar cr

8995 Graduate Research in Risk Management and Insurance (prereq grad SMgt approval)
745327 ar cr

INTERDEPARTMENTAL STUDY (ID)
Liberal Arts

R 1011 Career Exploration and Planning (course fee)
473395 —1 1220-1415 T, VinH 1, 2 cr
073828 —2 1010-1205 W, FordH 175, 2 cr
873829 —3 1325-1520 Th, Phys 236A, 2 cr

3180 HECUA Off-Campus Study Program: City Arts (prereq #)
441417 1-24 cr (for information call Mia Bolte, 626-2044, Office for Special Learning Opportunities, FraserH 345)

R 3206 Community, Service, and Self (3205-3206-3207†; prereq 3205) (C/PE; CD; practicum)
741231 1220-1350 W, VinH 20, Rubright D, 2 cr (for more information contact the Office for Special Learning Opportunities, 626-2044, FraserH 345)

R 3211 Internship: Perspectives on Work (prereq acceptance into internship program in Office for Special Learning Opportunities, Δ)
173830 1535-1730 W, FolH 50, 6 cr

R 3251 Metro Internship Seminar (3251-3252†; prereq Δ) (A-F only)
644302 Weaver M, 4 cr (for information call Mary Beth Weaver, Director, 625-3800)

R 3925 Strategic Career Planning (course fee)
751564 0905-1100 F, FolH 312, 2 cr

3970 Directed Studies (prereq consult with Office for Special Learning Opportunities, JohH 220, Δ)
152511 1-15 cr

5970 Directed Studies (prereq Δ)
849434 1-4 cr

INTERDISCIPLINARY ARCHEOLOGICAL STUDIES (InAr)
Liberal Arts

R 8110 Interdisciplinary Seminar (prereq grad maj or #)
352023 4 cr

8200 Directed Readings (prereq Δ)
151285 ar cr

8300 Directed Research (prereq Δ)
746283 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
745151 1-18 cr

8777 Thesis Credits: Masters
549105 1-16 cr

8888 Thesis Credit: Doctoral (max 18 cr per quarter)
844363 1-36 cr

INTERDISCIPLINARY MEDICINE (InMd)
Medical School

5202 Pathophysiology II (prereq regis med, Medical School Curriculum Affairs Office approval)
641755 1010-1205 MF, 1325-1415 MF, MoosT 2650, 1220-1310 MF, MoosT 2690, Soltis R, 10 cr 0800-1100 T, 1010-1100 Th, 1220-1310 Th, MoosT 2650 (Jan 2-Mar 28)

5203 Pathophysiology III (prereq regis med, Medical School Curriculum Affairs Office approval)
751323 1010-1205 MF, 1325-1415 MF, MoosT 2650, 1220-1310 MF, MoosT 2690, Soltis R, 11 cr 0905-1100 T, 1010-1100 Th, 1220-1310 Th, MoosT 2650 (Jan 2-Mar 28)

5290 Laboratory Medicine (prereq regis med, Med School Curriculum Affairs Office approval)
174940 0800-0955 TTh, 1 cr

5500 Clinical Medicine IV/Ambulatory Medicine (prereq regis med)
549413 0800-1600 W, PWB 8335, 9 cr (Jan 2-Mar 15)

5508 Clinical Medicine IV: Primary Care Medicine (5508-5509†; prereq med stu, 2 maj req rotations)
345671 6 cr

5509 Clinical Medicine IV: Primary Care Medicine (5508-5509†; prereq 5508, med stu)
142643 6 cr

5552 Indian Health Service Elective (prereq regis med)
951370 ar cr

5553 Elective Away at Centers for Disease Control (CDC) (prereq med stu)
150511 ar cr

5560 Elective Away at the National Institutes of Health (prereq regis 3rd or 4th yr stu)
348649 ar cr

5566 Clinical Experience in International Medicine (prereq regis year 3 and 4 medical student)
542008 ar cr

INTERFACIAL ENGINEERING, CENTER FOR (CIE)
Institute of Technology

R 5101 Fundamentals of Interfacial Engineering (prereq IT sr or IT grad)
646342 1325-1415 MWF, EltH N119, Evans F, 3 cr

8001 Strategies for Interfacial Engineering (prereq IT grad stu, 5101) (A-F only)
945133 1-3 cr

INTERNATIONAL RELATIONS (IntR)
Liberal Arts

R 3302H Honors Seminar: Change in the Contemporary Global Order (prereq 3301H or #) (A-F only)
373910 1245-1400 TTh, BlegH 350, Duvall R, 4 cr

R 3900 Topics in International Relations (prereq 12 cr in social sciences)
847215 —1 1115-1230 TTh, BlegH 5, Thompson K, 4 cr (Alternatives to War: International Conflict Resolution)
272250 —2 1415-1530 TTh, BlegH 110, Moses R, 4 cr (Theory and Practice of Negotiation)

3960 Field Studies/Internship in International Studies (max 8 cr for international relations maj; prereq Δ)
151634 1-8 cr

3970 Directed Studies (prereq #, Δ, ❑)
146880 1-15 cr

R 3981 Major Project Seminar (prereq Δ) (A-F only)
843696 1430-1615 W, BlegH 225, 4 cr

3990H Honors: Supervised Research Paper (prereq sr honors candidate in international relations, #, Δ, ❑)
751502 1-5 cr

INTERPERSONAL RELATIONSHIPS RESEARCH (IRel)

R 8001 Proseminar in Interpersonal Relationships Research (max 3 cr; prereq int rel res grad minor) (S-N only)
943849 1430-1545 W, ChDev 108, Collins W A, 1 cr

ITALIAN (Ital)
French and Italian
Liberal Arts

R 1102 Beginning Italian (prereq 1101)
150542 —1 0800-0850 MTWThF, KoltH S132, 5 cr
041882 —2 1010-1100 MTWThF, KoltH S134, 5 cr
242021 —3 1115-1205 MTWThF, KoltH S132, 5 cr
943169 —4 1220-1310 MTWThF, KoltH S133, 5 cr
242617 —5 1325-1415 MTWThF, KoltH S132, 5 cr
752004 —6 1430-1520 MTWThF, KoltH S132, 5 cr

R 1105 Intermediate Italian (prereq 1104)
545734 —1 0905-1020 MWF, KoltH S138, 5 cr
542073 —2 1115-1230 MWF, KoltH S138, 5 cr
849871 —3 1325-1440 MWF, FordH 285, 5 cr

R 3016 Advanced Italian Composition, Conversation (prereq 3015 or #)
171558 1010-1100 MWF, CivE 214, Ferlito S, 4 cr

R 3502 Italian Civilization and Culture (prereq 3015) (AH; IP)
071559 1115-1230 TTh, NichH 122, Ferlito S, 4 cr

3970 Directed Readings (prereq undergrad, #, Δ, ❑)
452367 1-5 cr

R 5401 Dante (prereq 3015)
773693 1415-1530 TTh, VinH 364, Ferlito S, 4 cr

R 5609 Dante (in English)
573694 1545-1700 TTh, KoltH S134, Martinez R, 4 cr

8777 Thesis Credits: Masters
445113 1-16 cr

8970 Directed Readings
144621 1-5 cr

JAPANESE (Jpn)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 1012 Beginning Japanese (prereq 1011)
044362 —1 LECT 0905-0955 TTh, FolH 218, Szatrowski P
946220 —2 LECT 1010-1100 TTh, FolH 218, Szatrowski P
542185 —3 LECT 1115-1205 TTh, FolH 218, Szatrowski P
Registration in one of the following REC sections is also required:
✦848347 —1 REC 0905-0955 MTWThF, PeikH 315, 5 cr
✦946069 —2 REC 1010-1100 MTWThF, PeikH 225, 5 cr
✦143114 —3 REC 1115-1205 MTWThF, PeikH 225, 5 cr
✦643439 —4 REC 1220-1310 MTWThF, PeikH 215, 5 cr
✦146443 —5 REC 1325-1415 MTWThF, PeikH 315, 5 cr

R 3022 Intermediate Japanese (prereq 3021)
142117 —1 LECT 0905-0955 TTh, PeikH 155, Pradt S
348506 —2 LECT 1010-1100 TTh, PeikH 155, Pradt S
Registration in one of the following REC sections is also required:
✦252483 —1 REC 1010-1100 MWF, FolH 218, 5 cr
✦841740 —2 REC 1115-1205 MWF, FolH 218, 5 cr
✦051800 —3 REC 1220-1310 MWF, FolH 218, 5 cr
✦649760 —4 REC 1325-1415 MWF, FolH 218, 5 cr

R 3032 Third Year Japanese (prereq 3031)
941793 —1 1325-1415 MWF, CivE 214, 5 cr
744520 —2 1430-1520 MWF, FolH 218, 5 cr
572268 —3 1535-1625 MWF, FolH 218, 5 cr

R 3052 Advanced Japanese Conversation and Composition (§5052; prereq 3033 or #)
051151 —1 1535-1625 MWF, PeikH 315, 4 cr
142490 —2 1640-1730 MWF, PeikH 315, 4 cr

R 3090H Honors Course: Tutorial (prereq Δ)
948226 1-4 cr

R 3970 Directed Studies (prereq #, Δ, ❑)
944614 1-15 cr

R 5052 Advanced Japanese Conversation and Composition (§3052; prereq 3033 or #)
642176 1535-1625 MWF, PeikH 315, 4 cr

R 5361 Readings in Modern Japanese Literature I (prereq 3031)
972266 1415-1530 TTh, FolH 218, Pradt S, 4 cr

R 5452 Structure of Japanese-Phonology/Morphology (prereq 3023, Ling 3001 or #)
772267 1545-1700 TTh, FolH 218, Szatrowski P, 4 cr

R 5970 Directed Studies in Japanese (prereq #, Δ, CLA approval)
146949 1-15 cr.

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
843746 1-18 cr

R 8777 Thesis Credits: Masters
544082 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
451672 1-36 cr

JEWISH STUDIES (JwSt)
Classical and Near Eastern Studies
Liberal Arts

1034 Introduction to Judaism (§3034, RelA 1034, RelA 3034, RelS 1034, RelS 3034) (AH; IP)
644817 1325-1415 MWF, NichH 45, 4 cr

3034 Introduction to Judaism (§1034, RelA 1034, RelA 3034, RelS 1034, RelS 3034) (AH; IP)
544020 1325-1415 MWF, NichH 45, 4 cr

5970 Directed Readings (max 12 cr; prereq #, Δ, CLA approval)
043566 1-12 cr

JOURNALISM AND MASS COMMUNICATION (Jour)
Liberal Arts

R 1001 Introduction to Mass Communication (SSci) (A-F only)
250023 1325-1415 MWF, MurH 105, Domke D, 4 cr

R 3004 Information for Mass Communication (prereq jour maj or min, fr comp or exempt, Δ) (A-F only)
752830 1415-1530 TTh, MurH 105, Anderson C, 4 cr

R 3006 Visual Communication (prereq jour maj or min status, 3004, Δ) (A-F only)
345315 1010-1205 MW, MurH 105, Schwartz D, 4 cr

R 3007 The Media in American History and Law: Case Studies (prereq jour maj or min status, 3004, Δ) (A-F only)
150452 1430-1520 MWF, MurH 105, Huntzicker W, 4 cr

R 3008 Mass Communication Processes and Structure (open to non-jour maj; jour maj must hav crse appr on prog plan; pre-jour maj shld not enrl) (A-F only)
851877 1115-1230 TTh, MurH 308, Luther C, 4 cr

R 3011 News Writing (prereq jour maj or minor, fr comp or exempt, pass 40wpm keybrd test w/ 6 or fewer errors, Δ) (A-F only)
★LECT 1220-1310 MW, MurH 105, Huntzicker W, 4 cr
372286 —1 LAB 1325-1520 M, MurH 212
172287 —2 LAB 0905-1100 T, MurH 212
072288 —3 LAB 1115-1310 T, MurH 212
872289 —4 LAB 1325-1520 W, MurH 212
072291 —5 LAB 1115-1310 Th, MurH 212
472294 —6 LAB 1115-1310 F, MurH 212

R 3101 Reporting (prereq jour maj, 3004, 3011, pass 40 wpm keybrd test with 6 or fewer errors, Δ) (A-F only)
345279 —1 1010-1205 MW, MurH 212, Domke D, 4 cr
052378 —2 1325-1530 TTh, MurH 212, Babcock W, 4 cr

R 3155 Publications Editing (prereq jour maj, 3004, C or higher in 3101, pass 40 wpm keybrd test w/6 or fewer errors, Δ) (A-F only)
★LECT 1010-1310 MW, MurH 315, 320, Cramer J, 4 cr
647569 —1 LAB 1010-1205 F, MurH 315

R 3201 Principles of Advertising (prereq jour maj or minor, fr comp or exempt, Δ) (A-F only)
272281 0905-0955 MWF, MurH 105, Wackman D, 4 cr

R 3241 Advertising Copywriting (prereq jour maj status, 3004, 3201, Δ) (A-F only)
172282 0905-1100 TTh, MurH 311, Shaw S, 4 cr

R 3251 Advertising and Public Relations Research (prereq jour maj, 3004, 3159 or 3201, Δ) (A-F only)
672312 1415-1530 TTh, MurH 311, Doyle K, 4 cr

R 3741 Racial Minorities and the Mass Media (open to non-jour maj, jour maj must have crse appr on prog plan, pre-jour maj shld not enrl) (CD) (A-F only)
972283 1115-1230 TTh, MurH 105, Doyle K, 4 cr

R 3776 Mass Communication Law (prereq jour maj or min status, 3004, Δ) (A-F only)
772284 1220-1310 MWF, MurH 308, Belmas G, 4 cr

R 3970 Projects in Journalism (max 8 cr; prereq jour maj or min status, 3004, #, Δ, ❑) (A-F only)
145843 1-4 cr

3980 Directed Instruction (max 2 cr; prereq maj stat, adv appr, 1 prof crse for prof maj, 1 adv appr crse for mass comm maj, Δ, ❑) (S-N only)
941485 1-2 cr

R 5155 Advanced Reporting Methods (prereq jour maj, 3004, C or higher in 3101, pass 40 wpm keybrd test w/6 or fewer errors, Δ) (A-F only)
972297 0815-0930 TTh, MurH 320, McEnroe P, 4 cr

R 5159 Case Studies in Public Relations (prereq jour maj status, 3004, 3159, Δ) (A-F only)
572299 1545-1700 TTh, MurH 311, Tims A, 4 cr

R 5263 Advertising Campaign Planning (prereq jour maj status, 3004, 5261, Mktg 3000 or #, Δ) (A-F only)
748146 —1 1010-1205 MW, MurH 311, Faber R, 4 cr
274032 —2 1325-1520 MW, MurH 311, Zhao X, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
\# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5316 Theories of Visual Communication (prereq jour maj or min status, 3004, 3006 or #, Δ) (A-F only)
146188 0905-1100 TTh, MurH 105, Schwartz D, 4 cr

R 5441 Electronic Newsgathering (prereq jour maj, 3004, 3451, Δ) (A-F only)
348800 0945-1100 TTh, MurH 207, Gilbert M, 4 cr

R 5442 Advanced Television News (prereq jour maj, 3004, 3451, pass 40 wpm keyboarding test with 6 or fewer errors, Δ) (A-F only)
172508 1115-1230 TTh, MurH 207, Gilbert M, 4 cr

R 5541 Mass Communication and Public Health (§PubH 5394; prereq 12 cr in soc or behav sci; maj or min or grad status, 3004, Δ for jour stu; #, Δ for PhD, MS stu in publ hlth and epidemiology)
847294 1325-1610 T, Mayo D262, Finnegan J, 3 cr

R 5611 Development of American Broadcasting (open to non-jour maj; jour maj must hav crse appr on prog plan; pre-jour maj shld not enrl) (A-F only)
172301 1415-1530 TTh, MurH 308, Gabrial B, 4 cr

R 5721 Mass Media and U.S. Society (prereq jour maj or min status, 3004, Comp 3027 or #, Δ) (A-F only)
372305 0945-1100 TTh, MurH 320, Hansen K, 4 cr

R 5731H Honors Course: Communications Problems and Issues (prereq jour maj or min status, 3004, sr, #, Δ, honors div registration) (A-F only)
741827 1245-1400 TTh, MurH 320, Hansen K, 4 cr

R 5801 International Communication (prereq jour maj or min, 3004, Δ) (IP) (A-F only)
072310 1010-1100 MWF, MurH 308, Akhavan-Majid R, 4 cr

R 5970 Advanced Projects in Journalism (max 8 cr; prereq jour maj or min status, 3004, #, B avg, Δ, ❑) (A-F only)
243850 1-4 cr

R 5970H Honors Course: Advanced Projects in Journalism (max 8 cr; prereq jour maj or min status, 3004, #, B avg, Δ, ❑, honors div registration) (A-F only)
552814 1-4 cr

R 5990 Special Topics in Mass Communication: Charnley Projects (max 8 cr; prereq jour maj, 3101, 1 addtl prof jour crse and/or #, Δ) (A-F only)
652755 0800-1100 T, MurH 20, Dornfeld S, 4 cr

R 8020 Studies in Mass Communication (prereq 8010) (A-F only)
444334 1245-1400 TTh, MurH 105, Dicken-Garcia H, 4 cr

R 8501 Seminar: The Process of Quantitative Mass Communication Research (prereq 12 cr in soc sci, stat course or ¶) (A-F only)
472313 1325-1520 MW, MurH 30, Wackman D, 4 cr

R 8560 Seminar: History of Mass Communication (prereq 5601, #, Δ) (A-F only)
172315 1010-1310 W, MurH 30, Dicken-Garcia H, 4 cr

R 8630 Seminar: Visual Communication Research (prereq 5316, proseminars or #, Δ) (A-F only)
972316 1245-1400 TTh, MurH 30, Griffin M, 4 cr

R 8662 Seminar: Literary Aspects of Journalism (prereq 5606, #, Δ) (A-F only)
772317 0905-1205 M, MurH 30, Roberts N, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
645904 1-18 cr

8777 Thesis Credits: Masters
245243 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
345251 1-36 cr

R 8970 Advanced Projects in Mass Communication (max 8 cr; prereq grad maj or min in mass comm, #, Δ) (A-F only)
149682 1-4 cr

R 8990 Special Problems in Mass Communication: Practicum in Communication Research (prereq bas meth of soc sci res crse, stat crse, or #, Δ, reg in 8990 Fall 1996 req) (A-F only)
147141 0945-1100 TTh, MurH 30, Wells W, 4 cr

KINESIOLOGY (Kin)

School of Kinesiology and Leisure Studies
Education and Human Development

R 1871 Introduction to Kinesiology (PEL) (A-F only)
250622 1010-1125 TTh, Arch 40, Shaffer S, 3 cr

R 1990 Directed Study (prereq #) (A-F only)
143078 Pickert R, 1-6 cr

R 1999 Active Wellness: Individuals and Communities (A-F only)
747787 1535-1705 TTh, AmundH 240, Meath J, 3 cr

R 3111 Mechanics of Movement (prereq CBN 1027, EHD stu or #; PEL) (A-F only)
150712 0800-0850 MWF, CookeH 215, 325, 3 cr

R 3131 History and Philosophy of Kinesiology and Sport (prereq Kin maj or #; PEL)
244139 0905-1045 TTh, CookeH 214, Krotee M, 4 cr (1 hr ar)

R 3135 Motor Learning and Human Performance (prereq Kin maj or #; PEL) (A-F only)
752200 0905-0955 MWF, CookeH 400, Smith T, 3 cr

R 3143 Organization and Management of Sport and Physical Education (§SpSt 3143; prereq 2 cr coaching crse, Kin or SpSt maj or #; PEL) (A-F only)
052185 1325-1440 MW, CookeH 214, Krotee M, 3 cr

R 3150 Introduction to Evaluation (prereq Kin maj or #; PEL) (A-F only)
451137 1010-1205 MW, CookeH 214, 325, Engelhardt A, 4 cr

R 3169 Volleyball Coaching (prereq PE 1174 or #; PEL) (A-F only)
441370 0800-0855 TTh, BFAB, 2 cr (BFAB Gym)

R 3327 Teaching Physical Education in the Elementary School (prereq elem educ maj) (A-F only)
672410 1325-1440 TTh, NorrisH 3, M151, Skemp K, 3 cr

R 3386 Exercise Physiology II (§3115; prereq 3385 or equiv, Kin maj or #; PEL) (A-F only)
046046 1220-1310 MTWTh, AkerH 319, Serfass R, Gaskill S, 4 cr

R 3624 Student Teaching: Coaching (prereq #; PEL) (S-N only)
144781 1830-2000 W, CookeH 400, Radtke D, 3 cr (1 hr ar)

R 3625 Supervised Practical Experience (max 12 cr; prereq #; PEL) (S-N only)
045785 —1 1640-1825 T, CookeH 214, Pickert B, 1-12 cr
847540 —2 1640-1825 T, CookeH 222B, Spletzer E, 1-12 cr

3900 Directed Study (max 12 cr; prereq #) (A-F only)
445550 —1 Anderson B, 1-12 cr
542381 —3 Burton A, 1-12 cr
472411 —5 Hancock P, 1-12 cr
450845 —7 Kane M, 1-12 cr
848753 —9 Krotee M, 1-12 cr
046628 —11 Leon A, 1-12 cr
250846 —13 Pickert R, 1-12 cr
648754 —15 Serfass R, 1-12 cr
846629 —17 Spletzer E, 1-12 cr
447573 —21 Wade M, 1-12 cr
145445 —23 Walker A, 1-12 cr
142005 —25 Wiese-Bjornstal, 1-12 cr

R 5101 Physical Activities for Persons with Disabilities (PEL) (A-F only)
149195 1815-2045 M, CookeH 215, Burton A, 3 cr

R 5102 Practicum: Developmental/Adapted Physical Education (max 6 cr; prereq 5100; PEL) (S-N only)
848221 1815-2045 T, CookeH 215, Burton A, 1-6 cr (1 hr ar)

R 5111 Sport Facilities (§Rec 5111; prereq Kin or Rec maj or #) (A-F only)
041560 1615-1830 T, CookeH 215, Anderson B, 3 cr

R 5121 Contributions of Basic Science to Kinesiology (A-F only)
746168 1400-1600 Th, CookeH 215, Smith T, 3 cr (1 hr ar)

R 5132 Motor Development (§CPsy 5322; prereq 3132 or #; PEL) (A-F only)
242682 1615-1815 W, CookeH 206, Wade M, 3 cr (1 hr ar)

R 5385 Exercise for Special Populations (prereq undergrad level physiology or biology; PEL) (A-F only)
674013 1615-1745 TTh, CookeH 400, Leon A, 3 cr

R 5387 Detection and Prevention of Coronary Heart Disease (prereq 3386 or equiv or #) (A-F only)
272412 1615-1755 MW, CookeH 215, Serfass R, 4 cr

R 5530 Biological and Physical Foundations of Education (prereq stu in Foundation of Educ prog or Educ Teacher Licensure Prog) (A-F only)
949408 1640-1830 TTh, Arch 40, Rodgerson R, 2 cr (Jan 6-Feb 6)

5562 Clinical Experience II: Physical Education (prereq 5561, admission to init lic/MEd PE prog or #; PEL) (A-F only)
251267 1615-1815 M, CookeH 214, Spletzer E, 6 cr

R 5720 Topics in Kinesiology: Psychology of Sport Injury (max 12 cr; prereq #) (A-F only)
172413 1115-1230 TTh, CookeH 214, Wiese-Bjornstal, 3 cr

R 5860 Legal Aspects of Sport and Physical Activity (§Rec 5860; prereq 3143 or 5460 or Rec 3550, Kin or Rec maj or #) (A-F only)
452417 0905-1100 TTh, CookeH 206, Schemmel J, 4 cr

R 5980 Research Methodology (§Rec 5980; prereq Kin or MEd stu or #; PEL) (A-F only)
049352 1010-1125 TTh, CookeH 400, Kane M, 3 cr (SES students only)

5981 Problems (prereq MEd candidate, #; PEL) (A-F only)
342382 —1 Anderson B, ar cr
551890 —3 Burton A, ar cr
972414 —5 Hancock P, ar cr
447699 —7 Kane M, ar cr
245551 —9 Krotee M, ar cr
147700 —11 Leon A, ar cr
145552 —13 Pickert R, ar cr
042384 —15 Serfass R, ar cr
841222 —17 Spletzer E, ar cr
247395 —21 Wade M, ar cr
846100 —23 Walker A, ar cr
846050 —25 Wiese-Bjorstal, ar cr

5983 Readings: Kinesiology (max 9 cr; prereq CEHD or grad stu, #) (A-F only)
448755 —1 Anderson B, ar cr
146630 —3 Burton A, ar cr
772415 —5 Hancock P, ar cr
842385 —7 Kane M, ar cr
351891 —9 Krotee M, ar cr
644476 —11 Leon A, ar cr
642386 —13 Pickert R, ar cr
151892 —15 Serfass R, ar cr
149771 —17 Spletzer E, ar cr
647393 —21 Wade M, ar cr
951546 —23 Walker A, ar cr
843813 —25 Wiese-Bjornstal, ar cr

R 8128 Psychology of Sport (prereq 5126 or equiv or #)
544941 1325-1555 T, CookeH 214, Wiese-Bjornstal, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
343435 1-18 cr

8777 Thesis Credits: Masters
441644 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
444088 1-36 cr

8980 Graduate Research Seminar (prereq #) (S-N only)
645787 —3 1430-1625 M, CookeH 20, Burton A, 1 cr
842127 —5 1430-1625 M, Mariucci 141B, Wade M, 1 cr
945553 —9 1430-1625 M, CookeH 206, Krotee M, 1 cr
442387 —11 1430-1625 M, URecCtr 27J, Leon A, 1 cr

8981 Research Problems (prereq 8980 or #) (S-N only)
641223 —1 Anderson B, ar cr
950848 —3 Burton A, ar cr
572416 —5 Hancock P, ar cr
745554 —7 Kane M, ar or
242388 —9 Krotee M, ar cr
441224 —11 Leon A, ar cr
248756 —15 Serfass R, ar cr
046631 —17 Spletzer E, ar cr
648625 —21 Wade M, ar cr
645370 —23 Walker A, ar cr
548035 —25 Wiese-Bjornstal, ar cr

LABORATORY MEDICINE AND PATHOLOGY (LaMP)

Laboratory Medicine and Pathology Medical School

5099 General Pathology for Dental Students (prereq elementary anatomy, elementary microbiology) (A-F only)
044734 1325-1415 Th, 0800-0850 F, MoosT 2690, Estensen R, 2 cr (1640-1730 T, Jan 7, 21, Feb 4, 18, Mar 4; 1640-1730 F, Mar 14; MoosT 2690)

5104 Organ System Pathology III (prereq registered 2nd yr med stu)
★LECT 0905-0955 M, 1115-1205 T, 1325-1520 TTh, MoosT 2650, Anderson R E, (Jan 2-Mar 30)
952132 —1 LAB 1430-1625 T, MoosT 3317, 3337, 3343, 3349, 3 cr
146054 —2 LAB 1430-1625 Th, MoosT 3317, 3337, 3343, 3349, 3 cr

5113 Surgical Pathology: University Hospitals (prereq 3rd or 4th yr medical student)
943625 Manivel C, ar cr

5114 Surgical Pathology: Hennepin County Medical Center (prereq 3rd or 4th yr medical student)
147390 Linzie B, ar cr

5115 Surgical Pathology: Veterans Administration Hospital (prereq 3rd or 4th yr medical student)
744906 Guzman M, ar cr

5119 Forensic Pathology: Medical Examiner's Office, Hennepin County Medical Center (prereq 3rd or 4th yr medical student)
452384 Peterson G, ar cr

5125 Chronobiology (prereq 3rd or 4th yr medical student, #)
841494 Halberg F, ar cr

5141 Problems in Experimental Pathology (prereq 3rd or 4th yr medical student, #)
847943 ar cr

5150 Anatomic Pathology in a Hospital Setting: University Hospitals (prereq 3rd or 4th yr medical student)
242763 Anderson R E, ar cr

5151 Anatomic Pathology in a Hospital Setting: Hennepin County Medical Center (prereq 3rd or 4th yr medical student)
052218 Anderson W R, ar cr

5152 Anatomic Pathology in e Hospital Setting: Veterans Administration Hospital (prereq 3rd or 4th yr medical student)
846937 Niehans G, ar cr

5153 Anatomic Pathology in e Hospital Setting: St. Paul-Ramsey Medical Center (prereq 3rd or 4th yr medical student)
850499 Posalaky Z, ar cr

5154 Anatomic Pathology in a Hospital Setting: Abbott-Northwestern (prereq 3rd or 4th yr med stu)
045933 Arneson M, Horwitz C, ar cr

5158 Cardiac Pathology: United Hospital (prereq 3rd or 4th yr medical student, #)
548391 Rose A, Titus J, ar cr

5181 Laboratory and Clinical Hematology (prereq #)
648947 Brunning R, ar cr

5184 Immunohematology in Blood Banking (prereq #)
650150 Stroncek D, ar cr

R 5185 Laboratory Problems in Blood Coagulation (prereq #)
151044 Edson J R, ar cr

5186 Laboratory Medicine in a Community Hospital (prereq 4th yr medical student, #)
447119 Apple F, ar cr

5188 Clinical Pathology Externship: Methodist Hospital (prereq #)
142965 Manoles E N, ar cr

5192 Laboratory Medicine for Primary Care: Virginia (prereq 4th yr medical student, #)
244318 Knabe G, ar cr

5193 Clinical Pathology Externship: Hibbing Hospital (prereq #)
841365 Uncini T, ar cr

5195 Computer Applications in Medical Research (prereq #)
341345 Ellis L, ar cr

5210 Surgical Pathology for Post-M.D.s (prereq regis med fellow special, #) (S-N only)
450697 1-10 cr

5211 Autopsies for Post-M.D.s (prereq regis med fellow special, #) (S-N only)
344715 1-10 cr

5213 Laboratory Medicine for Post-M.D.s (prereq regis med fellow special, #) (S-N only)
146207 1-10 cr

LANDSCAPE ARCHITECTURE (LA)

Architecture and Landscape Architecture

R 1301 Introduction to Landscape Architecture Drawing (Vis) (A-F only) (course fee)
149186 —1 0905-1205 MW, Arch 40, 4 cr
374314 —2 1220-1520 TTh, Arch 40, 4 cr
174315 —3 1325-1625 TTh, JonesH 2, 4 cr

R 1401 The Designed Environment (§1031) (AH; Envt) (A-F only)
★LECT 1535-1700 T, SmithH 100, Damon P
250832 —1 REC 0905-1035 Th, 4 cr
342365 —2 REC 1115-1245 Th, 4 cr
441210 —3 REC 1325-1455 Th, 4 cr
174761 —4 REC 1535-1705 Th, 4 cr

3200 Landscape Architecture Practicum (prereq landscape architecture student, #) (S-N only)
143543 1-6 cr

R 3311 Drawing for Design (§Arch 3311; prereq arch or env dsgn or landscape arch maj, Arch/LA 1301, or #) (A-F only) (course fee)
846405 —1 1220-1520 TTh, Arch 55, 4 cr
074767 —2 1325-1625 TTh, Arch 50, 4 cr

R 3412 History of Architecture since 1750 (§Arch 3412) (A-F only)
★LECT 1115-1230 TTh, NichH 45, Solomonson K, 4 cr
244805 —1 REC 0800-0850 M, Arch 20
251415 —2 REC 0800-0850 M, Arch 15
152296 —3 REC 0905-0955 M, Arch 20
947027 —4 REC 0905-0955 M, Arch 30
148113 —5 REC 0800-0850 W, Arch 20
046919 —6 REC 0905-0955 W, Arch 20
349980 —7 REC 0800-0850 F, Arch 20
647538 —8 REC 0905-0955 F, Arch 20

5131 Directed Studies in Landscape Architecture History and Theory (prereq LA student or Δ) (A-F only)
648978 1-6 cr

5133 Directed Studies in Landscape Architecture Technology (prereq LA student, Δ) (A-F only)
050386 1-6 cr

5134 Directed Studies in Emerging Areas for Landscape Architecture (prereq LA student, Δ) (A-F only)
047987 1-6 cr

5200 Directed Studies in Landscape Architecture Design (§5132; prereq #)
248403 1-6 cr

R 5202 Landscape Ecology (prereq one course in ecology or #) (A-F only)
747689 0945-1100 TTh, HodsonH 495, Galatowitsch S, 3 cr (StP).

5213 Making Landscape Types (prereq 5211) (A-F only)
★LECT 1430-1830 MWF, Arch 35, Sykes R
174100 —1 LAB 1400-1800 MWF, Arch 240, Sykes R, 6 cr

R 5562 Introduction to Geographic Information Systems (§Geog 5562, prereq jr, sr, or grad maj in Geog or LA or #) (A-F only)
★LECT 1800-1915 TTh, AndH 230, Veregin H
844623 —1 LAB 1430-1630 T, BlegH 455, 4 cr
845982 —2 LAB 1930-2130 T, BlegH 455, 4 cr
051179 —3 LAB 1115-1310 W, BlegH 455, 4 cr
246943 —4 LAB 1830-2030 W, BlegH 455, 4 cr
451946 —5 LAB 1430-1630 Th, BlegH 455, 4 cr
374099 —6 LAB 1930-2130 Th, BlegH 455, 4 cr

5621 Professional Practice (§5226; prereq terminal yr of study) (A-F only)
843794 1800-2000 TTh, Arch 10, Murphy R, 4 cr

8111 Directed Studio in Landscape Architecture (prereq 8222) (A-F only)
352555 6 cr

8200 Landscape Architectural Research Issues and Methods (§8281, 8282; prereq LA student or #) (A-F only)
043549 0905-1130 MW, Arch 45, Pitt D, 5 cr

8222 The Landscape Architectural Design of Community Places (§3092; prereq 8221, LA student or #) (A-F only)
★LECT 1430-1830 MWF, Arch 40, Martin R
647152 —1 LAB 1400-1800 MWF, 1425Univ, Martin R, 6 cr

8232 Design of Recreational Landscapes (§5105; prereq 8223) (A-F only)
★LECT 1430-1830 MWF, Arch 50, Abbott D
351213 —1 LAB 1400-1800 MWF, Arch 210, Abbott D, 6 cr

8233 Special Problems: Design Proposal (prereq 8223 or 8231) (A-F only)
844864 1010-1205 F, Arch 15, Martin R, 2 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

8500 Landscape Architecture Research Project (prereq 8283 or #) (A-F only)
747207 1-6 cr

8600 Landscape Architecture Education (prereq M.L.A. candidate or #) (A-F only)
142974 1-4 cr

8777 Thesis Credits: Masters
647068 1-16 cr

LANGUAGE, TEACHING, AND TECHNOLOGY (LgTT)
Liberal Arts

R 5101 Technology in the Language Classroom (prereq Δ)
973465 1615-1730 MW, FolH 208, Stenson N, Rowekamp J, 3 cr

LATIN (Lat)
Classical and Near Eastern Studies
Liberal Arts

R 1102 Beginning Latin (prereq 1101)
952499 —1 0905-0955 MTWThF, NichH 209A, 5 cr
450022 —2 1010-1100 MTWThF, FolH 344, 5 cr
149164 —3 1325-1415 MTWThF, VinH 211, 5 cr

1122H Honors Course: Beginning Latin (prereq 1111H)
352216 1010-1100 MTWThF, FolH 326, Sheets G, 5 cr

3052 Accelerated Beginning Latin (prereq 3051)
841981 1010-1100 MTWThF, FolH 326, Sheets G, 5 cr

3105 Latin Poetry (prereq 1103 or 1104 or Δ)
346397 —1 1115-1205 MWF, FolH 326, Krevans N, 5 cr
043695 —2 1220-1310 MWF, FolH 326, Sonkowsky R, 5 cr

3440 Advanced Undergraduate Latin: Later Latin Authors (prereq 3106 or 4 yrs high school Latin or Δ)
372269 1245-1400 TTh, FolH 50, Nicholson O, 5 cr

3951 Major Project (prereq Greek-Latin or Latin maj, three 3xxx courses in Latin or #) (A-F only)
642789 5 cr

3960H Honors Tutorial (prereq Δ)
944161 5 cr

3970 Directed Studies (prereq #, Δ, ❑)
843021 1-5 cr

R 5038 Oral Interpretation of Classical Latin Literature (prereq 2 yrs Latin, Th 3801 or Th 3321 or #)
772270 1325-1625 F, FolH 315, Sonkowsky R, 5 cr

5715 Introduction to Classical Philology (§Grk 5715)
572271 1220-1310 MWF, FolH 50, Sheets G, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
148595 1-5 cr

5980 Directed Instruction (prereq #, Δ, CLA approval)
351275 ar cr

5990 Directed Research (prereq #, Δ, CLA approval)
243475 ar cr

R 8120 Latin Text Course (prereq 3052 or Δ, non-maj)
248465 —1 1115-1205 MWF, FolH 326, Krevans N, 4 cr
051473 —2 1220-1310 MWF, FolH 326, Sonkowsky R, 4 cr
873877 —3 1245-1400 TTh, FolH 50, Nicholson O, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
943110 1-18 cr

8777 Thesis Credits: Masters
344164 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
346173 1-36 cr

LATIN AMERICAN STUDIES (LAS)
Area Studies Programs
Liberal Arts

3121 Latin America (§Geog 3121)
871563 1010-1100 MWF, BlegH 250, Weil C, 4 cr

R 3222 Peoples and Cultures of Middle America (§Anth 3222) (A-F only)
671564 0945-1100 TTh, FordH 130, Ingham J, 4 cr

R 3402 Survey of Latin American History: 1800-1929 (§Hist 3402) (Hist; IP)
★LECT 0945-1100 TTh, AndH 350, McCaa R
152556 —1 REC 0800-0850 M, BlegH 420, 4 cr
549251 —2 REC 1115-1205 T, BlegH 140, 4 cr
251656 —3 REC 1010-1100 W, HHHCtr 30, 4 cr
150421 —4 REC 1220-1310 W, BlegH 250, 4 cr
341734 —5 REC 1220-1310 Th, BlegH 105, 4 cr
843097 —6 REC 1325-1415 Th, AndH 350, 4 cr

3441 The Spanish-Mexican Borderlands and the Chicano Experience to 1900 (§Chic 3441, Hist 3441)
471565 1115-1230 TTh, AndH 330, Valdes D, 4 cr

R 5903 Latin American History (§Hist 5903; prereq reading knowledge of Spanish, #)
271566 1325-1520 T, ScottH 2, Valdes D, 4 cr

LAW SCHOOL (Law)

5003 Legal Research (prereq ❑)
★LECT 0800-0850 F, Law 65, Cooper L, 1 cr
152721 —1 REC
648012 —2 REC
146474 —3 REC
★LECT 0800-0850 F, Law 55, Fellows M L, 1 cr
251592 —4 REC
152668 —5 REC
142084 —6 REC
★LECT 0800-0850 F, Law 15, Chomsky C, 1 cr
145803 —7 REC
744744 —8 REC
644767 —9 REC
★LECT 0800-0850 WF, Law 35, Sherry S, 1 cr
141789 —10 REC
846081 —11 REC
043258 —12 REC
★LECT 0800-0850 F, Law 45, Chen J, 1 cr
644896 —13 REC
643702 —14 REC
750463 —15 REC

5004 Property I (prereq ❑)
550609 —1 1430-1520 MTWTh, Law 40, Younger J, 4 cr
248997 —2 1430-1520 MTWTh, Law 50, Powell J, 4 cr
473896 —3 1430-1520 MTWTh, Law 55, Burkhart A, 4 cr

5006 Procedure (prereq ❑)
351566 —1 0845-1000 TTh, Law 50, Sullivan, 3 cr
044104 —2 0905-0955 TThF, Law 40, Paulsen M, 3 cr
352748 —3 0800-0850 MTW, Law 65, Cooper L, 3 cr

5007 Conatitutional Law (prereq ❑)
344942 —1 1115-1205 MW, Law 65, Paulsen M, 2 cr
652528 —2 1115-1205 MW, Law 30, Morrison F, 2 cr
947593 —3 1115-1205 MW, Law 20, Chen J, 2 cr

5008 Legislation (prereq ❑)
043129 —1 0905-0955 MW, Law 65, Chen J, 2 cr
049979 —2 0905-0955 MW, Law 40, Schoettle F P, 2 cr
847537 —3 0905-0955 MW, Law 50, Frickey P, 2 cr

5038 Maynard Pirsig Moot Court Director (prereq ❑)
452255 Olson, ar cr

5039 Maynard Pirsig Moot Research Director (prereq ❑)
650200 Olson, ar cr

5040 Child Advocacy Clinic (prereq ❑)
149690 1530-1730 W, Law 1, Gerval J, 2 cr

5041 Bankruptcy Clinic Director (prereq ❑)
144059 Kampf, 2 cr

5042 Intellectual Property Competition Team (prereq ❑)
448352 Olson A, 1 cr

5050 Commercial Paper (prereq ❑)
950624 1010-1100 MTW, Law 50, Adams E, 3 cr

5051 Business Associations (prereq ❑)
445970 1010-1100 MTWTh, Law 65, Morris R, 4 cr

5052 Sales (prereq ❑)
341765 1010-1100 MTW, Law 40, Chomsky C, 3 cr

5054 Corporation II (Corporate Finance) (prereq ❑)
552571 0905-0955 MT, Law 20, Matheson J, 2 cr

5055 Maynard Pirsig Moot Court (prereq ❑)
★LECT 1115-1205 F, 1325-1415 F, Law 25, 30, 1 cr
543370 —1 REC
448495 —2 REC
151559 —3 REC
147289 —4 REC
646308 —5 REC
251317 —6 REC
252726 —7 REC

5056 Civil Clinic (prereq ❑) (A-F only)
549346 —1 1535-1730 W, Law 15, Befort S, Warren C, others, ar cr
246408 —2 1535-1730 W, Law 15, Befort S, Warren C, others, ar cr

5057 Judicial Externship (prereq ❑)
150041 1535-1730 F, Law 65, Chomsky C, ar cr

5058 Misdemeanor Prosecution (prereq ❑)
244934 1535-1730 MW, Law 35, Costello M, Simon S, 2 cr

5059 Seminar: Appellate Brief Writing (Criminal Appeals Clinic) (prereq ❑)
843830 1535-1730 F, Law 45, Middlebrook C, 2 cr

5060 Legal Aid to Minnesota Prisoners (prereq ❑) (A-F only)
349283 —1 1535-1730 T, Law 473, Peterson J, Marron P, 2 cr
447864 —2 1535-1730 T, Law 473, Peterson J, Marron P, ar cr

5065 Seminar: Misdemeanor Defense (prereq ❑)
452532 1535-1730 MW, Law 35, Costello M, Simon S, 2 cr

5066 Moot Court (National) Team (prereq ❑)
345699 Clary B, ar cr

5067 National Moot Court Directors (prereq ❑)
048122 Clary B, 1-2 cr

5068 International Moot Court Team (prereq ❑)
446973 Page D, ar cr

5069 International Moot Court Director (prereq ❑)
946475 Page D, ar cr

5070 Civil Clinic Directors (prereq ❑)
543174 1535-1730 M, Law 3, Befort S, ar cr

5071 Misdemeanor Prosecution/Defense (Legal Aid II) Clinical Directors (prereq ❑) (S-N only)
643814 1535-1730 T, Law 3, Simon S, ar cr

5072 Legal Assistance to Minnesota Prisoners (LAMP) (Legal Aid IV) Clinical Directors (prereq ❑) (S-N only)
544910 1535-1730 M, Law 1, Peterson J, Marron P, ar cr

5073 Tax Clinic Directors (prereq ❑) (S-N only)
151407 Sedo K, ar cr

5075 Civil Rights Moot Court (prereq ❑)
548407 Warren C, ar cr

5076 Civil Rights Moot Court Directors (prereq ❑)
545815 Warren C, 1 cr

5077 Law and Inequality Journal Staff (prereq ❑) (S-N only)
750270 Powell J, 1-2 cr

5078 Law and Inequality Journal Directors (prereq ❑) (S-N only)
548469 —1 Powell J, 3 cr
149262 —2 2 cr (Associate Director)

5079 Wagner Moot Court Directors (prereq ❑)
749622 Cooper L, ar cr

5080 Wagner Moot Court Team (prereq ❑)
951613 Cooper L, 1 cr

5081 Public Interest Clinic (prereq ❑)
146059 1535-1730 W, Law 65, Befort S, 2 cr

5082 Environmental Law Moot Court Competition Team (prereq ❑)
847196 Reich S, 1 cr

5083 Environmental Law Moot Court (prereq ❑)
143971 Reich S, 1 cr

5084 Environmental Moot Court Director (prereq ❑)
749426 Reich S, 1-2 cr

5086 ABA Competition Team (prereq ❑)
048296 Reich S, 1 cr

5087 Environmental Law Managing Director (prereq ❑)
351180 Reich S, ar cr

5088 Intellectual Property (prereq ❑)
050226 Reich S, 1 cr

5089 Intellectual Property Directors (prereq ❑)
051537 Reich S, 1-2 cr

5090 ABA Director (prereq ❑)
643635 Reich S, 1-2 cr

5091 ABA Managing Director (prereq ❑)
543692 Reich S, 1 cr

5092 Bankruptcy Clinic (prereq ❑)
941633 Kampf, 2 cr

5093 Maynard Pirsig Moot Court Managing Director (prereq ❑)
151374 Reich S, ar cr

5094 Wagner Moot Court Competition Team (prereq ❑)
748616 Cooper L, 1 cr

5095 National Moot Court Competition Team (prereq ❑)
147115 Clary B, 1 cr

5096 Civil Rights Moot Court Competition Team (prereq ❑)
047519 Warren C, 1 cr

5100 Taxation I (prereq ❑)
152470 —1 0800-0850 WThF, Law 40, Brown K, 3 cr
873894 —2 1325-1415 MTW, Law 45, Schoettle F P, 3 cr

5101 Taxation II (prereq ❑)
151083 1325-1415 ThF, Law 20, Kilbourn W, 2 cr

5104 Business Planning (prereq ❑)
674772 1535-1730 T, Law 45, Culhane, Chaput, 2 cr

5110 Securities Regulation II (prereq ❑)
344939 0800-0850 MTW, Law 30, Ayotte, Lederman, 3 cr

5112 Accounting for Lawyers (prereq ❑) (S-N only)
548004 1010-1100 WThF, Law 20, Kilbourn W D, 3 cr

5113 State and Local Tax (prereq ❑) (A-F only)
173892 1115-1205 MTW, Law 45, Schoettle F P, 3 cr

5114 Partnership Tax (prereq ❑)
349672 1325-1415 ThF, 1430-1520 F, Law 45, Burke K, 3 cr

5116 Lawyering Process (prereq ❑)
144747 1430-1520 M, 1535-1730 Th, Law 45, Landsman M, 3 cr

5122 Immigration (prereq ❑)
443989 1535-1730 T, 0905-1100 F, Law 30, Danielson L, 3 cr

5151 Estate Planning (prereq ❑)
442521 0800-0850 MT, Law 55, 3 cr

5153 Wills and Trusts (prereq ❑)
573887 0905-0955 MTWTh, Law 30, Fellows M L, 4 cr

5200 Remedies (prereq ❑)
073893 1115-1205 WThF, Law 55, Cound J, 3 cr

5201 Land Use Planning (prereq ❑)
973885 3 cr

5202 Conflicts (prereq ❑)
673895 1325-1415 MTW, Law 15, Cooper, 3 cr

5205 Criminal Law (prereq ❑)
148331 —1 1325-1415 TWTh, Law 30, Bryden D, 3 cr
550514 —2 1325-1415 TWTh, Law 40, Tonry M, 3 cr
151553 —3 1325-1415 TWTh, Law 65, Fellows M, 3 cr

5208 State and Local Government (prereq ❑)
373888 0905-0955 MTW, Law 55, Morrison F, 3 cr

5212 Federal Jurisdiction (prereq ❑)
645384 1010-1100 MTW, Law 55, Sherry S, 3 cr

5213 Modern Real Estate (prereq ❑)
143851 1115-1205 MTW, Law 50, Burkhart A, 3 cr

5217 Complex Litigation (prereq ❑)
273897 1430-1520 TWTh, Law 45, Cound J, 3 cr

5218 Criminal Procedures (prereq ❑)
773886 0800-0850 MWF, Law 20, Hopeman J, 3 cr

5219 Evidence (prereq ❑)
641934 1010-1100 MTWTh, Law 30, Marshall A, 4 cr

5236 Indian Law (prereq 5007, 5606, ❑)
173898 1430-1520 MTW, Law 35, Frickey P, 3 cr

5240 Civil Liberties and Freedom of Speech (prereq ❑)
573890 Sherry S, 3 cr

5400 Seminar: Entertainment (prereq ❑)
149519 1600-1800 Th, Law 7, Litsey, 2 cr

5600 Professional Responsibility (prereq ❑)
542882 1430-1520 MW, Law 20, Marshall A, 2 cr

5604 Family Law (prereq ❑)
845772 1115-1205 MTW, Law 40, Younger J, 3 cr

5605 Health Law (prereq ❑)
047858 1430-1520 MTW, Law 65, Wolf S, 3 cr

5606 Administrative Law (prereq ❑)
547998 1325-1415 MTW, Law 50, Gifford D, 3 cr

5608 Independent Research (prereq ❑)
641674 —1 ar cr
946072 —2 2 cr

5609 Law Review (prereq ❑) (S-N only)
145798 —1 Frickey P, 3 cr (Editors)
843472 —2 Frickey P, 2 cr (Associate Editors)
952079 —3 Frickey P, 1 cr (Staff)

5615 Jurisprudence (prereq ❑)
544535 1010-1205 Th, Law 475, powell j, 2 cr

5618 Trial Practice (prereq ❑)
847182 —1 1800-2100 M, Law 170, Flinn C, 3 cr
643473 —2 1800-2100 M, Law 180, Solum R, 3 cr
841415 —3 1800-2100 T, Law 170, Levy R, 3 cr
773905 —4 1800-2100 W, Law 170, Burke, 3 cr

5632 Employment Law (prereq ❑)
744940 1430-1520 MTW, Law 30, Befort S, 3 cr

5641 Minnesota Journal of Global Trade Editors (prereq ❑)
641626 Gifford D, 3 cr

5642 Minnesota Journal of Global Trade (prereq ❑)
348473 Gifford D, 1-2 cr

5800 Seminar: International Contracts (prereq ❑)
141596 1430-1730 Th, Law 170, Hudec R, 3 cr

5805 Law and Violence Against Women Clinic (prereq ❑)
143364 1535-1730 M, Law 45, Balos B, 2 cr

5808 Sem: Child, State ¶ Law (prereq ❑)
973899 1535-1730 M, Law 475, Levy R, 2 cr

5825 Seminar: Divorce Negotiation (prereq ❑) (A-F only)
450313 1535-1730 W, Law 473, Levy R, Dennis S, others, 3 cr

5828 Seminar: Expository Write (prereq ❑)
241967 1010-1100 TW, Law 45, Bryden D, 2 cr

5832 Computer Applications (prereq ❑)
173903 1535-1730 W, Law 475, Howland J, 2 cr

5840 Seminar: Anti-Trust (prereq ❑)
049528 1535-1730 W, Law 45, Gifford D, 2 cr

5842 Immigration/Human Rights Clinic (prereq ❑)
152282 1535-1730 W, Law 55, Ellingson K, 2 cr

5846 Philosophy of Punishment (prereq ❑)
646695 1535-1730 Th, Law 35, Tonry M, 2 cr

5850 Seminar: Advanced Criminal Law (prereq ❑)
744534 1535-1730 T, Law 170, Noel F, 2 cr

5851 Advanced Legal Research Seminar (prereq ❑) (A-F only)
044636 1535-1730 T, Law 65, Jackson G, 2 cr

5857 Seminar: Merge and Acquisitions (prereq ❑) (A-F only)
344195 1535-1730 Th, Law 471, Kilbourn W D, Brown K, 2 cr

5858 Seminar: Closely Held Corporation (prereq ❑)
752116 1535-1730 M, Law 473, Matheson J, 2 cr

5859 Seminar: Equality (prereq ❑)
941342 1535-1730 T, Law 55, Anderson, 2 cr

5864 Seminar: Precedent (prereq ❑)
673900 1535-1730 T, Law 35, Burstein, Rolnick, 2 cr

5865 Alternate Computer System Seminar (prereq ❑)
973904 1535-1730 W, Law 471, Chomsky C, 2 cr

5868 Seminar: Business/Environmental Law (prereq ❑)
142523 1535-1730 W, Law 5, Harper, 2 cr

5870 Seminar: Constitutional Litigation (prereq ❑)
050968 1535-1730 W, Law 3, Adams, 2 cr

5874 Seminar: Taxation (prereq ❑)
941289 1600-1800 Th, Law 475, Burke, 3 cr

5879 Seminar: Mental Health (prereq ❑)
273902 1535-1730 T, Law 475, Segal, 2 cr

5885 Advanced Environmental Law (prereq ❑)
248238 1535-1730 Th, Law 473, Nauen C, 2 cr

5894 Sentencing Policy Workshop (prereq ❑)
046032 Frase R, Levy R, 2 cr

5900 Industrial Policy (prereq ❑)
643909 1535-1730 M, Law 471, Chen J, Gifford D, 2 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

LEARNING AND ACADEMIC SKILLS (LASk)
Liberal Arts

R 1001 Becoming a Master Student
242780 —1 0905-0955 MW, TerH, 2 cr (Territorial Hall Classroom)
646423 —2 0905-0955 MW, FronH, 2 cr (Frontier Hall Classroom)
341474 —3 1010-1100 MW, EddyH 20, Wark D, 2 cr (study skills using self-hypnosis)
148628 —4 1115-1205 MW, EddyH 102, 2 cr
147437 —5 1220-1310 MW, EddyH 102, 2 cr
842709 —6 1325-1415 MW, EddyH 102, 2 cr
047309 —7 1430-1520 MW, EddyH 102, 2 cr
345881 —8 1010-1100 TTh, EddyH 102, 2 cr
646387 —9 1115-1205 TTh, EddyH 102, 2 cr
143467 —10 1220-1310 TTh, EddyH 102, 2 cr
145591 —11 1325-1415 TTh, EddyH 102, 2 cr
150922 —12 1430-1520 TTh, EddyH 102, 2 cr

R 1101 Academic Success (prereq #) (S-N only)
446505 1 cr (individualized study for academic probation students; go to EddyH 104 for info before 1st day of qtr)

LINGUISTICS (Ling)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 1005 Language and Society (IP; CD)
952843 1325-1415 MWF, FordH 120, 4 cr

R 3001 Introduction to Linguistics (§5001) (SSci)
★LECT 1010-1100 MTW, Phys 166, Hegarty M
842712 —1 REC 1010-1100 Th, NichH 207, 5 cr
647135 —2 REC 1010-1100 Th, LindH 320, 5 cr
043745 —3 REC 1010-1100 F, FolH 334, 5 cr
142439 —4 REC 1010-1100 F, FolH 38, 5 cr

R 3052H Honors Course: Linguistics (prereq 3051H)
146174 4 cr

R 3970 Directed Studies (prereq linguistics maj, #, Δ, U)
243234 1-5 cr

R 3971 Senior Project (prereq #) (S-N only)
642047 1 cr

R 5002 Linguistic Analysis (§5201, 5302; prereq 3001 or 5001 or #)
042983 1325-1415 MWF, FolH 326, Stenson N, 4 cr

R 5201 Introduction to Syntax (prereq 3001 or 5001 or #)
349462 1115-1230 TTh, FolH 50, Hegarty M, 4 cr

R 5302 Introduction to Phonology (prereq 3301 or 5301 or #)
352068 1220-1310 MWF, FolH 312, Stemberger J, 4 cr

R 5702 Second-Language Acquisition (prereq 5701 or #)
046404 1245-1400 TTh, Phys 143, Tarone E, 4 cr

R 5711 Field Methods in Linguistics (prereq #)
574019 1115-1230 TTh, FolH 326, 1115-1205 F, FolH 344, Stemberger J, 4 cr

R 5741 Linguistic Description of Modern English (prereq 3001 or 5001 or #)
746378 0945-1100 TTh, FolH 50, Downing B, 4 cr

R 5752 Field Research in Spoken Language (§Spch 5462; prereq Spch 5461 or 5751, or #)
972011 1325-1520 MW, FolH 36, Sheldon A, 4 cr

R 5970 Directed Studies (prereq linguistics or ESL maj, #, Δ, CLA approval)
145204 1-5 cr

R 8211 Formal Semantics of Natural Language (prereq 5011 or Phil 5201 or #)
772012 1115-1310 MWF, FordH 50, Kac M, 4 cr

R 8500 Seminar: Topics in Linguistics
974020 1430-1625 T, FolH 334, Gundel J, 4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
047908 1-18 cr

R 8777 Thesis Credits: Masters
147521 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
251091 1-36 cr

R 8900 Independent Study (prereq Ling maj, #)
752357 1-5 cr

LOGISTICS MANAGEMENT (LM)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3000 Introduction to Logistics Management (prereq Econ 1101 or equiv) (A-F only)
045804 1010-1155 TTh, HHHCtr 30, Harper D, 4 cr

8990 Readings in Logistics Management (prereq consent of advisor, #, grad SMgt approval) (A-F only)
447976 ar cr

8995 Graduate Research in Logistics Management (prereq grad SMgt approval) (A-F only)
543983 ar cr

MANAGEMENT (Mgmt)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3001 Fundamentals of Management (§8001) (restricted to CSOM soph preferred admits) (A-F only)
071951 —1 0905-1100 MW, AndH 370, Albert S, 4 cr
871952 —2 1220-1415 MW, BlegH 145, Albert S, 4 cr

R 3004 Business Policy: Strategy Formulation and Implementation (prereq sr, completion of business core courses or equiv of final core course) (A-F only)
241628 —1 0800-1010 MW, BlegH 335, Zaheer A, 5 cr
341782 —2 1010-1220 TTh, BlegH 335, Shukla, 5 cr
552439 —3 1325-1535 TTh, AndH 310, Shukla, 5 cr

R 8032 International and Cooperative Strategies (prereq grad mgmt stu or grad SMgt approval, 8031) (A-F only)
150010 —1 0800-0945 TTh, BlegH 335, Murtha T, 4 cr
942359 —2 1325-1510 TTh, BlegH 335, Murtha T, 4 cr

R 8201 Foundations of Business-Government-Society (prereq PhD student or grad SMgt approval)
671953 1325-1640 M, HHHCtr 30, Marcus A, 4 cr

R 8303 Organizational Research Seminar (prereq PhD stu, #)
774021 1325-1640 T, BlegH 105, Rulke D, 4 cr

R 8403 Strategic Management Research Seminar (prereq PhD student or grad SMgt approval)
471954 1325-1640 W, HHHCtr 30, Srinivasan S, 4 cr

R 8990 Readings in Management Theory and Administration (prereq 2nd yr grad stu, requisite intro courses, consent of adviser, #, grad SMgt approval)
542025 —1 ar cr

R 8995 Graduate Research in Management Theory and Administration (prereq 2nd yr grad stu, requisite intro courses, consent of adviser, #, grad SMgt approval)
246005 ar cr

MANAGEMENT OF TECHNOLOGY (MOT)
Management and Technology

8111 Marketing Management in Technology-Based Organizations (§MBA 8045; prereq MOT stu) (A-F only)
151343 0800-1145 FS, WBOB 150, Roering K, 4 cr

R 8132 Quality Control and Management (§IEOR 5030; prereq MOT stu) (A-F only)
743819 1220-1620 FS, WBOB 150, Dooley K, 4 cr (Jan 3-Mar 15)

8133 Communications in a Technical Environment (!8133; prereq MOT stu) (A-F only)
850115 0800-1145 FS, WBOB 150, Bell M, 4 cr

8231 Managing Information Resources in a Technology-Based Organization (§IDSc 8101; prereq MOT stu) (A-F only)
444284 1115-1600 FS, WBOB 150, Chervany N, 3 cr (alt F, S, Feb 15-Mar 8)

8233 Strategic Technology Management (prereq MOT stu) (A-F only)
144997 1115-1600 FS, WBOB 150, Chakravarthy B, 4 cr

R 8910 Corporate Responsibility (prereq MOT stu) (S-N only)
171634 0800-1630 FS, WBOB 150, Maitland I, 2 cr

MARKETING (Mktg)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3000 Principles of Marketing (prereq Econ 1101 or equiv) (A-F only)
552294 —1 0800-0945 MW, BlegH 255, Bonner J, 4 cr
843200 —2 1535-1720 MW, BlegH 105, Eckhardt G, 4 cr
052705 —3 1010-1155 TTh, BlegH 205, Rudelius W, 4 cr

R 3010 Marketing Research (prereq 3000, OMS 1020/BA 1550 or equiv)
445936 1010-1155 TTh, BlegH 225, Stone L, 4 cr

R 3040 Buyer Behavior (prereq 3000)
271955 1010-1155 MW, BlegH 240, Rao A, 4 cr

R 3050 Marketing Communications (prereq 3000)
171956 1535-1720 MW, BlegH 220, Ritson M, 4 cr

R 3060 Marketing Channels and Distribution (prereq 3000)
971957 1325-1510 TTh, BlegH 145, Beier F, 4 cr

R 3080 Marketing Strategy (§3020; prereq 3000, sr status recommended)
250829 1535-1720 TTh, BlegH 420, Hansen R, 4 cr

R 8055 Consumer Behavior (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
771958 1535-1720 MW, BlegH 420, Rao A, 4 cr

R 8060 Distribution Systems (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
550044 1730-2100 M, BlegH 330, John G, 4 cr

R 8074 Product Policy (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
243427 1730-2100 Th, BlegH 415, Shocker A, 4 cr

R 8078 Marketing Communications (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
571959 1010-1155 MW, BlegH 230, Ritson M, 4 cr

R 8080 Business-To-Business Marketing (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
971960 1730-2100 W, BlegH 230, John G, 4 cr

R 8890 Seminar: Marketing Topics (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
571962 Houston M, 4 cr (Mgmt/Econ 1275) (PhD students only)

R 8990 Readings in Marketing (prereq MBA 8045 or MBA 8210 or equiv or Δ, consent of advisor, #, grad mgmt student, grad SMgt approval)
050727 ar cr

R 8995 Graduate Research in Marketing (prereq MBA 8045 or MBA 8210 or equiv or Δ, consent of advisor, #, grad mgmt student, grad SMgt approval)
948565 ar cr

MATERIALS SCIENCE (MatS)
Chemical Engineering and Materials Science
Institute of Technology

R 3400 Mechanical Properties of Materials (prereq 2nd yr IT student)
★LECT 1325-1415 MWF, FordH 55, Weaver J
549959 —1 LAB 1430-1730 M, AmundH 410, 4 cr
642713 —2 LAB 1430-1730 W, AmundH 410, 4 cr
244271 —3 LAB 1430-1730 F, AmundH 410, 4 cr

R 3600H Introduction to Materials Science, Honors (prereq selection for IT honors program or consent of IT honors office)
★LECT 0800-0850 MWF, AmundH 116, Wentzcovitch R
446083 —80 REC 0800-0850 Th, AmundH 120, 4 cr
247204 —81 REC 1220-1310 Th, AmundH 116, 4 cr

R 5012 Introduction to Dislocations and Physical Metallurgy (prereq upper division IT, 3400, 5011, AEM 3016 or #)
949926 1115-1205 MTWThF, AmundH 158, Gerberich W, 4 cr

R 5101 Thermodynamics of Solids (prereq Chem 5534 or #)
248336 1010-1100 MTWF, AmundH 240, Shores D, 4 cr

R 5202 X-Ray Structural Analysis (prereq upper divison IT, 5011 or #)
★LECT 1325-1520 MF, AmundH 124, Ward M
351485 —1 LAB 1430-1730 T, ShepLab 320, 4 cr
943351 —2 LAB 1430-1730 W, ShepLab 320, 4 cr
943253 —3 LAB 1430-1730 Th, ShepLab 320, 4 cr

R 5411 Materials Design (prereq 5012, 5013, 5101, 5200)
746669 0905-0955 MTWF, AmundH 124, Sivertsen J, 4 cr

R 5481 Special Problems in Physical Metallurgy and Materials Science (prereq sr)
448934 1010-1205 TTh, AmundH 104, Francis L, 3 cr

R 5482 Special Problems in Physical Metallurgy and Materials Science (prereq sr)
044233 ar cr

R 5483 Special Problems in Physical Metallurgy and Materials Science (prereq sr)
649922 ar cr

R 5500 Senior Design Project (prereq sr material science maj)
851765 1325-1415 Th, AmundH 162, 2 cr

R 5620 Polymer Processing and their Composites (prereq heat transfer and fluid mechanics or #)
★LECT 1325-1500 MW, AmundH 120, Ramalingam S, Macosko C
145297 —1 LAB 1535-1835 W, MechE 50, 4 cr
446214 —2 LAB 1325-1625 Th, MechE 50, 4 cr
349252 —3 LAB 1325-1625 F, MechE 50, 4 cr

R 5630 Polymer Physical Properties (prereq 3400 or 5011 or 5610 or Chem 5610 or #)
548777 1220-1310 MWF, AmundH 156, Tirrell M, 3 cr

R 8210 Structure-Property Relationships: Mechanical and Microelectronic (prereq #)
142092 —1 1430-1625 TTh, EE/CSci 3125, Gerberich W, 3 cr

8471 Seminar: Materials Science and Engineering (prereq 8470) (S-N only)
445130 1325-1520 TTh, AmundH B75, 1 cr

8481 Selected Topics in Materials Science and Engineering (prereq 8480)
648074 1430-1520 MWF, AmundH 116, Palmstrom C, 3 cr

R 8520 Electron Diffraction, Electron Microscopy
143937 1535-1730 MW, AmundH 120, Carter C, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
751435 1-18 cr

8777 Thesis Credits: Masters
048153 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
649466 1-36 cr

MATHEMATICS (Math)
Institute of Technology

R 1001 Excursions in Mathematics (prereq 3 yrs high schl math, placement exam or GC 0631 with grade of C or better) (Math)
★LECT 1115-1205 MWF, Arch 60
644171 —1 REC 1010-1100 TTh, VinH 206, 4 cr
342754 —2 REC 1115-1205 TTh, AmundH 120, 4 cr

R 1031 College Algebra and Probability (§1051, 1151, 1111, 1201; prereq 3 yrs high school math, plcmnt exam or GC 0631 with C or better) (Math)
★LECT 0800-0850 MWF, HckrH 210, (StP)
746896 —1 REC 0800-0850 TTh, HckrH 210, 4 cr (StP)
★LECT 1115-1205 MWF, VinH 16
843729 —2 REC 1115-1205 TTh, VinH 301, 4 cr
047388 —3 REC 1115-1205 TTh, VinH 207, 4 cr
648558 —4 REC 1220-1310 TTh, FordH 70, 4 cr
248417 —5 REC 1220-1310 TTh, FordH 60, 4 cr
★LECT 1325-1415 MWF, VinH 16
750379 —6 REC 1220-1310 TTh, FordH 40, 4 cr
150329 —7 REC 1220-1310 TTh, VinH 313, 4 cr
141713 —8 REC 1220-1415 TTh, ApH 319, Camacho D, 4 cr (TRIO stu only)
045964 —9 REC 1325-1415 TTh, AmundH 240, 4 cr
244237 —10 REC 1325-1415 TTh, EE/CSci 3125, 4 cr
★LECT 1430-1520 MWF, FordH 155
147986 —11 REC 1325-1415 TTh, MoosT 2580, 4 cr
049271 —12 REC 1325-1415 TTh, Phys 170, 4 cr
249390 —13 REC 1430-1520 TTh, SmithH 100, 4 cr
341670 —14 REC 1430-1520 TTh, MoosT 2580, 4 cr

R 1038 College Algebra and Probability Submodule (§1031, 1111; prereq 1051)
943401 2 cr

R 1051 Precalculus I (§1031, 1111, 1201, 1008, 1151; prereq 3 yrs hi sch math, placemnt exam or GC 0631 C or bet)
★LECT 0905-0955 MWF, FordH 55
046869 —1 REC 0800-0850 TTh, VinH 206, 4 cr
150301 —2 REC 0800-0850 TTh, VinH 364, 4 cr
549136 —3 REC 0800-0955 TTh, ApH 223, Camacho D, 4 cr (TRIO stu only)
851295 —4 REC 0905-0955 TTh, AmundH B75, 4 cr
348182 —5 REC 0905-0955 TTh, Phys 133, 4 cr
★LECT 1430-1520 MWF, Arch 55
146958 —6 REC 1430-1520 TTh, Arch 10, 4 cr
150290 —7 REC 1430-1520 TTh, Phys 133, 4 cr
043678 —8 REC 1535-1625 TTh, NichH 109, 4 cr
451980 —9 REC 1535-1625 TTh, NichH 216, 4 cr

R 1058 Precalculus I Submodule (§1051, 1151, 1111, 1201, 1008; prereq 1031)
449677 2 cr

R 1131 Finite Mathematics (prereq 3 1/2 yrs high school math or grade of C or better in 1031 or 1181, pre-bus or soc and behav sci students) (Math)
★LECT 1430-1520 MWF, FordH 115
751239 —1 REC 1430-1520 TTh, VinH 20, 5 cr
750639 —2 REC 1535-1625 TTh, WulH 140, 5 cr

R 1142 Short Calculus (§1211, 1411H; prereq 3 1/2 yrs hs math or grade of C or better in 1031 or 1181 or 1151) (Math)
★LECT 0800-0850 MWF, McNH 197, (StP)
548634 —1 REC 0800-0850 TTh, McNH 198, 5 cr (StP)
★LECT 1325-1415 MWF, Arch 35
672391 —2 REC 1325-1415 TTh, SmithH 331, 5 cr
949439 —3 REC 1325-1415 TTh, SmithH 100, 5 cr
541456 —4 REC 1430-1520 TTh, SciCB 325, 5 cr
545829 —5 REC 1430-1520 TTh, OwreH 2230, 5 cr
★LECT 1430-1520 MWF, FordH 55
843262 —6 REC 1430-1520 TTh, AmundH 240, 5 cr
847103 —7 REC 1430-1520 TTh, FordH 155, 5 cr
343368 —8 REC 1535-1625 TTh, Arch 40, 5 cr
347873 —9 REC 1535-1625 TTh, Arch 10, 5 cr

R 1151 Precalculus II (§1111, 1201, 1008; prereq 3 1/2 yrs hi sch math, plcmnt exam or 1051 grade of C or better) (Math)
★LECT 0905-0955 MWF, OwreH 2230
252838 —1 REC 0905-0955 TTh, VinH 6, 4 cr
049934 —2 REC 0905-0955 TTh, NichH 207, 4 cr
347310 —3 REC 1010-1100 TTh, VinH 6, 4 cr
344973 —4 REC 1010-1100 TTh, VinH 2, 4 cr
★LECT 1220-1310 MWF, SciCB 125
151410 —5 REC 1220-1310 TTh, VinH 311, 4 cr
643411 —6 REC 1220-1310 TTh, VinH 20, 4 cr
150306 —7 REC 1220-1310 TTh, VinH 211, 4 cr
144005 —8 REC 1325-1415 TTh, FordH 285, 4 cr
542767 —9 REC 1325-1415 TTh, FordH 130, 4 cr
274046 —10 REC 1325-1415 TTh, VinH 16, 4 cr

Symbols

- **R** The letter R preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 1251 One-Variable Differential and Integral Calculus I (§1142, 1451H, 1211, 1411H; prereq 4 yrs high schl math incl trig, or C grade or better in 1201 or 1008, 1111, or equiv)
★LECT 0905-0955 MWF, Arch 35
446598 —1 REC 0905-0955 TTh, VinH 2, 4 cr
549069 —2 REC 0905-0955 TTh, BuH 125, 4 cr
444446 —3 REC 1010-1100 TTh, Phys 157, 4 cr
742329 —4 REC 1010-1100 TTh, VinH 209, 4 cr
★LECT 1115-1205 MWF, MoosT 2690
243640 —5 REC 1115-1205 TTh, VinH 311, 4 cr
142173 —6 REC 1115-1205 TTh, VinH 20, 4 cr
143808 —7 REC 1220-1310 TTh, VinH 113, 4 cr
251169 —8 REC 1220-1310 TTh, VinH 6, 4 cr
★LECT 1325-1415 MWF, Arch 50
141993 —9 REC 1325-1415 TTh, SmithH 231, 4 cr
347047 —10 REC 1325-1415 TTh, PillsH 110, 4 cr
345234 —11 REC 1430-1520 TTh, NichH 122, 4 cr
446388 —12 REC 1430-1520 TTh, SmithH 331, 4 cr
★LECT 1430-1520 MWF, SciCB 325
544888 —13 REC 1430-1520 TTh, VinH 211, 4 cr
451445 —14 REC 1430-1520 TTh, MechE 202, 4 cr
851331 —15 REC 1535-1625 TTh, Phys 166, 4 cr
745795 —16 REC 1535-1625 TTh, AmundH 124, 4 cr
★LECT 1535-1625 MWF, FordH 55
241631 —17 REC 1430-1520 TTh, MechE 221, 4 cr
852060 —18 REC 1430-1520 TTh, MoosT 2520, 4 cr
941647 —19 REC 1535-1625 TTh, Arch 55, 4 cr
948548 —20 REC 1535-1625 TTh, FordH 55, 4 cr

R 1252 One-Variable Differential and Integral Calculus II (§1452H, 1221, 1421H; prereq C grade or better in 1251)
★LECT 0905-0955 MWF, VinH 16, Weinberger H
150606 —1 REC 0800-0850 TTh, VinH 2, 4 cr
552201 —2 REC 0800-0850 TTh, VinH 209, 4 cr
349199 —3 REC 0905-0955 TTh, VinH 207, 4 cr
444317 —4 REC 0905-0955 TTh, VinH 113, 4 cr
★LECT 1010-1100 MWF, WullH 140
344150 —5 REC 0905-0955 TTh, VinH 211, 4 cr
941521 —6 REC 0905-0955 TTh, SciCB 375, 4 cr
951644 —7 REC 1010-1100 TTh, VinH 313, 4 cr
746901 —8 REC 1010-1100 TTh, FordH 155, 4 cr
★LECT 1115-1205 MWF, Arch 25
345461 —9 REC 1115-1205 TTh, FordH 285, 4 cr
443068 —10 REC 1115-1205 TTh, AmundH 240, 4 cr
443667 —11 REC 1220-1310 TTh, Phys 133, 4 cr
247333 —12 REC 1220-1310 TTh, AmundH 240, 4 cr
★LECT 1220-1310 MWF, Arch 50
845822 —13 REC 1220-1310 TTh, Arch 50, 4 cr
052171 —14 REC 1220-1310 TTh, VinH 209, 4 cr
150726 —15 REC 1325-1415 TTh, CivE 212, 4 cr
644025 —16 REC 1325-1520 TTh, VinH 6, 4 cr (Emerging Scholars)
★LECT 1325-1415 MWF, EE/CSci 3210, Stanton D
349543 —17 REC 1115-1205 TTh, NichH 216, 4 cr
146992 —18 REC 1115-1205 TTh, NichH 207, 4 cr
749216 —19 REC 1220-1310 TTh, BuH 125, 4 cr
144361 —20 REC 1220-1310 TTh, NichH 216, 4 cr
841852 —21 REC 1325-1415 TTh, ChDev 105, 4 cr
651668 —22 REC 1325-1415 TTh, NichH 207, 4 cr

R 1261 Calculus III (§1241, 1553H, 3551H; prereq 1252 or 1353 or equiv)
★LECT 1115-1205 MWF, FordH 155
443510 —1 REC 1115-1205 TTh, VinH 211, 4 cr
143047 —2 REC 1115-1205 TTh, VinH 113, 4 cr
051229 —3 REC 1220-1310 TTh, VinH 16, 4 cr
151293 —4 REC 1220-1310 TTh, VinH 301, 4 cr
★LECT 1325-1415 MWF, AmundH B75
451350 —5 REC 1220-1310 TTh, FordH 170, 4 cr
472392 —6 REC 1220-1310 TTh, NichH 207, 4 cr
151696 —7 REC 1325-1415 TTh, FolH 38, 4 cr
641612 —8 REC 1325-1415 TTh, AmundH 120, 4 cr
043065 —9 REC 1430-1520 TTh, FolH 340, 4 cr
174047 —10 REC 1430-1520 TTh, MechE 18, 4 cr

R 1268 Short Course: Introduction to Linear Algebra (§1261, 3221, 3142; prereq any crse in diff equations) (S-N only)
341278 1430-1520 MTWThF, VinH 1, 2 cr (1st 4 wks only)

R 1352 Calculus: Concepts, Explorations, and Applications (§1252; prereq 1351, #)
★LECT 0905-0955 TTh, Arch 35, Gray L
651895 —1 REC 0905-0955 M, FordH 150, 0905-1100 W, VinH 20, 4 cr
249776 —2 REC 0905-0955 M, VinH 1, 0905-1100 W, VinH 301, 4 cr
147706 —3 REC 1325-1415 M, FordH 150, 1325-1520 W, FordH 70, 4 cr
345556 —4 REC 1325-1415 M, VinH 1, 1325-1520 W, VinH 206, 4 cr
★LECT 1325-1415 TTh, Arch 25, Shaw D
174050 —5 REC 0905-1100 M, VinH 20, 0905-0955 W, FordH 175, 4 cr
974051 —6 REC 0905-1100 M, VinH 301, 0905-0955 W, VinH 1, 4 cr
774052 —7 REC 1325-1520 M, VinH 20, 1325-1415 W, FordH 170, 4 cr
574053 —8 REC 1325-1520 M, VinH 206, 1325-1415 W, VinH 1, 4 cr

R 1552H Honors: One-Variable Differential and Integral Calculus II (§1252, 1421H, 1221; prereq 1551H with grade of C or better, consent of IT Honors Office)
★LECT 1010-1100 MWF, Arch 60
172385 —80 REC 0905-0955 TTh, VinH 311, 4 cr
241581 —81 REC 1010-1100 TTh, VinH 311, 4 cr

R 1553H Honors: Linear and Nonlinear Analysis I (prereq 1251-1252 or 1551H-1552H or equiv, grade of C or better required to continue in sequence, consent of IT Honors Office)
★LECT 1010-1100 MWF, VinH 209
446200 —80 REC 1010-1100 TTh, VinH 364, 4 cr

R 3106 Topics in Elementary Mathematics (no cr for IT stu; prereq C or better in 3105)
272393 —1 1430-1625 TTh, FordH 130, 4 cr
774018 —2 1430-1625 TTh, FordH 285, 4 cr

R 3251 Multivariable Differential Calculus (§3211, 3311, 3521H, 3552H; prereq 1 yr calc, e.g. 1261 or 1353)
★LECT 1010-1100 MWF, VinH 16
848218 —1 REC 1010-1100 TTh, VinH 1, 4 cr
947996 —2 REC 1010-1100 TTh, VinH 113, 4 cr
448643 —3 REC 1115-1205 TTh, VinH 6, 4 cr
147916 —4 REC 1115-1205 TTh, VinH 2, 4 cr
★LECT 1220-1310 MWF, Arch 35
742752 —5 REC 1115-1205 TTh, PeikH 335, 4 cr
252144 —6 REC 1115-1205 TTh, MurH 311, 4 cr
143672 —7 REC 1220-1310 TTh, VinH 364, 4 cr
072386 —8 REC 1220-1310 TTh, PeikH 335, 4 cr
★LECT 1325-1415 MWF, MechE 18
443801 —9 REC 1325-1415 TTh, AmundH 158, 4 cr
350675 —10 REC 1325-1415 TTh, SciCB 325, 4 cr
250720 —11 REC 1430-1520 TTh, EE/CSci 3210, 4 cr
349591 —12 REC 1430-1520 TTh, Phys 170, 4 cr

R 3252 Multivariable Integral Calculus (§3311/3331 or 3211/3331 or 3551H or 3552H; prereq 1252, ¶3251)
★LECT 0905-0955 MWF, Arch 50
652352 —1 REC 0800-0850 TTh, VinH 213, 4 cr
548083 —2 REC 0800-0850 TTh, VinH 313, 4 cr
441398 —3 REC 0905-0955 TTh, SciCB 325, 4 cr
145705 —4 REC 0905-0955 TTh, VinH 16, 4 cr
★LECT 1115-1205 MWF, Arch 50
252287 —5 REC 1010-1100 TTh, VinH 16, 4 cr
144618 —6 REC 1010-1100 TTh, VinH 207, 4 cr
152301 —7 REC 1115-1205 TTh, Arch 55, 4 cr
752214 —8 REC 1115-1205 TTh, AmundH 116, 4 cr

R 3261 Differential Equations with Linear Algebra (§3221, 3321, 3531H, 3551H; prereq 1 yr calc, e.g. 1261 or 1353)
★LECT 1010-1100 MWF, Arch 50
643991 —1 REC 0905-0955 TTh, FordH 155, 4 cr
142716 —2 REC 0905-0955 TTh, Arch 50, 4 cr
450473 —3 REC 1010-1100 TTh, VinH 211, 4 cr
246487 —4 REC 1010-1100 TTh, VinH 301, 4 cr
★LECT 1220-1310 MWF, VinH 16
649144 —5 REC 1115-1205 TTh, FordH 120, 4 cr
947240 —6 REC 1115-1205 TTh, VinH 16, 4 cr
344035 —7 REC 1220-1310 TTh, VinH 207, 4 cr
752066 —8 REC 1220-1310 TTh, VinH 2, 4 cr

R 3355 Calculus Concepts, Explorations, and Applications (prereq 3354, grade of C or better to continue in sequence)
★LECT 1115-1205 WF, FordH 120
073408 —1 REC 0905-0955 T, VinH 301, 4 cr
★LAB 0905-1100 Th, LindH 1
173410 —2 REC 1115-1205 T, VinH 213, 4 cr
★LAB 1115-1310 Th, LindH 1
873412 —3 REC 1325-1415 T, VinH 20, 4 cr
★LAB 1325-1520 Th, LindH 1

R 3552H Honors: Linear and Nonlinear Analysis III (prereq 3551H with C grade or better, consent of IT Honors Office)
★LECT 1220-1310 MWF, VinH 1
741410 —80 REC 1115-1205 TTh, VinH 1, 4 cr
872387 —81 REC 1220-1310 TTh, FordH 160, 4 cr

R 5058 Actuarial Mathematics II (prereq 5057)
351504 1325-1415 MWF, AmundH 240, Agard S, 4 cr

R 5151 Elementary Set Theory (prereq one 32XX math course or equiv or #)
952812 1010-1100 MWF, VinH 6, Fuhrken E G, 4 cr

R 5163 Mathematical Logic (prereq 5162)
142741 1430-1520 MWF, VinH 113, Richter W, 4 cr

R 5242 Linear Algebra with Applications (§5232-5233, 5247, 5284; prereq [1261, 3261] or 3142 or equiv or #)
★LECT 1115-1205 MWF, VinH 20
346688 —1 REC 1115-1205 Th, FordH 170, 4 cr

R 5243 Linear Algebra with Applications (prereq 5242)
★LECT 0905-0955 MWF, VinH 6, Sell G
146345 —1 REC 0905-0955 Th, CivE 212, 4 cr

R 5245 Introduction to Modern Algebra I (§5282; prereq three 32XX math courses or equiv or #)
048217 0905-0955 MWF, VinH 207, Eagon J, 4 cr

R 5246 Introduction to Modern Algebra II (§5283; prereq 5245)
846808 —1 0905-0955 MWF, FordH 50, White D, 4 cr
147082 —2 1010-1100 MWF, VinH 313, 4 cr

R 5283 Fundamental Structures of Algebra (prereq 5282)
546155 0905-0955 MWF, VinH 113, Webb P, 4 cr

R 5332 Geometry II (§5083; prereq 5331)
151181 1325-1520 M, VinH 364, 1325-1415 WF, FordH 50, Aeppli A, 4 cr

R 5342 Introduction to Topology (prereq 5341)
474014 1325-1415 MWF, FordH 115, Gershenson H, 4 cr

R 5458 Methods of Applied Mathematics (prereq 5457)
172394 —1 1115-1205 MWF, VinH 207, Miracle C, 4 cr
647328 —2 1645-1930 M, EE/CSci 3125, Prikry K, 4 cr

R 5464 The Mathematics of Industrial Problems (prereq 2 yrs calc includ 3262 or equiv, famil with FORTRAN, Pascal, or C)
844010 1325-1415 MWF, NichH 207, Littman W, 4 cr

R 5474 Analysis of Numerical Methods (prereq 5473) (A-F only)
351521 1115-1205 MWF, VinH 6, Lee H, 4 cr

R 5478 Applied Numerical Analysis of Partial Differential Equations (prereq 5477)
546415 1010-1100 MWF, VinH 20, Cockburn B, 4 cr

R 5512 Differential Equations with Applications I (prereq 3261 or equiv or #...3262 rec)
048573 1010-1100 MWF, VinH 113, Weinberger H, 4 cr

R 5522 Introduction to Ordinary Differential Equations (prereq 5521) (A-F only)
944757 1010-1100 MWF, VinH 211, Leung N-C, 4 cr

R 5532 Dynamical Systems and Chaos (prereq 5531)
341958 1325-1415 MWF, VinH 113, Moeckel R, 4 cr

R 5568 Elementary Theory of Complex Variables (§5553, 5572; prereq 3331 or 3531H or 3213 or 5602 or equiv)
151665 1325-1415 MWF, VinH 6, 4 cr

R 5572 Elementary Partial Differential Equations (§5568; prereq 5571)
446391 1115-1205 MWF, VinH 113, Sattinger D, 4 cr

R 5606 Advanced Calculus: A Rigorous Approach (§5612; prereq 2 yrs calculus)
443653 1220-1310 MWF, VinH 207, 4 cr

R 5607 Advanced Calculus: A Rigorous Approach (§5613; prereq 2 yrs calculus)
841771 —1 1115-1205 MWF, VinH 301, Reich E, 4 cr
843780 —2 1220-1310 MWF, VinH 2, Storvick D, 4 cr

R 5613 Introduction to Analysis (prereq 5612)
045138 —1 1220-1310 MWF, VinH 301, Agard S, 4 cr
651637 —2 1430-1520 MWF, VinH 6, Jodeit M, 4 cr

R 5682 Probability and Stochastic Processes (prereq 5681)
348523 1010-1100 MWF, VinH 207, Neuhauser C, 4 cr

R 5701 Enumerative Combinatorics (prereq 3251 or equiv...3XXX linear algebra rec)
142506 —1 1220-1310 MWF, EE/CSci 3125, Stanton D, 4 cr
174016 —48 1220-1310 MWF, Stanton D, 4 cr (UNITE)

R 5702 Graph Theory and Optimization (prereq 3251 or equiv...3XXX linear algebra rec)
750205 1545-1700 TTh, Arch 45, Goldman J, 4 cr

R 5712 Combinatorial Optimization (prereq 5711)
274015 1010-1100 MWF, VinH 311, Edelman P, 4 cr

R 5900 Tutorial Course in Advanced Mathematics (prereq #)
451381 ar cr

R 8000 Preparation for Teaching College Mathematics (!; prereq grad stu in doct prog in math, beyond 1st yr, good acad stand with dept, #) (S-N only)
774004 1600-1730 W, VinH 206, Keynes H, 2 cr

R 8141 Applied Logic (prereq 8140)
574005 1535-1625 MWF, VinH 213, Richter W, 3 cr

R 8201 General Algebra (prereq 8200)
641688 1115-1205 MWF, VinH 211, Roberts J, 3 cr

R 8212 Commutative Algebra (prereq 8211)
374006 0905-0955 MWF, VinH 311, Sperber S, 3 cr

R 8267 Topics in Number Theory (prereq 8266)
174007 1010-1100 MWF, VinH 1, Garrett P, 1-3 cr

R 8291 Topics in Algebra (prereq 8290)
074008 0905-0955 MWF, VinH 211, Lyubeznik G, 1-3 cr

R 8301 Manifolds/Topology (prereq 8300)
144790 1325-1415 MWF, LindH 305, Chow B, 3 cr

R 8366 Riemannian Geometry (prereq 8365)
950901 1220-1310 MWF, VinH 206, Olver P, 3 cr

R 8446 Numerical Analysis of Ordinary and Partial Differential Equations (prereq 6445) (A-F only)
148032 1115-1205 MWF, VinH 311, Lowengrub J, 1-3 cr

R 8501 Theory of Ordinary Differential Equations (prereq 8500)
648379 1010-1100 MWF, FordH 130, Sibuya Y, 3 cr

R 8551 Theory of Partial Differential Equations (prereq 8550)
148314 1430-1520 MWF, VinH 211, Meyers N, 3 cr

R 8561 Calculus of Variations, Minimal Surfaces (prereq 8560)
874009 1430-1520 MWF, VinH 311, Nitsche J, 3 cr

R 8581 Mathematical Modelling of Industrial Problems (prereq 8580)
742556 1430-1520 MWF, FordH 130, Santosa F, 4 cr

R 8591 Topics in Partial Differential Equations (prereq 8590)
249034 1115-1205 MWF, VinH 1, Fabes E, 1-3 cr

R 8601 Real Analysis (prereq 8600)
346156 1220-1310 MWF, VinH 209, Safanov M, 3 cr

R 8653 Introduction to Stochastic Processes (prereq 8650 or 8656 or 8600, 5681-5682 or #)
174010 1115-1205 MWF, FordH 130, Jain N, 3 cr

R 8657 Measure Theory and Probability (prereq 8656)
844640 1010-1100 MWF, FordH 285, Sethuraman S, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
350658 1-18 cr

R 8869 Introduction to Combinatorial Theory (prereq 8668)
074011 1115-1205 MWF, FordH 285, Stanton D, 3 cr

R 8691 Topics in the Theory of Probability (prereq 8690)
845061 1325-1415 MWF, VinH 311, 3 cr

R 8701 Complex Analysis (prereq 8700)
152730 1430-1520 MWF, FordH 285, Marden A, 3 cr

8777 Thesis Credits: Masters
142800 1-16 cr

R 8801 Functional Analysis (prereq 8800)
349655 1220-1310 MWF, VinH 313, Sverak V, 3 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
546947 1-36 cr

R 8990 Reading and Research
548438 ar cr

R 8991 Reading and Research (prereq 8990)
449369 ar cr

MATHEMATICS EDUCATION (MthE)
Curriculum and Instruction
Education and Human Development

R 5155 Rational Number Concepts and Proportionality (max 3 cr; prereq educ or grad stu or #) (A-F only)
471601 Post T, 3 cr (off-campus) (contact dept for info)

R 5170 Teaching Problem Solving, Reasoning, and Proof (prereq math ed or grad stu or #) (A-F only)
048783 1630-2000 Th, PeikH 375, Burgeson J, 4 cr

5650 Full-Day Student Teaching in Mathematics (prereq 5540, 5640, math ed postbac stu or #) (S-N only)
174601 Capistran, 12 cr

5680 Practicum in Mathematics Education (max 9 cr; prereq #) (A-F only)
042918 —1 Orton R, 3-9 cr
441465 —2 Post T, 3-9 cr
650553 —3 Stochl J, 3-9 cr

8680 Internship: Mathematics Education
750690 —1 Orton R, ar cr
044930 —2 Post T, ar cr
343838 —3 Stochl J, ar cr

8980 Problems: Mathematics Education (prereq 8500 or 8570)
271602 —1 Orton R, ar cr
249955 —2 Post T, ar cr
974602 —3 Stochl J, ar cr

MECHANICAL ENGINEERING (ME)
Mechanical Engineering
Institute of Technology

An IT computer fee is assessed at the time of registration for ME 1010, 1012, 1025, 3020, 3203, 5203, 5220, 5225, 5226, 5227, 5260, 5265, 5268, 5271, 5288, and 5351. See page 28 for more information on this fee.

R 1001 Introduction to Mechanical Engineering (S-N only)
350479 1325-1415 T, AkerH 209, 1 cr

R 1012 Introduction to Engineering II (1010-1012†; prereq 1010, lower div IT stu)
873930 1430-1630 MW, Arch 10, Durfee W, 4 cr

R 1025 Engineering Graphics (prereq Math 1251 or equiv, IT stu or pre-BAE maj)
948145 —1 LECT 1010-1100 MTWThF, Arch 10, Berhe T, 4 cr
945701 —2 LECT 1325-1415 MTWThF, Arch 10, Berhe T, 4 cr
★LAB (open hrs, ElectE 118)

R 3020 Mechanical Engineering Computation (prereq IT stu, Math 3261, OSci 3101)
446035 —1 0905-0955 MWThF, MechE 18, Chase T, 4 cr
746185 —2 1325-1415 MWThF, MechE 202, 4 cr

R 3201 Mechanical Engineering Systems Analysis (§AEM 3401; prereq AEM 3036, 3020 recommended)
★LECT 1010-1100 MWF, MechE 221
151402 —1 REC 1430-1625 M, AkerH 225, 4 cr
251625 —2 REC 1220-1415 T, MechE 221, 4 cr
142058 —3 REC 1430-1625 W, MechE 202, 4 cr

R 3203 Analysis of Mechanism Systems (prereq ME upper div, AEM 3036 or equiv, 3020)
★LECT 1115-1205 MWF, Arch 55
143204 —1 REC 1430-1625 M, MechE 202, 4 cr
048167 —2 REC 1115-1310 T, MechE 18, 4 cr
848090 —3 REC 1430-1625 F, MechE 202, 4 cr

R 3203H Analysis of Mechanisms Systems (§3203; prereq AEM 3036 or equiv, ME upper div honors stu)
★LECT 1115-1205 MWF, Arch 55
146085 —80 REC 1115-1310 T, MechE 18, 4 cr

R 3301 Thermodynamics (prereq IT or ForP or pre-BAE maj, Chem 1014 or Chem 1052 or Phys 1252, Math 3261 or equiv)
152587 —1 0905-0955 MTWThF, Arch 55, Strykowski P, 4 cr
048024 —2 1010-1100 MTWThF, Arch 55, Kulacki F, 4 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
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- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 3301H Thermodynamics (§3301; prereq Chem 1014 or Phys 1281, Math 3221 or equiv, IT upper div honors stu)
548312 0905-0955 MTWThF, Arch 55, Strykowski P, 4 cr

R 3303 Applied Thermodynamics (§3305; prereq 3301 or equiv, upper division mech engr or aerospace engr maj)
844332 0905-0955 MTWThF, Arch 10, Girshick S, 4 cr

R 3303H Applied Thermodynamics (§3303; prereq ME upper div honors stu)
941728 0905-0955 MTWThF, Arch 10, Girshick S, 4 cr

R 3701 Basic Measurements Laboratory I (prereq 3301 or ¶, upper division mech engr maj)
846890 —1 LECT 1220-1310 T, Arch 10, Pui D, 2 cr
★LAB (open lab ar, MechE 370-388)

R 3702 Basic Measurements Laboratory II (prereq 3701, upper division mech engr maj)
047410 —1 LECT 1220-1310 Th, Arch 10, Pui D, 2 cr
★LAB (open lab ar, MechE 370-388)

R 3702H Basic Measurements Laboratory II (§3702; prereq 3701, ME upper div honors stu)
943494 —80 LECT 1220-1310 Th, Arch 10, Pui D, 2 cr
★LAB (open lab ar, MechE 370-388)

R 3741 Industrial Assignment (!; prereq ME undergrad, regis in co-op prog)
041767 Marple V, 2 cr

R 3742 Industrial Assignment (!; prereq 3741)
744890 Marple V, 2 cr

R 3743 Industrial Assignment (!; prereq 3742)
243492 Marple V, 2 cr

R 5190 Advanced Engineering Problems (prereq #, Δ)
641996 2-4 cr

R 5198H Mechanical Engineering Upper Division Honor Thesis I (5198H-5199Ht; prereq upper div ME honors stu)
145700 4 cr

R 5199H Mechanical Engineering Upper Division Honor Thesis II (5198H-5199Ht; prereq upper div ME honors stu)
051604 4 cr

R 5209 Friction and Lubrication (prereq CE 3400, AEM 3200 or equiv, IT stu or grad)
351177 1220-1310 MWThF, MechE 202, Klamecki B, 4 cr

R 5220 Computer-Aided Design, Optimization, and Computer Graphics (prereq IT or grad stu, 1025, 3020, 3203, 3205)
949120 1535-1730 MW, Kelso F, 4 cr

R 5227 Finite Element Methods in Mechanical Engineering II (prereq 5226 or #, programming, IT upper div or grad stu)
851667 1535-1730 TTh, MechE 202, Tamma K, 4 cr

R 5231 Mechatronics Laboratory (prereq 3701, 3702, 3201, ME upper div) (A-F only)
★LECT 1325-1415 M, MechE 321, Stelson K
741598 —1 LAB 0800-1100 T, ElectE 304, 2 cr
543403 —2 LAB 1430-1730 T, ElectE 304, 2 cr
147549 —3 LAB 1430-1730 W, ElectE 304, 2 cr
648219 —4 LAB 0800-1100 Th, ElectE 304, 2 cr
249227 —5 LAB 1325-1625 Th, ElectE 304, 2 cr
147950 —6 LAB 1430-1730 F, ElectE 304, 2 cr

R 5233 Programmable Automation (prereq ME upper div stu, 3702)
★LECT 1535-1625 M, Arch 55, Vogel J
050601 —1 LAB 0905-1205 T, ElectE 308, 2 cr
248367 —2 LAB 0905-1205 W, ElectE 308, 2 cr
851300 —3 LAB 1325-1625 W, ElectE 308, 2 cr
747062 —4 LAB 0905-1205 Th, ElectE 308, 2 cr
142934 —5 LAB 1325-1625 Th, ElectE 308, 2 cr
749412 —6 LAB 0905-1205 F, ElectE 308, 2 cr

R 5254 Design Morphology with Applications (prereq upper div ME maj, 1025, 3201, 3205, 3303, 5342 or #)
★LECT 1325-1415 TTh, AkerH 319
142691 —1 LAB 1325-1730 TTh, MechE 18, 4 cr

R 5255 Engineering Design Project (prereq 5254, upper division mech engr maj)
★LECT 1325-1415 TTh, AkerH 319
146278 —1 LAB 1325-1730 TTh, MechE 18, 4 cr

R 5260 Engineering Materials and Processing (prereq ME upper div, 3020, Phys 1253, Chem 1052, AEM 3016, MatS 3400, safety glasses req)
★LECT 1325-1415 MWF, Arch 55, Stelson K
952678 —1 REC 1430-1625 M, MechE 72, 4 cr
241533 —2 REC 0800-0955 T, MechE 72, 4 cr
247106 —3 REC 1010-1205 T, MechE 72, 4 cr
248112 —4 REC 1220-1415 T, MechE 72, 4 cr
751578 —5 REC 0800-0955 W, MechE 72, 4 cr
548553 —6 REC 1010-1205 W, MechE 72, 4 cr
844668 —7 REC 1430-1625 W, MechE 72, 4 cr
952163 —8 REC 1010-1205 Th, MechE 72, 4 cr
443796 —9 REC 1220-1415 Th, MechE 72, 4 cr
150709 —10 REC 1010-1205 F, MechE 72, 4 cr
348943 —11 REC 1430-1625 F, MechE 72, 4 cr

R 5268 Properties and Fabrication of Plastics (prereq 5260, IT stu or grad)
★LECT 1325-1500 MW, AmundH 120
152405 —1 LAB 1535-1835 W, MechE 50, 4 cr
444835 —2 LAB 1325-1625 Th, MechE 50, 4 cr
542817 —3 LAB 1325-1625 F, MechE 50, 4 cr

R 5271 Robotics (2 cr lab option; prereq IT or grad stu, 5283 or equiv)
244948 —1 1010-1205 WF, MechE 212, Donath M, 3-5 cr

R 5284 Control Systems (prereq 5283 or equiv, IT stu or grad)
342186 1325-1520 MW, AkerH 313, Ogata K, 4 cr

R 5342 Heat Transfer (prereq IT upper div or grad or ForP stu, 3301, CE 3400 or AEM 3200)
052431 —1 1115-1205 MTWThF, MechE 202, Bischof J, 4 cr
372420 —2 1115-1205 MTWThF, Arch 10, Sparrow E, 4 cr

R 5342H Heat Transfer (§5342; prereq 3301, CE 3400 or AEM 3200, ME upper div honors stu)
946332 1115-1205 MTWThF, Arch 10, Sparrow E, 4 cr

R 5360 Plasma-Aided Manufacturing (prereq 3301, 5342 or equiv, IT upper div or grad stu)
372417 1325-1415 MWF, AkerH 317, Heberlein J, 4 cr

R 5370 Transport Phenomena Laboratory (prereq upper div ME maj, 3303, 3701, 3702, AEM 3200 or CE 3400, 5342)
★LECT 1220-1310 MF, MechE 221, Strykowski P
573923 —1 LAB 1325-1725 M, MechE 260, 4 cr
373924 —2 LAB 1325-1725 T, MechE 260, 4 cr
173925 —3 LAB 1325-1725 W, MechE 260, 4 cr

R 5446 An Introduction to Combustion (prereq 5342 or equiv, IT stu or grad; 3303 recommended)
944726 1115-1205 MTWThF, MechE 221, Hofeldt D, 4 cr

R 5455 Rocket Propulsion (prereq IT or grad stu, 3301 or equiv)
172421 1325-1415 MWF, LindH 215, Fletcher E, 4 cr

R 5460 Internal Combustion Engines (prereq IT or grad stu; 3301, 3303, ¶5430 recommended)
945732 1010-1100 MTWThF, MechE 321, Kittelson D, 4 cr

R 5470 Energy Conversion Systems Laboratory (prereq upper div ME stu, 3303, 3701, 3702, AEM 3200 or CE 3400)
★LECT 1220-1310 MF, MechE 321, Hofeldt D
873927 —1 LAB 1325-1725 M, MechE 460, 4 cr
673928 —2 LAB 1325-1725 T, MechE 460, 4 cr
473929 —3 LAB 1325-1725 W, MechE 460, 4 cr

R 5603 Thermal Environmental Engineering (prereq 3303, 5342 or equiv, IT stu or grad)
843925 0800-0955 MW, AkerH 317, Ramsey J, 4 cr

R 5605 Refrigeration and Air Conditioning Systems (prereq 3303, IT stu or grad)
746252 1325-1415 MWThF, MechE 221, Kuehn T, 4 cr

R 5610 Air Pollution Control (prereq IT or grad stu, 3303)
146507 0800-0955 TTh, MechE 202, McMurry P, 4 cr

R 5614 Principles of Particle Technology (prereq 5613, IT stu or grad)
452076 0800-0955 MW, AkerH 313, Liu B, 4 cr

R 5616 Aerosol Measurement (prereq 5613, 5614 or #, IT or grad stu)
872423 1430-1625 T, Pui D, Romay F, 2 cr

R 5741 Industrial Assignment and Design Project (!; prereq 3742)
551100 Marple V, 4 cr

R 5742 Industrial Assignment and Design Project (!; prereq 5741)
948307 Marple V, 4 cr

R 8251 New Product Design and Development (prereq 8250)
342480 1115-1245 TTh, BlegH 115, Durfee W, 4 cr

R 8280 Multivariable Control Systems I (prereq 5283 or equiv) (A-F only)
673931 0905-1100 WF, MechE 202, 4 cr

R 8311 Statistical, Non-Equilibrium Thermodynamics (prereq 8310)
172418 0905-0955 MWF, LindH 215, Pfender E, 3 cr

R 8331 Convection (prereq 5342)
344651 —1 1115-1230 TTh, MechE 102, Simon T, 3 cr

R 8351 Computation of Fluid Flow and Heat Transfer (prereq 5342)
645949 1325-1455 WF, MechE 321, Patankar S, 3 cr

R 8444 Applied Thermodynamics II (prereq 8443 or equiv)
072422 1220-1340 TTh, AkerH 313, Fletcher E, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
549184 1-18 cr

R 8770 Mechanical Engineering Research (prereq Δ)
250328 ar cr

8771 Mechanical Engineering Research (prereq 8770, Δ)
143235 ar cr

8772 Mechanical Engineering Research (prereq 8771, Δ)
249132 ar cr

R 8773 Graduate Seminar (S-N only)
251186 —1 1535-1635 W, MechE 108, 1 cr

R 8774 Graduate Seminar (prereq 8773) (S-N only)
844797 —1 1535-1635 W, MechE 108, 1 cr

R 8775 Graduate Seminar (prereq 8774) (S-N only)
252645 —1 1535-1635 W, MechE 108, 1 cr

8777 Thesis Credits: Masters
349929 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
742072 1-36 cr

MEDICAL TECHNOLOGY (MedT)
Medical School

3001 Basic Techniques in Laboratory Science (prereq previous enroll in NAACLS/CAHEA accredited med lab tech prog) (S-N only)
950557 Karni K, 3 cr

5068 Comparative Hemostasis (prereq permission of veterinary medicine dept)
848106 1115-1205 TTh, MoosT 2530, Swinehart C, 2 cr

R 5078 Hematology II: Hemostasis/Instrumentation (prereq 5077) (A-F only)
★LECT 1115-1205 TTh, MoosT 2530, Swinehart C
852396 —1 LAB 0905-1205 W, MoosT 3349, Swinehart C, 3 cr
051781 —2 LAB 1220-1520 W, MoosT 3349, Swinehart C, 3 cr

5080 Seminar: Specialty Rotations (prereq regis in prof med tech prog) (S-N only)
345847 1010-1100 M, MoosT 3317, Solberg P, 1 cr

5082 Applied Clinical Chemistry (prereq 5113) (S-N only)
343385 0700-1600 MTWThF, Hanson N, 4 cr (University Hospital labs)

5084 Applied Clinical Virology (prereq 5100, 5102) (S-N only)
149200 0800-1630 MTWThF, Stratton C, 1 cr (University Hospital labs)

5085 Applied Clinical Hematology (prereq 5077, 5078, 5765 or CLS 5765) (S-N only)
250071 0700-1530 MTWThF, Lofsness K, Swinehart C, 4 cr (University Hospital labs)

5086 Applied Clinical Immunohematology (prereq 5064, 5065) (S-N only)
245128 0730-1600 MTWThF, Hallgren H, 4 cr (University Hospital labs)

5088 Applied Diagnostic Microbiology (prereq 5100, 5102) (S-N only)
545717 0730-1600 MTWThF, Wells C, 4 cr (University Hospital labs)

5089 Specialty Rotation (prereq completion of med tech preclin prof crses, 5064, 5065, 5078, 5100, 5102, 5113, 5765) (S-N only)
745215 0730-1630 MTWThF, UHosp, Karni K, 1 cr

5090 Special Laboratory Methods (prereq #)
149608 2 cr

5092 Honors Program: Laboratory Methods (prereq #)
041820 5 cr

5100 Virology/Mycology/Parasitology for Medical Technologists (prereq MicB 5235) (A-F only)
051683 0905-0955 MTTh, MoosT 2520, Wells C, Jechorek R, others, 3 cr

5120 Seminar
743657 1-3 cr

5125 Practicum: Teaching (max 3 cr)
849370 ar cr

R 5127 Introduction to Management and Education (prereq student in professional medical technology program) (S-N only)
447167 Solberg P, 1 cr

5135 Advanced Clinical Microbiology (prereq #)
151519 Wells C, 5 cr

5145 Development of Medical Technology
450554 3 cr

5155 Advanced Clinical Hematology (prereq #)
648317 5 cr

5165 Advanced Clinical Immunohematology (prereq #)
445998 5 cr

5175 Advanced Clinical Chemistry (prereq #)
148497 5 cr

5179 Chemistry Seminar (prereq #)
152380 1 cr

R 5320 Clinical Chemistry II (prereq Chem 3301, Chem 3302, Chem 3305, Chem 3306, MdBc 5300, MdBc 5301) (A-F only)
145597 1010-1100 TTh, MoosT 2520, Tsai M, 2 cr

R 5321 Clinical Chemistry II: Laboratory Applications (prereq Chem 3301, Chem 3302, Chem 3305, Chem 3306, MdBc 5300, MdBc 5301) (A-F only)
642484 1300-1700 TTh, MoosT 3343, Brunzel N, 2 cr

MEDICINAL CHEMISTRY (MedC)
Pharmacy

5152 Biochemistry II (prereq 5151, ¶Phcy 5922) (A-F only)
141282 1010-1100 MTWTh, MoosT 2620, Portoghese P, 4 cr

5163 Therapeutic Agents III (prereq 5162, ¶Phcl 5102) (A-F only)
874298 1325-1415 MW, 1010-1100 F, MoosT 2530, Abul-Hajj Y, 3 cr

5164 Therapeutic Agents IV (prereq 5152, 5172) (A-F only)
674299 1325-1415 TThF, MoosT 5125, Remmel R, 3 cr

5185 Principles of Bio-Molecular Simulation (prereq 5151 or Chem 5521 or #)
674044 1030-1200 TTh, Ferguson D, 4 cr

5710H Medicinal Chemistry Seminar (prereq #) (A-F only)
374040 1 cr

5714H Chemical Aspects of Drug Metabolism and Bioactivation (prereq #) (A-F only)
174041 Hanna P, 2 cr

5970 Directed Studies (prereq #)
074042 1-5 cr

5999 Special Problems (prereq #)
874043 1-5 cr

8100 Medicinal Chemistry Seminar
147177 1535-1730 T, MoosT 2520, Vince R, ar cr

8600 Chemical Aspects of Drug Metabolism and Bioactivation (prereq 5600 or #) (A-F only)
171608 Hanna P, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
942183 1-18 cr

8777 Thesis Credits: Masters
345203 1-16 cr

8800 Laboratory Techniques (prereq Chem 3303 or #)
646972 ar cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
043034 1-36 cr

8900 Research in Medicinal Chemistry (prereq Chem 3303 or #)
851149 ar cr

MEDICINE (Med)
Medical School

R 5500 Medicine Externship I (prereq regis med student)
942023 Parenti C, 9 cr

R 5501 Externship in Medicine (prereq regis med student, 5500)
347324 Parenti C, 9 cr

5505 Infectious Disease Research at the University Hospital
543885 Jordan C, ar cr

5507 Research in Oncology (prereq regis med student)
845254 Ginder G, ar cr

5508 Preceptorships in Internal Medicine (prereq regis med)
850616 Nath K, ar cr

5509 Research in Rheumatology
747157 Messner R, 9 cr

5511 Research in Gastroenterology
544776 Steer, ar cr

5512 Research in Hematology
143879 Jacob H, 1-18 cr

5518 Research in Endocrinology (prereq regis med student)
747918 Robertson P, ar cr

5521 Infectious Diseases, Clinical Aspects at the University Hospitals
351230 Jordan C, 6-9 cr

5522 Medical Gastroenterology
546883 Soltis R, 6-9 cr

5523 Medical Endocrinology, Metabolism and Clinical Pharmacology
348554 Robertson P, 6-9 cr

5525 Cardiovascular Medicine
946251 Bache R, ar cr

5526 Medical Oncology Outpatient/Consulation (prereq 5500)
352183 Luikart S, Faber-Langendoe, 4.5-9 cr

5527 Contemporary Problems in Investigative Cardiology
748163 Bache R, 9 cr

5528 Clinical Hematology
949957 Weisdorf D, ar cr

5531 Clinical Rheumatology
750446 Messner R, ar cr

5532 Pulmonary Disease
851751 Bitterman P, ar cr

5533 Clinical Allergy at University Hospitals
344956 Blumenthal M, 4.5-9 cr

5534 Research in Allergy (prereq regis med)
141615 Blumenthal M, 9 cr

5548 Clinical Genetics
044328 King R, 9 cr

5554 Fluid Electrolyte, Acid-Base Metabolism
747854 Ma K V, 6-9 cr

5556 Renal Consultation (prereq 5500)
741519 Nath K, 6-9 cr

5557 Research in Nephrology (prereq 5500 at Univ Hosp)
650603 Nath K, ar cr

5561 Outpatient and Clinical Nephrology (prereq 5500, regis med stu)
042367 Abraham, ar cr

5562 Clinical Nephrology (prereq 5500)
549315 Rao V K, 6-9 cr

5570 Clinical Medicine in the General Clinical Research Center (prereq 5500)
452272 Bantle J, ar cr

5571 Clinical Toxicology and Emergency Medicine (prereq regis med student)
151934 Saxena K, ar cr

5573 Acute Care Internal Medicine (prereq regis med stu, Med I and II)
249809 Cohen J S, ar cr

5579 Critical Care Medicine (prereq regis med stu...5501, sub-internship rec)
842645 ar cr

5583 Fundamentals of Clinical Oncology (prereq 5500 or Ped 5501)
947741 Peterson B, 6 cr

5590 Preceptorships in Internal Medicine
551064 McCollister R, 4.5-9 cr

5596 Occupational Health
148555 Lohman W, 4.5 cr

5597 Research in Occupational Health
147230 Miles S, 9 cr

8201 Clinical Medicine
952180 Ferris T, ar cr

8202 Clinical Conference
849269 Ferris T, 1 cr

8203 Clinical Radiology Conference
741603 Ferris T, 1 cr

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8204 Pathology Conference
651430 Ferris T, 1 cr

8205 Electrocardiographic Conference
445015 Tuna N, 1 cr

8206 Nephrology Seminar
043079 Ferris T, 3 cr

8209 Tumor Clinical Conference
847988 Kennedy B J, 1 cr

8210 Infectious Disease Seminar
243833 Sabath L, ar cr

8211 Diseases of the Cardiovascular System
143680 Cohn J, ar cr

8212 Diseases of the Chest
947335 Bitterman P, ar cr

8213 Diseases of the Kidney
751225 Ferris T, ar cr

8214 Diseases of Diabetes, Endocrinology, Metabolism
848316 Oppenheimer J, ar cr

8215 Diseases of Hematology
443037 Jacob H, ar cr

8216 Diseases of Gastroenterology
248479 Bloomer J, ar cr

8217 Diseases of Oncology
743058 Kennedy B J, ar cr

8220 Research in Medicine
241922 Ferris T, ar cr

8221 Topics in Medicine
244710 Ferris T, ar cr

8223 Topics in Related Basic Science
442941 Ferris T, ar cr

MEDIEVAL STUDIES (MeSt)
Liberal Arts

R 3610 Topics in Medieval Studies
544275 0945-1100 TTh, BlegH 135, Reyerson K, 4 cr

R 5610 Topics in Medieval Studies (prereq 1 yr work in some area of Middle Ages, reading knowledge of appropriate language)
046452 —1 1545-1700 TTh, FolH 426, Fullerton G, 4 cr
151942 —2 1325-1520 T, WaLib, Hanawalt B, 4 cr
049299 —3 1415-1530 TTh, FolH 426, Grimstad K, 5 cr

8020 Medieval Studies Colloquium (prereq #) (S-N only)
451025 Hanawalt B, 1 cr

R 8120 Seminar in Medieval Studies (prereq #) (A-F only)
873197 —1 1325-1520 W, VinH 313, Liberman A, 4 cr
673198 —2 1535-1730 W, SocSci 680, Bachrach B, 3 cr

MICROBIAL ENGINEERING (MicE)
Biological Sciences

5990 Teaching Practicum (A-F only)
151066 0-1 cr

8777 Thesis Credits: Masters
252760 1-16 cr

8950 Special Topics (A-F only)
148788 1-4 cr

8990 Biotechnology Seminar
841849 1535-1635 F, GorL 239, 1 cr

MICROBIOLOGY (MicB)
Medical School

R 5105 Biology of Microorganisms (§3103, Biol 5013, VPB 3103; prereq 5 cr biol sci, Biol 5001 or BioC 3021 or BioC 5331 or #) (course fee)
★LECT 1245-1400 TTh, MoosT 2530, Sherman D, 5 cr
452840 —1 LAB 0905-1100 TTh, MoosT 2252

5205 Microbiology for Medical Students (prereq regis med freshman, all others #)
★LECT 1325-1415 MTWThF, PWB 2470, Schlievert P, 5 cr (Jan 2-Mar 16)
642744 —1 LAB 1010-1205 M, 1430-1625 W, MoosT 2252, (Jan 2-Mar 16)
152159 —2 LAB 1430-1625 M, 1010-1205 W, MoosT 2252, (Jan 2-Mar 16)

R 5218 Immunology (prereq Biol 5001 or BioC 3021 or BioC 5331)
350708 1430-1520 MWF, MoosT 2620, Gray B, Jemmerson R, 3 cr

5232 Medical Microbiology (prereq 5216 or 5218, 5105 or 3103 or 8110 or Biol 5013)
048900 0945-1100 TTh, MoosT 2530, Cleary P, 3 cr

R 5234 Immunology and Medical Microbiology Laboratory (prereq 5218 or ¶5218, 5232 or ¶5232) (course fee)
242858 1220-1520 TTh, MoosT 2252, Cleary P, Gray B, 3 cr

5970 Directed Studies (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
146037 Rogers P, others, ar cr

5990 Directed Research (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
351373 Rogers P, others, ar cr

8112 Microbial Genetics (prereq grad maj in microbiology or #)
449095 1115-1230 TTh, PWB 6224, Dunny G, 3 cr

8125 Microbial Ecology (prereq crsewrk in microbiol and biochem or #) (A-F only)
846615 0945-1100 TTh, PWB 6224, Sadowsky M, 3 cr

R 8910 Seminar (prereq #)
143686 1220-1320 M, Mayo C231, 1 cr

MICROBIOLOGY, IMMUNOLOGY, AND MOLECULAR PATHOBIOLOGY (MIMP)
Microbiology
Medical School

5992 Practicum: Teaching (§MicB 5992; prereq microbiol or MIMP grad stu or #) (A-F only)
074316 1 cr

R 8217 Frontiers of Immunology II: Cellular Immunology (§MicB 8217, Path 8217; prereq Biol 5001 or equiv or #)
673704 1010-1100 MWF, BioSci 70, Jenkins M, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
473705 1-18 cr

8777 Thesis Credits: Masters
273706 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
173707 1-36 cr

8920 Seminar: Student Research Topics (prereq MIMP maj) (S-N only)
974826 —1 1530-1630 F, MoosT 5125, 1 cr
774827 —2 1530-1630 F, CentLib 4, 1 cr (StP)

8990 Research in Microbiology, Immunology, and Molecular Pathobiology (§MicB 8990; prereq MicB or Path or MIMP grad maj or #)
973708 ar cr

MIDDLE EASTERN LANGUAGES AND CULTURES (MELC)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 3505 Survey: The Middle East (§5505, Arab 5505, Hist 3505)
473963 0945-1100 TTh, BlegH 235, Farah C, 4 cr

R 3532 Russia and Central Asia (§5532, CAS 3532, CAS 5532) (Hist; IP)
371610 1010-1100 MWF, VinH 364, Bashiri I, 4 cr

R 3601 Fiction: Iran and Central Asia (§CAS 3601) (Lit; IP)
371588 1430-1520 MWF, NichH 213, Bashiri I, 4 cr

R 5532 Russia and Central Asia (§3532, CAS 3532, CAS 5532) (IP)
171611 1010-1100 MWF, VinH 364, Bashiri I, 4 cr

R 5601 Fiction: Iran and Central Asia (§CAS 5601)
571590 1430-1520 MWF, NichH 213, Bashiri I, 4 cr

R 5730 Proseminar in Middle East History: 16th to 19th Century (§Hist 5730, MidE 5730)
174928 1300-1500 T, HHHCtr 60, Farah C, 4 cr

MILITARY SCIENCE (Mil)

0100 Leadership Laboratory (prereq fr or soph) (A-F only)
552232 0645-0745 Th, Armory 100, Eldert M, 0 cr (Gym)

0300 Advanced Leadership Laboratory (prereq enrolled as a military science advanced course cadet or #) (A-F only)
847408 0630-0745 Th, Armory 100, Talley B, 0 cr (Gym)

1002 Basic Military Skills (prereq fr or soph) (A-F only)
146093 0645-0745 Th, Armory 100, Eldert M, 1 cr (Gym)

1220 Military Science II: Leadership Laboratory
944502 0645-0745 Th, Armory 100, Larson S, 1 cr (Gym)

1221 Learning to Lead (A-F only)
849529 —1 0905-0955 MW, Armory 116A, Larson S, 2 cr
748972 —2 1325-1415 MW, Armory 103, Larson S, 2 cr

3130 Military Science III: Leadership Laboratory (max 3 cr) (A-F only)
547550 0630-0745 Th, Armory 100, Talley B, 1 cr (Gym)

R 3132 Land Navigation: Small Unit Tactics (A-F only)
546172 —1 0800-0850 TTh, Armory 116A, Talley B, 3 cr
447024 —2 1325-1415 TTh, Armory 116A, Talley B, 3 cr

3140 Military Science IV: Leadership Laboratory (max 3 cr) (A-F only)
549962 0630-0745 Th, Armory 100, Oravis J, 1 cr (Gym)

R 3142 Leadership Communication (A-F only)
748521 —1 0800-0850 TTh, Armory 103, Oravis J, 3 cr
349039 —2 1430-1520 TTh, Armory 116A, Oravis J, 3 cr

3970 Directed Studies (prereq #, Δ) (A-F only)
942944 1-3 cr

MOLECULAR, CELLULAR, DEVELOPMENTAL BIOLOGY, AND GENETICS (MCDG)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
141573 1-18 cr

8777 Thesis Credits: Masters
941566 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
642808 1-36 cr

8920 Special Topics (prereq MCDG grad stu or Δ) (S-N only)
142450 1535-1625 T, MoosT 4128, 1-5 cr

8950 Teaching Practicum (prereq MCDG maj or Δ) (S-N only)
351924 1 cr

8970 Directed Studies (prereq MCDG maj or Δ)
549802 ar cr

8990 Research (prereq MCDG maj or Δ) (S-N only)
847733 ar cr

MORTUARY SCIENCE (Mort)
Medical School

3040 Funeral Service Psychology (prereq introductory course in general psychology) (A-F only)
652836 1325-1415 MWF, JOAd 2125, Tibbetts S, 3 cr

R 3050 Restorative Art (prereq regis mortuary science) (A-F only)
★LECT 0800-0955 TTh, JacH 2153, Tibbetts S, 4 cr
144926 —1 LAB 1010-1205 T, JacH 2153B, Tibbetts S
248451 —2 LAB 1325-1520 T, JacH 2153B, Tibbetts S
352460 —3 LAB 1010-1205 Th, JacH 2153B, Tibbetts S

R 3060 Embalming (prereq biology, human anatomy, regis in mortuary science or #) (A-F only)
★LECT 0800-0955 MWF, JacH 2153, Kroshus J, Lee D
748745 —1 LAB 1010-1310 M, JacH 2153A, Kroshus J, Lee D, 8 cr
146619 —2 LAB 1010-1310 W, JacH 2153A, Kroshus J, Lee D, 8 cr
744467 —3 LAB 1010-1310 F, JacH 2153A, Kroshus J, Lee D, 8 cr

3070 Funeral Service Management (prereq regis mortuary science) (A-F only)
043955 1115-1205 MTWTh, JOAd 2125, Mathews M, 4 cr

R 3071 Funeral Service Practice (prereq regis mortuary science) (A-F only)
★LECT 0800-1100 T, 0800-0955 Th, JOAd 2125, Mathews M
742136 —1 LAB 0800-0955 M, JOAd 2125, Mathews M, 6 cr
751693 —2 LAB 0800-0955 W, JOAd 2125, Mathews M, 6 cr
447847 —3 LAB 0800-0955 F, JOAd 2125, Mathews M, 6 cr

3080 Funeral Service Practicum (prereq have completed all requirements for graduation with the exception of 3080, Δ) (S-N only)
044703 Kroshus J, Mathews M, 15 cr

3090 Independent Study (prereq regis in mortuary science)
446875 Kroshus J, Tibbetts S, 1-3 cr

3271 Funeral Service Seminar (prereq regis mortuary science) (S-N only)
144280 1325-1520 Th, JOAd 2125, Tibbetts S, 1 cr

R 5040 Dying and Death in Contemporary Society (prereq hlth sci maj, pubh grad student, educ sr, certified teacher, mort sci maj, #)
050999 1640-1920 W, MoosT 2690, Rothenberger J, Mathews M, 3 cr

MUSEUM STUDIES (MSt)

8010 Museum History and Philosophy (prereq #) (A-F only)
952826 1535-1730 TTh, BellMus 175, Murdock G, 4 cr

8016 Internship (prereq 8010, prereq permission of Director of Graduate Studies in Museum Studies)
142805 Murdock G, 1-6 cr

MUSIC (Mus)
Music
Liberal Arts

R 1001 Fundamentals of Music (§1003, 1004; prereq non-mus maj) (Vis)
★LECT 1430-1520 MWF, FergH 225
150069 —1 REC 1010-1100 F, FergH 105, 4 cr
845979 —2 REC 1115-1205 F, FergH 105, 4 cr
347470 —3 REC 1220-1310 F, FergH 105, 4 cr
252466 —4 REC 1325-1415 F, FergH 105, 4 cr

R 1051 Piano Class for Non-Music Majors (Vis)
352071 —1 1430-1520 MW, FergH 259, 2 cr
874625 —2 1535-1625 MW, FergH 259, 2 cr
674626 —3 0800-0850 TTh, FergH 259, 2 cr

R 1052 Piano Class for Non-Music Majors (prereq 1051) (Vis)
146491 1115-1205 TTh, FergH 259, 2 cr

R 1152 Piano: Class Lessons (prereq 1151) (A-F only)
551680 —1 0800-0850 MW, FergH 259, 2 cr
049383 —2 0800-0850 MW, FergH 265, 2 cr
143503 —3 0905-0955 MF, FergH 259, 2 cr
745697 —4 1010-1100 MF, FergH 259, 2 cr
049982 —5 0905-0955 TTh, FergH 265, 2 cr
644445 —6 1010-1100 TTh, FergH 259, 2 cr

R 1160 Voice: Class Lessons
141602 —1 1010-1100 MW, FergH 90, 2 cr
950316 —2 1115-1205 MW, FergH 90, 2 cr
651783 —3 1115-1205 TTh, FergH 90, 2 cr
252158 —4 1430-1520 WF, FergH 90, 2 cr

1162 Diction for Singers II (prereq 1162)
141629 1010-1100 MW, FergH 205, del Santo J, 1 cr

1165 Diction for Singers V (prereq 1164)
046127 1010-1100 TTh, FergH 90, Weller L, 1 cr

1340 Jazz Ensemble (max 6 cr; prereq audition, #) (A-F only)
947349 —1 1640-1830 M, 1740-1830 W, FergH 95, McCurdy R, 1 cr (Jazz I)
148166 —2 1220-1310 TThF, FergH 95, 1 cr (Jazz II)

1440 Ensemble (prereq #)
051635 —1 1430-1625 F, FergH 123, Van J, 1 cr (guitar)
645451 —2 Aspnes F, 1 cr (harp)
150475 —3 Shockley R, 1 cr (piano)
544955 —4 1 cr (strings)
643442 —5 1535-1625 M, FergH 95, Ashworth T, 1 cr (Trombone Choir)
852057 —6 1 cr (Woodwind)
447881 —7 1 cr (Jazz Combos)
473672 —8 Baldwin D, 1 cr (Brass Quintet)
152825 —9 Ashworth T, 1 cr (Trombone Quartet)
143002 —10 1800-2000 M, FergH 225, Davis S, 1 cr (Gospel Choir)

R 1508 Theory Review II (prereq #) (A-F only)
074705 1115-1310 TTh, FergH 105, Lubet A, 3 cr

R 1511 Ear-Training and Sight-Singing I (prereq 1004 or #, ¶1531) (A-F only)
051327 —1 0905-0955 TTh, FergH 149, 1 cr
150220 —2 0905-0955 TTh, FergH 203, 1 cr
144702 —3 1010-1100 TTh, FergH 149, 1 cr
148233 —4 1010-1100 TTh, FergH 203, 1 cr

R 1522 Keyboard Skills (prereq 1521) (A-F only)
149133 0905-0955 TTh, FergH 259, Shockley R, 2 cr

R 1531 Theory I: Foundations of Tonal Theory (prereq 1003, 1151 or 1521, or #, ¶1511) (A-F only)
★LECT 0800-0850 TTh, FergH 225
651735 —1 REC 0905-0955 WF, FergH 149, 3 cr
850504 —2 REC 0905-0955 WF, FergH 203, 3 cr
752486 —3 REC 1010-1100 WF, FergH 149, 3 cr
649189 —4 REC 1010-1100 WF, FergH 203, 3 cr

1602 Music and Society (prereq 1003 or equiv or #) (A-F only)
245453 1115-1205 MTWTh, FergH 225, Kagan A, 3 cr

R 3020 Campus Orchestra (prereq audition, #)
052008 1535-1730 M, 1800-2000 W, FergH 85, Barnes E, 1 cr

3021 Introduction to Music (§1021; prereq non-mus maj) (Vis; IP)
041655 1220-1310 MTWThF, FergH 225, Grayson D, 5 cr

R 3029 Music in the 20th Century (prereq non-music maj) (Vis; IP)
172564 0905-1100 TTh, FergH 105, Jackson D, 4 cr

3290 Jazz Singers (prereq #)
149561 1535-1730 TTh, FergH 81, McCurdy R, 1 cr

R 3332 Jazz Improvisation II (prereq 3331 or #)
045429 1115-1205 MWTh, FergH 95, Yeshaya A, 2 cr

R 3352 Jazz Class Piano (prereq 1153 or #)
272555 1115-1205 MW, FergH 259, Hamilton J, 2 cr

3410 University Wind Bands (A-F only)
449632 —1 1325-1520 MWF, FergH 95, Kirchhoff C, 1 cr (Symphonic Wind Ensemble) (prereq audition, #)
346352 —2 1535-1730 TTh, FergH 95, Kirchhoff C, 1 cr (Symphonic Band) (prereq audition, #)
251740 —3 1830-2030 T, FergH 95, Kirchhoff C, 1 cr (University Band)

3420 Orchestra (prereq audition, #) (A-F only)
849515 1325-1520 MTTh, FergH 85, Clark K, 1 cr

3430 Chorus (prereq audition, #) (Vis)
144644 —1 1535-1625 MWF, FergH 90, Romey K, 1 cr (Women's Chorus)
250040 —2 1535-1625 TTh, FergH 90, 1535-1625 F, FergH 225, Romey K, 1 cr (Men's Chorus)
551145 —3 1325-1415 MTWThF, FergH 90, Romey K, 1 cr (Concert Choir)
174890 —5 1430-1520 MW, FergH 123, Lancaster T, 1 cr (Choral Conducting Ensemble)

3440 Ensemble (prereq #)
952048 —1 1430-1625 F, FergH 123, Van J, 1 cr (guitar)
342009 —2 Aspnes F, 1 cr (harp)
043762 —3 Shockley R, 1 cr (piano)
645353 —4 1 cr (strings)
646843 —5 1535-1625 M, FergH 95, Ashworth T, 1 cr (Trombone Choir)
042711 —6 1 cr (Woodwind)
148071 —7 1 cr (Jazz Combos)
273673 —8 Baldwin D, 1 cr (Brass Quintet)
549217 —9 Ashworth T, 1 cr (Trombone Quartet)
441482 —10 1800-2000 M, FergH 225, Davis S, 1 cr (Gospel Choir)
347016 —11 Van J, 1 cr (guitar and other instruments)

3452 Accompanying Skills (max 3 cr; prereq 3451) (A-F only)
042806 1115-1205 M, FergH 3, 1 cr

R 3511 Ear Training and Sight Singing IV (prereq 1513, ¶3531) (A-F only)
342026 —1 0800-0850 TTh, FergH 149, 1 cr
044281 —2 0800-0850 TTh, FergH 203, 1 cr
748227 —3 1115-1205 TTh, FergH 149, 1 cr
845691 —4 1115-1205 TTh, FergH 203, 1 cr

R 3531 Theory IV: Chromaticism (prereq 1533, ¶3511) (A-F only)
951093 0905-1100 MW, FergH 225, Damschroder D, 3 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

3605 History of Western Music (prereq 1533 or #) (IP) (A-F only)
★LECT 0905-1100 TTh, FergH 225, Hepokoski J
242066 —1 REC 0905-0955 F, FergH 225, 5 cr

R 3742 Vocal Repertoire Survey (prereq 3741) (A-F only)
351308 1430-1625 W, FergH 203, del Santo J, 2 cr

3970 Directed Studies (prereq #, Δ, ❑)
651248 1-15 cr

3995 Major Project (prereq sr, #, Δ) (A-F only)
848400 2 cr

5290 Jazz Singers (prereq #)
251768 1535-1730 TTh, FergH 81, McCurdy R, 1 cr

R 5300 Jazz Rhythm Section Techniques (prereq jazz studies maj or #) (A-F only)
150354 1430-1520 Th, FergH 3, Yeshaya A, 1 cr

5302 Advanced Jazz Class Piano (prereq keyboard maj, #, 5301)
474627 1115-1205 MW, FergH 259, Hamilton J, 2 cr

R 5310 Piano Pedagogy Practicum (max 3 cr; prereq ¶5351-5352-5353 or ¶5354-5355-5356 or #) (A-F only)
644199 Shockley R, 1 cr

R 5322 Suzuki Violin Pedagogy (prereq 5321)
845187 1220-1415 W, FergH 203, Bjork M, 2 cr

R 5325 Advanced Suzuki Violin Pedagogy (prereq 5324)
252497 0905-1100 T, FergH 224, Bjork M, 2 cr

5330 Concerto Grosso Ensemble (prereq #) (A-F only)
251396 1430-1625 F, FergH 85, Kim Y, 1 cr

R 5332 Jazz Improvisation V (prereq 5331 or audition) (A-F only)
043082 1325-1415 TTh, FergH 81, McCurdy R, 2 cr

R 5337 Jazz Arranging II (prereq 3532, 5336 or #) (A-F only)
449923 1535-1625 MW, FergH 123, Yesha A, 2 cr

5340 Jazz Ensemble (max 6 cr; prereq audition, #) (A-F only)
751712 —1 1640-1830 M, 1740-1830 W, FergH 95, McCurdy R, 1 cr (Jazz I)
152727 —2 1220-1310 TThF, FergH 95, 1 cr (Jazz II)

R 5350 Orchestral Repertoire (A-F only)
874933 Fleezanis J, 1 cr

R 5354 Advanced Piano Pedagogy (prereq grad piano maj or 5353 or #) (A-F only)
972557 0905-1100 W, FergH 123, Shockley R, 2 cr

R 5360 Woodwind Ensemble (prereq audition)
850082 —1 1325-1415 Th, FergH 72, Anderson J, 1 cr (Clarinet Choir)
948601 —2 1 cr (Flute Choir)
244951 —3 1220-1415 F, FergH 72, 1 cr (Woodwind Quintet)
647586 —4 1 cr (Saxophone Quartet)
343788 —5 1 cr

R 5364 Cello Pedagogy (prereq 12 cr in applied cello or MuEd 3501 or #)
345055 1220-1310 WTh, FergH 72, Remenikova T, 2 cr

R 5370 Vocal Pedagogy Practicum (max 3 cr; prereq sr or grad stu, #) (A-F only)
743593 1325-1415 TTh, FergH 115, Ware C, 1 cr

R 5372 Diction for Singers (prereq 5371)
572562 1115-1205 TTh, FergH 81, Weller L, 2 cr

R 5376 Vocal Performance (prereq sr or grad stu, #) (A-F only)
543904 1430-1520 MW, FergH 115, Ware C, 2-3 cr

5380 Brass Choir (prereq #)
449498 1535-1730 TTh, FergH 85, Baldwin D, 1 cr (Brass Choir)

R 5383 Choral Conducting Technique (prereq #) (A-F only)
572559 1430-1520 MW, FergH 123, Lancaster T, 2 cr

5390 Percussion Ensemble (prereq #)
044765 1535-1730 WF, FergH 95, Meza F, 1 cr

5410 University Wind Bands (A-F only)
249552 —1 1325-1520 MWF, FergH 95, Kirchhoff C, 1 cr (Symphonic Wind Ensemble) (prereq audition, #)
545281 —2 1535-1730 TTh, FergH 95, Kirchhoff C, 1 cr (Symphonic Band) (prereq audition, #)
348361 —3 1830-2030 T, FergH 95, Kirchhoff C, 1 cr (University Band)

5420 Orchestra (prereq audition, #) (A-F only)
144635 1325-1520 MTTh, FergH 85, Clark K, 1 cr

R 5422 Vocal Accompanying Skills and Repertoire (prereq Italian, German, French diction, accompanying or grad vocal maj) (A-F only)
043468 1115-1310 W, FergH 240, 2 cr

5430 University Chorus (prereq #)
942717 —1 1535-1625 MWF, FergH 90, Romey K, 1 cr (Women's Chorus)
246828 —2 1535-1625 TTh, FergH 90, 1535-1625 F, FergH 225, Romey K, 1 cr (Men's Chorus)
348991 —3 1325-1415 MTWThF, FergH 90, Romey K, 1 cr (Concert Choir)

5440 Ensemble (prereq #)
450246 —1 1430-1625 F, FergH 123, Van J, 1 cr (guitar)
947061 —2 Aspnes F, 1 cr (harp)
143509 —3 Shockley R, 1 cr (piano)
644316 —4 1 cr (strings)
942118 —5 1535-1625 M, FergH 95, Ashworth T, 1 cr (Trombone Choir)
142067 —6 1 cr (Woodwind)
548293 —7 1 cr (Jazz Combos)
173674 —8 Baldwin D, 1 cr (Brass Quintet)
146269 —9 Ashworth T, 1 cr (Trombone Quartet)
747238 —10 1800-2000 M, FergH 225, Davis S, 1 cr (Gospel Choir)
443250 —11 Van J, 1 cr (guitar and other instruments)

5470 Opera Workshop and Ensemble (prereq ability to sing arias satisfactorily, # by audition)
545121 1535-1730 MTTh, FergH 99, Sutton E, 1 cr

5480 Opera Theatre (prereq advanced ability to sing arias satisfactorily, by audition, #)
347193 1535-1730 MTTh, FergH 99, Sutton E, 2 cr

5490 Chamber Singers (prereq audition, #)
445872 1220-1310 MTWThF, FergH 90, Lancaster T, 1 cr

R 5510 Early Music Performance Practices (prereq 3606, 3532, #) (A-F only)
672567 Kagan A, 1 cr

R 5522 Advanced Keyboard Skills (prereq 5521) (A-F only)
749751 1325-1415 MW, FergH 259, Billmeyer D, 2 cr

R 5532 Analysis of 20th-Century Music (prereq 3532) (A-F only)
443152 0905-0955 MWF, FergH 105, Cherlin M, 3 cr

R 5550 Composition (prereq 3532 or equiv, 3553 or grad, #) (A-F only)
943575 —1 Argento D, 2 cr
451087 —2 Lubet A, 2 cr
241905 —3 Zaimont J, 2 cr

R 5562 Orchestration (prereq 5561) (A-F only)
444169 1220-1310 MW, FergH 149, Argento D, 2 cr

5646 19th-Century European Music (prereq 3606 or equiv, 12 cr undergrad music hist, 3534 or equiv, # for undergrads) (A-F only)
347730 0905-1100 MW, FergH 105, 4 cr

R 5745 Piano Literature (prereq 12 cr of MusA 1201 or MusA 1301 or #) (A-F only)
545068 1535-1830 T, FergH 115, McNab D, 2 cr

R 5748 Organ Literature (prereq 3606, 3532, or #) (A-F only)
372563 1325-1625 Th, FergH 213, Billmeyer D, 2 cr

R 5793 Analog Synthesis and Recording Techniques (prereq 5791 or ¶5791) (A-F only)
548861 1325-1520 Th, FergH 215, 2 cr

R 5797 Music and Text: Seminar on the Interrelations of Text and Music (prereq 3531, 3532)
772558 1325-1520 MW, FergH 105, Cherlin M, 4 cr

R 5950 Topics in Music
972560 —1 1010-1205 M, 1115-1205 Th, FergH 240, Palmer R, 2 cr (Opera Accompanying and Coaching) (prereq accompanying maj)
275035 —2 0905-1100 TTh, FergH 123, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval) (A-F only)
147964 —1 Gisselman G, 1-5 cr
774889 —2 Gisselman G, 1-5 cr

R 5971 Music Transcription for Winds (prereq 3532)
652786 0905-0955 TTh, FergH 24, Baldwin D, 2 cr

R 8372 Wind Ensemble/Band Conducting II (prereq wind conducting maj or #) (A-F only)
644686 Kirchhoff C, 4 cr

R 8380 Orchestral Conducting (prereq #) (A-F only)
146479 4-5 cr

8389 Performance and Document: Orchestral Conducting (prereq 12 cr of 8380, #) (A-F only)
943141 4 cr

8399 Performance: Choral Conducting (prereq 5384, 5385, #) (A-F only)
744680 Lancaster T, 4 cr

R 8402 Sonata Seminar (prereq accompanying maj; strings and winds by audition, #) (A-F only)
741956 1115-1310 T, FergH 240, 2 cr

R 8550 Composition (max 18 cr; prereq compl of undergrad maj sequence in music theory and composition , #)
544728 —1 Argento D, 3 cr
541487 —2 Lubet A, 3 cr
141511 —3 Zaimont J, 3 cr

R 8560 Readings in Music Theory (prereq #) (A-F only)
272569 0905-1100 TTh, FergH 205, Lubet A, 4 cr

8571 Composers' Laboratory I (prereq 8570) (A-F only)
843276 1220-1415 T, FergH 149, Zaimont J, 2 cr

R 8575 Women Composers (prereq #) (A-F only)
772561 1325-1520 MW, FergH 149, Zaimont J, 4 cr

R 8581 Schenkerian Theory and Analysis I (prereq 3534 or #) (A-F only)
472568 1115-1205 MW, 1115-1310 F, FergH 149, Damschroder D, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
848588 1-18 cr

8754 Choral Literature: Renaissance Through Baroque Eras (prereq grad student, #)
646597 0905-1100 MWF, FergH 115, Lancaster T, 4 cr

8777 Thesis Credits: Masters
744713 1-16 cr

R 8840 Seminar in Musicology (A-F only)
072565 1325-1520 TF, FergH 108, Hepokoski J, 4 cr

R 8847 Seminar: Notation of Polyphonic Music (prereq undergrad degree in music)
872566 0905-1100 MW, FergH 108, Jackson D, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
943835 1-36 cr

8990 Special Problems (prereq Δ)
848994 2-12 cr

8999 Recital Credits: Doctoral (max 12 cr per qtr; prereq Doctor of Musical Arts students) (S-N only)
645093 —1 6 cr

MUSIC APPLIED (MusA)
Music
Liberal Arts

See Applied Music chart on the next page.

MUSIC EDUCATION (MuEd)
Liberal Arts

R 3011 Teaching Music in the Elementary School (prereq Mus 1001, elementary educ maj) (A-F only)
252547 1430-1520 MWF, FergH 107, Hamilton H, 4 cr

APPLIED MUSIC (MusA) COURSES

Courses in applied music are classified according to nine modes: elective (with or without credit), principal, major, secondary required, secondary elective, principal beyond requirement, major beyond requirement, minor, and transfer student, as well as 3 levels: 1000-, 3000-, and 8000-level (graduate level). You may not register for a course in applied music for credit until you pass the required applied entrance exam. The examining committee will determine the mode(s) for which you may register. You should consult the School of Music, 100 Ferguson Hall, regarding the mode and level appropriate for your degree program. Studio class is required for all undergraduates registering at the x2xx, x3xx, x6xx, x7xx, or 19xx levels. Specific times for these classes will be available from the applied instructor.

Fees for applied music courses are based on individual lessons: 1 half-hour lesson per week for two credits; 2 half-hour lessons or 1 hour lesson per week for 4 credits. See the chart below for individual amounts. Music fees are course fees: they are applied *in addition to* tuition.

NOTE: Call numbers for courses in applied music will be posted outside 100 Ferguson Hall and must be listed on your Course Request form. Do not call the music office for these numbers.

Instrument	Elective	Principal	Major	Secondary Required	Secondary Elective	Principal Beyond Requirement	Major Beyond Requirement	Minor	Transfer Student
Fee per 2 cr	$125	$50	$50	$65	$65	$65	$65	$65	$50
Fee per 4 cr	n.a.	$100	$100	$130	n.a.	$130	$130	n.a.	$100
Accomp/ Coach			8324						
Baritone	1118, 3118, 5118	1218, 3218, 8218	1318, 3318, 8318	1418, 3418, 8418	1518, 3518, 8518	1618, 3618, 8618	1718, 3718, 8718	3818	1918
Bassoon	1114, 3114, 5114	1214, 3214, 8214	1314, 3314, 8314	1414, 3414, 8414	1514, 3514, 8514	1614, 3614, 8614	1714, 3714, 8714	3814	1914
Cello	1107, 3107, 5107	2107, 3107, 8107	1307, 3307, 8307	1407, 3407, 8407	1507, 3507, 8507	1607, 3607, 8607	1707, 3707, 8707	3807	1907
Clarinet	1112, 3112, 5112	1212, 3212, 8212	1312, 3312, 8312	1412, 3412, 8412	1512, 3512, 8512	1612, 3612, 8612	1712, 3712, 8712	3812	1912
Double Bass	1108, 3108, 5108	1208, 3208, 8208	1308, 3308, 8308	1408, 3408, 8408	1508, 3508, 8508	1608, 3608, 8608	1708, 3708, 8708	3808	1908
Flute	1109, 3109, 5109	1209, 3209, 8209	1309, 3309, 8309	1409, 3409, 8409	1509, 3509, 8509	1609, 3609, 8609	1709, 3709, 8709	3809	1909
French Horn	1115, 3115, 5115	1215, 3215, 8215	1315, 3315, 8315	1415, 3415, 8415	1515, 3515, 8515	1615, 3615, 8615	1715, 3715, 8715	3815	1915
Guitar	1123, 3123, 5123	1223, 3223, 8223	1323, 3323, 8323	1423, 3423, 8423	1523, 3523, 8523	1623, 3623, 8623	1723, 3723, 8723	3823	1923
Harp	1122, 3122, 5122	1222, 3222, 8222	1322, 3322, 8322	1422, 3422, 8422	1522, 3522, 8522	1622, 3622, 8622	1722, 3722, 8722	3822	1922
Harpsicord	1102, 3102, 5102	1202, 3202, 8202	1302, 3202, 8302	1402, 3402, 8402	1502, 3502, 8502	1602, 3602, 8602	1702, 3702, 8702	3802	1902
Oboe	1111, 3111, 5111	1211, 3211, 8211	1311, 3311, 8311	1411, 3411, 8411	1511, 3511, 8511	1611, 3611, 8611	1711, 3711, 8711	3811	1911
Organ	1103, 3103, 5103	1203, 3203, 8203	1303, 3303, 8303	1403, 3403, 8403	1503, 3503, 8503	1603, 3603, 8603	1703, 3703, 8703	3803	1903
Percussion	1121, 3121, 5121	1221, 3221, 8221	1321, 3321, 8321	1421, 3421, 8421	1521, 3521, 8521	1621, 3621, 8621	1721, 3721, 8721	3821	1921
Piano	1101, 3101, 5101	1201, 3201, 8201	1301, 3301, 8301	1401, 3401, 8401	1501, 3501, 8501	1601, 3601, 8601	1701, 3701, 8701	3801	1901
Saxophone	1113, 3113, 5113	1213, 3213, 8213	1313, 3313, 8313	1413, 3413, 8413	1513, 3513, 8513	1613, 3613, 8613	1713, 3713, 8713	3813	1913
Trombone	1117, 3117, 5117	1217, 3217, 8217	1317, 3317, 8317	1417, 3417, 8417	1517, 3517, 8517	1617, 3617, 8617	1717, 3717, 8717	3817	1917
Trumpet	1116, 3116, 5116	1216, 3216, 8216	1316, 3316, 8316	1416, 3416, 8416	1516, 3516, 8516	1616, 3616, 8616	1716, 3716, 8716	3816	1916
Tuba	1119, 3119, 5119	1219, 3219, 8219	1319, 3319, 8319	1419, 3419, 8419	1519, 3519, 8519	1619, 3619, 8619	1719, 3719, 8719	3819	1919
Viola	1106, 3106, 5106	1206, 3206, 8206	1306, 3306, 8306	1406, 3406, 8406	1506, 3506, 8506	1606, 3606, 8606	1706, 3706, 8706	3806	1906
Violin	1105, 3105, 5105	1205, 3205, 8205	1305, 3305, 8305	1405, 3405, 8405	1505, 3505, 8505	1605, 3605, 8605	1705, 3705, 8705	3805	1905
Voice	1104, 3104, 5104	1204, 3204, 8204	1304, 3304, 8304	1404, 3404, 8404	1504, 3504, 8504	1604, 3604, 8604	1704, 3704, 8704	3804	1904

3302 Teaching Secondary General Music (prereq music education or music therapy maj or #) (A-F only)
951417 1010-1205 TTh, FergH 107, McCoy C, 4 cr

3415 Choral Laboratory (prereq music education or music therapy maj or #) (A-F only)
246392 1010-1205 MW, FergH 107, McCoy C, 4 cr

R 3501 String Techniques II (prereq music education or music therapy maj or #) (A-F only)
448285 1220-1310 MWF, FergH 81, Remenikova T, 3 cr

3505 Percussion Techniques (prereq music education or music therapy maj) (A-F only)
650102 0800-0850 MTWTh, FergH 7A, Meza F, 4 cr

3515 Instrumental Laboratory I (prereq music education or music therapy maj or #) (A-F only)
750088 1010-1205 MW, FergH 85, Schultz S, 4 cr

3650 Student Teaching in Music (prereq #) (A-F only)
650178 —1 1430-1625 M, FergH 157, Schultz S, Haack P, 6-18 cr
746509 —2 1535-1700 W, FergH 157, McCoy C, Hamilton H, 6-18 cr

3801 Psychology of Music I (prereq Psy 1001, 3604 or #) (A-F only)
945200 0905-0955 MTWTh, FergH 157, Haack P, 4 cr

3804 Music Therapy Techniques I (prereq music therapy or music education maj) (A-F only)
549203 1115-1310 T, 1115-1205 Th, FergH 151, Furman C, 4 cr

R 3850 Field Experiences: Music Therapy (max 12 cr; prereq 3800, 3804) (A-F only)
248644 —1 1220-1310 Th, FergH 151, Furman C, 2 cr
149505 —2 1220-1310 Th, FergH 144, Furman C, 2 cr
842063 —3 1325-1415 Th, FergH 151, Furman C, 2 cr
143199 —4 1325-1415 Th, FergH 144, Furman C, 2 cr

3851 Internship: Music Therapy (3851-3852†; prereq #) (S-N only)
941938 Furman C, 6 cr

3852 Internship: Music Therapy (3851-3852†; prereq #) (S-N only)
751158 Furman C, 6 cr

5655 New Dimensions in Music Education (A-F only)
172290 1640-1845 T, FergH 107, Haack P, 3 cr

R 5666 Microcomputers in the Music Classroom (A-F only)
349154 1220-1310 MTW, AndH 250, Schultz S, 3 cr

5804 Music in Therapy (prereq music educ or music therapy grad stu or #) (A-F only)
149181 Furman C, 3 cr

5970 Independent Study (prereq music educ/therapy or grad stu, #, Δ)
545412 1-4 cr

8880 Master's Research Project (prereq 5112 or #)
743092 1-8 cr

8990 Research Problems (prereq knowledge of elementary statistics, Δ)
844072 1-12 cr

NATURAL RESOURCES AND ENVIRONMENTAL STUDIES (NRES)

Natural Resources

R 1020 Information Technology in Natural Resources (A-F only)
★LECT 0905-0955 T, McNH 33, Burk T
842371 —1 LAB 0800-1100 W, NatResAd 35, 2 cr
541215 —2 LAB 1535-1835 W, NatResAd 35, 2 cr
350837 —3 LAB 1535-1835 Th, NatResAd 35, 2 cr
548746 —4 LAB 0800-1100 F, NatResAd 35, 2 cr

R 1040 Natural Resources as Raw Materials (Envt; IP) (A-F only)
550710 1010-1100 MWF, PetH 110, Bowyer J, 3 cr

R 1201 Conservation of Natural Resources (§FR 1201) (Envt)
947691 1010-1100 MWF, GrnH 110, Splett P, 3 cr

R 3001 Colloquium in Natural Resources and Environmental Studies
148841 —1 Wang T, 2 cr (Environmental Values and Management: Individual Voices and Social Movements) (A-F only)
942605 —2 1220-1415 W, GrnH 19, Steinberg S, Perry H, 1-2 cr (Case Studies in Environmental Management)

R 3020 Plant Resource Management and the Environment (§5020; prereq soph, Biol 1009) (Biol/L; Envt)
549850 1430-1625 M, 1430-1520 WF, GrnH 110, 4 cr

3050 Experience and Training in a Field Setting (prereq #) (A-F only)
052672 Splett P, 1-4 cr

3070 From Local to Global Ecology (Envt; IP) (A-F only)
546706 1115-1230 TTh, McNH 197, Cohen Y, 3 cr

3225 Directed Study Experience (prereq fr or soph, #)
651041 —1 Anderson D, 1-5 cr
048279 —2 Bauer M, 1-5 cr
246442 —3 Baughman M, 1-5 cr
752634 —4 Blinn C, 1-5 cr
146149 —5 Bolstad P, 1-5 cr
448139 —6 Brooks K, 1-5 cr
772530 —7 Burk T, 1-5 cr
172533 —8 Carlson S, 1-5 cr
872583 —9 Ek A, 1-5 cr
672584 —10 Ellefson P, 1-5 cr
472585 —11 Gregersen H, 1-5 cr
272586 —12 Johnson G, 1-5 cr
972588 —13 Kitts J, 1-5 cr
772589 —14 Lime D, 1-5 cr
172590 —15 Mohn C, 1-5 cr
972591 —16 Newman R, 1-5 cr
772592 —17 Perry J, 1-5 cr
572593 —18 Puettmann K, 1-5 cr
372594 —19 Reich P, 1-5 cr
172595 —20 Rose D, 1-5 cr
072596 —21 SplettP, 1-5 cr
872597 —22 Sucoff E, 1-5 cr

5001 Colloquium in Natural Resources and Environmental Studies (A-F only)
146742 —1 1325-1415 TTh, AlderH 415, Yin X, 2 cr (Applied Ecological Modeling) (prereq 3001 or equiv)
173934 —2 1010-1205 F, GrnH 19, Weisbrod A, 2 cr (Endangered Species: Biology and Public Policy) (prereq 15 cr intro biol, 5 cr pol sci)

R 5020 Plant Resource Management and the Environment (§3020; prereq soph, Biol 1009) (Envt)
147785 1430-1625 M, 1430-1520 WF, GrnH 110, 4 cr

5210 Survey, Measurement and Modeling Methods for Natural Resources I (prereq Stat 3011 or Stat 5021, Math 1142 or Math 1251, NRES 1020 or CSci 3101 or CSci 3102 or CSci 3113 or GC 1571) (A-F only)
★LECT 0800-0850 MWF, GrnH 110, Ek A
043907 —1 LAB 1230-1320 Th, GrnH 110, Ek A, 4 cr

5225 Directed Study Experience (prereq jr or sr or grad stu, #)
452689 —1 Anderson D, 1-5 cr
850745 —2 Bauer M, 1-5 cr
450585 —3 Baughman M, 1-5 cr
146997 —4 Blinn C, 1-5 cr
941891 —5 Bolstad P, 1-5 cr
743447 —6 Brooks K, 1-5 cr
144840 —7 Burk T, 1-5 cr
251513 —8 Carlson S, 1-5 cr
672598 —9 Ek A, 1-5 cr
472599 —10 Furnier G, 1-5 cr
172600 —11 Gregerson H, 1-5 cr
072601 —12 Johnson G, 1-5 cr
872602 —13 Kitts J, 1-5 cr
672603 —14 Lime D, 1-5 cr
472604 —15 Mohn C, 1-5 cr
272605 —16 Newman R, 1-5 cr
172606 —17 Perry J, 1-5 cr
972607 —18 Puettmann K, 1-5 cr
772608 —19 Reich P, 1-5 cr
572609 —20 Rose D, 1-5 cr
972610 —21 Splett P, 1-5 cr
772611 —22 Sucoff E, 1-5 cr

R 5240 Natural Resources Policy and Administration (prereq Pol 1001, AgEc 1101 or Econ 1101, AgEc 1102 or Econ 1102, Rhet 1151)
644543 —1 1010-1100 MWF, KaufL 302, Ellefson P, 3 cr
942541 —2 1325-1415 MWF, KaufL 302, Ellefson P, 3 cr

R 5800 Natural Resources Interpretation and Communication (§3800) (A-F only)
744209 1700-2000 T, GrnH 203, Carlson S, 3 cr

NAVAL SCIENCE (Nav)

R 0204 Professional Training in Naval Science (S-N only)
751029 0650-0850 T, Armory 202, Matkin J, 0 cr

R 1102 Fundamentals of Naval Science II (A-F only)
144336 —1 0905-0955 TTh, Armory 205, Steen A, 2 cr
948498 —2 1325-1415 TTh, Armory 205, Steen A, 2 cr

R 1202 Navigation II: Celestial and Electronic (prereq 1201) (A-F only)
141170 0800-0850 MTWTh, Armory 12A, Covington N, 4 cr

R 3302 Naval Ship Systems II: Engineering (prereq 3301) (A-F only)
942121 0905-0955 TTh, Armory 202, Vellella R, 2 cr

R 3402 Principles of Naval Management II (A-F only)
571668 1115-1230 TTh, Armory 202, Fitzgerald J S, 3 cr

R 3453 Amphibious Warfare II (prereq 3452 or #) (A-F only)
771667 1430-1520 TTh, Armory 205, Matkin J, 2 cr

NEUROLOGY (Neur)

Medical School

5120 Selected Problems in Neurology (prereq regis med)
552750 ar cr

5121 Descriptive Neurology (prereq regis in occupational or physical therapy)
745280 1220-1310 TWTh, MoosT 2620, 2 cr

5122 Pediatric Neurology: Health Care Psychology Interns (prereq #)
547273 Shapiro E, ar cr

R 5124 Sleep Disorders Medicine: Externship (prereq regis med) (S-N only)
641593 Mahowald M, ar cr

5125 Neuroimmunology Research (S-N only)
151679 Birnbaum G, ar cr

R 5510 Externship in Clinical Neurology (prereq regis med)
551677 ar cr

5541 Pediatric Neurology: Neurochemistry (prereq regis med)
146501 Lockman L, ar cr

5542 Pediatric Neurology (prereq regis med)
751161 Lockman L, ar cr

5544 Clinical Electroencephalography (prereq regis med)
544745 ar cr

5545 Electromyography (prereq regis med)
549167 Day J, ar cr

5599 Subinternship in Clinical Neurology (prereq 5510, course director recommendation, med stu) (S-N only)
145129 Rottenberg D, ar cr

8200 Clinical Neurology
645210 Parry G, ar cr

8201 Clinical Pediatric Neurology
144708 Lockman L, ar cr

8202 Research in Neurology
151268 Parry G, ar cr

8203 Applied Electroencephalography
341863 Parry G, ar cr

8204 Applied Electromyography
542770 Parry G, ar cr

8205 Applied Neuropathology
049951 Clark H B, ar cr

8221 Neurochemical Aspects of Selected Clinical Disorders
544695 Parry G, 2 cr

8233 Neurological Clinical Pathological Conference
348456 Parry G, 1 cr

8236 Research in Neuropathology
141914 Clark B H, ar cr

8704 Survey of Neuropathology
850180 Clark B H, 1 cr

8705 Neurological-Neurosurgical Conference (§Rad 0124)
444981 Parry G, 1 cr

NEUROSCIENCE (NSc)

5102 Veterinary Neurobiology (§VB 5102; prereq #)
★LECT 1000-1100 TTh, AnScVM 125, Beitz A, Fletcher T, 3 cr (StP)
247025 —1 LAB 1325-1615 T, AnScVM 104, 125, (StP)

R 5202 Computational Neuroscience II: Cells and Circuits (prereq an understanding of UNIX, Phsl 5201 or equiv)
748471 1430-1600 TTh, MIrdH 5276, Miller R, 5 cr (lab ar)

R 5461 Cellular and Molecular Neuroscience (§GCB 5461, MdBc 5461, Phcl 5461, Phsl 5461, VB 5461; prereq 5460)
873443 1010-1100 TWF, MoosT 2580, Boland L, 3 cr

5480 Invertebrate Neurobiology (§Ent 5480) (A-F only)
143414 1325-1520 W, HodsonH 490, Mesce K, 2 cr (StP)

8124 Recent Advances in Chemoreception Science (prereq #) (S-N only)
071271 Sorensen P, 1 cr

8207 Seminar: Psychopharmacology (max 3 cr, §Phcl 8207; prereq #)
750401 Sparber S, 1 cr (MIrdH 3260)

8216 Selected Topics: Neurophysiology (§Phsl 8216; prereq CBN 5111, Phsl 5112 or equiv, or #)
871269 Pardo J, 1 cr

8217 Selected Topics: Systems and Computational Neuroscience (prereq CBN 5111, Phsl 5112, or equiv, or #) (S-N only)
171270 Soechting J, 2 cr

8247 Physiology of Hearing (§Otol 8247; prereq #)
871272 Anderson J, Javel E, others, 3 cr

8324 Readings in Neurobiology (§NSu 8324; prereq Phsl 8104 or #)
747031 1 cr

8333 Lab Neuroscience (prereq NSc grad stu or Δ) (S-N only)
152184 —1 LAB Ebner T, ar cr
444124 —2 LAB Ebner T, ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
151584 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
650259 1-36 cr

NEUROSURGERY (NSu)
Medical School

5200 Neurosurgery Specialty Course (prereq 3rd or 4th yr med stu)
148572 Hall W, ar cr

5500 Externship at the University Hospitals (prereq regis med)
548195 Hall W, Erickson D, others, 4.5-9 cr

5510 Externship at Veterans Hospital (prereq regis med)
245808 Wen D, 4.5-9 cr

5511 Externship at Hennepin County Medical Center (prereq regis med)
947366 Rockswold G, Bergman T, 4.5-9 cr

5512 Externship at St. Paul Ramsey Hospital (prereq regis med)
943799 Ganz W, 4.5-9 cr

5520 Neurosurgical Investigation (prereq regis med)
151237 Ebner T, Low W, ar cr

8305 Neurosurgical Diagnosis
151173 Maxwell R, Erickson D, others, 4 cr

8308 Neurosurgical Problems and Management
843374 Maxwell R, Haines S, others, 4 cr

8311 Operative Neurosurgery
748096 Maxwell R, Erickson D, others, 4 cr

8316 Neurosurgical Research
643487 Ebner T, Low W, 6 cr

8318 Neuroradiological Conference
151309 1630-1730 F, UHosp 2300, Maxwell R, Erickson D, others, 1 cr (Todd Amph)

8320 Neurosurgical Conference
949554 0800-1100 S, Mayo D417, Maxwell R, Erickson D, others, 2 cr

8324 Readings in Neurobiology (§NSc 8324; prereq 8104, consent of Medical School)
350319 Ebner T, Low W, ar cr

8330 Neurosurgery Literature Seminar
346934 2000-2200 Th, MoosT 2580, Maxwell R, Ebner T, others, 2 cr

NORWEGIAN (Nor)
German, Scandinavian, and Dutch Liberal Arts

R 1102 Beginning Norwegian (prereq 1101)
848364 1220-1310 MTWThF, FolH 240, Vraa K, 5 cr

R 1105 Intermediate Norwegian (prereq 1104 or equiv)
749491 0905-1030 MWF, VinH 213, Fjeld T, 5 cr

R 3670 Advanced Norwegian (max 28 cr; prereq 1106 or equiv)
250572 1415-1530 TTh, VinH 20, Zagar M, 4 cr

NURSING, SCHOOL OF (Nurs)

5040 Restoration and Enhancement of Health in the Acutely Ill Adult (prereq 5000, 5021, pathophysiology, pharmacology, 5042, 5212 or ¶5042, ¶5212)
443930 1220-1415 TTh, OwreH 2210, Anglim M, Bliss D, 4 cr

5041 Practicum: Acutely Ill Adults (prereq ¶5040)
★LAB 0800-0955 TW, WDH 4120, Ridgeway S, 7 cr
742055 —1 CLN 0700-1200 ThF, (off-campus)
★LAB 1010-1205 TW, WDH 4120, Ridgeway S, 7 cr
150614 —2 CLN 0700-1200 ThF, (off-campus)
★LAB 0800-0955 ThF, WDH 4120, Ridgeway S, 7 cr
543532 —3 CLN 0700-1200 TW, (off-campus)
★LAB 1010-1205 ThF, WDH 4120, Ridgeway S, 7 cr
450523 —4 CLN 0700-1200 TW, (off-campus)

R 5042 Interpersonal Communications (prereq admission to School of Nursing or #)
141632 —1 0800-0955 T, WDH 4150, 4176, 1640-1835 Th, WDH 4180, 2 cr
441935 —2 1010-1205 T, WDH 4150, 4176, 1430-1625 Th, WDH 2110, 2140, Lewis M, 2 cr
246201 —3 1430-1625 T, 0800-0955 F, WDH 4180, Tomlinson P, 2 cr
145056 —4 1430-1625 T, WDH 2120, 2130, 1010-1205 F, WDH 4180, Saline E, 2 cr

5215 Expansion of Perspectives in Nursing II (prereq RN, admission to School of Nursing, 5214)
051294 1640-2030 Th, WDH 4178, Brand K, 4 cr

5420 Applied Clinical Research (prereq 5440)
644851 0905-1205 Th, WDH 4180, Duckett L, 3 cr

R 5422H Applied Clinical Research II (!; prereq nurs honors stu)
744260 1430-1625 T, WDH 4178, Brand K, Duckett L, 2 cr

R 5445 Health Assessment (prereq 5000, 5021, or RN, Δ)
★LECT 0800-0955 M, OwreH 2210, Harbaugh B
751256 —1 LAB 1010-1205 M, WDH 4130, 4131, 4132, 4133, 4134, 4135, 4136, 4137, 3 cr
844931 —2 LAB 1325-1520 M, WDH 4130, 4131, 4132, 4133, 4134, 4135, 4136, 4137, 3 cr
046189 —3 LAB 1430-1625 T, WDH 4130, 4131, 4132, 4133, 4134, 4135, 4136, 4137, 3 cr
747983 —4 LAB 1010-1205 W, WDH 4130, 4131, 4132, 4133, 4134, 4135, 4136, 4137, 3 cr
141520 —5 LAB 1220-1415 W, WDH 4130, 4131, 4132, 4133, 4134, 4135, 4136, 4137, 3 cr
443846 —6 LAB 0800-0955 Th, WDH 4130, 4131, 4132, 4133, 4134, 4135, 4136, 4137, 3 cr
347064 —7 LAB 1010-1205 Th, WDH 4130, 4131, 4132, 4133, 4134, 4135, 4136, 4137, 3 cr
246182 —8 LAB 1325-1520 F, WDH 4130, 4131, 4132, 4133, 4134, 4135, 4136, 4137, 3 cr

R 5446 Healthy and High Risk Childbearing Families (prereq 5140, 5141, 5142, 5440 or ¶5440, 5445, 5450)
★LECT 1010-1205 M, WDH 2110, 2140, Rabinowitz L
★REC 1010-1205 T, WDH 4180, Fairbanks D
150430 —1 CLN 0700-1500 W, Fairbanks D, 5 cr (off-campus)
149259 —2 CLN 0700-1500 F, Fairbanks D, 5 cr (off-campus)
551209 —3 CLN 0700-1500 W, Goering M, 5 cr (off-campus)
544681 —4 CLN 0700-1500 F, Dodgson J, 5 cr (off-campus)
342527 —5 CLN Rabinowitz L, 5 cr (off-campus)

R 5447 Families with Children: Practicum (prereq 5140, 5141, 5142, 5440 or ¶5440, 5445, 5450)
★LECT 0800-0955 M, WDH 2120, 2130, Alaniz K, Friedrich C, others
848431 —1 CLN 3 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5448 Practicum: Nursing Care of Individuals, Groups, and Populations in the Community (prereq 5140, 5141, 5142, 5440 or ¶5440, 5445, 5450)
★LECT 0800-0955 M, WDH 4180, Lia-Hoagberg B, Kerr M, others
745991 —1 CLN 0830-1630 W, 6 cr (off-campus)
445225 —2 CLN 0830-1630 W, 6 cr (off-campus)
952485 —3 CLN 0830-1630 W, 6 cr (off-campus)
174721 —4 CLN 6 cr (off-campus)

R 5449 Practicum: Nursing Care of Individuals, Groups, and Populations with Mental Health Problems (prereq 5140, 5141, 5142, 5440 or ¶5440, 5445, 5450)
★LECT 1010-1205 M, WDH 4180, Saline E, Quast S, others
849109 —1 CLN 0830-1130 T, 1600-2100 W, UHosp, Saline E, 4 cr (1st 5 wks)
142187 —2 CLN 0830-1130 T, 1600-2100 W, UHosp, Saline E, 4 cr (2nd 5 wks)
444057 —3 CLN 1000-1400 WF, Quast S, 4 cr (1st 5 wks) (off-campus)
848350 —4 CLN 1000-1400 WF, Quast S, 4 cr (2nd 5 wks) (off-campus)

5460 Leadership/Followership/Management (prereq 5440)
150525 1220-1415 TTh, WDH 4180, Krichbaum K, Fleury J, 4 cr

5480 Special Topics (prereq admission to School of Nursing or #)
347940 1115-1205 Th, WDH 2110, 2140, Weisensee M, 1-2 cr (addtl hr ar)

5609 Special Educational Experiences in Nursing (prereq #)
648284 ar cr

5620 Independent Study in Nursing Topics (prereq #)
451039 1-9 cr

R 5634 Women's Issues: A Health Perspective (prereq upper div or grad stu or #)
043924 1325-1625 T, WDH 2110, 2140, Ringdahl D, 3 cr

5799 Self-Directed Study as a Means of Accomplishing Nursing Electives (prereq #)
450232 ar cr

R 5810 Health Assessment for Advanced Nursing Practice (prereq grad nurs student, #) (A-F only)
★LECT 1010-1205 W, MoosT 5125, Kubik M, 3 cr
273723 —1 LAB 1430-1625 W, WDH 4130, 4131, 4132, 4133, 4134, 4135, 4136, 4137, Kubik M, (TC stu only)
973725 —2 LAB 1640-1835 W, WDH 4130, 4131, 4132, 4133, 4134, 4135, 4136, 4137, Kubik M, (TC stu only)
★LECT 1010-1205 W, Kubik M, 3 cr (off-campus)
173724 —3 LAB (outstate stu only) (off-campus)

R 5834 Primary Care: Reproductive Health (§5835, 8030; prereq grad nurs stu, hlth asses and reprod phys crse or concurrent reg, #) (A-F only)
346996 —1 1220-1625 W, MoosT 5125, Avery M, 4 cr (ITV) (TC stu only)
673766 —2 1220-1625 W, Avery M, 4 cr (ITV) (outstate stu only)

R 5835 Primary Care Practicum: Reproductive Health (prereq grad nurs stu, ¶5834, #) (A-F only)
074722 Bata-Jones B, Kubik M, others, 3 cr

R 5902 Nursing and the Politics of Health (prereq nurs grad student)
743822 1640-1940 T, WDH 4180, Feldman B, 3 cr

5919 Assessment and Intervention Models in Families of Children with Special Health Care Needs (prereq 5917, 5920, #) (A-F only)
041896 0905-1205 T, WDH 4178, Lindeke L, 6 cr (addtl hrs ar)

R 5925 Primary Care Practicum: Common Health Problems of Infants, Children, and Adolescents (prereq grad nurs stu, 5923, 5924, ¶5926, #)
650505 Poe C, Vanic A, others, 5 cr

R 5926 Primary Care: Common Acute and Chronic Conditions Experienced by Infants, Children, and Adolescents (prereq grad nurs stu, 5923, 5924, ¶5925, #)
550352 1220-1625 W, WDH 4178, Poe C, Vanic A, others, 4 cr

R 5928 Primary Care: Pharmacotherapeutics (prereq grad nurs stu, #)
573727 —1 1700-2100 T, MoosT 5125, Bata-Jones B, 3 cr (ITV) (TC stu only)
373728 —2 1700-2100 T, Bata-Jones B, 3 cr (ITV) (outstate stu only)

R 5945 Nursing Care of the Elderly: Assessment and Management (prereq 5940, 5947, grad nurs stu)
173729 1010-1310 W, WDH 4155, Zwygart-Stauffacher M, Feldt K, 6 cr (cln ar)

R 5948 Advanced Practice Roles (prereq nurs grad stu, 12 grad cr)
843004 1625-1835 Th, WDH 4150, 4176, Zwygart-Stauffacher M, Feldt K, 2-3 cr

R 5949 Practicum: Advanced Practice Nursing (prereq grad nurs stu, 12 grad cr, 5948 or ¶5948)
874723 Zwygart-Stauffacher M, Feldt K, 4-8 cr

R 5952 Psychosocial Dimensions of Cancer (prereq grad nurs stu, 8011 or #)
848784 1535-1835 W, WDH 4155, Post-White J, 3 cr

R 5953 Oncology Practicum II (prereq grad nurs stu, 5952 or ¶5952, 5951, or #)
544504 Post-White J, 3 cr

R 5964 Public Health Nursing Leadership Practicum (prereq 8010, 5960, 8040, 5963 or ¶5963, #) (S-N only)
842743 Lia-Hoagberg B, 4 cr

R 8001 Special Educational Experiences in Nursing (prereq #)
452465 —1 ar cr
851961 —2 1220-1625 T, MoosT 5125, Kaas M, 8 cr (ITV to MSU) (TC stu only)
648821 —3 1220-1625 T, Kaas M, 8 cr (ITV to MSU) (MSU stu only)

R 8009 Special Topics (prereq #)
147883 —1 1535-1835 Th, PWB 6224, Snyder M, 3 cr
573730 —2 ar cr

R 8010 Structure of the Discipline of Nursing (prereq nurs grad student or #)
149374 —1 1325-1625 T, WDH 4150, 4176, Brauer D, 3 cr
651363 —2 1640-1940 W, WDH 4150, 4176, Egan E, 3 cr

R 8011 Moral and Ethical Positions in Nursing (prereq grad nurs stu or #)
551503 —1 0905-1205 T, WDH 2120, 2130, Corcoran-Perry, 3 cr
242455 —2 1325-1625 W, WDH 4150, 4176, Crisham P, 3 cr
373731 —3 1700-2100 W, Hooper R, 3 cr (off-campus)

R 8012 Conceptual Framework for Nursing Practice (prereq 8010, nurs grad student or #)
845111 0905-1205 M, WDH 4150, 4176, Eberhardt C, 3 cr

R 8014 Research in Nursing (prereq inferential statistics)
645224 —1 1640-1940 T, WDH 4150, 4176, DeHart S, 3 cr
345072 —2 1325-1625 Th, WDH 4150, 4176, DeHart S, 3 cr

R 8030 Nursing Intervention Models (8 cr must be completed before any cr is given; prereq 8012, 8011 or ¶8011, #)
541361 —1 LECT 0905-1310 W, PWB 6224, Tomlinson P, 8 cr (cln ar) (C & F)
★REC (cln conf ar)
244707 —2 LECT 0905-1310 F, WDH 4150, 4176, Lindquist R, 8 cr (cln ar) (Med-Surg)
★REC (cln conf ar)

R 8040 Public Health Interventions Across the Lifespan (prereq 8011 or ¶8011, PubH 5330 or ¶PubH 5330, 5609 or ¶5609, or #)
946315 1430-1730 W, WDH 2120, 2130, Bearinger L, 3 cr

R 8050 Problems in Nursing (prereq #) (S-N only)
149178 —1 LECT Avery M, 1-9 cr
352426 —2 LECT Bearinger L, 1-9 cr
347937 —3 LECT Bliss D, 1-9 cr
241368 —4 LECT Block D, 1-9 cr
145826 —5 LECT Bull M, 1-9 cr
045348 —6 LECT Corcoran-Perry, 1-9 cr
747353 —7 LECT Crisham P, 1-9 cr
143946 —8 LECT DeHart S, 1-9 cr
047360 —9 LECT Duckett L, 1-9 cr
947092 —10 LECT Edwardson S, 1-9 cr
450358 —11 LECT Egan E, 1-9 cr
247588 —12 LECT Feldman B, 1-9 cr
648267 —13 LECT Gross C, 1-9 cr
946203 —14 LECT Hansen H, 1-9 cr
141718 —15 LECT Hooper R, 1-9 cr
548181 —16 LECT Josten L, 1-9 cr
849241 —17 LECT Kaas M, 1-9 cr
651556 —18 LECT Krichbaum K, 1-9 cr
145809 —19 LECT Leonard B, 1-9 cr
351423 —20 LECT Lewis M, 1-9 cr
249941 —21 LECT Lia-Hoagberg B, 1-9 cr
446892 —22 LECT Lindeke L, 1-9 cr
642002 —23 LECT Lindquist R, 1-9 cr
843066 —24 LECT Newman M, 1-9 cr
045026 —25 LECT Pederson C, 1-9 cr
349347 —26 LECT Post-White J, 1-9 cr
952454 —27 LECT Ryden M, 1-9 cr
947951 —28 LECT Sime A, 1-9 cr
841446 —29 LECT Snyder M, 1-9 cr
643652 —30 LECT Tomlinson P, 1-9 cr
351311 —31 LECT Vellenga B, 1-9 cr
442454 —32 LECT 1-9 cr
241256 —33 LECT 0905-1100 W, WDH 4150, 4176, Bull M, 1-9 cr
★LAB 1200-1600 W, WDH 2160A

8051 Special Topics in Nursing Research
651640 —1 Avery M, 1-9 cr
351762 —2 Bearinger L, 1-9 cr
945584 —3 Bliss D, 1-9 cr
142456 —4 Bull M, 1-9 cr
447735 —5 Corcoran-Perry, 1-9 cr
745585 —6 Crisham P, 1-9 cr
942457 —7 DeHart S, 1-9 cr
141257 —8 Duckett L, 1-9 cr
150878 —9 Edwardson S, 1-9 cr
448786 —10 Egan E, 1-9 cr
646664 —11 Feldman B, 1-9 cr
344505 —12 Gross C, 1-9 cr
742458 —13 Hansen H, 1-9 cr
651928 —14 Hooper R, 1-9 cr
248787 —15 Josten L, 1-9 cr
446665 —16 Kaas M, 1-9 cr
144506 —17 Krichbaum K, 1-9 cr
542459 —18 Leonard B, 1-9 cr
451929 —19 Lewis M, 1-9 cr
049805 —20 Lia-Hoagberg B, 1-9 cr
247736 —21 Lindeke L, 1-9 cr
545586 —22 Lindquist R, 1-9 cr
942460 —23 Newman M, 1-9 cr
941258 —24 Pederson C, 1-9 cr
345587 —25 Post-White J, 1-9 cr
742461 —26 Ryden M, 1-9 cr
741259 —27 Sime A, 1-9 cr
950879 —28 Snyder M, 1-9 cr
151925 —29 Tomlinson P, 1-9 cr
349803 —30 Vellenga B, 1-9 cr
642453 —31 1-9 cr

8060 Advanced Clinical Nursing (prereq #)
149679 3-9 cr

R 8110 Theoretical Foundations of the Discipline (prereq 8012 or equiv, knowledge of philosophy of science, nurs grad student or #)
549220 1325-1730 Th, WDH 4155, Sime A, 4 cr

8115 Advanced Nursing Research Practicum (6 cr must be completed as prog req, may be spread over 3 qtrs; prereq doct nurs stu, #) (S-N only)
873734 —1 Avery M, 1-6 cr
673735 —2 Bearinger L, 1-6 cr
473736 —3 Bliss D, 1-6 cr
273737 —4 Bull M, 1-6 cr
173738 —5 Corcoran-Perry, 1-6 cr
973739 —6 Crisham P, 1-6 cr
273740 —7 DeHart S, 1-6 cr
173741 —8 Duckett L, 1-6 cr
973742 —9 Edwardson S, 1-6 cr
773743 —10 Egan E, 1-6 cr
573744 —11 Feldman B, 1-6 cr
373745 —12 Gross C, 1-6 cr
173746 —13 Hansen H, 1-6 cr
073747 —14 Hooper R, 1-6 cr
873748 —15 Josten L, 1-6 cr
673749 —16 Kaas M, 1-6 cr
073750 —17 Krichbaum K, 1-6 cr
873751 —18 Leonard B, 1-6 cr
673752 —19 Lewis M, 1-6 cr
473753 —20 Lia-Hoagberg B, 1-6 cr
273754 —21 Lindeke L, 1-6 cr
173755 —22 Lindquist R, 1-6 cr
973756 —23 Pederson C, 1-6 cr
773757 —24 Post-White J, 1-6 cr
573758 —25 Ryden M, 1-6 cr
373759 —26 Sime A, 1-6 cr
773760 —27 Snyder M, 1-6 cr
573761 —28 Tomlinson P, 1-6 cr
373762 —29 Vellenga B, 1-6 cr
173763 —30 1-6 cr
073764 —31 1-6 cr
873765 —32 1-6 cr

R 8116 Principles and Methods of Implementing Research (prereq nurs grad stu, 8114 or equiv, 2 grad-level stat crses)
073733 0905-1205 F, WDH 4178, Sime M, Gross C, 3 cr

8220 Seminar: Developing Nursing Knowledge I (prereq PhD nurs stu or #; nurs grad maj must take both 8220 and 8221 but need not take them in order) (S-N only)
749104 1010-1205 Th, WDH 4155, Snyder M, 1 cr (meets every other week bgn Jan 9)

R 8450 Investigations of Stress and Coping From a Nursing Perspective (prereq nurs grad stu, psy or behav med, 8014 or equiv, #)
274726 0905-1205 W, WDH 4178, Snyder M, 3 cr

8509 Special Topics: Nursing Education (prereq #)
043406 ar cr

8809 Special Topics in Nursing Supervision (prereq #)
644011 —1 ar cr
473767 —2 Hansen H, 1 cr

8888 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
147074 1-18 cr

R 8702 Nursing Administration II (prereq 8701, #)
541683 —1 LECT 1640-1940 T, WDH 4155, Hansen H, 6 cr (cln ar)
★REC (cln conf ar)

8777 Thesis Credits: Masters
241788 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
441997 1-36 cr

Nutrition: See Food Science and Nutrition.

NUTRITION (Nutr)
Food Science and Nutrition
Agricultural, Food, and Environmental Sciences, and Human Ecology

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
041574 1-18 cr

8745 Seminar (prereq #) (S-N only)
151092 1605-1700 T, FScN 23, Gallaher D, 1 cr

8777 Thesis Credits: Masters
141601 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
545751 1-36 cr

8990 Graduate Research (prereq #)
244092 2-5 cr

OBSTETRICS AND GYNECOLOGY (Obst)
Medical School

5500 Externship in Obstetrics and Gynecology: Primary Health Care of Women (prereq regis med)
645742 Twiggs L, others, ar cr

5520 Obstetrics and Gynecology Externship in Clinical Practice (prereq regis med)
641982 Twiggs L, others, 4.5 cr

5540 Advanced Externship in Obstetrics and Gynecology (prereq 5500)
548990 Twiggs L, others, ar cr

5560 Research in Reproduction (prereq 5500)
152310 Twiggs L, others, ar cr

5575 Gynecological Pathology and Diagnostic Cytology (prereq 5500)
545698 Okagaki T, Brooker D, 9 cr

5590 Preceptorship in Obstetrics and Gynecology (prereq 5500)
442860 Twiggs L, others, 0-0 cr

8201 Advanced Obstetrics and Gynecology I
243007 Twiggs L, others, ar cr

8202 Advanced Obstetrics and Gynecology I (prereq 8201)
048220 Twiggs L, others, ar cr

8203 Advanced Obstetrics and Gynecology I (prereq 8202)
542932 Twiggs L, others, ar cr

8204 Advanced Obstetrics and Gynecology I (prereq 8203)
544177 Twiggs L, others, ar cr

8205 Advanced Obstetrics and Gynecology II
941857 Twiggs L, others, ar cr

8206 Advanced Obstetrics and Gynecology II (prereq 8205)
351695 Twiggs L, others, ar cr

8207 Advanced Obstetrics and Gynecology II (prereq 8206)
143615 Twiggs L, others, ar cr

8208 Advanced Obstetrics and Gynecology II (prereq 8207)
151786 Twiggs L, others, ar cr

8209 Advanced Obstetrics and Gynecology III
351227 Twiggs L, others, ar cr

8210 Advanced Obstetrics and Gynecology III (prereq 8209)
241838 Twiggs L, others, ar cr

8211 Advanced Obstetrics and Gynecology III (prereq 8210)
645885 Twiggs L, others, ar cr

8212 Advanced Obstetrics and Gynecology III (prereq 8211)
241953 Twiggs L, others, ar cr

8213 Advanced Obstetrics and Gynecology IV (prereq 8212)
747966 Twiggs L, others, ar cr

8214 Advanced Obstetrics and Gynecology IV (prereq 8213)
943186 Twiggs L, others, ar cr

8215 Advanced Obstetrics and Gynecology IV (prereq 8214)
146829 Twiggs L, others, ar cr

8216 Advanced Obstetrics and Gynecology IV (prereq 8215)
945360 Twiggs L, others, ar cr

8217 Seminar: Obstetrics and Gynecology IV (prereq 8216)
352569 Twiggs L, others, ar cr

8218 Seminar: Obstetrics and Gynecology (prereq 8217)
148474 Twiggs L, others, ar cr

8219 Seminar: Obstetrics and Gynecology (prereq 8218)
743254 Twiggs L, others, ar cr

8221 Seminar: Obstetrics and Gynecology (prereq 8219)
150158 Twiggs L, others, ar cr

8222 Gynecological Oncology (prereq 8221)
942801 Twiggs L, others, ar cr

8223 Gynecological Oncology (prereq 8222)
351647 Twiggs L, others, ar cr

8224 Gynecological Endocrinology I (prereq 8223)
752679 Twiggs L, others, ar cr

8225 Gynecological Endocrinology II (prereq 8224)
341927 Twiggs L, others, ar cr

8226 Obstetrical Physiology and Anesthesiology (prereq 8225)
044801 Twiggs L, others, ar cr

8227 Preceptorship in Clinical Practice (prereq 8226)
250636 Twiggs L, others, ar cr

8228 Selected Aspects of Radiation Therapy (prereq 8227)
448559 Twiggs L, others, ar cr

8229 Selected Aspects of Medical Oncology (prereq 8228)
151027 Twiggs L, others, ar cr

8230 Research in Reproduction (prereq 8229)
146121 Twiggs L, others, ar cr

8777 Thesis Credits: Masters
049349 1-16 cr

OPERATIONS AND MANAGEMENT SCIENCES (OMS)
Management

Non-SMgt students should refer to page 16, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 1020 Data Analysis and Statistical Inference for Managers (prereq IDSc 1010, Math 1111 ...Math 1131 rec) (A-F only)
★LECT 1245-1400 TTh, BlegH 10
647426 —1 LAB 0905-1005 F, BlegH 130, 4 cr
346478 —2 LAB 1010-1110 F, BlegH 125, 4 cr

R 3000 Introduction to Operations Management (A-F only)
347579 —1 0800-0945 MW, BlegH 130, 4 cr
349218 —2 1010-1155 TTh, BlegH 110, 4 cr
850308 —3 1325-1510 TTh, BlegH 240, 4 cr

R 3059 Quality Management (prereq 3000 or #) (A-F only)
272314 0905-1050 MW, BlegH 340, 4 cr

R 5170 Simulation Modeling (A-F only)
974082 1325-1510 MW, BlegH 340, Taaffe M, 4 cr

R 8041 Project Management (prereq 3000 or MBA 8050 or #) (A-F only)
642372 1730-2100 W, BlegH 335, 4 cr

R 8059 Quality Management (prereq 3000 or MBA 8050 or #) (A-F only)
648740 1325-1510 TTh, BlegH 340, 4 cr

R 8650 Regression Analysis (prereq MBA 8020 or equiv or #) (A-F only)
443278 1010-1155 TTh, BlegH 340, 4 cr

8990 Readings in Operations and Management Science (prereq #, Grad Schl of Mgmt approval) (A-F only)
052719 ar cr

8995 Graduate Research in Operations and Management Science (prereq #, Grad Schl of Mgmt approval) (A-F only)
645062 ar cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

OPHTHALMOLOGY (Oph)
Medical School

5100 Introduction to Anatomy, Histology, and Embryology (prereq physician or vet med student)
245341 0715-0830 Th, PWB 9335, Cameron J D, 1 cr

5180 Externship (prereq regis med)
647278 ar cr

5190 Research Problems (prereq regis med)
545409 ar cr

8101 Clinical Ophthalmology
550240 0800-1700 MTWThF, PWB 9100, Krachmer J, others, 8 cr (Eye Clinic)

8106 Strabismus Management (prereq grad physician or grad in veterinary science)
851605 0700-0800 M, PWB 9339, Summers G, 1 cr

8111 Intraocular Inflammation, Uveitis, Ocular Tumors (prereq grad physican or grad in veterinary science)
447668 1400-1500 F, PWB 9339, Holland E, 3 cr

8119 Clinical Pathological Correlations in Ophthalmology (prereq grad physician or grad in veterinary sci)
148225 1500-1630 F, PWB 9339, Cameron J D, 1 cr

8120 Scope of Ophthalmic Pathology (prereq grad physician or grad in veterinary science)
147888 1630-1730 F, PWB 9339, Cameron J D, 2 cr

8131 Practical Ocular Surgery
243010 0800-1200 MTWThF, Krachmer J, others, 3 cr (Mayo OR)

8142 Ophthalmic Pathology Laboratory
648009 1330-1530 T, PWB 9335, Cameron J D, 2 cr

8152 Ophthalmology Laboratory
148376 15 cr

8155 Special Topics in Ophthalmology (prereq #)
150248 1-3 cr

ORAL AND MAXILLOFACIAL SURGERY (OSur)
Dentistry

5257 Ambulatory General Anesthesia
049030 1 cr

5275 Oral Pathology Review
452188 1 cr

5276 Medicine for the Oral Surgeon (prereq participation in an oral surgery residency program)
550612 2 cr

5280 Advanced Oral and Maxillofacial Surgery for Postgraduate Dental Fellows (S-N only)
041901 1 cr

8250 Advanced Oral and Maxillofacial Surgery
452692 ar cr

8251 Seminar: Oral Surgery
449078 ar cr

8252 Research in Oral and Maxillofacial Surgery
845870 ar cr

8253 Problems in Oral and Maxillofacial Surgery
850261 ar cr

8254 Topics: Oral Surgery
243072 1 cr

8255 General Surgery
048072 ar cr

8258 Anesthesia II Seminar
943768 1 cr

8280 Oral and Maxillofacial Surgery Clinical Pathology Conference
550304 1 cr

ORAL BIOLOGY (OBio)
Dentistry

8001 Research in Oral Biology
350160 ar cr

8002 Tutorial in Oral Biology
352801 ar cr

8010 Oral Biology (prereq dental specialist or oral research trainee) (A-F only)
449372 3 cr

8022 Topics in Oral Biology (prereq #)
447038 1-3 cr

8030 Seminar (S-N only)
152100 1 cr

8102 Topics in Cariology (prereq possession of a dental degree or PhD) (A-F only)
246957 1-2 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
451798 1-18 cr

8777 Thesis Credits: Masters
947884 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
945777 1-36 cr

ORAL PATHOLOGY (OPat)
Dentistry

5017 Oral Pathology Clinic
342060 ar cr

8002 Oral Pathology (prereq 5251, 5252)
843973 ar cr

8004 Histopathology
248322 2 cr

8006 Current Literature Review
245162 1 cr

8007 Special Oral Pathology
743495 2 cr

8008 Clinical Oral Pathology
345122 1 cr

8011 Surgical Oral Pathology
152458 ar cr

8012 Human and Medical Cytogenetics
042093 —1 LECT 4 cr
★LAB

8301 Human Development Genetics II (prereq 8300)
350059 2 cr

ORTHODONTICS (Otho)
Dentistry

5002 Clinical Orthodontics
447430 0900-1200 MTWF, 1400-1630 MTWF, MoosT 6345, ar cr

8001 Research in Orthodontics
946945 1300-1400 MTWThF, MoosT 6370, ar cr

8201 Growth and Development
145938 0800-0900 MTWThF, MoosT 6370, ar cr

8205 Orthodontic Diagnosis and Treatment Planning
145610 0800-0900 MTWThF, 1300-1400 MTWThF, MoosT 6370, ar cr

8209 Orthodontic Seminar
149570 0800-0900 MTWThF, 1300-1400 MTWThF, MoosT 6370, ar cr

8217 Topics in Orthodontics
944760 1300-1400 MTWThF, MoosT 6370, ar cr

ORTHOPAEDIC SURGERY (OrSu)
Medical School

5180 Orthopaedics I (prereq regis med)
443006 Ogilvie J, others, 6 cr

5185 Orthopaedics II: Externship in Orthopaedic Surgery (prereq regis med)
148216 Ogilvie J, others, ar cr

5186 Research Problems in Orthopaedic Surgery (prereq regis med)
941387 Ogilvie J, others, ar cr

5188 Externship in Orthopaedic Surgery and Fractures-Gillette Children's Hospital (prereq regis med)
441787 Koop S, 4.5-9 cr

5190 Externship in Orthopaedic Surgery and Fractures-Veterans Hospital (prereq regis med)
151682 McElfresh E, ar cr

5191 Orthopaedic Externship at Hennepin County Medical Center (prereq regis med)
447878 Kyle R, ar cr

5192 Preceptorship in Orthopaedic Surgery (prereq regis med jr or sr)
648169 Johnston R, ar cr

5194 Orthopaedic Externship (prereq regis 3rd or 4th yr med stu)
751774 4.5-9 cr

5195 Orthopaedics for the Generalist (prereq regis med stu)
145672 ar cr

8401 Orthopaedic Conference
050131 Ogilvie J, others, 3 cr

8403 Fractures
152525 Kyle R, 5 cr

8405 Orthopaedic Diagnosis
143694 Ogilvie J, others, 3 cr

8407 Pediatric Orthopaedics
652285 Ogilvie J, 5 cr

8408 Orthopaedic Problems and Management
841950 Ogilvie J, others, 5 cr

8409 Orthopaedic Problems and Management
542848 Aamoth G, 5 cr

8410 Orthopaedic Pathology
647412 Ogilvie J, others, 2 cr

8411 Orthopaedic Operative Surgery
247994 Ogilvie J, others, 5 cr

8412 Orthopaedic Anatomy
144103 Putnam M, 2 cr

8416 Orthopaedic Research
547340 Ogilvie J, 5 cr

OTOLARYNGOLOGY (Otol)
Medical School

5200 Surgical Specialty: Otolaryngology (prereq regis med student)
349204 Hom D, ar cr

5500 Primary Care-ENT Elective
045320 Hom D, ar cr

5501 Surgical-ENT Elective
842953 Hom D, ar cr

5503 Research Basic Science (prereq regis med student)
350496 Hom D, ar cr

5970 Directed Studies (prereq #)
143963 ar cr

8230 Clinical Otorhinolaryngology
947853 Adams G, others, 6 cr

8231 Surgery of Ear, Nose, and Throat
344763 Adams G, others, 4 cr

8232 Maxillofacial Surgery
650729 Adams G, Boies L, others, 1 cr

8233 Plastic and Reconstructive Surgery of the Head and Neck
051277 Adams G, Boies L, others, 1 cr

R 8234 Anatomy of the Head and Neck and Temporal Bone Dissection
641951 Gapany M, Levine S, others, 2 cr

8235 Roentgenology of the Head and Neck
946413 2 cr

8236 Pharmacology in ENT
152444 2 cr

8237 Endoscopy
352054 Adams G, others, 2 cr

8238 Pathology of the Ear, Nose, and Throat
852446 Adams G, others, 2 cr

8239 Otoneurology
542140 Anderson J, Levine S, 2 cr

8240 Allergy
948257 2 cr

8241 Tumor Clinic
150001 Adams G, others, 1 cr

8242 Audiology and Speech Pathology
347436 Hunter L, others, 2 cr

8243 Introduction to Research Methodology
350594 Daly K, others, 2 cr

8244 Seminar: Current Literature
051456 Gapany M, others, 1 cr

8245 Master's Thesis Research
646888 ar cr

8246 Ph.D. Thesis Research
052042 ar cr

8247 Physiology of Hearing (§NSc 8247; prereq #)
242293 Javel E, 3 cr

8248 Readings in Auditory Physiology (prereq #)
147222 Santi P, 1-3 cr

8250 Advanced Biochemistry of the Auditory System (prereq MdBc 5100, MdBc 5101 or equiv or #)
852107 Juhn S, 2 cr

8262 Advanced Clinical Audiology (prereq Otol grad maj, 8242 or #) (A-F only)
149947 Margolis R, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
548505 1-18 cr

8777 Thesis Credits: Masters
150208 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
748566 1-36 cr

PATHOBIOLOGY (Path)
Laboratory Medicine and Pathology
Medical School

5110 Seminar: Pathology (prereq #) (S-N only)
047889 1220-1320 M, Mayo C231, 1 cr (Todd Amph)

5141 Problems in Experimental and Clinical Chronobiology
246814 Halberg F, ar cr

5865 Departmental Seminar (prereq #) (S-N only)
152265 0800-0900 W, Mayo D230, Steffes M W, 1 cr (Eustis Amph)

8109 Pathobiology II (8108-8109-8110†; prereq 8108)
447590 0905-0955 MWF, MoosT 2580, Orr H T, 3 cr

8135 Biochemical Aspects of Normal and Abnormal Cell Growth (prereq #)
273589 1545-1700 TTh, MoosT 2580, Ahmed K, 3 cr

8140 Research Topics and Methods in Pathobiology
945911 1115-1230 TTh, MoosT 2580, Ellis L, 4 cr

8201 Research
241399 ar cr

8263 Pathophysiology of Environmental Disease (prereq PubH 8261 or #)
449663 1325-1415 MWF, MoosT 2580, Garry V F, 3 cr

8335 Mammalian Gene Transfer and Expression (prereq #)
048377 0815-0930 TTh, OwreH 2210, McIvor R S, 3 cr

PEDIATRIC DENTISTRY (Pedo)
Dentistry

5405 Advanced Pediatric Dentistry for Postgraduate Dental Fellows (S-N only)
052123 1 cr

5414 Advanced Clinical Pedodontics
142030 0900-1200 MThF, 1400-1600 T, MoosT 6210, ar cr

8290 Hospital Pedodontics I (S-N only)
249065 ar cr

8291 Hospital Pedodontics II (S-N only)
748891 ar cr

8292 Pedodontic Literature
951496 0800-0900 F, MoosT 6162, ar cr

8294 Pedodontic Diagnosis and Treatment Planning
346240 0800-0900 M, MoosT 6162, ar cr

PEDIATRICS (Ped)
Medical School

5501 Pediatric Externship (prereq successful completion of Year 2 Clinical Medicine III Pediatrics)
844170 Moller J, 9 cr

R 5512 Pediatric Acting Internship
148118 Moller J, ar cr

5520 Pediatrics Ambulatory Course (prereq 2nd yr clinical pediatrics)
341880 Moller J, ar cr

5531 Psychology Internship (prereq psych fellow specialist)
451512 Robiner W, 12 cr

5533 Pediatric Clinical Allergy at University Hospital (prereq 3rd or 4th yr medical student)
245971 Blumenthal M, 4.5-9 cr

R 5534 Pediatric Cardiology at the University Hospital
842886 Moller J, ar cr

R 5535 Pediatric Infectious Diseases
142862 Ferrieri P, ar cr

R 5536 Pediatric Hematology/Oncology/Bone Marrow Transplantation at the University Hospital
346402 Orchard P, ar cr

R 5537 Pediatric Endocrinology and Metabolism at the University
143722 Brown D, ar cr

R 5538 Pediatric Gastroenterology and Nutrition
441630 Sharp H, ar cr

5539 Neonatal Medicine Externship
651475 Boros S, ar cr

R 5540 Pediatric Neurology
250684 Swaiman K, ar cr

R 5543 Pediatric Nephrology at University
943656 Fish A, ar cr

R 5544 Pulmonary Disease in Pediatrics
850096 Warwick W, ar cr

R 5548 Pediatric Genetics at the University
942099 Pierpont M, 9 cr

R 5553 Adolescent Medicine
547399 Remafedi G, ar cr

R 5555 Neonatal Clerkship (prereq 5501 or 5512)
744646 Opitz J, ar cr

R 5556 Clinical Pediatrics Clerkship (prereq 5501 or 5512)
242990 Moller J, ar cr

5559 Pediatric Critical Care Medicine (prereq 5501 and/or 5512)
047956 Green T, 4.5-9 cr

5560 Research/Special Problems in Pediatrics (prereq regis med) (S-N only)
050520 Moller J, ar cr

8204 Residency in Pediatrics (prereq #)
941440 Shannon M, ar cr

8206 Pediatric Special Interest (prereq #)
948081 Shannon M, ar cr

PERIODONTICS (Pero)
Dentistry

5300 Advanced Periodontics for Postgraduate Dental Fellows (S-N only)
946122 1 cr

8000 Advanced Clinical Periodontology
245694 0945-1215 MTThF, 1330-1615 MTWTh, MoosT 7470, ar cr

8200 Lectures
145283 1215-1315 M, MoosT 7360, ar cr

8300 Seminar: Periodontology
952681 0800-0930 Th, MoosT 7360, ar cr

8400 Anatomy of Normal and Observed Periodontium (A-F only)
046421 2 cr

PHARMACEUTICS (Phm)
Pharmacy

8100 Seminar: Pharmaceutics
146661 1600-1700 Th, MoosT 2520, Grant D J W, 1 cr

8101 Readings in Pharmaceutics
352281 1600-1700 W, WDH 7193, Suryanarayanan, 1 cr

8105 Pharmacokinetics Research Seminar (prereq grad in pharmaceutics majoring in pharmacokinetics) (S-N only)
346903 Sawchuk R, Zimmerman C, 2 cr

8200 Research Problems (S-N only)
941471 ar cr

8470 Biological Approaches to Drug Targeting (prereq survey course in biochemistry) (A-F only)
671869 Rahman Y E, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
446438 1-18 cr

8777 Thesis Credits: Masters
341779 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
041557 1-36 cr

PHARMACEUTICS, UNDERGRAD (Phmc)
Pharmaceutics
Pharmacy

5451 Principles of Drug Delivery I (prereq 5450, ¶Phcy 5922) (A-F only)
645613 1115-1205 TThF, MoosT 2620, Grant D, 3 cr

R 5681 Basic Pharmacokinetic Modelling (prereq 5680 with grade of A or B) (A-F only)
744503 1315-1500 Th, WDH 5145, Sawchuk R, 2 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

5730H Pharmaceutics Seminar (prereq #) (A-F only)
146832 1 cr

5970 Directed Studies (prereq #)
849580 1-5 cr

5999 Special Problems (prereq #)
842032 ar cr

PHARMACOLOGY (Phcl)
Medical School

5102 Pharmacology for Pharmacy Students (prereq 5101 or #) (A-F only)
844315 1430-1520 MW, 1115-1205 F, MoosT 2530, Dunham E, 3 cr

5109 Problems in Pharmacology (prereq grad or upper div stu or #)
447282 Loh H, ar cr

5111 Pharmacology (5111†; prereq 5110 or #)
142926 0905-0955 WF, 1115-1205 Th, MoosT 2650, Hunninghake D, Lichtblau L, 4 cr

5262 Metabolism and Distribution of Xenobiotics (§PubH 5262; prereq 5261 or #)
950333 Holtzman J, 3 cr

8111 Advanced Pharmacology II (prereq biochem, physiol background, 5111 or ¶5111 or #) (A-F only)
941714 1535-1735 T, 1535-1635 Th, MIrdH 3260, Loh H, 3 cr

8204 Seminar: Selected Topics in Pharmacology (prereq 5111 or #)
244769 1220-1310 T, MoosT 3110, Walseth T, 1 cr

8207 Seminar: Psychopharmacology (§NSc 8207; prereq #)
243511 Sparber S, 1 cr (MIrd 3260)

8209 Current Research in Drug Metabolism (prereq #) (A-F only)
443040 Holtzman J, 1 cr (MIrdH 3260)

8269 Toxicology Seminar (§PubH 8269; prereq 8261, #) (S-N only)
042756 Holtzman J, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
048346 1-18 cr

8777 Thesis Credits: Masters
245209 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
652206 1-36 cr

PHARMACY PRACTICE (Phar)
Pharmacy

R 1001 Orientation to Pharmacy (S-N only)
949005 1220-1310 T, WDH 7135, Benson B, 1 cr

5007 Biology of Aging (§Dent 5070, HSU 5031)
341975 1640-1825 Th, PWB 2470, Thompson L, 2 cr

5210 Terminology of the Health Sciences (§HSU 5210)
150693 Zaske D, 2 cr (for information go to rm 5-120 WDH before first day of quarter)

5222 Over-the-Counter Drug Therapy (prereq Phcl 5101, phar stu) (A-F only)
943477 0830-0955 T, 1500-1625 Th, WDH 7135, Johnson J, 3 cr

5290 Specialty Clerkships (prereq #)
047262 Rodriguez R, 1-12 cr

5291 Specialty Externship (prereq #)
250216 Rodriguez R, 1-12 cr

5392 Hospital Practice Externship (prereq third yr phar student) (A-F only)
549573 —1 LECT 0800-0955 Th, WDH 7135, 7 cr
★REC

5395 B.S. Clerkship (prereq third yr pharmacy student) (A-F only)
849806 —1 LECT 1535-1730 W, WDH 7135, Fletcher C, 7 cr
★REC

Pathophysiology and Therapeutics: Fluid and Electrolyte Disorders and Shock (prereq 3rd yr pharmacy stu) (A-F only)
1010-1205 TF, WDH 7135, Mann H, 3 cr

5507 Pathophysiology and Therapeutics: Neoplastic Diseases (prereq 3rd yr pharmacy stu) (A-F only)
544258 1325-1625 T, MoosT 2690, Brundage D, 2 cr

5508 Pathophysiology and Therapeutics: Infectious Diseases (prereq 3rd yr pharmacy stu) (A-F only)
142044 1325-1520 MW, MoosT 2520, Rotschafer J, 3 cr

5514 Pathophysiology and Therapeutics: Clinical Nutrition (prereq 3rd yr pharmacy stu) (A-F only)
052624 1010-1205 W, MoosT 2520, Barber-Pihlstrom J, 1 cr

5515 Neuroanatomy (prereq 3rd yr pharmacy stu) (S-N only)
549010 Graves N, 1 cr (independent study ar, WDH 7115)

5516 Pathophysiology and Therapeutics: Endocrine and Reproductive Disorders (prereq 3rd yr pharmacy stu) (A-F only)
343872 0800-0955 F, WDH 7135, Lackner T, 2 cr

R 5517 Pharmacotherapy for the Elderly (prereq 3rd yr pharmacy stu) (A-F only)
747434 1010-1205 Th, WDH 7135, Larson T, 2 cr

5550 Pharmacy Practice Clerkship: Acute Care (prereq PharmD IV student) (A-F only)
951160 4-12 cr

5551 Pharmacy Practice Clerkship: Clinical Pharmacokinetics (prereq PharmD IV student) (A-F only)
545958 4 cr

5552 Pharmacy Prsctice Clerkship: Pediatrics (prereq PharmD IV student) (A-F only)
542011 4 cr

5553 Pharmacy Practice Clerkship: Clinical Elective I (prereq PharmD IV student) (A-F only)
541439 4-12 cr

5554 Pharmacy Practice Clerkship: Special Elective I (prereq PharmD IV student) (A-F only)
544860 4-12 cr

5555 Pharmacy Practice Clerkship: Clinical Elective II (prereq PharmD IV student) (A-F only)
148483 4-12 cr

5556 Pharmacy Practice Clerkship: Clinical Elective III (prereq PharmD IV student) (A-F only)
852222 4-12 cr

5557 Pharmacy Practice Clerkship: Special Elective II (prereq PharmD IV student) (A-F only)
744016 4-12 cr

5558 Pharmacy Practice Clerkship: Special Elective III (prereq PharmD IV student) (A-F only)
150239 4-12 cr

5770H Hospital Pharmacy Seminar (prereq #) (A-F only)
042076 1 cr

5812 Pharmaceutical Care II (prereq 5811, ¶5922) (A-F only)
842516 1430-1625 TTh, MoosT 2620, Cipolle R, 4 cr

5822 Pharmacotherapy II (prereq Phsl 5100, Phmc 5460, Phcl 5101, ¶Phcl 5102, ¶MedC 5163) (A-F only)
474305 1010-1205 MW, MoosT 2530, Straka R, 4 cr

5823 Pharmacotherapy III (prereq Phsl 5100, Phcl 5101, ¶Phcl 5102, ¶MedC 5163)
174307 1010-1100 T, 0905-1100 Th, MoosT 2690, Guay D, Lackner T, 3 cr

5865 Pharmacy Clerkship I (S-N only)
246666 Benson S, 1 cr

5666 Pharmacy Clerkship II (prereq Pharm D II stu)
974308 1 cr

5970 Directed Studies (prereq #)
042739 1-5 cr

5999 Special Problems (prereq #)
444883 ar cr

PHARMACY, INTERDEPARTMENTAL (Phcy)
Pharmacy

R 5922 Pharmacy Laboratory II (prereq ¶MedC 5152, ¶Phar 5812, ¶Phmc 5451) (A-F only)
★LECT 1115-1205 M, MoosT 2520, Remmel R
050906 —1 LAB 0800-0955 M, WDH 3150, Jafari M, 1 cr
348814 —2 LAB 0800-0955 W, WDH 3150, Jafari M, 1 cr
146692 —3 LAB 1430-1625 W, WDH 3150, Jafari M, 1 cr
174646 —4 LAB 0905-1100 F, WDH 3150, Jafari M, 1 cr

R 5925 Pharmacy Laboratory V (prereq ¶Phar 5822, Phar 5823, MedC 5164) (A-F only)
★LECT 1115-1205 T, Zimmerman C
074302 —1 LAB 0800-0955 T, WDH 3150, Jaffari M, 1 cr
874303 —2 LAB 1430-1625 T, WDH 3150, Jaffari M, 1 cr
674304 —3 LAB 1430-1625 Th, WDH 3150, Jaffari M, 1 cr

PHILOSOPHY (Phil)
Liberal Arts

R 1001 Introduction to Logic (Math)
★LECT 0905-0955 MWF, NichH 211, Dolan J
349588 —1 REC 0905-0955 T, FordH 160, 5 cr
149012 —2 REC 0905-0955 T, AkerH 215, 5 cr
642985 —3 REC 1010-1100 T, FordH 160, 5 cr
845447 —4 REC 1010-1100 T, LindH 203, 5 cr
643246 —5 REC 1010-1100 T, AkerH 209, 5 cr
149057 —6 REC 1325-1415 T, EltH N119, 5 cr
348974 —7 REC 1325-1415 T, MechE 202, 5 cr
347419 —8 REC 1325-1415 Th, EltH N119, 5 cr
445841 —9 REC 1325-1415 Th, VinH 1, 5 cr
★LECT 1325-1415 MWF, SciCB 175, Hellman G
548911 —10 REC 1220-1310 T, LindH 302, 5 cr
145888 —11 REC 1325-1415 T, AmundH 162, 5 cr
950378 —12 REC 1430-1520 T, FordH 40, 5 cr
649001 —13 REC 1220-1310 Th, FordH 285, 5 cr
143820 —14 REC 1325-1415 Th, FordH 120, 5 cr
046905 —15 REC 1430-1520 Th, FordH 120, 5 cr

R 1002 Introduction to Philosophy (Phil)
★LECT 1115-1230 TTh, NichH 211, Gunderson K
942748 —1 REC 1010-1100 M, AmundH 156, 5 cr
847604 —2 REC 1115-1205 M, FordH 175, 5 cr
051084 —3 REC 1430-1520 M, FordH 150, 5 cr
752150 —4 REC 1010-1100 W, FordH 40, 5 cr
344262 —5 REC 1115-1205 W, FordH 115, 5 cr
146975 —6 REC 1430-1520 W, FordH 170, 5 cr

R 1003 Introduction to Ethics (Phil)
872700 1220-1310 MTWF, FordH 285, Peterson S, 5 cr

R 1004 Introduction to Political Philosophy (Phil; C/PE)
★LECT 1430-1520 MWF, OwreH 2230, Mason H
972705 —1 REC 1220-1310 T, AmundH 116, 5 cr
572710 —2 REC 1430-1520 T, AmundH 156, 5 cr
172712 —3 REC 1430-1520 Th, LindH 320, 5 cr

R 1006 Philosophy and Cultural Diversity (§1002) (Phil; CD)
★LECT 1325-1415 MWF, FordH 155, Scheman N
472716 —1 REC 0905-0955 T, AmundH 240, 5 cr
272717 —2 REC 1010-1100 T, Phys 236A, 5 cr
672973 —3 REC 1325-1415 T, FordH 50, 5 cr
472974 —4 REC 1430-1520 T, AkerH 317, 5 cr
272975 —5 REC 0905-0955 Th, SmithH 331, 5 cr
172976 —6 REC 1220-1310 Th, FordH 50, 5 cr

R 1007 Introduction to Political Philosophy Practicum (prereq ¶1004)
872714 1430-1520 MWF, OwreH 2230, Mason H, 2 cr

R 3002 General History of Western Philosophy (Phil)
★LECT 0815-0930 TTh, LindH 305, Hopkins J
447203 —1 REC 0800-0850 W, FordH 50, 5 cr
648107 —2 REC 0905-0955 W, FordH 40, 5 cr
045110 —3 REC 0905-0955 F, FordH 175, 5 cr

3231 Introduction to the Philosophy of Language (prereq 1001 or #)
772978 0905-0955 MWF, FordH 130, Hanson W, 4 cr

R 3302 Moral Problems of Contemporary Society (Phil; C/PE)
★LECT 1010-1100 MWF, AkerH 319, Root M
150735 —1 REC 1010-1100 T, AmundH B75, 5 cr
142036 —2 REC 1325-1415 T, FolH 344, 5 cr
850423 —3 REC 1010-1100 Th, LindH 217, 5 cr

3308 Social Justice and Community Service: Power and Democracy (prereq 3307) (Phil; CD; practicum)
143431 0945-1100 TTh, FordH 175, Wallace J, 4 cr

R 3502 Introduction to Aesthetics (AH)
572979 1115-1205 MWF, AmundH 240, Eaton M, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
452126 1-5 cr

3980 Directed Instruction (prereq #, Δ, ❑)
442874 1-5 cr

5046 Kant (prereq 3003 or #)
772981 1325-1415 MWF, SmithH 231, Holtman S, 4 cr

R 5202 Symbolic Logic II (prereq 5201 or #)
★LECT 1115-1205 MWF, FordH 150, Dolan J
346237 —1 REC 1115-1205 TTh, FordH 160, 5 cr

5324 Ethics and Education (prereq 8 cr in phil or educ or #)
572982 1245-1400 TTh, FordH 150, Wallace J, 4 cr

5325 Biomedical Ethics (prereq one phil crse)
272992 1530-1800 Th, FordH 160, Calvin S, Dolan J, others, 4 cr

5521 Philosophy of Religion (§RelS 5521; prereq 8 cr in philosophy)
449470 0945-1100 TTh, LindH 305, Hopkins J, 4 cr

5601 The Evaluation of Scientific Hypotheses (prereq 3601 or #)
372983 1010-1100 MWF, FordH 50, Savage C, 4 cr

5814 Philosophy of Psychology (prereq Psy 3051 or Psy 5011 or 3607 or 5601 or #)
172984 1245-1400 TTh, FordH 115, Owens J, 4 cr

5615 Minds, Bodies, and Machines (prereq 4 cr in philosophy or #)
072985 1415-1530 TTh, FordH 115, Gunderson K, 4 cr

5760 Selected Topics in Philosophy: Topics in Musical Aesthetics: Expression and Content (prereq 4 3xxx-5xxx cr in philosophy or #)
872986 1500-1730 W, FergH 205, Heilman G, 4 cr

5970 Directed Studies and Research (prereq #, Δ, CLA approval)
152671 1-5 cr

5990 Directed Studies and Research (prereq #, Δ, CLA approval)
741682 1-5 cr

8090 Seminar in History of Philosophy
672987 1535-1730 T, FordH 359, Lewis D, 4 cr

8420 Seminar: Political Philosophy
472988 1535-1730 W, FordH 40, Holtman S, 4 cr

8600 Seminar in Philosophy of Science
272989 1535-1730 T, AmundH 156, Heilman G, 4 cr

8605 Issues and Approaches in Philosophy of Science
672990 1430-1730 Th, FordH 359, Giere R, 4 cr

8620 Seminar: Philosophy of Biology
472991 1535-1730 W, FordH 359, Waters K, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
242813 1-18 cr

8777 Thesis Credits: Masters
842855 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
450215 1-36 cr

8970 Directed Study and Research (prereq passing grade on written prelim exam for PhD in philosophy, #)
941518 1-4 cr

8990 Directed Study and Research (prereq passing grade on written prelim exam for PhD in philosophy, #)
143873 1-4 cr

PHYSICAL EDUCATION (PE)

School of Kinesiology and Leisure Studies
Education and Human Development

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. You are encouraged to consider carefully any limits on your health or physical fitness and to consult a doctor if you have any questions about your health or about your ability to participate safely in the physical activities required for the course.

R 1004 Diving, Springboard (prereq 1007 or #)
346027 0800-0850 TTh, UAqCtr, 1 cr (Natatorium Diving Well)

R 1007 Swimming (prereq non-swimmer)
945293 —1 0800-0850 MW, CookeH 10, 1 cr
341538 —2 0905-0955 MW, CookeH 10, 1 cr

R 1014 Conditioning
643201 —1 0800-0850 MW, FieldHse, 1 cr
050159 —2 0905-0955 MW, FieldHse, 1 cr
442132 —3 1010-1100 MW, FieldHse, 1 cr
549279 —4 1115-1205 MW, FieldHse, 1 cr
652190 —5 0800-0850 TTh, FieldHse, 1 cr
152167 —6 0905-0955 TTh, FieldHse, 1 cr
648401 —7 1010-1100 TTh, FieldHse, 1 cr
746302 —8 0800-0850 MW, Gym, 1 cr (StP)

R 1015 Weight Training
145252 —1 0800-0850 MW, URecCtr, 1 cr
943219 —2 0905-0955 MW, URecCtr, 1 cr
251124 —3 1010-1100 MW, URecCtr, 1 cr
450151 —4 0800-0850 TTh, URecCtr, 1 cr
750673 —5 0905-0955 TTh, URecCtr, 1 cr
743867 —6 1010-1100 TTh, URecCtr, 1 cr
749958 —7 0905-0955 MW, Gym, 1 cr (StP)

R 1029 Handball
974003 1010-1100 MW, URecCtr, 1 cr

R 1032 Badminton
044085 0800-0850 TTh, URecCtr, 1 cr

R 1034 Judo (facility fee)
752391 1325-1425 TTh, Gym, 1 cr (StP)

R 1035 Karate (facility fee)
745733 —1 0905-0955 MW, CookeH 308, 1 cr
852379 —2 1010-1100 MW, CookeH 308, 1 cr

R 1036 Racquetball
643733 0905-0955 TTh, URecCtr, 1 cr

R 1037 Squash Racquets
450053 0905-0955 MW, URecCtr, 1 cr

R 1038 Tennis
350630 —1 0800-0850 MW, FieldHse, 1 cr
947237 —2 0905-0955 MW, FieldHse, 1 cr
746431 —3 1115-1205 MW, FieldHse, 1 cr
541523 —4 0905-0955 TTh, FieldHse, 1 cr

R 1044 Self Defense
350062 0905-0955 MW, NorrisH M151, 1 cr

R 1048 Bowling (moderate intensity) (facility fee)
941535 —1 0905-0955 MW, CMU B55, 1 cr
045768 —2 1010-1100 MW, CMU B55, 1 cr
652139 —3 1115-1205 MW, CMU B55, 1 cr
944872 —4 0905-0955 TTh, CMU B55, 1 cr
149317 —5 1010-1100 TTh, CMU B55, 1 cr

R 1052 Rifle Marksmanship (moderate intensity)
945990 —1 0905-0955 TTh, Armory 16, 1 cr
252631 —2 1325-1415 TTh, Armory 16, 1 cr

R 1053 Ice Skating
041459 —1 0905-0955 MW, Mariucci, 1 cr
542798 —2 1010-1100 MW, Mariucci, 1 cr

R 1056 Nordic (Cross Country) Skiing
151450 —1 1325-1525 MW, Gym, 1 cr (Jan 6-Feb 5) (StP)
352314 —2 1325-1525 TTh, Gym, 1 cr (Jan 7-Feb 6) (StP)

R 1057 Skiing (facility fee)
851488 —1 1325-1525 T, FieldHse, 1 cr
943530 —2 1535-1735 T, FieldHse, 1 cr
149995 —3 1325-1525 Th, FieldHse, 1 cr
341555 —4 1535-1735 Th, FieldHse, 1 cr
141792 —5 1535-1735 F, FieldHse, 1 cr
647524 —6 1700-1900 F, FieldHse, 1 cr

R 1059 Track and Field
351096 1010-1100 TTh, FieldHse, 1 cr

R 1067 Basketball
352197 1010-1100 TTh, URecCtr, 1 cr

R 1070 Ice Hockey (prereq 1053 or equiv)
246277 —1 0800-0850 MW, Mariucci, 1 cr
051666 —2 1010-1100 TTh, Mariucci, 1 cr

R 1074 Volleyball
150385 —1 0905-0955 MW, URecCtr, 1 cr
146426 —2 1010-1100 MW, URecCtr, 1 cr
543496 —3 0905-0955 TTh, URecCtr, 1 cr

R 1107 Intermediate Swimming (prereq proficient ability to swim 100 meters)
642842 —1 1010-1100 MW, UAqCtr, 1 cr (Natatorium West)
647247 —2 1115-1205 MW, UAqCtr, 1 cr (Natatorium West)

R 1135 Intermediate Karate (prereq 1035 or equiv)
345119 0800-0850 MW, CookeH 308, 1 cr

R 1136 Intermediate Racquetball (prereq 1036 or equiv)
641657 1010-1100 TTh, URecCtr, 1 cr

R 1138 Intermediate Tennis (prereq 1038 or equiv)
650228 —1 1010-1100 MW, FieldHse, 1 cr
149536 —2 1010-1100 TTh, FieldHse, 1 cr

R 1154 Figure Skating (prereq 1053 or equiv)
872454 —1 0800-0850 TTh, Mariucci, 1 cr
472456 —2 0905-0955 TTh, Mariucci, 1 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 1157 Intermediate Skiing (prereq 1057 or equiv) (facility fee)
151133 —1 1325-1525 T, FieldHse, 1 cr
446830 —2 1535-1735 T, FieldHse, 1 cr
848011 —3 1325-1525 Th, FieldHse, 1 cr
644087 —4 1535-1735 Th, FieldHse, 1 cr

R 1174 Intermediate Volleyball (prereq 1074 or equiv)
142061 0800-0850 MW, URecCtr, 1 cr

R 1205 Scuba and Skin Diving (prereq 1107 or equiv) (facility fee)
142893 1010-1205 TTh, UAqCtr, 1 cr (Wet Classroom)

R 1306 Lifeguard Training (prereq ability to swim 500 meters)
047021 1010-1205 MW, UAqCtr, 1 cr (Natatorium East)

R 1415 Theory and Practice of Weight Training and Conditioning (prereq 1014, 1015 or #)
545975 1640-1735 MTWTh, FbComp 30, 2 cr

R 1497 Directed Study (prereq 3 cr in physical education, #)
750480 Pickert R, 1-6 cr

PHYSICAL MEDICINE AND REHABILITATION (PMed)
Medical School

R 1002 Orientation to Physical Therapy (S-N only)
144232 1220-1310 T, ChRC R220, Scudder G, 1 cr

5182 Functional Neuroanatomy and Neurophysiology (prereq regis OT or PT)
444611 1010-1205 MWF, OwreH 2210, Reisman J, 5 cr

5221 Therapeutic Procedures II (prereq regis PT)
246229 0800-0955 MTWThF, ChRC R220, Ellingham C, Gardner M, 4 cr

5230 Theory and Technique of Muscle Function, Tests, and Measurements (prereq regis PT)
141444 1325-1520 MT, 1430-1625 WF, ChRC R220, Coleman K, 5 cr

5270 Rehabilitation Procedures (prereq regis PT)
542929 1010-1205 MTWTh, ChRC R220, Scudder G, 4 cr

5289 Patient Assessment (prereq regis PT)
746459 1220-1415 M, 1220-1520 W, 1430-1730 Th, 1325-1415 F, ChRC R220, Carey J, 3 cr

5290 Administration (prereq regis PT) (S-N only)
549623 1220-1415 T, 1220-1310 F, ChRC R208, Gardner M, 3 cr (field exp ar)

5293 Introduction to Research Design (prereq 5292, regis PT)
250460 1535-1705 MTh, OwreH 2210, DiFabio R, 3 cr

5294 Independent Study in Physical Therapy (prereq regis PT stu or #)
749054 Ellingham C, ar cr

5311 Therapeutic Occupation: Individual Focus (prereq regis OT) (A-F only)
943513 0800-1100 TTh, ChRC R255, R262, Meyers C, Anderson D, 3 cr

5312 Therapeutic Occupation: Group Focus (prereq regis OT) (A-F only)
846257 0905-0955 M, 0800-0955 W, ChRC R262, Anderson D, 2 cr

5344 Neurorehabilitation: Assessment and Intervention (prereq regis OT) (A-F only)
948968 1430-1625 MTWThF, ChRC R262, Stern E, Reisman J, 8 cr

5380 Management of Occupational Therapy Services (prereq regis OT) (A-F only)
852673 1220-1415 TTh, ChRC R262, Reisman J, 3 cr

5391 Work Across the Lifespan: Assessment and Intervention (prereq regis OT) (A-F only)
146367 1220-1415 MF, ChRC R262, Anderson D, Meyers C, 4 cr

5395 Independent Study in Occupational Therapy (prereq #)
145969 Meyers C, ar cr

5397 Field Work Education in Occupational Therapy (prereq 5396) (S-N only)
174718 Meyers C, 12 cr

5398 Fieldwork Education in Occupational Therapy (prereq reg occup ther prog) (S-N only)
074719 Meyers C, ar cr

5410 Adult Rehabilitation Medicine (prereq regis med)
346772 Dykstra D, others, ar cr

5411 Rehabilitation Medicine: Children (prereq regis med)
144725 Dykstra D, others, ar cr

5412 Rehabilitation Medicine for Adults (prereq regis med stu)
145860 4.5-9 cr

5414 Physical Medicine and Rehabilitation for the Family Physician (prereq regis med)
142979 Dykstra D, others, ar cr

5415 Private Practice in Physical Medicine and Rehabilitation (prereq regis med)
443362 Eckmann M, 4.5-9 cr

5416 Physical Medicine and Rehabilitation at St. Paul Ramsey (prereq regis med)
145090 Timming R, others, ar cr

5418 Physical Medicine and Rehabilitation at Hennepin County Medical Center (prereq regis med stu)
444219 4.5 cr

5810 Assessment of the Elderly (prereq #)
149026 DiFabio R, Ellingham C, others, 3 cr (1640-1820 to be ar) (lab ar)

5817 Special Topics in Physical Therapy
951773 1640-1825 Th, PWB 2470, DiFabio R, 1-3 cr

5950 Bioelectric Measurements (prereq Phsl 5441, calculus, college physics) (A-F only)
452515 1010-1130 TTh, ChRC R208, Patterson R, 3 cr

8103 Clinic (prereq regis PT)
241404 Ellingham C, ar cr

8135 Advanced Kinesiology (prereq kinesiology course)
852169 DiFabio R, 3 cr

8150 Research Methodology: Physical Therapy in Electromyography and Nerve Conduction (prereq #)
848624 1535-1730 T, 1535-1820 Th, DiFabio R, 3 cr

8170 Special Topics in Physical Therapy (prereq #)
152573 DiFabio R, 1 cr

8185 Problems in Physical Therapy (prereq regis PT)
250717 DiFabio R, others, ar cr

8188 Teaching Practicum (max 8 cr; prereq #)
747403 Ellingham C, others, ar cr

8192 Research Design in Physical Therapy (prereq #)
043633 DiFabio R, 3 cr

8193 Research Problems in Physical Therapy (prereq 8192 or #)
944144 DiFabio R, others, ar cr

8195 Research in Physical Therapy (prereq #)
244240 DiFabio R, others, ar cr

8200 Physical Medicine and Rehabilitation Service
648303 Dykstra D, others, ar cr

8205 Readings in Physical Medicine and Rehabilitation (max 2 cr)
647362 1010-1110 F, Mayo 825, Dykstra D, 2 cr

8206 Conference on Physical Medicine and Rehabilitation
550495 0800-0900 F, ChRC R208, Dykstra D, others, 2 cr

8207 Basic and Applied Physiatry
045981 0905-1005 WF, ChRC R208, Dykstra D, others, 2 cr

8210 Research in Physical Medicine
352474 Dykstra D, Patterson R, ar cr

8212 Electromyography (prereq #)
249129 0800-1700 MTWThF, Mayo B564, Dykstra D, others, ar cr

8214 Readings in Electromyography (max 3 cr; prereq #)
649208 1010-1110 W, Dykstra D, others, 1 cr (VA Med Ctr, Rm 3R110)

8220 Seminar: Physical Medicine and Rehabilitation
844900 0800-0900 W, Dykstra D, 2 cr (VA Med Ctr, Rm 3R110)

PHYSICAL THERAPY (PT)
Physical Medicine and Rehabilitation
Medical School

8777 Thesis Credits: Masters
474689 DiFabio R, 1-16 cr

PHYSICS (Phys)
Institute of Technology

The policy of the Physics department is to provide access to all physics courses to all qualified students. To facilitate lab and recitation scheduling, it may be necessary for some students to register for "to be assigned" lab sections. These sections are opened as published sections fill and require approval (i.e., magic numbers) from 148 Physics. You *must* attend the first day of lecture to receive your lab assignment or have it confirmed.

R 1001 The Physical World (§any phys courses; no cr for IT stu; prereq 1 yr high school alg) (Phys/NL) (companion lab is 1005)
147169 1115-1205 MTWF, Phys 170, 4 cr

R 1005 Physics Laboratory (no cr for IT students; prereq 1001 or ¶1001) (Phys/L)
751631 —1 LAB 0800-0955 T, Phys, 1 cr
650486 —2 LAB 1325-1520 T, Phys, 1 cr
546043 —3 LAB 0800-0955 W, Phys, 1 cr
141928 —4 LAB 1325-1520 Th, Phys, 1 cr
143565 —5 LAB 1640-1835 Th, Phys, 1 cr
149021 —6 LAB 1325-1520 F, Phys, 1 cr
042028 —7 LAB 1640-1835 F, Phys, 1 cr

R 1041 Introductory Physics (prereq high schl algebra, geometry; trigonometry recommended) (Phys/L)
★LECT 1430-1520 MTWF, Phys 150, 5 cr
★REC 1430-1520 Th, Arch 20
652089 —1 LAB 1220-1415 T, Phys
★REC 1430-1520 Th, AkerH 317
652173 —2 LAB 1535-1730 F, Phys
★REC 1430-1520 Th, LindH 217
846131 —3 LAB 0800-0955 W, Phys
★REC 1430-1520 Th, AkerH 211
143574 —4 LAB 1640-1835 T, Phys
★REC 1430-1520 Th, AkerH 215
345802 —5 LAB 1010-1205 Th, Phys
★REC 1535-1625 Th, Phys 236A
141363 —6 LAB 0800-0955 T, Phys
★REC 1535-1625 Th, AkerH 317
548245 —7 LAB 0800-0955 Th, Phys
★REC 1535-1625 Th, LindH 217
850244 —8 LAB 1220-1415 W, Phys
★REC 1535-1625 Th, AkerH 211
149446 —9 LAB 1640-1835 W, Phys
★REC 1535-1625 Th, AkerH 215
649452 —10 LAB 0800-0955 F, Phys

R 1042 Introductory Physics (prereq 1041) (Phys/L)
★LECT 1325-1415 MTWF, Phys 150, 5 cr
★REC 1325-1415 Th, FordH 170
347033 —1 LAB 0800-0955 T, Phys
★REC 1325-1415 Th, FordH 160
849482 —2 LAB 1535-1730 Th, Phys
★REC 1325-1415 Th, FordH 70
450067 —3 LAB 1010-1205 F, Phys
★REC 1325-1415 Th, AkerH 209
544647 —4 LAB 1430-1625 T, Phys
★REC 1325-1415 Th, Arch 30
145977 —5 LAB 0800-0955 W, Phys
★REC 1430-1520 Th, Arch 30
451333 —6 LAB 0800-0955 Th, Phys
★REC 1430-1520 Th, AkerH 225
551078 —7 LAB 1640-1835 T, Phys
★REC 1430-1520 Th, AkerH 319
643957 —8 LAB 1010-1205 W, Phys
★REC 1430-1520 Th, AkerH 209
146393 —9 LAB 1430-1625 W, Phys
★REC 1430-1520 Th, CivE 213
147396 —10 LAB 1010-1205 Th, Phys
★REC 1430-1520 Th, FordH 70
641819 —11 LAB 1535-1730 F, Phys

R 1105 General Physics (no cr for IT students; prereq 1104, ¶1108) (Phys/NL)
848235 1220-1310 MTWThF, Phys 150, 4 cr

R 1108 General Physics Laboratory (prereq ¶1105 or #, 1107) (Phys/L)
644882 —1 LAB 0800-0955 T, Phys, 1 cr
349140 —2 LAB 1010-1205 T, Phys, 1 cr
351678 —3 LAB 1430-1625 T, Phys, 1 cr
443829 —4 LAB 1745-1940 T, Phys, 1 cr
247963 —5 LAB 0800-0955 W, Phys, 1 cr
752701 —6 LAB 1430-1625 W, Phys, 1 cr
851166 —7 LAB 1745-1925 W, Phys, 1 cr
547256 —8 LAB 0800-0955 Th, Phys, 1 cr
046242 —9 LAB 1430-1625 Th, Phys, 1 cr
949960 —10 LAB 1745-1940 Th, Phys, 1 cr
249518 —11 LAB 0800-0955 F, Phys, 1 cr
551761 —12 LAB 1430-1625 F, Phys, 1 cr
146717 —13 LAB 1640-1835 F, Phys, 1 cr

R 1251 General Physics I (§1451H; prereq Math 1251 or ¶Math 1251) (Phys/L)
★LECT 0905-0955 MTWF, Phys 150, 4 cr
★REC 0800-0850 Th, Phys 157
648334 —1 LAB 1220-1415 W, Phys
★REC 0800-0850 Th, Phys 236A
450991 —2 LAB 1430-1625 T, Phys
★REC 0800-0850 Th, AkerH 317
943933 —3 LAB 1010-1205 Th, Phys
★REC 0800-0850 Th, LindH 302
151648 —4 LAB 1430-1625 F, Phys
★REC 0800-0850 Th, LindH 217
046399 —5 LAB 1640-1835 W, Phys
★REC 0800-0850 Th, LindH 229
446956 —6 LAB 1220-1415 T, Phys
★REC 0800-0850 Th, AkerH 211
573081 —7 LAB 1010-1205 T, Phys
★REC 0905-0955 Th, AkerH 317
073084 —8 LAB 1640-1835 Th, Phys
★REC 0905-0955 Th, Phys 143
573095 —9 LAB 1430-1625 W, Phys
★REC 0905-0955 Th, AkerH 211
048136 —10 LAB 1220-1415 Th, Phys
★REC 0905-0955 Th, LindH 203
152856 —11 LAB 1010-1205 F, Phys
★REC 0905-0955 Th, Phys 157
243752 —12 LAB 1640-1835 T, Phys
★REC 0905-0955 Th, AkerH 319
173102 —13 LAB 1430-1625 Th, Phys
★REC 0905-0955 Th, AkerH 209
948856 —14 LAB 1220-1415 F, Phys

R 1252 General Physics II (§1452H; prereq 1251, Math 1252 or ¶Math 1252) (Phys/L)
★LECT 0800-0850 MTWF, Phys 166, 4 cr
★REC 0800-0850 Th, AkerH 215
843052 —1 LAB 1430-1625 T, Phys
★REC 0800-0850 Th, Arch 15
150671 —2 LAB 1220-1415 Th, Phys
★REC 0800-0850 Th, LindH 203
643876 —3 LAB 1430-1625 W, Phys
★LECT 1115-1205 MTWF, Phys 150, 4 cr
★REC 0800-0850 Th, Arch 45
143641 —4 LAB 1010-1205 T, Phys
★REC 0800-0850 Th, Arch 60
847960 —5 LAB 1640-1835 W, Phys
★REC 0905-0955 Th, KoltH S140
748194 —6 LAB 1220-1415 W, Phys
★REC 0905-0955 Th, FolH 326
142433 —7 LAB 1010-1205 F, Phys
★REC 0905-0955 Th, ApH 103
148001 —8 LAB 1430-1625 Th, Phys
★REC 0905-0955 Th, VinH 301
744498 —9 LAB 1640-1835 Th, Phys
★REC 0905-0955 Th, PeikH 375
073134 —10 LAB 1430-1625 F, Phys
★LECT 0905-0955 MTWF, Phys 131, 4 cr
★REC 0800-0850 Th, AkerH 309
852561 —11 LAB 1220-1415 Th, Phys
★REC 0800-0850 Th, AkerH 225
849546 —12 LAB 1430-1625 T, Phys
★REC 0800-0850 Th, AkerH 319
441742 —13 LAB 1430-1625 W, Phys
★REC 0800-0850 Th, AkerH 209
149794 —14 LAB 1220-1415 W, Phys
★REC 0800-0850 Th, Arch 35
245226 —15 LAB 1640-1835 T, Phys
★REC 0905-0955 Th, AmundH 124
843293 —16 LAB 1220-1415 F, Phys
★REC 0905-0955 Th, VinH 20
651914 —17 LAB 1430-1625 Th, Phys
★REC 0905-0955 Th, VinH 1
845576 —18 LAB 1220-1415 T, Phys
★REC 0905-0955 Th, AmundH 240
273141 —19 LAB 1430-1625 F, Phys
★LECT 1115-1205 MTWF, Phys 150, 4 cr
★REC 1115-1205 Th, AkerH 215
451364 —20 LAB 0800-0955 T, Phys
★REC 1115-1205 Th, AkerH 309
146846 —21 LAB 0800-0955 W, Phys
★REC 1115-1205 Th, AkerH 225
141248 —22 LAB 1640-1835 F, Phys
★REC 1115-1205 Th, AkerH 319
144210 —23 LAB 1430-1625 W, Phys
★REC 1115-1205 Th, Arch 25
845075 —24 LAB 1430-1625 Th, Phys
★REC 1115-1205 Th, SmithH 121
948775 —25 LAB 1640-1835 Th, Phys
★REC 1115-1205 Th, FordH 40
842435 —26 LAB 1220-1415 T, Phys
★REC 1220-1310 Th, Phys 236A
446522 —27 LAB 0800-0955 F, Phys
★REC 1220-1310 Th, Arch 20
251916 —28 LAB 1430-1625 T, Phys
★REC 1220-1310 Th, Arch 35
141582 —29 LAB 1220-1415 W, Phys
★REC 1220-1310 Th, Arch 25
952633 —30 LAB 0800-0955 Th, Phys
★REC 1220-1310 Th, CivE 213
848137 —31 LAB 1640-1835 T, Phys
★REC 1220-1310 Th, SmithH 111
073151 —32 LAB 1640-1835 W, Phys
★REC 1220-1310 Th, SmithH 121
473154 —33 LAB 1430-1625 F, Phys
★REC 1220-1310 Th, VinH 206
173156 —34 LAB 1220-1415 F, Phys
★LECT 1430-1520 MTWF, Phys 166, 4 cr
★REC 1430-1520 Th, FordH 160
847151 —35 LAB 0800-0955 W, Phys
★REC 1430-1520 Th, SmithH 111
749796 —36 LAB 1010-1205 Th, Phys
★REC 1430-1520 Th, FordH 170
141890 —37 LAB 1640-1835 F, Phys
★REC 1430-1520 Th, AmundH 124
445578 —38 LAB 1220-1415 F, Phys
★REC 1430-1520 Th, PeikH 155
041249 —39 LAB 0800-0955 T, Phys
★REC 1535-1625 Th, AkerH 225
748776 —40 LAB 1220-1415 T, Phys
★REC 1535-1625 Th, AkerH 209
073179 —41 LAB 1640-1835 W, Phys
★REC 1535-1625 Th, AmundH 104
173181 —42 LAB 0800-0955 F, Phys
★REC 1535-1625 Th, CivE 213
073196 —43 LAB 0800-0955 Th, Phys
★REC 1535-1625 Th, FolH 246
242603 —44 LAB 1640-1835 Th, Phys

R 1253 General Physics III (§1453H; prereq 1252, Math 1261 or ¶Math 1261) (Phys/L)
★LECT 1535-1625 MTWF, Phys 133, 4 cr
★REC 1535-1625 Th, KoltH S132
151951 —1 LAB 1640-1835 W, Phys
★REC 1535-1625 Th, KoltH S133
249826 —2 LAB 0800-0955 Th, Phys
★REC 1640-1730 Th, Phys 143
745649 —3 LAB 1220-1415 W, Phys

R 1254 General Physics IV (§1454H; prereq 1253)
741858 1325-1415 MTWF, Phys 133, 4 cr

R 1452H Honors Physics II (§1252, 1281, 1321, 1421H; prereq 1451H, consent of IT Honors office) (Phys/L)
★LECT 1115-1205 MTWF, Phys 131, 4 cr
844055 —80 REC 0800-0850 Th, Phys 143
051361 —81 REC 1010-1100 Th, Phys 143
847909 —82 REC 1115-1205 Th, Phys 143
845223 —83 REC 1115-1205 Th, AkerH 211
Registration in one of the following LAB sections is also required:
552246 —80 LAB 0800-0955 T, Phys
441739 —81 LAB 1325-1520 T, Phys
142814 —82 LAB 1220-1415 W, Phys
150659 —83 LAB 1430-1625 W, Phys
452630 —84 LAB 1220-1415 Th, Phys
273169 —85 LAB 1325-1520 F, Phys
944578 —86 LAB 0800-0955 Th, Phys

R 1911 Laboratory-Based Physics for Teachers (1911-1912†; no credit for IT students) (Phys/L) (A-F only)
645630 1535-1730 MTTh, Phys, 4 cr

R 3512 Quantum Physics I (prereq 1253 or 1291 or 1341 or 1441 or 1453, 1254 or 1454 is rec, Math 3252 or ¶Math 3252)
350448 1010-1100 TWF, Phys 170, 3 cr (companion lab is 3515)

R 3515 Modern Physics Laboratory (prereq 3512 or ¶3512 or 3501 or ¶3501)
★LECT 1010-1100 M, Phys 170
451400 —1 LAB 1430-1730 M, Phys 62, 2 cr
350384 —2 LAB 1430-1730 T, Phys 62, 2 cr
551744 —3 LAB 0800-1100 Th, Phys 62, 2 cr
044796 —4 LAB 1430-1730 Th, Phys 62, 2 cr

R 3970 Directed Studies (prereq #, Δ)
543580 1-5 cr

R 5022 Introduction to Analytic Mechanics (prereq 5021)
645367 0905-0955 MTWF, Phys 170, 4 cr

R 5032 Topics in Mathematical Physics (prereq 5031)
546267 1220-1310 MTWF, Phys 236A, 4 cr

R 5052 Classical Physics (prereq 5051)
152209 1010-1100 MTWF, Phys 143, 4 cr

R 5062 Computational Methods in the Physical Sciences II (§Ast 5062; prereq 5061 or Ast 5061 or #)
152503 1115-1300 Th, Phys 210, Woodward P, 4 cr

R 5102 Introduction to Quantum Mechanics (prereq 5101)
051697 1430-1520 MTWF, Phys 210, 4 cr

R 5122 Methods of Experimental Physics II (prereq 5121 or #)
★LECT 1220-1310 MWF, Phys 131
952373 —1 LAB 1325-1520 MW, Phys, 4 cr
151701 —2 LAB 1535-1655 M, 1430-1700 Th, Phys, 4 cr
543708 —3 LAB 0905-1100 TTh, Phys, 4 cr
852611 —4 LAB 1220-1415 TTh, Phys, 4 cr
573162 —5 LAB 1430-1625 TF, Phys, 4 cr

R 5124 Experimental Project (prereq 5123, #)
142151 ar cr

R 5152 Quantum Mechanics (prereq 5151)
345329 1115-1205 MTWF, Phys 143, 4 cr

R 5201 Thermal and Statistical Physics (prereq 3513 or equiv)
350076 0905-0955 MTWF, Phys 143, 4 cr

R 5202 Thermal and Statistical Physics (prereq 5201)
650410 0905-0955 MTWF, Phys 157, 4 cr

R 5232 Introduction to Solid State Physics (prereq 5231)
651461 1115-1205 MTWF, Phys 157, 4 cr

Symbols

R The letter R preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
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# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 5400H Junior Honors Seminar (prereq IT or CLA upper div honors student, #) (S-N only)
943379 1640-1755 T, Phys 143, 1 cr

R 5410H Senior Honors Seminar (prereq IT or CLA upper div honors student, #) (S-N only)
950039 1640-1755 Th, Phys 157, 1 cr

R 5552 Topics in Physics for Biology and Medicine: Electricity and Signals (prereq general physics, calculus)
373163 —1 1115-1205 MTWThF, MechE 108, 5 cr

R 5805 Contemporary Optics (prereq #)
748065 1430-1615 TTh, EE/CSci 3115, Leger J, 4 cr

R 5950 Colloquium Seminar (prereq beginning grad stu or adv undergrad in physics) (S-N only)
849014 1535-1705 W, Phys 170, ar cr

R 5970 Directed Studies (prereq #, Δ)
151164 1-5 cr

R 5980 Research Seminar (prereq grad stu or upper div phys maj) (S-N only)
641853 1640-1730 Th, Phys 236A, 1 cr

R 5990 Directed Research (prereq 3rd yr, Δ)
744310 ar cr

R 8122 Relativistic Quantum Mechanics (prereq 8121 or #)
546205 0905-0955 MWF, Phys 210, 3 cr

R 8163 Plasma Physics (prereq 5162 or #)
173164 1325-1415 MWF, 3 cr

R 8200 Seminar: Condensed Matter Physics (prereq #) (S-N only)
650617 1325-1500 Th, Phys 210, ar cr

R 8212 Transport Theory (prereq 5153 or #)
347551 1325-1415 MWF, Phys 170, 3 cr

R 8222 Solid-State Physics (prereq 8221)
344018 1430-1520 W, Phys 131, 1430-1625 F, AkerH 313, 3 cr

R 8300 Seminar: Nuclear Physics (prereq #) (S-N only)
845724 1430-1625 W, LindH 216, ar cr

R 8370 Seminar: Elementary Particle Physics (prereq #) (S-N only)
146935 1325-1520 T, ar cr

R 8382 Modern Quantum Field Theory and Its Applications (prereq 8381) (A-F only)
673167 1220-1310 MWF, Phys 157, 3 cr

R 8400 Seminar: Space Physics (prereq #) (S-N only)
447380 1430-1625 T, Phys 131, ar cr

R 8500 Plan B Project (no cr toward PhD; prereq #) (S-N only)
843763 1220-1310 MWF, Phys 143, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
651203 1-18 cr

8777 Thesis Credits: Masters
141878 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
149530 1-36 cr

R 8990 Research in Physics (prereq #)
252533 ar cr

PHYSIOLOGY (Phsl)
Medical School

R 3051 Human Physiology (prereq 1 yr chemistry, biology, primarily for nursing, nutrition, medical technology and physical therapy stu)
★LECT 0905-0955 MWThF, NichH 45, Bloom G, 5 cr
252306 —1 LAB 0800-0955 T, MoosT 3110
748082 —2 LAB 1010-1205 T, MoosT 3110

3053 Principles of Physiology (prereq 1 yr college chemistry, physics, math thru integ calculus, 3052, Δ)
351616 1010-1100 MWF, MoosT 2690, Levitt D, 3 cr

3056 Principles of Physiology (prereq 1 yr each college chem, phys, math thru integ calc, 3055)
942796 1010-1100 MWF, MoosT 2690, Levitt D, 5 cr

3091H Honors Course: Readings in Physiology (prereq honors candidates in physiology, Δ)
750625 Branton W D, ar cr

3092H Honors Course: Problems in Physiology (prereq honors candidates in physiology, Δ)
343774 Branton W D, ar cr

3970 Directed Studies (prereq #, Δ)
747210 ar cr

5100 Systems Physiology (prereq biochem and human anatomy; primarily for dental, pharm, med tech, and nurs anes stu) (A-F only)
★LECT 1325-1415 MTWF, MoosT 2620, Katz S, 5 cr
550030 —1 LAB 1430-1625 M, MoosT 3110, (non-dental students only)
346383 —2 LAB 1325-1520 Th, MoosT 3110, (dental students only)

5110 Human Physiology (prereq 1st yr med stu or grad stu)
★LECT 1010-1205 TTh, 1010-1100 F, PWB 2470, Wangensteen O, 3 cr (bgn 6th week of qtr)
149004 —1 LAB 1430-1730 W, MoosT 3110
843519 —2 LAB 1325-1625 T, MoosT 3110
350367 —3 LAB 1430-1730 F, MoosT 3110

5113 Problems in Physiology (prereq #)
248174 ar cr

5130 Intermediate Systems Physiology 5130-5131; prereq phsl grad stu or #, physics, calculus, cell biology)
★LECT 1010-1205 TTh, 1010-1100 F, PWB 2470, Wangensteen O
★REC
850065 —1 LAB 1430-1730 W, MoosT 3110, 4 cr

R 5202 Computational Neuroscience II: Cells and Circuits (prereq understanding of UNIX, 5201 or equiv)
845366 1430-1600 TTh, MIrdH 5276, Miller R, 5 cr (lab ar)

5441 Quantitative Physiology (prereq 5440, grad stu)
541392 1010-1100 MWF, MoosT 2690, Levitt D, 3 cr

R 5461 Cellular and Molecular Neuroscience (§GCB 5461, MdBc 5461, NSc 5461, Phcl 5461, VB 5461; prereq 5460)
673718 1010-1100 TWF, MoosT 2580, Boland L, 3 cr

5552 Readings in Physiology
945391 ar cr

5553 Research in Physiology
447895 ar cr

8113 Problems in Physiology (prereq #)
251723 —1 1600-1700 F, MIrdH 5276, Newman E, 1 cr
473719 —2 ar cr

8202 Readings in Physiology
144935 ar cr

8203 Research in Physiology
442003 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
149687 1-18 cr

8777 Thesis Credits: Masters
247249 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
143848 1-36 cr

PLANT BIOLOGY (PBio)
Biological Sciences

R 3109 Plant Anatomy (prereq Biol 1103 or Biol 3012)
★LECT 1115-1230 TTh, BioSci 151, Biesboer D
173147 —1 LAB 0800-1100 TTh, BioSci 151, 5 cr

5001 Basic Botany (prereq Biol 1008 or Biol 1009, #, Δ)
451705 ar cr

5183 Water, Minerals, and Translocation (prereq 5131 or equiv)
★LECT 1325-1430 MW, Soils S415, Markhart A, Allan D
848655 —1 REC 1325-1500 F, Soils S415, 4 cr

R 5203 Herbarium Techniques (prereq 1009 or 3201 or equiv) (S-N only)
052039 1220-1520 M, BioSci 842, Cholewa A, 1 cr

5970 Directed Studies (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
142870 ar cr

5990 Directed Research (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
644946 ar cr

8301 Pollen Morphology and Quaternary Palynology (prereq plant taxonomy or #)
349185 Cushing E, 3-5 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
849255 1-18 cr

8777 Thesis Credits: Masters
043325 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
949280 1-36 cr

8910 Journal Club (prereq Δ) (S-N only)
973935 1200-1300 Th, BioSci 648, 1 cr

8950 Seminar (prereq #)
348098 1245-1400 T, 1 cr

8990 Research Problems (prereq #, Δ)
247591 ar cr

PLANT BREEDING (PlBr)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
746218 1-18 cr

8777 Thesis Credits: Masters
552358 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
242746 1-36 cr

PLANT PATHOLOGY (PlPa)
Agricultural, Food, and Environmental Sciences

R 1003 Diseases of Trees
★LECT 1820-1910 M, BorH 365, Blanchette R, 2 cr
073697 —1 LAB 1920-2120 M, BorH 291, 295, 296, Blanchette R

R 3002 Management of Horticultural Crop Diseases (prereq Biol 1009 or equiv)
★LECT 1325-1415 TTh, BorH 365, MacDonald D, 4 cr
170913 —1 LAB 1115-1310 TTh, BorH 295, AGRPGGH 106, MacDonald D
144263 —2 LAB 1430-1625 TTh, BorH 295, AGRPGGH 106, MacDonald D

R 3004 Air Pollution, People and Plants (prereq Chem 1052, Biol 1009 or equiv) (Envt)
951238 1010-1100 MWF, BorH 365, Krupa S, 3 cr

3090 Research in Plant Pathology (prereq 1001 or equiv or #)
343418 ar cr

5000 Professional Experience Program (prereq #)
843391 Percich J, 4 cr

5090 Issues in Plant Pathology (prereq grad stu or #)
373695 ar cr

5109 Molecular Genetics and Biochemistry of Yeasts and Filamentous Fungi (§PBio 5109; prereq 1 course each in genetics and biochemistry or #)
448741 1220-1415 MW, BorH 365, Brambl R, 4 cr

5211 Fungal Genetics (prereq introductory genetics)
873698 0905-0955 MWF, BorH 365, Groth J, Anderson N, 4 cr

5500 Epidemiology and Ecology of Plant Disease (prereq 5002 or 5050 or #)
343113 0945-1100 TTh, BioSci 70, Kinkel L, 3 cr

5999 Special Workshop in Plant Pathology (prereq #)
651962 1-4 cr

8090 Advanced Procedures and Research in Plant Pathology
343497 ar cr

8200 Current Topics in Plant Pathology (prereq #)
551095 1010-1205 F, BorH 491, MacDonald D, 2 cr

R 8201 Seminar
452644 1430-1530 M, BorH 365, Dill-Macky R, 1 cr

8500 Research in Plant Pathology (S-N only)
246098 1-8 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
847148 1-18 cr

8777 Thesis Credits: Masters
343032 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
647944 1-36 cr

POLISH (Plsh)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 3002 Intermediate Polish (§1105; prereq 3001 or #)
771572 0905-0955 MTWThF, VinH 313, Polakiewicz L, 5 cr

R 5970 Directed Readings (prereq #, Δ, CLA approval)
343337 1-4 cr

POLITICAL SCIENCE (Pol)
Liberal Arts

R 1001 American Government and Politics (SSci; C/PE)
672651 —2 LECT 1830-2145 W, AndH 230, Breen S, 5 cr
174072 —3 LECT 1325-1415 MTWThF, BlegH 140, 5 cr
★LECT 1010-1100 MTW, WilleyH 125, Smith S
443247 —1 REC 1010-1100 Th, HHHCtr 20, 5 cr
842158 —2 REC 0905-0955 Th, BlegH 105, 5 cr
052798 —3 REC 1010-1100 Th, RarigC 616, 5 cr
552568 —4 REC 1115-1205 Th, BlegH 140, 5 cr
248126 —5 REC 1115-1205 Th, BlegH 240, 5 cr
946038 —6 REC 1220-1310 Th, BlegH 240, 5 cr
752438 —7 REC 1220-1310 Th, BlegH 120, 5 cr
446794 —8 REC 1220-1310 Th, BlegH 215, 5 cr
351048 —9 REC 1010-1100 F, BlegH 350, 5 cr
751466 —10 REC 1010-1100 F, BlegH 210, 5 cr
051490 —11 REC 1010-1100 F, HHHCtr 30, 5 cr
048461 —12 REC 1010-1100 F, BlegH 245, 5 cr
074073 —13 REC 1115-1205 F, HHHCtr 30, 5 cr
874074 —14 REC 1115-1205 F, BlegH 350, 5 cr
674075 —15 REC 1220-1310 F, HHHCtr 30, 5 cr

R 1025 World Politics (SSci; IP)
246683 1115-1205 MWF, AndH 350, Freeman J, 4 cr

R 1041 Contemporary Political Ideologies (SSci; C/PE)
849403 0945-1100 TTh, AndH 370, Ball T, 4 cr

R 3051 Introduction to Political Analysis (SSci)
243671 1115-1205 MWF, AndH 270, Sikkink K, 4 cr

3070 Directed Field Studies (prereq #, Δ) (A-F only)
147518 1-4 cr

3080 Internship (!; max 8 cr; prereq Δ) (S-N only)
045351 4 cr

R 3085 Introduction to Political Research (prereq 3051 or #)
849658 —1 1415-1530 TTh, AndH 270, Smith M, 4 cr (pol sci maj only)
649077 —2 1415-1530 TTh, AndH 270, Smith M, 4 cr

3090 Practicum in Politics with Seminar (prereq concurrent registration in 5610, #)
445080 0905-1205 TTh, SocSci 101, Farr J, 2 cr

3110H Honors Work in Selected Fields (max 6 cr; prereq political science honors program maj, 3109H)
944077 1-6 cr

R 3309 Judicial Process (prereq 1001 or equiv or #) (C/PE)
048752 0905-0955 MWF, AndH 330, Jasperson A, 4 cr

R 3323 Civil Liberties in America (prereq 1001 or equiv or #) (CD; C/PE)
472652 1430-1520 MWF, AndH 230, Riedel E, 4 cr

R 3352 Fieldwork in the Legislature (!; prereq 1001 or equiv) (C/PE; practicum)
250443 1430-1545 MW, BlegH 155, Gray V, 4 cr

R 3499 Advanced Seminar: Democratization (§5410; prereq 1054 or 3051 or #)
174775 0945-1100 TTh, AndH 330, Davidheiser E, 4 cr

R 3661 Democratic Theory (prereq 3051 or 9 cr social science or #) (C/PE)
272653 1010-1100 MWF, AndH 230, Disch L, 4 cr

R 3710 Topics in Politics and Behavior: Public Opinion Trends and Cycles (§5710; prereq 1001 or #)
773094 1115-1230 TTh, AndH 310, Stimson J, 4 cr

R 3835 International Relations (SSci; IP)
044474 0905-0955 MWF, AndH 270, Cherin E, 4 cr

R 3836 Foreign Policy Decision Making
974891 1820-2050 T, AndH 350, Kirshner O, 4 cr

R 3872 International Organizations and the Environment (§5872; prereq pol sci or int rel maj or 12 cr in soc sci or #) (IP)
542493 1820-2050 Th, BlegH 155, Sampson M, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
344102 1-6 cr

R 5410 Advanced Topics in Government and Politics: Democratization (§3499; prereq 3051 or non-political science grad or #) (IP)
974776 0945-1100 TTh, AndH 330, Davidheiser E, 4 cr

R 5441 Politics of Environmental Protection (prereq 3051 or non-pol sci maj or #)
774309 1245-1400 TTh, BlegH 135, Holt R, 4 cr

R 5473 Chinese Government and Politics (IP)
172654 1415-1530 TTh, BlegH 155, Kelliher D, 4 cr

R 5478 Government and Politics of African Countries (prereq 3051 or non-political science grad student or #) (IP)
772656 1820-2050 W, BlegH 155, Nimtz A, 4 cr

R 5501 Principles of the American Constitution I (prereq 1001 or equiv)
174945 1115-1230 TTh, Vogel H, 5 cr

R 5655 Development of Political Thought: Early Modern (Renaissance to the Age of Revolution) (1061 or 9 crs in social science rec)
572660 1115-1230 TTh, AndH 370, Farr J, 4 cr

R 5710 Advanced Topics in Politics and Behavior: Public Opinion Trends and Cycles (§3710; prereq 1001 or # or qual grad stu)
544521 1115-1230 TTh, AndH 310, Stimson J, 4 cr

R 5766 American Political Culture and Values (prereq 3085 or equiv or #) (C/PE) (A-F only)
172662 1010-1100 MWF, BlegH 135, Rahn W, 4 cr

R 5872 International Organizations and the Environment (§3872; prereq pol sci or int rel maj or non-pol sci grad stu or 12 cr soc sci or #)
774777 1820-2050 Th, BlegH 155, Sampson M, 4 cr

8101 Scope and Methods of Political Science (prereq pol sci grad maj or Δ)
274077 1230-1500 T, SocSci 1450, Fogelman E, 3 cr

8140 Individual Readings and Research in Methodology (prereq pol sci grad maj or #, Δ)
245856 1-3 cr

8202 Development of Political Thought (prereq pol sci grad maj or #)
072632 1325-1520 Th, SocSci 1383, Farr J, 3 cr

8240 Individual Reading and Research in Political Thought (prereq pol sci grad maj or #, Δ)
752746 1-3 cr

8260 Topics in Political Theory (prereq pol sci grad maj or #) (A-F only)
249096 —1 1535-1730 T, SocSci 1383, Ball T, 3 cr (Green Political Theory)
472635 —2 1535-1730 Th, SocSci 1383, Dietz M, 3 cr (Heidegger/Jaspers/Arendt)

8300 American Politics (prereq pol sci grad maj or Δ)
342379 1230-1500 M, SocSci 1450, Stimson J, 4 cr

8303 Political Parties (prereq pol sci grad maj or #)
974079 1535-1730 T, BlegH 140, Sorauf F, 3 cr

8308 Proseminar in Political Psychology (§Psy 8211, 8212, 8213; prereq 8307) (S-N only)
148975 1130-1230 F, BlegH 205, Rahn W, 1 cr

8340 Individual Reading and Research in American Politics (prereq pol sci grad maj or #, Δ)
648186 1-3 cr

8440 Individual Reading and Research in International Relations (prereq pol sci grad maj or #, Δ)
644039 1-3 cr

R 8450 Research Seminar: International Politics and Foreign Policy: Popular Culture, Power, and Resistance (§CSDS 8910, sec 1, Soc 8090, sec 1; prereq pol sci grad maj or #)
372644 1325-1600 W, BlegH 205, Duvall R, 3 cr

8460 Topics in International Politics: Morality and World Politics/Norms and Institutions (prereq pol sci grad maj or #)
043891 1535-1730 M, SocSci 101, Price R, 3 cr

8605 Government and Politics of Africa (prereq pol sci grad maj or #)
672648 1535-1730 M, SocSci 1383, Nimtz A, 3 cr

8640 Individual Readings and Research in Comparative Politics (prereq pol sci grad maj or #, Δ)
146118 1-3 cr

8660 Topics in Comparative Politics: Political Economy of Environmental Protection (prereq pol sci grad maj or #)
872650 1325-1520 F, SocSci 101, Holt R, 3 cr

Symbols

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8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
444205 1-18 cr

8777 Thesis Credits: Masters
952423 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
844234 1-36 cr

8990 Directed Readings in Political Science (prereq 45 cr in 8XXX-level pol sci courses) (S-N only)
150007 1-7 cr

PORTUGUESE (Port)
Spanish and Portuguese
Liberal Arts

R 1002 Beginning Portuguese (prereq 1001 or #)
371574 0905-1020 MWF, BuH 120, 5 cr

3001 Portuguese for Spanish Speakers (prereq knowledge of Spanish or #)
171575 1010-1125 MWF, FolH 208, 5 cr

R 3502 Brazilian Culture (prereq 1006)
242326 1430-1600 TTh, FolH 38, 5 cr

3970 Directed Studies (prereq #, Δ, ❑)
144229 1-5 cr

5970 Directed Readings (max 15 cr; prereq #, Δ, CLA approval)
044975 1-5 cr

5990 Directed Research (prereq #, Δ, CLA approval)
750687 1-5 cr

8777 Thesis Credits: Masters
342687 1-16 cr

PROSTHODONTICS (Pros)
Dentistry

5200 Fixed Prosthodontics Seminar for Postgraduate Dental Fellows (S-N only)
346819 1 cr

8003 Advanced Technical Restorative Dentistry
049965 ar cr

8005 Advanced Clinical Prosthodontics I
742962 ar cr

8006 Advanced Clinical Prosthodontics II (prereq #)
043020 ar cr

8012 Topics in Prosthodontics (prereq #)
742024 ar cr

8017 Seminar: Advanced Prosthodontics (prereq #)
744047 ar cr

PSYCHOLOGY (Psy)
Liberal Arts

R 1001 Introduction to Psychology (SSci)
★LECT 1325-1415 MTWTh, WilleyH 175, Peterson G, others, 5 cr
446424 —1 REC 0905-0955 F, FolH 419
251172 —2 REC 0905-0955 F, BlegH 120
149950 —3 REC 0905-0955 F, BuH 123
451607 —4 REC 1010-1100 F, NichH 213
851684 —5 REC 1010-1100 F, BuH 123
852091 —6 REC 1010-1100 F, FolH 419
543627 —7 REC 1010-1100 F, BlegH 120
442034 —8 REC 1115-1205 F, PeikH 335
550383 —9 REC 1115-1205 F, RarigC 616
748213 —10 REC 1115-1205 F, NichH 213
045883 —11 REC 1115-1205 F, BlegH 260
752763 —12 REC 1220-1310 F, BuH 120
152735 —13 REC 1220-1310 F, BlegH 150
445323 —14 REC 1220-1310 F, PeikH 335
545846 —15 REC 1220-1310 F, BlegH 260
247168 —16 REC 1220-1310 F, RarigC 616
849028 —17 REC 1325-1415 F, BuH 120
442843 —18 REC 1325-1415 F, BuH 123
749037 —19 REC 1325-1415 F, BlegH 150
348327 —20 REC 1430-1520 F, BuH 123

R 1001H Honors Seminar: Introduction to Psychology (prereq ¶Psy 1001, fr or soph honors stu) (S-N only)
045723 1430-1600 W, EltH N227, Fletcher C, 1 cr

R 1004 Introductory Laboratory Psychology (1004-1005†; prereq soph, 1001 or ¶) (SSci)
★LECT 0905-0955 M, SciCB 175, Ferstl K
449064 —1 LAB 0905-1205 T, EltH 150, 4 cr
749233 —2 LAB 0905-1205 T, EltH 160, 4 cr
847568 —3 LAB 1325-1625 T, EltH 150, 4 cr
942684 —4 LAB 1325-1625 T, EltH 160, 4 cr
646938 —5 LAB 0905-1205 W, EltH 150, 4 cr
942698 —6 LAB 1325-1625 W, EltH 160, 4 cr
146863 —7 LAB 1325-1625 W, EltH 160, 4 cr

R 1005 Introductory Laboratory Psychology (1004-1005†; prereq 1004) (SSci)
★LECT 1010-1100 T, SciCB 325, Fox P, Peterson G
846243 —1 LAB 1325-1625 W, EltH 50, 4 cr
241547 —2 LAB 1325-1625 W, EltH 60, 4 cr
347128 —3 LAB 1325-1625 Th, EltH 50, 4 cr
751127 —4 LAB 1325-1625 Th, EltH 60, 4 cr
146295 —5 LAB 0905-1205 F, EltH 50, 4 cr
152193 —6 LAB 0905-1205 F, EltH 60, 4 cr
043454 —7 LAB 1325-1625 F, EltH 60, 4 cr
644610 —8 LAB 1325-1625 F, EltH 50, 4 cr

R 3011 Introduction to Psychology of Learning (prereq 1001) (SSci)
542834 1430-1520 MWF, SmithH 100, Peterson G, 4 cr

R 3051 Introduction to Cognitive Psychology (prereq 1001) (SSci)
872681 1415-1530 TTh, NichH 45, Marsolek C, 4 cr

R 3902 Major Project in Psychology (prereq 1005, 3801, jr or sr psychology maj)
752181 —1 1325-1520 T, AmundH 104, 4 cr
046371 —2 1325-1520 W, BuH 120, 4 cr
645983 —3 1010-1205 Th, PeikH 375, 4 cr
551453 —4 1010-1205 F, WullH 220, 4 cr

3960 Undergraduate Seminar (prereq 1001, #)
048539 1-5 cr

3970 Directed Studies (prereq #, Δ, ❑)
542851 1-8 cr

3990 Directed Research (prereq #, Δ, ❑)
452661 —1 1-8 cr

R 5012 Psychology of Learning (prereq 1005, 3011 or EEB 3111 or #, except grad students)
250569 0905-0955 MWF, EltH N119, Overmier J, 4 cr

R 5036 Vision: Computational Theory to Neural Systems (prereq 3031, Math 3261 or equiv, CSci 3113 or equiv or #) (A-F only)
151360 1115-1230 TTh, EltH 225, Kersten D, 4 cr

5051 Psychology of Human-Machine Interaction (prereq 3051 or 3031 or #)
643327 0945-1100 TTh, EltH N119, Legge G, 4 cr

R 5054 Psychology of Language (prereq 3011 except for students in honors sequence and grad students)
541389 1115-1230 TTh, EltH N119, Fletcher C, 4 cr

R 5101 Personality (§3101; prereq 5862 or ¶5862, honors or grad stu)
449176 0945-1100 TTh, NichH 109, Tellegen A, 4 cr

R 5138 Psychology of Aging (prereq 3135 or 5135, 5862 or #)
143470 1245-1400 TTh, BuH 120, Gershenson C, 4 cr

R 5206 Research Methods in Social Psychology (prereq #)
543787 0945-1100 TTh, EltH N227, Rothman A, 4 cr

R 5604H Abnormal Psychology (§3604; prereq honors maj or # for grad students)
048010 1430-1625 TTh, EltH N119, Leon G, 4 cr

R 5606 Clinical Psychophysiology (prereq 1004, 1005 or equiv, 3061 or 5061, 3604 or 5604H or #)
846582 1545-1700 TTh, EltH N423, Iacono W, 4 cr

R 5701 Personnel and Industrial Psychology (prereq 3801 or equiv, 8 cr in psychology or #)
650598 1415-1530 TTh, SciCB 175, Ones D, 4 cr

5901H Honors Project (prereq sr, #) (A-F only)
551257 4-8 cr

R 5960 Topics in Psychology (prereq 1001, #)
144697 1-5 cr

R 8031 Seminar: Visual Perception (§NSc 8031; prereq 5031 or #)
246697 Legge G, Kersten D, 1 cr

R 8070 Seminar: Psychopharmacology (prereq #)
943155 Sparber S, Overmier J, others, 1 cr

R 8202 Advanced Social Psychology-Close Relationships (prereq #)
743643 Berscheid E, 3 cr

R 8203 Impression Management (prereq #...8208 rec)
844816 1010-1210 T, EltH N305, Gonzales M, 3 cr

R 8205 Seminar: Research in Social Psychology (prereq 8204, #)
844086 1010-1210 W, EltH N305, Berscheid E, Snyder M, others, 3 cr

R 8212 Proseminar in Political Psychology (§Pol 8308; prereq acceptance into the PhD minor in Political Psychology) (S-N only)
549055 1130-1230 F, BlegH 205, Borgida E, 1 cr

R 8410 Perspectives in Learning, Perception, and Cognition (prereq post-baccalaureate status) (S-N only)
746087 1535-1730 Th, EltH 150, 160, Van den Broek P, 1 cr

R 8503 Counseling Psychology III: Interviewing and Theories (prereq 8501, 8502, counseling psychology stu or #)
★LECT 1010-1150 W, EltH N595, Layton P
250801 —1 LAB 1325-1520 F, EltH N595, Layton P, 4 cr

R 8515 Practicum in Student Counseling (prereq 8501, 8502, 8503 or equiv) (S-N only)
049609 1430-1625 Th, EddyH 202, Loper R, 4 cr

R 8518 Practicum in Counseling Psychology (prereq 8517) (S-N only)
148135 1-4 cr

R 8542 Ethical Issues in Psychology (prereq grad student in counseling or clinical psychology or #) (S-N only)
542686 1300-1600 M, EltH N668, Frazier P, 3 cr

R 8544 Seminar: Research in Counseling Psychology (prereq counseling grad stu or #) (S-N only)
548715 Hansen J, 1 cr (EltH N595)

R 8545 Seminar: Research in Counseling Psychology (prereq 8544 or #) (S-N only)
672679 1300-1500 W, EltH N595, Frazier P, 1 cr

R 8546 Seminar: Research in Counseling Psychology (prereq 8544 or #) (S-N only)
072680 1300-1500 W, EltH N595, Frazier P, 1 cr

R 8560 Advanced Practicum/Internship in Counseling Psychology (max 24 cr; prereq #) (S-N only)
747496 Hansen J, Frazier P, 1-6 cr

R 8612 Professional Methods in Clinical Psychology I: Assessment (prereq clinical psychology maj)
★LECT 1415-1530 TTh, EltH N423, Butcher J, Tellegen A
846498 —1 LAB 1315-1500 W, EltH N423, 4 cr

R 8620 Practicum in Clinical Psychology (prereq #) (S-N only)
441904 1-6 cr

R 8622 Professional Methods in Clinical Psychology II: Adult Behavior Therapy (prereq clinical psychology major, 8611, 8612, 8613)
★LECT 1000-1200 W, EltH N423
144434 —1 LAB 1000-1200 F, EltH N423, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
244917 1-18 cr

R 8702 Seminar: Industrial and Organizational Psychology (prereq 8701, #)
172676 Dunnette M, Campbell J, 4 cr

8777 Thesis Credits: Masters
141542 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
546348 1-36 cr

R 8970 Seminar: Special Areas of Psychology and Related Sciences (prereq #)
345007 —1 1220-1320 W, ElthH N227, Fox P, Fletcher C, 1-6 cr
074123 —2 1325-1455 Th, ElthH N668, Snyder M, 1-6 cr
251852 —3 1630-1800 T, Mayo D330, Gershenson C, Kane R, others, 1 cr
245338 —4 McGue M, 1-6 cr
548956 —5 1325-1510 Th, ElthH N227, Iacono W, 2 cr
951580 —6 Berscheid E, 1-6 cr
143865 —7 Akerman P, Kanfer R, 2 cr
874124 —8 Legge G, 1-6 cr
049741 —9 1010-1140 MW, ElthH N119, Cudeck R, 2 cr
150564 —10 1815-2000 M, ElthH N595, Hansen J, 1-6 cr (S-N only)

R 8980 Directed Teaching in Psychology (prereq #)
950638 1-6 cr

R 8990 Reseasrch Problems (prereq #)
343189 1-6 cr

PUBLIC AFFAIRS (PA)

R 5011 Policy Analysis I: Applied Microeconomics for Policy Analysis (prereq 5010 or interm microecon, publ aff or plan or sci/tech pol or publ hlth maj or #) (A-F only)
★LECT 1535-1720 MW, HHHCtr 25, Brandl J, Kudrle R
946685 —1 LAB 1115-1215 F, HHHCtr 25, 4 cr
672469 —2 LECT 1535-1720 MW, BlegH 230, 4 cr

R 5022 Quantitative Methods in Public Affairs and Planning II (prereq publ aff or planning or sci/tech pol or publ hlth maj or #) (A-F only)
★LECT 1535-1720 TTh, HHHCtr 25, Kleiner M, Kudrle R
849918 —1 LAB 1245-1405 T, BlegH 90, 1245-1405 Th, BlegH 440, 4 cr
★LECT 1535-1720 TTh, BlegH 145, Assaad R
343421 —2 LAB 1815-1945 Th, 0905-1030 F, BlegH 90, 4 cr

R 5122 Public Budgeting II (†5121-5122; prereq 5121, grad or publ hlth stu or adult spec or #)
★LECT 1115-1300 MW, HHHCtr 20, Brandl J
941311 —1 LAB 0800-0850 F, HHHCtr 20, 4 cr

R 5192 Topics in Public and Independent Sector Management: Managing Beyond Bureaucracy (prereq grad or publ hlth stu or adult spec or #)
752522 1615-2045 W, HHHCtr 20, Armajani B, 3 cr

R 5195 Topics in Public and Independent Sector Management: Economics of Public Services (prereq grad or publ hlth stu or adult spec or #)
272880 1630-1900 W, ClaOff B25, Honadle B, 3 cr (StP)

R 5196 Topics in Public and Independent Sector Management (prereq grad or publ hlth stu or adult spec or #)
674934 0815-0930 TTh, HHHCtr 25, Stone M, 3 cr

R 5200 Introduction to Planning (prereq grad or publ hlth stu or adult spec or #)
774732 1815-2045 Th, BlegH 110, Lukermann B, 3 cr

R 5230 Strategic Planning and Management (prereq grad or publ hlth stu or adult spec or #)
145194 1900-2130 T, HHHCtr 25, Bryson J, 3 cr

R 5231 Strategy and Tactics in Project Planning (§5521; prereq grad or publ hlth stu or adult spec or #)
574733 1815-2045 M, HHHCtr 25, Campbell C, 3 cr

R 5391 Topics in Policy Analysis: Public Policy, Work, and the Family in Developing Countries and the U.S. (prereq grad or publ hlth stu or adult spec or #)
272474 1535-1805 W, HHHCtr 20, Levison D, 3 cr

R 5395 Topics in Policy Analysis: Seminar on Participatory Policy Analysis (prereq 5394, grad or publ hlth stu or adult spec or #)
073585 1815-2045 W, HHHCtr 30, Meyers S, 3 cr

R 5401 Introduction to Social Policy (prereq grad or publ hlth stu or adult spec or #)
144523 0945-1100 TTh, HHHCtr 25, Ards S, 3 cr

R 5430 Labor Policy (prereq 5021 or equiv, grad or publ hlth stu or adult spec or #)
941373 1115-1230 TTh, HHHCtr 20, Kleiner M, 3 cr

R 5495 Topics in Social Policy: The Search for Youth Policy (prereq grad or publ hlth stu or adult spec or #)
444544 1245-1400 TTh, HHHCtr 20, Ards S, Schneider E, 3 cr

R 5499 Topics in Social Policy: Women in Law (prereq grad or publ hlth stu or adult spec or #) (A-F only)
174735 1535-1730 W, Law 471, Kenny S, Chomsky C, 3 cr (Jan 8-Apr 30)

R 5502 Economic Development II (prereq grad or publ hlth stu or adult spec or #)
552375 0905-1045 MW, BlegH 125, Assaad R, 4 cr

R 5592 Topics in Economic and Community Development: State and Local Economic Strategies Workshop (prereq grad or publ hlth stu or adult spec or #)
172993 1815-2045 Th, HHHCtr 25, Munnich L, 3 cr

5598 Topics in Economic and Community Development: Regional Development Systems (prereq grad or publ hlth stu or adult spec or #)
374734 1630-1745 MW, ClaOff B26, Morse G, 3 cr

R 5602 Metropolitan Analysis I: Population and Housing (§Geog 5372; prereq grad or publ hlth stu or adult spec or #) (A-F only)
272460 0800-1000 TTh, BlegH 145, Adams J, 4 cr

R 5711 Energy Policy (prereq grad or publ hlth stu or adult spec or #)
874091 0905-1045 MW, HHHCtr 20, Abrahamson D, 4 cr

R 5721 Environmental Policy (prereq grad or publ hlth stu or adult spec or #)
674092 1325-1505 MW, BlegH 415, Abrahamson D, 4 cr

R 5731 Technology Policy (prereq grad or publ hlth stu or adult spec or #)
874768 Archibald S, 2 cr (WBOB 150) (MOT stu or #)

5794 Topics in Technology, Energy and Environmental Policy: Nuclear Power: Friend or Foe (prereq grad or publ hlth stu or adult spec or #)
972977 1815-2045 W, HHHCtr 25, Abrahamson D, 3 cr

R 5902 Computer Applications in Public Affairs (!; prereq grad or publ hlth stu or adult spec or #) (S-N only)
944421 0800-1000 MW, BlegH 90, 1 cr

R 5961 General Topics: Writing for Publications (prereq grad or publ hlth stu or adult spec or #)
644378 1745-2015 Th, HHHCtr 20, Mikelonis-Paraskov V, 3 cr

R 5964 General Topics: Conflict Management Seminar prereq grad or publ hlth stu or adult spec or #)
442566 1325-1525 M, HHHCtr 20, Fiutak T, 1 cr (alt M)

R 8321 Analysis of Discrimination (prereq 5011 or #)
★LECT 1415-1530 TTh, HHHCtr 30, Meyers S
474093 —1 LAB 1430-1530 F, HHHCtr 30, Myers S, 4 cr

8702 Technology, Energy, and Environmental Policy: Plan B Seminar (prereq 1st yr Humphrey Institute grad stu) (S-N only)
442633 Abrahamson D, Archibald S, Keller K, 1 cr

8705 Technology, Energy, and Environmental Policy: Plan B Seminar (prereq 2nd yr Humphrey Institute grad stu) (S-N only)
141338 Abrahamson D, Archibald S, Keller K, 1 cr

8901 Plan B Tutorial (prereq public affairs or planning maj who have completed core crses in PA: 5001, 5002, 5011, 5012, 5021, 5022) (S-N only)
646101 —1 4 cr
442275 —2 Abrahamson D, 4 cr
747661 —3 Adams J, 4 cr
146572 —4 Archibald S, 4 cr
850793 —5 Ards S, 4 cr
248711 —6 Assaad R, 4 cr
946573 —7 Bolan R, 4 cr
650794 —8 Brandl J, 4 cr
146712 —9 Brookins G, 4 cr
746574 —10 Bryson J, 4 cr
544423 —11 Eustis N, 4 cr
942281 —12 Hoenack S, 4 cr
851846 —13 Kapstein E, 4 cr
349736 —14 Keller K, 4 cr
347663 —15 Kenny S, 4 cr
645515 —16 Kleiner M, 4 cr
742282 —17 Kudrle R, 4 cr
147664 —18 Luce T, 4 cr
445516 —19 Lukermann B, 4 cr
542283 —20 Myers S, 4 cr
449825 —21 Schuh G, 4 cr
974728 —22 Stone M, 4 cr

8910 Independent Study (may be taken once toward master's deg in publ aff, plan or sci/tech pol; prereq publ aff plan or sci/tech pol maj or #)
044846 —1 1-3 cr
541165 —2 Abrahamson D, 1-3 cr
450795 —3 Adams J, 1-3 cr
948713 —4 Archibald S, 1-3 cr
546575 —5 Ards S, 1-3 cr
344424 —6 Assaad R, 1-3 cr
342284 —7 Bolan R, 1-3 cr
651847 —8 Brandl J, 1-3 cr
144425 —9 Brookins G, 1-3 cr
142285 —10 Bryson J, 1-3 cr
451848 —11 Eustis N, 1-3 cr
149737 —12 Hoenack S, 1-3 cr
047665 —13 Kapstein E, 1-3 cr
245517 —14 Keller K, 1-3 cr
042286 —15 Kenny S, 1-3 cr
341166 —16 Kleiner M, 1-3 cr
250796 —17 Kudrle R, 1-3 cr
748714 —16 Luce T, 1-3 cr
141167 —19 Lukermann B, 1-3 cr
774729 —20 Myers S, 1-3 cr
174730 —21 Schuh G, 1-3 cr
974731 —22 Stone M, 1-3 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

PUBLIC HEALTH (PubH)

3003 Fundamentals of Alcohol and Drug Abuse (§3004)
444513 1640-1840 Th, MoosT 2650, Rothenberger J, 2 cr

5003 Fundamentals of Alcohol and Drug Abuse (§5023; prereq educ maj or #)
742475 1640-1840 Th, MoosT 2650, Rothenberger J, 2 cr

R 5004 Field Instruction in Public Health (prereq #)
843990 ar cr

R 5005 Topics in Public Health (prereq #)
644512 3 cr

R 5027 Community and Environmental Approaches to Health Behavior Change (prereq 5026, comm hlth educ maj or #)
147186 1220-1520 F, Mayo 1250, Wagenaar A, 3 cr

R 5040 Dying and Death in Contemporary Society (§HSU 5040, Mort 5040; prereq health science maj, public health grad, educ sr, mortuary science maj or #)
942474 1640-1920 W, MoosT 2690, Rothenberger J, Matthews M, 3 cr

R 5044 Topics in Alcohol and Drug Problems (prereq #)
643781 1-4 cr

R 5049 Legislative Advocacy Skills for Public Health (prereq 5398, #) (A-F only)
941759 Forster J, 4 cr

R 5084 Internship in Health Education Practice I (prereq health educ maj and community health educ maj or #) (S-N only)
644932 ar cr

R 5085 Internship in Health Education Practice II (prereq health educ maj and community health educ maj or #) (S-N only)
043986 ar cr

R 5090 Research Topics in Health Education (prereq health educ maj and community health educ maj or #)
152394 —1 Finnegan J, 2-8 cr
649743 —2 Forster J, 2-8 cr
741181 —3 French S, 2-8 cr
150807 —4 Garrard J, 2-8 cr
848719 —5 Jeffrey R, 2-8 cr
546589 —6 Jones-Webb R, 2-8 cr
144442 —7 Kushi L, 2-8 cr
642310 —8 Lando H, 2-8 cr
751855 —9 Luepker R, 2-8 cr
949747 —10 Lytle L, 2-8 cr
442311 —11 McGovern P, 2-8 cr
551856 —12 Murray D, 2-8 cr
749748 —13 Neumark-Sztainer D, 2-8 cr
247672 —14 Perry C, 2-8 cr
545524 —15 Pirie P, 2-8 cr
242312 —16 Rothenberger J, 2-8 cr
541182 —17 Wagenaar A, 2-8 cr
050808 —18 Williams C, 2-8 cr
372613 —19 Wolfson M, 2-8 cr
172614 —20 2-8 cr

R 5096 Community Health Education Master's Research Project (prereq health educ maj and community health educ maj or #)
752178 —1 Finnegan J, ar cr
343452 —2 Forster J, ar cr
241435 —3 French S, ar cr
247378 —4 Garrard J, ar cr
743299 —5 Jeffery R, ar cr
443605 —6 Jones-Webb R, ar cr
747000 —7 Kushi L, ar cr
647457 —8 Lando H, ar cr
741746 —9 Luepker R, ar cr
151058 —10 Lytle L, ar cr
149116 —11 McGovern P, ar cr
145387 —12 Murray D, ar cr
152489 —13 Neumark-Sztainer D, ar cr
547001 —14 Perry C, ar cr
945309 —15 Pirie P, ar cr
344374 —16 Rothenberger J, ar cr
548357 —17 Wagenaar A, ar cr
544843 —18 Williams C, ar cr
072615 —19 Wolfson M, ar cr
872616 —20 ar cr

R 5097 Topics: Selected Readings (prereq grad student in health sciences)
952275 —1 Finnegan J, ar cr
451218 —2 Forster J, ar cr
149620 —3 French S, ar cr
245081 —4 Garrard J, ar cr
249115 —5 Jeffery R, ar cr
141668 —6 Jones-Webb R, ar cr
148670 —7 Kushi L, ar cr
252564 —8 Lando H, ar cr
251219 —9 Luepker R, ar cr
447542 —10 Lytle L, ar cr
148961 —11 McGovern P, ar cr
745229 —12 Murray D, ar cr
551291 —13 Neumark-Sztainer D, ar cr
946525 —14 Perry C, ar cr
850437 —15 Pirie P, ar cr
744064 —16 Rothenberger J, ar cr
751368 —17 Wagenaar A, ar cr
746851 —18 Williams C, ar cr
672617 —19 Wolfson M, ar cr
472618 —20 ar cr

R 5150 Topics: Environmental and Occupational Health
944743 —1 1325-1625 W, Mayo A367, Sexton K, McGovern P, 3 cr (Environmental and Occupational Health Policy) (prereq PubH or grad stu or #)
274712 —2 ar cr (prereq #)

R 5154 Practicum in Environmental and Occupational Health (§Nurs 5882; prereq env hlth maj or grad nurs stu) (S-N only)
141394 1-6 cr

5159 Seminar: Environmental Health (prereq environmental health student) (S-N only)
145400 1535-1625 W, WDH 2110, 2140, Greaves I, 2 cr

R 5171 Environmental Microbiology (prereq MicB 3103 or #)
★LECT 1325-1520 M, Mayo 1250, Vesley D
852253 —1 LAB 1220-1415 W, Mayo 1250, 4 cr

R 5184 Measurement of Airborne Contaminants in Workplaces (prereq 5210, 5216 or #)
448528 1430-1520 W, 0800-0900 F, Mayo 1250, 0905-1100 F, BoynHS S35, Ramachandran G, 4 cr

R 5186 Environmental Chemistry (prereq general chemistry and organic chemistry or #)
846842 1010-1115 TTh, Mayo 1250, Swackhamer D, 3 cr

R 5194 Injury Prevention in the Workplace, Community, and Home (§5594)
346089 0905-0955 T, 0800-0955 Th, Mayo 1250, Gerberich S, 3 cr

R 5197 Topics: Injury Prevention in the Workplace, Community, and Home (§5597; prereq #)
650441 Gerberich S, 1-3 cr

R 5245 Legal Framework of Public Health Policy I
774567 1730-2030 T, Mayo A387, 3 cr

R 5250 Environmental and Occupational Health Master's Project (prereq env hlth maj, #) (S-N only)
051036 —1 Barber D, 1-4 cr
345735 —2 Brosseau L, 1-4 cr
350465 —3 Gerberich S, 1-4 cr
342902 —4 Greaves I, 1-4 cr
152646 —5 Johnson R, 1-4 cr
843570 —6 Maldonado G, 1-4 cr
544311 —7 Mandel J, 1-4 cr
649032 —8 McGovern P, 1-4 cr
547063 —9 Olson D, 1-4 cr
846341 —10 Ramachandran G, 1-4 cr
546804 —11 Sexton K, 1-4 cr
051540 —12 Swackhamer D, 1-4 cr
650682 —13 Vesley D, 1-4 cr
146594 —14 Vincent J, 1-4 cr
648723 —15 Wattenberg E, 1-4 cr
172623 —16 1-4 cr

R 5253 Introduction to Hazardous Waste Management
248515 1600-1715 TTh, MoosT 2530, Thompson F, 3 cr

R 5326 Research in Animal/Human Health (prereq VPH or Epi maj or #)
352717 —1 Diesch S, ar cr
350353 —2 Pullen M, ar cr
443300 —3 Quigley J, ar cr
352636 —4 Robinson R A, ar cr
348280 —5 ar cr

R 5330 Epidemiology I (prereq publ hlth, pharm, med, nurs, dent, or grad stu or #)
★LECT 1115-1230 TTh, MoosT 2690, Sellers T, Lowry P
541795 —1 LAB 1245-1415 T, Mayo A270, 4 cr
441689 —2 LAB 1245-1415 T, Mayo A367, 4 cr
749121 —3 LAB 1245-1415 Th, Mayo A270, 4 cr
741987 —4 LAB 1245-1415 Th, Mayo A367, 4 cr

R 5340 Epidemiology II: Strategies and Methods (prereq 5330, one biostatistics course or #, MPH or grad stu)
641531 —1 0800-0955 MW, WDH 2110, 2140, Shahar E, 4 cr
741441 —2 0800-0955 TTh, WDH 2110, 2140, Arnett D, 4 cr

R 5345 Epidemiologic Methods: Data Collection (prereq 5330, 5450, 5420, epi MPH maj or #)
051439 0905-0955 MWF, Mayo A367, Pirie P, 3 cr

R 5383 Pathobiology of Human Disease (prereq publ hlth, pharm, med, nurs or dent stu; epid, biostat or env hlth grad stu or #)
151567 1115-1310 TTh, Mayo A387, Crow R, Gross M, 4 cr

R 5386 The Public Health Aspects of Cardiovascular Diseases (prereq Epidemiology I, Biostatistics I or equiv)
746803 1220-1415 WF, Mayo D326, Elmer P, Folsom A, 3 cr

R 5387 Cancer Epidemiology (prereq health sci grad stu or #)
750494 1430-1520 MWF, Mayo D326, Robison L, 3 cr

R 5393 Design and Analysis of Community Trials in Epidemiology (prereq 5341, 5454, epi MPH or epi grad stu or #)
272619 0905-1100 TTh, Mayo A270, Murray D, 4 cr

R 5394 Mass Communication and Public Health (§Jour 5541; prereq credits in social or behavioral sci, public health stu or grad jour maj)
846520 1325-1610 T, Mayo D262, Finnegan J, 3 cr

R 5395 Obesity and Eating Disorders (prereq grad-level stu or #)
449811 0905-0955 MWF, Mayo A270, Jeffery R, French S, 3 cr

R 5399 Seminar: Topics in Epidemiology
651265 —1 1115-1415 M, Mayo D262, Perry C, Lando H, others, 3 cr (Principles of Human Behavior II) (prereq epi grad stu or #)
574568 —2 0905-1100 F, Mayo D262, Sellers T, Perry C, 2 cr (Teaching Practicum in Epidemiology) (prereq epi grad stu, 5330, 5340, #)

R 5415 Biostatistical Methods II (§5452; prereq grade of B or better in 5414 or 5409 or 5450, MPH or grad hlth sci stu)
849921 1010-1100 MWF, Mayo A367, Goldman, 3 cr

R 5421 Statistical Computing II: Advanced Computational and Graphical Methods (prereq 5464, knowledge of C or FORTRAN or #, grad stu)
048170 1115-1230 TTh, Mayo A367, Carlin B, 3 cr

R 5452 Biostatistics II (§5415; prereq 5450 with grade of B or better, 5420, or #)
047861 1010-1100 MTWTh, FordH 115, Jeffries D, 4 cr

R 5462 Clinical Trials I (prereq biostatistics or epidemiology maj or #, 5452 or ¶5452 or 5465 or ¶5465)
344231 1115-1205 MWF, MoosT 2580, Neaton J, 3 cr

R 5465 Biostatistical Inference II (§5452; prereq 5464, Stat 5132 or ¶Stat 5132, biostat maj or #) (A-F only)
245906 0905-1100 TTh, Mayo A367, Anderson A, 4 cr

R 5470 Topics in Biostatistics (prereq #)
849157 ar cr

R 5605 Perinatal Health and Family Planning (prereq grad or public hlth stu or #) (A-F only)
850924 1430-1600 MW, Mayo A387, Hellerstedt W, 3 cr

R 5613 Chronic Illness and Childhood Disability (prereq grad or public hlth stu or #)
246523 1640-1910 T, Mayo A367, Patterson J, 3 cr

R 5614 Field Experience in Maternal and Child Health (prereq MCH grad stu, #) (S-N only)
052297 —1 Garwick A, ar cr
947268 —2 Hellerstedt W, ar cr
348621 —3 Himes J, ar cr
148720 —4 Patterson J, ar cr
150130 —5 Resnick M, ar cr
547287 —6 Story M, ar cr
373776 —7 Wunderlich M, ar cr

R 5647 Independent Study in Maternal and Child Health (prereq #, MCH or grad stu preferred)
350109 —1 Garwick A, ar cr
252404 —2 Hellerstedt W, ar cr
148958 —3 Himes J, ar cr
946590 —4 Patterson J, ar cr
949473 —5 Resnick M, ar cr
645594 —6 Story M, ar cr
173777 —7 Wunderlich M, ar cr

R 5648 Topics in Maternal and Child Health
173780 —1 1700-1930 M, Mayo D262, Axtell S, 3 cr (Community Organizing for Public Health Workers) (prereq publ hlth or grad stu or #)
873779 —2 0905-1100 T, Mayo A387, Garwick A, Wunderlich M, 2 cr (Qualitative Research Methods) (prereq 5806, publ hlth or grad stu or #)
073781 —3 1640-1910 W, Mayo A270, Nyberg L, 3 cr (Advocating for Change for Children) (prereq publ hlth or grad stu or publ hlth prof or #)

R 5649 Maternal and Child Health Master's Project (prereq MCH grad stu, #) (S-N only)
749927 —1 Garwick A, 3-4 cr
543319 —2 Hellerstedt W, 3-4 cr
648933 —3 Himes J, 3-4 cr
142313 —4 Patterson J, 3-4 cr
647961 —5 Resnick M, 3-4 cr
542476 —6 Story M, 3-4 cr
073778 —7 Wunderlich M, 3-4 cr

R 5651 Critical Readings of Scientific Literature in Adolescent Health (prereq 1 grad level stat crse) (A-F only)
645806 0905-1100 W, Mayo D325, Resnick M, 2 cr

5704 Field Experience: Public Health Administration (prereq student in public health administration or #) (S-N only)
146451 —1 Aroskar M, 1-12 cr
145390 —2 Block L, 1-12 cr
651623 —3 Dornblaser B, 1-12 cr
652660 —4 Johnson G, 1-12 cr
348490 —5 Litman T, 1-12 cr
449940 —6 McBean M, 1-12 cr
444740 —7 Resnick M, 1-12 cr
973515 —8 Veninga R, 1-12 cr
347484 —9 Weckwerth V, 1-12 cr

5707 Independent Study: Public Health Administration (prereq student in public health administration or #) (S-N only)
245369 —1 Aroskar M, 1-12 cr
550254 —2 Block L, 1-12 cr
548178 —3 McBean M, 1-12 cr
572626 —4 Veninga R, 1-12 cr
151366 —5 1-12 cr

5733 Public Health Interventions Across the Lifespan (§Nurs 8040; prereq 5330 or #)
148435 1430-1730 W, WDH 2120, 2130, Bearinger L, 3 cr

R 5735 Public Ethics/Politics and Public Health (prereq public health or grad stu or #)
648415 1535-1730 M, Mayo A270, Aroskar M, 2-3 cr

R 5739 Topics: Public Health Administration (prereq student in public health administration or #)
950056 —1 Aroskar M, ar cr
949179 —2 Block L, ar cr
152615 —3 McBean M, ar cr
773516 —4 Veninga R, ar cr
450117 —5 ar cr

R 5740 Organizational Behavior (prereq hlth care adm stu or #) (A-F only)
842189 1010-1205 M, 1010-1100 W, WDH 2120, 2130, 3 cr

R 5744 Principles of Problem Solving in Health Services Organizations (prereq MHA stu or #) (A-F only)
148538 0800-0955 T, 1325-1520 Th, Mayo C381, Dornblaser B, others, 3 cr

R 5745 Advanced Problem Solving Project in Health Services Organizations (prereq 5744) (A-F only)
547855 1535-1730 MF, Dornblaser B, others, 5 cr (off-campus)

R 5747 Human Resources Management (prereq Hospital Administration or Public Health Administration student or #)
149088 0800-0955 MTh, Mayo D325, Langan P, 3 cr

R 5753 Strategic Management in the Healthcare Industry (prereq MHA student or #) (A-F only)
751614 1325-1520 MW, Mayo C381, Erickson W B, 3 cr

R 5757 Managerial Accounting in Health Services Organizations (prereq 5756, MHA or PHA student or #)
546902 1430-1630 MW, BiegH 135, Allen C, 4 cr

R 5760 Operations Research and Control Systems for Hospitals (§HInf 5435; prereq 5404 or #) (A-F only)
443488 1010-1205 T, 1010-1100 Th, WDH 2110, 2140, Potthoff S, 3 cr

R 5767 Applied Field Research II (prereq MHA student or #) (A-F only)
472621 1535-1730 W, Mayo C381, Weckwerth, 2 cr

5770 Topics: Hospital and Health Care Administration (prereq hospital administration student or #)
945231 —1 ar cr
652612 —2 Dornblaser B, 2 cr

R 5812 Managed Care I (prereq HA or PHA or HSRP/A or HSRP stu or #) (A-F only)
172587 1535-1735 T, 1535-1625 Th, Mayo C381, Christianson J, 3 cr

R 5852 Program Evaluation in Health and Mental Health Settings (§HSU 5026; prereq #)
341300 1535-1730 MW, Mayo D325, Garrard J, 4 cr

R 5861 Health Insurance (prereq intro course in microeconomic theory, grad stu or #) (A-F only)
545118 1010-1130 MW, Mayo C381, Nyman S, Feldman, 3 cr

5863 Quality Assurance
647992 1535-1710 W, Mayo D330, Kane Robert, Lurie N, 2 cr

R 5881 Topics in Health Services Research and Policy (prereq #)
845769 3 cr

R 5894 Public Policy in Health Care (prereq MHA or PHA or HSRP or publ aff stu or #) (A-F only)
873782 1010-1205 TTh, Mayo C381, Kralewski J, 3 cr

R 5906 Field Experience: Public Health Nutrition (prereq public health nutrition maj) (S-N only)
044815 —1 Krinke U, 1-8 cr
745926 —2 Story M, 1-8 cr

R 5909 Topics in Public Health Nutrition (prereq public health nutrition student or #)
145414 —1 Brown J, 1-12 cr
850003 —2 French S, 1-12 cr
243797 —3 Himes J, 1-12 cr
845125 —4 Krinke U, 1-12 cr
549556 —5 Kushi L, 1-12 cr
650889 —6 Neumark-Sztainer D, 1-12 cr
550674 —7 Story M, 1-12 cr
348831 —8 1-12 cr

R 5920 Public Health Aspects of Nutrition Policy (prereq PubH nutr or CHE or epi MPH or PhD stu or nutr MS or PhD stu or #)
241340 1115-1310 M, 1115-1205 W, Mayo A270, Kushi L, 3 cr

R 5935 Child and Adolescent Nutrition (prereq grad-level stu or #)
642727 1535-1835 T, Mayo A270, Story M, 3 cr

R 8150 Research: Environmental and Occupational Health (prereq #) (S-N only)
343533 1-8 cr

R 8191 Research: Injury Prevention in the Workplace, Community, and Home (prereq #) (S-N only)
546351 Gerberich S, 1-8 cr

R 8193 Occupational Injury Prevention and Safety Research Seminar (prereq 8192, environmental hlth grad maj or #) (S-N only)
349350 Maldonado G, Gerberich S, 1 cr (Mayo 1165)

R 8264 Human Diseases Caused by Environmental Agents (prereq 5261, 5262, #)
152274 1115-1205 MWF, Mayo 1250, Greaves I, 3 cr

R 8272 Validity Concepts in Epidemiologic Research (prereq 5341 with grade of B or better or #)
449338 1220-1415 Th, Mayo 1250, Maldonado G, 2 cr

R 8330 Research in Epidemiology (prereq epi maj or epi grad stu or #)
146496 —1 Anderson K, 1-8 cr
041669 —2 Arnett D, 1-8 cr
952714 —3 Crow R, 1-8 cr
952258 —4 Elmer P, 1-8 cr
150122 —5 Finnegan J, 1-8 cr
150508 —6 Folsom A, 1-8 cr
348067 —7 Gross M, 1-8 cr
445919 —8 Himes J, 1-8 cr
043759 —9 Jacobs D, 1-8 cr
546852 —10 Jeffery R, 1-8 cr
243606 —11 Jones-Webb R, 1-8 cr
044216 —12 Kushi L, 1-8 cr
849191 —13 Lando H, 1-8 cr
752715 —14 Leon A, 1-8 cr
950588 —15 Lifson A, 1-8 cr
943138 —16 Lowry P, 1-8 cr
950509 —17 Luepker R, 1-8 cr
248434 —18 Lytle L, 1-8 cr
141590 —19 McGovern P, 1-8 cr
149410 —20 Murray D, 1-8 cr
352118 —21 Perry C, 1-8 cr
649984 —22 Pirie P, 1-8 cr
841818 —23 Robison L, 1-8 cr
673783 —24 Schreiner P, 1-8 cr
645465 —25 Sellers T, 1-8 cr
148211 —26 Shahar E, 1-8 cr
648592 —27 Shu X O, 1-8 cr
746445 —28 Wagenaar A, 1-8 cr
552330 —29 Welles S, 1-8 cr
342043 —30 Williams C, 1-8 cr
344844 —31 Wolfson M, 1-8 cr
143140 —32 Zheng W, 1-8 cr
451591 —33 1-8 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 8332 Readings in Epidemiology (prereq epi maj or epi grad stu or #)
050338 —1 Anderson K, 1-4 cr
048671 —2 Arnett D, 1-4 cr
749264 —3 Crow R, 1-4 cr
247154 —4 Elmer P, 1-4 cr
152789 —5 Finnegan J, 1-4 cr
351292 —6 Folsom A, 1-4 cr
544065 —7 Gross M, 1-4 cr
150587 —8 Himes J, 1-4 cr
143137 —9 Jacobs D, 1-4 cr
143915 —10 Jeffery R, 1-4 cr
844685 —11 Jones-Webb R, 1-4 cr
041817 —12 Kushi L, 1-4 cr
842192 —13 Lando H, 1-4 cr
651802 —14 Leon A, 1-4 cr
143453 —15 Lifson A, 1-4 cr
452790 —16 Lowry P, 1-4 cr
147079 —17 Luepker R, 1-4 cr
744923 —18 Lytle L, 1-4 cr
848512 —19 McGovern P, 1-4 cr
651220 —20 Murray D, 1-4 cr
949117 —21 Perry C, 1-4 cr
446293 —22 Pirie P, 1-4 cr
347002 —23 Robison L, 1-4 cr
273785 —24 Schreiner P, 1-4 cr
947304 —25 Sellers T, 1-4 cr
247915 —26 Shahar E, 1-4 cr
151441 —27 Shu X O, 1-4 cr
649337 —28 Wagenaar A, 1-4 cr
044376 —29 Welles S, 1-4 cr
552411 —30 Williams C, 1-4 cr
550285 —31 Wolfson M, 1-4 cr
844217 —32 Zheng W, 1-4 cr
450201 —33 1-4 cr

R 8431 Biostatistical Decision Theory (prereq Stat 5131-5133, 8311-8312, biostat grad stu, or #) (A-F only)
952793 1415-1530 TTh, Mayo A387, Louis T, 3 cr

R 8436 Spatial Biostatistics (prereq 8420, 8421, exp with stat comput pkgs such as BMDP or SAS, FORTRAN or C prog exp)
772625 1245-1400 TTh, Mayo D325, Waller L, 3 cr

R 8449 Topics in Biostatistics (prereq 5450, #)
245968 ar cr

R 8450 Research in Biostatistics
945830 ar cr

8866 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
546365 1-18 cr

R 8762 Contemporary Problems of Hospital and Related Health Services
551758 1325-1520 T, Mayo C396, Weckwerth V, 3 cr

8763 External Forces Affecting Health Services Delivery (prereq HSRP/A student or #) (A-F only)
343211 Weckwerth V, 3 cr

8777 Thesis Credits: Masters
445094 1-16 cr

R 8780 Advanced Statistical Methods in Health Care Research (prereq one quarter each of applied and theoretical statistics)
848252 1325-1520 Th, Mayo C396, Weckwerth V, 3 cr

8782 Research Practicum (prereq HSRP/A student or #)
946802 —1 Litman T, Weckwerth V, 3 cr
845190 —2 Litman T, Weckwerth V, 3 cr

R 8790 Seminar: Political Aspects of Health Care (prereq HSRPA student or #) (A-F only)
272622 1115-1310 T, Mayo C396, Litman T, 3 cr

R 8811 Seminar: Research Studies in Health Care (8810-8811-8812†; prereq 8810 or #) (A-F only)
449355 1325-1455 MWF, Mayo D330, Dowd B, Finch M, 3 cr

R 8820 Health Economics II (prereq 8761 or 8819, 1 qtr calculus, 1 qtr linear algebra, or #) (A-F only)
941504 0800-0915 MWF, Mayo D330, Manning W, 3 cr

8831 Research Project in Health Care (8830-8831-8832†; prereq 8830) (A-F only)
672620 1325-1415 F, Mayo D330, Finch M, Dowd B, 1 cr

8861 Topics in Theory and Principles of Health Services Research, Policy, and Administration (prereq hlth serv res, pol, and adm PhD student or #) (A-F only)
374569 Kane Robert, 3 cr

R 8880 Directed Research (prereq PhD stu in HSRP/A, #) (S-N only)
949151 1-8 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
747899 1-36 cr

RADIOLOGY (Rad)
Medical School

0120 X-Ray Conference (prereq #)
452353 1600-1800 T, Mayo C231, Thompson W, 0 cr (Todd Amph)

0121 Medical Roentgenologic Conference
451638 1130-1200 T, Mayo C231, Thompson W, 0 cr (Todd Amph)

0123 Surgical Roentgenologic Conference
351776 0900-1100 S, Mayo C231, Thompson W, 0 cr (Todd Amph)

0124 Neurosurgical-Roentgenologic Conference
449291 1300-1430 F, Mayo C231, Truwit C, 0 cr (Todd Amph)

0125 Cardiovascular Roentgenologic Conference
948985 1200-1300 Th, Mayo B167, Amplatz K, 0 cr (Rigler Lib)

0126 Roentgenologic Conference on Chest Diseases
248983 1200-1300 M, Mayo B167, Thompson W, 0 cr (Rigler Lib)

0220 Nuclear Medicine: Clinical Conference
149236 1700-1800 T, Mayo C231, Boudreau R, 0 cr (Todd Amph)

5101 Externship: Diagnostic Radiology-University Hospitals (prereq regis med)
142139 Thompson W, ar cr

5102 Externship: Diagnostic Radiology-Veterans Administration Hospital (prereq regis med)
152047 Reinke D, ar cr

5103 Externship: Diagnostic Radiology-Hennepin County General Hospital(prereq regis med)
449422 Anderson Q, ar cr

5104 Externship: Diagnostic Radiology-St. Paul Ramsey Hospital (prereq regis med)
442129 Krueckeberg S, ar cr

5105 Externship: Diagnostic Radiology-St. Luke's Hospital, Duluth (prereq regis med)
751175 Ahrens C, ar cr

5110 Research Problems in Radiology (prereq regis med)
448397 Thompson W, ar cr

5140 Special Problems: Roentgenology (prereq regis med)
344097 Thompson W, ar cr

5171 Physics of Nuclear Medicine (§BPhy 5171, TRad 5171; prereq 5170 or #)
841799 0905-1035 TTh, MoosT 1752, Ritenour R, 3 cr

5240 Special Problems: Nuclear Medicine (prereq regis med)
645143 Boudreau R, ar cr

5511 Roentgen Technique
450604 1700-1800 M, Mayo C231, Ritenour R, 1 cr (Todd Amph)

5530 Externship in Nuclear Medicine at University Hospital (prereq regis med)
151102 Boudreau R, ar cr

5540 Special Problems: Radiological Physics (prereq regis med)
348330 Ritenour R, ar cr

8100 Gastrointestinal Roentgenology
447184 Foshager M, ar cr

8101 Urologic Roentgenology
144778 Goldberg M, ar cr

8102 Neurological Roentgenology
047102 Truwit C, ar cr

8103 Cardiovascular Roentgenology
943463 Amplatz K, ar cr

8104 Pediatric Roentgenology
752374 Carpenter B, ar cr

8105 Pulmonary Roentgenology
141475 Thompson W, ar cr

8150 Research: Roentgenology
444138 Thompson W, ar cr

8200 Nuclear Medicine
551632 Boudreau R, ar cr

8210 Fundamentals of Nuclear Medicine (prereq 1st yr resident)
946346 1600-1700 M, Mayo C231, Boudreau R, 1 cr (Todd Amph)

8250 Research; Nuclear Medicine
344181 Boudreau R, ar cr

8450 Research: Radiation Biology
152095 Ritenour R, Song C, ar cr

8550 Research: Radiological Physics
342950 Ritenour R, ar cr

RECREATION, PARK, AND LEISURE STUDIES (Rec)
School of Kinesiology and Leisure Studies
Education and Human Development

R 1520 Orientation to Leisure and Recreation (A-F only)
448237 1010-1205 TTh, CookeH 215, Scholl K, 4 cr

R 1600 Leadership in Social Activities (A-F only)
449596 0905-1100 M, CookeH 215, Pinch K, 3 cr

R 3540 Recreation Programming (prereq 1520, recreation maj or #) (A-F only)
447170 1220-1415 TTh, CookeH 206, Feldman H, 4 cr

3700 Senior Internship (prereq sr, recreation maj or minor, #) (S-N only)
051148 Schultz J, Schleien S, others, 1-15 cr

3900 Directed Study (max 9 cr; prereq recreation maj or #)
950204 1-3 cr

R 5111 Sports Facilities (§Kin 5111; prereq Kin or Rec maj or #) (A-F only)
651282 1615-1830 T, CookeH 215, Anderson B, 3 cr

R 5220 Therapeutic Recreation Services (prereq 5210 or #, recreation maj) (A-F only)
947044 1615-1830 TTh, CookeH 206, Tabourne C, 5 cr

R 5288 Grant Writing in Human Services (A-F only)
250099 1730-2100 M, CookeH 400, Schleien S, 4 cr

R 5350 Wilderness Outdoor Recreation Programming (prereq 3150) (A-F only)
942782 1630-1930 Th, CookeH 214, Paxton T, 4 cr (weekend field trip ar)

5630 Practicum: Therapeutic Recreation (prereq recreation M.Ed. or grad) (S-N only)
144854 Tabourne C, Schleien S, 3-9 cr

5640 Practicum: Leisure Services (prereq recreation M.Ed. or grad) (S-N only)
251043 Kane M, 3-9 cr

5695 Practicum: Sport Management (prereq MEd or grad stu or sport mgmt maj, #) (S-N only)
141937 Anderson B, 3-9 cr

R 5750 Legal Issues in Leisure Services (prereq 3550 or #) (A-F only)
751189 0905-1100 MW, CookeH 206, Schultz J, 4 cr

R 5860 Legal Aspects of Sport and Physical Activity (§Kin 5860; prereq 3550 or 5460 or Kin 3143, Kin or Rec maj or #) (A-F only)
147026 0905-1100 TTh, CookeH 206, Schemmel J, 4 cr

R 5980 Introduction to Research (§Kin 5980; prereq MEd or grad stu or #) (A-F only)
144859 1010-1125 TTh, CookeH 400, Kane M, 3 cr

5981 Problems (prereq MEd or grad stu or #) (A-F only)
043390 ar cr

5983 Readings: Recreation (prereq MEd or grad stu or #) (A-F only)
247946 1-3 cr

8320 Seminar: Theoretical Perspectives of Leisure Behavior (prereq 5100 or #) (A-F only)
449906 1325-1625 M, CookeH 400, Kane M, 3 cr

8777 Thesis Credits: Masters
846923 1-16 cr

8980 Seminar: Research Problems (max 3 cr; prereq 5980 or #) (S-N only)
744078 1220-1310 T, CookeH 215, Tabourne C, 1 cr

8981 Research Problems (prereq 8980 or #) (S-N only)
441384 ar cr

RELIGIONS IN ANTIQUITY (RelA)
Classical and Near Eastern Studies
Liberal Arts

1031 Introduction to the Religions of South Asia (§RelS 1031, SALC 1504) (IP)
343595 1325-1415 MWF, SciCB 325, Malandra W, 4 cr

1034 Introduction to Judaism (§3034, JwSt 1034, JwSt 3034, RelS 1034) (AH; IP)
747224 1325-1415 MWF, NichH 45, 4 cr

3034 Introduction to Judaism (§1034, JwSt 1034, JwSt 3034, RelS 3034) (AH; IP)
650195 1325-1415 MWF, NichH 45, 4 cr

R 3072 The New Testament (§5072, Clas 3072, Clas 3072H, Clas 5072, RelS 3072) (Hist)
171584 1010-1100 MWF, Arch 25, Sellew P, 4 cr

3502 Ancient Israel (§ANE 3502, RelS 3502)
151875 0905-0955 MWF, FolH 306, Reisman D, 4 cr

R 5072 The New Testament (§3072, Clas 3072, Clas 3072H, RelS 5072)
971585 1010-1100 MWF, Arch 25, Sellew P, 4 cr

5970 Directed Studies (§RelS 5970; prereq #, Δ, CLA approval)
049108 3-5 cr

RELIGIOUS STUDIES (RelS)
Classical and Near Eastern Studies
Liberal Arts

8777 Thesis Credits: Masters
545670 1-16 cr

RHETORIC (Rhet)
Agricultural, Food, and Environmental Sciences

R 1000 Introduction to Scientific and Technical Communication (S-N only)
173715 0905-0955 F, HckrH 111, Wahlstrom B, 1 cr (Jan 8-Feb 7)

R 1101 Writing to Inform and Persuade (§Comp 1011) (CD) (A-F only)
844038 —1 0815-0930 T, McNH 305, 0815-0930 Th, HckrH 100, Allen L, 4 cr (computer assisted instruction)
149018 —2 0945-1100 T, McNH 305, 0945-1100 Th, HckrH 100, Allen L, 4 cr (computer assisted instruction)
051943 —3 1245-1400 T, McNH 305, 1245-1400 Th, HckrH 100, Koerber A, 4 cr (computer assisted instruction)
049819 —4 1415-1530 T, McNH 305, 1415-1530 Th, HckrH 100, Koerber A, 4 cr (computer assisted instruction)

R 1104 Library Research Methods (S-N only)
150721 —1 LAB 0905-0955 M, ClaOff B30, Richardson G, 1 cr (computer assisted instruction)
142853 —2 LAB 1430-1520 M, ClaOff B30, Richardson G, 1 cr (computer assisted instruction)
647572 —3 LAB 0905-0955 W, ClaOff B30, Richardson G, 1 cr (computer assisted instruction)
146773 —4 LAB 1430-1520 W, ClaOff B30, Richardson G, 1 cr (computer assisted instruction)
446259 —5 LAB 0905-0955 F, ClaOff B30, Richardson G, 1 cr (computer assisted instruction)
149052 —6 LAB 1430-1520 F, ClaOff B30, Richardson G, 1 cr (computer assisted instruction)

R 1151 Writing in Your Major (prereq 1104, fr comm req, soph) (A-F only)
043843 —1 0800-0850 MWF, HckrH 111, Silker C, 4 cr
650407 —2 0905-0955 MWF, HckrH 210, Beard D, 4 cr
144957 —3 0815-0930 TTh, ClaOff 17, Balzhiser-Morton D, 4 cr (computer assisted instruction)
049027 —4 1115-1230 T, McNH 305, 1115-1230 Th, HckrH 111, Sokolowski B, 4 cr (computer assisted instruction)
849210 —5 1245-1400 T, McNH 305, 1245-1400 Th, HckrH 111, Sokolowski B, 4 cr (computer assisted instruction)
847439 —6 1415-1530 TTh, ClaOff 17, Lay M, 4 cr (computer assisted instruction)

R 1200 Information Technology in Scientific and Technical Professions (prereq CAFES undergrad) (A-F only)
852737 0945-1100 TTh, ClaOff 17, Brady P, 3 cr (computer assisted instruction)

R 1220 Principles of Human Communication
950834 0800-0900 MWF, HckrH 312, McCarthy C, 4 cr

R 1222 Public Speaking (prereq completion of freshman communication requirement) (A-F only)
850650 —1 0905-1045 MW, HckrH 222, Doud M, 4 cr
351499 —2 1010-1150 MW, CentLib 6, Daniels J, 4 cr
448464 —3 1220-1400 MW, HckrH 222, Sadler V, 4 cr
143050 —4 1220-1400 MW, CentLib 6, Daniels J, 4 cr
151620 —5 0905-1045 TTh, HckrH 222, Lett D, 4 cr
644140 —6 1115-1255 TTh, HckrH 222, Lett D, 4 cr
945956 —7 1325-1505 TTh, CentLib 6, 4 cr
348439 —8 1325-1505 TTh, HckrH 222, Gurak L, 4 cr

R 1303 Humanities: Science, Religion, and the Search for Human Nature (Hist)
250068 1010-1100 MWF, HckrH 312, Walzer A, 4 cr

R 1310 Humanities: The Land in American Experience (AH; CD)
347968 0945-1100 TTh, HckrH 312, Scanlan T, 4 cr

R 1441 College Reading and Learning Skills
572917 1010-1150 TTh, HckrH 210, Bennett J M, 4 cr

R 3105 Corporate Video for Technical Communicators (prereq 3562 or equiv)
148913 1535-1715 MW, HckrH 210, Becker S, 4 cr

R 3254 Advanced Public Speaking (prereq 1222)
551355 1430-1610 TTh, HckrH 210, Bennett J M, 4 cr

R 3266 Communication, Discussion in Small Group Decision Making (prereq 1222 or #) (C/PE)
449128 —1 1010-1115 MWF, HckrH 210, Sadler V, 4 cr
851586 —2 1325-1505 TTh, HckrH 302, Schuelke D, 4 cr

3270 Speech: Special Problems (prereq #, Δ)
151142 Bennett M, Montgomery P, others, 1-5 cr

R 3370 American Humanities
741214 1115-1230 TTh, HckrH 312, Montgomery P, 4 cr

3374 Special Problems in Humanities (prereq #, Δ)
245310 Horberg R, Marchand W, others, 1-2 cr

R 3380 Humanities: The Literature of Social Reflection
373518 1325-1440 W, HckrH 209, Marchand W, 2 cr

R 3381 Humanities: 20th-Century Culture (AH; IP)
251284 1415-1530 TTh, HckrH 312, Montgomery P, 4 cr

R 3382 Humanities: Ethics of Total War (AH; C/PE) (A-F only)
072923 1325-1415 MWF, HckrH 210, Gross A, 3 cr

R 3390 Humanities: Technology, Self, and Society (prereq jr, STC or pre-STC, or Δ)
248742 1245-1400 TTh, HckrH 312, Scanlan T, 4 cr

R 3562 Writing in Your Profession (prereq completion of freshman communication requirement, 1151, jr or sr) (A-F only)
248398 —1 0905-0955 MWF, HckrH 302, 4 cr
852382 —2 1010-1100 MWF, HckrH 302, Horberg R, 4 cr
851183 —3 1325-1415 M, ClaOff 17, 1325-1415 WF, HckrH 111, Segaard M, 4 cr
552747 —4 1430-1520 M, ClaOff 17, 1430-1520 WF, HckrH 312, Segaard M, 4 cr
841401 —5 0815-0930 Th, McNH 305, 0815-0930 T, HckrH 312, Norton D, 4 cr (computer assisted instruction)
450568 —6 0945-1100 T, HckrH 100, 0945-1100 Th, McNH 305, Norton D, 4 cr (computer assisted instruction)
144658 —7 1115-1230 T, HckrH 111, 1115-1230 Th, McNH 305, Cronje R, 4 cr (computer assisted instruction)
041395 —8 1245-1400 T, HckrH 111, 1245-1400 Th, McNH 305, Claas S, 4 cr (computer assisted instruction)
372918 —9 1415-1530 T, HckrH 111, 1415-1530 Th, McNH 305, Balzhiser-Morton D, 4 cr (computer assisted instruction)

R 3575 Newsletter (prereq STC or pre-STC maj, fr comm req, 3562 or #)
742394 1430-1520 MW, HckrH 302, 1430-1520 F, ClaOff 17, Frost J, 3 cr (computer assisted instruction)

5100 Technical Communication: Special Problems (prereq #, Δ)
052266 Duin A, McDowell E, others, ar cr

R 5105 Corporate Video for Technical Communicators (§3105)
643134 1535-1715 MW, HckrH 210, Becker S, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

5180 Internship in Scientific and Technical Communication (prereq STC maj or grad stu, #, Δ) (S-N only)
847490 Duin A, McDowell E, others, 2-6 cr

R 5500 Research in Communication Strategies
172919 1700-2020 T, HckrH 222, McDowell E, 4 cr

R 5532 Scientific and Technical Communication Course Development: Mentored Teaching (prereq 5531, STC or RSTC grad maj or #) (A-F only)
244786 1245-1400 T, HckrH 210, Wahlstrom B, 2 cr

R 5562 Theory and Practice in International and Intercultural Communication (prereq 3562 or #) (IP) (A-F only)
647815 0905-1045 TTh, HckrH 302, Mikelonis-Paraskov V, 4 cr

R 5573 Grant Proposal (prereq STC maj, freshman communication requirement, 3562 or grad stu or #)
572920 1545-1735 TTh, CentLib 4, Mikelonis-Paraskov V, 3 cr (Jan 7-Feb 20) (ITV to Crookston)

5999 Special Workshop in Rhetoric (prereq #)
774780 1-4 cr (off-campus)

8170 Design Project (8170-8171†; prereq STC Plan B grad stu) (A-F only)
573713 4 cr

8171 Design Project (8170-8171†; prereq STC Plan B grad stu, 8170) (A-F only)
373714 4 cr

8181 STC Capstone Project (prereq STC Plan B grad student, #)
842368 Duin A, others, 4 cr

R 8210 Theory and Research in Media Selection (prereq STC or RSTC grad maj or #)
150029 1115-1230 TTh, HckrH 209, Wahlstrom B, 4 cr

R 8515 Topics in the Rhetoric of Science and Technology: Perspectives on Knowledge, Power, and Rhetoric in the 18th Century (max 16 cr; prereq 5700 or Spch 5611 or equiv) (A-F only)
148006 1535-1805 W, HckrH 209, Walzer A, 4 cr

R 8525 Topics in Culture and Communication: Computer-Mediated Communication (max 12 cr; prereq STC or RSTC grad stu or #) (A-F only)
172922 1535-1805 M, HckrH 209, Gurak L, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
844993 1-18 cr

8777 Thesis Credits: Masters
150337 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
841687 1-36 cr

8990 Special Problems in Rhetoric and Scientific and Technical Communication (max 6 cr; prereq #, Δ) (A-F only)
741228 1-6 cr

RUSSIAN (Russ)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 1102 Beginning Russian (prereq 1101)
143784 —1 0905-0955 MTWThF, VinH 364, 5 cr
249275 —2 0905-0955 MTWThF, PeikH 165, Jahn G, 5 cr
151021 —3 1115-1205 MTWThF, VinH 364, 5 cr

R 3002 Intermediate Russian (§1105; prereq 3001)
348778 —1 1010-1100 MTWThF, PeikH 165, 5 cr
746655 —2 1010-1100 MTWThF, PeikH 315, 5 cr

R 3102 Third-Year Russian (prereq 3101)
446617 —1 1220-1310 MTWTh, PeikH 225, 4 cr

R 3112 Fourth-Year Russian (prereq 3111)
049559 —1 1010-1100 MTWTh, NichH 209A, 4 cr

R 3311 Major Project in Russian (prereq Russian lang maj or #)
444303 2 cr

R 3311H Honors Course: Major Project in Russian (prereq honors sr, Russian lang maj or #) (A-F only)
242052 2-4 cr

R 3422 Literature: Tolstoy to the Present in Translation (§5422; prereq 3003 for Russ lang/lit maj) (Lit; IP)
444236 1325-1415 MWF, NichH 211, Corten I, 4 cr

R 3601 Methods of Translating Fiction from Russian to English (§5601; prereq at least 3 yrs college-level Russian, #)
945651 1115-1205 MWF, AmundH 120, Corten I, 4 cr

R 3970 Directed Readings (prereq #)
142075 1-5 cr

R 5021 Russia Study Tour (prereq 3003 or equiv)
044149 6-18 cr

R 5422 Literature: Tolstoy to the Present in Translation (§3422)
343547 1325-1415 MWF, NichH 211, Corten I, 4 cr

R 5601 Methods of Translating Fiction from Russian to English (prereq at least 3 yrs of college level Russ or equiv, #)
148743 1115-1205 MWF, AmundH 120, Corten I, 4 cr

R 5970 Directed Readings (prereq #, upper div or grad student)
046791 1-5 cr

RUSSIAN AREA STUDIES (RAS)
Area Studies Programs
Liberal Arts

8777 Thesis Credits: Masters
652366 1-16 cr

SANSKRIT (Skt)
Classical and Near Eastern Studies
Liberal Arts

5202 Intermediate Sanskrit (prereq 5201)
671578 1430-1520 MWF, NichH 122, Malandra W, 5 cr

SCANDINAVIAN (Scan)
German, Scandinavian, and Dutch
Liberal Arts

R 3342 Major Project (prereq Δ) (A-F only)
842550 4 cr

R 3342H Major Project (prereq Δ) (A-F only)
351972 4 cr

R 3504 The Immigrant Experience
273995 1115-1230 TTh, PeikH 155, Stockenstrom G, 4 cr

R 3505 Scandinavian Fiction from 1890 to Present
948744 0815-0930 TTh, FolH 334, Stockenstrom G, 4 cr

3970 Directed Studies (max 15 cr; prereq #, Δ, ❑)
346044 1-5 cr

R 5631 19th-Century Scandinavian Novel
971909 1545-1700 TTh, FolH 208, Houe P, 4 cr

R 5634 Scandinavian Women Writers
173996 1245-1400 TTh, FolH 306, Zagar M, 4 cr

R 5702 Old Norse Language and Literature (prereq 5701)
642369 1415-1530 TTh, FolH 426, Grimstad K, 4 cr

R 5970 Directed Studies (prereq #, Δ, CLA approval)
142764 1-5 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
952244 1-18 cr

R 8702 Philological Proseminar II: Introduction to Philology
171911 1325-1520 W, VinH 313, Liberman A, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
748311 1-36 cr

8970 Research: Scandinavian Literature and Language
849367 1-6 cr

SCIENCE AND TECHNOLOGY POLICY (ScTP)

R 8777 Thesis Credits: Master's
973160 1-16 cr

SCIENCE IN AGRICULTURE (ScAg)
Agricultural, Food, and Environmental Sciences

R 1500 Biotechnology, Society, and the Environment (§Agro 1500, AnSc 1500, FScN 1500, PlPa 1500, Soil 1500; prereq high schl biol, chem) (Envt) (A-F only)
144126 1115-1205 MWF, BorH 365, Young N, Sadowsky M, others, 3 cr

5009 Undergraduate Senior Thesis: Science in Agriculture (not for grad credit; prereq #) (A-F only)
449520 Hunter A, 1-5 cr

SCIENTIFIC COMPUTATION (SciC)

8002 Advanced Numerical Methods (prereq undergrad degree in a field that uses scientific computation) (A-F only)
544938 1010-1205 MW, FordH 70, Saad Y, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
942300 1-18 cr

8777 Thesis Credit: Masters
441174 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
150802 1-36 cr

Sign Language, American: See Educational Psychology.

SMALL ANIMAL CLINICAL SCIENCES (SACS)
Veterinary Medicine

5113 Internal Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
445953 4-24 cr

5123 Comparative Ophthalmology/Dermatology (prereq 3rd or 4th yr vet med stu) (S-N only)
050596 4-24 cr

5133 Emergency Rotation (prereq 3rd or 4th yr vet med stu) (S-N only)
844699 4-24 cr

5143 Clinical Nutrition/Internal Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
244898 4-24 cr

5153 Community Practice (prereq 3rd or 4th yr vet med stu) (S-N only)
949084 4-24 cr

5163 Clinical Oncology Rotation (prereq #)
747773 4-24 cr

5172 Small Animal Medicine (prereq 5171 or #) (A-F only)
246909 0905-0955 MTWThF, AnScVM 135, Hardy R, Klausner J, 5 cr

5183 Clinical Small Animal Cardiology (prereq #, 5182)
145624 4-24 cr

5192 Diagnostic and Therapeutic Techniques (prereq 3rd or 4th yr vet med stu) (S-N only)
451753 1325-1415 ThF, AnScVM 125, 135, 1430-1620 ThF, VetTchHos C254, C256, McKeever P, Hardy R, others, 2 cr

5213 Small Animal Surgery (prereq 3rd or 4th yr vet med stu) (S-N only)
842760 4-24 cr

5251 Comparative Clinical Veterinary Dermatologic Pathology (prereq grad stu or #) (A-F only)
647958 McKeever P, 1 cr

5255 Diseases of the Urinary System (prereq regis 3rd or 4th yr vet med or grad or #)
850101 Osborne C, 2 cr

5270 Animal Behavior (prereq #) (A-F only)
847327 0800-0950 T, AnScVM 125, Redig P, 2 cr

5271 Hospital Management (prereq regis 3rd or 4th yr vet med or grad or #) (S-N only)
848154 1500-1650 M, AnScVM 135, Hardy R, others, 1 cr (2nd 5 weeks)

5285 Canine Clinical Neurology (prereq regis 3rd or 4th yr vet med or grad or #) (A-F only)
443636 1535-1725 M, AnScVM 135, Hardy R, 1 cr (1st 5 weeks)

5313 Anesthesiology (prereq 3rd or 4th yr vet med stu) (S-N only)
142960 Raffe M, Robinson E, 4-24 cr

5323 Small Animal Critical Care Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
644705 4-24 cr

5351 Veterinary Surgery (prereq CVM 5350 or #) (A-F only)
★LECT 1115-1205 TWThF, AnScVM 135, Wallace L, Lipowitz A, others, 5 cr
452045 —1 LAB 1325-1615 T, VetTchHos C254
752505 —2 LAB 1325-1615 W, VetTchHos C254

5398 Independent Research in Veterinary Anesthesiology (prereq registered in veterinary medicine or grad or #)
543322 Robinson E, 1-6 cr

5413 Radiology (prereq 3rd or 4th yr vet med stu) (S-N only)
341748 4-24 cr

5503 Clinical Small Animal Theriogenology (prereq vet med stu)
845156 4-24 cr

R 5802 Residency in Veterinary Dermatology (prereq #) (A-F only)
743948 Johnston S, McKeever P, ar cr

5812 Companion Animal Oncology (prereq DVM or equiv)
842841 Klausner J, others, 2 cr

5903 Zoo, Exotic, Raptor and Companion Birds (prereq regis 4th yr vet med stu or #)
950395 4-12 cr

8180 Advanced Clinical Neurology (prereq #)
248319 Fletcher T, Hardy R, others, ar cr

8190 Comparative Cardiovascular Diseases (prereq grad)
247140 Ogburn P, 3 cr

8191 Advanced Comparative Electrocardiology (prereq grad, #)
248630 Ogburn P, 3 cr

8192 Special Cardiology Clinics (prereq grad, #)
244142 Ogburn P, ar cr

8196 Internal Medicine in Small Companion Animals (prereq grad, #)
152758 Osborne C, others, 2 cr

8197 Advanced Dermatologic Clinics (prereq grad, #) (A-F only)
144070 McKeever P, ar cr

8198 Problems in Veterinary Comparative Dermatology (prereq grad, #)
347405 McKeever P, ar cr

8200 Directed Studies in Veterinary Comparative Dermatology (prereq grad, #) (A-F only)
151777 McKeever P, 2 cr

8290 Advanced Veterinary Medicine (prereq 5172, CAPS 5162, #)
146006 Osborne C, Polzin D, ar cr

8291 Advanced Diagnosis and Therapeutics of Animal Diseases (prereq 5172, CAPS 5162, #)
052848 Osborne C, others, ar cr

8292 Seminar: Veterinary Medicine (prereq grad, #)
744775 Osborne C, others, ar cr

8293 Medical Conference (prereq 5172, CAPS 5162, #)
141752 Osborne C, others, ar cr

8297 Advanced Clinical Veterinary Ophthalmology (prereq grad or #)
052199 Bistner S, 3 cr

8298 Research in Veterinary Ophthalmology (prereq grad or #)
849319 Bistner S, 3-5 cr

8299 Research in Veterinary Medicine
646468 Osborne C, others, ar cr

8390 Seminar: Veterinary Surgery (prereq 5360, 5365 or equiv, #)
841477 Wallace L, Lipowitz A, others, ar cr

8391 Advanced Small Animal Surgery (prereq CVM 5350 or equiv, #)
645191 —1 1220-1520 M, Wallace L, Lipowitz A, others, ar cr
042921 —2 1220-1520 M, Wallace L, Lipowitz A, others, ar cr

8394 Surgery of the Gastrointestinal System (prereq CAPS 5160 or #)
951739 Caywood D, Lipowitz A, ar cr

8396 Advanced Veterinary Anesthesia (prereq LACS 5355, #)
749572 Raffe M, Robinson E, ar cr

8398 Research in Veterinary Anesthesia (prereq grad of professional veterinary curriculum, 8396, LACS 8397 or equiv, #) (A-F only)
247123 Raffe M, Robinson E, 2 cr

8399 Seminar: Veterinary Anesthesia (prereq grad of professional veterinary curriculum, 8396, CAPS 8397 or equiv, #) (A-F only)
649600 Raffe M, Robinson E, 1-4 cr

8410 Surgical Physiology (prereq 8391, #)
751130 Wallace L, Caywood D, 2 cr

8420 Neurosurgery (prereq 8391 or equiv, #) (A-F only)
343175 Wallace L, 2-3 cr

R 8430 Thoracic and Cardiovascular Surgery (prereq 8391, #)
242133 Caywood D, Lipowitz A, others, 3 cr

8471 Therapeutic Radiology (max 2 cr; prereq 5452, #)
151156 Feeney D, Johnston G, others, ar cr

8480 Seminar: Veterinary Radiology (prereq 5452, #)
551159 0800-0850 T, VetTchHsp 282, Walter P, Feeney D, 1 cr

8483 Abdominal Roentgenology (max 3 cr; prereq 5452, #)
351065 Walter P, Johnston G, ar cr

8485 Thoracic Roentgenology (max 3 cr; prereq 5452, #)
549945 1535-1725 M, VetTchHsp 282, Feeney D, Johnston G, others, ar cr

8490 Advanced Veterinary Radiology (prereq 5450, 5451, 5452 or equiv, #) (A-F only)
446181 Feeney D, Johnston G, others, 1-2 cr

8491 Fundamentals of Nuclear Medicine (prereq #) (A-F only)
847876 Johnston G, Feeney D, others, ar cr

8492 Radiation Biology (max 3 cr; prereq grad, #) (A-F only)
348635 Feeney D, Johnston G, others, 1-3 cr

SOCIAL AND ADMINISTRATIVE PHARMACY (SAPh)

Social, Administrative, and Hospital Pharmacy

Pharmacy

5007 Biology of Aging
644252 1640-1825 Th, PWB 2470, Thompson L, 2 cr

8100 Seminar
247350 —1 1325-1625 Th, WDH 7193, 1 cr
250152 —2 1430-1625 Th, WDH 7164, 1 cr

8200 Research Problems
147180 ar cr

8210 Experimental Pharmacotherapeutics I (A-F only)
049089 3 cr

8220 Experimental Pharmacotherapeutics II (A-F only)
274760 Canafax D, 3 cr

8270 Clinical Conferences
641609 Cloyd J, 2 cr

8280 Administrative Clerkship
244335 ar cr

8290 Clinical Clerkship (prereq 8270)
043647 2-5 cr

8400 Special Clinical Problems
851409 ar cr

8420 Social and Behavioral Aspects of Pharmacy Practice
445242 Morley P, 3 cr

8501 Pharmacy and Its Environment
570858 Morley P, 3 cr

8611 Research Design
850597 0900-1200 F, Gross C, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
652402 1-18 cr

8702 Hospital Pharmacy Survey (prereq 8701)
346061 Broekemeier R, 1 cr

8777 Thesis Credits: Masters
143520 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
745294 1-36 cr

SOCIAL AND PHILOSOPHICAL FOUNDATIONS OF EDUCATION (SPFE)

Educational Policy and Administration

Education and Human Development

8777 Thesis Credits: Masters
743383 1-16 cr

Symbols

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❑ Approval of the college offering the course is required for registration.
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SOCIAL WORK (SW)

Human Ecology

R 1001 Introduction to Social Welfare and Community Services
274094 1115-1300 MW, FordH 40, 5 cr

R 3201 Interventions with Individuals and Groups
148099 —1 0905-1100 TTh, FordH 285, 4 cr
174095 —2 0905-1100 TTh, FordH 40, 4 cr

3970 Directed Studies
143498 1-15 cr

3990 Directed Research (prereq #)
046855 ar cr

R 5010 Seminar: Special Topics
846744 —1 0800-1100 M, FordH 175, Jones L, 3 cr (Social Work Ethics)
172323 —2 0800-1100 T, FordH 60, Evans T, 3 cr (Adolescence: Norms, Culture, and Health)

R 5026 Mediation and Conflict Resolution (prereq MSW stu or grad conflict mgmt minor stu)
974096 1640-1940 T, FordH 70, Greenwood J, Toogood M, 3 cr

R 5028 Social Work in the Schools
341216 1640-1940 Th, FordH 175, Marget D, 3 cr

R 5234 Clinical Practice Within a Hospital and Health Care Setting
651511 1535-1835 Th, FordH 70, Frenzel M, 3 cr

R 5601 Ethno-Cultural Concepts in Social Work Practice
251527 —1 0800-1100 M, FordH 40, Williams O, 3-4 cr
344746 —2 1325-1625 M, FordH 175, Williams O, 3-4 cr

5970 Independent Study in Social Work
752083 ar cr

8010 Field Instruction I (8010†; 4 cr or ar cr by #) (S-N only)
552733 Sullivan M, ar cr

8020 Field Instruction II (8020†; 4 cr or ar cr by #; prereq 8010) (S-N only)
152346 Sullivan M, ar cr

8030 Field Instruction in Social Work III (8030†; prereq 8020) (S-N only)
846789 Sullivan M, ar cr

R 8104 Child Welfare and the Law (prereq 8121, 8402, or equiv)
746414 1640-1940 W, FordH 175, Sutton E, 3 cr

R 8180 Social Policy Formulation and Analysis (prereq doctoral student or #)
351597 1325-1625 M, FordH 170, Reinardy J, 3 cr

R 8301 Introduction to Human Services Management Theory and Practice
145101 1325-1625 M, FordH 70, Long A, 3 cr

R 8305 Community Development
750060 1325-1625 T, FordH 70, Carter I, 3 cr

R 8311 Issues and Interventions in Child Sexual Abuse (§5311)
143582 1325-1625 M, FordH 160, Ahlquist A, 3 cr

R 8401 Social Work Methods II (prereq ¶8010, 8400)
147611 —1 1325-1625 T, FordH 160, Van Slyke V, 3 cr
745814 —2 1325-1625 T, FordH 170, Bradshaw W, 3 cr

R 8407 Strategies of Family Intervention (prereq 8401, 2nd yr MSW student, #)
752696 0800-1100 T, FordH 70, Belling K, 3 cr

R 8424 Social Work with Involuntary Clients (prereq 8401)
845660 1325-1625 T, FordH 120, Macy-Lewis J, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
147608 1-18 cr

R 8702 Social Work Teaching Seminar (prereq reg in two qtrs, SW PhD stu or #)
446620 1640-1840 T, FordH 175, Jones L, 1 cr (alt T)

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
251432 1-36 cr

R 8901 Social Work Research Methods
050470 —1 0905-1205 Th, FordH 60, Beeman S, 3 cr
350188 —2 0905-1205 Th, FordH 70, Jones L, 3 cr

8970 Directed Study (prereq #)
748552 —1 ar cr
846078 —2 ar cr

8990 Research Projects (max 6 cr)
548441 ar cr

R 8992 Research Seminar (prereq 8991, doctoral student)
042059 0800-1100 Th, FordH 160, Gilgun J, 3 cr

SOCIOLOGY (Soc)

Liberal Arts

R 1001 Introduction to Sociology (SSci; CD)
451378 —2 LECT 1325-1415 MWF, BlegH 5, Boyle E, 4 cr
172718 —3 LECT 1115-1230 TTh, AndH 210, Galaskiewicz J, 4 cr
★LECT 1010-1100 MW, BlegH 5, Broadbent J
972719 —1 LAB 1010-1100 F, BlegH 115, 4 cr
272720 —2 LAB 1010-1100 F, BlegH 110, 4 cr
172721 —3 LAB 1010-1100 F, BlegH 140, 4 cr
572724 —4 LAB 1010-1100 F, BlegH 145, 4 cr
172726 —5 LAB 1325-1415 F, BlegH 110, 4 cr
672729 —6 LAB 1325-1415 F, BlegH 125, 4 cr
872731 —7 LAB 1325-1415 F, BlegH 115, 4 cr
272734 —8 LAB 1325-1415 F, HHHCtr 30, 4 cr

R 1001H Honors Course: Introduction to Sociology
349008 1010-1100 MWF, BlegH 440, Aminzade R, 4 cr

R 3101 Introduction to American Criminal Justice (SSci; C/PE)
172749 1245-1400 TTh, AndH 270, Savelsberg J, 4 cr

R 3102 Introduction to Criminal Behavior and Social Control (prereq 3101)
674089 1010-1100 MWF, AndH 210, Boyle E, 4 cr

R 3401 Principles of Social Organization (prereq 1001, 3801)
★LECT 0815-0930 TTh, BlegH 235, Galaskiewicz J
772754 —1 LAB 0800-0955 M, BlegH 210, 5 cr
572755 —2 LAB 0800-0955 M, HHHCtr 30, 5 cr
372756 —3 LAB 0800-0955 W, BlegH 105, 5 cr
172757 —4 LAB 0800-0955 F, BlegH 350, 5 cr
072758 —5 LAB 0800-0955 F, BlegH 245, 5 cr

R 3411 Understanding Formal Organizations (prereq 1001)
074090 1115-1230 TTh, AndH 230, Knoke D, 4 cr

R 3457 Comparative Scandinavian Societies
372742 1115-1205 MWF, BlegH 130, Cooperman D, 4 cr

R 3481 Modern Japanese Society (§EAS 3481; prereq introductory sociology or #) (SSci; IP)
951885 1325-1415 MWF, AndH 230, Broadbent J, 4 cr

R 3551 World Population Problems
547693 1245-1400 TTh, AndH 230, Kennedy R, 4 cr

R 3801 Sociological Methods I: Descriptive Statistics (prereq intermediate algebra or GC 0631, soc maj)
★LECT 0945-1100 TTh, BlegH 10, Bian Y
349381 —1 LAB 0800-0850 MW, BlegH 440, 5 cr
844850 —2 LAB 0905-0955 MW, BlegH 440, 5 cr
051568 —3 LAB 1010-1100 MW, BlegH 440, 5 cr
350692 —4 LAB 1115-1205 MW, BlegH 440, 5 cr
044152 —5 LAB 1220-1310 MW, BlegH 440, 5 cr

R 3802 Sociological Methods II: Statistical Inference (prereq 3801 or equiv, soc maj)
★LECT 1115-1230 TTh, BlegH 10, Uggen C
441448 —1 LAB 0800-0850 MW, AndH 170, 5 cr
546432 —2 LAB 0905-0955 MW, AndH 170, 5 cr
447959 —3 LAB 1010-1100 MW, AndH 170, 5 cr
947111 —4 LAB 1115-1205 MW, AndH 170, 5 cr
145289 —5 LAB 0800-0850 TTh, BlegH 90, 5 cr
147477 —6 LAB 0905-0955 TTh, BlegH 90, 5 cr

R 3802H Honors Course: Sociological Methods II: Statistical Inference (prereq 3801H or equiv or #, honors soc maj)
★LECT 1115-1230 TTh, BlegH 10, Uggen C
146014 —80 LAB 0800-0850 MW, AndH 170, 5 cr

R 3811 Computer Usage for Social Statistics (¶3801 rec) (S-N only)
852513 0800-0930 F, BlegH 440, Miller A, 1 cr

R 3954 Sociological Perspectives on Race, Class, and Gender (§Afro 3954) (SSci; CD)
550500 0945-1100 TTh, BlegH 250, Pierce J, 4 cr

R 3991H Junior Honors Seminar (prereq jr or sr honors sociology maj, #) (A-F only)
141735 1415-1530 TTh, BlegH 135, Knoke D, 4 cr

R 5101 Sociology of Law (prereq 3101, 3102 or #...5705 rec)
272751 0945-1100 TTh, BlegH 140, Savelsberg J, 4 cr

R 5141 Juvenile Delinquency (prereq 3101, 3102 or #...5161, 5162 rec)
747756 1245-1400 TTh, BlegH 220, Uggen C, 4 cr

R 5161 Criminal Law in American Society
545605 1115-1230 TTh, HHHCtr 25, Samaha J, 4 cr

R 5705 Background of Modern Social Thought (prereq 8 cr in social science or #)
574893 1115-1205 MWF, BlegH 150, Ault B, 4 cr

R 5954 Sociology of Gender (prereq 3401 or #)
072744 1415-1530 TTh, BlegH 130, Laslett B, 4 cr

R 5960 Topics in Sociology: International Migration and the Politics of Immigration and Xenophobia: The U.S. and the E.C. (§Geog 5900, sec 2; prereq 1001 or #)
174685 1325-1505 WF, BlegH 330, Brustein W, Leitner H, 4 cr

R 5966 Advanced Project Seminar (prereq all other required sociology coursework, Comp 3014, Δ) (A-F only)
844895 —1 1545-1700 TTh, BlegH 245, Bian Y, 4 cr
644266 —2 1545-1700 TTh, HHHCtr 30, Kennedy R, 4 cr

R 5978 Proseminar (5977-5978-5979†; prereq 5977) (A-F only)
646521 1115-1230 WF, BlegH 155, Marini M, 3 cr

R 8090 Topics in Sociology (prereq #)
148605 —1 1325-1600 W, BlegH 205, Laslett B, Duvall R, 3 cr (Popular Culture, Power, and Resistance) (§CSDS 8910, sec 1, Pol 8450, sec 1)
448349 —2 ar cr

R 8148 Law, Society, and the Mental Health System (prereq grad student, 5148 or #)
772737 1430-1715 Th, BlegH 140, Malmquist C, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
351731 1-18 cr

R 8725 Seminar: Theory Construction (prereq 8711 or #) (A-F only)
251463 1325-1515 WF, BlegH 105, Cooperman D, 4 cr

8777 Thesis Credits: Masters
444706 1-16 cr

R 8815 Seminar: Design of Sociological Research II (prereq 8814 or #) (A-F only)
045835 1245-1425 TTh, BlegH 125, McLeod J, 4 cr

R 8817 Sociological Research Practicum
172760 1245-1400 TTh, BlegH 150, Pierce J, 5 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
444625 1-36 cr

R 8955 Seminar: Teaching Sociology on the College Level (prereq 2nd or 3rd yr sociology grad student or #)
772740 1325-1600 F, BlegH 245, Aminzade R, 3 cr

SOIL SCIENCE (Soil)
Soil, Water, and Climate
Agricultural, Food, and Environmental Sciences

R 3125 Basic Soil Science (§1020; prereq Chem 1051) (Phys/L; Envt)
★LECT 1010-1100 MWF, BorH 335, Cooper T
847702 —1 REC 0905-0955 Th, Soils S415, Cooper T, 5 cr
244478 —2 REC 1010-1100 Th, Soils S415, Cooper T, 5 cr
242391 —3 REC 1115-1205 Th, Soils S415, Cooper T, 5 cr
051893 —4 REC 1220-1310 Th, Soils S415, Cooper T, 5 cr
649774 —5 REC 1325-1415 Th, Soils S415, Cooper T, 5 cr
★LAB (2 hr lab ar, M a.m. to W p.m.)

R 3416 Plant Nutrients in the Environment (prereq 3125) (A-F only)
★LECT 1430-1520 MWF, BorH 335, Malzer G, 4 cr
544664 —1 REC 1220-1310 T, Soils S415, Malzer G
348120 —2 REC 1325-1415 T, Soils S415, Malzer G
747546 —3 REC 1430-1520 T, Soils S415, Malzer G
542428 —4 REC 1535-1625 T, Soils S415, Malzer G

R 3417 Plant Nutrients in the Environment Laboratory (prereq ¶3416) (A-F only)
150631 —1 LAB 0800-1130 Th, Soils S320, Malzer G, 1 cr
445788 —2 LAB 1220-1550 Th, Soils S320, Malzer G, 1 cr

R 3612 Soil Biology and Fertility: Reaching for Sustainable Agricultural Production (prereq Chem 1001 recommended but not required)
874088 1630-2000 W, BorH 375, Graham P, 4 cr

5110 Practicum Internship in Precision Agriculture (prereq sr or grad stu, #) (S-N only)
350840 Robert P, 2-4 cr

R 5114 Special Problems in Soils (; prereq 3125, #, Δ)
142957 1-7 cr

R 5183 Water Relations, Mineral Nutrition and Translocation in Higher Plants (prereq PBio 3131 or equiv)
★LECT 1325-1430 MW, Soils S415, Allan D
851457 —1 REC 1325-1500 F, Soils S415, Markhart A, 4 cr

R 5210 Environmental Biophysics (prereq Math 1251, Phys 1041, or #) (A-F only)
774083 0945-1100 TTh, BorH 375, Reece C, 3 cr

R 5380 Soil Clay Mineralogy (prereq sr or grad stu)
574084 1220-1310 MWF, Soils S514, Nater E, 3 cr

R 5361 Soil Clay Mineralogy Laboratory (¶5360; prereq #)
374085 1 cr

R 5550 Peatlands: Formation, Classification, and Utilization (prereq 1020 or 3125 or #)
472554 1115-1230 TTh, BorH 375, Grigal D, 3 cr

R 5600 Principles of Waste Management (prereq Chem 1051 or Biol 1009, Stat 3011 or #) (A-F only)
★LECT 1220-1310 MWF, BorH 375, Halbach T
050114 —1 REC 1325-1415 W, BorH 375, Halbach T, 4 cr

R 8111 Colloquia in Soil Science (prereq maj or min or #) (S-N only)
746056 1 cr

R 8112 Colloquia in Soil Science II (prereq maj or min or #)
146622 1-2 cr

R 8124 Research Problems in Soils
351471 2-5 cr

R 8128 Seminar: Soils (S-N only)
852642 1500-1555 M, BorH 375, 1 cr

R 8250 Advanced Soil Physics (prereq 5232, differential equations, #)
174086 0905-0955 MWF, BorH 375, Gupta S, 3 cr

R 8630 Current Topics in Biological Nitrogen Fixation (prereq 5610 or 5605 or #)
074087 1010-1100 TTh, Soils S514, Graham P, 2 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
547371 1-18 cr

R 6777 Thesis Credits: Masters
746784 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
852124 1-36 cr

SOUTH ASIAN LANGUAGES and CULTURES (SALC)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 1504 Introduction to the Religions of South Asia (§RelA 1031, RelS 1031)
571895 1325-1415 MWF, SciCB 325, Malandra W, 4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
344052 1-18 cr

R 8777 Thesis Credits: Masters
141825 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
141677 1-36 cr

SPANISH (Span)
Spanish and Portuguese
Liberal Arts

R 1101 Beginning Spanish
452742 —1 0800-0850 MTWThF, FolH 340, 5 cr
252676 —2 0800-0850 MTWThF, KoltH S133, 5 cr
145767 —3 0905-0955 MTWThF, KoltH S136, 5 cr
042904 —4 1010-1100 MTWThF, FolH 116, 5 cr
650665 —5 1115-1205 MTWThF, KoltH S136, 5 cr
750124 —6 1220-1310 MTWThF, FolH 134, 5 cr
852639 —7 1325-1415 MTWThF, KoltH S137, 5 cr
143302 —8 1430-1520 MTWThF, FolH 134, 5 cr
549752 —9 1430-1520 MTWThF, KoltH S133, 5 cr
347677 —10 1535-1625 MTWThF, FolH 340, 5 cr

R 1102 Beginning Spanish (prereq 1101)
147365 —1 0800-0850 MTWThF, FolH 134, 5 cr
749149 —2 0800-0850 MTWThF, KoltH S134, 5 cr
951319 —3 0905-0955 MTWThF, KoltH S137, 5 cr
151424 —4 0905-0955 MTWThF, VinH 206, 5 cr
542736 —5 1010-1100 MTWThF, KoltH S135, 5 cr
242827 —6 1115-1205 MTWThF, FolH 134, 5 cr
252788 —7 1220-1310 MTWThF, KoltH S134, 5 cr
751662 —8 1325-1415 MTWThF, FolH 116, 5 cr
748356 —9 1325-1415 MTWThF, KoltH S138, 5 cr
950123 —10 1430-1520 MTWThF, KoltH S134, 5 cr
445466 —11 1430-1520 MTWThF, KoltH S135, 5 cr
551663 —12 1535-1625 MTWThF, FolH 134, 5 cr
852009 —13 1535-1625 MTWThF, FolH 116, 5 cr

R 1103 Beginning Spanish (prereq 1102)
843536 —1 0800-0850 MTWThF, FolH 116, 5 cr
843682 —2 0905-0955 MTWThF, Phys 236A, 5 cr
542879 —3 1010-1100 MTWThF, FolH 134, 5 cr
249311 —4 1115-1205 MTWThF, KoltH S137, 5 cr
243881 —5 1220-1310 MTWThF, KoltH S135, 5 cr
251107 —6 1325-1415 MTWThF, FolH 134, 5 cr
749118 —7 1325-1415 MTWThF, NichH 109, 5 cr
645529 —8 1430-1520 MTWThF, KoltH S136, 5 cr

R 1104 Intermediate Spanish (prereq 1103 or 3 yrs high school Spanish)
090050 —1 0800-0850 MTWThF, KoltH S135, 5 cr
852821 —2 0905-0955 MTWThF, FolH 134, 5 cr
749152 —3 1010-1100 MTWThF, KoltH S136, 5 cr
742718 —4 1115-1205 MTWThF, FolH 116, 5 cr
641447 —5 1220-1310 MTWThF, KoltH S136, 5 cr
051344 —6 1325-1415 MTWThF, VinH 209, 5 cr
145017 —7 1325-1415 MTWThF, FordH 40, 5 cr
841589 —8 1430-1520 MTWThF, FolH 116, 5 cr
450747 —9 1430-1520 MTWThF, KoltH S137, 5 cr

R 1105 Intermediate Spanish (prereq 1104 or 4 yrs high school Spanish)
351146 —1 0800-0850 MTWThF, KoltH S136, 5 cr
648639 —2 0905-0955 MTWThF, FolH 116, 5 cr
143705 —3 1010-1100 MTWThF, FolH 340, 5 cr
547497 —4 1115-1205 MTWThF, PeikH 315, 5 cr
052607 —5 1115-1205 MTWThF, VinH 206, 5 cr
649273 —6 1220-1310 MTWThF, FolH 116, 5 cr
952471 —7 1220-1310 MTWThF, KoltH S137, 5 cr
450635 —8 1325-1415 MTWThF, FordH 60, 5 cr
348568 —9 1325-1415 MTWThF, VinH 301, 5 cr
452322 —10 1430-1520 MTWThF, KoltH S138, 5 cr
947450 —11 1430-1520 MTWThF, NichH 109, 5 cr
749877 —12 1430-1520 MTWThF, PeikH 375, 5 cr

R 1106 Intermediate Spanish (prereq 1105 or 5 yrs high school Spanish)
952552 —1 0800-0915 MWF, FolH 138, 5 cr
445435 —2 0905-1020 MWF, PeikH 155, 5 cr
741388 —3 1010-1125 MWF, NichH 109, 5 cr
047486 —4 1115-1230 MWF, VinH 213, 5 cr
148409 —5 1325-1440 MWF, PeikH 225, 5 cr
148250 —6 1325-1440 MWF, PeikH 155, 5 cr
242892 —7 1430-1545 MWF, FolH 326, 5 cr
052011 —8 1430-1545 MWF, SmithH 121, 5 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

R 3015 Spanish Composition and Communication (prereq 1106 or equiv and Graduation Proficiency Test)
546656 —1 0800-0915 MWF, FolH 38, 5 cr
144501 —2 1010-1125 MWF, AmundH 116, 5 cr
942443 —3 1220-1335 MWF, AmundH 104, 5 cr
151920 —4 1325-1440 MWF, VinH 213, 5 cr
349798 —5 1430-1545 MWF, ChDev 105, 5 cr

R 3016 Advanced Spanish Composition and Communication (prereq 3015 or equiv and Graduation Proficiency Test)
047729 —1 0800-0915 MWF, PeikH 335, 5 cr
245579 —2 0905-1020 MWF, SmithH 121, 5 cr
742444 —3 1115-1230 MWF, SmithH 121, 5 cr
041252 —4 1220-1335 MWF, ChDev 105, 5 cr
150872 —5 1325-1440 MWF, Phys 157, 5 cr
542445 —6 1430-1545 MWF, AmundH 158, 5 cr

R 3104 The Art of Reading Literary Texts (prereq 3016)
450182 —1 0905-0955 MWF, NichH 122, 4 cr
646857 —2 1115-1230 TTh, NichH 209A, 4 cr

R 3105 Introduction to the Study of Hispanic Cultures (prereq 3016 or #)
146894 —1 1430-1520 MWF, FolH 340, Ramos-Garcia L, 4 cr
572870 —2 0945-1100 TTh, FolH 38, Vidal H, 4 cr

R 3107 Introduction to the Study of Hispanic Linguistics (prereq 3016 or #)
143283 1115-1205 MWF, FolH 426, 4 cr

R 3212 Spanish Literature: Aspects of Poetry (prereq 3104)
172872 1010-1100 MWF, VinH 206, Sullivan C, 4 cr

R 3212H Honors Course: Spanish Literature: Aspects of Poetry (prereq 3104)
072873 1010-1100 MWF, VinH 206, Sullivan C, 4 cr

R 3252 Spanish-American Literature: Aspects of Poetry (prereq 3104)
349753 1245-1400 TTh, NichH 213, Jara R, 4 cr

R 3252H Honors Course: Spanish-American Literature—Aspects of Poetry (prereq 3104, honors student or #)
147678 1245-1400 TTh, NichH 213, Jara R, 4 cr

R 3501 Spanish Civilization: Roots of Modern Spain and Latin America (prereq 3105 or #)
848171 0945-1100 TTh, KoltH S138, 5 cr

R 3702 The Structure of Spanish: Morphology and Syntax (prereq 3107 or #)
241189 1115-1230 TTh, KoltH S138, Ocampo F, 4 cr

R 3910 Topics in Spanish Peninsular Literature (max 12 cr; prereq 3104 or #)
250815 1325-1415 MWF, ScottH 4, 4 cr

R 3910H Topics in Spanish Peninsular Literature (max 12 cr; prereq 3104 or #)
942331 1325-1415 MWF, ScottH 4, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
949053 1-5 cr

R 3972 Graduation Seminar (prereq 30 cr Span 3xxx or Span-Port 3xxx courses, Δ) (A-F only)
641190 1115-1230 T, FolH 46, Vidal H, 4 cr

R 3972H Honors Graduation Seminar (prereq 30 cr Span 3xxx or SpPt 3xxx crses, honors stu, Δ) (A-F only)
346738 1115-1230 T, FolH 46, Vidal H, 4 cr

5108 The Spain of Cervantes' Don Quijote: History and Fiction (prereq three 3xxx or 5xxx literature courses in Span or Port or Δ)
472876 1430-1730 Th, FolH 334, Spadaccini N, 4 cr

5109 The Literature of Bourgeois Order: Enlightenment, Romanticism, and Positivism (prereq three 3xxx or 5xxx literature courses in Span or Port)
272877 1430-1730 M, FolH 426, Sullivan C, 4 cr

5527 National Literary Consciousness and Free Trade (prereq three 3xxx or 5xxx Span or Port lit courses or Δ)
174069 1430-1730 W, AmundH 124, Cerna J, 4 cr

5970 Directed Readings (max 15 cr; prereq #, Δ, CLA approval)
147440 1-5 cr

5990 Directed Research (prereq #, Δ, CLA approval)
942152 1-5 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
247221 1-18 cr

8750 Seminar in Spanish and Portuguese Pragmatics (prereq 5715 or #) (A-F only)
172878 1415-1530 TTh, NichH 209, Ocampo F, 4 cr

8777 Thesis Credits: Masters
048489 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
443992 1-36 cr

8970 Directed Readings in Romance Languages (prereq Δ)
745411 ar cr

8980 Advanced Research in Semiotic/Structural Analysis of Spanish American Literary Texts
651864 1430-1730 T, LindH 320, Jara R, 4 cr

SPANISH-PORTUGUESE (SpPt)
Spanish and Portuguese
Liberal Arts

3980 Directed Instruction (max 8 cr; prereq #, Δ, ❑) (S-N only)
347095 1-4 cr

5930 Selected Topics in the Hispanic Cultural Discourses (prereq reading knowledge of Spanish and Portuguese)
771636 1430-1730 W, FordH 160, Arenas F, 4 cr

SPEECH-COMMUNICATION (Spch)
Liberal Arts

R 1101 Introduction to Public Speaking
743853 —1 0800-0955 MW, FolH 318, 4 cr
948579 —2 1010-1205 M, NichH 122, 1010-1205 W, FolH 318, 4 cr
049075 —3 1010-1205 M, FolH 318, 1010-1205 W, NichH 122, 4 cr
548262 —4 1010-1205 MW, NichH 312, 4 cr
146384 —5 1010-1205 MW, FolH 419, 4 cr
248546 —6 1325-1520 M, FolH 318, 1325-1520 W, NichH 209, 4 cr
350093 —7 1325-1520 M, NichH 209, 1325-1520 W, FolH 318, 4 cr
845206 —8 1535-1730 MW, FolH 344, 4 cr
543773 —9 0800-0955 TTh, FolH 419, 4 cr
749393 —10 1010-1205 T, Arch 50, 1010-1205 Th, FolH 419, 4 cr
350434 —11 1220-1415 TTh, FolH 419, 4 cr
848820 —12 1430-1625 TTh, FolH 419, 4 cr
946699 —13 1430-1625 TTh, FolH 312, 4 cr
975085 —14 1535-1730 MW, FolH 246, 4 cr

R 1313 Analysis of Oral Argument (C/PE)
743349 —1 0800-0955 MW, FolH 419, 4 cr
748034 —2 1325-1520 MW, FolH 312, 4 cr
752519 —3 1535-1730 MW, FolH 318, 4 cr
646924 —4 0800-0955 TTh, FolH 312, 4 cr
350336 —5 1010-1205 T, FolH 419, 1010-1205 Th, Arch 50, 4 cr
052316 —6 1220-1415 TTh, FolH 334, 4 cr
141744 —7 1430-1625 TTh, FolH 318, 4 cr

R 3110 Current Topics in Speech-Communication: Freedom of Speech (may be repeated for cr with #; prereq 3211, 3401, 3601, whichever is relevant to the topic)
272703 1010-1205 MW, FordH 160, Schiappa A, 4 cr

3192H Honors Course: Tutorial Seminar in Speech (prereq honors candidate in speech-communication, #, Δ)
045124 4 cr

R 3201 Introduction to Electronic Media Production
142108 —1 1010-1205 MW, RarigC 610, 4 cr
443698 —2 1325-1520 MW, RarigC 610, 4 cr
846310 —3 0800-0955 TTh, RarigC 610, 4 cr

R 3211 Introduction to Electronic Media in America (SSci) (A-F only)
441837 1220-1415 TTh, EE/CSci 3210, Browne D, 4 cr

R 3401 Introduction to Communication Theory (SSci)
647331 1010-1205 MW, NichH 213, Hewes D, 4 cr

R 3411 Small Group Communication Processes (prereq 1101 or #) (C/PE)
747417 —1 0800-0955 MW, FolH 312, 4 cr
343001 —2 1010-1205 MW, NichH 209, 4 cr
343483 —3 0800-0955 TTh, FolH 318, 4 cr
042014 —4 1010-1205 TTh, CivE 213, 4 cr
849563 —5 1220-1415 TTh, FolH 312, 4 cr

R 3441 Communicating in Organizations (prereq 1101 or equiv)
350627 1220-1415 TTh, FolH 318, 4 cr

R 3451 Intercultural Communication: Theory and Practice (prereq planning an intercultural experience)
152492 1600-1800 MW, FolH 138, Albert R, 4 cr

R 3452 Communication and the Intercultural Reentry (prereq return from an intercultural experience)
950381 1430-1625 TTh, Arch 25, 4 cr

R 3501 Introduction to Communication Research Methods
842502 1010-1205 TTh, Arch 35, Kinney T, 4 cr

R 3605 Persuasive Speaking (prereq 1101)
152654 —1 1535-1730 MW, FolH 312, 4 cr
052803 —2 1010-1205 TTh, FolH 312, Wilson K, 4 cr (Conversation Analysis)

R 3615 Argumentation (prereq 1101 or 1101H or #)
172704 1430-1625 TTh, Arch 35, Wilson K, 4 cr

3970 Directed Studies (no major program cr for spch-comm maj; prereq at least one spch-comm course, #, Δ, ❑)
152744 ar cr

3980 Directed Instruction (max 8 cr; no major program cr for speech-communication maj; prereq #, Δ, ❑) (S-N only)
345962 1-4 cr

R 5110 Advanced Topics in Speech-Communication Theory: Psychology and Communication (may be repeated for cr with #; prereq 3211, 3401, 3601, whichever is relevant)
848042 1535-1730 MW, FolH 334, Omdahl B, 4 cr

R 5261 Communicative Processes in Electronic Media (prereq 3211 or #)
372708 1010-1205 TTh, FolH 318, Lind R, 4 cr

R 5402 Problems in Interpersonal Communication (prereq 3401 or #)
172709 1010-1205 MW, FordH 170, Omdahl B, 4 cr

R 5451 Intercultural Communication (recommend 3401, Anth 1102 or another course in cultural anthropology or #) (IP)
048749 1325-1520 MW, FolH 419, Albert R, 4 cr

R 5462 Field Research in Spoken Language (§Ling 5752; prerq 5461 or #)
372711 1325-1520 MW, FolH 38, Sheldon A, 4 cr

R 5615 Introduction to Rhetorical Criticism (prereq 1101 or 1101H...3601 rec)
949103 1535-1730 MW, FolH 419, Schiappa E, 4 cr

5970 Directed Readings (prereq nine upper div speech cr, #, Δ, CLA approval) (S-N only)
642064 ar cr

8110 Seminar: Advanced Speech Problems (prereq undergrad degree in spch-comm or equiv)
349946 —1 1100-1400 T, FolH 426, Sheldon A, 3 cr (Conversation Analysis)
344469 —2 1430-1730 T, FolH 344, Kinney T, 3 cr (Social Influence and Persuasion)

8612 Seminar in Rhetoric (prereq 5611 or #)
072713 1325-1625 F, FolH 344, Scott R, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
244206 1-18 cr

8777 Thesis Credits: Masters
249079 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
850681 1-36 cr

8990 Research (prereq #, Δ) (S-N only)
745425 ar cr

STATISTICS (Stat)
Liberal Arts

R 1001 Introduction to Ideas of Statistics (prereq high school algebra) (Math)
★LECT 0905-0955 MWF, ClaOff B25, Cook R D, (StP)
147874 —1 LAB 0905-0955 T, ClaOff B36, 4 cr (StP)
143548 —2 LAB 1010-1100 T, ClaOff B42, 4 cr (StP)
★LECT 1115-1205 MWF, Phys 133, Sudderth W
747045 —3 LAB 1115-1205 T, FordH 40, 4 cr
646874 —4 LAB 1115-1205 Th, EE/CSci 3111, 4 cr
644798 —5 LAB 1115-1205 Th, Phys 131, 4 cr
★LECT 1325-1415 MWF, Phys 210, Kuhn J
273883 —6 LAB 1325-1415 T, EE/CSci 3115, 4 cr
173884 —7 LAB 1325-1415 Th, VinH 20, 4 cr

R 3011 Statistical Analysis (prereq college algebra) (Math)
★LECT 1010-1100 MWF, ClaOff B35, Kuhn J, (StP)
947898 —1 LAB 0800-0850 T, ClaOff B30, 4 cr (StP)
445791 —2 LAB 0905-0955 T, ClaOff B42, 4 cr (StP)
851779 —3 LAB 1010-1100 T, ClaOff B36, 4 cr (StP)
★LECT 1430-1520 MWF, EE/CSci 3230, Posse C
652299 —4 LAB 1430-1520 T, VinH 209, 4 cr
943866 —5 LAB 1430-1520 Th, Phys 131, 4 cr
642162 —6 LAB 1430-1520 Th, Phys 166, 4 cr

R 3012 Statistical Analysis (prereq 3011)
★LECT 1010-1100 MWF, EE/CSci 3115, Geyer C
147697 —1 LAB 1010-1100 T, LindH 217, 4 cr
144787 —2 LAB 1010-1100 Th, Phys 236A, 4 cr
★LECT 1325-1415 MWF, ClaOff B25, Grund B, (StP)
947979 —3 LAB 0905-0955 T, ClaOff 135, 4 cr (StP)
142013 —4 LAB 1010-1100 T, ClaOff 135, 4 cr (StP)

R 3091 Introduction to Probability and Statistics (§5121, 5131; prereq differential, integral calculus)
★LECT 0800-0850 MWF, VinH 16, Sudderth W
541537 —1 LAB 0600-0850 T, VinH 207, 4 cr
145132 —2 LAB 0800-0850 Th, VinH 207, 4 cr
★LECT 1115-1205 MWF, Phys 210
146241 —3 LAB 1115-1205 T, Phys 210, 4 cr
841902 —4 LAB 1115-1205 Th, Phys 170, 4 cr
★LECT 1430-1520 MWF, FolH 50, Dickey J
850728 —5 LAB 1430-1520 T, WullH 220, 4 cr
844220 —6 LAB 1430-1520 Th, WullH 140, 4 cr

R 5021 Statistical Analysis (§3012; prereq college algebra)
★LECT 1010-1100 MWF, ClaOff B25, Grund B, (StP)
745330 —1 LAB 0905-0955 Th, ClaOff B36, 5 cr (StP)
351390 —2 LAB 1010-1100 Th, ClaOff B36, 5 cr (StP)

R 5121 Theory of Statistics (§5131-5132-5133; prereq Math 1252)
★LECT 1010-1100 MWF, EE/CSci 3111, Dickey J
850387 —1 REC 1010-1100 T, VinH 20, 5 cr
750527 —2 REC 1010-1100 Th, VinH 20, 5 cr

R 5122 Theory of Statistics (prereq 5121)
★LECT 1430-1520 MWF, Phys 170, Geyer C
844847 —1 REC 1430-1520 T, AmundH 124, 5 cr
251253 —2 REC 1430-1520 Th, SmithH 231, 5 cr

R 5132 Theory of Statistics (prereq 5131)
044068 —1 0905-0955 MWF, VinH 2, Lindgren B, 4 cr
143476 —2 1115-1205 MWF, VinH 2, Eaton M, 4 cr
949635 —3 1430-1520 MWF, ElthN119, Geisser S, 4 cr

R 5152 Theory of Statistics (prereq 5151, stat grad stu)
747370 1325-1415 MWF, MurH 308, Pruitt R, 4 cr

R 5162 Applied Statistical Methods (prereq 5161, stat grad stu or #) (A-F only)
451263 0800-0955 MWF, ClaOff B35, Oehlert G, 4 cr (StP)

R 5301 Designing Experiments (§5163; prereq 3012 or 5021 or 5133 or 5153 or #)
★LECT 1220-1310 MWF, ClaOff B25, Oehlert G, (StP)
244156 —1 LAB 1115-1205 Th, ClaOff B30, 5 cr (StP)
651301 —2 LAB 1220-1310 Th, ClaOff B30, 5 cr (StP)

5421 Analysis of Categorical Data (§5162; prereq 3012 or 5021 or 5133 or #)
673881 0905-1100 TTh, ClaOff B30, Chaloner K, 4 cr (StP)

5601 Nonparametric Methods (prereq 5021 or 5122 or 5132 or 5152 or #)
347694 1535-1625 MWF, VinH 6, Pruitt R, 4 cr

5890 Senior Paper (prereq sr in statistics) (A-F only)
543546 2 cr

5900 Tutorial Course (prereq #)
845013 ar cr

8152 Mathematical Statistics (prereq 8151)
443314 1115-1205 MWF, EE/CSci 2260, Meeden G, 4 cr

8312 Linear Models (prereq 8311)
249681 1430-1625 MW, ClaOff B26, Martin F, 4 cr (StP)

8313 Topics in Experimental Design (prereq 8312)
572531 1325-1520 TTh, ClaOff B30, Chaloner K, 3 cr (StP)

8511 Time Series Analysis (prereq linear algebra, 5133 or 5153 or #)
372532 1325-1415 MWF, HckrH 312, Bingham C, 3 cr (StP)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
145221 1-18 cr

8777 Thesis Credits: Masters
943222 1-16 cr

8801 Statistical Consulting (max 3 cr; prereq grad stat maj or #) (S-N only)
251060 1430-1620 F, ClaOff B26, Hawkins D, 1 cr (StP)

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
348571 1-36 cr

8900 Student Seminar (prereq statistics maj or #) (S-N only)
649046 1 cr

8901 Directed Readings and Research (prereq #)
548617 1-3 cr

STUDIES OF SCIENCE AND TECHNOLOGY (SST)

8000 Colloquium (may be repeated for credit) (S-N only)
047990 1535-1730 F, Phys 210, 1 cr

8300 Seminar: The Biological and Biomedical Sciences (prereq Phil 8605 or HSci 8111, or #)
572738 1535-1730 W, FordH 359, Waters C K, Beatty J, 4 cr

Study Skills: See Learning and Academic Skills.

SURGERY (Surg)
Medical School

5500 Externship: Surgery at the University and Affiliated Hospitals (prereq regis med)
145137 Dunn D L, ar cr

5502 Externship in the Surgical Intensive Care Unit (prereq regis med)
744873 Dunn D L, 6-9 cr

5503 Research Problems in Surgery (prereq regis med) (S-N only)
147972 Dunn D L, 1-18 cr

5504 Hospital Base Nutrition (prereq medical stu year 3 and 4)
548908 Dunn D L, 4.5-9 cr

5509 Burn Surgery (prereq general surgery)
148810 Solem L D, ar cr

5510 Advanced Surgery Externship: Subinternship (prereq 3rd or 4th yr medical student, 5500)
346500 Dunn D L, 4.5-9 cr

5522 Plastic and Reconstructive Surgery (prereq 5500)
248594 Dunn D L, ar cr

5523 Externship in Colon and Rectal Surgery: Veterans Administration Hospital (prereq regis med)
644977 Rothenberger D, ar cr

5526 Clinical Nutrition Seminar (prereq acceptance to master's prog in nutr support dietetics or Kellogg MD fellowship prog) (S-N only)
148152 Shronts E, 1 cr

5527 Hospital Nutrition Support (prereq acceptance to the master's program in nutrition support dietetics) (S-N only)
045737 Shronts E, 9 cr

8200 Clinical Surgical Problems in Management
146322 Dunn D L, 5 cr

8201 Surgical-Roentgenological Conference
352121 0905-1310 S, Mayo C231, Dunn D L, 1 cr (Todd Amph)

8202 Surgical Research
451719 Dunn D L, 5 cr

8203 Surgery Complications and Research Conference
051134 1600-1700 T, PWB 11157, Dunn D L, 1 cr

8207 Transplantation, Bone Marrow Conference
749376 1630-1700 Th, PWB 11157, Dunn D L, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
750107 Dunn D L, 1-18 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
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¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

8777 Thesis Credits: Masters
643554 Dunn D L, 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
143400 Dunn D L, 1-36 cr

SUSTAINABLE AGRICULTURAL SYSTEMS (SAgr)
Agronomy and Plant Genetics
Agricultural, Food, and Environmental Sciences

8020 Field Experience in Sustainable Agriculture (prereq SAgr grad minor, #) (A-F only)
249793 2-4 cr

SWEDISH (Swed)
German, Scandinavian, and Dutch
Liberal Arts

R 1102 Beginning Swedish (prereq 1101)
345900 —1 0905-0955 MTWThF, PeikH 225, 5 cr
352233 —2 1430-1520 MTWThF, PeikH 315, 5 cr

R 1105 Intermediate Swedish (prereq 1104 or equiv)
152170 1115-1240 MWF, PeikH 155, Edberg-Caldwell G, 5 cr

R 3670 Advanced Swedish (max 28 cr; prereq 1106 or equiv)
046838 1245-1400 TTh, VinH 213, Metcalf E M, 4 cr

TEACHING ENGLISH AS A SECOND LANGUAGE (TESL)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 5723 English as a Second Language: Materials (§ESL 5723; prereq 5721, 5722, #)
471906 1245-1400 TTh, FolH 142, Bosher S, 4 cr

R 5910 Seminar in Teaching English as a Second Language: Literacy and TESL: Issues and Perspectives (prereq #)
474059 1220-1520 W, VinH 364, Bosher S, 4 cr

THEATRE ARTS (Th)
Liberal Arts

R 1101 Introduction to the Theatre (Vis; CD)
543031 1220-1310 MWF, RarigC 185, Norwood J, 4 cr

R 1102 Drama and Media (Vis)
247770 0905-0955 MWF, RarigC 190, Norwood J, 4 cr

R 1301 Beginning Acting for Non-Theatre Majors (prereq 1101 or ¶1101)
349266 —1 0800-0955 MW, RarigC 90, Sharp T, 4 cr
746123 —2 1325-1520 MW, RarigC 90, Roberts J, 4 cr
750303 —3 1325-1520 TTh, RarigC 90, Mechem R, 4 cr
251897 —4 1535-1730 TTh, RarigC 90, Dooley S, 4 cr

R 1321 Beginning Acting (prereq 1101, 1504)
647460 —1 1325-1520 MW, RarigC 190, Farias J, 4 cr
150668 —2 1325-1520 TTh, RarigC 20, Overman S, 4 cr

R 1331 Beginning Movement for Actors (§1326; prereq 1321)
144918 —1 1325-1520 MW, RarigC 10, Esping L, 2 cr
172668 —2 1535-1730 TTh, RarigC 10, Walters R, 2 cr

R 1341 Beginning Voice Production (§3311; prereq 1321)
441577 1010-1205 TTh, RarigC 210, Bonazzoli L, 2 cr

R 1502 Makeup for the Actor (prereq 1504, clean-shaven face)
949778 0905-1100 TTh, RarigC 45, Waszut-Barrett, 2 cr

R 1504 Elements of Technical Theatre (prereq 1101 or ¶1101)
144313 1115-1205 TTh, RarigC 190, LeFebvre M, 4 cr (lab ar)

R 3172 History of the Theatre: Neo-Classicism through Realism (prereq 1101, theatre arts maj)
443619 1010-1205 TTh, BlegH 150, Gadberry G, 4 cr

R 3321 Intermediate Acting (prereq 1331, 1341, #)
751449 1535-1730 MW, RarigC 210, Reid B, 4 cr

R 3322 Intermediate Acting (prereq 3321)
245288 1010-1205 TTh, RarigC 90, Houfek N, 4 cr

3412H Honors Course: Tutorial Seminar in Theatre Arts (prereq candidate for honors in theatre arts, Δ)
643568 Kobialka M, 3-6 cr

R 3711 Introduction to Directing (§3701; prereq 1101, 1301 or 1321, 1504, maj or min) (A-F only)
652710 1010-1205 MW, RarigC 185, Martin M, 4 cr

R 3712 Beginning Stage Direction (§3711 prior to Fall 94; prereq 1504, 3711, jr or sr) (A-F only)
374071 1325-1520 MW, RarigC 185, Marshall B, 4 cr

R 3803 Platform Performance (prereq Management maj)
951272 —1 1010-1205 TTh, RarigC 610, Childs R, 4 cr
143512 —2 1325-1520 TTh, RarigC 610, Chomet S, 4 cr

R 3901 Theatre Arts/Dance Senior Seminar (prereq sr, theatre or dance maj) (A-F only)
347520 1325-1520 MW, RarigC 275, Bellamy L, Killacky J, 4 cr

3950 Topics in Theatre (max 12 cr)
047536 —1 1-5 cr
448670 —2 1-5 cr

R 5100 Theatre Practicum (prereq written permission, #, Δ) (A-F only)
045866 —1 1-6 cr
744338 —2 1-6 cr

5110 Theatre Performance (max 9 cr; prereq written permission after casting and/or assignment to a production) (S-N only)
844069 Montgomery J, 1 cr

R 5182 Contemporary Black Theatre 1960-Present (§Afro 5182)
472666 1325-1520 TTh, RarigC 275, Bellamy L, 4 cr

R 5322 Acting for the Camera (prereq 3322 or grad stu)
150427 1010-1205 TTh, RarigC, Dallin H, 4 cr (Studio 5B)

R 5335 Stage Combat: Armed (prereq 3323, grad stu or # by audition)
547533 0905-1100 TTh, RarigC 10, Hennum N, 2 cr

R 5342 Singing for Musical Theatre (prereq 3321-3322, #)
972669 1010-1205 MW, RarigC 20, Nash E, 2 cr

R 5530 Costume Design (max 12 cr; prereq 3515 or #)
347582 0905-1100 MW, RarigC 275, 230, 4 cr

R 5550 Theatre Sound Design (max 6 cr; prereq 1504, 5564, or #)
272670 1325-1520 MW, RarigC 75, 210, Gwinup M, 2 cr

5560 Theatre Crafts Practicum (max 6 cr for undergrads; prereq 3513 and/or 3515, Δ, #)
243962 —1 1-4 cr
651587 —2 1-4 cr

R 5718 Theatre Management and Promotion (prereq 1504) (A-F only)
172671 1535-1730 TTh, RarigC 75, Wagner S, 4 cr

R 5720 Plays in Production and Performance (max 6 cr for undergrads; prereq 5712, #, Δ)
646311 2-4 cr

R 5760 Advanced Stage Management (max 6 cr for undergrads; prereq 5716 or ¶, #, written permission)
744145 Montgomery J, 1-3 cr

R 5950 Topics in Theatre (max 12 cr)
974759 0905-0955 MTWTh, RarigC 210, Nash E, Houfek N, 1 cr

5970 Directed Readings (prereq 9 cr in theatre, #, Δ, CLA approval)
447234 —1 1-6 cr
250037 —2 1-6 cr

8100 Theatre Practicum (prereq #, Δ)
246795 —1 1-6 cr
746154 —2 1-6 cr

8103 The Theatre Dramaturg
972672 1325-1625 F, RarigC 75, Lupu M, 4 cr

8111 History/Theory of Western Theatre: Origins and Ancient World
574070 1325-1520 TTh, RarigC 75, Gadberry G, 4 cr

R 8325 MFA Acting II (prereq MFA acting student or # by audition) (A-F only)
544678 1535-1730 MW, 1325-1520 F, RarigC 185, Houfek N, 4 cr

R 8330 Alexander Technique for MFA Actors (prereq MFA acting student or #) (A-F only)
749474 1325-1520 MW, RarigC 20, Lightner B, 1 cr

R 8346 Advanced Text and Voice Production for MFA Actors (prereq MFA acting student or #) (A-F only)
145381 0905-1100 MW, 1115-1205 TTh, RarigC 20, Nash E, 2 cr

R 8560 Theatre Crafts Practicum (prereq #, Δ)
145395 —1 1-4 cr
347372 —2 1-4 cr

8575 Seminar: Technical Production (prereq 5511, 5561, or #)
072677 0905-1100 TTh, RarigC 75, 130, 0905-1200 F, RarigC 130, 190, Gwinup M, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
450277 1-18 cr

8730 One-Act Limited Workshop Production (prereq MFA-Directing Program) (A-F only)
942006 2 cr

8740 Supported Workshop Production (prereq MFA-Directing Program) (A-F only)
743559 4 cr

8750 Mainstage Production (prereq MFA-Directing Program) (A-F only)
344732 6 cr

8770 Advanced Directing Laboratory (prereq MFA Director or #)
552327 0905-1200 F, RarigC 75, Kanee S, 2 cr

8777 Thesis Credits: Masters
542123 1-16 cr

8888 Thesis Credits: Doctoral (max 16 cr per qtr)
248904 1-36 cr

8980 Directed Instruction (prereq Δ)
344343 1-3 cr

8990 Research (prereq #, Δ)
151190 ar cr

THERAPEUTIC RADIOLOGY (TRad)
Medical School

3100 Mathematics (prereq #)
249146 3 cr

3110 Physics (prereq #)
843956 2 cr

3121 Radiation Physics (prereq #)
343824 3 cr

5171 Physics of Nuclear Medicine (§Rad 5171, BPhy 5171; prereq 5170 or #)
151598 0905-1035 TTh, MoosT 1752, Khan F, others, 3 cr

5173 Physics of Radiation Therapy (§Rad 5173, BPhy 5173; prereq 5170 or #)
641786 0730-0845 W, 1600-1715 F, Khan F, others, 3 cr

5340 Special Problems in Radiation Therapy
552182 Levitt S, others, ar cr

5505 Externship in Radiation Therapy (prereq regis med)
645840 Levitt S, others, ar cr

5507 Advanced Externship in Radiation Therapy (prereq regis med)
948288 Levitt S, others, ar cr

5508 Special Problems in Radiation Biology
951000 Song C, others, ar cr

R 5509 Radiobiological Basis of Radiotherapy (prereq medical school sr)
148457 Song C, others, 9 cr

5510 Radiation Oncology Clinical Research (prereq 5505 or 5506 or 5507)
047438 9-18 cr

5512 Dosimetry of Internal and External Radiation Emitters
941910 1200-1300 M, UHosp 1243, Khan F, others, 1 cr

5540 Special Problems in Radiological Physics (prereq regis med)
745439 Khan F, others, ar cr

5800 Radiation Oncology-Pathology
345850 ar cr

8300 Radiation Therapy
543501 Levitt S, others, ar cr

8310 Fundamentals of Radiation Therapy
544003 1630-1730 M, UHosp 1243, Levitt S, others, 1 cr (except 1st M of month, 1700-1800)

8315 Radiation Therapy Pathology
449212 1 cr

8320 Radiation Therapy Treatment Planning Problems
346187 Levitt S, others, 1 cr

8325 Radiation Therapy Pediatrics Oncology
842077 1 cr

8350 Research in Radiation Therapy
652416 ar cr

8410 Seminar: Radiation Biology (prereq #)
348358 Song C, others, 1 cr

8450 Research in Radiation Biology
150623 Song C, others, ar cr

8550 Research of Radiation Physics
143218 Khan F, others, ar cr

THERIOGENOLOGY (Tgen)
Veterinary Medicine

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
549542 1-18 cr

8777 Thesis Credits: Masters
052588 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
548973 1-36 cr

TOXICOLOGY (Txcl)

R 5216 Chemical and Environmental Toxicology (prereq 5214, #) (A-F only)
648270 1010-1205 MWF, MoosT 1752, Roy R, 4 cr (Mpls) (Jan 6-Feb 21)

R 8102 Toxicology Seminar (8101-8102-8103†; prereq #) (S-N only)
643795 1535-1705 Th, MoosT 1752, Wallace K, 1 cr (Mpls) (Jan 16, 30, Feb 13, 27, Mar 13)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
643747 Shier W, 1-18 cr

8777 Thesis Credits: Masters
551579 Shier W, 1-16 cr

8800 Directed Research (S-N only)
147051 Shier W, ar cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
048413 Shier W, 1-36 cr

UNIVERSITY COLLEGE (UC)

3075 Directed Study (prereq Δ)
246358 ar cr

3075H Honors Course: Directed Study (prereq Δ)
150380 ar cr

URBAN STUDIES (UrbS)
Liberal Arts

R 3102 Urban Studies Colloquia (prereq #) (A-F only)
144733 1430-1630 Th, BlegH 255, Skewes J, 2 cr

R 3301 American Cities: Settings for Cultural Pluralism (CD) (A-F only)
243458 1245-1400 TTh, BlegH 155, Byers J, 4 cr

R 3500 Workshops (prereq jr or sr, #)
849322 1800-2100 T, HHHCtr 30, Karasov D, 4 cr

R 3900 Internship (prereq jr or sr, #) (A-F only)
748339 1900-2100 W, BlegH 460, Pentel P, 3 cr

R 3970 Directed Studies (prereq #, Δ, ❑)
943205 Martin J, 2-6 cr

UROLOGIC SURGERY (Urol)
Medical School

5200 Surgical Specialty: Urology (prereq regis med)
943544 Pryor J, ar cr

8250 Urological Surgery
441949 0800-1200 MWF, 4 cr (Mayo OR Room H)

8251 Cystoscopy and Urological Diagnosis
745182 0800-1200 MTWThF, Reddy P, 4 cr (Cysto Suite)

8252 Urological Conference
152078 0800-0900 S, Reddy P, 4 cr (Sta 57 Conf Room)

8253 Research in Urology
749006 Reddy P, 4 cr

8254 Urological Seminar
247011 1300-1400 MWF, Mayo A503, Reddy P, 3 cr

8255 Urological Radiological Conference
149276 1300-1400 MTWThF, Mayo A503, Reddy P, 3 cr

8256 Urological Pathological Conference
742704 1600-1700 W, Mayo A503, Reddy P, 3 cr

8257 Selected Topics on the Genitourinary System (prereq MD or PhD degree, PhD with #)
549038 2 cr

VETERINARY DIAGNOSTIC MEDICINE (VDM)
Veterinary Medicine

5013 Veterinary Hospital Necropsy (prereq 3rd or 4th yr vet med stu) (S-N only)
773936 Hayden D, Walser M, others, 2-12 cr

5113 Diagnostic Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
573937 2-12 cr

5123 Directed Studies (prereq #) (S-N only)
171990 1-12 cr

5511 Swine Disease Diagnosis (prereq regis vet med or grad, #) (A-F only)
947058 1535-1725 M, 1-2 cr (1st 5 weeks)

R 5524 Problems in Diagnostic Pathology (prereq #) (A-F only)
948341 Kurtz H, 1-4 cr

5613 Advanced Veterinary Toxicology (prereq 5164, 5165 or #)
545801 4-24 cr

5622 Problems in Diagnostic Virology (prereq #) (A-F only)
742850 Goyal S, 1-4 cr

5851 Seminar: Diagnostic Medicine (prereq #) (S-N only)
241712 1-2 cr

VETERINARY MEDICINE (CVM)
Veterinary Medicine

5093 Precepteeship (prereq 3rd or 4th yr vet med stu) (S-N only)
148063 Trent A, 4-24 cr

5101 Orientation to Veterinary Medicine II (I; prereq 1st yr DVM stu) (S-N only)
748843 Trent A, 1 cr

5303 Doctor of Veterinary Medicine Mentorship Program (prereq 3rd yr DVM stu) (S-N only)
548066 Trent A, 1 cr

5603 Rotations at Other Institutions (prereq regis 4th yr vet med stu) (S-N only)
852429 4-24 cr

5800 Problems in Veterinary Research (prereq #) (A-F only)
243623 5 cr

5801 Veterinary Research Survey Seminar (prereq #) (A-F only)
649905 Pijoan C, 1 cr

VETERINARY MEDICINE, GRADUATE (VMed)
Veterinary Medicine

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
348957 1-18 cr

8777 Thesis Credits: Masters
248448 1-16 cr

8886 Thesis Credits: Doctoral (max 18 cr per qtr)
148281 1-36 cr

Symbols

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✦ This symbol will precede the call numbers of a course with multiple section types (e.g., LECT, LAB, REC) without automatic registration. You must select and register for one of each of the parts of the course.

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VETERINARY PATHOBIOLOGY (VPB)
Veterinary Medicine

5023 Clinical Hematology and Cytology (prereq 3rd or 4th yr vet med stu) (S-N only)
048654 2-12 cr

5033 Clinical Microbiology (prereq 3rd or 4th yr vet med stu) (S-N only)
141369 2-12 cr

5102 Veterinary Neurobiology (prereq #) (A-F only)
★LECT 1010-1100 TTh, AnScVM 125, Beitz A, Fletcher T, 3 cr
041218 —1 LAB 1325-1615 T, AnScVM 104, 125

5105 Microscopic Anatomy of Domestic Animals (prereq #) (A-F only)
★LECT 0905-0955 MWF, AnScVM 125, Czarnecki C, Gallant E, 4 cr
348750 —1 LAB 1010-1140 MWF, AnScVM 104

5123 Directed Studies (prereq #) (S-N only)
972509 1-24 cr

5149 Topics in Organology (prereq 5104 or equiv, #) (A-F only)
149768 1-5 cr

5212 Veterinary Biochemistry (prereq 5210 or #) (A-F only)
946623 1325-1415 MW, 1115-1205 TTh, AnScVM 125, Mickelson J, Louis C, others, 4 cr

5306 Animal Physiology (prereq vet med stu or #) (A-F only)
★LECT 0800-0850 MWF, AnScVM 125, Osborn J, O'Grady S, others, 5 cr
242374 —1 REC 0800-0950 Th, AnScVM 125

5320 Avian Physiology (prereq AnSc 3301 or 4 cr syst physiol or equiv, #) (A-F only)
746624 1010-1100 MTThF, AnScVM 295M, Duke G, 4 cr

5401 Veterinary Pharmacology and Therapeutics II (prereq 5310, 5400, or #) (A-F only)
544471 0800-0850 MWF, 1430-1520 F, VetS 145, Brown D, 5 cr

5461 Cellular and Molecular Neuroscience (§GCB 5461, MdBc 5461, NSc 5461, Phcl 5461, Phsl 5461; prereq 5460)
573470 1010-1100 TWF, MoosT 2580, Boland L, 3 cr

5504 Veterinary Clinical Pathology (prereq 5502 or #) (A-F only)
★LECT 1325-1415 WTh, 1535-1625 F, VetS 145, Weiss D, 4 cr
142867 —1 LAB 1430-1720 W, VetS 225
741715 —2 LAB 1430-1720 Th, VetS 225

5524 Pathology of Spontaneous Diseases of Poultry (prereq #)
144764 Walser M, 3 cr

5533 Directed Studies in Veterinary Patho-biology (prereq regis vet med, 4th yr, #)
946816 Johnson K, Hayden D, others, ar cr

5550 Laboratory Animal Medicine (prereq 5502 or #) (A-F only)
142375 1010-1200 T, AnScVM 145, Gillett C, others, 2 cr

5602 Veterinary Paresitology II (prereq 5601 or #)
★LECT 1325-1415 MTF, VetS 145, Stromberg B, Moon R, 4 cr
949215 —1 LAB 1430-1520 M, VetS 145, 1430-1720 M, VetS 145, 225
345217 —2 LAB 1430-1520 T, VetS 145, 1430-1720 T, VetS 225, 229

5702 Pathogenic Bacteria and Fungi (prereq 5701 or equiv or #) (A-F only)
★LECT 0905-0955 MWF, VetS 145, Nagaraja K, Rutherford M, others, 5 cr
552263 —1 LAB 1010-1200 MWF, VetS 225

5704 Avian Diseases (prereq 5503, 5703 or #)
252421 0800-0950 T, 1115-1205 Th, VetS 145, Halvorson D, others, 3 cr

5746 Problems in Veterinary Microbiology and Public Health (prereq 5703 or equiv, #) (A-F only)
344178 ar cr

5920 Independent Research in Veterinary Biology (A-F only)
147695 ar cr

5950 Directed Studies (A-F only)
445547 1-5 cr

8111 Histologic and Ultrahistologic Techniques (prereq 5106, #)
942376 3 cr

8112 Research Propositions in Morphology (prereq #)
546625 2 cr

8113 Research Propositions in Morphology (prereq #)
344472 2 cr

8114 Research Propositions in Morphology (prereq #)
742377 2 cr

8134 Comparative Veterinary Neurology (prereq 5100, #)
351888 4 cr

8135 Cmparative Veterinary Neurology (prereq 5100, #)
049769 4 cr

8136 Experimental Comparative Veterinary Neurology (§NSc 8136; prereq 8135, #)
847697 3 cr

8150 Research Problems in Veterinary Anatomy (prereq 8149, #)
245548 1-5 cr

8349 Research in Physiology (prereq #)
542378 ar cr

8448 Problems in Veterinary Pharmacology (prereq 5401, #)
141220 Larson A, Brown D, others, ar cr

8500 Seminar: Veterinary Pathology (prereq 5503, #)
551887 O'Leary T, 1-3 cr

8504 Seminar: Advanced Veterinary Histopathology (prereq 5502, 5503, #)
441823 1530-1700 M, VetS 215, Hayden D, 1 cr

8531 Hospital Pathology (prereq 5501, 5502, 5503, #)
743321 O'Leary T, Hayden D, others, 1-2 cr

8533 Problems: Pathology (prereq #)
052221 Johnson K, Hayden D, others, ar cr

8534 Problems: Clinical Pathology (prereq #)
248031 Weiss D, ar cr

8648 Problems in Veterinary Parasitology (prereq 5602, #)
241449 Stromberg B, ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims
945987 1-18 cr

8700 Seminar: Veterinary Pathobiology (prereq #)
041929 Rutherford M, Weiss D, 1 cr

8716 Colloquium on Current Topics in Avian Immunology (prereq MicB 5216) (A-F only)
574313 Sivanandan V, Nagaraja K, 2 cr

8720 Advanced Veterinary Microbiology (prereq #)
441613 ar cr

8777 Thesis Credits: Masters
049092 1-16 cr

8888 Thesis Credit: Doctoral (max 18 cr per qtr)
148953 1-36 cr

VETERINARY SURGERY, RADIOLOGY, AND ANESTHESIOLOGY (VSRA)
Veterinary Medicine

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
050193 1-18 cr

8777 Thesis Credits: Masters
148144 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
142876 1-36 cr

Vocational Education: See Work, Community, and Family Education.

WATER RESOURCES SCIENCE (WRS)
Natural Resources

R 5101 Water Resources: Individuals and Institutions (A-F only)
874317 1325-1520 MW, AlderH 415, 4 cr

8100 Interdisciplinary Seminar in Water Resources (prereq water resources minor) (A-F only)
773001 1430-1630 W, NatResAd 100, Brezonik P, 2 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
373003 1-18 cr

8777 Thesis Credits: Masters
073005 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
873006 1-36 cr

WOMEN'S STUDIES (WoSt)
Liberal Arts

R 1001 Introduction to Women's Studies (AH; CD)
674061 0930-1200 Th, Phibbs A, 4 cr (Roseville Activity Ctr)

R 3003 Women in World Cultures (SSci; IP)
★LECT 0945-1100 TTh, NichH 213
974762 —1 REC 1115-1205 T, FordH 170, 4 cr
774763 —2 REC 1115-1205 T, FordH 70, 4 cr
574764 —3 REC 1010-1100 W, AmundH 158, 4 cr
374765 —4 REC 1010-1100 W, AmundH 156, 4 cr

R 3104 Feminist Expository Writing (§Comp 3051; prereq fulfillment of writing prac requirement, jr, WoSt maj or min or Δ)
551937 0905-0955 MWF, AmundH 116, 4 cr

R 3202 Biology of Women (Biol/NL)
651749 1820-2050 W, SciCB 325, Zita J, 4 cr

R 3205 Women: A Sense of Identity (§5205)
474062 1810-2110 T, Armory 202, Sundell S, 4 cr

R 3300 Topics: Women in Literature and the Arts: Scandinavian Women Writers (§Scan 5634; max 12 cr)
874060 1245-1400 TTh, FolH 306, Zagar M, 4 cr

R 3400 Topics in Comparative Study of Women (max 12 cr)
772513 —1 1115-1205 MWF, AmundH 158, Desai J, 4 cr (Asian-American Women's Cultural Studies)
274063 —2 1820-2050 W, FordH 285, Darling P, Schunk-Jensen S, 4 cr (American Indian Women)
174064 —3 1820-2050 Th, FordH 115, Abel B, Raham R, 4 cr (German and American Feminisms Since the 1970s)

R 3406 Women, Race, and Class in the U.S. (prereq 1001 or 1002 or 1003 or WoSt maj or #) (SSci; CD)
974065 1820-2050 Th, FordH 150, Miles T, 4 cr

R 3600 Topics in Women's Studies (max 12 cr)
572514 —1 1820-2050 M, FordH 150, 4 cr (Women and Labor Struggles)
774066 —2 1010-1210 W, LindH 303, 4 cr (Career Development for Women's Studies Students: Women and Gender Issues in the Workforce) (prereq jr or sr WoSt maj or minor or #)

R 3606 Community, Service, and Self (3605-3606-3607†; §ID 3206; prereq 3605, #)
073523 1220-1350 W, VinH 20, Rubright R, 2 cr

R 3901H Senior Seminar: Feminist Research Methods (prereq jr or sr WoSt maj, Δ; priority given to graduating seniors)
544373 —80 1325-1555 T, FordH 350, Longino H, 4 cr
348795 —81 1325-1555 Th, FordH 350, 4 cr

R 3960 Field Learning in Women's Studies (max 8 cr; prereq #)
172516 1325-1555 W, FordH 350, Faunce P, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
251379 1-15 cr

R 5101 History of Western Feminism (prereq 1001, 1002)
072517 1115-1230 TTh, FordH 175, Norling L, 4 cr

R 5103 Feminist Pedagogies (prereq 8 cr in women's studies or #)
574067 1820-2050 T, FordH 170, Zita J, 4 cr

R 5200 Topics in Women's Studies: Women's Issues: A Health Perspective (max 12 cr)
573436 1325-1625 T, WDH 2110, 2140, Ringdahl D, 4 cr

R 5201 The Older Woman: A Feminist Perspective (prereq 12 cr WoSt or substantial work in soc sci or psy)
374068 1730-2000 M, AmundH 120, Faunce P, 4 cr

R 5202 Feminist Therapies
545460 1325-1555 Th, FordH 349, Faunce P, 4 cr

R 5501 Women and the Law
174766 1325-1555 F, FordH 170, Jaren C, 4 cr

5970 Directed Studies (max 12 cr; prereq #, Δ, CLA approval)
151349 1-5 cr

R 8103 Feminist Theory in the Social Sciences
872518 1325-1555 W, FordH 150, Maynes M J, 4 cr

R 8511 Feminist Theory and Method (prereq 8510, #)
145857 1430-1700 T, FordH 495, Kaminsky A, 4 cr

8970 Directed Study (prereq completion of courses approved by faculty supervisor and director of grad studies)
348179 1-8 cr

WORK, COMMUNITY, AND FAMILY EDUCATION (WCFE)
Education and Human Development

R 5002 Thinking, Learning, and Teaching in Work, Family, and Community (§FE 5002) (A-F only)
972784 1600-1830 Th, VoTech R380, Thomas R, 3 cr

R 5027 Practicum: Extension Experiences (§AgEd 5027; max 9 cr)
472795 Norenberg C, 2-9 cr

R 5100 Special Topics in Instruction (§VoEd 5100; max 9 cr)
572786 1600-1830 Th, VoTech R285, Kielsmeier J, 3 cr

5101 Special Topics in Curriculum: Rebuilding the Educational System in Pakistan: Case Study of Sind Agricultural University (§EdPA 5128, sec 3; max 9 cr)
674738 1535-1805 W, NichH 209A, Bracewell E, Warner A, 1 cr (Feb 5, 12, 19, 26) (Mpls)

5102 Special Topics in Administration: Cross-Cultural and Comparative Perspectives on The Brazilian Educational System (§EdPA 5128, sec 1; max 9 cr)
474739 —1 1535-1805 T, PeikH 375, Gama, 1 cr (Jan 7, 14, 21, 28) (Mpls)
974941 —2 1600-1830 T, VoTech R390, Leske G, 1 cr

R 5330 Coordination Techniques in Cooperative Education (§AgEd 5071, BME 5352, HEEd 5106, Ind 5310, VoEd 5330) (A-F only)
372787 1845-2115 T, VoTech R385, Leske G, 3 cr

R 5340 Principles of Supervisory Management (§VoEd 5340) (A-F only)
172788 1600-1830 W, VoTech R280, 3 cr

R 5603 Teaching Internship: Classroom Setting (prereq WCFE init lic grad prog or undergrad lic spec) (A-F only)
272796 —1 0905-1100 T, VoTech R380, Peterson R, 2-3 cr (AgEd or FE stu only)
172797 —2 1830-2205 T, VoTech R280, 2-3 cr (BIE stu only)

R 5808 Diversity Issues and Practices (§HRD 5808, VoEd 5808) (A-F only)
072789 1845-2115 W, VoTech R385, Brown J, 3 cr

R 5900 Using Work, Community, and Family Education Research (§VoEd 5900; prereq admission to grad-level prog or #) (A-F only)
372790 1600-1830 T, VoTech 230, Stone J, 3 cr

R 5920 Independent Study (§VoEd 5920; prereq Δ)
172791 1-6 cr

8100 Colloquium (§VoEd 8100)
674741 —1 1430-1700 M, WullH 220, Paige R M, 1 cr (Jan 6, 13, 27, Feb 3) (Mpls)
474742 —2 1430-1700 W, WullH 220, Mestenhauser J, Thomas R, others, 1 cr (Feb 5, 12, 19, 26) (Mpls)

R 8150 Comparative Systems in Education for Work, Community, and Family (§VoEd 8110; PhD and EdD stu in WCFE must reg A-F)
272801 1600-1830 M, VoTech R280, Copa G, 3 cr

R 8886 Doctoral Pre-Thesis Credits (§VoEd 8666; max 18 cr per qtr; prereq EdD stu who has not passed oral prelims)
072792 1-18 cr

R 8810 Internship (§VoEd 8810; prereq Δ) (S-N only)
172802 1-15 cr

R 8888 Thesis Credits: Doctoral (§VoEd 8888; max 18 cr per qtr)
872793 1-36 cr

R 8910 Positivistic Research (§VoEd 8910; prereq 5900 or equiv or #)
674058 1600-1830 T, VoTech R280, Brown J, 3 cr

R 8920 Interpretive and Critical Science Research (§VoEd 8920)
672794 1600-1830 Th, VoTech R385, Phihal J, 3 cr

R 8990 Research Seminar (max 9 cr; only 2 cr will apply to doct prog res core req; prereq 8910 or 8920 or Δ) (S-N only)
772804 —1 1220-1410 W, VoTech R280, Pucel D, 1 cr (alt W)
972803 —2 1900-2100 T, VoTech R250, Copa G, 1 cr (alt T)

Writing: See Composition and Communication; Creative and Professional Writing; English; General College; and Rhetoric.

YOUTH DEVELOPMENT AND RESEARCH (YoSt)
Human Ecology

R 5120 Independent Study in Youth Studies (max 12 cr; prereq #)
645823 Baizerman M, Beker J, others, ar cr

5200 Youth Policy: Enhancing Healthy Development in Everyday Life
646955 1535-1835 W, McNH 198, Baizerman M, 3 cr

ZOOLOGY (Zool)
Biological Sciences

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
146989 1-18 cr

8777 Thesis Credits: Masters
145258 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
152811 1-36 cr

8970 Seminar
945262 0 cr

8980 Special Research
952745 ar cr

8990 Research
250491 ar cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/registrar

COURSES OPEN TO EXTENSION STUDENTS

General Information—The following two lists indicate those day school courses which are open to Extension students. You should use these lists with the course listings which start on page 67.

- Currently enrolled day school students may not register through Extension for day school courses.
- Extension students must meet the same prerequisites as day school students.
- No 8000-level courses are available under this program.
- Occasionally, courses not on these lists are also open to Extension students with written permission from the instructor and the department offering the course.

Registration—If you wish to enroll in these courses through Extension Classes, you must follow the steps outlined in the brochure "A Guide for Registering Through Extension for Day School Classes" or the section on registration procedures in the 1996-97 *Extension Classes Bulletin.* Call 624-2388 for a bulletin, registration forms, and permission slips. The general Extension Classes information number is 625-3333. Information on counseling and program advising is available at 625-2500.

A few spaces are available without written permission in any of the courses listed below which are limited. (Limited-enrollment courses have R before the course number in Section 4 of this *Class Schedule.*) After those spaces are taken, written permission from the instructor is required. Courses which are not limited require written permission only after the first week. Call 625-3333 if you have any questions about permission requirements.

Adult Education: All courses *except* 5205
Aerospace Engineering and Mechanics: All courses
Aerospace Studies: All courses
Afro-American Studies: All courses
Agricultural Education: All courses *except* 3029, 3041, 5090, 5095
Agricultural Engineering Technology: 5027, 5200
Agronomy and Plant Genetics: All courses
Akkadian: All courses
American Indian Studies: All courses
American Studies: 1002, 3111, 3112, 3113, 5102
Ancient Near Eastern: All courses
Animal and Plant Systems: All courses
Animal Science: All courses
Anthropology: All courses
Arabic: All courses
Aramaic: All courses
Art History: All courses
Biochemistry: All courses *except* 5025
Biology: 1009, 1101, 1201 (See other list also.)
Business and Industry Education: All courses *except* 3900, 5500, 5510, 5900
Central Asian Studies: All courses
Chicano Studies: All courses
Child Psychology: All courses
Chinese: All courses
Classical Civilization: All courses
Classics: All courses
Comparative Literature: All courses
Comparative Studies in Discourse and Society: All courses
Coptic: All courses
Croatian and Serbian: All courses
Cultural Studies and Comparative Literature: All courses
Dutch: All courses
East Asian Languages and Literatures: All courses
Economics: All courses *except* 3101, 3102, 3105, 3501, 3701, 5301, 5331, 5401, 5429, 5531, 5701, 5721
Educational Policy and Administration: All courses
English: Creative & Professional Writing: 3102, 3103
English Language & Literature: All courses *except* 3960
Entomology: All courses
Family Education: All courses *except* 5600, 5900
Family Social Science: All courses
Finance: 3601
Finnish: All courses
Fisheries and Wildlife: All courses
Food Science and Nutrition: All courses
Forest Resources: All courses *except* courses offered at Cloquet or Itasca
French: All courses
French and Italian: All courses
Geography: All courses
German: All courses
Greek: All courses
Hebrew: All courses
Hindi: All courses
History: All courses
History of Science and Technology: All courses
Human Resource Development: All courses *except* 5750, 5760
Humanities: All courses
Industrial Engineering/Operations Research: All 1000- and 3000-level courses (See other list for 5000-level courses.)
Insurance: 5100, 5200
Interdisciplinary Archeological Studies: All courses
International Relations: 3900
Italian: All courses
Japanese: All courses
Jewish Studies: All courses
Language, Teaching, and Technology: All courses
Latin: All courses
Learning and Academic Skills: All courses
Linguistics: All courses
Marathi: All courses
Mathematics: All courses
Mechanical Engineering: All 1000- and 3000-level courses (See other list for 5000-level courses.)
Middle Eastern Languages and Cultures: All courses
Military Science: All courses
Modern Greek: All courses
Natural Resources and Environmental Studies: All courses
Naval Science: All courses
Persian: All courses
Philosophy: All courses
Plant Pathology: All courses
Polish: All courses
Political Science: All courses *except* 3085
Portuguese: All courses
Religions in Antiquity: All courses
Russian: All courses
Sanskrit: All courses
Scandinavian: All courses
Slavic: All courses
South Asian Languages and Cultures: All courses
Spanish: All courses
Spanish-Portuguese: All courses
Statistics: All courses
Swedish: All courses
Theatre Arts: All courses *except* 5100
Turkish: All courses
Urban Studies: All courses
Urdu: All courses
Women's Studies: All courses
Work, Community, and Family Education: All courses *except* 5920
Youth Studies: All courses

A Joint Day/Extension Special Permission slip, signed by the instructor and department office, is required in any of the courses listed below which are limited. (Limited-enrollment courses have R before the course number in Section 4 of this *Class Schedule.*) *Courses which are not limited require written permission only after the first week.* Call 625-3333 if you have any questions about permission requirements.

Applied Economics: All courses
Architecture: All courses
Area Studies: All courses
Art: 1510, 1520, 1530, 3301, 3302, 3510, 3530, 3810, 3830, 5310, 5320, 5510, 5530, 5810, 5830
Astronomy: All courses
Biology: All courses *except* 1009, 1101, 1201, 3950H, 3960 (See other list for 1009, 1101, 1201.)
Civil Engineering: All courses
Clinical Laboratory Science: All courses
Communication Disorders: All courses
Composition: All courses
Computer Science: All courses
Dance: All courses
Design, Housing, and Apparel: All courses
East Asian Studies: All courses
Ecology, Evolution, and Behavior: All courses
General College: All courses *except* TRIO-only or CE-only courses, or courses requiring concurrent registration
Genetics and Cell Biology: All courses
Geology: All courses
History of Medicine: All courses
Horticultural Science: All courses
Industrial Engineering/Operations Research: All 5000-level courses (See other list for 1000- and 3000-level courses.)
Industrial Relations: 3002 thru 5006
Interdepartmental Study: All courses *except* 3170, 3180, 3190
Journalism and Mass Communication: 1001, 3741, 5611
Landscape Architecture: 1401, 5562, 5621
Latin American Studies: All courses
Mechanical Engineering: All 5000-level courses (See other list for 1000- and 3000-level courses.)
Microbiology: All courses
Mineral Engineering: All courses
Music: All courses (Does not include Applied Music courses.)
Music Education: All courses
Plant Biology: All courses
Psychology: All courses
Public Affairs: All courses *except* 5011, 5022, 5902
Public Health: All courses *except* 5154, 5159, 5250, 5614, 5649, 5700-5799
Rhetoric: All courses
Russian Area Studies: All courses
Social Work: All courses
Sociology: All courses except 3102, 3802
Speech-Communication: All courses

section 7 exams & grades

FINAL EXAMINATION SCHEDULES

To find when the final exam for each of your courses is scheduled, do the following:

1. Determine the **college through which each of your courses is offered.** (To determine the college, see the last line under the department heading in the course offerings.) Remember: It is the college offering the course that is important, not your college of enrollment. Schedule A, on this page, is for all courses offered through Education, Liberal Arts, Health Sciences, Dentistry, and Public Affairs. All other courses use Schedule B, on the next page.
2. Determine the **beginning time** for each of your courses using the following guidelines:
   - Use the lecture beginning time for your course rather than the lab or recitation times.
   - Each range of beginning times (0800-0859, 0900-0959, etc.) is subdivided into MWF and TTh exam times. Use MWF if your course meets for more than three days per week or if it meets on unusual days. For example, courses that meet MWThF or TWTh or TF would all follow the MWF exam time.
   - If your course meets at different times on different days, use the day earliest in the week. A course meeting 0905-1100 T, 0800-0850 Th, for example, would follow the 0900-0959 TTh exam time.
3. Read across to find the time and day for your final examination using the beginning time for the course and the correct schedule (A or B).
4. Check the list of common exams on the next page to see if any of your courses are listed there. Common examination times *always* take precedence over schedules A and B.
5. Ask your instructor for confirmation of your exam time. Instructors may schedule 3-hour examinations for courses meeting four or more days a week. Instructors may also, with college approval in a very limited number of circumstances, request a change in exam time. See Examination Conflicts, on the next page, for information on conflicts in your final exam schedule.

NOTE: These final examination schedules do not apply to courses offered primarily to students registered in the colleges of Dentistry, Pharmacy, and Veterinary Medicine, Law School, and Medical School, or to 8000-level courses that have no regularly scheduled classrooms.

WINTER QUARTER EXAMS

SCHEDULE A: Winter 1997
Courses offered in Colleges of Education and Human Development; Liberal Arts; *Health Sciences; *Dentistry; Public Affairs

CLASS BEGINS:	EXAM TIME:	CLASS BEGINS:	EXAM TIME:
0800-0859 MWF	1330-1530 Thursday, March 20	1200-1259 TTh	1030-1230 Saturday, March 22
0800-0859 TTh	1600-1800 Thursday, March 20	1300-1359 MWF	1030-1230 Thursday, March 20
0900-0959 MWF	1600-1800 Saturday, March 22	1300-1359 TTh	1600-1800 Tuesday, March 18
0900-0959 TTh	0800-1000 Wednesday, March 19	1400-1459 MWF	1600-1800 Friday, March 21
1000-1059 MWF	1030-1320 Tuesday, March 18	1400-1459 TTh	1330-1530 Friday, March 21
1000-1059 TTh	1330-1530 Tuesday, March 18	1500-1559 MWF	1030-1230 Friday, March 21
1100-1159 MWF	1600-1800 Wednesday, March 19	1500-1559 TTh	0800-1000 Friday, March 21
1100-1159 TTh	1030-1230 Wednesday, March 19	0800-0859 S	0800-1000 Saturday, March 22
1200-1259 MWF	0800-1000 Saturday, March 22	1000-1059 S	1030-1230 Saturday, March 22

*Courses offered primarily to students other than medical or dental students.

Courses which begin anytime from 1730 to 1800 will start at 1815 during exam week.

SCHEDULE B: Winter 1997
Courses offered in Colleges of Agricultural, Food, and Environmental Sciences; Architecture and Landscape Architecture; Biological Sciences; Human Ecology; Natural Resources; General College; Management; Institute of Technology

CLASS BEGINS:	EXAM TIME:	CLASS BEGINS:	EXAM TIME:
0800-0859 MWF	1330-1530 Thursday, March 20	1200-1259 TTh	1030-1230 Saturday, March 22
0800-0859 TTh	1600-1800 Thursday, March 20	1300-1359 MWF	0800-1000 Thursday, March 20
0900-0959 MWF	1330-1530 Saturday, March 22	1300-1359 TTh	1600-1800 Tuesday, March 18
0900-0959 TTh	0800-1000 Wednesday, March 19	1400-1459 MWF	1600-1800 Friday, March 21
1000-1059 MWF	0800-1000 Tuesday, March 18	1400-1459 TTh	1330-1530 Friday, March 21
1000-1059 TTh	1330-1530 Tuesday, March 18	1500-1559 MWF	1030-1230 Friday, March 21
1100-1159 MWF	1330-1530 Wednesday, March 19	1500-1559 TTh	0800-1000 Friday, March 21
1100-1159 TTh	1030-1230 Wednesday, March 19	0800-0859 S	0800-1000 Saturday, March 22
1200-1259 MWF	0800-1000 Saturday, March 22	1000-1059 S	1030-1230 Saturday, March 22

Courses which begin anytime from 1730 to 1800 will start at 1815 during exam week.

Winter Common Examinations—All sections of the following courses are examined together at the time indicated.

Monday, March 17
Acct 1050—1030-1230
BA 1550—0800-1000
BFin 3000—1030-1230
Biol 1009, 1009H, 1101—1030-1230
BLaw 3058—0800-1000
GC 0611, 0616, 0621, 0623, 0625, 0631, 0643—1030-1230
IDSc 3030—0800-1000
Math 1008—1330-1530
Math 1001, 1031, 1038, 1051, 1058, 1131, 1142, 1151, 1251, 1252, 1261, 1351, 1551H, 1552H, 1553H, 3221, 3251, 3252, 3261, 3262, 3354, 3551H, 3552H—1330-1630
Psy 1001—1900-2100
PubH 3001—1830-2130

Tuesday, March 18
Econ 1101, 1101H—1830-2130
Phys 1252—1830-2130

Wednesday, March 19
Econ 1102, 1102H—1830-2130
Ger 1101, 1102, 1103, 1104, 1105, 1106—1830-2030
Span 1101, 1102, 1103, 1104, 1105, 1106—1830-2030

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: See Regulations Regarding Examinations, below.

Examination Scheduling Conflicts—You 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, an F, 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 21 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 in the *Minnesota Daily*.

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 problem, departments are encouraged to limit final examinations to 2 hours. Courses meeting four or more days a week may give 3-hour examinations, however, *provided the instructor notifies the Scheduling Office* of her or his intention to do so on an A123 form. For this quarter, three hour examinations will be scheduled on the respective day the examinations would be given: March 18 (0830-1130); March 19 (1330-1630); March 20 (0830-1130, 1330-1630); March 21 (0830-1130, 1330-1630); March 22 (0830-1130, 1330-1630).

   Departments are also encouraged to request alternate seating only when it is necessary for proper administration of the exam. Requests for rooms for alternate seating must be submitted by the department office on an A123 form.

   Exam times and rooms for courses which begin from 0700-0759 or anytime after 1600 will not be scheduled unless they are requested on an A123 form.

   All A123 forms must be received in the Scheduling Office (150 Williamson Hall for Minneapolis rooms, 130 Coffey Hall for St. Paul rooms) on or before February 7. Notification of room assignments for all A123 forms received by February 7 will be sent to departments on or before March 5.

7. University Senate policy decrees that no extracurricular events which *require* the participation of students may be scheduled from the beginning of study day to the end of finals week. Exceptions to this policy may be granted by the Senate Committee on Educational Policy. The Senate advises all faculty members that students who are unable to complete course requirements during finals week shall be provided an alternative and timely opportunity to do so.

WINTER QUARTER GRADES

Academic Staff—Grades are due in the Office of the Registrar, 150 Williamson Hall (130 Coffey Hall for St. Paul units), within 72 hours after the examination. Grades for this quarter are due beginning Thursday, March 20; the grades for the last examinations are due by 9:30 a.m. on Wednesday, March 26. Messenger service can be requested by calling 625-5069 for Minneapolis service or 624-3731 for St. Paul service when grades are ready. *Do not send grades by mail.*

Students—Grades are available on both the Gopher Student Line and the Student Access System. You can call the Gopher Student Line, 624-5200, from any touch tone phone. Press 1 for grade information. Grades for the last 3 terms are available. Or see page 4 for information on connecting to the Student Access System. Once on the system, use the University Day Coursework and Grades screen to access your grades.

GRADUATION

Undergraduates and students in professional programs (e.g., MEd.) must submit Application for Degree forms to the Service Center, 150 Williamson Hall (130 Coffey Hall for St. Paul students). Most applications for degree do not require payment of a graduation fee but other applicable fees may apply. Students in colleges that select larger diplomas or other enhancements may also be required to pay for those enhancements.

If you fail to apply by the dates listed below, you will not be able to graduate until the following quarter. For information on Graduate School graduation application and commencement deadlines, see page 17.

NOTE: Students in the colleges of Agricultural, Food and Environmental Sciences, and Human Ecology must meet deadlines earlier than those listed below.

DEGREE APPLICATION DEADLINES

QUARTER OF GRADUATION	APPLICATION DEADLINE
Winter 1997	January 13, 1997
Spring 1997	April 11, 1997
Term I, Summer 1997	June 23, 1997
Term II, Summer 1997	July 30, 1997
Fall 1997	October 1, 1997

GRADING POLICIES AND PRACTICES

Compete grading policies and practices can be found on the World Wide Web at http://www.umn.edu/registrar.

ACCESS TO STUDENT EDUCATIONAL RECORDS

In accordance with regents' policy on access to student records and in accordance with federal law, information about you generally may not be released to a third party without your permission. (Exceptions under the law include state and federal educational and financial aid institutions.) The regents' policy also permits you to review your educational records and to challenge the contents of those records. You also have the right to file a complaint with the U.S. Department of Education.

Some student information—name, address, electronic (e-mail) address, telephone number, dates of enrollment and enrollment status (full-time, part-time, not enrolled, withdrawn

and date of withdrawal), major, adviser, college and class, academic awards and honors received, and in the event of your graduation the degree received—are matters of public record or directory information. University officials and departments may provide this information in answer to inquiries without requiring authorization from you. You may prevent release of public information outside the University. The records office on your campus can provide you with information on the procedures necessary to do so.

Students are advised that disciplinary action will be taken if academic records are forged or altered.

The regents' policy, including a directory of student records, is available for review in 150 Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Registrar, 150 Williamson Hall (612/625-5333).

E-MAIL ADDRESSES

To promote communication and facilitate research at the University, all students are assigned electronic mail (e-mail) addresses. E-mail is simply a method of communication that uses computers linked together by a network. Along with e-mail, you also have access to a worldwide computer network called the Internet.

Before you can use your e-mail account or the Internet, you'll need to activate your e-mail account. You can accomplish this via the campus network from either a computer facility on campus or a Microcomputer Help Line. After your account is activated, you can access your e-mail and the Internet in any of the computer facilities around campus or from home. Software for using the Internet is available from Academic and Distributed Computing Services in 152 Shepherd Labs, 93a Blegen Hall, or 58 Biological Sciences Center. Be sure to bring at least five new high density or six new double density disks for the software. In addition, you are encouraged to attend an e-mail orientation. The E-Mail/Internet Help Line, 626-7676, can provide information on orientation times and locations as well as general assistance in activating and using e-mail and other internet software. Hours for the help line are 9 a.m. to 4 p.m., Monday through Friday. You can also obtain assistance by sending e-mail to help@tc.umn.edu.

Rules for Using E-mail—E-mail addresses are assigned to individuals and are not to be shared. You are encouraged to select an obscure password and change it frequently.

Access to and use of e-mail is a privilege and should be treated as such by all users. Computing services, including e-mail, may not be used for illegal or unauthorized purposes including: harassment; destruction of or damage to equipment, software, or data belonging to others; or the disruption or unauthorized monitoring of electronic communications. Using e-mail to participate in illegal acts is itself illegal and may be subject to prosecution by state and federal authorities. Use of e-mail for private business purposes unrelated to the University is not allowed.

You are responsible for using system resources wisely. If you use the system in ways that are judged excessive or wasteful, your access to the system may be taken away, and you may be subject to University disciplinary procedures.

STUDENT RIGHT-TO-KNOW ACT

Students may receive, on request, information about campus security, and graduation and retention rates at the Twin Cities campus. This information is available from the Office of the Registrar, 150 Williamson Hall and 130 Coffey Hall.

section 8 codes, maps, forms

TWIN CITIES COURSE DESIGNATORS

A

Acct	Accounting
AdEd	Adult Education
AdPy	Adult Psychiatry
AEM	Aerospace Engineering and Mechanics
Afro	Afro-American Studies
AgEd	Agricultural Education
AgET	Agricultural Engineering Technology
Agri	Agriculture
Agro	Agronomy and Plant Genetics
AIM	Agricultural Industries and Marketing
Air	Aerospace Studies
Akka	Akkadian
AmIn	American Indian Studies
AmSt	American Studies
ANE	Ancient Near Eastern
Anes	Anesthesiology
AnPh	Animal Physiology
AnPl	Animal and Plant Systems
AnSc	Animal Science
Anth	Anthropology
ApEc	Applied Economics
Arab	Arabic
Arch	Architecture
Area	Area Studies
Arm	Aramaic
ArtH	Art History
ArtS	Art
Ast	Astronomy

B

BA	Business Administration
BAE	Biosystems and Agricultural Engineering
Ben	Bengali
BFin	Finance
BGS	Business, Government, and Society
BIE	Business and Industry Education
BioC	Biochemistry (College of Biological Sciences)
Biol	Biology
BLaw	Business Law
Bldg	Building Sciences
BMEn	Biomedical Engineering
BMSc	Biomedical Science
BPhy	Biophysical Sciences

C

CAPS	Clinical and Population Sciences
CAPy	Child and Adolescent Psychiatry
CAS	Central Asian Studies
CBio	Conservation Biology
CBN	Cell Biology and Neuroanatomy
CDis	Communication Disorders
CE	Civil Engineering
CgSc	Cognitive Science
Chem	Chemistry
ChEn	Chemical Engineering
Chic	Chicano Studies
Chn	Chinese
ChPh	Chemical Physics
CI	Curriculum and Instruction
CIE	Interfacial Engineering, Center for
Clas	Classics
CICv	Classical Civilization
CLit	Comparative Literature
CLS	Clinical Laboratory Science
CmpE	Computer Engineering
Comp	Composition and Communication
Copt	Coptic
CPsy	Child Psychology
CSci	Computer Science
CSCL	Cultural Studies and Comparative Literature
CSDS	Comparative Studies in Discourse and Society
CSDy	Control Science and Dynamical Systems
CVM	Veterinary Medicine

D

Dan	Danish
Dent	Dentistry
Derm	Dermatology
DH	Dental Hygiene
DHA	Design, Housing, and Apparel
Dnce	Dance
DSSC	Development Studies and Social Change
Dtch	Dutch

E

EALL	East Asian Languages and Literatures
EAS	East Asian Studies
Econ	Economics
EdAd	Educational Administration
EdPA	Educational Policy and Administration
Educ	Education
EE	Electrical Engineering
EEB	Ecology, Evolution, and Behavior
EEur	East European Studies
EmMd	Emergency Medicine
Endo	Endodontics
Engl	English Language and Literature
EngW	English: Creative and Professional Writing
Ent	Entomology
Entr	Entrepreneurship
EPsy	Educational Psychology
ES	Environmental Science
ESL	English as a Second Language

F

FE	Family Education
Fin	Finnish
FlMe	Fluid Mechanics
ForP	Forest Products
Fors	Forestry
FoSt	Foreign Study
FPCH	Family Practice and Community Health
FR	Forest Resources
Fren	French
FrIt	French and Italian
FScN	Food Science and Nutrition
FSMg	Foreign Studies Management
FSoS	Family Social Science
FSSP	Foreign Study—SPAN
FW	Fisheries and Wildlife

G

GC	General College
GCB	Genetics and Cell Biology
Geo	Geology and Geophysics
GeoE	Geological Engineering
Geog	Geography
Ger	German
Gero	Gerontology
GPhl	Germanic Philology
Grad	Graduate School
Grk	Greek

H

HCol	Honors Colloquia
HE	Human Ecology
Hebr	Hebrew
HInf	Health Informatics
Hist	History
HMed	History of Medicine
Hndi	Hindi
Hort	Horticultural Science
HRD	Human Resource Development
HSci	History of Science and Technology
HSem	Honors Seminar
HSU	Health Science Units
Hum	Humanities
HumF	Human Factors

I

ID	Interdepartmental Study
IDSc	Information and Decision Science
IEOR	Industrial Engineering/Operations Research
InAr	Interdisciplinary Archeological Studies
InMd	Interdisciplinary Medicine
Ins	Insurance
IntR	International Relations
IofT	Institute of Technology
IR	Industrial Relations

IRel	Interpersonal Relationships Research
Ital	Italian

J

Jour	Journalism and Mass Communication
Jpn	Japanese
JwSt	Jewish Studies

K

Kin	Kinesiology

L

LA	Landscape Architecture
LaMP	Laboratory Medicine and Pathology
LAS	Latin American Studies
LASk	Learning and Academic Skills
Lat	Latin
Law	Law School
LgTT	Language, Teaching, and Technology
Ling	Linguistics
LM	Logistics Management

M

Mar	Marathi
Math	Mathematics
MatS	Materials Science
MBA	Master of Business Administration
MChm	Medicinal Chemistry, Undergraduate
MdBc	Biochemistry (Medical School)
MdGk	Modern Greek
MCDG	Molecular, Cellular, Developmental Biology and Genetics
ME	Mechanical Engineering
Med	Medicine
MedC	Medicinal Chemistry
MedT	Medical Technology
MELC	Middle Eastern Languages and Cultures
MeSt	Medieval Studies
MetE	Metallurgical Engineering
Mgmt	Management
MicB	Microbiology
MicE	Microbial Engineering
Mil	Military Science
MIMP	Microbiology, Immunology, and Molecular Pathobiology
MinE	Mineral Engineering
Mktg	Marketing
Mort	Mortuary Science
MOT	Management of Technology
MSt	Museum Studies
MthE	Mathematics Education
MuEd	Music Education
Mus	Music
MusA	Music Applied

N

Nav	Naval Science
Neur	Neurology
Nor	Norwegian
NRES	Natural Resources and Environmental Studies
NSc	Neuroscience
NSu	Neurosurgery
Nurs	School of Nursing
Nutr	Nutrition

O

OBio	Oral Biology
Obst	Obstetrics and Gynecology
OCS	Off-Campus Study
OMS	Operations and Management Science
OPat	Oral Pathology
Oph	Ophthalmology
ORad	Oral Radiology
OrSu	Orthopaedic Surgery
OSur	Oral and Maxillofacial Surgery
OT	Occupational Therapy
Otho	Orthodontics
Otol	Otolaryngolgy

P

PA	Public Affairs
Path	Pathobiology
PBio	Plant Biology
PE	Physical Education
Ped	Pediatrics
Pedo	Pediatric Dentistry
Per	Persian
Pero	Periodontics
Phar	Pharmacy Practice
Phcl	Pharmacology
Phcy	Pharmacy Interdepartmental
Phil	Philosophy
Phm	Pharmaceutics
Phmc	Pharmaceutics, Undergraduate
Phsl	Physiology
Phys	Physics
PlBr	Plant Breeding
PlPa	Plant Pathology
Plsh	Polish
PMed	Physical Medicine and Rehabilitation
PNI	Psychoneuroimmunology
Pol	Political Science
Port	Portuguese
Pros	Prosthodontics
Psy	Psychology
PT	Physical Therapy
PubH	Public Health

R

Rad	Radiology
RAS	Russian Area Studies
Rec	Recreation, Park, and Leisure Studies
RelA	Religions in Antiquity
RelS	Religious Studies
Rhet	Rhetoric
RSc	Rehabilitation Science
Russ	Russian

S

SACS	Small Animal Clinical Sciences
SAgr	Sustainable Agriculture Systems
SALC	South Asian Languages and Cultures
SALL	South Asian Languages and Literature
SAPh	Social and Administrative Pharmacy
ScAg	Science in Agriculture
Scan	Scandinavian
SciC	Scientific Computation
ScTP	Science and Technology Policy
Skt	Sanskrit
Slav	Slavic
Soc	Sociology
Soil	Soil Science
Span	Spanish
Spch	Speech-Communication
SPFE	Social and Philosophical Foundations of Education
SpPt	Spanish-Portuguese
SpSt	Sport Studies
SST	Studies of Science and Technology
Stat	Statistics
Sum	Sumerian
Surg	Surgery
SW	Social Work
Swed	Swedish

T

TESL	Teaching English as a Second Language
Tgen	Theriogenology
Th	Theatre Arts
TRad	Therapeutic Radiology
Turk	Turkish
Txcl	Toxicology

U

UC	University College
UrbS	Urban Studies
Urdu	Urdu
Urol	Urologic Surgery

V

VDM	Veterinary Diagnostic Medicine
VMed	Veterinary Medicine, Graduate
VPB	Veterinary Pathobiology
VSRA	Veterinary Surgery, Radiology, and Anesthesiology

W

WCFE	Work, Community, and Family Education
WRS	Water Resources Science
WoSt	Women's Studies

Y

YoSt	Youth Development and Research

Z

Zool	Zoology

DIRECTORY FOR DEPARTMENT OFFICES

A

Accounting ..... Mgmt/Econ 645 (624-6506)
Adult Education ..... VoTech 325 (624-1221)
Aerospace Engineering and Mechanics .. AkerH 107 (625-8000)
Aerospace Studies ..... Armory 3 (624-2884)
Afro-American Studies ..... SocSci 808 (624-9847)
Applied Economics ..... ClaOff 231 (625-1222)
Agricultural Education ..... VoTech 325 (624-3010)
Agronomy ..... BorH 411 (625-7773)
American Indian Studies ..... ScottH 102 (624-1338)
American Studies ..... ScottH 104 (624-4190)
Anesthesiology ..... Mayo B515 (624-9990)
Animal Science ..... PetH 120 (624-2722)
Anthropology ..... FordH 215 (625-3400)
Architecture ..... Arch 110 (624-7866)
Art History ..... JonesH 107 (624-4500)
Astronomy ..... Phys 356 (624-0211)

B

Biochemistry (BioC) ..... GortL 140 (624-7755)
Biochemistry (Med) ..... MrdH 4-225 (625-6100)
Biological Sciences ..... SnH 123 (624-9717)
Biology ..... KoltH P180 (625-6636)
Biosystems and Agricultural Engineering . AgEng 213 (625-7733)
Business and Industry Education ..... VoTech 425 (624-3004)
Business, Government, and Society . Mgmt/Econ 835 (624-5232)
Business Law ..... Mgmt/Econ 645 (624-6506)

C

Cell Biology and Neuroanatomy ..... JacH 4-135 (624-1123)
Chemical Engineering and Materials
Science ..... AmundH 151 (625-1313)
Chemistry ..... SmithH 115 (624-0026)
Chicano Studies ..... ScottH 102 (624-6309)
Child Psychology ..... ChDev 104 (624-1891)
Civil Engineering ..... CivE 122 (625-5522)
Classical and Near Eastern Studies ..... FolH 330 (625-5353)
Clinical and Population Sciences .... VetTchHos 225 (625-7755)
Communication Disorders ..... ShevH 115 (624-3322)
Cultural Studies & Comparative Literature . FolH 350 (624-8099)
Composition and Communication ..... LindH 306B (625-2888)
Computer Science ..... EE/CSci 4-192 (625-4002)
Curriculum and Instruction ..... PeikH 125 (625-6372)

D

Dance ..... NorrisH 106 (624-5060)
Dental Hygiene ..... MoosT 9-436 (625-9121)
Dentistry ..... MoosT 15-209 (625-9982)
Dermatology ..... PWB 4-240 (625-8625)
Design, Housing, and Apparel ..... McNH 240 (624-9700)

E

East Asian Languages and Literatures .... KlaCt 192 (624-3331)
East Asian Studies ..... 232 SocSci (624-8543)
Ecology, Evolution, and Behavior ..... Ecology 100 (625-5700)
Economics ..... Mgmt/Econ 1035 (625-6353)
Educational Administration ..... WullH 330 (624-1006)
Educational Policy and Administration .... WullH 330 (624-1006)
Educational Psychology ..... BuH 202 (624-3543)
Electrical Engineering ..... EE/CSci 4-178 (625-3300)
English ..... LindH 207 (625-3363)
English: Creative and Professional Writing LindH 209 (625-6366)
Entomology ..... HodsonH 219 (624-3636)

F

Family Education ..... VoTech 325 (624-3010)
Family Practice, Community Health ..... PWB 6-240 (624-2622)
Family Social Science ..... McNH 290 (625-1900)
Finance ..... Mgmt/Econ 735 (624-2888)
Fisheries and Wildlife ..... HodsonH 200 (624-3600)
Food Science and Nutrition ..... FScN 225 (624-1290)
Forest Products ..... KaufL 203 (624-9219)
Forest Resources ..... GrnH 115 (624-3400)
French and Italian ..... FolH 260 (624-4308)

G

General College ..... ApH 140 (625-6663)
Genetics and Cell Biology ..... BioSci 250 (624-3003)
Geography ..... SocSci 414 (625-6080)
Geology and Geophysics ..... PillsH 106 (624-1333)
German, Scandinavian, & Dutch ..... FolH 205 (625-2080)

H

History ..... SocSci 614 (624-2800)
History of Medicine ..... DiehlH 510 (624-4416)
History of Science & Technology ..... Phys 342E (624-7069)
Home Economics ..... McNH 32 (624-1717)
Horticultural Science ..... AlderH 305 (624-5300)
Human Resource Development ..... VoTech 425 (624-3004)

I

Industrial Relations ..... Mgmt/Econ 537 (624-2500)
Information and Decision Science ..... HHHCtr 395 (624-8030)
Insurance ..... Mgmt/Econ 537 (624-2500)
Interdepartmental Study (CLA) ..... JohH 220 (624-7577)
International Relations ..... SocSci 214 (624-9007)

J

Journalism, Mass Communication ..... MurH 15 (625-0120)

K

Kinesiology ..... CookeH 220 (625-5300)

L

Laboratory Medicine ..... Mayo D242 (625-9171)
Landscape Architecture ..... Arch 125 (625-6860)
Latin American Studies ..... SocSci 232 (624-8543)
Law School ..... Law 285 (625-1000)
Linguistics ..... KlaCt 192 (624-3331)

M

Marketing ..... Mgmt/Econ 1235 (624-5055)
Mathematics ..... VinH 4 (625-4848)
Mathematics Education ..... PeikH 125 (625-6372)
MBA Program, Carlson School ..... HHH 295 (624-0006)
Mechanical Engineering ..... MechE 125 (625-0705)
Medical Technology ..... PWB 15-170 (625-9490)
Medicine ..... PWB 14-110 (625-3220)
Microbiology ..... Mayo 1460 (624-6190)
Middle Eastern Languages and Cultures ... KlaCt 192 (624-3331)
Middle Eastern Studies ..... 232 SocSci (624-8543)
Military Science ..... Armory 108 (624-7300)
Mineral Engineering ..... CivE 122 (625-5522)
Mortuary Science ..... Mayo A275 (624-6464)
Music ..... FergH 100 (624-5740)
Music Education ..... FergH 100 (624-0071)

N

Naval Science ..... Armory 203 (625-6677)
Neurology ..... PWB 12-100 (625-9900)
Nursing ..... WDH 5-140 (624-9600)

O

Obstetrics and Gynecology ..... MoosT 12-211 (626-3111)
Operations and Management Science Mgmt/Econ 332 (624-7010)
Ophthalmology ..... PWB 9th floor (625-4400)
Otolaryngology ..... PWB 8-240 (625-3200)

P

Pediatrics ..... PWB 13-107 (624-4477)
Pharmacology ..... MlrdH 3-260 (625-9997)
Pharmacy ..... WDH 5-110 (624-9490)
Philosophy ..... FordH 355 (625-6563)
Physical Education ..... CookeH 220 (625-5300)
Physical Medicine and Rehabilitation ..... Mayo 860 (626-5961)
Physics ..... Phys 148 (624-7375)
Physiology ..... MlrdH 6-255 (625-5902)
Plant Biology ..... BioSci 220 (625-1234)
Plant Pathology ..... StakH 304 (625-8299)
Plant Physiology ..... BioSci 220 (625-4222)
Political Science ..... SocSci 1414 (624-4144)
Psychiatry ..... Mayo A605 (626-5400)
Psychology ..... ElthH N218 (625-4042)
Public Affairs ..... HHHCtr 225 (625-9505)
Public Health ..... Mayo D305 (626-3500)

R

Radiology ..... Mayo B238 (626-5529)
Recreation, Park, and Leisure Studies .. CookeH 220 (625-5300)
Rhetoric ..... HckrH 202 (624-3445)
Russian Area Studies ..... 232 SocSci (624-8543)
Russian ..... KlaCt 192 (624-3331)

S

Scandinavian ..... FolH 205 (625-2080)
Small Animal Clinical Sciences .... VetTchHos C339 (625-7744)
Social Work ..... FordH 400 (624-5888)
Sociology ..... SocSci 909 (624-4300)
Soil Science ..... BorH 439 (625-1244)
South Asian Languages and Literature .... KlaCt 192 (624-3331)
South Asian Studies ..... 232 SocSci (624-8543)
Spanish and Portuguese ..... FolH 34 (625-5858)
Speech-Communication ..... FolH 460 (624-5800)
Sports Studies ..... CookeH 220 (625-5300)
Statistics ..... VinH 270 (625-8046)
Studio Arts ..... ArtB 208 (625-8096)
Surgery ..... PWB 11-100 (625-1400)

T

Theatre Arts ..... MdbH 204 (625-6699)

U

University College
Intercollege Program (ICP) ..... Armory 107 (324-2004)
Program for Individualized Learning .. Armory 107 (624-4020)

V

Veterinary Biology ..... AnScVM 295K (624-2700)
Veterinary Pathobiology ..... VetS 205g (625-5255)

W

Women's Studies ..... FordH 492 (624-6006)
Work, Community, and Family
Education ..... VoTech 350 (624-1221)

Y

Youth Development and Research ..... McNH 386 (624-3700)

UNDERGRADUATE ADVISING OFFICES

Agricultural, Food, and Environmental Sciences,
College of ..... CofH 277 (624-3009)

Architecture and Landscape Architecture,
College of ..... Arch 110 (626-1000)

Biological Sciences, College of .... SnH 223 (624-9717)
(Please call ahead for an appointment.)

Education and Human Development,
College of ..... 110 Walling Hall (625-6501)

General College ..... ApH 40 (626-8703)

Human Ecology, College of ..... McNH 32 (624-1717)

Liberal Arts, College of
Premajor Offices:
CLA major& preprofessional . JohH B18 (624-9585)
Pre-health sciences ..... JohH 30 (624-9006)
Upper Division College Offices:
East bank departments, adult special,
interdepartmental ..... JohH 114 (624-4545)
West bank departments ... SocSci 122 (624-5848)
Honors Program ..... JohH 115 ((624-5522)
Martin Luther King Program ..... JohH 19 (625-2300)

Management, Carlson
School of ..... HHHCtr 290 (624-3313)

Natural Resources,
College of ..... NatResAd 135 (624-6768)

Nursing, School of ..... WDH 5-160 (624-4454)

Pharmacy, College of ..... WDH 5-110 (624-9490)

Technology, Institute of
Student Affairs Office ..... LindH 105 (624-8504)
Project Technology Power ..... WaLib 339 (625-0219)

University College
Individualized Learning,
Program for (PIL) ..... Armory 107 (624-4020)
Intercollege Program
(ICP) ..... Armory 107 (624-2004)

BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

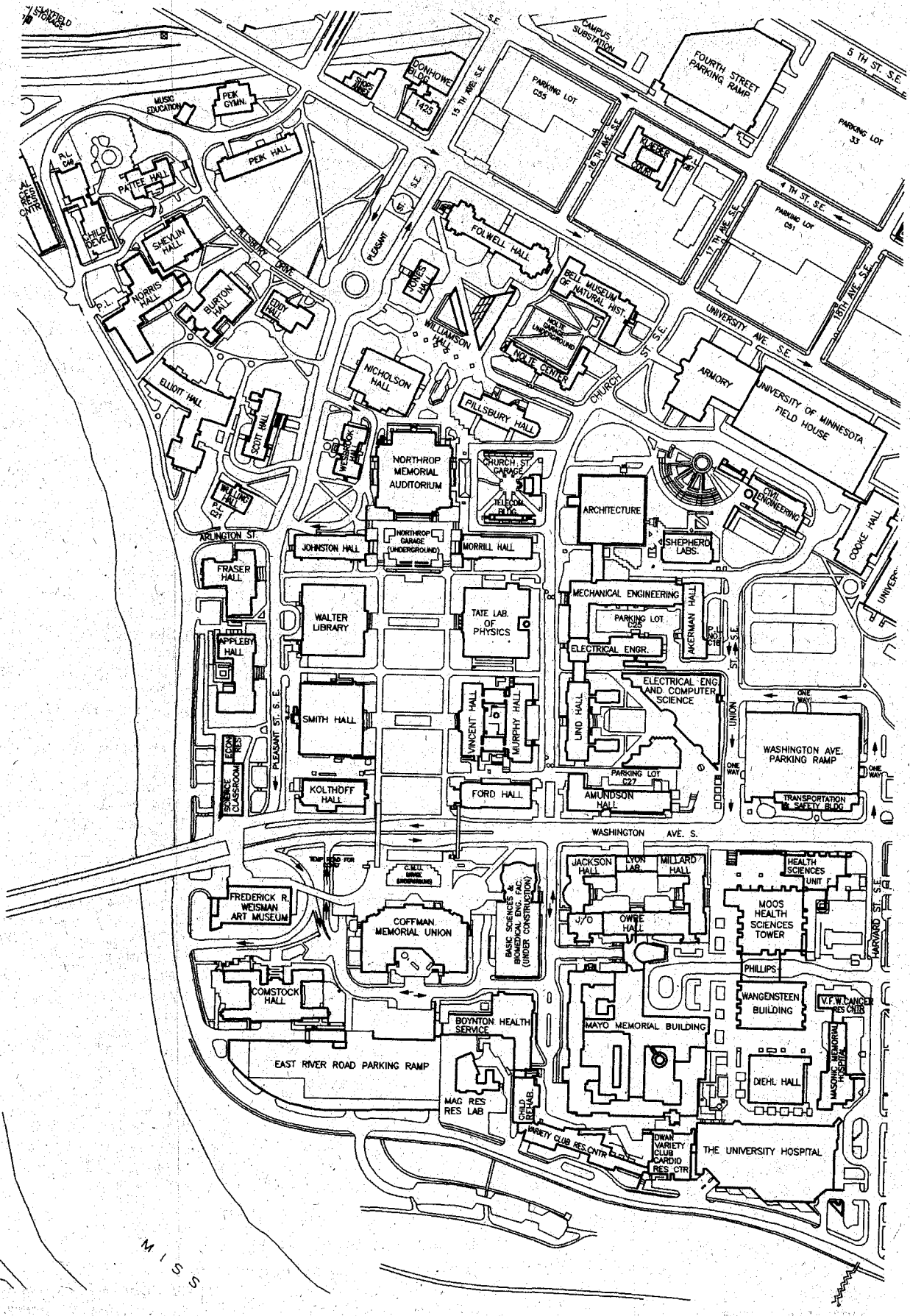
- ○ ABLMS, Andrew Boss Laboratory-Meat Science (SP) *
- ○ AgGhCl, Agronomy Greenhouse Classroom (SP)
- ❑ AgrPGGh, Agronomy/Plant Genetics Greenhouse (SP)
- ❑ AkerH, Akerman Hall (EB)
- ○ AlderH, Alderman Hall (SP) *
- ○ AmundH, Amundson Hall (EB) * R
- ○ AnAren, Animal Arena (SP)
- ❑ AndH, Anderson Hall (WB) * R
- ○ AnScVM, Animal Science, Veterinary Medicine (SP) *
- ○ ApH, Appleby Hall (EB) * R
- ❑ Arch, Architecture (EB) *
- ❑ Armory (EB)
- ❑ ArtB, Art Building (WB)
- ○ BCB, Beef Cattle Barn (SP)
- ○ BellMus, Museum of Natural History (EB) * R
- ❑ Berry, Berry House (SP)
- ○ BFAB, Bierman Field Athletic Building (EB) * R
- ○ BioAgEng, Biosystems and Agricultural Engineering (SP) * R
- ○ BioSci, Biological Sciences Center (SP) * R
- ○ BlegH, Blegen Hall (WB) * R
- ○ BorH, Borlaug Hall (SP) * R
- ○ BoynHS, Boynton Health Service (EB) * R
- ○ BuH, Burton Hall (EB) * R
- ○ CenH, Centennial Hall (EB) * R
- ○ CentLib, St. Paul Campus Central Library (SP) * R
- ❑ ChDev, Child Development (EB) *
- ○ ChRC, Children's Rehabilitation Center (EB) * R
- ○ CivE, Civil Engineering (EB) * R
- ○ ClaOff, Classroom Office Building (SP) * R
- ○ CMU, Coffman Memorial Union (EB) * R
- ○ CofH, Coffey Hall (SP) * R
- ○ ComH, Comstock Hall (EB) *
- ○ CookeH, Cooke Hall (EB) * R
- ○ DiehlH, Diehl Hall (EB) *
- ○ DinC, Dining Center (SP) *
- ○ DVCCRC, Dwan Variety Club Cardiovascular Research Center (EB) * R
- ○ EBCEC, Earl Brown Continuing Education Center (SP) * R
- ○ Ecology, Ecology Building (SP) * R
- ○ EddyH, Eddy Hall (EB) * R
- ○ EdHAn, Eddy Hall Annex (EB)
- ○ EE/CSci, Electical Engineering/Computer Science Building (EB) * R
- ❑ ElectE, Electical Engineering (EB) * R
- ○ EltH, Elliot Hall (EB) * R
- ○ EngFishL, Engineering and Fisheries Laboratory (SP)
- ○ FBComp, Football Complex, 600 15th Ave. SE (EB) * R
- ○ FergH, Ferguson Hall (WB) * R
- ❑ FieldHse, University Field House (EB)
- ○ FolH, Folwell Hall (EB) * R
- ○ FordH, Ford Hall (EB) * R
- ❑ FraserH, Fraser Hall (EB) R *
- ◆ FronH, Frontier Hall (EB) *
- ○ FScN, Food Science and Nutrition (SP) *
- ○ GorL, Gortner Laboratory of Biochemisty (SP) *
- ○ GrnH, Green Hall (SP) * R
- ○ Gym, Gymnasium (SP) * R
- ◆ HayesH, Hayes Hall (SP)
- ❑ HckrH, Haecker Hall (SP)
- ○ HHHCtr, Humphrey Center (WB) * R
- ○ HodsonH, Hodson Hall (SP) * R
- ❑ HrG, Horticulture Greenhouse (SP)
- ○ JacH, Jackson Hall (EB) *
- ○ JOAd, Jackson-Owre Addition (EB) *
- ❑ JohH, Johnston Hall (EB) * R
- ◆ JonesH, Jones Hall (EB)
- ○ KaufL, Kaufert Laboratory (SP) * R
- ❑ KlaCt, Klaber Court (EB)
- ❑ KoltH, Kolthoff Hall (EB) * R
- ○ Law, Law Building (WB) * R
- ○ LindH, Lind Hall (EB) * R
- ○ LyonL, Lyon Laboratories (EB)
- ○ MannConc, Ted Mann Concert Hall (WB) * R
- ○ Mayo, Mayo Memorial (EB) * R
- ○ McNH, McNeal Hall (SP) * R
- ○ MdbH, Middlebrook Hall (WB) * R
- ❑ MechE, Mechanical Engineering (EB) * R
- ○ Mgmt/Econ, Management/Economics Building (WB) * R
- ○ MlrdH, Millard Hall (EB) *
- ❑ MMA, Mayo, Memorial Auditorium (EB)
- ○ MoosT, Moos Health Sciences Tower (EB) * R
- ❑ MorH, Morrill Hall (EB) * R
- ○ MurH, Murphy Hall (EB) * R
- ◆ MusEd, Music Education (EB)
- ○ NatResAd, Natural Resources Administration Building (SP) * R
- ○ NichH, Nicholson Hall (EB) * R
- ○ NMA, Northrop Memorial Auditorium (EB) * R
- ○ NorrisH, Norris Hall (EB) * R
- ○ OMWL, O Meredith Wilson Library (WB) * R
- ○ OwreH, Owre Hall (EB) * R
- ❑ PeikG, Peik Gym (EB)
- ○ PeikH, Peik Hall (EB) * R
- ❑ PetH, Peters Hall (SP)
- ○ Phys, Tate Laboratory of Physics (EB) *
- ◆ PiH, Pioneer Hall (EB)
- ◆ PillsH, Pillsbury Hall (EB)
- ◆ PlSci, Plant Sciences (SP)
- ○ PtH, Pattee (EB) * R
- ○ PWB, Phillips Wangensteen Building (EB) * R
- ○ RarigC, Rarig Center (WB) * R
- ❑ SaH, Sanford Hall (EB) *
- ❑ SciCB, Science Classroom Building (EB) * R
- ◆ ScottH, Scott Hall (EB)
- ○ ShepLab, Shepherd Laboratories (EB) *
- ○ ShevH, Shevlin Hall (EB) * R
- ○ SmithH, Smith Hall (EB) * R
- ○ SnH, Snyder Hall (SP) * R
- ○ SocSci, Social Sciences Building (WB) * R
- ○ Soils (SP)
- ❑ Stad, Stadium (EB) R
- ○ StakH, Stakman Hall of Plant Pathology (SP) *
- ○ StCen, Student Center (SP) * R
- ◆ TerH, Territorial Hall (EB)
- ○ UAqCtr, University Aquatic Center (EB) * R
- ○ UHosp, University Hospital (EB) * R
- ◆ VetA, Veterinary Anatomy (SP)
- ○ VetDL, Veterinary Diagnostic Laboratories (SP) * R
- ❑ VetS, Veterinary Science (SP) *
- ○ VetTchHos, Veterinary Teaching Hospitals (SP) * R
- ○ VinH, Vincent Hall (EB) * R
- ○ VoTech, Vocational-Technical Education (SP) * R
- ○ WaLib, Walter Library (EB) * R
- ○ WBOB, West Bank Office Building, 1300 S. Second Street (WB) * R
- ○ WBU, West Bank Union (WB) R
- ○ WDH, Weaver-Densford Hall (formerly Health Sciences Unit F) (EB) * R
- ◆ Weigley, Weigley House (SP)
- ○ WeismanArt, Frederich R. Weisman Art Museum (EB) * R
- ○ WesH, Wesbrook Hall (EB) * R
- ○ WilleyH, Willey Hall (WB) * R
- ○ WmsA, Williams Arena (EB) * R
- ○ WmsonH, Williamson Hall (EB) * R
- ○ WuH, Wulling Hall (EB) * R

KEY:

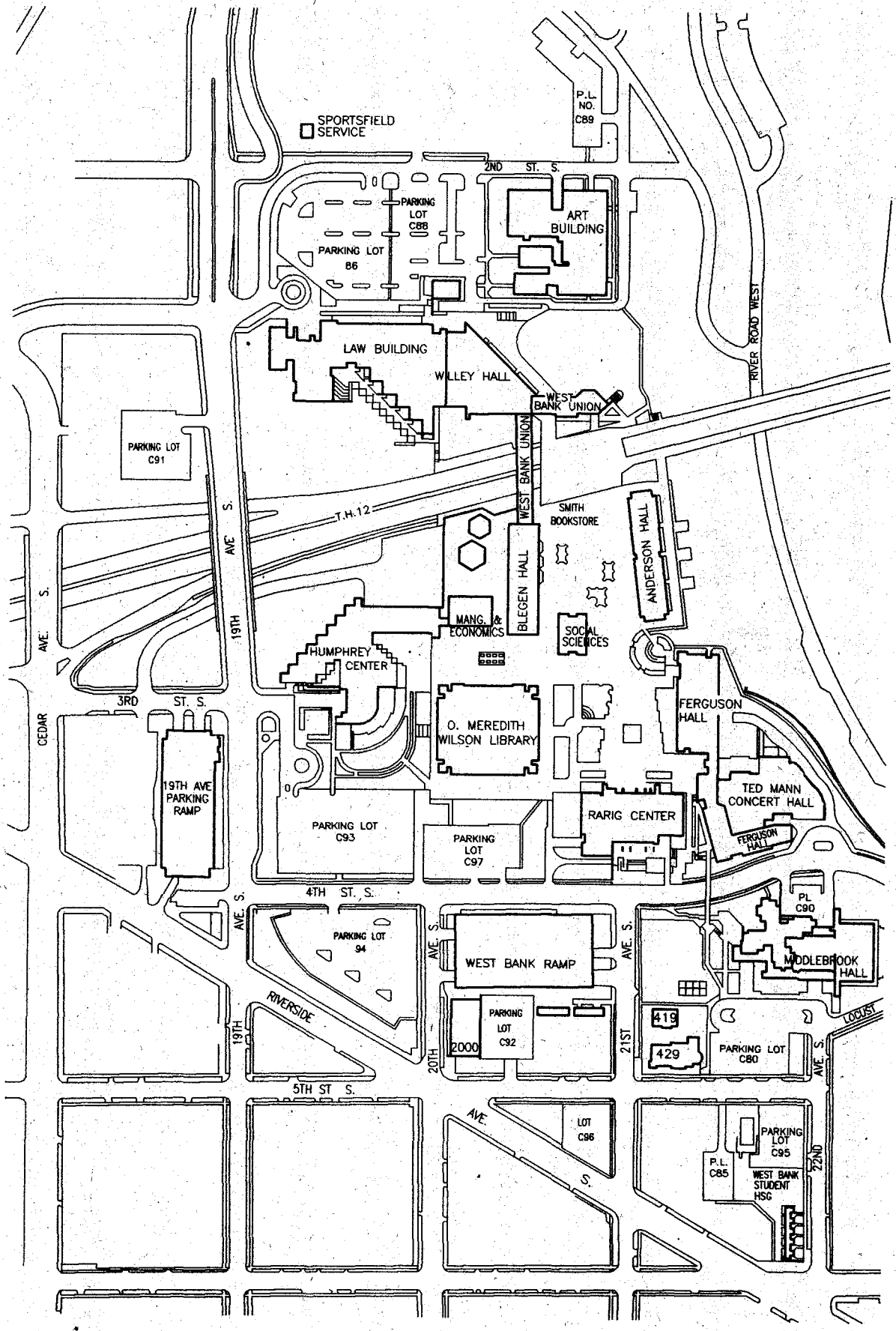
- ○ = accessible building
- ❑ = partially accessible
- ◆ = inaccessible building
- * = elevator

R = adapted restroom
(EB) = East Bank, Minneapolis
(WB) = West Bank, Minneapolis
(SP) = St. Paul

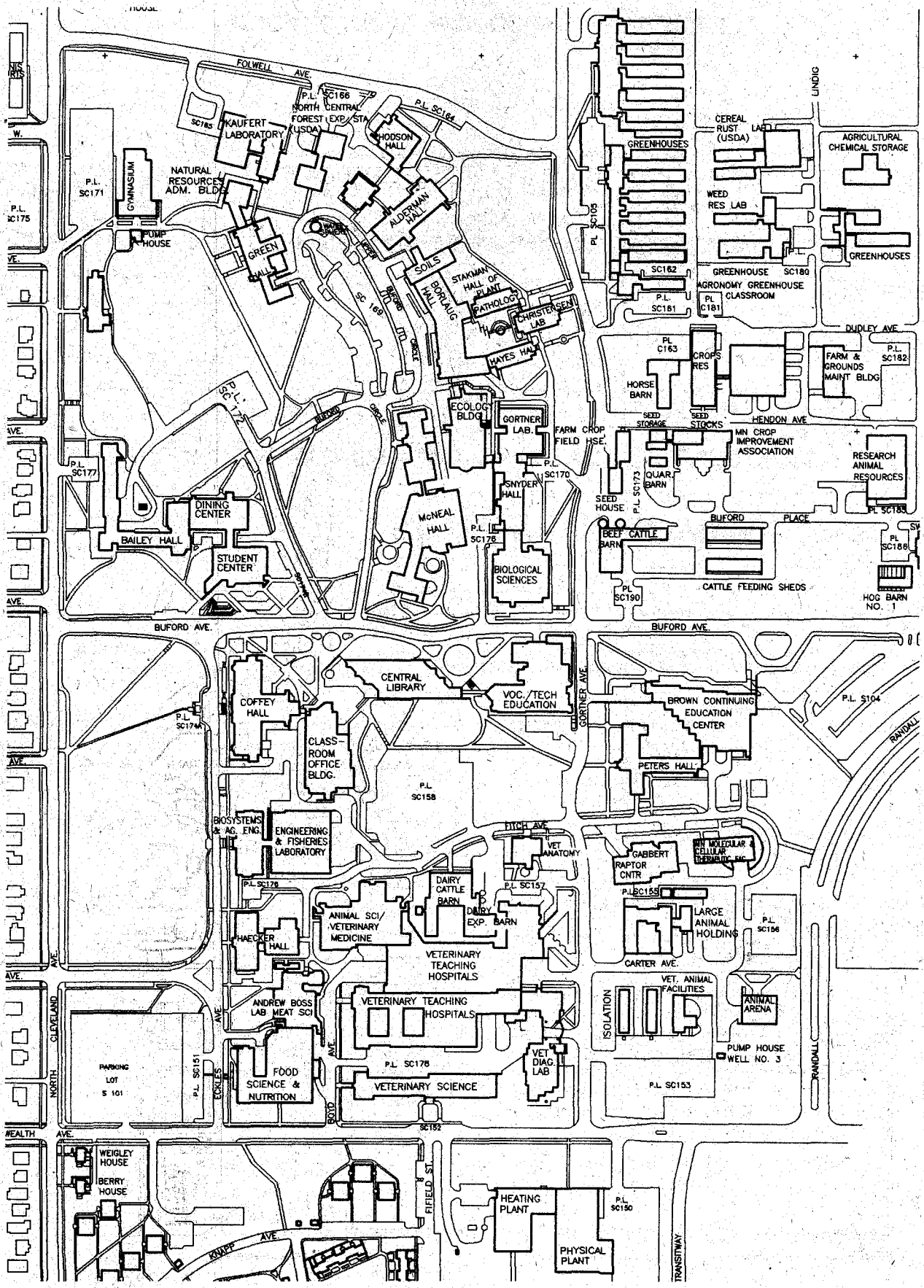
For maps *(Campus Access Guides)* and further information, contact Disability Services at 624-4037 (Voice and TTY).



EAST BANK, MINNEAPOLIS

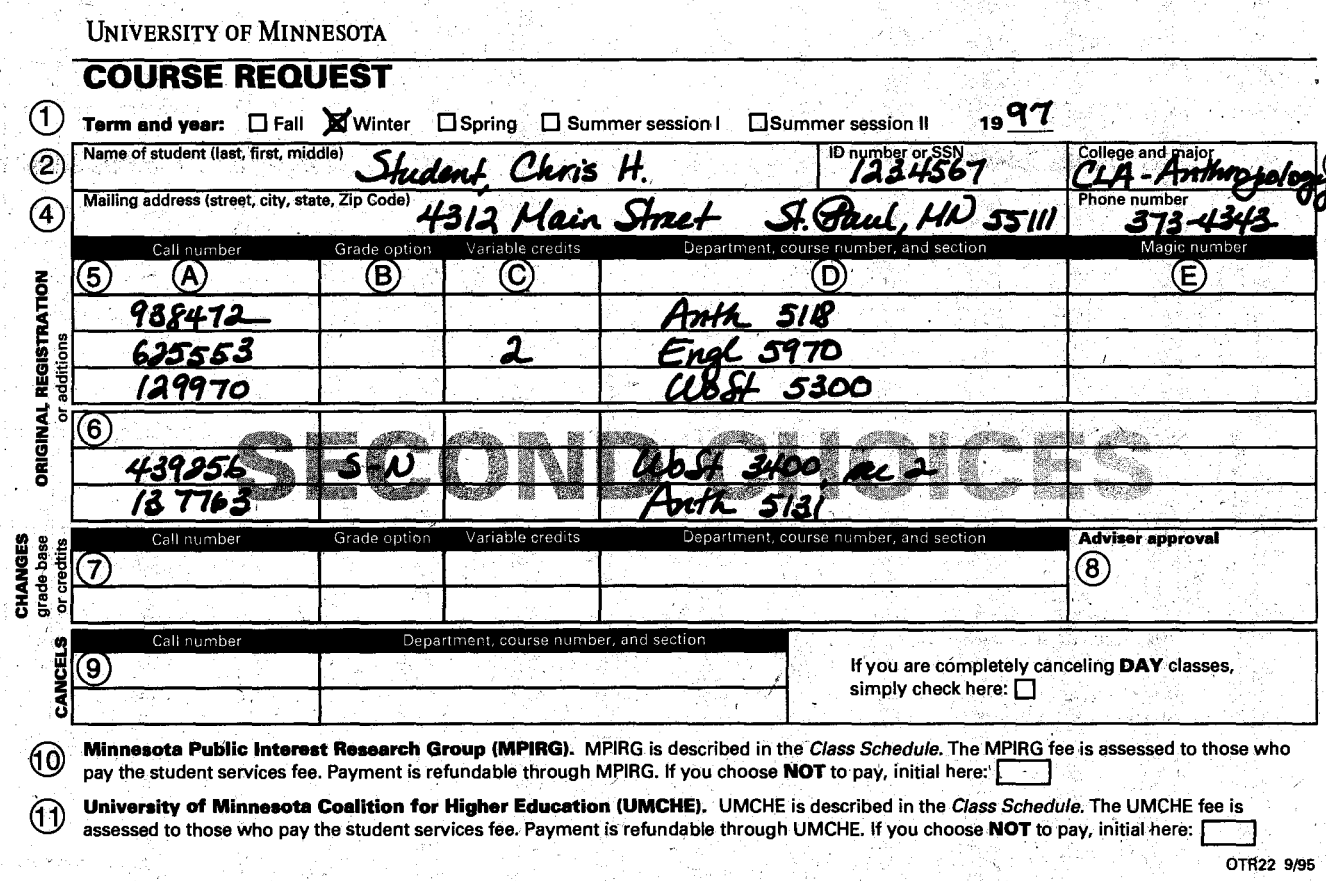


WEST BANK, MINNEAPOLIS


FOLWELL AVE.
KAUFERT LABORATORY
NORTH CENTRAL FOREST EXP. STA. (USDA)
HODSON HALL
ALDERMAN HALL
NATURAL RESOURCES ADM. BLDG.
GYMNASIUM
PUMP HOUSE
GREEN HALL
SOILS
STAKMAN HALL OF PLANT PATHOLOGY
BORLAUG HALL
CHRISTENSEN LAB
HAYES HALL
ECOLOG. BLDG.
GORTNER LAB.
FARM CROP FIELD HSE.
SNYDER HALL
McNEAL HALL
BIOLOGICAL SCIENCES
DINING CENTER
BAILEY HALL
STUDENT CENTER
BUFORD AVE.
GREENHOUSES
CEREAL RUST LAB (USDA)
AGRICULTURAL CHEMICAL STORAGE
WEED RES LAB
GREENHOUSE SC180
AGRONOMY GREENHOUSE CLASSROOM
DUDLEY AVE.
CROPS RES
HORSE BARN
FARM & GROUNDS MAINT BLDG
SEED STORAGE
SEED STOCKS
HENDON AVE.
MN CROP IMPROVEMENT ASSOCIATION
RESEARCH ANIMAL RESOURCES
QUAR. BARN
SEED HOUSE
BEEF CATTLE BARN
BUFORD PLACE
CATTLE FEEDING SHEDS
HOG BARN NO. 1
CENTRAL LIBRARY
VOC./TECH EDUCATION
COFFEY HALL
CLASS-ROOM OFFICE BLDG.
BROWN CONTINUING EDUCATION CENTER
PETERS HALL
GORTNER AVE.
RANDALL
BIOSYSTEMS & AG. ENG.
ENGINEERING & FISHERIES LABORATORY
FITCH AVE.
VET ANATOMY
GABBERT RAPTOR CNTR
MN MOLECULAR & CELLULAR THERAPEUTIC FAC.
DAIRY CATTLE BARN
DAIRY EXP. BARN
ANIMAL SCI/ VETERINARY MEDICINE
HAECKER HALL
VETERINARY TEACHING HOSPITALS
LARGE ANIMAL HOLDING
CARTER AVE.
VET. ANIMAL FACILITIES
ISOLATION
ANIMAL ARENA
PUMP HOUSE WELL NO. 3
ANDREW BOSS LAB MEAT SCI
FOOD SCIENCE & NUTRITION
VETERINARY SCIENCE
VET DIAG. LAB
PARKING LOT S 101
CLEVELAND AVE. NORTH
ECKLES
BOYD
WEIGLEY HOUSE
BERRY HOUSE
KNAPP AVE.
FIFIELD ST.
HEATING PLANT
PHYSICAL PLANT
TRANSITWAY

ST. PAUL

COMPLETING YOUR COURSE REQUEST FORM



UNIVERSITY OF MINNESOTA

COURSE REQUEST

(1) **Term and year:** ☐ Fall ☒ Winter ☐ Spring ☐ Summer session I ☐ Summer session II 19 97

(2) Name of student (last, first, middle): Student, Chris H. | ID number or SSN: 1234567 | (3) College and major: CLA - Anthropology

(4) Mailing address (street, city, state, Zip Code): 4312 Main Street St. Paul, MN 55111 | Phone number: 373-4343

ORIGINAL REGISTRATION or additions

(5) Call number (A)	Grade option (B)	Variable credits (C)	Department, course number, and section (D)	Magic number (E)
988472			Anth 5118	
625553		2	Engl 5970	
129970			WoSt 5300	

(6)

439256	S-N		WoSt 3400 sec 2	
137763			Anth 5131	

SECOND CHOICES

CHANGES grade base or credits

Call number	Grade option	Variable credits	Department, course number, and section	Adviser approval
(7)				(8)

CANCELS

Call number	Department, course number, and section	
(9)		If you are completely canceling **DAY** classes, simply check here: ☐

(10) **Minnesota Public Interest Research Group (MPIRG).** MPIRG is described in the *Class Schedule*. The MPIRG fee is assessed to those who pay the student services fee. Payment is refundable through MPIRG. If you choose **NOT** to pay, initial here: ☐

(11) **University of Minnesota Coalition for Higher Education (UMCHE).** UMCHE is described in the *Class Schedule*. The UMCHE fee is assessed to those who pay the student services fee. Payment is refundable through UMCHE. If you choose **NOT** to pay, initial here: ☐

OTR22 9/95

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

(2) Print your name and student ID number (or Social Security Number).

(3) Print your major and the college in which you are enrolled.

(4) Print your complete address and phone number.

(5) 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-F and S-N.* See example above and read the paragraph on Grading Option on page 65 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.

(E) Print the magic number for each course for which approval is required.

(6) This section is for your second choice course requests. **Plan alternatives for all parts of the course (e.g., lecture, lab, recitation) in case your first choice requests are closed or otherwise unavailable.**

(7) This section is for courses where you are *changing* your grade base or number of credits.

(8) Required approvals, if needed.

(9) Provide the call number, designator, course, and section numbers for any courses you are cancelling.

(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 $2.50. A statewide advocacy group, MPIRG gives the 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.

(11) UMCHE—see instructions on form. University of Minnesota Coalition for Higher Education (UMCHE) lobbies to express student views on University quality, affordability, and accessibility. The UMCHE fee is $1.81 per quarter.

UNIVERSITY OF MINNESOTA

COURSE REQUEST

Term and year: ☐ Fall ☐ Winter ☐ Spring ☐ Summer session I ☐ Summer session II 19 ____

Name of student (last, first, middle)	ID number or SSN	College and major

Mailing address (street, city, state, Zip Code)	Phone number

ORIGINAL REGISTRATION or additions

Call number	Grade option	Variable credits	Department, course number, and section	Magic number

SECOND CHOICES

CHANGES grade base or credits

Call number	Grade option	Variable credits	Department, course number, and section	**Adviser approval**

CANCELS

Call number	Department, course number, and section

If you are completely canceling **DAY** classes, simply check here: ☐

Minnesota Public Interest Research Group (MPIRG). MPIRG is described in the *Class Schedule.* The MPIRG fee is assessed to those who pay the student services fee. Payment is refundable through MPIRG. If you choose **NOT** to pay, initial here: ☐

University of Minnesota Coalition for Higher Education (UMCHE). UMCHE is described in the *Class Schedule.* The UMCHE fee is assessed to those who pay the student services fee. Payment is refundable through UMCHE. If you choose **NOT** to pay, initial here: ☐

OTR22 9/95

UNIVERSITY OF MINNESOTA

STUDENT HOSPITALIZATION INSURANCE

Student name (last, first, middle initial)	Student ID number or SSN

☐ Fall quarter ☐ Winter quarter ☐ Spring quarter

☐ Fall semester ☐ Spring semester

If you are taking 6 or more day school credits, you will automatically be charged for University-sponsored hospitalization insurance unless you check the first box below, fill in the name of your insurance company and policy number, and sign the bottom of this form. If you do not provide complete information, you will be charged for insurance when you register. You may receive a full refund by returning to the Registration Center with complete insurance information **by the end of the first week of classes.** (NOTE: If you are taking 6 or more credits and do not have hospitalization insurance, you do not have to fill out this card.)

☐ **I am adequately covered by the hospitalization insurance indicated below.**

Name of insurance company or HMO	Policy or identification number

☐ **I have applied for and am enrolled in the Graduate Assistant Health-Care Plan.**

Student signature	Date

OTR290 8/93

PROGRAM WORK SHEET

EXAMPLE

Course: AmIn 3242
Room/Building: WullH 130

TIME/DAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
0800-0830 (8-8:30 a.m.)					
0830-0900 (8:30-9 a.m.)					
0900-0930 (9-9:30 a.m.)					
0930-1000 (9:30-10 a.m.)					
1000-1030 (10-10:30 a.m.)					
1030-1100 (10:30-11 a.m.)					
1100-1130 (11-11:30 a.m.)					
1130-1200 (11:30-12 noon)					
1200-1230 (12-12:30 p.m.)					
1230-1300 (12:30-1 p.m.)					
1300-1330 (1-1:30 p.m.)					
1330-1400 (1:30-2 p.m.)					
1400-1430 (2-2:30 p.m.)					
1430-1500 (2:30-3 p.m.)					
1500-1530 (3-3:30 p.m.)					
1530-1600 (3:30-4 p.m.)					
1600-1630 (4-4:30 p.m.)					
1630-1700 (4:30-5 p.m.)					
1700-1730 (5-5:30 p.m.)					
1730-1800 (5:30-6 p.m.)					
1800-1830 (6-6:30 p.m.)					
1830-1900 (6:30-7 p.m.)					

registration options

DAY CLASSES

REGISTRATION . . . . . .

Self-registration

In-person Registration
Locations:
202 Fraser, Minneapolis campus
130 Coffey Hall, St. Paul campus

Dual Registration (for admitted students only)
202 Fraser Hall
130 Coffey Hall
101 Wesbrook

See *Class Schedule* or *Summer Session Bulletin* for dates and times of registration.

Note: Certain students need to register in their program office (e.g., MBA, Medical School, Law School, Dentistry, Veterinary Medicine).

PAYMENT . . . . . .

All tuition and fees are billed through Student Accounts Receivable.

EXTENSION CLASSES

REGISTRATION . . . . . .

Mail Registration

Fax Registration

In-person Registration
Locations:
Wesbrook Hall, Minneapolis campus
MacPhail, downtown Minneapolis
St. Paul Skyway, downtown St. Paul

Dual Registration (for admitted students only)
101 Wesbrook
202 Fraser Hall
130 Coffey Hall

See *Extension Classes Bulletin* for dates and times of registration.

Note: Certain students need to register in their program office (e.g., MBT, Neighborhood Programs, ESL, PSEOA).

PAYMENT . . . . . .

Due at time of registration*

Cash

Check/money order

Credit card (Visa, MasterCard, Discover)

**Exceptions:* Students eligible for financial aid, students whose tuition and fees are being billed to an agency, and students using dual registration will have their tuition billed through Student Accounts Receivable.

PROGRAM WORK SHEET

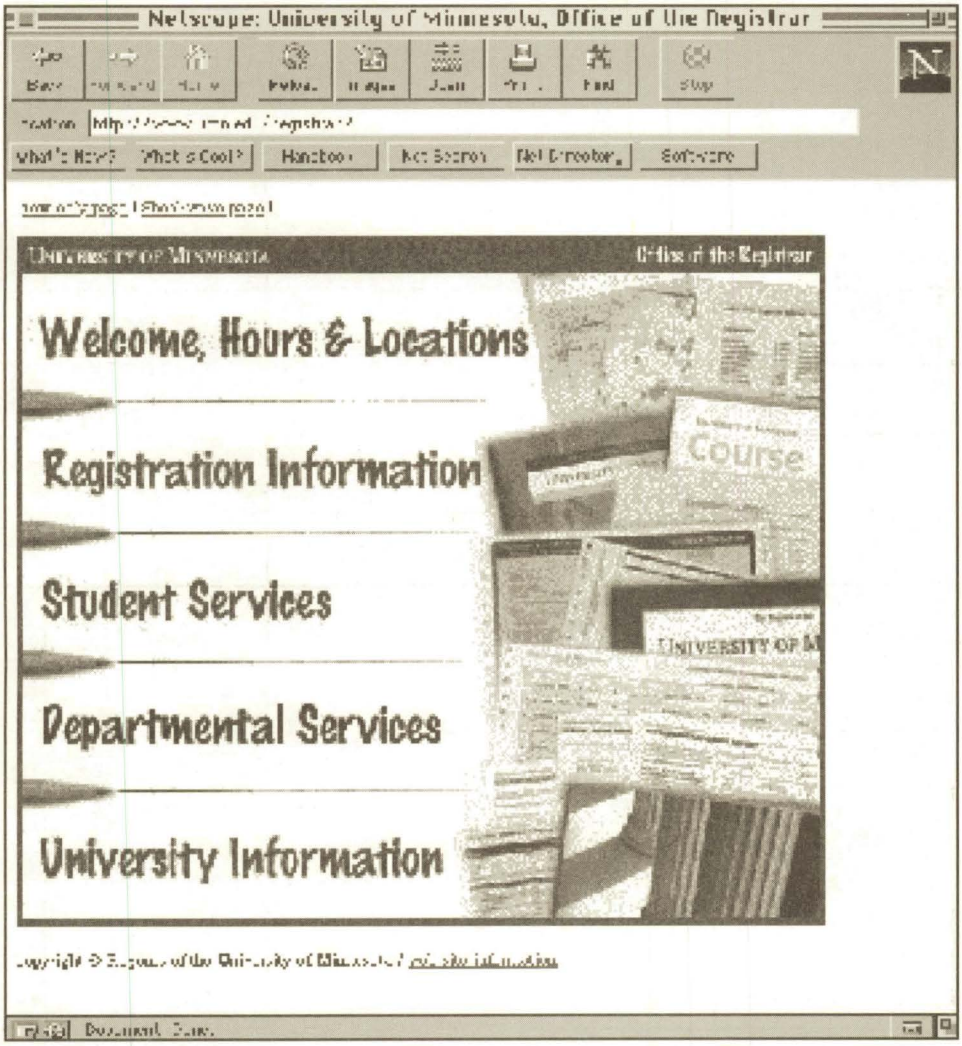
EXAMPLE

Course: AmIn 3242
Room/Building: WullH 130

TIME/DAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
0800-0830 (8-8:30 a.m.)					
0830-0900 (8:30-9 a.m.)					
0900-0930 (9-9:30 a.m.)					
0930-1000 (9:30-10 a.m.)					
1000-1030 (10-10:30 a.m.)					
1030-1100 (10:30-11 a.m.)					
1100-1130 (11-11:30 a.m.)					
1130-1200 (11:30-12 noon)					
1200-1230 (12-12:30 p.m.)					
1230-1300 (12:30-1 p.m.)					
1300-1330 (1-1:30 p.m.)					
1330-1400 (1:30-2 p.m.)					
1400-1430 (2-2:30 p.m.)					
1430-1500 (2:30-3 p.m.)					
1500-1530 (3-3:30 p.m.)					
1530-1600 (3:30-4 p.m.)					
1600-1630 (4-4:30 p.m.)					
1630-1700 (4:30-5 p.m.)					
1700-1730 (5-5:30 p.m.)					
1730-1800 (5:30-6 p.m.)					
1800-1830 (6-6:30 p.m.)					
1830-1900 (6:30-7 p.m.)					

DISCOVER CYBERSPACE

Visit the Office of the Registrar HomePage



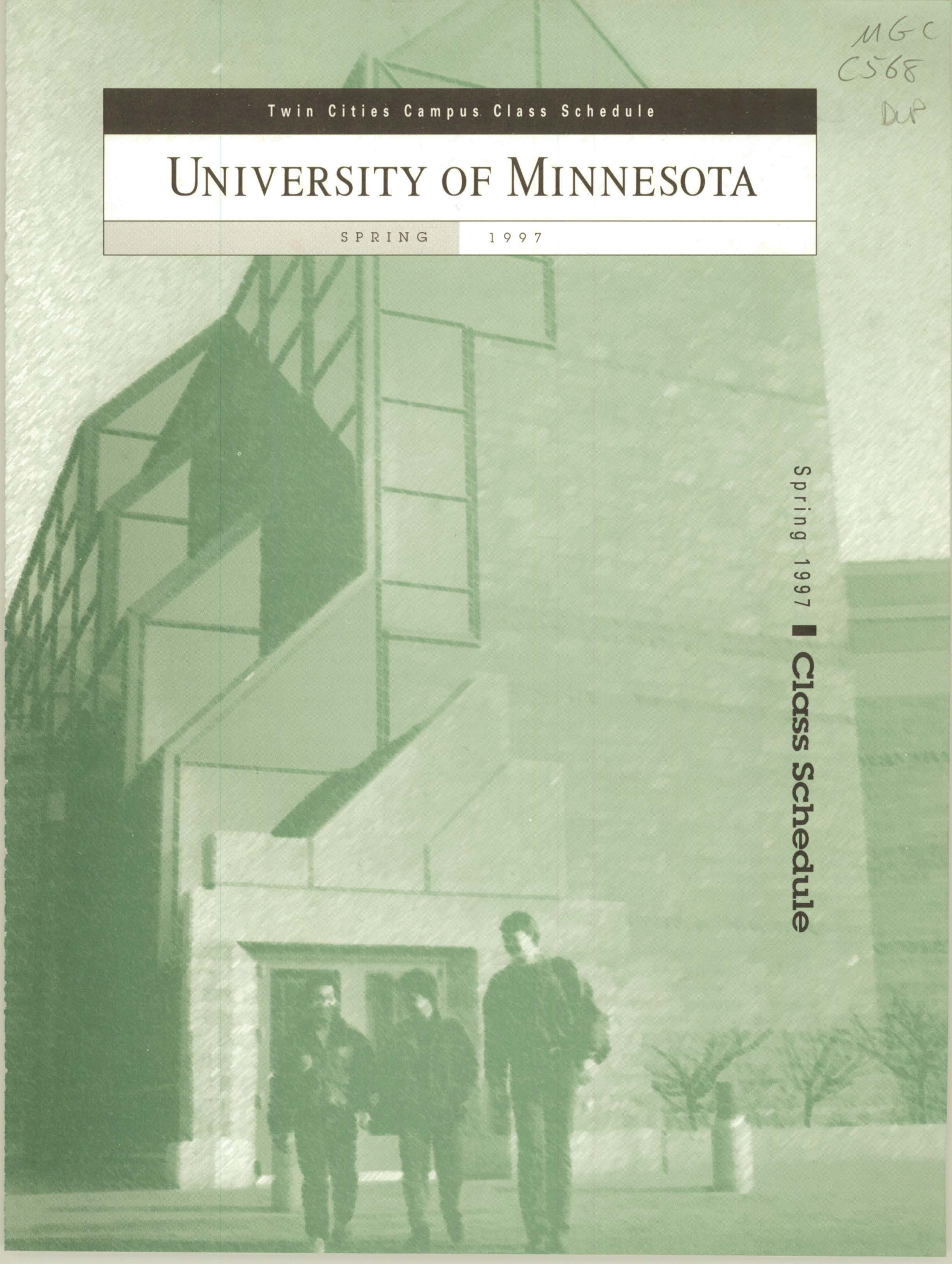
http://www.umn.edu/registrar

MGC
C568
Dup

Twin Cities Campus Class Schedule

UNIVERSITY OF MINNESOTA

SPRING 1997



Spring 1997 | Class Schedule

registration services

REGISTRATION CENTERS

202 Fraser Hall, Minneapolis
130 Coffey Hall, St. Paul
Monday-Friday 8-4:30
(March 31-April 3, April 7-10: 8 a.m.-5:30 p.m., Fraser Hall only.)

For turning in scholarships and obtaining duplicate fee statements; processing in-person registrations, cancel/adds, and payroll deductions; resetting passwords; obtaining unofficial copies of student records.

STUDENT SERVICES

150 Williamson Hall, Minneapolis
Transcript Service, 624-4115
Service Center, 625-5333
Monday-Friday 8-4:30
130 Coffey Hall, St. Paul
624-3731
624-4115 (Transcript information only)
Monday-Friday 8-4:30

Transcript Service—For regular service for official transcripts ($4 charge), rush service for official transcripts ($8 charge), and for unofficial copies of student records (limit one copy per day—no charge).

Service Center—For assistance with individual student record problems, questions; registration services for students with mobility impairments; address changes; certification letters; Veterans certification (Minneapolis only); student loan deferments; turning in Application for Degree forms and Application for Change of College or Status forms. For obtaining maps and miscellaneous publications and information.

WORLD WIDE WEB

The Office of the Registrar has developed an extensive World Wide Web home page on the internet. The address is: **http://www.umn.edu/tc**. The following are available at the registrar's web site: *Class Schedule* information, *Course Guide* information, textbook information, section status reports, registration (http://www.umn.edu/tc/students/registrar/registration.html), Liberal Education requirements, building location maps, and an interactive course planner (all linked). See page 5 for information on registering through the web.

Also available at the site are final exam schedules, the registration queue, self registration instructions, forms for your use, and a GPA computer.

STUDENT ACCESS SYSTEM

You may view your academic record using the on-line Student Access System on the Gopher Information Server (see page 4 for various ways you can get connected to this system). The Student Access System consists of the following screens:

- The *Basic Student Record Information* screen contains information on your address, college, major and adviser, total credits earned, and GPA. Any holds on your record are also displayed, along with addresses for clearance of those holds.
- The *University Day Coursework and Grades* screen contains information on your day school registrations, including your grades, on a quarter by quarter basis.
- The *CEE and Transfer Coursework and Grades* screen contains information on your CEE registrations and on work transferred to the University from other institutions.
- The *Display Course Enrollment Counts and Status* screen allows you to check the current status (open/closed) of day courses.
- The *Registration* screens allow you to change your current mailing address and certain other demographic information, and to register yourself. See page 5 for self registration instructions.
- The *Financial Aid Main Menu* allows you to display some information on the status of your financial aid awards and holds.
- The *Student Accounts Receivable* screens allow you to view your account transactions and billing statements, and also provide other information on your account.

Only use the system to access your own record. Accessing the records of other students is a violation of University policy and state and federal law.

To use the system, you will need to enter your student ID number or your social security number, and your birthdate (if you have not previously changed it) as your password. If your password is still set as your birthdate, you will immediately be sent to the password screen and required to enter a new password before you can proceed. Continue to change your password periodically as you use the system. (If needed, you can have your password reset at a registration center or by calling the Service Center, 625-5333.) The system is available Monday-Thursday, 7 a.m.-12 a.m., Friday, 7 a.m.-10 p.m., and Saturday, 8 a.m.-6 p.m *except* official University holidays.

PUBLICATION INFORMATION

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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, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

In adhering to this policy, the University abides by the Minnesota Human Rights Act, Minnesota Statute Ch. 363; by the Federal Civil Rights Act, 42 U.S.C. 2000e; by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by the Americans With Disabilities Act of 1990; by Executive Order 11246, as amended; by 38 U.S.C. 2012, the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Stephanie Lieberman, Office of Equal Opportunity and Affirmative Action, University of Minnesota, 419 Morrill Hall, 100 Church Street S.E., Minneapolis, MN 55455, (612) 624-9547.

ALTERNATIVE FORMATS

This publication is available in alternative formats upon request. Please call the Office of the Registrar, 625-5333, for assistance.

UNIVERSITY CALENDAR
Twin Cities Campus

Winter Quarter 1997

FEBRUARY 1997

19 Spring *Class Schedules* available.

26 Spring quarter registration begins.

MARCH 1997

14 Last day of instruction.

15 Study day.

17-22 Final examinations.

22 *End of winter quarter.*

Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information.

Spring Quarter 1997

MARCH 1997

28 Floating holiday. University offices closed.

29 Last day to register for spring without paying late registration fee.

31 ***Spring quarter classes begin.***

APRIL 1997

1 Last day for Graduate School students who want to participate in spring commencement ceremony to apply for graduation.

5 Last day to cancel with 100% refund.

11 Last day for most undergraduates and students in professional degree programs to apply for spring quarter graduation (see Graduation in Section 7).

12 Last day to cancel individual course without transcript record.

Last day financial aid recipients can register for spring and have registrations count towards financial aid eligibility. (Students in units that do not follow the regular quarterly schedule should contact their college office for deadlines.)

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

MAY 1997

12 Fall *Class Schedules* available.

15 Summer registration begins for currently enrolled students.

Graduate school application deadline for second term of summer session.

19 Early registration for fall 1997 begins.

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

JUNE 1997

6 Last day of instruction.

7 Study day.

9-14 Final examinations.

14 *End of spring quarter.*

Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information.

Summer Session—First Term 1997

JUNE 1997

17 ***First term classes begin.***

20 Early registration for fall 1997 ends.

23 Last day for most undergraduates and students in professional degree programs to apply for first term graduation (see Graduation in Section 7).

JULY 1997

4 Independence Day, holiday observed. Classes excused and University offices closed.

15 Graduate School application deadline for fall quarter.

22 *End of first term.*

Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information.

Summer Session—Second Term 1997

JULY 1997

24 ***Second term classes begin.***

30 Last day for most undergraduates and students in professional degree programs to apply for second term graduation (see Graduation in Section 7).

AUGUST 1997

27 *End of second term.*

Commencement. Commencement ceremonies are held by colleges once or twice a year. Check with your college office for information.

SEPTEMBER 1997

2 Registration for fall 1997 reopens.

1997

JANUARY

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

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	

MARCH

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					

APRIL

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			

MAY

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

JUNE

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					

JULY

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		

AUGUST

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						

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				

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	

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						

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			

■ First and Last Days of Instruction

□ Final Examination Dates

○ Classes Excused or Holidays

getting connected

CONNECTING TO THE STUDENT ACCESS SYSTEM

The Student Access System is menu item 13 on the Administrative Information Services (AIS) Public Information Menu. There are several ways you can get to that menu.

Directly Connected Terminals—A number of terminals around campus are directly connected to the AIS mainframe and are available for student use. These include terminals in the registration centers (202 Fraser Hall and 130 Coffey Hall), in 150 Williamson Hall, and LUMINA terminals in the campus libraries. (The libraries would like you to use only certain designated terminals for the Student Access System, in order to keep other terminals free for library use.)

Gopher—You can attach via Gopher. From the Home Gopher select *University of Minnesota Campus Information* and then select *Office of the Registrar.* Finally, choose *Student Access System.*

Dial Up—You can dial up from home, using a modem and communication software. Follow either of the procedures outlined below.

① **Dial 626-1920 using slip software.** Once you are connected to the University's modem pool:

- The system will return a long message asking, at the end, for your *user name.*
- Type your complete **e-mail address** and press **Enter** (type vonm0001@gold.tc.umn.edu, for example).
- The system will prompt you to enter your *password.*
- Type your **e-mail password** and press **Enter**.
- The system will prompt you to enter a *slipserver.*
- Type **tn3270 pubinfo.ais.umn.edu** and press **Enter**.
- The system will connect you to the AIS Public Information Menu.

② **Or dial 625-6009 using terminal emulation software** such as Crosstalk, SmartCom, ProComm, TinCan, or MacTerminal to connect directly to the computer at AIS. (If you have a high speed async V32/V42 class modem, dial 624-7539.) Additional parameters include:

data bits: 8
parity: ..... none
stop bits: 1
duplex: ..... full

Once you are connected to the computer at AIS, follow this log-on procedure:

- Press the **Enter** (or **Return**) key. You may need to press the key more than once before you receive a response.
- The system will return a message: *Enter terminal type.*
- Type **vt100** and press **Enter** (or **Return**).
- The system will return a message: *Please type in pa and press enter.*
- Type **pa** and press **Enter** (or **Return**).

Internet—If you have access to the internet, either using a computer connected via ethernet—such as the computers in the Computer and Information Services (CIS) microcomputer labs (see below for a list of labs)—or dialing in using SLIP software, you can connect to the system without going through Gopher. The address of the AIS computer is pubinfo.ais.umn.edu (or 128.101.109.1). If you are using TN3270, choose one of the items identified as "PubInfo" in the TN3270 Settings folder. If you are using Telnet, enter 63 when you are prompted to enter a terminal type.

Telnet users note: Access through the internet works better using TN3270 than using Telnet software. If you use Telnet, your function key will probably not work. Instead, you can use the command field in the lower right hand corner of each registration screen to key in a function type (e.g., F1) and then press Enter. The function type number is listed on the screen (F1-F9 for PF1-PF9, F0 for PF 10, FA for PF11, and FB for PF12). Also check to make sure that the Line Wrap setting is Yes and that the keyboard layout that you are using allows use of the Tab key to move from field to field. You may be able to view the keyboard map by keying #help and pressing Enter.

CIS Lab Locations—You can use any of the following CIS microcomputer and network terminal facilities to connect to the Student Access System:

East bank: DiehlH 278; EE/CSci 3-166 (IT students have priority use); EltH 121; FolH 14; LindH 1, 26 (LindH 26 frequently scheduled for classes); MechE 308; NichH 1; Phys 130 (IT students have priority use); WaLib 9.

West bank: HHHCtr 50; BlegH 455.

St. Paul: CentLib B40, B50; ClaOff 17, 135; McNH 305 (frequently scheduled for classes).

For information on hours and availability of the above facilities, call the E-Mail/Internet Help Line, 626-7676, 8-5 Monday-Friday.

Getting Software—TN3270, Telnet, Gopher, TinCan, ProComm (and other communication software), and SLIP software are available from CIS. TN3270, Telnet, and Gopher for both Macintosh and DOS computers, and SLIP software for DOS, are available on the CIS file servers. SLIP software for the Macintosh and communications software such as TinCan and ProComm must be obtained in person at a CIS Micro Helpline office—be sure to bring 5 high density or 6 double density disks for the software.

Questions?—For help with the Student Access System, call 626-4276.

section 1 registering yourself

GENERAL INFORMATION FOR SELF REGISTRATION

Registration is available in two formats: on the World Wide Web (using Netscape Navigator, version 2.0 or higher) and on the Student Access System, an option on the Public Access Information Menu. The system is available Monday-Thursday from 7 a.m.-12:00 a.m., Friday from 7 a.m.-10 p.m., and on Saturday from 8 a.m.-6 p.m. *except* on official University holidays. In-person registration is also available at the registration centers—see page 7 for more information.

Web Registration—The address for web registration is http://www.umn.edu/tc/students/registrar/registration.html. For assistance with web registration, use the help buttons listed on the registration screens.

Student Access System Registration—Registration instructions for the Student Access System screens are listed below. For additional help, refer to the section General Instructions for the Student Access System, below, or call the Service Center, 625-5333, Monday through Friday, 8-4:30, to talk to staff from the Office of the Registrar.

Public Access Menu—Type 13 and press enter.

Student Access System Initial Entry—Type your ID number or Social Security Number and press enter. Type your password. NOTE: Your password is originally set to your birthdate (e.g., June 10, 1976 is 061076).

Change Password—Type a new password and press enter. Type your new password again and press enter.

Student Access Primary Option Menu—Type 5 (registration) and press enter. New students go to the *Registration Printer Selection* screen (see below). Continuing students press F10 for printer selection at the *Registration Student Demographic Data* screen.

Registration Printer Selection—Type x in the space before the location of your printer and press enter.

Registration Student Demographic Data—Check all address information to see that it is correct. Make any necessary changes and press enter. Press F4 to continue.

Registration Eligibility—If this screen says Eligible to Register, press enter.

Course Enrollment—Add your courses. Type the 6-digit call number only and press enter. Add each course this way. When all course additions have been completed, press F4 to continue. To drop (cancel) a course, type d in the select field next to the course and press enter. (Do not type information for cancellations in the top line.)

Tuition and Fee Assessment—Check fee details. Change any optional fees (hospitalization insurance, MPIRG, UMCHE) as desired. Add insurance information at the bottom of the screen. MPIRG and UMCHE are described on page 164. Press F4 to complete your registration and print your fee statement.

***Registration Event Completion Updates*—You have completed your registration or cancellation when this screen notifies you that your registration transactions are complete and your course selections are confirmed.**

REMEMBER: You are responsible for the accuracy of your course enrollment and fee information. When you register yourself you are still subject to all University and college regulations. You must register by March 29 to avoid a late registration fee. Students who register from March 31-April 12 will be charged a $20 late registration fee. Students who are permitted to register on or after April 14 will be charged a $40 late registration fee. Read the registration information on pages 7-11 in Section 2 of this *Class Schedule* before you begin registration. You may also find it helpful to complete a registration form (page 165) before your start.

GENERAL INSTRUCTIONS FOR THE STUDENT ACCESS SYSTEM

Entering Data and Moving Between Screens—To enter data (change your address, add a course, etc.), type the appropriate data and press **Enter** (or **Return**). After entry, the screen will return, showing the change or giving a confirmation message. The most common confirmation message is TRANSACTION COMPLETED. If there are several items to enter or change on a screen, you can type all of the data, then press **Enter** once.

To move from one screen to another, press **Enter** or a function type. Function keys are usually referred to as **PF** or **F** keys, with a number associated (such as **F1** or **PF1**). Screen instructions will indicate the keys to press on each screen. Since the location and combination of keys required for function keys varies with different hardware and software, another means of specifying a function type is provided. Every screen contains a **COMMAND** field in the lower right corner. To enter a function type command, type **F**, followed by the function type number or letter (**F1-F9** for PF1-PF9, **F0** for PF10, **FA** for PF 11, **FB** for PF12) in the **COMMAND** field, then press **Enter.**

Exiting and Timing Out—It is extremely important to exit the student access system when you are done using it (whether registering or viewing your record). To exit, type **XQ** and press **Enter.** When registering, you must first complete your transaction by creating your enrollment statement (see above) *or* back out of your changes by pressing **F6** or using the **F6** command from the Course Enrollment screen. You can then enter **XQ.** Unless you exit the system, your record can be accessed by someone else when you leave the terminal. **Protect yourself by always exiting the system when you finish!**

If you do not create any activity within a five minute period, you will be logged off the system. Activity is generated when you press **Enter** or a function type.

SCREEN-SPECIFIC INSTRUCTIONS

Registration Screens (Student Access Menu Option 5)

Problems with Adding Courses—If the system is unable to process your transaction, explanatory messages will appear in the top portion of the screen. Some of the messages you may see include:

- SECTION CLOSED, PRESS PF2 TO DISPLAY OPEN ALTERNATE SECTIONS *or* SECTION CLOSED, NO OPEN ALTERNATE SECTION EXISTS—If you are trying to register for a closed course, the system will determine if there are other sections of the course that are still open and reflect that in the message. If you have been given a magic number by the instructor or department, enter that code in the magic number field (under your name) and press **Enter.** Press **F2** or use the **F2** command and press **Enter** to access alternate sections on the Course Status Display screen.
- TIME CONFLICT WITH OTHER COURSE: USE ACTION OF T TO ADD THIS SECTION ANYWAY—If you are trying to register for a course that overlaps with another course already on your schedule (or comes within 10 minutes of overlapping), the overlapping course will be highlighted. If you still want to register for the course, type **T** over the **A** in the action field (not in the magic number field) and press **Enter.**
- COURSE ENTRY REQUIRES APPROVAL OF (followed by INSTRUCTOR, DEPARTMENT, COLLEGE, or GRAD SCHOOL)—You do not meet the entry requirements for the course, or all students need permission to register for the course. College approval is obtained from the college that *offers* the course, not necessarily the college in which you are enrolled. If you have been given a magic number for the section, enter that code in the magic number field (under your name) and press **Enter.**

Duplicate Enrollment Statement Screen—This screen allows you to print a copy of a enrollment statement that has already been created or send a copy to yourself via e-mail. To print, you will need go to the Printer Selection screen using **F10** or **F0** and select a printer. Then, from the Student Demographic Data Screen, use **F2** to move to the Duplicate Enrollment Statement screen.

TROUBLESHOOTING

The Student Access system rarely goes down, but if the system goes down while you are registering (or you accidently end your connection), you must log back on to complete your registration. Your course selections will be held to give you a chance to complete your registration. Access the system and complete your registration as soon as possible. Wait five minutes, then attempt to log back on. If successful, select registration and proceed to the point at which you lost your connection and complete your registration. You will also be logged off if you are in registration when the system is taken down at the end of the day. If the system has shut down for the day, complete your registration the next day.

If you continue to have problems accessing registration or the Student Access system, contact the Office of the Registrar in one of the following ways:

- By phone: Call the Service Center, 625-5333 (8 a.m.-4:30 p.m. weekdays).
- Visit one of the registration centers (202 Fraser Hall or 130 Coffey Hall) to have a staff member help you or to complete your registration.
- E-mail a message to registrar@gold.tc.umn.edu. If you send e-mail, send your name, file number (student ID number), phone number (and a suggested time to reach you), and a thorough explanation of the problem, including the name of the screen on which the problem occurs and any messages on that screen. If your problem seems easy enough to correct with written instructions, you will receive a reply via e-mail.

section 2 registration info

USING THE REGISTRATION CENTER

Step 1 **Complete the registration check list on this page.**

Step 2 **Bring your Course Request form and this *Class Schedule* to any registration center.** You may register in 202 Fraser Hall or 130 Coffey Hall, whichever is more convenient for you. Students with mobility restrictions (including temporary problems) can also register in 150 Williamson Hall.

Step 3 **Review all information on your enrollment statement for accuracy before you leave the registration center—name, address, course information, and fees.** See pages 23-25 for complete information on paying your fees.

LATE REGISTRATION FEE

You must register by March 29 to avoid a late registration fee. Students who register from March 31-April 12 will be charged a $20 late registration fee. Students who are permitted to register on or after April 14 will be charged a $40 late registration fee.

STUDENT RESPONSIBILITY

The policies in this *Class Schedule* directly affect your registration. You are responsible for all the information contained in this book: avoid potential problems by reading carefully through the various sections of this schedule and by checking the prerequisites of all your courses. You can receive credit only for those courses for which you are properly registered. Likewise, you must pay for any course for which you register unless you officially cancel on-line (your cancellation is not complete until you create a enrollment statement) or at your registration center during the 100% refund period. If you cancel after the 100% refund period, you must pay for any portion of the course for which you do not receive a monetary credit. In addition, if you attend a class without registering for it, you will be considered an auditor in the course and will be billed for full tuition and fees.

The general registration instructions in this book apply to all students. Students in the College of Liberal Arts, the College of Education, the Carlson School of Management, and the Graduate School, and *all* international students have specific registration instructions printed on pages 7-11. In addition, your course of study falls under policies established by your college. These policies are contained in your college bulletin and in other publications issued by your college. You are also responsible for knowing and following the policies of your college.

To prevent misunderstandings and errors in registration, you should register yourself. If you cannot register yourself, you can have someone register at a registration center for you with your written permission and student ID card.

REGISTRATION CHECK LIST

☑ **A Registration Check List**—Run through this check list before you register on-line or before you go to your registration center. You will be able to avoid frustrating delays by following these hints:

☐ **Fill out a Course Request form completely.** (A Course Request form can be found on page 165.) Be sure to list a new address on the form if you have moved or have a new local address. List alternate courses in case your first choices are not available. Obtain on-line instructor or college approval as required.

☐ **Do you know the name and policy number of your hospitalization insurance company or HMO?** Unless you provide this information on the Student Hospitalization Insurance Form (on page 165), or provide or verify this information on the tuition and fee assessment screen when registering yourself, you will **automatically** be charged for University-sponsored hospitalization insurance if you take 6 or more credits. See Health Service and Hospitalization Charges, page 18, for more information.

☐ **Have you checked the Section Status Report to see if space is available in limited-enrollment courses (R before the course number)?** Check the report on the World Wide Web (http://www.umn.edu/tc/courses). Click on the section status report. The report is updated at the end of the previous day. Or check for current information on the Student Access System. (See page 4 for information on the Student Access System.)

☐ **Do you need any Magic Numbers?** Is there a # or Δ or ❑ in the prerequisite statement of your course? Are you trying to register in a closed course? After the first week of classes? Remember: You must have a magic number to register in these courses.

☐ **Do you have any holds you need to clear?** You will not be able to register if you have any holds on your record. Clear your holds as soon as possible. See Holds, page 8, for further information.

☐ **Do you have specific college instructions to review?** Students in the College of Liberal Arts, the College of Education, the Carlson School of Management, and the Graduate School, and *all* international students have specific registration instructions printed on pages 7-11.

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:

Web registration available! . . . . . page 5

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.

Because this *Class Schedule* was prepared in December, scheduling changes may also occur before or during registration. Registration terminals always contain the most current and accurate information. Hour and day changes are published in the Official Daily Bulletin, a column in the *Minnesota Daily,* and on the World Wide Web at http://www.umn.edu/tc/courses/schedule.html. Room changes are posted on classroom doors.

CREDIT LIMITS

Many units restrict the number of credits students may take each quarter without special permission. The table below lists all such restrictions. Contact your college office for informations on approvals required to take more than the maximum number of credits. If your unit is *not* on the table below (i.e., Health Science units), there is no limit to the number of credits you may take each quarter.

CREDIT LIMITS FOR COLLEGES

UNIT	CREDIT LIMITS
General College; University College; Graduate School	18 credits
Architecture and Landscape Architecture; Biological Sciences; Institute of Technology	19 credits
Education and Human Development; Liberal Arts; Management	20 credits
Agricultural, Food, and Environmental Sciences; Human Ecology; Natural Resources	21 credits

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 tuition or fees, unpaid library fines, 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, is available from the Gopher Student Line, 624-5200, and also appears on the Student Access System (see page 4).

To remove a hold from your record, you must first pay the debt owed, correct the scholastic deficiency, or be cleared by Student Judicial Affairs. 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, the unit imposing the hold will electronically remove the hold from your record. (In some cases, you may be given a paper release. You must then take this release to a registration center.) Units may, on occasion, issue *temporary hold releases.* Temporary releases will allow you to either receive one transcript or to register during the quarter in progress.

If, in order to register, you pay a Student Accounts Receivable hold for a previous quarter with a personal check, and that check does not clear the bank, you will be sent a notice by Student Accounts Receivable. Your current registration may be cancelled if you fail to respond to this notice and pay your debt.

DISABILITY SERVICES

Disability Services can assist disabled students in accessing campus employment, courses, programs, facilities, services, and activities by providing services such as disability documentation, information, referral, and reasonable accommodations (i.e., interpreters, document conversion, readers, exam modifications). For more information, contact Disability Services at 30 Nicholson Hall, 626-1333 (V/TDD).

These procedures should be followed for classroom or registration accessibility:

- *Classroom Changes*—Requests for room changes for courses scheduled in inaccessible locations should be made directly to the department offering the course.
- *Early Registration*—If you need to schedule clustered classes, sign language interpreters, or arrange for taped textbooks, you must contact your college office for permission to register early.
- *Registration*—Students with disabilities that prevent them from standing in lines or who find Fraser Hall inaccessible may register on-line or at the Service Center, 150 Williamson Hall. (130 Coffey Hall on the St. Paul campus is also accessible.)

REGISTRATION INSTRUCTIONS FOR COLLEGE OF LIBERAL ARTS STUDENTS

Before Registering—Check the Student Access System for holds or required registration approvals. To clear CLA holds or receive authorization to register, follow these steps:

ADVISER APPROVAL Make an appointment to meet with your adviser before you register.

PROBATION 1, FINAL QTR, *or* SUSPENSION Contact your college office.

MAJ PROG	Bring an approved program from your major department to your college office.
ORIENT MTG	Contact 49 Johnston Hall.
UD MAJ MTG	Contact your college office, make an appointment, and attend this orientation.
REASSIGN	Confirm or change your intended major. Contact 49 Johnston Hall.
NEW STUDENTS	Attend orientation to receive authorization to register.

Read official CLA communications, including *The Clarion* (on the Web at http://cla.umn.edu/clarion/).

Registration Deadlines—CLA strictly enforces registration deadlines. See the cancel/add procedures on pages 12-13. For late registrations, follow procedures for adding a class. If circumstances prevent you from meeting a deadline, you must contact your college advising office *before* the deadline.

Program Approval—Registrations for *independent study, extra credit, directed study, directed research, and directed instruction* require the approval of the instructor, department, and college. Obtain a student/faculty contract from the department, get approval of the instructor and department, and bring the form to 49 Johnston Hall for college approval.

Courses not listed in the *CLA Bulletin* may not be applicable towards a CLA degree. Consult your college advising office before registering for courses not listed in the *CLA Bulletin.*

S-N Registration—Changes to or from S-N registration may be made through the first two weeks of the quarter. Follow the cancel/add procedures outlined on pages 12-13.

The number of S-N credits that can be applied 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. Freshmen may take no more than *half* of a quarter's credits S-N.

Ask in your college office about restrictions on the use of S-N credits in premedicine, predentistry, prepharmacy, and all interdepartmental programs (such as American Studies, International Relations, and Urban Studies). If you are in a preprofessional program, you should follow the requirements of the college that you plan to enter.

COLLEGE OF EDUCATION AND HUMAN DEVELOPMENT REGISTRATION INSTRUCTIONS

New Students—If you are a *newly admitted student who has never attended the University of Minnesota* and have received official notification of your admission, you must go to 40 Coffman Union to obtain your student ID—the U Card. Students who are newly admitted but who have taken classes at the University of Minnesota before fall 1995 must also go to 40 Coffman Union for their U Card if they do not already have one.

Program Approval—*Newly admitted adult special students* must obtain college approval to register by going to Student & Professional Services (SPS), 110 Wulling Hall, or by calling SPS at (612) 625-5815.

Registration Options—There are now three ways to register: (1) self registration by computer either in one of the computer labs on campus or from home following the instructions on page 5; (2) in-person registration at the registration centers (202 Fraser Hall in Minneapolis or 130 Coffey Hall in St. Paul); and (3) mail or fax registration if you cannot do either of the above.

Mail or Fax Registration—Mail/fax registration is available and processed from February 26-March 14 for those students who are admitted M.Ed., M.Ed. initial licensure (postbaccalaureate), or adult special students in the College of Education and Human Development. Mail/fax registrations must be received on or before Friday, March 18 or you will be charged a late registration fee. Mail/fax registrations are processed according to your spot in the registration queue (see pages 14-15) and according to the availability of space if enrollments are limited. Mail/fax registration does not guarantee that you will be registered for the class(es) you are requesting. It is not possible to register for 8000-level courses by mail or fax without the necessary approvals. For specific information and instructions on registering for 8000-level courses, contact the department offering the course. You are responsible for choosing the courses for which you register: you are encouraged to contact your faculty adviser before you register.

Follow the steps below to register by mail or fax:

1. Complete a Course Request form. (See page 165.) Before you submit your Course Request form, be sure you include magic numbers when a course has a prerequisite that requires instructor (#) or department (Δ) approval. When college approval (❑) is required, that approval can be obtained from SPS. Any holds on your record must be cleared or temporarily removed before your registration can be processed.
2. Complete the Student Hospitalization Insurance form; this is a requirement and *must* be included with your registration. (See page 165.)
3. Mail your completed forms to the following address: Registration, Student & Professional Services, 110 Wulling Hall, 86 Pleasant Street S.E., Minneapolis, MN 55455, or fax your forms to (612) 626-1580. DO NOT send any payment with your registration materials. Any incomplete or inaccurate registration materials will be returned to you; you may then have to register in person or register on line by computer.

After your registration is processed, you will receive an enrollment statement by mail. If you have not received notification within 10 days after mailing or faxing your registration, call (612) 625-5815 to confirm your registration.

You may change your registration by mail or fax only if your original registration was processed by mail or fax. All registration changes must be received by April 4; if they are not, you *must* cancel/add in person.

If you have questions about registration, visit SPS in 110 Wulling Hall, call the registration specialist at (612) 625-5815, or send an e-mail message to spsreg@coled.umn.edu.

Class Schedules—You may pick up a *Class Schedule* in the east bank, west bank, or St. Paul bookstores. If you are not able to come to campus, you may send your name and address, the quarter requested (fall, winter, or spring), and 8-32¢ postage stamps for each schedule to Student & Professional Services (see address above). (Summer session bulletins can be requested by calling 624-4000.) You can also view class schedule information on the web (see the inside front cover for more information).

Courses—Courses offered by the College of Education and Human Development are found under a number of different designators. See *Education*, in the course sections, for a complete list.

REGISTRATION INSTRUCTIONS FOR CARLSON SCHOOL OF MANAGEMENT COURSES

UPPER DIVISION COURSES

Degree-seeking Students in Approved Majors—If you are a student in an approved major with 90 or more credits and your GPA is 2.8 or higher, you may register for all 3000- and 5000-level general management courses (excluding practicum, honors, and special sections). You may register for these courses on-line during queued registration or you can go directly to a registration center. Your college office can provide you with a detailed list of general management courses.

Other non-Carlson School of Management Students—Any non-Carlson School student with 90 or more credits and a cumulative GPA of 2.8 or higher may be able to register for open 3000- and 5000-level Carlson School courses during open registration by coming to 290 Humphrey Center for permission.

GRADUATE COURSES

Carlson School of Management and IR Graduate Students—Graduate students enrolled in the Carlson School or the Industrial Relations program may register for most Carlson School courses on or after their queue time. M.B.A. courses are restricted to students enrolled in the M.B.A. program.

Non-Carlson School of Management Graduate Students—Non-Carlson School graduate students may request approval to register for Carlson School graduate courses by completing a petition for entry form. Approval will be given just prior to the first class meeting based on availability of space in courses. Forms and additional information will be available in 295 Humphrey Center beginning March 3. Approval for IR graduate courses must be obtained from the director of graduate studies in Industrial Relations, 537 Management/Economics.

GRADUATE SCHOOL REGISTRATION INSTRUCTIONS

New Students—If you are registering for the first time in the Graduate School, contact your department to make an appointment to see your adviser.

Active Students—If you have registered in the Graduate School at least once in the last two years, follow the steps below to clear any Graduate School holds:

MAST PROG	Take signed master's program to 316 Johnston Hall.
DOCT PROG	Take signed doctoral program to 316 Johnston Hall.
SPEC PROG	Take signed specialist program to 316 Johnston Hall.
THES TITLE	Take signed thesis title to 316 Johnston Hall.
BACH DEGREE	Take bachelor's transcript, showing degree awarded, to 316 Johnston Hall.
GPA	Take letter releasing hold from major field director of graduate studies to 316 Johnston Hall.
INCOMPLETE	Take letter releasing hold from major field director of graduate studies to 316 Johnston Hall.
DEAN'S HLD	Go to 316 Johnston Hall for explanation and instructions for clearing.
GS DEG AWD	Go to 309 Johnston Hall for change of status or readmission information.

Inactive Students—Graduate School policy stipulates that students must register at least once in a twelve month period in order to maintain their active status as graduate students. (Your last registration *must* have been no later than spring quarter 1996 to register for spring 1997.) Those who do not register within a twelve month period are considered to have withdrawn, and must seek readmission—and if readmitted, must register—in order to resume work toward degrees, take examinations, file for graduation, or otherwise participate as Graduate School students.

Thesis Credits—All students are required to register for thesis credits before receiving a Plan A master's or a professional master of engineering degree (at least 16 credits of 8777 required), or a Ph.D. or Ed.D. degree (at least 36 credits of 8888 required). D.M.A. students should consult their department or the Graduate School to determine their requirement. Doctoral students may not register for thesis credits until the quarter after they have passed their preliminary oral examinations. If you are taking your preliminary oral within the first two weeks of the quarter, contact the Graduate School for registration instructions. You must register for all thesis credits under your major field course designator.

If you have any questions about registering for thesis credits, contact your director of graduate studies or the Graduate School, 316 Johnston Hall (625-3490).

Graduation—Graduate School degrees are awarded monthly. To graduate at the end of any given month you must:

- *submit your Graduate School Application for Degree form* in 150 Williamson Hall or 130 Coffey Hall on or before the first workday of the month.
- *complete all other requirements* by the last workday of the month.

Graduating before the end of the quarter may affect your eligibility for student loans, housing, etc. Check with the appropriate office if you have questions on eligibility.

Graduate School students obtain the Application for Degree form and detailed graduation instructions from 316 Johnston Hall.

Spring Commencement Ceremony—The spring commencement ceremony will be held on Friday, May 16, 1997. If you wish to attend, submit a completed Commencement Attendance Approval Form (signed by your adviser and Director of Graduate Studies indicating your eligibility to attend the ceremony) to 316 Johnston Hall by April 1, 1997. Forms are available in your program office and in the Graduate School.

INTERNATIONAL STUDENTS

If you hold a non-immigrant visa of any type, have been formally admitted to the University of Minnesota, and are registering for the first time, three holds have been placed on your record—AI (check of non-immigrant status documents), ME (health clearance), and AZ (English proficiency). Please read the following information carefully.

Preregistration Program and Document Check (AI Hold)—Go to International Student and Scholar Services (ISSS), 20 Nicholson Hall. You must sign up for a mandatory Preregistration Program for International Students. During this program, you will receive information about living and studying in the U.S. and at the University. You will also have your non-immigrant status documents checked and your AI and AZ holds released. You must bring your passport and non-immigrant status documents (your I-94 form, and your IAP-66 *or* pages 3-4 of your I-20AB). Sponsored students must also provide documentation of their financial support. If you are a permanent resident, you must present documented evidence of your status.

Mantoux Test (ME Hold)—Noncitizens of the United States registering for the first time at the University of Minnesota must have a Mantoux test, a test for tuberculosis, after which their ME holds will be released. Go directly to Boynton Health Service for this.

If you have had a Mantoux test within the past 12 months and bring proof in English of your testing, this test will not be required. A positive reaction indicates that you have been exposed to tuberculosis but it does not necessarily mean that you have contracted the disease. If your test is positive, you will be allowed to register for classes, but you will be required to have a chest x-ray and to return for the results. Be sure to tell the nurse if you have been recently immunized for tuberculosis, since this could cause a reaction to the Mantoux test.

Other Immunization Requirements—Minnesota law requires that all students provide in writing the month and year when they were immunized against measles, mumps, rubella, tetanus, and diphtheria. You must complete and sign the Student Immunization Form you received with your admission letter. See Immunization Clearance, page 19.

Mandatory Health/Hospitalization Insurance—All international students must carry hospitalization insurance for themselves and their dependents. Insurance coverage must be continuous from the date of arrival in the U.S. through the final date of departure from the U.S. This means that international students must have insurance coverage even if they are registered for fewer than 6 credits or are away from campus for the summer or an academic quarter. See Health Service and Hospitalization Charges, page 18.

English Proficiency (AZ Hold)—New international students who have not met the University's English proficiency requirement have a hold placed on their records. The AZ hold will be released by the Minnesota English Center (MEC) as part of the mandatory Preregistration Program for International Students (see above).

Students with a TOEFL score lower than that required by their college, or for whom the TOEFL was waived at the time of admission, may be required to take the Minnesota Battery English Language Proficiency test. You must pay a $25 testing fee when you register for the test. You can receive information about the test at the Preregistration Program.

If you have not met the English requirements for your college, you will be required to register for 1-3 noncredit English classes each quarter until you achieve the required test score.

If you have questions about the English language requirement, contact the Minnesota English Center, 320 16th Avenue S.E., phone 624-1503.

Full Course of Study—All international students holding F-1 and J-1 visas are required by the Immigration and Naturalization Service (INS) to register for a full course of study each academic quarter. To meet INS requirements, graduate students and adult specials are required to take a minimum of 7 credits per quarter; undergraduates must take a minimum of 12 credits per quarter. (NOTE: Certain academic programs or University offices, as well as exchange and scholarship program sponsors and other private educational funding agencies, may use a different credit requirement for their students. If this credit requirement is higher than that of the INS, it takes precedence over the INS requirement.) Exceptions to this rule are possible only in a limited number of circumstances. In such instances an Application for Exception from the Full Course of Study Requirement must be completed, signed by your adviser, and submitted to International Student and Scholar Services, 20 Nicholson Hall, by the first day of each quarter for undergraduates and adult specials, and by the end of the second week of each quarter for graduate students. (Forms are available at 20 Nicholson Hall or 130 Coffey Hall.) If you have questions about this requirement, call 626-7100.

THE FIRST WEEK OF CLASS

Spring quarter classes begin Monday, March 31.

Mandatory Attendance—You must attend the first class meeting of every course in which you are registered, unless you obtain approval for your intended absence before the first meeting. Without this prior approval, you may lose your place in class to another student. If you wish to remain in a course from which you have been absent the first day without prior approval, contact your instructor as soon as possible. Instructors have the right to deny you admission if the course is full. You must *officially* cancel any course to which you are denied admission.

Gaining Admission to a Closed Course—In general, you should first go to the department offering the course, where you may be put on a waiting list or be referred to the instructor for permission to register. Attend the first class meeting if you are on a waiting list or need the instructor's permission, to see if more students will be admitted. To register in a closed course you must have a magic number from the instructor.

Senior Citizen Education Program—If you are 62 or older and a Minnesota resident, you may audit courses free of charge or take courses for credit at $6 per credit whenever space is available after the first day of class. (The Section Status Report, available on the Student Access System and on the World Wide Web at http://www.umn.edu/tc/courses, can tell you if a course with limited enrollment—**R** before the course number—is open or closed.) Under this plan, you will not pay the student services fee, but must pay any required laboratory or materials fees.

Registration for the Senior Citizen Education Program is on the second day of class (Tuesday, April 1, for spring quarter). Attend the *first* day of class, however, to see if space is available and to receive information about class procedures. To register, go to 202 Fraser Hall (150 Williamson Hall for those with mobility impairments) or 130 Coffey Hall with your registration forms and identification to verify age and Minnesota residency. Call 625-5333 for more information.

CHANGE OF REGISTRATION

All-University Policies on Cancel/Adds—All-University policies on cancel/adds apply to all students in all colleges. See the box at the bottom of this page for requirements and dates. Contact your college office for information about committee requirements and procedures when scholastic committee approval is required. NOTE: Such approvals are not routinely given.

Transcript Record of Cancelled Courses—When you cancel an individual course during the first two weeks of the quarter there is no transcript record of that course. If you cancel *all* courses during the first two weeks, a notation of cancellation will appear on your record, although no Ws will be recorded. Cancellation of any course after the second week of the quarter will result in a W on your record.

Change of Grading Option—You may *not* change your grading option after the second week of classes. See page 60 for more information on grading options.

When to Cancel Courses—If you decide before the quarter begins not to attend, cancel before the first day of classes. If you stop attending class for any reason, cancel immediately. On occasion, a course may be cancelled by the department offering the course. Contact the department immediately to see if other arrangements have been made. If no arrangements exist, it is then your responsibility to remove the course from your record by changing your registration.

Cancellations are effective the day you *officially* cancel (either by cancelling on-line *or* by taking a completed Course Request form to either registration center—130 Coffey Hall or 202 Fraser Hall) *not* on the date you stopped attending class. You must pay for any course for which you register unless you officially cancel during the 100% refund period. If you cancel

UNIFORM CANCEL/ADD REQUIREMENTS SPRING QUARTER 1997

Week of Class	Required to Cancel	Required to Add
Week 1: March 31-April 5	Nothing required	Nothing required
Week 2: April 6-12	Nothing required	Instructor approval
Weeks 3-6: April 13-May 10	Nothing required	Instructor approval and college scholastic committee approval
Weeks 7-10: May 11-June 6	College scholastic committee approval	Instructor approval and college scholastic committee approval

Self registration is available Monday-Thursday from 7 a.m. to 12 a.m., on Friday from 7 a.m. to 10 p.m., and on Saturday from 8 a.m. to 6 p.m. In-person registration is available at the registration centers Monday 9 a.m. to 4 p.m. (8 a.m. to 5:30 p.m. in Fraser Hall during registration queues) and Tuesday-Friday from 8 to 4.

after the 100% refund period, you must pay for any portion of the course for which you do not receive a monetary credit; you will receive billing statements from Student Accounts Receivable for tuition and fees, including additional billing charges and late payment fees. If you fail to pay by the due date on your billing statement, a hold will be placed on your record.

Tuition Charges and Refunds for Course Additions and Cancellations—Full 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 16-20 credit undergraduate, or the 7-12 and 13-16 credit graduate plateaus. For example, if you are an undergraduate and add a 4-credit course, increasing your credit load from 14 to 18 credits, you will be charged only for your 15th and 16th credits because your 17th and 18th credits fall within the undergraduate plateau.

No additional tuition is charged when any course addition is balanced *at the same time* by a course cancellation, i.e., a cancellation equal to the number of credits being added *or* a cancellation and course addition that keeps the total number of credits within the undergraduate or graduate plateaus.

Refunds are issued on a per-credit basis according to the refund rate that applies to the date of cancellation. (In a very limited number of circumstances, retroactive cancellations and refunds may be authorized.) For more information on refunds, see page 25. There is no refund for those credits that fall within the undergraduate or graduate plateaus. For example, if you are an undergraduate registered for 16 credits and you cancel a three credit course within the refund period, lowering your credit load to 13, you will receive a refund for 3 credits. If you are registered for 19 credits, however, and cancel 3 credits, you will not be issued a refund because your credit total remains within the plateau.

How to Change Your Registration—To change your course load or grading system, you should:

1. Fill out a Course Request form if cancelling in person. 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.
2. Obtain instructor or college scholastic committee approval if required.
3. Cancel on-line (your cancellation is not complete until you create a enrollment statement) *or* turn in your Course Request form (and all required magic numbers) at either registration center, where you will receive a revised enrollment statement. Any assessment or credit amount that results from a change in registration is posted to your account at Student Accounts Receivable. New assessments will appear on your next billing statement. See Payment of Fees, pages 23-25, for more information.

CHANGE OF COLLEGE

Any student who wishes to transfer from one college of the University to another should submit a completed Application for Change of College or Status to the Office of the Registrar (150 Williamson Hall or 130 Coffey Hall) according to the following schedule for admitting colleges. Applications and general information are available from the Office of the Registrar. College offices can provide information on admission requirements.

NOTE: These dates are *not* applicable to programs in the Graduate School.

CHANGE OF COLLEGE DEADLINES

College:	Summer 1997	Fall 1997
Agricultural, Food, and Environmental Sciences	May 1	June 2
Biological Sciences	May 1	June 2
Dental Hygiene	----	April 15
Education and Human Development:		
Master of Education	April 1	July 1
Postbaccalaureate (Agricultural, Business & Marketing, Industry, Early Childhood, and Family Education)	Varies by program--contact college	July 1
Undergraduates (except Elementary and Mathematics Education)	----	March 3
Human Ecology	----	June 2
Institute of Technology:		
Undergradutes	----	April 1
Adult Specials	----	September 25
Liberal Arts:		
Undergraduates	----	June 2
Adult Specials	----	September 2
Management:		
Undergraduates	----	June 2
Adult Specials	----	July 15
Medical Technology	----	May 30
Mortuary Science	----	July 15
Natural Resources	May 15	June 2
Nursing	----	April 1
Pharmacy	----	February 3

REGISTRATION QUEUE—SPRING QUARTER 1997

The registration queue on this page and the next has three parts—stage 1 for graduate, pharmacy, and public health students, and seniors (135 or more credits completed or in progress); stage 2 for juniors, sophomores, and freshmen; and stage 3 for adult and high school 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 Stickler, B—Su, Jenny C in stage 2, and you may register at or after 10:00 a.m. on March 4.

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

	8:00 a.m.	8:30 a.m.	9:00 a.m.	9:30 a.m.	10:00 a.m.	10:30 a.m.	11:00 a.m.
February 26	Shima, Ryan- Song, Tang	Song, Tanh- Strunk, Dav	Strunk, Daw- Thompson, S	Thompson, T- Vangay, Pac	Vangay, Pad- Weigold, W	Weigold, X- Wood, Laure	Wood, Laurf- Abowitz, Ri
February 27	Churan, Amz- Cutting, Do	Cutting, Dp- Dintemann	Dintemano- Egherman, M	Egherman, N- Ferstl, And	Ferstl, Ane- Fujioka, Na	Fujioka, Nb- Gilchrist	Gilchrisu- Griffin, Ji
February 28	Jin, Dayonh- Kaess, Susa	Kaess, Susb- Kim, Jean J	Kim, Jean K- Kozinets, N	Kozinets, O- Lantz, Mark	Lantz, Marl- Leutbounsh	Leutbounsi- Lockwood, J	Lockwood, K- Mack, Antho
March 3	Ness, Marz- O'Donnell	O'Donnelm- Ozolins, Ed	Ozolins, Ee- Petersen, S	Petersen, T- Potter, Kam	Potter, Kan- Redmond-Br	Redmond-Bs- Rieke, Stua	Rieke, Stub- Rojas, Alli

Stage 2: Juniors, Sophomores, and Freshmen

	8:00 a.m.	8:30 a.m.	9:00 a.m.	9:30 a.m.	10:00 a.m.	10:30 a.m.	11:00 a.m.
March 4	Shima, Ryan- Skoglund, J	Skoglund, K- Soler, Kimb	Soler, Kimc- Staffa, Ray	Staffa, Raz- Stickler, A	Stickler, B- Su, Jenny C	Su, Jenny D- Taddei, Gen	Taddei, Geo- Tessema, Be
March 5	Vue, Eh C- Ward, Shell	Ward, Shelm- Welch, Grac	Welch, Grad- Wickstrom	Wickstron- Winthrop, E	Winthrop, F- Wuotila, Du	Wuotila, Dv- Yueh, Kenne	Yueh, Kennf- Zuidema, An
March 6	Becker, Erj- Berger, Lis	Berger, Lit- Bistodeau	Bistodeav- Bonifaci, D	Bonifaci, E- Bremer, Kri	Bremer, Krj- Bruskiewic	Bruskiewid- Buttera, Da	Buttera, Db- Carr, Saman
March 7	Dedekam, Es- Distad, Pau	Distad, Pav- Dudley, Kat	Dudley, Kau- Ehlers, Ken	Ehlers, Keo- Erickson, D	Erickson, E- Feldhahn, N	Feldhahn, O- Fleck, Nath	Fleck, Nati- Frank, Sara
March 10	Haagenseo- Hancock, Cr	Hancock, Cs- Harrison, R	Harrison, S- Heiling, Sc	Heiling, Sd- Herrmann, S	Herrmann, T- Hoeppner, G	Hoeppner, H- Horrisberg	Horrisberh- Humphrey, K
March 11	Kayser, Adb- Kieffer, Ta	Kieffer, Tb- Klouda, Lau	Klouda, Lav- Kopp, Kara	Kopp, Karb- Krogseng, J	Krogseng, K- Lacey, Jaso	Lacey, Jasp- Lanske, Dan	Lanske, Dao- Lay, Carrie
March 12	Maloney, Es- Marx, Eliza	Marx, Elizb- McClure, Er	McClure, Es- McNamara, E	McNamara, F- Meyer, Jill	Meyer, Jilm- Miller, Ste	Miller, Stf- Moll, Craig	Moll, Craih- Moua, Lo
March 13	O'Reilly, E- Olson, Jess	Olson, Jest- Pacheaco, R	Pacheaco, S- Patterson	Pattersoo- Peszynski	Peszynskj- Phanthavon	Phanthavoo- Plumley, Jo	Plumley, Jp- Preisen, Ja
March 14	Rossett, Jf- Saadi, Noa	Saadi, Nob- Sarver, Aar	Sarver, Aas- Schissel, K	Schissel, L- Schraber, B	Schraber, C- Scott, Davi	Scott, Davj- Selinger, K	Selinger, L- Shah, Ameet

NAME ROTATION THROUGH FUTURE QUEUES

	Fall 1997	Winter 1998	Spring 1998
Registration Starts:	May 19, 1997	November 17, 1997	February 15, 1998
Each Stage Queue Begins:	Flandrick	Tahtinen	Lawatsch

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

	11:30 a.m.	1:00 p.m.	1:30 p.m.	2:00 p.m.	2:30 p.m.	3:00 p.m.	3:30 p.m.
February 26	Abowitz, Rj- Artz, Ray E	Artz, Ray F- Beard, Davi	Beard, Davj- Bjerga, Tif	Bjerga, Tig- Brettin, Li	Brettin, Lj- Calado, Cat	Calado, Cau- Chan, Mei-C	Chan, Mei-D- Churan, Amy
February 27	Griffin, Jj- Halverson	Halversoo- Hartle, Kri	Hartle, Krj- Hendrie, Ch	Hendrie, Ci- Hoeschen, J	Hoeschen, K- Hu, Michael	Hu, Michaem- Ishani, Are	Ishani, Arf- Jin, Dayong
February 28	Mack, Anthp- Martin, The	Martin, Thf- McCutchan	McCutchao- Mena, Ugo L	Mena, Ugo M- Miller, Tim	Miller, Tin- Morrison, H	Morrison, I- Myran-Marc	Myran-Mard- Ness, Mary
March 3	Rojas, Allj- Ruska, Eric	Ruska, Erid- Sandau, Kri	Sandau, Krj- Scharber, M	Scharber, N- Schneider	Schneides- Schwartz, C	Schwartz, D- Serfling, J	Serfling, K- Shima, Ryam

Stage 2: Juniors, Sophomores, and Freshmen

	11:30 a.m.	1:00 p.m.	1:30 p.m.	2:00 p.m.	2:30 p.m.	3:00 p.m.	3:30 p.m.
March 4	Tessema, Bf- Thompson, T	Thompson, U- Tonn, Jessi	Tonn, Jessj- Trieu, Quan	Trieu, Quao- Umezu, Ken	Umezu, Keo- Vang, Lee	Vang, Lef- Villanueva	Villanuevb- Vue, Eh B
March 5	Zuidema, Ao- Albreecht	Albreechu- Anderson, D	Anderson, E- Antil, Aman	Antil, Amao- Avis, Victo	Avis, Victp- Banat, Nael	Banat, Naem- Bashorun, R	Bashorun, S- Becker, Eri
March 6	Carr, Samao- Chaudhry, L	Chaudhry, M- Chung, Sun	Chung, Suo- Collova, Je	Collova, Jf- Cottrill, A	Cottrill, B- Curtis, She	Curtis, Shf- Danzeisen	Danzeiseo- Dedekam, Er
March 7	Frank, Sarb- Funmaker, J	Funmaker, K- Garry, Robe	Garry, Robf- Giebel, Jas	Giebel, Jat- Goldschmid	Goldschmie- Green, Timo	Green, Timp- Gruber, Chr	Gruber, Chs- Haagensen
March 10	Humphrey, L- Ishado, Emi	Ishado, Emj- Janisch, Ja	Janisch, Jb- Johnson, Ad	Johnson, Ae- Johnson, Ma	Johnson, Mb- Jorgensen	Jorgenseo- Kane, Tammy	Kane, Tammz- Kayser, Ada
March 11	Lay, Carrif- Lehman, Abb	Lehman, Abc- Lewis, Mari	Lewis, Marj- Listug, Mel	Listug, Mem- Lorberter	Lorbertes- Lundy, Kevi	Lundy, Kevj- Mader, Rebe	Mader, Rebf- Maloney, Er
March 12	Moua, Lp- Muth, David	Muth, Davie- Nellis, Chr	Nellis, Chs- Neuharth, P	Neuharth, Q- Nguyen, Lie	Nguyen, Lif- Nienow, Sar	Nienow, Sas- North, Stac	North, Stad- O'Reilly, D
March 13	Preisen, Jb- Radder, Nat	Radder, Nau- Ratchman, M	Ratchman, N- Reinhardt	Reinhardu- Rick, Allis	Rick, Allit- Robertson	Robertsoo- Rohrer, Lau	Rohrer, Lav- Rossett, Je
March 14	Shah, Ameeu- Shima, Ryam						

Stage 3: Adult and High School Specials

		1:00 p.m.	1:30 p.m.	2:00 p.m.	2:30 p.m.	3:00 p.m.	3:30 p.m.
March 14		Shima, Ryan- Bai, Runyua	Bai, Runyub- Dietrich, J	Dietrich, K- Hoppe, Mega	Hoppe, Megb- Mann-Sandb	Mann-Sandc- Pavlock, Me	Pavlock, Mf- Shima, Ryam

section 3 tuition & fees

TWIN CITIES CAMPUS TUITION SCHEDULE 1996-97[1]

Twin Cities Tuition Rates for Undergraduates—The following per-credit tuition rates have been approved for the 1996-97 academic year. Your tuition is always tied to the college in which you registering. If there is only a single set of rates (resident and nonresident) listed below for your college, school, or program, you will pay that rate regardless of your class standing. When there are both lower and upper division rates listed for your college, you will pay lower division rates through the quarter in which *you have registered for your 90th credit. Upper division rates are* assessed thereafter. Adult special students pay upper division rates. **There is a 16-20 credit plateau for all units listed below.** Credits 1 through 16 are assessed on a per-credit basis. There is no charge (except for course fees) for your 17th, 18th, 19th, and 20th credits. Each credit above 20 is assessed on a per-credit basis. NOTE: This plateau includes *only* day school credits and not extension credits, even if the day school and extension credits are both billed through the Student Accounts Receivable system.

There is a base tuition rate of $60.00 that is assessed once each quarter for all students. For example, if your per credit amount is $75, you would pay $135 for 1 credit (1 x $75 + $60), $210 for 2 credits (2 x $75 + $60), $285 for 3 credits (3 x $75 + $60), $810 for 10 credits (10 x $75 + $60), and $1,260 for 16-20 credits (16 x $75 + $60).

College, school, or program:	**Resident**	**Non-Resident**
Agricultural, Food, and Environmental Sciences, College of		
Lower Division	$ 76.45	$225.50
Upper Division	90.45	266.80
Architecture and Landscape Architecture, College of		
Lower Division	76.45	225.50
Upper Division	90.45	266.80
Biological Sciences, College of		
Lower Division	76.45	225.50
Upper Division	90.45	266.80
Dental Hygiene		
(Baccalaureate Program)	90.45	266.80
Education and Human Development, College of		
Lower Division	76.45	225.50
Upper Division	90.45	266.80
General College		
Lower Division	76.45	225.50
Upper Division	86.65	255.60
Human Ecology, College of		
Lower Division	76.45	225.50
Upper Division	86.65	255.60
Liberal Arts, College of		
Lower Division	76.45	225.50
Upper Division	86.65	255.60
Management, Carlson School of		
Lower Division	*76.45*	*225.50*
Upper Division	90.45	266.80
Medical Technology, Program in	90.45	266.80
Mortuary Science, Department of	90.45	266.80
Natural Resources, College of		
Lower Division	76.45	225.50
Upper Division	90.45	266.80
Nursing, School of	90.45	266.80
Occupational Therapy, Physical Therapy, Programs in	90.45	266.80
Technology, Institute of		
Lower Division	76.45	225.50
Upper Division	90.45	266.80
University College		
Lower Division	76.45	225.50
Upper Division	90.45	266.80
Preparatory Instruction		
(0000-level courses)	$397.50 per course	

ADDITIONAL FEE INFORMATION

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[1]Fees are subject to change without notice.

Graduate School Tuition Rates—The following rates have been approved for the Graduate School for 1996-97. **In addition, there is a base tuition rate of $60.00 that is assessed once each quarter for all students.** For example, if your per-credit amount is $200, you would pay $260 for 1 credit (1 x $200 + $60), $460 for 2 credits (2 x $200 + $60), $660 for 3 credits (3 x $200 + $60), and so on. All amounts below except per-credit amounts include this base tuition rate.

Part-time rates	**Resident**	**Non-Resident**
1 credit	$ 275.00*	$ 473.00*
2 credits	490.00*	916.00*
3 credits	705.00*	1,359.00*
4 credits	920.00*	1,802.00*
5 credits	1,135.00*	2,245.00*
6 credits	1,350.00*	2,688.00*
Full-time rates		
7-12 credits	1,560.00*	3,130.00*
13-16 credits	1,940.00*	3,890.00*
Each credit over 16	200.00	400.00

Architecture and Landscape Architecture rates

Per credit	231.50	420.00
7-15 credits	1,680.00*	2,998.00*
Each credit over 15	231.50	420.00

Humphrey Institute masters rates

Per credit	231.50	398.00
7-15 credits	1,680.00*	2,844.00*
Each credit over 15	231.50	398.00

M.B.A. rates—see Professional School rates, below.

* Includes base tuition assessment.

Professional School Tuition Rates—The following rates have been approved for professional school students and the departmental masters for 1996-97. Some schools have a 14-18 credit plateau. With this plateau there is no charge (except for course fees) for the 15th-18th credits. Each credit above 18 is assessed on a per-credit basis. Departmental masters have a 12-18 credit plateau. Most other schools have term rates for 12 or more credits. **In addition, there is a base tuition rate of $60.00 that is assessed once each quarter for all students.** For example, if your per-credit amount is $150, you would pay $210 for 1 credit (1 x $150 + $60), $360 for 2 credits (2 x $150 + $60), $510 for 3 credits (3 x $150 + $60), $1560 for 10 credits (10 x $150 + $60), and so on. Term and plateau amounts below include this base tuition rate.

College, school, or program:	**Resident**	**Non-Resident**
Dentistry, School of		
Per credit	$ 257.95	$ 383.00
Term (12 or more credits)	3,155.40*	4,656.00*
Departmental Masters, Colleges of Agriculture and Education		
Per credit	117.20	236.50
12-18 credit plateau	1,466.00*	2,898.00*
Law School (semester rates)		
Per credit	347.00	592.70
Term (12 or more credits)	4,224.00*	7,172.00*
M.B.A. rates, Carlson School of Management		
Day program (per credit)	214.25	317.00
Term (12 or more credits)**	2,957.00*	4,364.00*
Evening program (per credit)	214.25	214.25
Medical School		
1-5 credits	1,024.50*	1,864.50*
6-10 credits	1,989.00*	3,669.00*
11-15 credits	2,953.50*	5,473.50*
16 or more credits	3,918.00*	7,278.00*
Medical fellow specialists residency program		
Per term	121.00*	121.00*
Psychology fellow specialists		
Per term	121.00*	121.00*
Nurse Anesthetist		
Per credit	126.00	345.00
14-18 credit plateau	1,824.00*	4,890.00*
Pharmacy, College of		
B.S. seniors		
Per credit	70.00	125.30
Pharm.D. program		
Per credit	182.45	341.85
14-18 credit plateau	2,614.30*	4,846.00*
Public Health, School of		
Per credit	117.20	236.50
12-18 credit plateau	1,466.00*	2,898.00*
Veterinary Medicine, College of		
Per credit	235.40	353.40
Term (12 or more credits)	2,884.80*	4,300.80*
Veterinary fellow specialists, per term	121.00*	121.00*

* Includes base tuition assessment.

** Term rate applies to students entering program fall 1993 or later.

STUDENT SERVICES FEE

All students registered for 6 or more credits must pay a $156.71-per-quarter ($235.07-per-semester) student services fee in addition to tuition. Courses that carry no degree credit (Comp 0011, GC 0401, 0402, 0419, 0611, 0615, 0616, 0617, 0618, 0621, 0623, 0625, 0631, 0643, and all courses in which you register as an auditor) count in the determination of the credit total for the student services fee on a one class hour = one credit basis. The fee is distributed among the following programs:

Africana Student Cultural Center	$ .39
American Indian Student Cultural Center	.38
Asian American Student Cultural Center	.41
Association of Gay/Lesbian/Bisexual Students	.24
Boynton Health Service	62.03
Child Care Consortium	.69
Crisis Point	.30
Disabled Student Cultural Center	.45
International Study and Travel Center	1.58
La Raza Student Cultural Center	.48
Minneapolis Student Union Capitol Fund	8.85
Minneapolis Student Union Operating Fund	19.56
Minnesota Daily	4.89
Minnesota International Student Association	.58
Radio KUOM	1.05
Recreational Sports Building Fund	5.00
Recreational Sports Capitol Fund	2.70
Recreational Sports Operating Fund	17.44
Recreational Sports St. Paul Gym	5.29
St. Paul Board of Colleges	.24
St. Paul Student Center Capitol Fund	4.34
St. Paul Student Center Operating Fund	10.98
Student Activities	1.51
Student Dispute Resolution Center	.89
University Student Legal Service	6.13
University YW	.32
TOTAL	**$156.71**

Students who are registered only for research or other independent work do not need to pay the student services fee if the work is done exclusively outside the 9-county metro area (Hennepin, Ramsey, Dakota, Washington, Scott, Anoka, Carver, Wright, and Chisago). Students meeting the exemption criteria may elect to pay the fee if they wish to use or support the services covered by the fee.

U CARD (STUDENT ID) REPLACEMENT

The University of Minnesota's student photo identification card is called the U Card. The U Card is needed to check out library materials, cash checks, and gain access to the recreation center, golf course, and secured buildings. The U Card

also lets you make Gopher GOLD purchases, reducing the need to carry pocket change. Up to $50 can be deposited into various CASH TO CARD machines located around campus, and then electronic purchases can be made from vending and copy machines, and at restaurants and cafeterias. Look for the Gopher GOLD™ logo to identify locations that accept this method of payment.

The U Card also offers calling card and bank account packages that were negotiated for members of the University community. The U Card calling card offers benefits like low long distance and surcharge rates, and the U Card free checking account lets you make an unlimited number of free ATM transactions every month. You can also use the U Card bank account to directly deposit financial aid credit balances and make debit purchases from University bookstores and at Boynton Health Service.

Your first U Card is free. To get one, go to the U Card Office, 40 Coffman Union, and bring your driver's license or passport. U Card Office hours are 8:30 a.m. to 4 p.m. Monday through Friday. Extended hours are sometimes available at the University Recreational Center. Call 626-9900 for more information.

Report a lost or stolen U Card immediately by calling the U Card Office at 626-9900, and, if applicable, TCF Bank at 823-2265 and AT&T at 1-800-445-6063. If your U Card is lost, stolen, or damaged due to negligence, there is a $10 replacement fee. Lost U Cards that are turned in are destroyed for your protection. No replacement fee is charged in the event of a legal name change; however, name changes must first be initiated through the Office of the Registrar (150 Williamson Hall or 130 Coffey Hall).

HEALTH SERVICE AND HOSPITALIZATION CHARGES

General Information—All students who take 6 or more day school credits must pay the student services fee. By paying the fee, you become eligible to receive most outpatient services at Boynton Health Service at no additional charge and others at reduced cost. Coverage for spring quarter begins Monday, March 24. (Students whose programs do not follow the regular quarterly calendar are usually covered on their first day of class. Call 624-0627 for further information.) If you do not pay the student services fee, you may be eligible to purchase outpatient health coverage through the Extended Coverage Benefits plan available at the Student Insurance Office, N323 Boynton Health Service. Call 624-0627 to determine your eligibility. Students who are not required to pay the student services fee and spouses and children of students may use Boynton Health Service on a fee-for-service basis.

Boynton Health Service in Minneapolis is open 8 a.m.-6 p.m. Monday and 8 a.m.-4:30 p.m. Tuesday through Friday. Boynton Health Service is open in 109 Coffey Hall, St. Paul, from 12:30-4:30 Monday though Friday. Prepaid medical care at Boynton includes general medical services, urgent care, internal medicine, orthopedics, chest clinic, women's clinic, laboratory procedures, and eye exams. Partial fees are charged for routine physical exams, mental health clinic visits, annual dental exams, and some specialty care. Charges for x-rays, minor surgical procedures, and charges remaining after patient copayment for mental health visits must be submitted by you to your hospitalization insurance company; your student services fee will cover the costs that your hospitalization insurance does not. Students without hospitalization insurance will be responsible for full payment of these charges. Full fees are charged for prescriptions, contact lenses, eyeglasses, massage therapy, and most dental care.

During the hours that Boynton is closed, emergency care is available at the University Hospital emergency department.

For detailed information, see *Welcome to Boynton,* a brochure available at Boynton Health Service. General information and a copy of the brochure may be obtained by calling 625-8400.

Hospitalization Insurance—The University requires all students taking 6 or more day school credits per quarter to carry hospitalization insurance. International students must carry hospitalization insurance for themselves and their dependents for the entire time they are in the U.S. If you already have insurance, fill in the name of your insurance company and your policy number on the hospitalization insurance form in the back of this *Class Schedule* and bring the form with you when you register or enter (or verify) the information on-line when you register yourself. For most students if you do not provide your insurance information when you register and you register for 6 or more day school credits, you will automatically be charged for University-sponsored hospitalization insurance. To cancel this assessment and receive a full refund, you must return to your registration center with your insurance information by the end of the *first* week of classes.

Only students who take 6 or more credits and who are degree seeking may purchase University-sponsored hospitalization insurance. Coverage may be purchased at registration or at the Student Insurance Office, N323 Boynton Health Service. You must pay either the student services fee or the extended coverage benefit fee to be eligible to purchase this insurance. Coverage must be purchased by the end of the second full week of classes (April 11 for spring quarter).

For more information on insurance or an insurance booklet, contact the Student Insurance Office at Boynton (624-0627).

Summer Insurance Coverage—If you enroll in the University-sponsored hospitalization insurance plan during spring quarter, you may purchase summer coverage, even if you do not take summer classes. You may also purchase Boynton's Extended Coverage Benefits plan for the summer. (See General Information, above, for details.)

For information about purchasing summer insurance coverage, contact the Student Insurance Office at Boynton Health Service (624-0627).

Permanent Residents—If you hold an immigrant visa, have been formally admitted to the University of Minnesota, and are registering for the first time, an ME (health clearance) hold has been placed on your record. To clear the hold, you must show proof of tuberculosis testing before registering for classes. This requirement can be met either by having a tuberculosis

test or by showing proof that you have taken tuberculosis medication in the past. If your tuberculosis test shows that you have been exposed to tuberculosis, you will be allowed to register, but you will be expected to receive follow-up care as recommended. To get a Tuberculin Screening Record sent to you, call 625-3222, or stop at the main check-in desk, 3rd floor Boynton, with your written proof of tuberculosis testing.

Immunization Clearance—The University requires all students born after December 31, 1956, to provide documentation of two immunizations for measles, mumps, and rubella, and a tetanus-diphtheria immunization within the last 10 years. This documentation must be entered on a Student Immunization Record and must include the month and year each immunization was given. Forms are available at your registration center and at the Boynton Health Service information desk.

Check your medical or high school immunization records. All students are legally required to provide information on immunizations or exemptions; students who fail to provide the required information will have a hold placed on their records and will not be allowed to register for classes. (The law does allow for an exception based on age, or documented medical or conscientious exemptions.) If you need any of the required immunizations, call your family doctor or the Boynton Immunization Clinic (625-3222) for an appointment. Boynton charges a fee for these required immunizations.

GRADUATE ASSISTANT MEDICAL PLAN

University-subsidized health insurance is available to graduate and professional school students who:

- hold appointments of 25% or more (12.5% or more during summer) as teaching assistant, research assistant, or administrative fellow, *or*
- hold appointments in class titles 9561 (Graduate School fellow), 9562 (Graduate School trainee), 9564 (professional school fellow), or 9565 (professional school trainee), and receive a stipend during the academic year (fall, winter, and spring quarters) at least equal to a 9-month 50% graduate assistantship ($8437.50 for 1996-97), provided their college or department agrees to pay the full insurance premium during the academic year.

For graduate assistants, the University pays a portion of the health insurance premium equal to twice their appointment percentage (e.g., 50% for an assistant with a 25% appointment). Eligible fellows and trainees receive 100% subsidies, but during the academic year *only*.

When departments pay for the health care plan as a non-service benefit, that payment is considered taxable income. The amount of the direct departmental contribution is reported as income, and taxes are withheld on that amount.

To receive this coverage you must apply for it during the first quarter of your assistantship, traineeship, or fellowship, and by the enrollment deadline. For most students, this deadline is the end of the second full week of classes (April 11 for spring quarter). Plan members are billed quarterly for any portion of the premium they owe. Those on hourly appointments who work less than the estimated number of hours are billed for their portion of the premium.

Graduate assistant plan members who pay the student services fee will receive a $21 credit to their account *after* the end of each quarter.

Once enrolled, you remain a plan member until your appointment ends or drops below the qualifying level. You can elect to continue coverage for a period of time at your own expense; you are then responsible for the full amount of the health insurance premium. Students receiving continuation coverage who become eligible again *must* contact the GAIO and ask to be reinstated; otherwise they will continue to be billed.

Students enrolled in the plan spring quarter remain eligible for summer but may have to pay some or all of the summer premium. The University will pay a portion of the summer premium based on the quarters during the academic year in which students were enrolled in the plan and the percentage of their appointments. Fellows and trainees enrolled in the plan are responsible for the entire summer premium unless their college or department wishes to pay it for them. Departments wishing to do so must contact the GAIO by the end of spring quarter.

Coverage for dependents of eligible students is available. The cost of dependent coverage is not subsidized by the University.

For further information, contact the GAIO, Boynton Health Service, 625-6936.

TRANSCRIPT FEES

There are three types of service for *official* transcripts: regular service, rush service, and FAX service. (Official transcripts are certified and signed by the University Registrar.) Regular service is available for $4 a copy. Processing time for regular service is 2-3 workdays; after processing, your transcripts will be mailed to the places you have specified. Rush service on your official transcript requests is available for $8 a copy. Rush service guarantees your transcript will either be issued to you in person or put in the mail on the same day it is requested. You must have a picture ID (U of M student ID card, driver's license, or current passport) to receive over-the-counter rush service. FAX service is available for $10 a copy. FAX service guarantees your transcript will be sent to the FAX number you specify and an official copy mailed to the same destination on the same day it is requested. Prepaid courier service may also be requested for both regular and rush service. Visit the transcript service (150 Williamson Hall, Minneapolis, or 130 Coffey Hall, St. Paul) for more information or call 625-5333.

Requests for official transcripts can be submitted by mail or FAX, or dropped off at the locations below. No telephone requests are accepted. Requests should include your full name and signature, a daytime phone number, your student ID number, college, dates of enrollment, and complete address(es) for mailing the transcript(s). You can send your requests to Transcript Service, 150 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455 or to Office of the Registrar—St. Paul, 130 Coffey Hall, 1420 Eckles Avenue, St.

Paul, MN 55108. FAX requests can be sent to either (612) 625-4351 (Minneapolis) or (612) 624-4943 (St. Paul).

Payment options for in-person requests include payment by check, money order, cash, or major credit card (Visa, MasterCard, or Discover). Mail requests can be paid by check, money order, or credit card. FAX requests *must* be paid by credit card. Make your check or money order payable to the University of Minnesota for $4 or $8 per transcript. Include the following credit card information for *all* FAX requests ($10 per copy) or when paying for mail requests by credit card: the type of card you are using, the credit card number, expiration date, your signature, and the signature of the card holder if different. Scanned or computer generated signatures are not accepted.

You may pick up an *unofficial* copy of your record by presenting a picture ID at 150 Williamson Hall, 202 Fraser Hall, or 130 Coffey Hall. There is no charge for an unofficial copy of your record; there is, however, a limit of one copy per day. *Unofficial transcripts are never available the first three days of winter or spring quarters.*

Students are advised that disciplinary action will be taken if academic records are forged or altered.

COURSE FEES[1]

All fees are per quarter unless otherwise indicated.
Students taking the following courses will pay course fees as follows:

ARCHITECTURE
$30—1301, 3311

ART
Materials fees[2]:
$5—1101, 1102, 1404, 5190
$20—1702, 3720
$25—1602, 1701, 3602, 3710, 5710, 5790
$30—3430, 5430, 8360
$35—1510, 1520, 1530, 1540, 3306, 5360
$40—3510, 3520, 3530, 3540, 3550, 5510, 5520, 5530, 5540, 5550, 5590
$45—3830
$50—1301, 1302, 1811, 1812, 3301, 3302, 3303, 3304, 3305, 3307, 5310, 5320, 5330, 5340, 5350, 5370, 8310, 8320, 8330, 8340, 8350, 8370
$55—5830
$60—1802, 3810, 5390
$66—5890
$70—5810
$80—3820, 5821
$95—5820
$225—8810
Arranged (amount adjusted to individual needs of students or particular class project)—3420, 3970, 3980, 5420, 5970, all other 8000-level courses

CELL BIOLOGY AND NEUROANATOMY
$18—5103—Microscope rental fee

CHEMISTRY
Materials and technical services fees:

$24.35—1052H	$24.71—3101
$24.73—1051	$25.17—1052
$25.28—1001	$25.84—1003
$26.26—3306	$27.08—1051H
$27.23—1002	$29.04—5538
$29.96—3305	$36.04—5126
$37.17—5540	$37.69—5131
$39.54—5613	$43.87—5740
$44.49—5140	$45.00—3336
$49.22—3335H, 3336H	$57.46—5127

CLINICAL LABORATORY SCIENCE
$12—5765—Microscope rental fee

DESIGN, HOUSING, AND APPAREL
$8—1641,1642, 3611, 3643, 5644, 5645, 5646—Materials fee for studio courses
$45—1331, 3331, 5331—Materials and dyes fee

ECOLOGY, EVOLUTION, AND BEHAVIOR
$15—5014, 5016, 5132, 5134—Transportation fee

FOREST PRODUCTS
$50—ForP 3300—Wood Industries Tour

GENERAL COLLEGE
Preparatory Mathematics and Composition:
$318[3]—0623, 0643
$397.50[3]—0401, 0402, 0419, 0611, 0615, 0616, 0617, 0618, 0621, 0625, 0631

GEOLOGY AND GEOPHYSICS
Transportation fees:
$10—3201, 5452, 5651, 5655
$20—3402, 5613, 5641
$30—5201, 5251, 5261, sec 2
$100—5010, sec 1, 5252
Field camp fees:
$450—3111, 5111
$600—5112

INTERDEPARTMENTAL STUDY
$15—1011, 3925—Materials fee

LANDSCAPE ARCHITECTURE
$30—1301, 3311

MATERIALS SCIENCE
$38.39—5613—Materials and technical services fee

MEDICAL TECHNOLOGY
$6—5011, 5077, 5102—Microscope rental fee

MICROBIOLOGY
$10—3103, 5013, 5105, 5234, 5322, 5424—Microscope rental fee

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: $50 per 2 credits
Majors taking extra credits (beyond requirement) or taking lessons on a second instrument: $65 per 2 credits
Students taking lessons for minor in music: $65 per 2 credits
Non-majors, elective credit: $125 (0-2 credits)

NATURAL RESOURCES AND ENVIRONMENTAL STUDIES
$150—3051—Food and lodging fee

PATHOBIOLOGY
Microscope rental fee:
$6—5102, 5103, 5104
$12—5101

PLANT BIOLOGY
$20—1009—Transportation fee

SOIL SCIENCE
$6—3220—Field course
$19—3520, 5510—Transportation fee
$35—5515—Transportation fee

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[1]Fees are subject to change without notice.
[2]Materials fees—assessed at the time of registration. Arranged fees are collected by department.
[3]In lieu of tuition.

SPECIAL FEES[1]

BILLING CHARGE
$7.50 per billing cycle for a maximum of $15 per quarter.

COLLEGE OF EDUCATION—PLACEMENT SERVICE FEE
$48—Registration fee for graduate students, alumni, and others (annual fee).
$30—College of Education students completing a teacher licensing program (annual fee—assessed with graduation fee)
Bachelor of Science degree candidates in the teacher licensing program areas from the College of Education are required to register with the placement section of Student and Professional Services or to secure an official exemption from that office. Graduate students and alumni seeking employment in education positions may also use the placement services.

COUNCIL OF GRADUATE STUDENTS (COGS)
$1.61—Required of *all* students in the Graduate School. (Fee not refundable.)

CREDIT BY SPECIAL EXAMINATION
$30—Check with your college office for further information.

DENTISTRY—INSTRUMENT USAGE FEE
$220—Instrument usage fee for postdoctoral students enrolled in periodontics.
$230—Instrument usage fee for dental hygiene students.
$265—Instrument usage fee for postdoctoral students enrolled in pedodontics.
$275—Instrument usage fee for postdoctoral students enrolled in endodontics and prosthodontics.
$525—Instrument usage fee for predoctoral dental students.

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—replacement fee for most diplomas.
$25—replacement fee for School of Dentistry or Medical School diplomas.

ENGLISH FOR INTERNATIONAL STUDENTS
For international students who are required to take English as a Second Language courses—a fee ranging from $687 (5 hours per week) to $1,719 (25 hours per week) is charged separate from tuition and fees charged for academic classes.

FIELD STUDIES HEALTH SERVICE FEE
$62.03 per quarter—Required of students on University field studies such as Anthropology, Geology, etc. (covers outpatient medical care for emergency illness at nearest facility on approval of the person in charge of the group. Eligible charges which are not collectible from a student's insurance carrier will be paid by Boynton Health Service up to a maximum of $100 per visit).

GRADUATE AND PROFESSIONAL STUDENT ASSEMBLY (GAPSA)
$2.71—Assessed quarterly to students in most professional schools and students in the Graduate School. (Fee not refundable.)

HOSPITALIZATION INSURANCE, UNIVERSITY SPONSORED
$192 per quarter—Available only to students who pay the student services fee or the extended coverage fee.

INTERNATIONAL STUDENT AID FEE
$4 per quarter—Required of *all* students who hold nonimmigrant visas.

I.T. BOARD OF PUBLICATIONS
$4.47—Required of all Institute of Technology students who pay the student services fee—assessed at registration.

LATE PAYMENT FEE
$15-20 per billing cycle for a maximum of $50 per quarter.

LATE REGISTRATION FEE
$20 through the first two weeks of classes and $40 thereafter. (Fee not refundable.)

MINNESOTA PUBLIC INTEREST RESEARCH GROUP (MPIRG)
$2.50 (refusable/refundable)—Assessed with student services fee. 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 $2.50. A statewide advocacy group, MPIRG gives the 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.

MINNESOTA STUDENT ASSOCIATION (MSA)
$2.70—Assessed to *all* undergraduates, adult special students, and departmental masters. (Fee not refundable.)

MUSIC PRACTICE ROOMS
Rooms with upright or grand piano, harp, harpsichord, organ, or percussion as well as rooms with no instrument are available on a quarterly basis. Check in 100 Ferguson Hall for rental information and rates.

ORIENTATION FEE
$39—Required of all new students *except:* high school and adult specials; graduate students who attended the University as undergraduates; students in law, medicine, veterinary medicine, dentistry, public health, and mortuary science; graduate Management students (MBA, Executive MBA, or Business Administration Ph.D. programs); and students in post-baccalaureate education, master of education, and master of agriculture programs. (Fee not refundable.)

RECREATIONAL SPORTS MEMBERSHIP FEES/LOCKER RENTALS
NOTE: All individuals must present necessary indentification every time they enter Recreational Sports facilities.
Currently enrolled students who have been assessed the student services fee will need to provide proof of that assessment (usually by presenting the U Card).
Currently enrolled students who are *not* assessed the student services fee must purchase a quarterly membership to become eligible to use recreational facilities and programs. Similar memberships (at different costs) are available for faculty and staff.
A variety of activities are available, including aquatics, intramurals, fitness programs, aerobic dance, open recreation, sports clubs, plus numerous other activities.
Sports lockers and towels can be rented at the equipment rooms in the University Recreation Center and the St. Paul Gym.
For further information, including the current fee rates, call or visit one of the Recreational Sports offices: University Recreation Center, Minneapolis (625-6800), or 104 St. Paul Gym (625-8283).

SERVICE FEE, INTERNATIONAL PROGRAMS
$250-$400 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.

STUDENT EMERGENCY LOAN FUND (SELF)
$.23—Assessed to *all* students.

UNIVERSITY COALITION FOR HIGHER EDUCATION (UMCHE)
$1.81 (refusable/refundable)—Assessed with student services fee. University of Minnesota Coalition for Higher Education (UMCHE) lobbies to express student views on University quality, affordability, and accessibility.

[1]Fees are subject to change without notice.

COMPUTER FEES

Institute of Technology—A computer fee of $100 per quarter is charged to most students in the Institute of Technology and some students in other colleges. The fee will be assessed at registration to the following groups of students:

- All IT upper division, UNITE, and adult special students who are required to pay the student services fee;
- Upper division CLA students majoring in astronomy, chemistry, computer science, geology, mathematics, or physics who are required to pay the student services fee;
- All graduate students in IT graduate programs taking one or more courses who are required to pay the student services fee, except those who have completed 36 credits in graduate school, exclusive of thesis credits. (These programs are aerospace engineering, astrophysics, biomedical engineering, chemical engineering, chemical physics, chemistry, civil engineering, computer and information sciences, control science and dynamical systems, electrical engineering, fluid mechanics, geological engineering, geology, geophysics, industrial engineering, materials science and engineering, mathematics, mechanical engineering, mechanics, mineral engineering, and physics); *and*
- Students (including those in other colleges) who are taking one or more courses that require use of the IT public labs. Most of these courses are indicated in the course sections of this *Class Schedule*.

IT undergraduate or graduate students who have not been required to pay the fee may sign up for a Unix account in the computer lab. They will then be billed the $100 fee through Student Accounts Receivable.

Carlson School of Management—A computer/technology fee of $25 per quarter is assessed at registration to all Carlson School of Management undergraduates, adult specials, and EMBA students. Ph.D. students in Carlson School graduate programs, day MBA students, and IR graduate students are assessed a $50 per quarter fee.

College of Architecture and Landscape Architecture (CALA)—A technology access fee of $100 per quarter will be assessed for all undergraduates and graduate students in CALA programs. Current course fees have been eliminated but new course fees will be assessed for Arch 1301, 3311, and LA 1301, 3311—drawing courses taken typically by students who are *not* in a CALA degree program and not paying the technology access fee.

College of Biological Sciences (CBS)—A college computing fee of $80 per quarter will be assessed to all students enrolled in the college and taking 6 or more credits.

College of Liberal Arts (CLA)—CLA will have a college computing fee of $45 per quarter for all freshmen, sophomores, juniors, and adult special students who take 6 or more credits. (This fee will not be assessed to seniors this year.) Upper division students (juniors *and* seniors), however, who major in CBS majors or IT majors will *not* pay the CLA computing fee but will instead pay the CBS or IT computing fees respectively.

General College—There is a Instructional Technology fee in General College of $45 per quarter. This fee is assessed to all students required to pay the student services fee (i.e., those taking 6 or more credits or credit equivalents).

Nursing—There is a computer fee of $24 for all undergraduate Nursing students.

Humphrey Institute of Public Affairs—A computer fee of $50 per quarter will be assessed to Humphrey Institute students taking 6 or more credits and a fee of $35 per quarter will be assessed to Humphrey Institute students taking less than 6 credits.

FACILITY FEES[1]

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.

Animal Science 1601 (Horse Equitation): $60
Physical Education 1034 (Judo): $18 maximum
Physical Education 1035 (Karate): $23 maximum
Physical Education 1043, 1143 (Horsemanship): $95 maximum
Physical Education 1048 (Bowling): $25 maximum
Physical Education 1057, 1157, 1257 (Skiing): each $75 maximum
Physical Education 1205 (Scuba and Skin Diving): $35 maximum

[1]Fees are subject to change without notice.

PAYMENT OF FEES

BILLING AND PAYMENT DATES FOR SPRING QUARTER

STATEMENT	BILLING DATE	PAYMENT DATE	BALANCE DUE
Billing Statement #1	April 4, 1997	April 29, 1997	30%
Billing Statement #2	May 2, 1997	May 22, 1997	60%
Billing Statement #3	May 27, 1997	June 13, 1997	100%

Student Accounts Receivable Billing System for Tuition and Fees—Every student has an account at Student Accounts Receivable and receives a bill for tuition and fees at the beginning of each quarter. Each time you register for, cancel, or add courses, your tuition and fees will be charged to your account. This account, unlike individual enrollment statements, will reflect your *total* charges for tuition and fees.

You will receive enrollment statements, but they will not carry payment due dates. Instead, your tuition due dates will be on your billing statements.

This billing system allows installment payments, with three payments possible over the quarter. Your first billing statement will list both your total tuition charges *and* a minimum payment amount. To make installment payments you need only pay the minimum payment listed. You will receive up to two additional billing statements during the quarter, each indicating a minimum amount due. There is a nominal billing charge ($7.50) for each installment. If you choose to pay less than the *full* amount, you will be assessed this $7.50 billing charge on your next statement. Every time you pay less than the *minimum* amount due, you will be charged $15-20 in late payment fees in addition to the $7.50 billing charge and a hold will be placed on your record. (Billing charges and late payment fees will appear under Charges and Debits on your bill.) Any bill can be paid *in full* by the due date to avoid billing charges.

Installment payments may not be suitable for certain 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, 150 Williamson Hall, for more information.

You can make installment payments only for charges for the current quarter—balances or transactions from previous quarters are always due in full. You will be assessed billing charges for the current quarter if you have a previous balance outstanding. Any payments that you make will *always* be applied to the oldest charge on your account.

The chart on the previous page lists the billing dates and the payment dates for the quarter. For this quarter, your first billing statement will be issued on April 4 and your first payment must be received by April 29. **(NOTE: Allow approximately one week for your billing statements to reach you by mail.)** This first billing statement will list a minimum payment of 30% of all *unpaid* charges for the quarter plus 100% of any previous charges. Your second bill will be issued on May 2 and due by May 22. The minimum payment for the second bill is 60% of your unpaid balance for the quarter (plus 100% of any charges for previous quarters or terms). The final bill for the quarter will be issued on May 27 and due by June 13. With the final bill you will be expected to pay any amount not yet paid. For example, if the unpaid balance of your tuition and fees total $900, the minimum payment on your *first* bill would be $270 (30% of your balance) and this amount would be due by April 29. After you make your first payment of $270, your *second* bill would list a minimum payment of $385.50 (60% of the balance of the $630 remaining on your account plus the $7.50 billing charge) and would be due by May 22. Your final bill would be for $259.50 (your balance of $252 plus a $7.50 billing charge); payment would be due by June 13.

NOTE: Paying more than the minimum payment due on your statements or paying before you receive your statements does *not* reduce the percentage required on your next billing statement—you will still be required to pay the standard percentage of the balance.

Students in units that do not follow the regular quarterly calendar (e.g., Dentistry, Medicine, Law) may have billing and due dates that differ from the above schedule. Contact Student Accounts Receivable, 625-8500, for information on billing schedules for your unit.

You can review your student account detail, current account balance, current minimum payment due, and the next due date on the Student Accounts Receivable screens on the Student Access System. (See page 4 for instructions on how to get connected to this system.) You can also check your billing address and get other information about your account.

It is your responsibility to report any change in address to the University. When you register on-line verify your address on the student demographic data screen or, if you register in person, verify that the address printed on your course confirmation form is correct. (You may report an address change to Student Accounts Receivable by calling 625-8500.) If you do not receive any billing statement, you *must* obtain a payment voucher on or before the payment due dates listed on the chart at the top of this page. Payment vouchers are available

at Student Accounts Receivable, 20 Fraser Hall, or the Bursar's Office (145 Williamson Hall on the east bank, 101a Anderson Hall on the west bank in Minneapolis, or 107 Coffey Hall in St. Paul). If you want to pay your balance *before* you receive your billing statement, go to the Bursar's Office or Student Accounts Receivable where a payment voucher will be prepared for you.

Billing Errors—If you suspect there is an error in your billing statement, contact Student Accounts Receivable as soon as you receive your statement.

When to Pay—For students who register through April 4, the first payment is due by April 29. Students whose registrations occur after the first billing date will be billed in the next billing cycle (May 2) and will have a May 22 due date. Always pay by the due date listed on your bill.

REMEMBER: Initial registrations that occur after March 29 are subject to late registration fees.

Mailing Your Payment—Your billing statement and a check or money order may be mailed, using the envelope enclosed with your billing statement, to the Bursar's Office, PO Box 88, Minneapolis, MN 55440-0088. Write your student ID number on your check or money order and enclose all copies of your statement. Your mailed payment must be received by the billing statement due date, or you will be billed for additional charges on the following statement. Your cancelled check is your receipt.

Where to Pay on Campus—Pay your tuition and fees at the Bursar's Office (145 Williamson Hall on the east bank, 101a Anderson Hall on the west bank in Minneapolis, or 107 Coffey Hall in St. Paul). Credit cards are not accepted. Your billing statement (or enrollment statement) and a check or money order may also be dropped in any of the fee deposit boxes on campus: in the Fraser Hall lobby; 107 Coffey Hall; both concourses of Williamson Hall; Anderson Hall; and Coffman Union Service Center. Payments are picked up at 8 a.m. and are credited to the previous day.

Collection Procedures and Costs—Past due accounts may be subject to handling charges and collection procedures. Collection can include court action or referral to outside collection agencies. You are responsible for any and all costs necessary for the collection of any amount not paid when due.

Enrollment Statements, Course Confirmation Forms—Do not destroy or throw away any enrollment statements. Although your tuition is billed by Student Accounts Receivable, you may use your enrollment statements to pay at the Bursar's Office prior to receiving your billing statement.

The bottom half of your enrollment statement—your course confirmation form—is your proof of enrollment. Keep all copies for the quarter together with your student ID card. Many University facilities such as the libraries, Boynton Health Service, and athletic facilities require your course confirmation form as proof of enrollment.

Duplicate Enrollment Statements—Duplicate unreceipted enrollment statements for the current quarter may be obtained at your registration center or you may print one yourself from the self-registration system. If your fees are paid, Student Accounts Receivable can issue a payment verification letter or validate your unreceipted copy at 20 Fraser Hall (150 Williamson Hall for students with mobility impairments). **Save all your enrollment statements and billing statements: you will be charged for duplication of account information.**

Credit Balance Enrollment Statements—Credit balance enrollment 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 *in full,* you may obtain a refund by presenting the credit balance enrollment statement to Student Accounts Receivable. (See also Refunds, on page 25.) If all of your fees have not been paid and the amount on the credit balance enrollment statement is less than what you owe, this credit will be reflected on your next bill from Student Accounts Receivable. This credit could also lower the minimum amount due on your current billing: for information on your current billing, check the Student Accounts Receivable screens on the Student Access system or call 625-8500. If all of your fees have not been paid and the credit amount is *more* than the amount that you owe, go to Student Accounts Receivable for further information or call 625-8500.

Zero Balance Enrollment Statements—Zero balance enrollment statements have zeros printed in the "Amount Due" box on the enrollment statement. This means that no *additional* tuition and fees have been charged to your account at Student Accounts Receivable. All previous amounts owed remain unchanged. If you have questions about your balance, call 625-8500 for more information.

Credit for Tuition Deposit—If you are registering for the first time at the University and you paid a tuition deposit, you will receive credit for that deposit on your first billing statement from Student Accounts Receivable.

Paying Tuition Holds—After the due date, you must pay the current amount due on your account to receive a hold release. If, in order to register, you pay a Student Accounts Receivable hold for a previous quarter with a personal check and that check does not clear the bank, you will be sent a notice by Student Accounts Receivable. Your current registration may be cancelled if you fail to respond to this notice and pay your debt.

NOTE: If you pay a hold by check, it will be two weeks before you can obtain a transcript. For an immediate transcript release, pay with cash.

Financial Aid Recipients—You must register by March 29, even though you will have not yet received your financial aid. If you register after March 29, you will be charged a late registration fee.

An interface with the Financial Aid system allows most financial aid payments to be credited directly to your account at Student Accounts Receivable. Some students will, however, continue to receive financial aid checks.

If the total of all your financial aid awards is less than the amount due on your account, or if your award is less than

100% of the amount due, you can make installment payments on the remaining balance. 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 installment payments if your financial aid awards or check are 100% or more of your tuition and fees. Call Student Accounts Receivable (625-8500) for further information.

REMEMBER: If, for any reason, you do not receive your financial aid, you are still responsible for paying your tuition and fees by the due dates listed on page 23.

Tuition and Fees Paid by Various Agencies—If you have authorization for the University to bill a sponsor for your tuition and fees, you should bring your authorization *before the beginning of registration* to a registration center (202 Fraser Hall or 130 Coffey Hall, 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.

New international students whose tuition and fees will be paid by a sponsor should bring their billing information to the Preregistration Program for International Students. Previously enrolled international students whose tuition and fees will be paid by a sponsor should make sure that a copy of their billing information is on file with International Student and Scholar Services, 20 Nicholson Hall.

NOTE: You will have a hold placed on your record if your sponsoring agency falls behind in payment for more than one quarter. You will be held responsible for all unpaid tuition and fees if your sponsoring agency does not fulfill its obligations. It is your responsibility to monitor payments made to your account by your sponsor.

Regents' Scholarships—If you are registering for a course with a Regents' Scholarship, you should bring your authorization to your registration center when you register. If you receive your authorization after you have registered, you must return to your registration center for an adjusted enrollment statement. If you plan to register on-line, you can mail your form to your registration center (202 Fraser Hall or 130 Coffey Hall). However, forms should *never* be mailed to the Bursar. If you fail to receive authorization by the due date on your first billing statement from Student Accounts Receivable, you will be liable for billing charges and late payment fees. Regents' Scholarships cover only tuition for approved courses. You are responsible for all course fees and special fees. If you fail to pay these fees by the due dates on your billing statements, you will be liable for billing charges and late payment fees.

Payroll Deduction for Graduate Assistants—To be eligible for payroll deduction, you must be enrolled in the Graduate School or in a professional post-baccalaureate degree program and hold at least a 25% graduate assistant appointment for the 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 deductible fees must total at least $150. (MPIRG and UMCHE are not deductible fees.) 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).

Application for payroll deduction is *never* possible after the fifth day of the quarter. Request payroll deduction when you register. After you fill out a payroll deduction authorization card, you will be credited directly on your billing statement for the amount to be deducted.

All students must pay all fees not covered by payroll deduction (e.g., MPIRG and UMCHE) by the due dates on their billing statements to avoid billing charges and late payment fees.

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), a billing statement with a new due date will be sent to you. This bill must be paid by the due date to avoid billing charges and late payment fees.

If you cancel/add anytime through the first week of the quarter, go to Student Accounts Receivable (20 Fraser Hall) to have your payroll deduction application adjusted. If you cancel or add courses after the first week, call Student Accounts Receivable (625-8500) for instructions.

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 $400, this amount will be withheld from your last four paychecks in equal installments of $100. To be eligible for payroll deduction, you must net at least $120 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 20 Fraser Hall (625-8500) for a new enrollment statement. If you are ineligible for payroll deduction, you can make installment payments by paying the minimum amount due on your billing statements.

REFUNDS

Tuition and Course Fees—There are two refund schedules: one for new students (students attending the University for the first time) and one for continuing students. Refer to the schedules on the next page for the dates for this quarter.

For *new* students, tuition and course fees are refunded on the following general schedule: if you cancel during the first week of the quarter or before, you will receive a 100% refund; 80% during the second week; 70% during the third week; 60% during the fourth week; 50% during the fifth week; 40% during the sixth week; and 0% thereafter. NOTE: These refund rates apply to your first quarter of enrollment only. After your first quarter, rates for continuing students apply.

For *continuing* students, tuition and course fees are refunded on the following general schedule: if you cancel during the first week of the quarter or before, you will receive a 100% refund; 50% during the second week and the first half of the third week; 25% during the last half of the third week and the fourth and fifth weeks; and 0% thereafter.

Special length courses that begin after the first week of the quarter may be cancelled for a 100% refund through the first

day of the course at the registration centers only. Cancellations after the first day of the course but during the second through fifth weeks of the quarter (second through sixth weeks for new students) follow the refund schedule above. After the fifth week of the quarter (sixth week of the quarter for new students), no refund is available if the course is cancelled after the first day.

Remember: Cancellations are effective the day they are processed and strictly follow the dates listed below (exceptions are *not* made for classes that have not yet met for the week). Your refund will be based on the date you *officially* cancel (by cancelling on-line *or* by taking a completed Course Request form to your registration center) not on the date you stopped attending class. Cancel immediately if you stop attending class for any reason.

In a very limited number of circumstances (e.g., medical, scholastic drop, military duty, attendance at another institution) retroactive cancellation may be possible. If retroactive cancellation is authorized within one quarter of the term in question and no later than June 30 of the current fiscal year, you may be entitled to a tuition refund. Petitions for retroactive tuition refunds based on failure to cancel or nonattendance will not be approved.

Check with the Service Center staff in 150 Williamson Hall (625-5333) or 130 Coffey Hall (624-3731) for more information and a petition form.

If you are receiving financial aid, phone or visit the Office of Scholarships and Financial Aid, 210 Fraser Hall, to find out if retroactive cancellations to the beginning of the quarter require repayment of financial aid.

If your tuition and fees are not paid in full, any refund you receive will be a monetary credit applied to your unpaid balance. Read Payment of Fees, pages 23-25.

Student Services Fee and University-Sponsored Hospitalization Insurance Fee—If you drop your credit load to below 6 credits, you must accept a refund of the University-sponsored hospitalization insurance although you may keep the student services fee. All refunds of these fees are based on the date that the cancellation is processed (see table below for deadlines) and are not affected by retroactive cancellation.

If you receive a refund of the student services fee, you can no longer use the services provided by the fee. To continue using these services, you must continue to be registered and not be issued any refund.

If you cancel *all* courses and qualify for a tuition refund, you must also accept a prorated refund of the student services fee and the University-sponsored hospitalization insurance.

Special Fees—The orientation fee, the late registration fee, and the COGS, GAPSA, MSA, and SELF fees are generally not refunded (the GAPSA and MSA fees are refunded with a 100% refund). MPIRG and UMCHE are not refunded through the registration system—refund instructions are published every quarter in the *Minnesota Daily.* All other special fees assessed at registration are refunded through the fifth week of the quarter (sixth week of the quarter for new students) at the same rate as tuition and course fees. There is no refund of special fees after the refund schedule has ended, even if retroactive cancellation is authorized.

How to Obtain Your Refund—If you have paid your fees in full, you may obtain a refund by presenting your credit balance enrollment statement and picture ID to Student Accounts Receivable, 20 Fraser Hall, Minneapolis, or the Bursar's Office, 107 Coffey Hall, St. Paul. There is a two week waiting period for your refund beyond the last date any payment was receipted, unless your fees were paid only with cash or a University of Minnesota check. You can request a refund be

REFUND SCHEDULE FOR SPRING QUARTER 1997

Continuing Students		New Students	
For refund of:	**Cancel by:**	**For refund of:**	**Cancel by:**
100%	April 5	100%	April 5
50%	April 16	80%	April 12
25%	May 3	70%	April 19
0%	on or after May 4	60%	April 26
		50%	May 3
		40%	May 10
		0%	on or after May 11

Self registration is available Monday-Thursday from 7 a.m. to 12 a.m., on Friday from 7 a.m. to 10 p.m., and on Saturday from 8 a.m. to 6 p.m. In-person registration is available at the registration centers Monday 9 a.m. to 4 p.m. (8 a.m. to 5:30 p.m. in Fraser Hall during registration queues) and Tuesday-Friday from 8 to 4.

sent to you by mail by calling Student Accounts Receivable, 625-8500. Allow an additional three to four weeks, beyond the two week waiting period, for a refund by mail.

If you have *not* paid your fees in full, any refund you receive will be a monetary credit applied to your unpaid balance. Read Payment of Fees, pages 23-25.

Refunds for Students on Payroll Deduction—If you cancel courses, call Student Accounts Receivable (625-8500) for refund instructions.

Tuition Refunds for Students on Financial Aid—Financial aid recipients must maintain the same number of credits throughout the quarter. If you cancel courses and are eligible for a tuition refund, federal regulations require that your refund be returned directly to the financial aid account from which you received aid and/or sent to the lender of your student loan to reduce the principal on that loan. If you cancel courses at the 100% refund rate during a quarter, you must repay *all* financial aid received during that quarter. If the amount of your tuition refund is insufficient to repay the appropriate financial aid fund(s), you will be billed for the difference by Student Accounts Receivable, 20 Fraser Hall, and/or the Student Loan Office, 140 Williamson Hall. If you fail to pay these bills by the due dates, you will be liable for billing charges and late payment fees, and a hold will be placed on your record. You will not receive further financial aid until your bill is paid in full. You will be notified by mail of the disposition of your refund.

RESIDENCE REGULATIONS

Because the University is a state institution, residents of Minnesota pay lower tuition than nonresidents, and, in many programs, receive priority consideration for admission. To qualify for resident status, you must reside in Minnesota for at least one calendar year *prior* to the first day of class attendance. During that one year waiting period, your primary reason for living in Minnesota must be something other than school attendance. There are few exceptions to this rule, and these generally apply to veterans, migrant workers, specific federal employees, refugees, and faculty at Minnesota colleges. Students holding temporary international visas (F-1, J-1, H-1, etc.) *do not* qualify for resident tuition.

If you have moved here from another state, resident status is not automatically granted; you must apply and present evidence that: you have abandoned your former domicile; you have made Minnesota your *permanent* home; you are not a tax dependent of a parent or spouse living out-of-state; and you have taken reasonable steps to substantiate your desire to remain in Minnesota. Although acceptance of employment, registration of automobiles, payment of local taxes, etc. may support an application for resident status, these actions, by themselves, do not constitute sufficient evidence of residence.

You may apply for or appeal your resident status by obtaining an application in 240 Williamson Hall or 130 Coffey Hall. An administrative classification will follow a review of the application. You should appeal a nonresident classification that you believe to be incorrect as soon as possible. If the Review Board determines that the nonresident classification was not appropriate, you will receive a refund for the appropriate period and amount of overpayment, if any. No more than one year's retroactive refund will be granted.

RECIPROCITY

The University has reciprocity agreements with Wisconsin, North Dakota, South Dakota, and Manitoba. The University also participates in a reciprocity program with Kansas, Michigan, Missouri, and Nebraska for students in the following undergraduate colleges: Agricultural, Food, and Environmental Sciences; Architecture and Landscape Architecture; Biological Sciences; Education and Human Development; Human Ecology; Liberal Arts; Natural Resources; Carlson School of Management; Dental Hygiene; School of Nursing; and Institute of Technology. If you are a resident of any of these states or provinces, you may qualify for reciprocity tuition rates, which are lower than nonresident tuition rates and, in some cases, comparable to resident rates. There are some exceptions:

- Wisconsin students enrolled in the School of Dentistry, the Medical School, or the College of Veterinary Medicine are not eligible for reciprocity.
- **Students participating in off-campus study or study abroad for an academic year or more must reapply for reciprocity.**

You must apply for reciprocity prior to the quarter in which you wish your reciprocity to begin. **As soon as you receive an approval letter from your home state, take that letter to your registration center and obtain an adjusted enrollment statement.** After your first year, *provided you have earned credits,* your reciprocity will automatically be renewed.

Delays in your reciprocity eligibility will not exempt you from billing charges or late payment fees. For information and application forms, check with your home state reciprocity office. You can also obtain application forms and information in 240 Williamson Hall or 130 Coffey Hall.

CERTIFICATION FOR FULL-TIME OR HALF-TIME STATUS

You may be required to have your attendance at the University certified as full time or half time in order to defer payment of your student loan. This certification is especially required of transfer students who received loans at their previous institutions.

For students in undergraduate and professional units (law, dentistry, medicine, and veterinary medicine) full-time status is defined as 12 or more credits per quarter; half-time status is 6-11 credits per quarter.

For students in the Graduate School, master's programs in agriculture and education, and dental and psychology fellow specialist programs, full-time status is defined as 7 or more credits per quarter; half-time status is 3-6 credits per quarter. For students in master's programs in public health, full-time status is 9 credits; half-time status is 4 credits.

Audit registrations are not applicable for certification purposes.

The University participates in the National Student Loan Clearinghouse. The University submits a tape of students' enrollment statuses to the Clearinghouse three times each quarter (at the 2nd, 7th, and 10th weeks). The Clearinghouse, in turn, supplies verification of enrollment to lending agencies. All deferment loan forms are forwarded by the Office of the Registrar to the Clearinghouse; this information is not supplied directly to lending agencies.

If you have registered late or had an exception processed to your registration, this information may not be reported until the submission of the next tape. The Clearinghouse asks that if you receive a collections letter from a lending agency, you:

- Call the lending agency to see if a deferment form was received between the time the Clearinghouse supplies this information and the lending agency sent the collection letter.
- If, after calling the lending agency, it still appears that your deferment has not been processed, you may call the Clearinghouse, (703) 742-7791, and ask for a student service representative. The representative will verify the date on which the deferment form was received by the Clearinghouse, the date the deferment was certified and mailed, the enrollment status that was certified, and where the forms were sent.
- If an emergency exits (for example, you are being threatened with default) the Clearinghouse will intervene on your behalf by faxing another deferment to the lending agency and will work with them to ensure the form is processed on a high priority.

Some lenders are not members of the Clearinghouse. If you receive a loan deferment form from your lender, bring your request to 150 Williamson Hall *or* 130 Coffey Hall, or mail it to Office of the Registrar, 150 Williamson Hall, 231 Pillsbury Drive SE, Minneapolis, MN 55455 *or* Office of the Registrar, St. Paul, 130 Coffey Hall, 1420 Eckles Avenue, St. Paul, MN 55108.

Minnesota law allows a student who takes at least 60% of a full-time credit load to qualify as a full time student for purposes of continued insurance coverage on a family policy *if the reduced credit load is due to illness, injury, or mental or physical disability and with appropriate documentation from a physician.* Insurance companies are responsible for informing you of this option if it applies to you. You can receive certification of your credit load and the number of credits required for a 60% credit load in 150 Williamson Hall or 130 Coffey Hall. Your physician should then forward your certification with the appropriate medical documentation to your insurance company.

More information about deferments and other exceptions to the definitions of full-time and half-time status is available at 150 Williamson Hall or 130 Coffey Hall.

VETERANS CERTIFICATION

Students under Chapters 30, 32, 35, 106, and 901—The following is a summary of University and Department of Veteran Affairs (V.A.) procedures and does not include all the information you may need. You can contact the following offices for further information:

- Veterans Certification Office
  150 Williamson Hall, Minneapolis
  625-8076
- Department of Extension Classes
  101 Wesbrook Hall, Minneapolis
  624-3341
- Department of Independent Study
  45 Wesbrook Hall, Minneapolis
  624-0000
- Continuing Education and Extension
  314 Nolte Center, Minneapolis
  625-2500

Only the V.A. can determine an applicant's eligibility for educational assistance. Because eligibility criteria are different for the several educational assistance programs and the benefits for the programs vary, students with specific questions about eligibility should contact the V.A.

If you plan on attending fall, winter, and spring quarters, you can request certification for the entire academic year by going in person to one of the offices listed above. If you enroll for (or drop to) less than half time, you can be certified only for the current term; when you register for the next term you will have to reapply for certification.

You can request continuous enrollment/payment during fall, winter, or spring quarters for the next quarter if you did not initially sign up for the academic year. Continuous enrollment/payment *cannot* be requested in the following instances:

- if you are attending less than half time, are on active duty, or are receiving chapter 901 benefits, *or*
- if you withdrew from all courses in the preceding term.

If you will be enrolling at a half-time rate or more when you enter school initially or reenter, but are not eligible for continuous payment, you may elect to be paid in advance for the first partial (or full) month of training plus the following full month. Payment for the next month, however, will not be available until the very end of that month. This means that if you receive advance payments for March and April for spring, you will not receive your May check until the first week in June. Advance payment for spring can be requested from December 23, 1996–February 24, 1997. Delays in your VA benefit payments will not exempt you from billing charges or late payment fees.

If you do not participate in advance payment or if you are not eligible for continuous pay, you must be officially registered before requesting certification. Certification cannot be sent to the V.A. until the first day of the quarter. You should receive your first check 6-8 weeks after the certification is sent to the V.A.

Whenever you register for extension courses you are required to show a paid enrollment statement by the first day of each quarter to be certified. If you requested certification for the academic year, you must be officially registered by the first day of each quarter. Failure to register by the first day of the quarter will result in notification of the V.A. and cancellation of payments.

If you cancel any or all of your courses, notify one of the offices listed above. Your reduction in credits will be reported to the V.A. The V.A. will adjust your benefits retroactive to the first

day of the quarter and may require you to repay all money paid to you for any courses that you cancel.

Any grade of N will be reported to the V.A. The V.A. will adjust your benefits retroactive to the first day of the quarter and require that you repay all money paid to you for that course. Likewise, any grade of I will be reported to the V.A. However, the V.A. will allow one year for completion of the course before repayment is required. You are responsible for notifying the Certifications Office, 150 Williamson Hall, once you receive a grade to replace the I.

Whenever you claim mitigating circumstances for reductions in your credit load, you should present written evidence to the Certifications Office to be included with the report submitted to the V.A.

Chapter 31 Veterans—If you receive vocational rehabilitation assistance, you can refer questions to the scholarship terminal at 202 Fraser Hall. Bring your enrollment statement and course list to the appropriate bookstore to obtain books and supplies.

TUITION BENEFITS FOR GRADUATE ASSISTANTS

NOTE: Effective fall 1996, tuition benefits have been capped at 12 credits per quarter for graduate students. Professional degree programs that set their own tuition will cap tuition benefits at the top of their full time band. Tuition costs (over and under the cap) are assessed at the resident rate for eligible graduate assistants; however, all tuition costs above the cap are the responsibility of the student.

Important Notice for Graduate Assistants—Students who work *any* number of hours on an assistantship fall, winter, or spring quarters must be registered for those quarters. Registration of one or more credits taken either A-F or S-N (or thesis credits if eligible) will fulfill this requirement. Audit (V) registration by itself is not sufficient to hold an assistantship. **If you do not register for credit or if you cancel all credits, your graduate assistantship will be terminated and you will be billed for all tuition for that quarter.**

To be excluded from FICA withholding, graduate assistants must meet the following exclusion tests:

1. You must be enrolled for a minimum of 6 credits for the quarter or semester, or enrolled for a minimum of 1 credit if you are a doctoral candidate (who has passed the preliminary oral examination for the Ph.D.) *and*
2. You must be employed for no more than 50% time or twenty hours per week.

Graduate students who are paid more than 50% on regular payroll, or more than 40 hours in a biweekly pay period, or any combination of payments and appointments exceeding half-time, and/or who have not met the registration requirements will have taxes withheld at the rate of 6.2% for Social Security and 1.5% for Medicare on total gross salary. Your employing department will be required to pay an equal amount. International students please refer to page 25 of the 1996/97 Graduate Assistant Handbook for additional tax information.

The deadline to meet the registration requirement for student exclusion from FICA for spring quarter 1997 is March 25, 1997.

Tuition Benefits—Graduate assistants who hold a minimum 25% appointment for an entire 13 week quarter or 19.5 week semester become eligible for tuition benefits equal to twice the percentage of their appointment. (Hourly equivalents to the minimum percent time are 130 hours per quarter or 195 hours per semester. Tuition benefits for a 25% appointment equal 50%, a 30% appointment equals 60%, and so on. The maximum tuition benefit is 100%. These benefits provide for tuition only (including the $60 base tuition fee) and do not cover the student services fee or course fees.

NOTE: There are two sets of official quarter and semester dates this year, which correspond to the semi-monthly and biweekly University payroll cycles. Tuition benefits are awarded to correspond to the official dates of the pay cycle on which you are paid. Spring quarter dates are 3/16/97 to 6/15/97 for the semi-monthly pay cycle and 3/17/97 to 6/15/97 for the biweekly pay cycle. Spring semester dates are 1/1/97 to 5/15/97 for the semi-monthly pay cycle and 1/1/97 to 5/16/97 for the biweekly pay cycle. Appointments which are shorter than these official quarter or semester dates will be prorated but must be the equvalent of a 25% appointment. Under this system, a 50% appointment for half the quarter or semester would be adjusted to a 25% appointment for benefit purposes, and a 50% tuition benefit would be awarded.

Procedures for Tuition Benefits—Spring tuition benefits will be credited to Student Accounts Receivable beginning March 24, 1997.

If you are taking out student loans, you may contact the GAO one week before financial aid checks are issued to ensure that your tuition benefit has been processed.

*If you are **not** taking out student loans for spring,* you should wait until you receive your first billing statement from Student Accounts Receivable (not your enrollment statement) before questioning your account (see page 23 for billing dates).

To receive tuition benefits for Continuing Educatioand Extension (CEE) classes, you must complete an "Application for Extension Classes Tuition Benefit" form. Complete applications must be submitted to the GAO for approval and accompanied by a current PAF. Copies of this application are available in your department and from the GAO. Tuition benefit rules are more restrictive for CEE classes. (See the application form or *The Handbook for Graduate Assistants* for specific details.) NOTE: the 12-credit tuition benefit cap applies to your combined total of day and CEE classes. In some cases you may be billed later in the quarter for tuition over the cap if the credits above the cap are not reflected on your first billing statement.

Payment of Fees—You must pay your fees (or installment payments), or have your account properly credited by the payment due date to avoid a late payment fee. If you hold an assistantship but the tuition benefit has not been adjusted by

the time you receive your bill, you must contact the GAO prior to the payment due date or be assessed late payment fees. You are responsible for all late payment and installment fees if your accounts have not been adjusted by the payment due date. **Do not ignore your bill or assume the adjustments will be made for you automatically.** You can verify that you have received your credit by checking your account detail on the Student Accounts Receivable screens on the Student Access System. Graduate assistants whose remaining tuition and fees total $150 or more may qualify for payroll deduction. See page 25 for application procedures.

If you have paid in full and subsequently receive a graduate assistantship, contact the GAO, 624-7070, for instructions.

Tuition Benefit Reversal—If you do not complete your appointment (i.e., leave in the middle of the quarter, graduate early, or work less than the estimated number of hours), you will be billed for *all or a portion of your tuition.* (Nonresidents would be charged the nonresident tuition rate.)

Information—For more information on graduate assistant benefits, procedures, and policies, refer to *The Handbook for Graduate Assistants,* or contact your department or the GAO. Contact the GAO in person at Suite 1-41, Donhowe Building; by mail to Graduate Assistant Office, Suite 200, Donhowe Building, 319 15th Ave. SE, Minneapolis, MN 55414; by phone at (612) 624-7070; by FAX at (612) 625-9801; and by e-mail at gaoinfo@gold.tc.umn.edu. Office hours are 8-4:30 Monday-Friday. Visit the GAO home page on the World Wide Web at http://www.umn.edu/ohr/gao/ for information and listings of current graduate assistant job openings.

Graduate Assistant Medical Plan—See page 19 for information.

RESIDENT TUITION PRIVILEGES

Graduate Assistants (9511, 9521, 9531) and Immediate Family Members—Non-resident students enrolled in the Graduate School or in another post-baccalaureate degree program who hold at least a 25% time appointment as a teaching assistant, research assistant, or administrative fellow are eligible for resident tuition rates. This eligibility extends also to a parent, spouse, child, or ward.

If you hold such an appointment, and your appointment has cleared the personnel system, you will automatically be charged the resident tuition rate when you register. If you are charged the nonresident tuition rate, you should contact the Graduate Assistant Office (GAO), 200 Donhowe Building, 319 15th Ave. SE, Minneapolis, 624-7070 (Suite 1-41 for in-person assistance).

If you hold such an appointment and you want your family member to receive resident tuition rates, you must contact the GAO quarterly.

Any changes to this policy will be distributed as soon as available.

Graduate School Fellows/Trainees (9561, 9562) and Immediate Family Members—Nonresident graduate students who hold fellowship or traineeship appointments are eligible for resident tuition rates, provided the award is administered by the University and the stipend is at least equal to a 25% time graduate assistantship. This eligibility also extends to members of the *immediate* family (i.e., parent, spouse, child, or ward).

If you hold a fellowship or traineeship appointment, codes for resident tuition have, most likely, already been entered into the computerized registration system. If you are charged the nonresident tuition rate when you register, you should contact the director of graduate studies in your program.

Any changes to this policy will be distributed as soon as available.

If you hold a qualifying fellowship or traineeship and you want your family member to receive resident tuition rates, contact the Graduate School Fellowship Office for more information, 625-7579.

Professional School Fellows/Trainees (9564, 9565) and Immediate Family Members—Professional school fellows/trainees and immediate family members are also eligible for resident tuition rates, provided the fellowship/traineeship appointment is at least equal to a 25% graduate assistantship. If you are charged the nonresident tuition rate when you register, first contact your department payroll personnel and then the Graduate Assistant Office, 200 Donhowe Building, 319 15th Ave. SE, Minneapolis, 624-7070 (Suite 1-41 for in-person assistance).

Any changes to this policy will be distributed as soon as available.

Former Graduate Assistants, Graduate School Fellows/Trainees, Professional School Trainees/Fellows, and Immediate Family Members—If you no longer hold a graduate assistantship, Graduate School fellowship/traineeship, or professional school fellowship/traineeship, but *have* held qualifying appointments for three or more quarters, you and your immediate family members may still be eligible for up to six more quarters of resident tuition. (Benefits must be used within 3 years of the last qualifying appointment.) Contact the Graduate Assistant Office, 200 Donhowe Building, 319 15th Ave. SE, Minneapolis, 624-7070 (Suite 1-41 for in-person assistance) for more information on graduate assistantships or professional school traineeships/fellowships.

Contact the Graduate School Fellowship Office, 625-7579, for more information on Graduate School fellowships/traineeships.

Academic Appointees and Immediate Families—Academic appointees at the University of Minnesota and their immediate family members are eligible to pay resident tuition rates subject to the following rules concerning class title and percentage of appointment.

Appointees (and their immediate family members) who hold 75% appointments for an entire quarter in the following classes are eligible to pay resident rates during that quarter: 93xx, 94xx, 96xx, 97xx, 9540, 9546, 9548, 9551, 9554, 9556, and 9563.

Appointees (and their immediate family members) who hold at least a 25% appointment in the following classes, with a level of support equal to or greater than that provided by a 25% graduate assistantship, are eligible to pay resident tuition rates during the quarter of their appointment: 9538, 9539, 9545, 9553, 9558, 9561, 9562, 9564, and 9565.

To claim the resident tuition benefit, appointees or immediate family members from both groups listed above should have the appointee's employing department complete a Verification of Appointment for Resident Tuition form. A separate form will be needed for each individual appointee or immediate family member for each quarter in which resident tuition is requested. Completed forms should be taken to a registration center (202 Fraser Hall or 130 Coffey Hall); resident rates will then be assessed. If you are registering on-line, you may mail your form to your registration center.

Appointees to the above class titles do not accrue extended resident tuition credit. Resident tuition privileges are available to appointees and their immediate family members *only* during quarters of qualifying appointment.

Civil Service Employees—Civil service employees of the University of Minnesota who work 75% time or more during an entire quarter and their immediate family members are eligible to pay resident tuition rates. These resident tuition privileges are available *only* during quarters of qualifying employment.

To claim the resident tuition benefit, *employees on regular payroll* or their immediate family members should have the employee's department complete a Verification of Appointment for Resident Tuition form. Every quarter a separate form is needed for each employee and family member. Completed forms should be taken by the student to a registration center (202 Fraser Hall or 130 Coffey Hall); resident rates will then be assessed. If you are registering on-line, you may mail your form to your registration center. *Employees on miscellaneous payroll* and their immediate family members must initially pay nonresident tuition and be reimbursed after the quarter ends. The employment department must certify that the employee worked at least 390 hours during the quarter.

section 4 liberal education

The University of Minnesota—Twin Cities liberal education requirements apply to all students entering a baccalaureate degree program fall 1996 and later. If you entered a degree program before fall 1996 and are uncertain whether the liberal education requirements apply to you, check with your academic adviser.

LIBERAL EDUCATION REQUIREMENTS

Overview—A liberal education introduces you to the modes of inquiry and subject matter of the major branches of knowledge, including the factual information and theoretical or artistic constructs that form their foundations; the "ways of knowing"—the kinds of questions asked and how insight, knowledge, and data are acquired and used; the changes over time of their central ideas or expressive forms; and the interrelationships among them and with human society in general. To these ends, study by all undergraduate students on the Twin Cities campus is guided by a common framework.

THE DIVERSIFIED CORE CURRICULUM

Physical and Biological Sciences—Comprehension of physical and biological principles; understanding of and ability to use the methods of scientific inquiry—the ways in which scientists investigate physical and biological phenomena; and appreciation of the importance of science and the value of a scientific perspective.

Requirement: A minimum of 3 courses totaling at least 12 credits, including 1 course with laboratory or field experience in the physical sciences and 1 course with laboratory or field experience in the biological sciences.

History and Social Sciences—Knowledge of how historians and social scientists describe and analyze human experiences and behavior; study of the interrelationships among individuals, institutions, structures, events, and ideas; understanding of the roles individuals play in their historical, cultural, social, economic, and political worlds.

Requirement: A minimum of 3 courses totaling at least 12 credits, including one course with historical perspective.

Arts and Humanities—Understanding of approaches to the human condition through works of art, literature, and philosophy; knowledge of how artists create and humanistic scholars think; ability to make aesthetic judgments.

Requirement: A minimum of 3 courses totaling at least 12 credits, including courses in two of the following: literature, philosophical perspective, and visual or performing arts.

Mathematical Thinking—Acquisition of mathematical modes of thinking; ability to evaluate arguments, detect fallacious reasoning, and evaluate complex reasoning chains; appreciation of the breadth of applications of mathematics and its foundations.

Requirement: A minimum of 1 course totaling at least 4 credits.

THE DESIGNATED THEMES OF LIBERAL EDUCATION

The designated themes of liberal education offer a dimension to liberal learning that complements the diversified core curriculum. Each of the themes focuses on an issue of compelling importance to the nation and the world, the understanding of which is informed by many disciplines and interdisciplinary fields of knowledge.

Requirement: A minimum of 6 courses (or 5 courses if one includes an approved practicum), including one course in each of the following:

Cultural Diversity—Understanding of the roles gender, ethnicity, and race play in structuring the human experience in and developing the social and cultural fabric of the United States.

International Perspectives—Comprehension of the ways in which you are part of a rapidly changing global environment dominated by the internationalization of most human endeavors.

Environment—Knowledge of the interaction and interdependence of the biophysical systems of the natural environment and human social and cultural systems.

Citizenship and Public Ethics—Reflection on and determination of a clearer sense of your present and future civic relationships and your obligations to the community.

You may satisfy liberal education requirements with a variety of courses and credits because some courses serve multiple goals in the curriculum. For example, some courses will satisfy a diversified core requirement and a designated theme requirement, and other courses will satisfy the requirements for each of two designated themes. Thus, you may satisfy the designated theme requirements with a smaller number of courses than is stated in the requirement.

Guide to Courses—The following charts list the courses that fulfill each of the diversified core curriculum and designated theme areas and the probable quarters that each is offered.

COURSES THAT SATISFY REQUIREMENTS FOR DIVERSIFIED CORE CURRICULUM

Physical and Biological Sciences

Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
AgET 3025	Engineering Principles and Applications	Phys/NL				
Agro 1007	Biology of Plant Food Systems & the Environment	Biol/L	Envt			p. 64
AnPl 3010	Environment and World Food Production	Biol/NL	Envt			
AnSc 3510	Introduction to Human and Animal Growth & Development	Biol/NL				
Anth 1101	Human Origins	Biol/L	Envt			p. 66
Ast 1019	Our Changing Planet	Phys/L	Envt			p. 70
Ast 1021H	Introduction to Astronomy	Phys/L	Envt			
Ast 1031	Exploring the Universe: A	Phys/NL	Envt			p. 70
Ast 1032	Exploring the Universe: L	Phys/L	Envt			p. 70
BioC 1401	Elementary Biochemistry	Biol/NL				p. 70
Biol 1009	General Biology	Biol/L				p. 71
Biol 1051	Environmental Studies	Biol/NL	Envt			
Biol 1101	Heredity and Human Society	Biol/NL	C/PE			
Biol 1103	General Botany	Biol/L				p. 71
Biol 1106	General Zoology	Biol/L				p. 71
Biol 1201	Evolutionary and Ecological Perspectives	Biol/L				p. 71
Biol 3051	Environmental Studies	Biol/NL	Envt			
CDis 1304	The Physics and Biology of Spoken Language	Phys/L				p. 80
Chem 1001	General Principles of Chemistry	Phys/L				
Chem 1002	Basic Organic Chemistry	Phys/L				p. 75
Chem 1003	Physical World, Chemistry	Phys/L	Envt			p. 75
Chem 1008	Physical World, Chemistry	Phys/NL	Envt			p. 75
Chem 1051	Chemical Principles I	Phys/L	Envt			p. 75
Chem 1052	Chemical Principles II	Phys/L	Envt			p. 75
EEB 1019	Our Changing Planet	Phys/L	Envt			p. 88
EEB 3001	Introduction to Ecology	Biol/NL	Envt			p. 88
Ent 1005	Economic Entomology	Biol/L	Envt			
Ent 3005	Insect Biology	Biol/NL				p. 95
Ent 3200	Social Insects	Biol/NL				
FR 3103	Meteorology and Climatology for Natural Resource Managers	Phys/NL	Envt			
FR 3104	Forest Ecology	Biol/NL	Envt			
FScN 1020	Introductory Microbiology	Biol/L				
FScN 1612	Principles of Nutrition	Biol/NL				p. 97
GC 1111	Science in Context: Weather and Climate	Phys/NL				p. 99
GC 1112	Ecological Evaluation of Environmental Problems	Biol/NL	Envt			p. 99
GC 1131	Biological Science: Principles	Biol/L				p. 99
GC 1132	Biological Science: The Human Body	Biol/NL				p. 100
GC 1132 & GC 1137	Biological Science: The Human Body Biological Sciences Laboratory: The Human Body	Biol/L				p. 100
GC 1166	Principles of Chemistry	Phys/NL				p. 100
GC 1171	Physical Geology	Phys/L				
GC 1172	Historical Geology	Phys/L				
GC 1173	Geology of the National Parks	Phys/L				p. 100

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

Abbreviations:

AH	Arts and Humanities
Biol/L	Biological Science with Laboratory
Biol/NL	Biological Science without Laboratory
CD	Cultural Diversity
C/PE	Citizenship and Public Ethics
Envt	Environment
Hist	Historical Perspective
IP	International Perspective
Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts

Physical and Biological Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Geo 1001	The Dynamic Earth: An Introduction to Geology	Phys/L	Envt			p. 101
Geo 1002	Historical Geology	Phys/L				p. 102
Geo 1003	Intro to the Mesozoic: Evolution, Ecology, and Extinction of Dinosaurs	Phys/NL				
Geo 1004	Physical and Historical Geology of Minnesota	Phys/NL				
Geo 1005	Geologic Perspectives on Energy	Phys/NL	Envt			
Geo 1011	Volcanoes of the Earth	Phys/NL				p. 102
Geo 1012	Planet Earth	Phys/NL	Envt			p. 102
Geo 1019	Our Changing Planet	Phys/L	Envt			p. 102
Geo 1044	Physical and Historical Geology of Minnesota	Phys/L				
Geo 1601	Oceanography	Phys/NL				
Geo 1701	Faces of the Earth	Phys/NL	IP			
Geo 3211H	Honors Earth Science	Phys/NL				p. 102
Geog 1402	Geography of Environmental Systems	Phys/NL	Envt			
Geog 1425	Introduction to Meteorology	Phys/L				p. 101
Hort 1036	Plant Propagation	Biol/L				
Hort 3003	Plant Genetics and Improvement	Biol/L				
MdBc 1030	Elementary Biochemistry	Biol/NL				
NRES 3020	Plant Resource Management & the Environment	Biol/L	Envt			
NRES 3060	Water Quality in Natural Resource Management	Biol/NL	Envt			p. 122
PBio 1012	Plants Useful to Humans	Biol/NL	Envt			p. 132
Phys 1001	The Physical World	Phys/NL				p. 130
Phys 1001 & Phys 1005	The Physical World; Physics Laboratory	Phys/L				p. 130
Phys 1041	Introductory Physics	Phys/L				
Phys 1042	Introductory Physics	Phys/L				p. 130
Phys 1104	General Physics	Phys/NL				
Phys 1104 & Phys 1107	General Physics; General Physics Laboratory	Phys/L				
Phys 1105	General Physics	Phys/NL				
Phys 1105 & Phys 1108	General Physics; General Physics Laboratory	Phys/L				
Phys 1106	General Physics	Phys/NL				p. 130
Phys 1106 & Phys 1109	General Physics; General Physics Laboratory	Phys/L				p. 130
Phys 1251	General Physics I	Phys/L				
Phys 1252	General Physics II	Phys/L				p. 130
Phys 1253	General Physics III	Phys/L				p. 131
Phys 1254	General Physics IV	Phys/L				
Phys 1451H	Honors Physics I	Phys/L				
Phys 1452H	Honors Physics II	Phys/L				
Phys 1453H	Honors Physics III	Phys/L				p. 131
Phys 1454H	Honors Physics IV	Phys/L				
Phys 1911	Laboratory-Based Physics for Teachers	Phys/L				
Phys 1912	Laboratory-Based Physics for Teachers	Phys/L				p. 131
Psy 3031	Sensation and Perception	Biol/NL				
Psy 3061	Introduction to Biological Psychology	Biol/NL				
Soil 1020	The Soil Resource	Phys/L	Envt			
Soil 1425	Introduction to Meteorology	Phys/L				p. 142
Soil 3125	Basic Soil Science	Phys/L	Envt			
VPB 3103	General Microbiology	Biol/NL				p. 147
WoSt 3202	Biology of Women	Biol/NL				p. 148

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

History and Social Sciences						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Afro 1021	Introduction to Africa	SSci	IP			
Afro 3001	Intro: West African History: Early Times to 1800	Hist	IP			
Afro 3002	Introduction to West African History: 1800 to the Present	Hist	IP			
Afro 3013	Cities in Africa: African, Islamic, European Tradition	Hist	IP			p. 64
Afro 3061	The Black Family	SSci	CD			p. 64
Afro 3072	Racism: Social and Psychological Consequences for Black Americans	SSci	CD			
Afro 3431	History of Africa to 1800	Hist	IP			
Afro 3432	History of Africa: 1800 to Present	Hist	IP			
Afro 3864	Afro-American History	Hist	CD			
Afro 3865	Afro-American History	Hist	CD			
Afro 3954	Sociological Perspectives on Race, Class, and Gender	SSci	CD			
AmIn 1771	Introduction to American Indian Studies	SSci	CD			p. 65
AmIn 3026	Ojibwe Culture and History	Hist	CD			p. 65
AmIn 3036	Dakota Culture and History	SSci	CD			p. 65
AmIn 3111	American Indian History from Mid-15th Century to 1830	Hist	CD			
AmIn 3112	American Indian History 1850 to the Present	Hist	CD			
AmSt 1001	American Cultures	SSci	CD			
AmSt 1002	American Cultures	SSci	CD			
AmSt 1003	American Cultures	SSci	CD			p. 65
ANE 3501	Ancient Israel	Hist				
ANE 3502	Ancient Israel	Hist				
ANE 3503	Ancient Israel: Background of the Bible	Hist				
Anth 1102	Understanding Cultures	SSci	IP			p. 66
Anth 3003	The Rise of Civilization	SSci	IP			
Anth 3116	Ecological Anthropology	SSci	Envt			p. 66
Anth 3303	Women: Anthropological Perspectives	SSci				
ApEc 1101	Principles of Microeconomics	SSci				
ApEc 1102	Principles of Macroecomonics	SSci				p. 66
ApEc 3040	Economic Development of American Agriculture	Hist				
CAS 3511	Ancient Iran	Hist	IP			p. 74
CAS 3512	Modern Iran	Hist	IP			
CAS 3531	Central Asian Culture	Hist	IP			
CAS 3532	Russia and Central Asia	Hist	IP			
Chic 3105	Introduction to Chicano Studies: The Beginnings	Hist	IP			p. 76
Chic 3106	Intro to Chicano Studies: Mexico and the U.S.	Hist	CD			
Chic 3107	Introduction to Chicano Studies: Chicano in Contemporary Society	Hist	CD			
Chic 3427	History of Cuba and Puerto Rico	Hist	IP			
Chic 3428	History of Relations Between the United States and Mexico: 1821-Present	Hist	IP			
Chic 3441	Chicano History to 1900	Hist	CD			
Chic 3442	Chicano History Since 1990	Hist	CD			p. 76
Clas 1001	Age of Homer	Hist				
Clas 1002	Age of Pericles	Hist				
Clas 1003	Age of Alexander	Hist				
Clas 1004	Age of Caesar	Hist				
Clas 1005	Age of Augustus	Hist				

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

Abbreviations:

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Biol/L	Biological Science with Laboratory
Biol/NL	Biological Science without Laboratory
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C/PE	Citizenship and Public Ethics
Envt	Environment
Hist	Historical Perspective
IP	International Perspective
Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts

History and Social Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Clas 1006	Age of Nero	Hist				p. 78
Clas 1023	Age of Constantine	Hist				
Clas 1024	Age of Saint Augustine of Hippo	Hist				
Clas 1025	Age of Justinian and Muhammad	Hist				
Clas 1043	Introduction to Greek and Roman Archaeology	Hist				
Clas 1082	Jesus in History	Hist				
Clas 3023	Age of Constantine	Hist				
Clas 3024	Age of Saint Augustine of Hippo	Hist				
Clas 3025	Age of Justinian and Muhammad	Hist				
Clas 3071	Greek and Hellenistic Religions	Hist				
Clas 3072	The New Testament	Hist				
Clas 3073	Roman Religion and Early Christianity	Hist				
CPsy 1301	Introductory Child Psychology	SSci				p. 76
CPsy 3309	Introductory Child Psychology for the Social Sciences	SSci				p. 76
CPsy 3331	Introduction to Social Development	SSci				
CSCL 1302	Discourse and Society II: Meaning and History	Hist				p. 83
CSCL 3421	Culture and the Production of Modern Identity, I: 1600-1750	Hist				
CSCL 3422	Culture and the Production of Modern Identity, II: 1750-1850	Hist				
CSCL 3472	Gay Men and Homophobia in American Culture	Hist	CD			
EAS 1462	Introduction to East Asia: The Imperial Age	Hist	IP			
EAS 1463	East Asia in Modern Times: 1790-1990	Hist	IP			p. 88
EAS 3465	China's Response to the West	Hist	IP			
Econ 1101	Principles of Microeconomics	SSci	IP			p. 88
Econ 1102	Principles of Macroeconomics	SSci	IP			p. 88
Econ 1104	Principles of Microeconomics	SSci	IP			p. 88
Econ 1105	Principles of Macroeconomics	SSci	IP			p. 88
EdPA 3120	Childhood Education: Western Civilization	Hist				
Engl 3851	The English Language	SSci				p. 94
Engl 3853	Gender and the English Language	SSci	CD			p. 94
EPsy 3119	Learning and Cognitive Bases of Education	SSci				
EPsy 3132	Psychology of Multiculturalism in Education	SSci	CD			
EPsy 3139	Social and Developmental Psychology in Education	SSci	CD			
EPsy 5119	Learning and Cognitive Foundations of Education	SSci				
EPsy 5139	Building a Learning Community	SSci	CD			
FScN 3472	Food Selection Princliples	SSci				
FSoS 3600	Family Issues Across the Lifespan	SSci	CD			p. 96
GC 1211	People and Problems	SSci	CD			p. 100
GC 1221	Minnesota History	Hist				
GC 1231	United States: Growth of National Power	Hist				p. 100
GC 1233	United States: Government and Politics	SSci				p. 100
GC 1235	United States: Law in Society	SSci	C/PE			p. 100
GC 1281	Psychology in Modern Society	SSci				p. 100
GC 1285	Cultural Anthropology	SSci	IP			p. 100
GC 1511	Introduction to Business and Society	SSci				p. 100
Geog 1301	Human Geography	SSci	IP			
Geog 1302	The World Around Us	SSci	IP			p. 101
Geog 3101	Geography of United States and Canada	SSci	CD			p. 101
Geog 3102	Geographic Issues in the United States, Canada	SSci				
Geog 3141	Africa	SSci	IP			p. 101
Geog 3161	Europe	SSci	IP			p. 101
Geog 3331	Economic Geography	SSci	IP			p. 101
Geog 3371	Introduction to Urban Geography	SSci				p. 101

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

History and Social Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Geog 3373	The Changing Form of the City	Hist	IP			
Geog 3381	Population in an Interacting World	SSci	IP			
Hist 1011	Introduction to World History	Hist	IP			
Hist 1012	Introduction to World History	Hist	IP			
Hist 1013	Introduction to World History	Hist	IP			p. 104
Hist 1017	Introduction to World History	Hist	IP			
Hist 1018	Introduction to World History	Hist	IP			
Hist 1021	Western Civilization	Hist	IP			
Hist 1031	Introduction to European Civilization: The Medieval Centuries	Hist	IP			
Hist 1032	Introduction to European Civilization: Early Modern Europe, 1350-1750	Hist	IP			
Hist 1033	Introduction to European Civilization: 1750 to Present	Hist	IP			p. 104
Hist 1301	American History	Hist	CD			
Hist 1302	American History	Hist	CD			p. 104
Hist 1307	American History	Hist	CD			
Hist 1308	American History	Hist	CD			
Hist 3101	Introduction to Medieval Studies	Hist				
Hist 3151	History of the British Isles	Hist	C/PE			
Hist 3152	History of the British Isles	Hist	C/PE			
Hist 3245	History of Modern East Central Europe	Hist	IP			
Hist 3347	Women in Colonial and Victorian America	Hist	CD			
Hist 3357	Topics in the Social History of the U.S.: 19th-Century Minnesota	Hist	C/PE			
Hist 3401	Survey of Latin American History: Colonial Period to 1800	Hist	IP			
Hist 3402	Survey of Latin American History: 1800-1929	Hist	IP			
Hist 3403	Survey of Latin American History: 1929 to Present	Hist	IP			p. 104
Hist 3431	History of Africa to 1800	Hist	IP			
Hist 3432	History of Africa, 1800 to Present	Hist	IP			
Hist 3462	Introduction to East Asia: The Imperial Age	Hist	IP			
Hist 3463	Introduction to East Asia in Modern Times	Hist	IP			p. 104
Hist 3465	China's Response to the West	Hist	IP			
Hist 3611	Medieval Cities of Europe	Hist	IP			
Hist 3615	Women in European History, 1500 to Present	Hist				
Hist 3616	France in the High Middle Ages	Hist	IP			
Hist 3636	Russian History from the Origins to Peter the Great	Hist	IP			p. 104
Hist 3704	Daily Life in Europe, 1348-1750	Hist	IP			p. 104
Hist 3721	Europe in the Era of World War I	Hist	IP			
Hist 3814	The Practice of Citizenship in 19th Century America	Hist	C/PE			
Hist 3864	Afro-American History	Hist	CD			
Hist 3865	Afro-American History	Hist	CD			
Hist 3871	American Indian History from Mid-15th Century to 1830	Hist	CD			
Hist 3872	American Indian History: 1830 to the Present	Hist	CD			
HMed 3040	Human Disease and the Environment in History	Hist	Envt			
HMed 3401	Early History of Medicine: The Classical Tradition	Hist				
HMed 3402	Health Care in Modern History	Hist				
HMed 3403	Health Care in Modern History	Hist				p. 105
HSci 1711	Technology & Western Civilization: Ancient & Medieval	Hist	IP			

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Phil	Philosophical Perspective
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Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts

History and Social Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
HSci 1712	Technology & Western Civilization: Renaissance to Industrial Revolution	Hist	IP			
HSci 1713	Technology & Western Civilization: 19th, 20th Centuries	Hist	IP			p. 105
HSci 1811	Introduction to the History of Science: Ancient	Hist	IP			
HSci 1812	Introduction to History of Science: The Scientific Revolution	Hist	IP			
HSci 1813	Introduction to History of Science: Modern Science	Hist	IP			p. 105
HSci 3202	History of Biology: Biology in the 19th and 20th Century	Hist	IP			
HSci 3331	Technology and American Culture	Hist	CD			
HSci 3332	Science and American Culture	Hist	CD			
HSci 3333H	Issues in 20th Century American Science	Hist	C/PE			
HSci 3402	Science, Ethics, and Values	Hist	C/PE			
HSci 3711	Technology & Western Civilization: Ancient & Medieval	Hist	IP			
HSci 3712	Technology & Western Civilization: Renaissance to Industrial Revolution	Hist	IP			
HSci 3713	Technology & Western Civilization: 19th, 20th Centuries	Hist	IP			p. 105
HSci 3811	Introduction to the History of Science: Ancient	Hist	IP			
HSci 3812	Introduction to History of Science: The Scientific Revolution	Hist	IP			
HSci 3813	Introduction to History of Science: Modern Science	Hist	IP			p. 105
HSci 3825	The Nuclear Age	Hist	IP			
Jour 1001	Introduction to Mass Communication	SSci				p. 109
Jour 3614	History of Mass Communication Technology	Hist				
Jour 3796	Mass Media and Politics	SSci				
LAS 3401	Survey of Latin American History: Colonial Period to 1800	Hist	IP			
LAS 3402	Survey of Latin American History: 1800-1929	Hist	IP			
LAS 3403	Survey of Latin American History: 1929 to Present	Hist	IP			p. 111
Ling 3001	Introduction to Linguistics	SSci				p. 112
MELC 3511	Ancient Iran	Hist	IP			p. 118
MELC 3512	Modern Iran	Hist	IP			
MELC 3531	Central Asian Cultural Sphere	Hist	IP			
MELC 3532	Russia and Central Asia	Hist	IP			
Nurs 1010	History of the United States Health Care System	Hist				
Pol 1001	American Government and Politics	SSci	C/PE			p. 132
Pol 1025	World Politics	SSci	IP			p. 132
Pol 1041	Contemporary Political Ideologies	SSci	C/PE			p. 133
Pol 1054	Government and Politics in a Changing World	SSci	IP			p. 133
Pol 3051	Introduction to Political Analysis	SSci				p. 133
Pol 3835	International Relations	SSci	IP			p. 133
Psy 1001	Introduction to Psychology	SSci				p. 134
Psy 1004	Introductory Laboratory Psychology	SSci				
Psy 1005	Introductory Laboratory Psychology	SSci				p. 134
Psy 3011	Introduction to Psychology of Learning	SSci				
Psy 3051	Introduction to Cognitive Psychology	SSci				
Psy 3101	Introduction to Personality	SSci				p. 134
RelA 1082	Jesus in History	Hist				
RelA 3071	Greek and Hellenistic Religions	Hist				
RelA 3072	The New Testament	Hist				
RelA 3073	Roman Religion and Early Christianity	Hist				
RelA 3501	Ancient Israel	Hist				
RelA 3502	Ancient Israel	Hist				
RelA 3503	Ancient Israel	Hist				
Rhet 1303	Humanities: Science, Religion, and the Search for Human Nature	Hist				p. 139
Soc 1001	Introduction to Sociology	SSci	CD			p. 142
Soc 1004	American Race Relations	SSci	CD			p. 142
Soc 3101	Introduction to American Criminal Justice	SSci	C/PE			p. 142

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History and Social Sciences--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Soc 3481	Modern Japanese Society	SSci	IP			
Soc 3482	Contemporary Chinese Society	SSci	IP			
Soc 3501	The Family	SSci	CD			
Soc 3524	America's Sexual Crisis	SSci				
Soc 3601	Urban Community	SSci	IP			p. 142
Soc 3954	Sociological Perspectives on Race, Class, and Gender	SSci	CD			
Spch 3211	Introduction to Electronic Media in America	SSci				
Spch 3401	Introduction to Communication Theory	SSci				p. 144
Spch 3601	Introduction to Rhetorical Theory	Hist	C/PE			p. 144
SW 3202	Interventions in Community and Social Policy	SSci	C/PE			p. 141
UrbS 3104	Introduction to Urban Studies	SSci				p. 147
WoSt 1002	Introduction to Women's Studies	SSci	CD			
WoSt 1003	Women in World Cultures	SSci	IP			
WoSt 3002	Women and U.S. Multicultural Studies	SSci	CD			p. 148
WoSt 3003	Women in World Cultures	SSci	IP			
WoSt 3100	Women in Colonial and Victorian America	Hist	CD			
WoSt 3103	Feminist Approaches to History	Hist				
WoSt 3405	Latin American Women's Lives	SSci				
WoSt 3406	Women, Race, and Class in the U.S.	SSci	CD			
Arts and Humanities						
Afro 3591	Introduction to Afro-American Literature	Lit	CD			
Afro 3601	Introduction to African Literature	Lit	IP			p. 64
Afro 3654	African Cinema	Vis	IP			
AmIn 3116	American Indian Literature	Lit	CD			p. 65
AmIn 3211	American Indian Philosophies	Phil	CD			p. 65
AmIn 3242	Survey of American Indian Arts	AH	CD			p. 65
ANE 1001	The Bible: Narrative Text	Lit				
ANE 1002	The Bible: Prophecy	Lit				
ANE 3001	The Bible: Narrative Text	Lit				
ANE 3002	The Bible: Prophecy	Lit				
ANE 3251	Modern Study of the Old Testament	Lit				
Arch 1301	Introduction to Architectural Drawing	Vis				p. 67
Arch 1401	The Designed Environment	AH	Envt			
Arch 3411	History of Architecture to 1750	Vis	IP			
Arch 3412	History of Architecture Since 1750	Vis	IP			
Arch 3413	Landscape Architectural History	Vis				
ArtH 1016	Introduction to Asian Art	Vis	IP			
ArtH 3008	History of Ancient Art	AH	IP			p. 70
ArtH 3014	Art of India	Vis	IP			p. 70
ArtH 3015	Art of Islam	Vis	IP			
ArtH 3017	Islamic Culture	AH	IP			
ArtH 3142	Arts of Egypt and the Near East	Vis	IP			
ArtH 3411	History of Architecture to 1750	Vis	IP			
ArtH 3412	History of Architecture Since 1750	Vis	IP			

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Phys/L	Physical Science with Laboratory
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Vis	Visual or Performing Arts

Arts and Humanities--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
ArtS 1101	Drawing I	Vis				p. 68
ArtS 1301	Sculpture	Vis				p. 68
ArtS 1302	Sculpture	Vis				p. 68
ArtS 1401	Introduction to Studio Arts	Vis	IP			p. 68
ArtS 1510	Printmaking: Intaglio	Vis				p. 68
ArtS 1520	Printmaking: Lithography	Vis				p. 68
ArtS 1530	Printmaking: Relief	Vis				
ArtS 1540	Printmaking: Screen	Vis				p. 68
ArtS 1602	Electronic Art	Vis				p. 68
ArtS 1701	Photo Medium	Vis				p. 68
ArtS 1811	Ceramics: Handbuilding	Vis				p. 68
ArtS 1812	Ceramics: Wheel Throwing	Vis				p. 68
CAS 3601	Fiction: Iran and Central Asia	Lit	IP			
CAS 3602	Persian Poetry	Lit				
Chic 3212	La Chicana	Lit	CD			
Chic 3213	Chicano Music and Art	Vis	CD			p. 76
Chic 3507	Introduction to Chicano Literature	Lit				
Chic 3508	Introduction to Chicano Literature: Text, Context	Lit				
Chn 3091	Filmic Construction of Modern Identity in China	Vis	IP			p. 77
Chn 3171	Introduction to Chinese Literature in Translation I	Lit	IP			
Chn 3172	Introduction to Chinese Literature in Translation II	Lit	IP			
Clas 1042	Greek and Roman Mythology	AH				p. 78
Clas 3001	Greek, Roman Lyric Poetry in Translation	Lit				
Clas 3008	Ancient Art	AH	IP			
Clas 3035	Mythology in Western Art	AH				p. 78
Clas 3081	Classical Epic in Translation	Lit				
Clas 3082	Greek Tragedy in Translation	Lit				
Clas 3142	Art of Egypt	Vis	IP			
CSCL 1001	Introduction to Cultural Studies: Rhetoric, Power, Desire	AH				
CSCL 1301	Discourse and Society I: Reading Culture	AH				p. 83
CSCL 1303	Discourse and Society III: Knowledge, Persuasion, Power	AH				p. 83
CSCL 3115	Cinema and Ideology	Vis				
CSCL 3132	The Modern Novel in a Comparative Perspective	Lit				
CSCL 3172	Music as Discourse	Vis				p. 83
CSCL 3175	Comedy: Text and Theory	AH				p. 83
CSCL 3176	Oppositional Cinemas	Vis	IP			
CSCL 3321	Theories of Culture	AH				p. 83
CSCL 3331	Science and the Humanities	Phil				p. 83
CSCL 3458	The Body and the Politics of Representation	AH				
DHA 1101	Introduction to the Designed Environment	AH				
DHA 1300	Introduction to Design	AH				p. 87
Dnce 1101	Introduction to Dance	Vis	IP			
Dnce 3401	Dance History I	Vis	IP			p. 85
Dnce 3402	Dance History II	Vis	IP			p. 85
Dnce 3486	Ethnic Dance Traditions in American Society	Vis	CD			
Dnce 3666	Dance Philosophy and Esthetics	Vis	IP			
Dnce 5487	World Dance Studies	Vis	IP			
Engl 1005	Introduction to Literature	Lit				p. 94
Engl 1016	Introduction to American Literature	Lit	CD			p. 94 (honors)
Engl 1017	Introduction to Modern Poetry	Lit				p. 94
Engl 1018	Introduction to Modern Fiction	Lit				p. 94
Engl 1019	Introduction to Modern Drama	Lit				p. 94

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Arts and Humanities--Continued

Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Engl 1241	Introduction to Shakespeare	Lit				p. 94
Engl 1591	Literature of American Minorities	Lit	CD			p. 94
Engl 1595	Introduction to "Third World" Literatures in English	Lit	IP			p. 94
Engl 3111	Survey of English Literature	Lit				
Engl 3112	Survey of English Literature	Lit				
Engl 3113	Survey of English Literature	Lit				p. 94
Engl 3241	Shakespeare	Lit				p. 94
Engl 3242	Shakespeare	Lit				p. 94
Engl 3411	Survey of American Literature to 1850	Lit				
Engl 3412	Survey of American Literature, 1850-1900	Lit				
Engl 3413	Survey of American Literature, 1900-1945	Lit				p. 94
Engl 3455	American Short Story	Lit				p. 94
Engl 3591	Introduction to Afro-American Literature	Lit	CD			
Engl 3651	Poetry	Lit				
Engl 3671	The Novel	Lit				p. 94
EngW 1101	Introduction to Creative Writing	Lit				p. 94
Fren 3101	Introduction to French Literary Texts: Poetry	Lit	IP			p. 99
Fren 3103	French Literary Texts: Novel	Lit	IP			p. 99
Fren 3606	Quebec: Literature and Film in Translation	Lit	IP			
GC 1311	Art: General Arts	Vis	IP			p. 100
GC 1312	Identity, Community, & Culture: Connections in the Arts & Humanities	Vis	CD			p. 100
GC 1331	Musical Heritage	Vis	IP			
GC 1357	World Religious Beliefs	Phil	IP			
GC 1365	Literatures of the United States	Lit	CD			p. 100
GC 1366	Images of Women in Literature	Lit	CD			
GC 1367	Contemporary Literature: International Perspectives	Lit	IP			
GC 1371	Literature: Reading Short Stories	Lit				p. 100
GC 1374	The Movies: An Introductory Course	Vis				
GC 1375	Film and Society	Vis	CD			p. 100
GC 1481	Creativity: Art Laboratory: Experiences in the Media	Vis				p. 100
GC 1816	African-American Literature	Lit	CD			p. 100
GC 1836	Asian-American Literature	Lit	CD			
Geog 3374	The City in Film: Europe and North America	Vis	CD			
Geog 3377	The City in Film: Third World Cities	Vis	IP			
Ger 3104	Reading and Analysis of Prose	Lit				p. 102
Ger 3105	Reading and Analysis of Drama and Poetry	Lit				p. 102
Ger 3604	Literature, History, and the German Film	Vis	IP			
Ger 3641	Introduction to German Folklore	Lit	IP			
Hist 3621	Renaissance Italy, 1200-1530	AH				
Hum 1001	Humanities in the Modern West I: The Enlightenment	AH	IP			
Hum 1002	Humanities in the Modern West II: 19th Century	AH	IP			
Hum 1004	Humanities in the Modern West IV	AH	IP			
Hum 1005	Humanities in the Modern West V	AH	IP			
Hum 1111	European Heritage: Greece	AH				
Hum 1113	European Heritage: Rome	AH				

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Arts and Humanities--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Hum 3001	Humanities in the Modern West I: The Enlightenment	AH	IP			
Hum 3002	Humanities in the Modern West II: 19th Century	AH	IP			
Hum 3004	Humanities in the Modern West IV	AH	IP			
Hum 3005	Humanities in the Modern West V	AH	IP			
Hum 3111	European Heritage: Greece	AH				
Hum 3113	European Heritage: Rome	AH				
Ital 3201	Italian Literary Tradition	Lit				
Ital 3209	Medieval Italian Literature	Lit				
Ital 3219	Renaissance and Baroque Italian Literature	Lit				
Ital 3289	Modern Italian Literature	Lit				
Ital 3301	Italian Lyric Poetry	Lit				
Ital 3303	Italian Drama	Lit				
Ital 3305	Italian Novel	Lit				
Ital 3501	Italian Civilization and Culture	AH	IP			
Ital 3502	Italian Civilization and Culture	AH	IP			
Jpn 3164	Japanese Literature in English Translation	Lit				
JwSt 1034	Introduction to Judaism	AH	IP			
JwSt 3034	Introduction to Judaism	AH	IP			
LA 1301	Introduction to Landscape Architecture Drawing	Vis				p. 111
LA 1401	The Designed Environment	AH	Envt			
LA 3411	History of Architecture to 1750	Vis	IP			
LA 3412	History of Architecture Since 1750	Vis	IP			
LA 3413	History of Landscape Architecture	Vis				p. 111
MELC 3601	Fiction: Iran and Central Asia	Lit	IP			
MELC 3602	Persian Poetry	Lit				
Mus 1001	Fundamentals of Music	Vis				p. 119
Mus 1021	Introduction to Music	Vis	IP			
Mus 1051	Piano Class for Non-Music Majors	Vis				p. 119
Mus 1052	Piano Class for Non-Music Majors	Vis				p. 119
Mus 1053	Piano Class for Non-Music Majors	Vis				
Mus 3021	Introduction to Music	Vis	IP			
Mus 3029	Music in the 20th Century	Vis	IP			
Mus 3430	Chorus	Vis				p. 119
Phil 1002	Introduction to Philosophy	Phil				p. 128
Phil 1003	Introduction to Ethics	Phil				
Phil 1004	Introduction to Political Philosophy	Phil	C/PE			p. 128
Phil 1004 & Phil 1007	Introduction to Political Philosophy & Practicum (1007 must be taken concurrently with 1004)	Phil	C/PE (practicum)			p. 128
Phil 1005	Scientific Reasoning	Phil				
Phil 1006	Philosophy and Cultural Diversity	Phil	CD			
Phil 3001	General History of Western Philosophy	Phil				
Phil 3002	General History of Western Philosophy	Phil				
Phil 3003	General History of Western Philosophy	Phil				p. 128
Phil 3004	General History of Western Philosophy	Phil				p. 128
Phil 3302	Moral Problems of Contemporary Society	Phil	C/PE			p. 128
Phil 3307	Social Justice and Community Service: Basic Political Values	Phil	C/PE Practicum			
Phil 3308	Social Justice and Community Service: Power and Democracy	Phil	C/PE Practicum			
Phil 3502	Introduction to Aesthetics	AH				
Phil 3601	Scientific Thought	AH				
RelA 1001	Introduction to Religious Studies	AH				p. 139
RelA 1034	Introduction to Judaism	AH	IP			
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Arts and Humanities--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
RelA 3034	Introduction to Judaism	AH	IP			
RelA 3201	The Bible: Narrative Text	Lit				
RelA 3202	The Bible: Prophecy	Lit				
RelA 3251	Modern Study of the Old Testament	Lit				
RelA 3411	Introduction to Indian Philosophy	Phil				
RelA 3412	Hinduism	AH				
RelA 3413	Buddhism	AH				
RelA 3414	Comparative Religions of South Asia	AH				
Rhet 1310	Humanities: The Land in American Experience (see page 55)	AH	CD			p. 139
Rhet 1311	The Family in American Experience	Lit	CD			p. 139
Rhet 1380	Fictional History: Twentieth Century Through the Eyes of Novelists	Lit	IP			p. 139
Rhet 3381	Humanities: 20th Century Culture	AH	IP			p. 139
Rhet 3382	Humanities: Ethics of Total War	AH	C/PE			
Rhet 3395	In Search of Nature	AH	CD			
Rhet 3690	Scientific Controversy	AH	C/PE			
Russ 1304	Intro to Literature: 19th Century Russian Fiction	Lit	IP			
Russ 3421	Literature: Middle Ages: Dostoevsky in Translation	Lit	IP			
Russ 3422	Literature: Tolstoy to the Present in Translation	Lit	IP			
Russ 3512	Russian Art and Culture from Peter I to the Present	Vis	IP			p. 140
SALC 3201	Ancient Indian Literature in Translation	Lit				
SALC 3202	Modern Indian Literature in Translation	Lit				
SALC 3411	Introduction to Indian Philosophy	Phil				
SALC 3412	Hinduism	AH				
SALC 3413	Buddhism	AH				
SALC 3414	Comparative Religions of South Asia	AH				
Scan 3503	Scandinavian Folklore	Lit				
Scan 3505	Scandinavian Fiction from 1890 to Present	Lit				
Scan 3601	Great Literary Works of Scandinavia	Lit				p. 140
Scan 5634	Isak Dinesen and Scandinavian Women Writers	Lit				
Th 1101	Introduction to the Theatre	Vis	CD			p. 146
Th 1102	Drama and Media	Vis				
WoSt 1001	Introduction to Women's Studies	AH	CD			
WoSt 3102	Feminist Thought and Theory	Phil	C/PE			p. 148
WoSt 3303	Women and Literature	Lit	CD			
WoSt 3304	Women and the Arts	Vis	CD			
WoSt 3306	U.S. Minority Women Writers	Lit	CD			
WoSt 3307	Modern Feminist Novel	Lit	CD			
WoSt 3308	Women Writers of Africa and Latin America	Lit	IP			
WoSt 3309	Contemporary Women's Short Fiction	Lit				
Mathematical Thinking						
Ast 1040	Mathematics and Our Universe	Math				
EPsy 3260	Basic and Applied Statistics	Math				
GC 1454	Statistics	Math				p. 100
GC 1456	Functions and Problems of Logic	Math				p. 100
Math 1001	Excursions in Mathematics	Math				p. 113

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Mathematical Thinking--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Math 1005	Introduction to Elementary Mathematics	Math				
Math 1031	College Algebra and Probability	Math				p. 113
Math 1105	Topics in Elementary Mathematics	Math				
Math 1106	Topics in Elementary Mathematics	Math				
Math 1131	Finite Mathematics	Math				p. 113
Math 1142	Short Calculus	Math				p. 114
Math 1151	Precalculus II	Math				p. 114
Math 1251 or Math 1551H	One-Variable Differential and Integral Calculus I	Math				p. 114
Math 1351	Calculus: Concepts, Explorations, and Applications	Math				
Phil 1001	Introduction to Logic	Math				p. 128
Psy 3801	Introduction to Statistical Methods	Math				
Stat 1001	Introduction to Ideas of Statistics	Math				p. 144
Stat 3011	Statistical Analysis	Math				p. 144
COURSES THAT SATISFY REQUIREMENTS FOR DESIGNATED THEMES						
Citizenship and Public Ethics						
AmSt 1201	Learning Public Ethics Through the Arts and the University		C/PE			
AmSt 3302 & AmSt 3303	Proseminar: American Studies		C/PE; CD			p. 65
Anth 5117	Natural Resources Anthropology		C/PE; Envt			
ApEc 3920	Agricultural Law		C/PE			p. 67
ApEc 5640	Financing State and Local Governments		C/PE			p. 67
ApEc 5660	Economics of Public Services		C/PE			
Arch 1601	Design Professions and Society		C/PE			p. 67
BGS 3002	Business and Society		C/PE			
Biol 1101	Heredity and Human Society	Biol/NL	C/PE			
Biol 5931	Environmental Ethics and Citizenship		C/PE			
CPsy 5334	Children and Youth in Society		C/PE			p. 77
CSCL 3361	Visions on Nature: The Natural World and Political Thought		C/PE; Envt			p. 83
CSCL 3979	Issues in Cultural Pluralism		C/PE; CD			p. 83
DHA 5485	Homelessness		C/PE			
EEB 3006	Visions of Nature: The Natural World and Political Thought		C/PE; Envt			p. 88
Engl 3854	American Literacy and Cultural Diversity		C/PE; CD (practicum)			
ES 1010	Issues in the Environment		C/PE; Envt			p. 95
FScN 1102	Food: Safety, Risks, and Technology		C/PE			p. 97
GC 1235	United States: Law in Society	SSci	C/PE			p. 100
GC 1294	Economics in Contemporary Society		C/PE			
Geo 3005	Earth Resources		C/PE; IP			
Geog 5605	Geographical Perspectives on Urban Planning I		C/PE; IP			p. 101
Hist 3151	History of the British Isles	Hist	C/PE			
Hist 3152	History of the British Isles	Hist	C/PE			
Hist 3348	Women in Modern America, 1890-1980		C/PE			
Hist 3357	Topics in the Social History of the U.S.: 19th-Century Minnesota	Hist	C/PE			
Hist 3814	The Practice of Citizenship in 19th-Century America	Hist	C/PE			
Hist 3821	The United States in the 20th Century: 1900-32		C/PE; CD			
Hist 3823	The United States in the 20th Century: 1960 to the Present		C/PE; CD			p. 104
Hist 5337	Criminal Justice in American History		C/PE			
HSci 3333H	Issues in 20th Century American Science	Hist	C/PE			
HSci 3401	Engineering Ethics in Historical Perspective		C/PE			
HSci 3402	Science, Ethics, and Values	Hist	C/PE			
HSci 5401	Engineering Ethics in Historical Perspective		C/PE			

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Citizenship and Public Ethics--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
ID 3205	Community, Service, and Self		C/PE; CD (practicum)			
ID 3206	Community, Service, and Self		C/PE; CD (practicum)			
ID 3207	Community, Service, and Self		C/PE; CD (practicum)			p. 108
Jour 5274	Advertising in Society		C/PE			p. 109
NRES 3010	Ethics and Values in Resource Management		C/PE			p. 122
Nurs	(Successful completion of Nursing program)		C/PE			
PA 5112	Organizational Design and Change		C/PE			p. 134
PA 5441	Women and Public Policy in the United States		C/PE			
Phil 1004	Introduction to Political Philosophy	Phil	C/PE			p. 128
Phil 1004 & Phil 1007	Introduction to Political Philosophy & Practicum (1007 must be taken concurrently with 1004)	Phil	C/PE (practicum)			p. 128
Phil 3302	Moral Problems of Contemporary Society	Phil	C/PE			p. 128
Phil 3307	Social Justice and Community Service: Basic Political Values	Phil	C/PE (practicum)			
Pol 1001	American Government and Politics	SSci	C/PE			p. 132
Pol 1041	Contemporary Political Ideologies	SSci	C/PE			p. 132
Pol 1057	Citizenship in Britain (see page 60)		C/PE (practicum)			
Pol 3308	The United States Congress		C/PE			
Pol 3309	Judicial Process		C/PE			
Pol 3323	Civil Liberties in America		C/PE; CD			
Pol 3331	Minnesota Government and Politics		C/PE			
Pol 3352	Fieldwork in the Legislature		C/PE (practicum)			
Pol 3661	Democratic Theory		C/PE			
Pol 3873	Global Citizenship and International Ethics		C/PE; IP			
Pol 5303	The American Democracy		C/PE			
Pol 5737	American Political Parties		C/PE			
Pol 5738	American Political Campaigns and Elections		C/PE			
Pol 5766	American Political Culture and Values		C/PE			
Rhet 1376	Special Topics in the Humanities: Terrorism		C/PE			
Rhet 3266	Communication, Discussion in Small Group Decision Making		C/PE			p. 139
Rhet 3382	Humanities: Ethics of Total War	AH	C/PE			
Rhet 3690	Scientific Controversy	AH	C/PE			
Soc 3101	Introduction to American Criminal Justice	SSci	C/PE			p. 142
Spch 1313	Analysis of Oral Argument		C/PE			p. 144
Spch 3411	Small Group Communication Processes		C/PE			p. 144
Spch 3431	The Role of Persuation in the Modern World		C/PE			p. 144
Spch 3601	Introduction to Rhetorical Theory	Hist	C/PE			p. 144
Spch 3625	Ethical Standards in Modern Communication		C/PE			p. 144
Spch 5431	The Process of Persuasion		C/PE			
SW 3202	Interventions in Community and Social Policy	SSci	C/PE			p. 141
SW 5502	Women and Public Policy in the United States		C/PE			
WCFE 5010	Technology and Public Ethics		C/PE			p. 148
WoSt 3102	Feminist Thought and Theory	Phil	C/PE			p. 148
WoSt 5502	Women and Public Policy in the United States		C/PE			

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IP	International Perspective
Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts

Cultural Diversity						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Afro 3061	The Black Family	SSci	CD			p. 64
Afro 3072	Racism: Social and Psychological Consequences for Black Americans	SSci	CD			
Afro 3591	Introduction to Afro-American Literature	Lit	CD			
Afro 3864	Afro-American History	Hist	CD			
Afro 3865	Afro-American History	Hist	CD			
Afro 3954	Sociological Perspectives on Race, Class, and Gender	SSci	CD			
AmIn 1771	Introduction to American Indian Studies	SSci	CD			p. 65
AmIn 3026	Ojibwe Culture and History	Hist	CD			p. 65
AmIn 3036	Dakota Culture and History	SSci	CD			p. 65
AmIn 3111	American Indian History from Mid-15th Century to 1850	Hist	CD			
AmIn 3112	American Indian History 1830 to Present	Hist	CD			
AmIn 3116	American Indian Literature	Lit	CD			p. 65
AmIn 3211	American Indian Philosophies	Phil	CD			p. 65
AmIn 3242	Survey of American Indian Arts	AH	CD			p. 65
AmSt 1001	American Cultures	SSci	CD			
AmSt 1002	American Cultures	SSci	CD			
AmSt 1003	American Cultures	SSci	CD			p. 65
AmSt 3302 & AmSt 3303	Proseminar: American Studies		CD; C/PE			p. 65
Anth 3211	Native Peoples of North America		CD			
Anth 3212	Indians of the Greater Southwest		CD			p. 66
CDis 5103	Communication Disorders and Cultural Diversity		CD			p. 80
Chic 3106	Introduction to Chicano Studies: Mexico and the U.S.	Hist	CD			
Chic 3107	Introduction to Chicano Studies: Chicano in Contemporary Society	Hist	CD			
Chic 3212	La Chicana	Lit	CD			
Chic 3213	Chicano Music and Art	Vis	CD			p. 76
Chic 3375	Folklore of Greater Mexico		CD; IP			
Chic 3441	Chicano History to 1900	Hist	CD			
Chic 3442	Chicano History Since 1900	Hist	CD			p. 76
Chic 3712	Chicanos: Psychological Perspectives		CD			
CI 5473	Language, Culture, and Education		CD			
Comp 1014	Writing Practice I and Cultural Diversity		CD			p. 81
CPsy 5332	Cross-Cultural Child Development		CD			
CSCL 3472	Gay Men and Homophobia in American Culture	Hist	CD			
CSCL 3979	Issues in Cultural Pluralism		CD; C/PE			p. 83
Dnce 3486	Ethnic Dance Traditions in American Society	Vis	CD			
Engl 1016	Introduction to American Literature	Lit	CD			p. 94 (honors)
Engl 1591	Literature of American Minorities	Lit	CD			p. 94
Engl 1621	Introduction to Women Writers		CD			
Engl 3591	Introduction to Afro-American Literature	Lit	CD			
Engl 3853	Gender and the English Language	SSci	CD			p. 94
Engl 3854	American Literacy and Cultural Diversity		CD; C/PE (practicum)			
Engl 5482	Folklore		CD; IP			
Engl 5483	Folklore		CD; IP			p. 94
EPsy 3132	Psychology of Multiculturalism in Education	SSci	CD			
EPsy 3139	Social and Developmental Psychology in Education	SSci	CD			
EPsy 5139	Building a Learning Community	SSci	CD			
FScN 3610	Community Nutrition		CD			
FSoS 3600	Family Issues Across the Lifespan	SSci	CD			p. 96
FSoS 5252	Aging, Family, and Society		CD; IP			
FSoS 5500	Racial and Ethnic Diversity in Families		CD			

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Cultural Diversity--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
GC 1211	People and Problems	SSci	CD			p. 100
GC 1312	Identity, Community, & Culture: Connections in the Arts & Humanities	Vis	CD			p. 100
GC 1364	Literature of the American Immigrant Experience		CD			
GC 1365	Literatures of the United States	Lit	CD			p. 100
GC 1366	Images of Women in Literature	Lit	CD			
GC 1375	Film and Society	Vis	CD			p. 100
GC 1463	Multicultural Oral Communication		CD			p. 100
GC 1816	African-American Literature	Lit	CD			p. 100
GC 1836	Asian-American Literature	Lit	CD			
GC 1851	Multicultural Relations		CD			p. 100
Geog 3101	Geography of the United States and Canada	SSci	CD			p. 101
Geog 3374	The City in Film: Europe and North America	Vis	CD			
Geog 5374	The City in Film: Europe and North America		CD			
Hist 1301	American History	Hist	CD			
Hist 1302	American History	Hist	CD			p. 104
Hist 1307	American History	Hist	CD			
Hist 1308	American History	Hist	CD			
Hist 3347	Women in Colonial, Victorian America: 1600-1890	Hist	CD			
Hist 3801	The People of Early America to 1750		CD			
Hist 3821	The United States in the 20th Century: 1900-32		CD; C/PE			
Hist 3822	The United States in the 20th Century: 1932-60		CD			
Hist 3823	The United States in the 20th Century: 1960-89		CD; C/PE			p. 104
Hist 3861	European Americans: From Immigrants to Ethnics		CD			
Hist 3862	European Americans: From Immigrants to Ethnics		CD			
Hist 3864	Afro-American History	Hist	CD			
Hist 3865	Afro-American History	Hist	CD			
Hist 3871	American Indian History: Pre-Contact to 1830	Hist	CD			
Hist 3872	American Indian History: 1830 to the Present	Hist	CD			
HSci 3331	Technology and American Culture	Hist	CD			
HSci 3332	Science and American Culture	Hist	CD			
HSci 5331	Technology and American Culture		CD			
HSci 5332	Science and American Culture		CD			
ID 3205	Community, Service, and Self		CD; C/PE (practicum)			
ID 3206	Community, Service, and Self		CD; C/PE (practicum)			
ID 3207	Community, Service, and Self		CD; C/PE (practicum)			p. 108
Jour 3741	Racial Minorities and the Mass Media		CD			p. 109
Jour 5741	Minorities and Mass Media		CD			
Jpn 3166	Japanese Film		CD; IP			p. 108
Ling 1005	Language and Society		CD; IP			
Ling 3812	Ethnic Bilingualism in the United States		CD			p. 112
Phil 1006	Philosophy and Cultural Diversity	Phil	CD			
Phil 3234	Knowledge and Gender		CD			
Phil 3308	Social Justice and Community Service: Power and Democracy	Phil	CD (practicum)			

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Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts

Cultural Diversity--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Pol 3323	Civil Liberties in America		CD; C/PE			
Pol 3739	Politics of Race, Class, and Ethnicity		CD			p. 133
Rhet 1101	Writing to Inform and Persuade		CD			p. 139
Rhet 1310	Humanities: The Land In American Experience (see page 55)	AH	CD			p. 139
Rhet 1311	The Family in American Experience	Lit	CD			p. 139
Rhet 3395	In Search of Nature	AH	CD			
Rhet 5170	Managerial Communications		CD; IP			p. 139
Rhet 5680	Gender and the Rhetoric of Science, Technology		CD			
Soc 1001	Introduction to Sociology	SSci	CD			p. 142
Soc 1004	American Race Relations	SSci	CD			p. 142
Soc 3501	The Family	SSci	CD			
Soc 3954	Sociological Perspectives on Race, Class, and Gender	SSci	CD			
Spch 5211	Contemporary Problems in U.S. Electronic Media		CD			p. 144
Spch 5404	Language, Culture, and Education		CD			p. 144
Spch 5452	Intercultural Interaction: Theory and Application		CD (practicum)			p. 144
Th 1101	Introduction to the Theatre	Vis	CD			p. 146
UrbS 3301	American Cities: Settings for Cultural Pluralism		CD			p. 147
WoSt 1001	Introduction to Women's Studies	AH	CD			
WoSt 1002	Introduction to Women's Studies	SSci	CD			
WoSt 3002	Introduction to Women's Studies	SSci	CD			p. 148
WoSt 3100	Women in Colonial and Victorian America	Hist	CD			
WoSt 3203	Biology, Race, and Gender		CD			
WoSt 3303	Women and Literature	Lit	CD			
WoSt 3304	Women and the Arts	Vis	CD			
WoSt 3306	U.S. Minority Women Writers	Lit	CD			
WoSt 3307	Modern Feminist Novel	Lit	CD			
WoSt 3403	Jewish Women in America		CD			
WoSt 3406	Women, Race, and Class in the U.S.	SSci	CD			
Environment						
Agro 1007	Biology of Plant Food Systems & the Environment	Biol/L	Envt			p. 64
AnPl 3010	Environment and World Food Production	Biol/NL	Envt			
Anth 1101	Human Origins	Biol/L	Envt			p. 66
Anth 3116	Ecological Anthropology	SSci	Envt			p. 66
Anth 5117	Natural Resources Anthropology		Envt; C/PE			
ApEc 3610	Resource Development, Environmental Economics		Envt			p. 67
ApEc 5650	Economics of Natural Resource & Environmental Policy		Envt			
Arch 1401	The Designed Environment	AH	Envt			
Ast 1019	Our Changing Planet	Phys/L	Envt			p. 70
Ast 1021H	Introduction to Astronomy	Phys/L	Envt			
Ast 1031	Exploring the Universe: A	Phys/NL	Envt			p. 70
Ast 1032	Exploring the Universe: L	Phys/L	Envt			p. 70
BGS 3019	Topics in Business, Government, and Society: Comparative Environmental Policies		Envt			p. 73
BioC 5301	Ecological Biochemistry		Envt			
Biol 1051	Environmental Studies	Biol/NL	Envt			
Biol 3051	Environmental Studies	Biol/NL	Envt			
Chem 1003	Physical World, Chemistry	Phys/L	Envt			p. 75
Chem 1008	Physical World, Chemistry	Phys/NL	Envt			p. 75
Chem 1051	Chemical Principles I	Phys/L	Envt			p. 75
Chem 1052	Chemical Principles II	Phys/L	Envt			p. 75
Comp 1015	Writing Practice and the Environment		Envt			p. 81

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Environment--continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
CSCL 3361	Visions on Nature: The Natural World and Political Thought		Envt; C/PE			p. 83
CSCL 3366	Landscape and Ideology, 1600-1875		Envt			
EEB 1019	Our Changing Planet	Phys/L	Envt			p. 88
EEB 3001	Introduction to Ecology	Biol/NL	Envt			p. 88
EEB 3006	Visions of Nature: The Natural World and Political Thought		Envt; C/PE			p. 88
Ent 1005	Economic Entomology	Biol/L	Envt			
Ent 5320	Ecology of Agriculture		Envt			
ES 1010	Issues in the Environment		Envt; C/PE			p. 95
FR 1201	Conservation of Natural Resources		Envt			
FR 1203	Introduction to Minnesota's Natural Resources		Envt			
FR 3103	Meteorology and Climatology for Natural Resource Managers	Phys/NL	Envt			
FR 3104	Forest Ecology	Biol/NL	Envt			
FR 3250	Role of Renewable Natural Resources in Developing Countries		Envt			p. 98
FR 5104	Forest Ecology		Envt			
FR 5114	Forest Hydrology		Envt			
FR 5226	Forest Economics and Planning		Envt			
FR 5231	Range Management		Envt			p. 98
FR 5232	Management of Recreational Lands		Envt			p. 98
FR 5250	Role of Renewable Natural Resources in Developing Countries		Envt			p. 98
FR 5460	Water Quality: The International Dimension		Envt			p. 98
FW 1002	Wildlife: Ecology, Values, and Human Impact		Envt			p. 97
FW 3052	Introduction to Fisheries and Wildlife Conservation		Envt			
FW 5604	Fisheries Ecology and Management		Envt			
GC 1112	Ecological Evaluation of Environmental Problems	Biol/NL	Envt			p. 99
Geo 1001	The Dynamic Earth: An Introduction to Geology	Phys/L	Envt			p. 101
Geo 1005	Geologic Perspectives on Energy	Phys/NL	Envt			
Geo 1012	Planet Earth	Phys/NL	Envt			p. 102
Geo 1019	Our Changing Planet	Phys/L	Envt			p. 102
Geo 3002	Climate Change and Human History		Envt			
Geo 3004	Human Geomorphology		Envt			
Geog 1402	Geography of Environmental Systems	Phys/NL	Envt			
Geog 5132	South America		Envt; IP			p. 101
Geog 5411	Medical Geography		Envt; IP			
HMed 3040	Human Disease and the Environment in History	Hist	Envt			
Hort 5015	Restoration and Reclamation Ecology		Envt			p. 106
IntR 1301	The Global Environment (see page 55)		Envt			
LA 1401	The Designed Environment	AH	Envt			
LAS 5132	South America		Envt; IP			p. 111
MicB 5611	Microbial Ecology		Envt			p. 118
NRES 1040	Natural Resources as Raw Materials		Envt; IP			
NRES 1201	Conservation of Natural Resources		Envt			p. 122
NRES 3020	Plant Resource Management & the Environment	Biol/L	Envt			
NRES 3060	Water Quality in Natural Resource Management	Biol/NL	Envt			p. 122
NRES 3070	From Local to Global Ecology		Envt; IP			
NRES 5020	Plant Resource Management and the Environment		Envt			

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SSci	Social Science
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Environment--continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
NRES 5060	Water Quality in Natural Resource Management		Envt			p. 122
NRES 5100	Problem Solving in Natural Resources and Environmental Studies		Envt (practicum)			
PBio 1012	Plants Useful to Humans	Biol/NL	Envt			p. 132
PlPa 3004	Air Pollution, People, and Plants		Envt			
Pol 5441	Politics of Environmental Protection		Envt			
ScAg 1500	Biotechnology, Society, and the Environment		Envt			
Soil 1020	The Soil Resource	Phys/L	Envt			
Soil 3125	Basic Soil Science	Phys/L	Envt			
Soil 5100	Problem Solving in Environmental Science		Envt (practicum)			
Soil 5605	Microbial Ecology		Envt			p. 142
International Perspectives						
Afro 1021	Introduction to African Studies	SSci	IP			
Afro 3001	Intro: West African History: Early Times to 1800	Hist	IP			
Afro 3002	Introduction to West African History: 1800 to the Present	Hist	IP			
Afro 3013	Cities in Africa: African, Islamic, European Tradition	Hist	IP			p. 64
Afro 3431	History of Africa to 1800	Hist	IP			
Afro 3432	History of Africa, 1800 to Present	Hist	IP			
Afro 3601	Introduction to African Literature	Lit	IP			p. 64
Afro 3654	African Cinema	Vis	IP			
AgET 5027	Appropriate Technology for International Development		IP			
Agro 5200	World Food Problems		IP			
Anth 1102	Understanding Cultures	SSci	IP			p. 66
Anth 3003	The Rise of Civilization	SSci	IP			
Anth 3224	Hispanic Cultures of Latin America		IP			
Anth 3261	Indian Culture and Society		IP			
Anth 3293	Peoples and Cultures of the Pacific Islands		IP			
Anth 3294	The Contemporary Pacific		IP			
Anth 5115	Economic Anthropology		IP			
Anth 5118	Political Anthropology		IP			
Anth 5121	Anthropology of Law		IP			
Anth 5325	Gender and Power in South Asia		IP			
ApEc 3007	Applied Macroeconomics: Policy, Trade, and Development		IP			p. 66
ApEc 3070	Agriculture and Economic Growth in Developing Countries		IP			p. 66
ApEc 5730	European Agriculture: Farm, Food, and Environmental Policy		IP			
ApEc 5750	Agricultural Trade and Commercial Policies		IP			
ApEc 5790	World Food Problems		IP			
Arch 3411	History of Architecture to 1750	Vis	IP			
Arch 3412	History of Architecture Since 1750	Vis	IP			
Area 1021	Europe Today (see page 55)		IP			
ArtH 1016	Introduction to Asian Art	Vis	IP			
ArtH 3008	History of Ancient Art	AH	IP			p. 70
ArtH 3014	Art of India	Vis	IP			p. 70
ArtH 3015	Art of Islam	Vis	IP			
ArtH 3017	Islamic Culture	AH	IP			
ArtH 3142	Arts of Egypt and the Near East	Vis	IP			
ArtH 3411	History of Architecture to 1750	Vis	IP			
ArtH 3412	History of Architecture Since 1750	Vis	IP			
ArtS 1401	Introduction to Studio Arts	Vis	IP			p. 68
BGS 3004	International Business		IP			p. 73
CAPS 5280	World Food Problems		IP			

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International Perspectives--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
CAS 3511	Ancient Iran	Hist	IP			p. 74
CAS 3512	Modern Iran	Hist	IP			
CAS 3526	Islam and Communism		IP			
CAS 3531	Central Asian Culture	Hist	IP			
CAS 3532	Russia and Central Asia	Hist	IP			
CAS 3601	Fiction: Iran and Central Asia	Lit	IP			
CAS 5526	Islam and Communism		IP			
CAS 5532	Russia and Central Asia		IP			
Chic 3105	Introduction to Chicano Studies: The Beginnings	Hist	IP			p. 76
Chic 3375	Folklore of Greater Mexico		IP; CD			
Chic 3427	History of Cuba and Puerto Rico	Hist	IP			
Chic 3428	History of Relations Between the United States & Mexico, 1821-Present	Hist	IP			
Chn 3091	Filmic Construction of Modern Identity in China	Vis	IP			p. 77
Chn 3163	20th Century Chinese Literature in English Translation (Pre-1949 Period)		IP			
Chn 3171	Introduction to Chinese Literature in Translation I	Lit	IP			
Chn 3172	Introduction to Chinese Literature in Translation II	Lit	IP			
Clas 3008	Ancient Art	AH	IP			
Clas 3142	Art of Egypt	Vis	IP			
CSCL 3176	Oppositional Cinemas	Vis	IP			
DHA 3212	Cultural Perspectives in Dress		IP			
DHA 5217	International Trade in Textiles and Apparel		IP			
DHA 5465	Housing in World Perspective I		IP			p. 87
Dnce 1101	Introduction to Dance	Vis	IP			
Dnce 3401	Dance History I	Vis	IP			p. 85
Dnce 3402	Dance History II	Vis	IP			p. 85
Dnce 3666	Dance Philosophy and Esthetics	Vis	IP			
Dnce 5487	World Dance Studies	Vis	IP			
EAS 1462	Introduction to East Asia: The Imperial Age	Hist	IP			
EAS 1463	East Asia in Modern Times: 1790-1990	Hist	IP			p. 88
EAS 3211	Geography of East Asia		IP			
EAS 3465	China's Response to the Weat	Hist	IP			
Econ 1101	Principles of Microeconomics	SSci	IP			p. 88
Econ 1102	Principles of Macroeconomics	SSci	IP			p. 88
Econ 1104	Principles of Microeconomics	SSci	IP			p. 88
Econ 1105	Principles of Macroeconomics	SSci	IP			p. 88
Econ 5307	Comparative Economic Systems		IP			
Econ 5337	Comparative Economic Systems		IP			p. 89
Econ 5401	International Economics		IP			p. 89
Econ 5421	Economic Integration in the Americas		IP			
Econ 5431	International Trade		IP			p. 89 (honors)
Econ 5432	International Finance		IP			
Engl 1595	Introduction to "Third World" Literatures in English	Lit	IP			p. 94
Engl 3621	British and American Women Writers		IP			
Engl 5482	Folklore		IP; CD			
Engl 5483	Folklore		IP; CD			p. 94

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Math	Mathematical Thinking
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Phys/L	Physical Science with Laboratory
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International Perspectives--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Fren 3101	Introduction to French Literary Texts: Poetry	Lit	IP			p. 99
Fren 3103	French Literary Texts: Novel	Lit	IP			p. 99
Fren 3279	Francophone Writers of the African Diaspora		IP			
Fren 3511	French Civilization and Culture		IP			
Fren 3512	French Culture and Civilization		IP			
Fren 3513	French Civilization and Culture		IP			p. 99
Fren 3606	Quebec: Literature and Film in Translation	Lit	IP			
FScN 5643	World Food Problems		IP			
FSoS 5252	Aging, Family, and Society		IP; CD			
GC 1251	World History		IP			p. 100
GC 1285	Cultural Anthropology	SSci	IP			p. 100
GC 1311	Art: General Arts	Vis	IP			p. 100
GC 1331	Musical Heritage	Vis	IP			
GC 1357	World Religious Beliefs	Phil	IP			
GC 1367	Contemporary Literature: International Perspectives	Lit	IP			
Geo 1701	Faces of the Earth	Phys/NL	IP			
Geo 3005	Earth Resources		IP; C/PE			
Geog 1301	Human Geography	SSci	IP			
Geog 1302	The World Around Us	SSci	IP			p. 101
Geog 3141	Africa	SSci	IP			p. 101
Geog 3161	Europe	SSci	IP			p. 101
Geog 3211	East Asia		IP			
Geog 3331	Economic Geography	SSci	IP			p. 101
Geog 3373	The Changing Form of the City	Hist	IP			
Geog 3377	The City in Film: Third World Cities	Vis	IP			
Geog 3381	Population in an Interacting World	SSci	IP			
Geog 5132	South America		IP; Envt			p. 101
Geog 5377	The City in Film: Third World Cities		IP			
Geog 5411	Medical Geography		IP; Envt			
Geog 5605	Geographical Perspectives on Urban Planning I		IP; C/PE			p. 101
Ger 3604	Literature, History, and the German Film	Vis	IP			
Ger 3641	Introduction to German Folklore	Lit	IP			
Hist 1011	Introduction to World History	Hist	IP			
Hist 1012	Introduction to World History	Hist	IP			
Hist 1013	Introduction to World History	Hist	IP			p. 104
Hist 1017	Introduction to World History	Hist	IP			
Hist 1018	Introduction to World History	Hist	IP			
Hist 1021	Western Civilization	Hist	IP			
Hist 1031	Introduction to European Civilization: The Medieval Centuries	Hist	IP			
Hist 1032	Introduction to European Civilization: Early Modern Europe, 1350-1750	Hist	IP			
Hist 1033	Intro to European Civilization: 1750 to Present	Hist	IP			p. 104
Hist 3245	History of Modern East Central Europe	Hist	IP			
Hist 3401	Survey of Latin American History: Colonial Period to 1800	Hist	IP			
Hist 3402	Survey of Latin American History: 1800-1929	Hist	IP			
Hist 3403	Survey of Latin American History: 1929 to the Present	Hist	IP			p. 104
Hist 3431	History of Africa to 1800	Hist	IP			
Hist 3432	History of Africa: 1800 to the Present	Hist	IP			
Hist 3462	Introduction to East Asia: The Imperial Age	Hist	IP			
Hist 3463	Introduction to East Asia in Modern Times	Hist	IP			p. 104
Hist 3465	China's Response to the West	Hist	IP			
Hist 3471	Twentieth Century Japan		IP			
Hist 3474	Rise of Modern Japan, 1853-1914		IP			

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

International Perspectives--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Hist 3475	Japan and World War II		IP			
Hist 3611	Medieval Cities of Europe	Hist	IP			
Hist 3616	France in the High Middle Ages	Hist	IP			
Hist 3636	Russian History from the Origins to Peter the Great	Hist	IP			p. 104
Hist 3703	European Cities, 1500-1800		IP			p. 104
Hist 3704	Daily Life in Europe, 1348-1750	Hist	IP			p. 104
Hist 3721	Europe in the Era of World War I	Hist	IP			
Hist 3722	Europe in the Era of World War II		IP			
Hist 3723	Europe Since 1945		IP			p. 104
Hist 3881	History of American Foreign Relations		IP			
Hist 3882	History of American Foreign Relations		IP			
Hist 3883	History of American Foreign Relations		IP			p. 104
Hist 5465	China's Response to the West		IP			
HSci 1711	Technology & Western Civilization: Ancient & Medieval	Hist	IP			
HSci 1712	Technology & Western Civilization: Renaissance to Industrial Revolution	Hist	IP			
HSci 1713	Technology & Western Civilization: 19th, 20th Centuries	Hist	IP			p. 105
HSci 1811	Introduction to the History of Science: Ancient	Hist	IP			
HSci 1812	Introduction to History of Science: Scientific Revolution	Hist	IP			
HSci 1813	Introduction to History of Science: Modern Science	Hist	IP			p. 105
HSci 3202	History of Biology: Biology in the 19th and 20th Centuries	Hist	IP			
HSci 3711	Technology & Western Civilization: Ancient & Medieval	Hist	IP			
HSci 3712	Technology & Western Civilization: Renaissance to Industrial Revolution	Hist	IP			
HSci 3713	Technology & Western Civilization: 19th, 20th Centuries	Hist	IP			p. 105
HSci 3811	Introduction to the History of Science: Ancient	Hist	IP			
HSci 3812	Introduction to History of Science: The Scientific Revolution	Hist	IP			
HSci 3813	Introduction to History of Science: Modern Science	Hist	IP			p. 105
HSci 3825	The Nuclear Age	Hist	IP			
HSci 5202	History of Biology: Biology in the 19th and 20th Centuries		IP			
HSem 3120	Seeking Solutions to Global Health Issues		IP			p. 106
Hum 1001	Humanities in the Modern West I: The Enlightenment	AH	IP			
Hum 1002	Humanities in the Modern West II: 19th-Century	AH	IP			
Hum 1003	Humanities in the Modern West III: 20th Century		IP			
Hum 1004	Humanities in the Modern West IV	AH	IP			
Hum 1005	Humanities in the Modern West V	AH	IP			
Hum 1115	European Heritage: Middle Ages		IP			
Hum 1117	European Heritage: Renaissance and Reformation		IP			p. 106
Hum 1119	Age of the Baroque		IP			
Hum 3001	Humanities in the Modern West I: The Enlightenment	AH	IP			
Hum 3002	Humanities in the Modern West II: 19th-Century	AH	IP			
Hum 3003	Humanities in the Modern West III: 20th Century		IP			
Hum 3004	Humanities in the Modern West IV	AH	IP			
Hum 3005	Humanities in the Modern West V	AH	IP			
Hum 3115	European Heritage: Middle Ages		IP			
Hum 3117	European Heritage: Renaissance and Reformation		IP			p. 106
Hum 3119	Age of the Baroque		IP			

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

Abbreviations:

AH	Arts and Humanities
Biol/L	Biological Science with Laboratory
Biol/NL	Biological Science without Laboratory
CD	Cultural Diversity
C/PE	Citizenship and Public Ethics
Envt	Environment
Hist	Historical Perspective
IP	International Perspective
Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts

International Perspectives--Continued						
Designator and Title		Diversified Core	Designated Themes	Offered		
				fall	winter	spring
Ital 3501	Italian Civilization and Culture	AH	IP			
Ital 3502	Italian Civilization and Culture	AH	IP			
Jour 5801	International Communication		IP			
Jpn 3166	Japanese Film		CD; IP			p. 108
JwSt 1034	Introduction to Judaism	AH	IP			
JwSt 3034	Introduction to Judaism	AH	IP			
LA 3411	History of Architecture to 1750	Vis	IP			
LA 3412	History of Architecture Since 1750	Vis	IP			
LAS 5132	South America		IP; Envt			p. 111
Ling 1005	Language and Society		IP; CD			
MELC 3511	Ancient Iran	Hist	IP			p. 118
MELC 3512	Modern Iran	Hist	IP			
MELC 3526	Islam and Communism		IP			
MELC 3531	Central Asian Cultural Sphere	Hist	IP			
MELC 3532	Russia and Central Asia	Hist	IP			
MELC 3601	Fiction: Iran and Central Asia	Lit	IP			
MELC 5526	Islam and Communism		IP			
MELC 5532	Russia and Central Asia		IP			
Mus 1021	Introduction to Music	Vis	IP			
Mus 3021	Introduction to Music	Vis	IP			
Mus 3029	Music in the 20th Century	Vis	IP			
Mus 3604	History of Western Music		IP			
Mus 3605	History of Western Music		IP			
Mus 3606	History of Western Music		IP			p. 119
NRES 1040	Natural Resources as Raw Materials		IP; Envt			
NRES 3070	From Local to Global Ecology		IP; Envt			
Nurs 5482H	Seeking Solutions to Global Health Issues		IP			p. 123
Pol 1025	World Politics	SSci	IP			p. 132
Pol 1054	Government & Politics in a Changing World	SSci	IP			p. 133
Pol 3835	International Relations	SSci	IP			p. 133
Pol 3872	International Organizations and the Environment		IP			
Pol 3873	Global Citizenship and International Ethics		IP; C/PE			
Pol 5410	Advanced Topics in Government and Politics		IP			p. 133
Pol 5461	Western European Government and Politics		IP			
Pol 5471	Politics of Russia and the Commonwealth of Independent States		IP			p. 133
Pol 5473	Chinese Government and Politics		IP			
Pol 5477	Middle Eastern Government and Politics		IP			p. 133
Pol 5478	Government and Politics of African Countries		IP			
Pol 5479	Latin American Government and Politics		IP			
RelA 1031	Introduction to the Religions of South Asia		IP			
RelA 1034	Introduction to Judaism	AH	IP			
RelA 3034	Introduction to Judaism	AH	IP			
Rhet 1380	Fictional History: Twentieth Century through the Eyes of Novelists	Lit	IP			p. 139
Rhet 3381	Humanities: 20th Century Culture	AH	IP			p. 139
Rhet 5170	Managerial Communications		IP; CD			p. 139
Rhet 5562	Theory and Practice in International and Intercultural Communication		IP			
Russ 1304	Introduction to Literature: 19th Century Fiction	Lit	IP			
Russ 3421	Literature: Middle Ages: Dostoevsky in Translation	Lit	IP			
Russ 3422	Literature: Tolstoy to the Present in Translation	Lit	IP			
Russ 3512	Russian Art and Culture from Peter I to the Present	Vis	IP			p. 140
Soc 3481	Modern Japanese Society	SSci	IP			
Soc 3482	Comtemporary Chinese Society	SSci	IP			

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

International Perspectives--Continued						
Designator and Title		**Diversified Core**	**Designated Themes**	**Offered**		
				fall	**winter**	**spring**
Soc 3601	Urban Community	SSci	IP			p. 142
Spch 5231	Comparative Electronic Media Systems		IP			
Spch 5232	International Broadcasting		IP			
Spch 5233	Broadcasting, National Development		IP			p. 144
Spch 5451	Intercultural Communication		IP			
WoSt 1003	Women in World Cultures	SSci	IP			
WoSt 3003	Women in World Cultures	SSci	IP			
WoSt 3308	Women Writers of Africa and Latin America	Lit	IP			
WoSt 5301	Women's Autobiographical Narratives		IP			

NOTE: Students who qualify for Honors may use an honors version of any of the above courses to satisfy the same requirements.

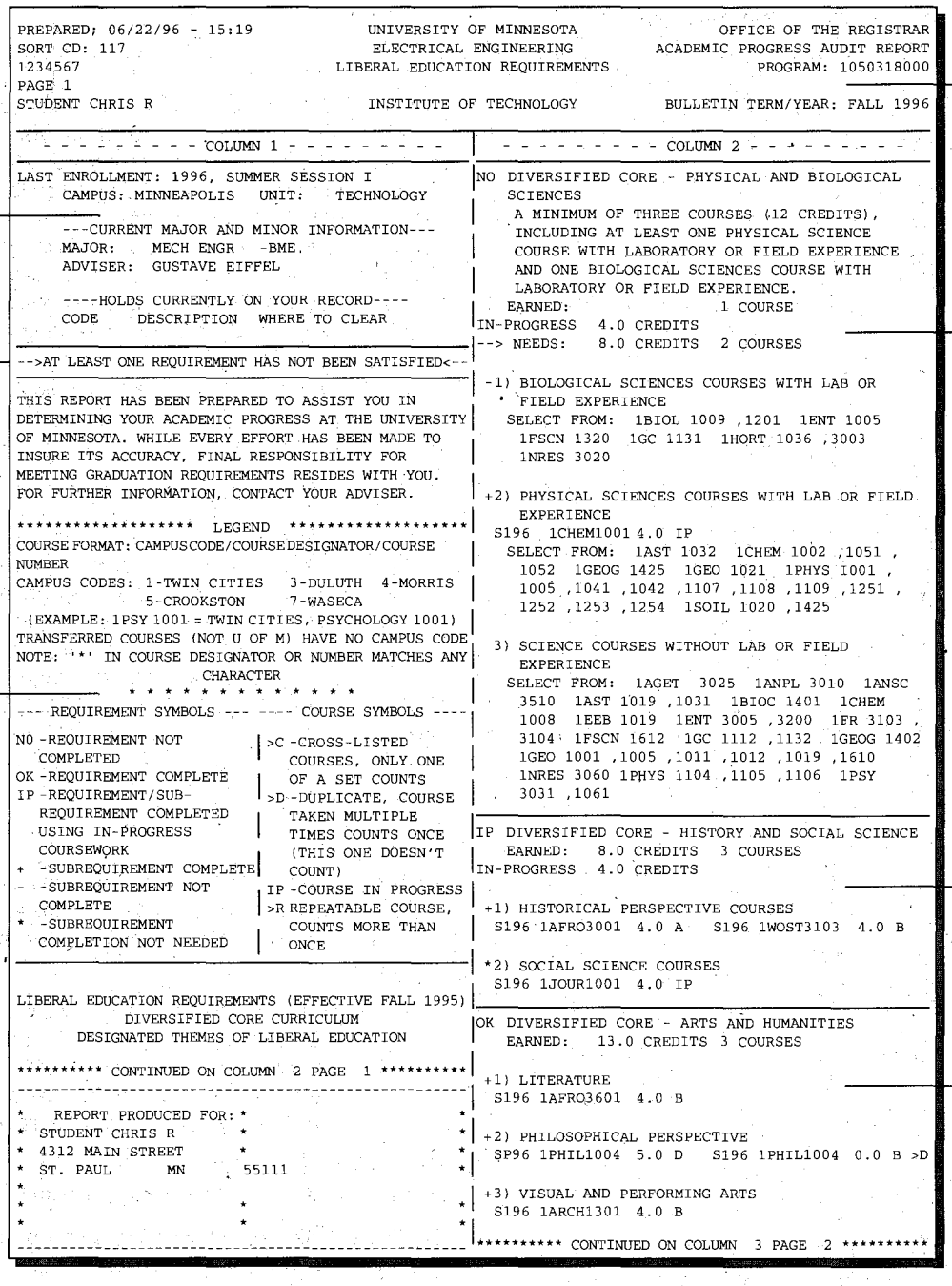
LIBERAL EDUCATION IN ENGLAND: The University offers a 6-week, 10-credit summer study abroad program built around the liberal education requirements. The summer 1997 program will offer Area 1021, IntR 1301, Pol 1057, and Rhet 1310. Successful completion of the program will satisfy five designated theme requirements (in all 4 categories) plus an Arts and Humanities core requirement. Contact the Global Campus office, 106 Nicholson Hall, 625-3379, for further information.

Abbreviations:

AH	Arts and Humanities
Biol/L	Biological Science with Laboratory
Biol/NL	Biological Science without Laboratory
CD	Cultural Diversity
C/PE	Citizenship and Public Ethics
Envt	Environment
Hist	Historical Perspective
IP	International Perspective
Lit	Literature
Math	Mathematical Thinking
Phil	Philosophical Perspective
Phys/L	Physical Science with Laboratory
Phys/NL	Physical Science without Laboratory
SSci	Social Science
Vis	Visual or Performing Arts

section 5 your apas report

SAMPLE ACADEMIC PROGRESS AUDIT SYSTEM (APAS) REPORT



PREPARED; 06/22/96 - 15:19 UNIVERSITY OF MINNESOTA OFFICE OF THE REGISTRAR
SORT CD: 117 ELECTRICAL ENGINEERING ACADEMIC PROGRESS AUDIT REPORT
1234567 LIBERAL EDUCATION REQUIREMENTS PROGRAM: 1050318000
PAGE 1
STUDENT CHRIS R INSTITUTE OF TECHNOLOGY BULLETIN TERM/YEAR: FALL 1996

- - - - - - - - - COLUMN 1 - - - - - - - - -

LAST ENROLLMENT: 1996, SUMMER SESSION I
CAMPUS: MINNEAPOLIS UNIT: TECHNOLOGY

---CURRENT MAJOR AND MINOR INFORMATION---
MAJOR: MECH ENGR -BME.
ADVISER: GUSTAVE EIFFEL

----HOLDS CURRENTLY ON YOUR RECORD----
CODE DESCRIPTION WHERE TO CLEAR

-->AT LEAST ONE REQUIREMENT HAS NOT BEEN SATISFIED<--

THIS REPORT HAS BEEN PREPARED TO ASSIST YOU IN DETERMINING YOUR ACADEMIC PROGRESS AT THE UNIVERSITY OF MINNESOTA. WHILE EVERY EFFORT HAS BEEN MADE TO INSURE ITS ACCURACY, FINAL RESPONSIBILITY FOR MEETING GRADUATION REQUIREMENTS RESIDES WITH YOU. FOR FURTHER INFORMATION, CONTACT YOUR ADVISER.

********** LEGEND **********
COURSE FORMAT: CAMPUS CODE/COURSE DESIGNATOR/COURSE NUMBER
CAMPUS CODES: 1-TWIN CITIES 3-DULUTH 4-MORRIS
5-CROOKSTON 7-WASECA
(EXAMPLE: 1PSY 1001 = TWIN CITIES, PSYCHOLOGY 1001)
TRANSFERRED COURSES (NOT U OF M) HAVE NO CAMPUS CODE
NOTE: '*' IN COURSE DESIGNATOR OR NUMBER MATCHES ANY CHARACTER
* * * * * * * * * * * * * *

--- REQUIREMENT SYMBOLS --- --- COURSE SYMBOLS ---

NO -REQUIREMENT NOT COMPLETED
OK -REQUIREMENT COMPLETE
IP -REQUIREMENT/SUB-REQUIREMENT COMPLETED USING IN-PROGRESS COURSEWORK
\+ -SUBREQUIREMENT COMPLETE
\- -SUBREQUIREMENT NOT COMPLETE
* -SUBREQUIREMENT COMPLETION NOT NEEDED

>C -CROSS-LISTED COURSES, ONLY ONE OF A SET COUNTS
>D -DUPLICATE, COURSE TAKEN MULTIPLE TIMES COUNTS ONCE (THIS ONE DOESN'T COUNT)
IP -COURSE IN PROGRESS
>R REPEATABLE COURSE, COUNTS MORE THAN ONCE

LIBERAL EDUCATION REQUIREMENTS (EFFECTIVE FALL 1995)
DIVERSIFIED CORE CURRICULUM
DESIGNATED THEMES OF LIBERAL EDUCATION

********** CONTINUED ON COLUMN 2 PAGE 1 **********

* REPORT PRODUCED FOR: *
* STUDENT CHRIS R *
* 4312 MAIN STREET *
* ST. PAUL MN 55111 *

- - - - - - - - - COLUMN 2 - - - - - - - - -

NO DIVERSIFIED CORE - PHYSICAL AND BIOLOGICAL SCIENCES
A MINIMUM OF THREE COURSES (12 CREDITS), INCLUDING AT LEAST ONE PHYSICAL SCIENCE COURSE WITH LABORATORY OR FIELD EXPERIENCE AND ONE BIOLOGICAL SCIENCES COURSE WITH LABORATORY OR FIELD EXPERIENCE.
EARNED: 1 COURSE
IN-PROGRESS 4.0 CREDITS
--> NEEDS: 8.0 CREDITS 2 COURSES

-1) BIOLOGICAL SCIENCES COURSES WITH LAB OR FIELD EXPERIENCE
SELECT FROM: 1BIOL 1009 ,1201 1ENT 1005 1FSCN 1320 1GC 1131 1HORT 1036 ,3003 1NRES 3020

+2) PHYSICAL SCIENCES COURSES WITH LAB OR FIELD EXPERIENCE
S196 1CHEM1001 4.0 IP
SELECT FROM: 1AST 1032 1CHEM 1002 ,1051 , 1052 1GEOG 1425 1GEO 1021 1PHYS 1001 , 1005 ,1041 ,1042 ,1107 ,1108 ,1109 ,1251 , 1252 ,1253 ,1254 1SOIL 1020 ,1425

3) SCIENCE COURSES WITHOUT LAB OR FIELD EXPERIENCE
SELECT FROM: 1AGET 3025 1ANPL 3010 1ANSC 3510 1AST 1019 ,1031 1BIOC 1401 1CHEM 1008 1EEB 1019 1ENT 3005 ,3200 1FR 3103 , 3104 1FSCN 1612 1GC 1112 ,1132 1GEOG 1402 1GEO 1001 ,1005 ,1011 ,1012 ,1019 ,1610 1NRES 3060 1PHYS 1104 ,1105 ,1106 1PSY 3031 ,1061

IP DIVERSIFIED CORE - HISTORY AND SOCIAL SCIENCE
EARNED: 8.0 CREDITS 3 COURSES
IN-PROGRESS 4.0 CREDITS

+1) HISTORICAL PERSPECTIVE COURSES
S196 1AFRO3001 4.0 A S196 1WOST3103 4.0 B

*2) SOCIAL SCIENCE COURSES
S196 1JOUR1001 4.0 IP

OK DIVERSIFIED CORE - ARTS AND HUMANITIES
EARNED: 13.0 CREDITS 3 COURSES

+1) LITERATURE
S196 1AFRO3601 4.0 B

+2) PHILOSOPHICAL PERSPECTIVE
SP96 1PHIL1004 5.0 D S196 1PHIL1004 0.0 B >D

+3) VISUAL AND PERFORMING ARTS
S196 1ARCH1301 4.0 B

********** CONTINUED ON COLUMN 3 PAGE 2 **********

General student information. See page 57.

Completion status line. See page 57.

Symbols used in the APAS report. See page 57.

Report heading. See page 57.

Liberal Education requirement and subrequirement blocks; courses that can be used to complete requirements; and symbols that indicate whether requirements are partially or totally completed. See page 58.

Your APAS Report—The Academic Progress Audit System (APAS) will provide you and your adviser with accurate, quarterly reports on how well you are meeting all the requirements for your degree. Your APAS report is a individualized, computerized record that compares your past and current coursework with the requirements for your academic program.

Your APAS report is broken down into sections, each addressing a portion of your degree requirement (for example: number of credits to graduate, Liberal Education requirements in each of the categories required, major credits and minor credits, and so on). Some sections will also list courses you can take to complete the requirements for that section. This information can help you and your adviser, plan future quarters by telling you *in detail* just what you need to complete your degree.

See the next two pages for more information on the report.

```
PREPARED; 06/22/96 - 15:19          UNIVERSITY OF MINNESOTA          OFFICE OF THE REGISTRAR
SORT CD: 117                        MECHANICAL ENGINEERING           ACADEMIC PROGRESS AUDIT REPORT
1234567                           LIBERAL EDUCATION REQUIREMENTS     PROGRAM: 1050318000
PAGE 1
STUDENT CHRIS R                     INSTITUTE OF TECHNOLOGY          BULLETIN TERM/YEAR: FALL 1996
```

Report Heading—Information in this heading includes the date and time your APAS report was prepared along with information from your academic record: your name, student ID number, college, and major. The bulletin term/year refers to the degree requirements under which your report was prepared.

```
LAST ENROLLMENT: 1996, SUMMER SESSION I
    CAMPUS: MINNEAPOLIS          UNIT:  TECHNOLOGY

    ---CURRENT MAJOR AND MINOR INFORMATION---
    MAJOR:      MECH ENGR        -BME
    ADVISER:    GUSTAVE EIFFEL

    ----HOLDS CURRENTLY ON YOUR RECORD----
    CODE   DESCRIPTION           WHERE TO CLEAR
```

General Student Information—This section of the APAS report contains general information on your enrollment and information on your major, minor, and adviser. Most freshmen will not have a major or minor indicated on their APAS report. Many students do not declare majors for several quarters and may change their majors several times in the course of their University careers. Once you have declared a major, that information will be added to your report. If you have any holds on your record, they will be listed here along with directions for clearing those holds. See page 8 for more information on holds. Direct any questions about this section or report any inaccuracies to the Office of the Registrar, 150 Williamson Hall or 130 Coffey Hall.

```
-->AT LEAST ONE REQUIREMENT HAS NOT BEEN SATISFIED<--
```

Completion Status Line—This section of your APAS report summarizes at a glance whether you have completed your degree requirements. As long as you have some requirements still unmet, this is the message you will see on your APAS report. When you have courses *in progress* that will complete all requirements, this message will read: PROGRAM COMPLETED IF IN PROGRESS COURSES ARE USED. A final message appears when all requirements have been met: ALL REQUIREMENTS IDENTIFIED BELOW HAVE BEEN MET.

```
******************** LEGEND ********************
COURSE FORMAT: CAMPUS CODE/COURSE DESIGNATOR/COURSE NUMBER
CAMPUS CODES: 1-TWIN CITIES  3-DULUTH  4-MORRIS
              5-CROOKSTON    7-WASECA
 (EXAMPLE: 1PSY 1001 = TWIN CITIES, PSYCHOLOGY 1001)
TRANSFERRED COURSES (NOT U OF M) HAVE NO CAMPUS CODE
NOTE: '*' IN COURSE DESIGNATOR OR NUMBER MATCHES ANY CHARACTER
              * * * * * * * * * * * * *

-- REQUIREMENT SYMBOLS --          ---- COURSE SYMBOLS ----
N0 -REQUIREMENT NOT COMPLETED      >C -CROSS-LISTED COURSES, ONLY ONE OF A SET COUNTS
OK -REQUIREMENT COMPLETE           >D -DUPLICATE, COURSE TAKEN MULTIPLE TIMES COUNTS ONCE (THIS ONE DOESN'T COUNT)
IP -REQUIREMENT/SUB-REQUIREMENT COMPLETED USING IN-PROGRESS COURSEWORK
                                   IP -COURSE IN PROGRESS
+  -SUBREQUIREMENT COMPLETE        >R REPEATABLE COURSE, COUNTS MORE THAN ONCE
-  -SUBREQUIREMENT NOT COMPLETE
*  -SUBREQUIREMENT COMPLETION NOT NEEDED
```

Symbols Used in APAS Reports—This example contains the most frequently used symbols in the APAS report. *Requirement* symbols indicate whether your requirements are complete:

- (OK) This requirement (including all subrequirements) is complete
- (NO) This requirement is not complete.
- (IP) This requirement is in progress—it will be complete when current coursework is completed.

Under subrequirements, symbols indicate complete (+), not complete (-), in progress (IP), or not required (*).

Course symbols are attached to some of the courses you have taken and indicate how the course is being counted towards your requirements.

Liberal education requirements are listed on your report, along with subrequirements for each category. See page 32 for a complete explanation of your Liberal Education requirements: the diversified core requirements, the designated themes requirements, and the subrequirements of each. On the next page, a sample of several requirement blocks shows how the symbols appear.

```
LIBERAL EDUCATION REQUIREMENTS (EFFECTIVE FALL 1994)
          DIVERSIFIED CORE CURRICULUM
       DESIGNATED THEMES OF LIBERAL EDUCATION
```

```
NO DIVERSIFIED CORE - PHYSICAL AND BIOLOGICAL
   SCIENCES
    A MINIMUM OF THREE COURSES (12 CREDITS),
    INCLUDING AT LEAST ONE PHYSICAL SCIENCE
    COURSE WITH LABORATORY OR FIELD EXPERIENCE
    AND ONE BIOLOGICAL SCIENCES COURSE WITH
    LABORATORY OR FIELD EXPERIENCE.
   EARNED:                    1 COURSE
IN-PROGRESS     4.0 CREDITS
--> NEEDS:      8.0 CREDITS    2 COURSES

 -1) BIOLOGICAL SCIENCES COURSES WITH LAB OR
     FIELD EXPERIENCE
    SELECT FROM:  1BIOL 1009 ,1201  1ENT 1005
     1FSCN 1320  1GC 1131  1HORT 1036 ,3003
     1NRES 3020

 +2) PHYSICAL SCIENCES COURSES WITH LAB OR FIELD
     EXPERIENCE
   S196 1CHEM1001 4.0 IP
    SELECT FROM:  1AST 1032  1CHEM 1002 ,1051 ,
     1052  1GEOG 1425  1GEO 1021  1PHYS 1001 ,
     1005 ,1041 ,1042 ,1107 ,1108 ,1109 ,1251 ,
     1252 ,1253 ,1254  1SOIL 1020 ,1425

  3) SCIENCE COURSES WITHOUT LAB OR FIELD EXPERI-
     ENCE
    SELECT FROM:  1AGET  3025  1ANPL 3010  1ANSC
     3510  1AST 1019 ,1031  1BIOC 1401  1CHEM
     1008  1EEB 1019  1ENT 3005 ,3200  1FR 3103 ,
     3104  1FSCN 1612  1GC 1112 ,1132  1GEOG 1402
     1GEO 1001 ,1005 ,1011 ,1012 ,1019 ,1610
     1NRES 3060 1PHYS 1104 ,1105 ,1106  1PSY
     3031 ,1061
```

```
IP DIVERSIFIED CORE - HISTORY AND SOCIAL SCIENCE
   EARNED:      8.0 CREDITS    3 COURSES
IN-PROGRESS     4.0 CREDITS

 +1) HISTORICAL PERSPECTIVE COURSES
  S196 1AFRO3001 4.0 A    S196  1WOST3103 4.0 B

 *2) SOCIAL SCIENCE COURSES
  S196 1JOUR1001 4.0 IP
```

```
OK DIVERSIFIED CORE - ARTS AND HUMANITIES
   EARNED:      13.0 CREDITS   3 COURSES

 +1) LITERATURE
  S196 1AFRO3601 4.0 B

 +2) PHILOSOPHICAL PERSPECTIVE
  SP96 1PHIL1004 5.0 D    S196  1PHIL1004 0.0 B >D

 +3) VISUAL AND PERFORMING ARTS
  S196 1ARCH1301 4.0 B

********** CONTINUED ON COLUMN  3 PAGE  2 **********
```

Requirement Blocks—Your APAS report will have a separate block for each of your degree requirements. Each block begins with the name of the requirement and lists subrequirements. To the left of the title, a symbol tells you whether you have completed that requirement (OK for completed, IP [In Progress] for completed with current coursework, and NO for not completed). Subrequirements also have symbols indicating whether or not they are completed (+ for completed, - for not completed, and * indicating that the subrequirement is not mandatory).

All courses that you take to fulfill requirements are listed after the subrequirement with the quarter, the number of credits, and your grade in the course (or IP for any courses in progress). When any subrequirement is not yet complete, SELECT FROM indicates all courses that can be used to complete the subrequirement.

For example, the first block in this sample report is the Liberal Education requirement DIVERSIFIED CORE—PHYSICAL AND BIOLOGICAL SCIENCES. The NO to the left of the title indicates that the student still needs to take courses to complete this requirement. Because this requirement has not been competed, the requirement is summarized after the title.

Although the requirement has not been completed, the subrequirements in this first block are in different stages of completion. The - before 1) Biological Sciences Courses with Lab or Field Experience indicates that this subrequirement has not been completed, and so a list of all courses that can be used to satisfy this subrequirement follows. The next subrequirement, Physical Sciences Courses with Lab or Field Experience, has been completed. Chem 1001 is used to complete this subrequirement: it is listed along with the term it was taken, the number of credits, and the symbol IP (in progress), instead of a grade, showing that the course has not been completed.

The next two requirement blocks show that the requirements are in progress (IP) and completed (OK) respectively. Because the student needs no new courses for these requirements, no courses from which to select are listed under each section.

Who to Contact for Further Information—Your adviser can help you understand the various sections of your APAS report and can help you plan your course of study to satisfy your degree requirements. If you believe your APAS report contains any errors about your program, you should also contact your adviser.

section 6 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 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 0999	noncredit courses
1000 to 1999	introductory courses—primarily for freshmen and sophomores
3000 to 3999	intermediate courses—primarily for juniors and seniors, but sometimes open to others with a C average overall and in prerequisites
5000 to 5999	advanced courses—open to juniors, seniors, and graduate students
8000 to 8999	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.

Class Standing—Your class standing is determined by the number of credits you have completed:

Freshman	1-45 credits
Sophomore	46-90 credits
Junior	91-135 credits
Senior	136 or more credits

Symbols—The following symbols are used throughout this schedule:

- **!** Work for this course will extend past the end of the term. A grade of K will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college 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 you are 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. You must select and register for one of each of the parts of the course.

Duplicate Courses, Registering for—References in prerequisite statements to old courses that had the same course content (e.g., '§PE 1990' or '§1431') are deleted after 2 years. To avoid registering for a course that duplicates work you have previously completed, check with your college office.

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. (Extra credit is sometimes possible, however, through X registration. See below.) 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. You usually may not register for the same course 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 your total registrations in the course may not exceed a maximum total of 12 credits.

Directed or Independent Study—Most colleges permit directed or independent study (X and Y registration) 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 the course 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, place a V in the grading option column for that course.

Grading Option—If either A-F 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-F 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.

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 in the *Minnesota Daily*. Room changes are posted on classroom doors.

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

✦ 873302 —1 LECT 0815-0900 T
✦ 637303 —2 LECT 0914-1000 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

Course Descriptions—Courses are listed in this *Class Schedule* with a minimum of information—title, prerequisites, day and time, location, and sometimes instructor. You should not choose your classes on the basis of title alone. For more information about undergraduate courses (expanded course descriptions, required books, use of class time, workload, grade requirements, and type of exams), pick up a copy of the *Course Guide* for the current quarter at one of the bookstores. College bulletins also provide descriptions of course content. Course information is also available on the World Wide Web (at http://www.umn.edu/tc/courses/schedule). College bulletins are available on Gopher. Departments can provide information on recent changes to course content. Department addresses are listed in Section 7.

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 continue for 50 minutes after the start time. Because there is a 15-minute break between classes, start times for classes are staggered throughout the hours. For example, the first class of the day starts at 8:00 a.m. and ends at 8:50; the second class starts at 9:05 and ends at 9:55; the third class starts at 10:10 and ends at 11:00.

Classes in Minneapolis and St. Paul meet on the same schedule. Standard class periods for both Minneapolis and St. Paul are: 0800-0850, 0905-0955, 1010-1100, 1115-1205, 1220-1310, 1325-1415, 1430-1520, 1535-1625, and 1640-1730.

The University Senate approved the above 50-minute class periods with the understanding that classes may continue for 55 minutes after the starting time whenever students' schedules permit.

There are also standard approved 75-minute Tuesday and Thursday periods for both Minneapolis and St. Paul. Times for these classes are: 0815-0930, 0945-1100, 1115-1230, 1245-1400, 1415-1530, and 1545-1700.

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.

schedule of classes

ACCOUNTING (Acct)
Management

Non-SMgt students should refer to page 10, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 1050 Introduction to Financial Reporting (§8050; prereq 40 or more credits) (A-F only)
★LECT 1245-1400 TTh, BlegH 5, Duke G
958724 —1 LAB 0800-0850 WF, BlegH 205, 5 cr
662119 —2 LAB 0905-0955 WF, BlegH 205, 5 cr
961350 —3 LAB 1010-1100 WF, BlegH 115, 5 cr
754495 —4 LAB 1115-1205 WF, BlegH 120, 5 cr

R 3001 Introduction to Management Accounting (prereq 1050) (A-F only)
★LECT 1245-1400 TTh, BlegH 235, Saly J
255612 —1 LAB 1325-1425 F, BlegH 205, 4 cr
457892 —2 LAB 1440-1540 F, BlegH 205, 4 cr
★LECT 1415-1530 TTh, BlegH 235, Saly J
959243 —3 LAB 1430-1530 F, BlegH 225, 4 cr
462879 —4 LAB 1545-1645 F, BlegH 225, 4 cr

R 3101 Intermediate Financial Reporting (prereq 1050) (A-F only)
854438 —1 1220-1405 MW, BlegH 240, Rayburn J, 4 cr
062151 —2 1430-1615 MW, BlegH 120, Rayburn J, 4 cr

R 3199 Internship in Public Accounting (prereq 5125; for accounting majors only) (S-N only)
958836 Biondich N, 3 cr

R 3201 Intermediate Management Accounting (prereq 3001, acct maj or gen mgmt maj with finance emphasis) (A-F only)
659415 —1 1220-1405 MW, BlegH 220, Amershi A, 4 cr
254590 —2 1430-1615 MW, BlegH 240, Kanodia C, 4 cr

R 3299 Internship in Management Accounting (prereq 3102; for accounting majors only) (S-N only)
554062 Biondich N, 3 cr

R 5101 Corporate Financial Reporting (prereq 1050 or MBA 8030, MBA stu) (A-F only)
558709 —1 1220-1405 MW, BlegH 240, Rayburn J, 4 cr
156736 —2 1430-1615 MW, BlegH 120, Rayburn J, 4 cr

R 5102 Advanced Financial Reporting I (prereq 3101 or 5101, mgmt or grad mgmt student) (A-F only)
662492 —1 0800-0945 MW, BlegH 140, Allen C, 4 cr
755128 —2 0800-0945 MW, BlegH 140, Allen C, 4 cr (MBA stu only)
554739 —3 1010-1155 MW, BlegH 140, Allen C, 4 cr
862295 —4 1010-1155 MW, BlegH 140, Allen C, 4 cr (MBA stu only)

R 5125 Auditing Principles and Procedures (prereq 3101 or 5101, acct maj) (A-F only)
959453 —1 0800-0945 TTh, BlegH 110, Biondich N, 4 cr
159460 —2 0800-0945 TTh, BlegH 110, Biondich N, 4 cr (MBA stu only)
559049 —3 1010-1155 TTh, BlegH 140, Biondich N, 4 cr
255142 —4 1010-1155 TTh, BlegH 140, Biondich N, 4 cr (MBA stu only)

R 5135 Income Tax Accounting (prereq 1025 or 1050) (A-F only)
953961 —1 1325-1510 MW, BlegH 110, Gutterman P, 4 cr
763133 —2 1325-1510 MW, BlegH 110, Gutterman P, 4 cr (MBA stu only)

R 5160 Financial Statement Analysis (prereq 1050 or MBA 8030) (A-F only)
173536 —1 1325-1510 TTh, BlegH 420, Caliendo C, 4 cr
874527 —2 1730-2100 W, BlegH 135, Runkle D, 4 cr

R 5180 Advanced Financial Reporting II (prereq 5102, mgmt or MBA student) (A-F only)
361840 —1 1430-1615 TTh, BlegH 110, Tranter T, 4 cr
763066 —2 1430-1615 TTh, BlegH 110, Tranter T, 4 cr (MBA stu only)

R 5236 Taxation II (prereq 5135; for accounting majors only) (A-F only)
553932 —1 1010-1155 MW, BlegH 220, Gutterman P, 4 cr (acct maj only)
859333 —2 1010-1155 MW, BlegH 220, Gutterman P, 4 cr (MBA stu only)
159113 —3 1325-1510 TTh, BlegH 135, Jacobs F, 4 cr (acct maj only)
960084 —4 1325-1510 TTh, BlegH 135, Jacobs F, 4 cr (MBA stu only)

R 8805 Seminar I (prereq PhD student or grad SMgt approval) (A-F only)
855234 1430-1730 T, BlegH 210, Kanodia C, 4 cr

R 8990 Readings in Accounting (prereq #, grad SMgt approval) (A-F only)
852916 Kanodia C, ar cr

R 8995 Research in Accounting (prereq PhD student, grad SMgt approval) (A-F only)
161323 1430-1730 F, BlegH 210, Dickhaut J, ar cr

ADULT EDUCATION (AdEd)
Work, Community, and Family Education
Education and Human Development

R 5104 Survey: Human Resource Development and Adult Education (§HRD 5104) (A-F only)
057323 1845-2205 M, VoTech R280, Peterson S, 4 cr

R 5203 Adult Literacy: Methods and Materials (prereq 5202 or Elem 5331 or #) (A-F only)
353883 1600-1830 T, VoTech R385, Park R, 3 cr

R 5205 Field Experience in Adult Education (max 8 cr; prereq #) (A-F only)
362891 4-8 cr

R 5401 Adult Learning and Development through the Life Span (A-F only)
453017 1600-1830 Th, VoTech R385, Leske G, 3 cr

R 5440 Multidisciplinary Perspectives on Aging (§CPsy 5305, HSU 5009, PA 5414, PubH 5737, Soc 5960, SW 5024) (A-F only)
362941 1640-1825 MW, MoosT 2690, 4 cr

R 5450 Critical Pedagogy (§FE 5450, VoEd 5450, WCFE 5450) (S-N only)
263662 1600-1830 Th, VoTech R380, McClelland J, 3 cr

R 8100 Research in Adult Education (prereq #, coursework in experimental design)
171360 1600-1830 M, VoTech 220, Park R, 3 cr

R 8302 Problems: Adult Education (prereq #)
357738 1-9 cr

ADULT PSYCHIATRY (AdPy)
Medical School

5107 Human Behavior (prereq 1st yr med stu)
157197 1115-1205 MTWThF, PWB 2470, 3 cr (Mar 24-June 8)

R 5109 Externship in Clinical Psychiatry: Duluth Hospital (prereq regis med)
956276 Olson C R, 9 cr

R 5110 Contemporary Hospital Psychiatry: St. Luke's Hospital, Duluth (prereq regis med)
460288 Cowan G, 9 cr

R 5500 Psychiatry Externship (prereq regis med)
053837 Eckert E, 9 cr

5501 Elective Rotation in Alcohol Problems Clinics (prereq 3rd or 4th yr med stu)
758482 Willenbring M, 4.5-9 cr

5502 Elective Rotation in Addiction Medicine (prereq 5500, regis med)
059198 Willenbring M, 9 cr

5503 Elective Experience in Research Addiction Medicine (prereq course director permission, regis med stu)
160947 Willenbring M, 4.5-9 cr

R 5512 Medical-Surgical Psychiatry: Consultation-Liaison (prereq 3rd or 4th yr med stu)
761088 Popkin M, ar cr

5514 Substance Abuse and Associated Psychiatric Disorders (prereq regis med)
158043 Halikas J, 9 cr

5515 Neuropsychology: University Hospitals (prereq regis med)
856271 Meier M, 9 cr

R 5516 St. Mary's Extended Care Center, Alcoholic Treatment Unit (prereq regis med)
154591 Hiers D, 4.5-9 cr

R 5518 Community Psychiatry: Braham, MN (prereq regis med)
663061 Walton J L, 9 cr

5530 Independent Study (prereq Δ)
754478 Mackenzie T, ar cr

5602 Clinical Psychopharmacology Seminar (prereq regis med)
459349 Abuzzahab F S, ar cr

5910 Internship: Hennepin County Medical Center Psychiatry (prereq PGY-1 psychiatry resident) (S-N only)
757252 Daily L, 12-48 cr

5911 Psychiatry PGY-1 Internship at VA Medical Center (prereq PGY-1 psychiatry resident) (S-N only)
556345 Dean C, 12-48 cr

5912 Psychiatry PGY-1 Internship at St. Paul Ramsey Medical Center (prereq PGY-1 psychiatric resident) (S-N only)
654652 Zander J, 12-48 cr

5926 Psychoanalytic Psychotherapy (prereq #) (S-N only)
155093 1300-1430 Th, 3 cr

5927 Biological Psychiatry II (prereq 5925, #) (S-N only)
556023 1400-1530 Th, Faris P, 3 cr

5936 Advanced Psychoanalytic and Personality Theory (prereq 5926, #) (S-N only)
660807 1300-1430 T, Serposs A, Meller W, 3 cr

R 5937 Substance Abuse and Associated Psychiatric Disorders (prereq #) (S-N only)
561156 1300-1430 W, Carroll-Santi M, 3 cr

5946 Human Sexuality: Therapy and Counseling (prereq #) (S-N only)
153836 Coleman E, 6 cr

5951 Inpatient Psychiatry (prereq psychiatric resident) (S-N only)
762029 Meller W, 6 cr

5952 VA Medical Center Inpatient Psychiatry (prereq psychiatry resident) (S-N only)
462123 Dean C, 6 cr

5953 Clinical Chemical Dependency (prereq psychiatric resident) (S-N only)
461750 Halikas J, 3-6 cr

5954 Clinical Eating Disorder Treatment (prereq psychiatric resident) (S-N only)
454619 Mitchell J, 3-6 cr

5955 Emergency Psychiatric Management and ECT (prereq psychiatric resident) (S-N only)
158253 Meller W, 3-6 cr

5961 Clinical Child Psychiatry (prereq psychiatry resident) (S-N only)
558449 6 cr

5962 Clinical Consultation Liaison Psychiatry (prereq psychiatric resident) (S-N only)
460369 Popkin M, 6 cr

5963 Clinical Outpatient Psychiatry (prereq psychiatric resident) (S-N only)
754707 Mackenzie T, 6 cr

5971 Consultation Liaison Psychiatric Fellowship (prereq C-L fellow/psychiatric resident) (S-N only)
156759 Popkin M, 6-24 cr

5972 Psychiatric Child Fellowship: Year I (prereq psychiatric resident/fellow) (S-N only)
656787 6-24 cr

5973 Chemical Dependency Fellowship (prereq psychiatric resident/fellow) (S-N only)
761401 Halikas J, 6-24 cr

5974 Eating Disorder Fellowship (prereq psychiatric resident/fellow) (S-N only)
662752 Mitchell J, 6-24 cr

5975 Advanced Clinical Psychiatry (prereq psychiatry resident/fellow) (S-N only)
363099 Meller W, 6-24 cr

5981 Psychiatric Child Fellowship: Year II (prereq psychiatric resident/fellow) (S-N only)
153500 6-24 cr

8201 Clinical Psychiatry (prereq MD)
553011 Meller W, ar cr

8203 Advanced Clinical Psychiatry (prereq MD, 8201)
762127 Meller W, ar cr

8205 Special Assignments (prereq MD, 8201, 8203)
162884 Meller W, 1 cr

8206 Research (prereq #)
257036 Meller W, ar cr

8209 Clinical Psychopathology (prereq #)
557396 Sines L, 3-4 cr

8221 Seminar: Current Literature (prereq #)
858800 1 cr

8224 Introduction to Group Therapy
960988 Hausman W, 1 cr

8227 Biological Psychiatry (prereq MD or #)
655851 Mitchell J, 3 cr

8243 Introduction to Clinical Theory of Psychoanalytic Psychotherapy (prereq #)
362938 Moore M, 3 cr

8264 Presentations on Current, Appropriate Literature Pertaining to all Phases of Medical Health Care (prereq #)
262057 Murtaugh R, 1 cr

8265 Readings in Psychosomatic Medicine, Consultation-Liaison Psychiatry (max 3 cr; prereq MD, #)
859462 Popkin M, ar cr

8970 Directed Studies (max 9 cr)
162973 Meller W, ar cr

AEROSPACE ENGINEERING AND MECHANICS (AEM)
Institute of Technology

An IT computer fee is assessed at the time of registration for AEM 5206, 5244, 5250, 5321, 5329, 5330, 5331, 5516, 5632, and 8251. See page 22 for more information on this fee.

R 1015 Statics (prereq IT stu or pre-BAE maj, Phys 1251, Math 1261) (A-F only)
★LECT 1115-1205 MWF, AkerH 319, Beavers G
456208 —1 REC 1115-1205 TTh, AkerH 211, 4 cr
654148 —2 REC 1115-1205 TTh, AkerH 317, 4 cr
157412 —3 REC 1115-1205 TTh, AkerH 313, 4 cr

R 3016 Deformable Body Mechanics (prereq IT stu or pre-BAE maj, 1015, ¶Math 3261) (A-F only)
★LECT 1220-1310 MWF, Arch 35, Ketema Y
756019 —1 REC 1220-1310 TTh, AkerH 309, 4 cr
760961 —2 REC 1220-1310 TTh, AkerH 215, 4 cr
157278 —3 REC 1220-1310 TTh, AkerH 211, 4 cr
158034 —4 REC 1220-1310 TTh, AkerH 317, 4 cr
256789 —5 REC 1220-1310 TTh, AkerH 313, 4 cr

R 3036 Dynamics (prereq IT stu or pre-BAE maj, 1015, ¶Math 3261) (A-F only)
★LECT 1325-1415 MWF, EE/CSci 3125, Longmire E
252998 —1 REC 1325-1415 TTh, AkerH 225, 4 cr
261149 —2 REC 1325-1415 TTh, AkerH 215, 4 cr
061940 —3 REC 1325-1415 TTh, AkerH 211, 4 cr
156400 —4 REC 1325-1415 TTh, AkerH 317, 4 cr
463322 —5 REC 1325-1415 TTh, AkerH 313, 4 cr

R 5202 Viscous Flow (prereq 5200, upper div IT or grad IT stu)
458976 1010-1205 MW, FordH 55, Alving A, 4 cr

R 5244 Hypersonic Aerodynamics (prereq IT or grad student, 5204)
657552 0905-1100 MW, AkerH 227, Candler G, 4 cr

R 5319 Dynamics and Control of Aerospace Vehicles (prereq 3401, 5300 or #, IT or grad IT stu) (A-F only)
758336 1430-1625 MW, AkerH 209, Enns D, 4 cr

R 5331 Design of Aerospace Elements and Systems (prereq AEM sr or Δ)
960876 1220-1415 MW, MechE 18, AkerH 209, Vano A, 4 cr

R 5440 Dynamics of Systems and Structures (prereq IT or grad IT stu, 5438)
971389 1115-1310 TTh, AkerH 227, Balas G, 4 cr

R 5516 Aerospace Structures II (prereq C or better in 5515 or Δ, IT stu)
171388 1325-1520 TTh, AkerH 309, Shield T, 4 cr

R 5518 Mechanics of Composite Materials (prereq 3016)
354516 1535-1730 TTh, AmundH 240, Leo P, 4 cr

R 5631 Aeromechanics Laboratory II: Solids and Structures (prereq IT upper div stu, 3016, 3036, 5200)
★LECT 0800-0850 MW, AkerH 227, Leo P, Shield T
871370 —1 LAB 0800-1205 T, AkerH 30, 4 cr
671371 —2 LAB 1325-1730 T, AkerH 30, 4 cr
471372 —3 LAB 0800-1205 Th, AkerH 30, 4 cr

5802 Problems in Mechanics and Materials (prereq Δ)
859090 1-4 cr

5812 Problems in Fluid Mechanics (prereq Δ)
156820 1-4 cr

5821H Aerospace Engineering and Mechanics Honors Thesis I (prereq #, upper div AEM honors program stu) (A-F only)
057712 4 cr

5822H Aerospace Engineering and Mechanics Honors Thesis II (prereq upper div AEM honors program student, #) (A-F only)
655557 4 cr

5840 Industrial Assignment (prereq regis in engineering intern program, Δ)
456872 2 cr

5841 Industrial Assignment (prereq regis in engineering intern program, Δ)
061355 2 cr

5842 Industrial Assignment (prereq regis in engineering intern program, Δ)
561223 2 cr

5843 Industrial Assignment (prereq regis in engineering intern program, Δ)
356783 2 cr

8003 Seminar: Aerospace Engineering and Mechanics (prereq consent of director of graduate studies) (S-N only)
656174 1430-1520 F, AkerH 209, 1 cr

R 8203 Fluid Mechanics III (prereq 8202)
052865 0905-0955 MTWF, AkerH 313, Lundgren T, 4 cr

R 8219 Experimental Methods in Fluid Mechanics (A-F only)
★LECT 1010-1100 MTW, AkerH 313, Longmire E
271387 —1 LAB 4 cr

8503 Research Seminar in the Mechanics of Materials (A-F only)
954480 1325-1520 T, AkerH 227, Fosdick R, James R, Truskinovsky L, 2-4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not yet passed oral prelims)
762077 1-18 cr

8777 Thesis Credits: Masters
659138 1-16 cr

R 8812 Selected Topics in Fluid Mechanics (prereq Δ)
658832 —1 1325-1415 MWF, AkerH 227, Joseph D, 3 cr
156350 —2 1-4 cr

8880 Plan B Project (max 4 cr; prereq grad aerospace engineering or mechanics maj, Δ)
362860 1-4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
161757 1-36 cr

AEROSPACE STUDIES (Air)

0100 Leadership Laboratory (prereq Air Force ROTC Cadets only) (S-N only)
559102 1800-1930 W, Armory 100, Campbell W, 0 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
I Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

1106 U.S. Air Force III (A-F only)
074882 —1 0905-0955 T, Armory 12, Lamatsch P, 1 cr
674884 —2 1325-1415 T, Armory 12, Lamatsch P, 1 cr

1206 Quality Air Force, Group Leadership Problems and Presentation Techniques (A-F only)
953636 —1 0905-0955 Th, Armory 12, Lamatsch P, 1 cr
062621 —2 1325-1415 Th, Armory 12, Lamatsch P, 1 cr

R 3303 Air Force Management (A-F only)
056396 —1 0800-0850 MWF, Armory 12, Campbell W, 3 cr
453843 —2 1430-1520 MWF, Armory 12, Campbell W, 3 cr

R 3403 Air Force Roles/Active Duty (prereq all 33XX crses) (A-F only)
962725 —1 0815-0930 TTh, Armory 105, Homan J, 3 cr
357030 —2 1115-1230 TTh, Armory 105, Homan J, 3 cr

AFRO-AMERICAN STUDIES (Afro)
Afro-American and African Studies
Liberal Arts

R 3013 Cities in Africa: African, Islamic, European Traditions (Hist; IP)
962191 1010-1100 MWF, BlegH 120, Coifman V, 4 cr

R 3061 The Black Family (SSci; CD)
858716 1245-1400 TTh, BlegH 140, Brewer R, 4 cr

R 3108 Black Music: A History of Jazz
174968 1220-1310 MWF, FergH 225, McCurdy R, 4 cr

R 3543 Psychology and the Black American Experience (prereq 1025, Psy 1001 or #)
276282 1115-1310 T, SciCB 375, Taborn J, 4 cr

R 3601 Introduction to African Literature (Lit; IP)
476281 1245-1400 TTh, BlegH 330, Pike C, 4 cr

R 3910 Topics in Afro-American/African Studies
676277 —1 1115-1310 M, BlegH 130, Atkins K, 4 cr (Introduction to Southern Africa)
876276 —2 0945-1100 TTh, BlegH 145, Winston, 4 cr (Beyond the "Color Line": Race, Class, Gender, and the African-American Experiences)

3970 Directed Studies (prereq #, Δ, ❑)
162794 1-15 cr

3991 Senior Project in Afro-American and African Studies (3991-3992-3993†; prereq completed CLA advanced composition requirement, permission of undergrad adviser) (A-F only)
754531 2 cr

3992 Senior Project in Afro-American and African Studies (3991-3992-3993†; prereq 3991) (A-F only)
654859 2 cr

3993 Senior Project in Afro-American and African Studies (3991-3992-3993†; prereq 3992) (A-F only)
052963 2 cr

5145 Development in Africa (§Geog 5145, IntR 5145; prereq #)
153814 0905-0955 MWF, BlegH 245, Scott E, 4 cr

R 5551 Use of Oral Traditions as Resources for History: Methods
154310 1325-1415 MWF, BlegH 350, Coifman V, 4 cr

R 5593 The Afro-American Novel (§Engl 5593)
571380 1415-1530 TTh, AndH 330, Wright J, 4 cr

R 5598 Seminar: The Black Arts Renaissance, 1960's and 1970's (prereq afro studies maj or min or #)
676280 1115-1310 W, Wright J, 4 cr

R 5865 • Afro-American History (§Hist 5865)
775315 1325-1520 Th, BlegH 210, Dillard A, 4 cr

R 5910 Topics: Afro-American/African Studies
953524 —1 1115-1310 T, SocSci 1383, Brewer R, Coifman V, 4 cr (Before the Field: Community Service and Internship in Afro-American and African Studies)
476278 —2 0945-1100 TTh, LindH 217, Sugnet C, 4 cr (Literature of South Africa and Zimbabwe)
276279 —3 1245-1400 TTh, LindH 302, Sugnet C, 4 cr (Ken Saro-Wiwa)

5970 Directed Studies (prereq #, Δ, CLA approval)
754934 1-6 cr

AGRICULTURAL EDUCATION (AgEd)
Work, Community, and Family Education
Education and Human Development

R 3001 Experiential Learning: Production Agriculture (max 14 cr; no more than 20 cr of 3001, 3002 combined; prereq #) (S-N only)
162836 1220-1310 T, VoTech R375, 1-14 cr

R 3002 Experiential Learning: Agricultural Business (max 14 cr; no more than 20 cr of 3001, 3002 combined; prereq #) (S-N only)
559813 1220-1310 T, VoTech R375, 1-14 cr

R 3029 Directed Experience in Agricultural Education (A-F only)
754402 1220-1310 T, VoTech R385, 1-3 cr

R 3041 Practicum: Agricultural Education Technology (max 5 cr) (A-F only)
360896 Peterson R, 1-3 cr

R 5023 Methods for Change in Developing Countries (§WCFE 5023) (A-F only)
463398 1535-1805 W, VoTech R385, Warner A, 3 cr

R 5041 Workshop: Agricultural Education Technology (max 12 cr)
563070 Bracewell E, 1-6 cr

R 5072 Practicum: Agricultural Business and Industry (max 9 cr; prereq 5071 or #) (A-F only)
661052 Norenberg C, 3 cr

R 5090 Independent Study (prereq sr) (A-F only)
756473 1-3 cr

R 5095 Integrating Paper: Master of Education (prereq MEd student in agricultural education) (A-F only)
559844 3 cr

R 8001 Research in Agricultural Education (prereq 15 cr educ)
154694 ar cr

R 8020 Seminar: Agricultural Educaton
160723 1115-1310 F, VoTech R275, Copa G, ar cr

R 8091 Field Problems
163797 3 cr

AGRICULTURAL ENGINEERING TECHNOLOGY (AgET)
Biosystems and Agricultural Engineering
Agricultural, Food, and Environmental Sciences

5091 Special Problems in Agricultural Engineering (prereq #)
262768 2-5 cr

AGRICULTURE (Agri)
Agricultural, Food, and Environmental Sciences

1000H Honors Colloquium: Sustainable Agriculture (prereq honors program registration, ❑) (A-F only)
454376 1430-1610 W, McNH 33, Sheaffer C, 2 cr

3100H Honors Experience (prereq approved proposal by Coll of Agri Honors Prog Comm) (A-F only)
362731 3-4 cr

AGRONOMY AND PLANT GENETICS (Agro)
Agricultural, Food, and Environmental Sciences

R 1007 Biology of Plant Food Systems and the Environment (Biol/L; Envt)
★LECT 0945-1100 TTh, Arch 30, Somers D (Mpls)
471940 —1 LAB 1325-1625 T, BorH 207, Brakke M, 4 cr
271941 —2 LAB 0905-1205 W, BorH 207, Brakke M, 4 cr
171942 —3 LAB 1325-1625 W, BorH 207, Brakke M, 4 cr

1020 Special Problems (prereq 5 cr agronomy, #)
556782 Cardwell V, 1-3 cr

R 3020 Growth and Development of Field Crops (§5120; prereq Agro 1007 or Biol 1009, Chem 1002 or Chem 1051 or equiv)
★LECT 1010-1100 MWF, BorH 335, Cardwell V
062053 —1 LAB 0905-1100 T, Hayes A104, Cardwell V, 4 cr
354273 —2 LAB 1325-1520 T, Hayes A104, Cardwell V, 4 cr
752925 —3 LAB 1115-1310 W, Hayes A104, Cardwell V, 4 cr

R 3060 Field Plot Design in Agronomy (prereq jr, Δ)
★LECT 0815-0930 TTh, Hayes A202, Hicks D, 4 cr
857310 —1 REC 1115-1310 T, BorH 213, Hicks D
555860 —2 REC 1325-1520 Th, BorH 213, Hicks D

5001 Problems in Agronomy for Advanced Students (prereq 20 cr agronomy, #)
055961 Cardwell V, 1-5 cr

R 5070 Agroecology (prereq 3010, 3 cr in agronomic sciences or #)
773659 0945-1100 TTh, BorH 306, Jordan N, 3 cr

R 5120 Growth and Development of Field Crops (§3020; prereq Agro 1007 or Biol 1009, Chem 1002 or Chem 1051 or equiv)
★LECT 1010-1100 MWF, BorH 335, Cardwell V, 4 cr
★REC 0905-0955 F, Hayes A408, Cardwell V
563036 —1 LAB 0905-1100 T, Hayes A104, Cardwell V
559388 —2 LAB 1325-1520 T, Hayes A104, Cardwell V
061176 —3 LAB 1115-1310 W, Hayes A104, Cardwell V

8010 Research in Agronomy (prereq #)
160469 ar cr

R 8020 Seminar: Agronomy
055507 1535-1625 M, BorH 306, Cardwell V, 1 cr

8280 Current Topics in Plant Breeding (prereq 8210 or #) (S-N only)
861762 1010-1205 Th, Hayes A408, Stuthman D, 2 cr

8330 Research in Plant Genetics
057760 ar cr

8340 Directed Studies for Thesis Research (prereq agronomy or plant breeding PhD stu or #) (S-N only)
061453 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
954463 1-18 cr

8777 Thesis Credits: Masters
055653 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
058486 1-36 cr

Algebra: See General College; Mathematics.

AMERICAN INDIAN STUDIES (AmIn)
Liberal Arts

R 1023 Beginning Ojibwe (prereq 1022)
261720 1115-1205 MTWThF, WullH 220, Jones D, 5 cr

R 1033 Beginning Dakota (prereq 1032)
458251 1220-1310 MTWThF, ScottH 4, Firesteel F, 5 cr

R 1771 Introduction to American Indian Studies (§AmSt 1771) (SSci; CD)
454989 —1 1010-1100 MWF, WullH 140, Danforth R, 4 cr
355486 —2 1220-1310 MWF, WullH 140, Buffalohead E, 4 cr
056687 —3 1245-1400 TTh, NichH 213, Danforth R, 4 cr

R 3026 Ojibwe Culture and History (Hist; CD)
160407 1430-1520 MWF, WullH 140, Jones D, 4 cr

R 3028 Intermediate Ojibwe (prereq 3025)
963406 1325-1415 MTWThF, WullH 220, Jones D, 5 cr

R 3036 Dakota Culture and History (SSci; CD)
260695 1115-1205 MWF, ScottH 4, Firesteel F, 4 cr

R 3038 Intermediate Dakota (prereq 3035)
261099 1325-1415 MTWThF, ScottH 4, Firesteel F, 5 cr

R 3116 American Indian Literature (Lit; CD)
276122 —1 0945-1100 TTh, NichH 209, 4 cr
376726 —2 1115-1230 TTh, NichH 211, Amo P, 4 cr

R 3211 American Indian Philosophies (Phil; CD)
653324 —1 1115-1205 MWF, WullH 140, Buckanaga J, 4 cr
963681 —2 1615-1900 Th, ScottH 4, Buckanaga J, 4 cr

R 3242 Survey of American Indian Arts (AH; CD)
176123 1800-2030 T, ScottH 4, Libertus R, Chapman J, 4 cr

3810 Field Practice: Indian Studies (prereq soph or jr or sr, #)
156882 3-9 cr

3970 Directed Studies (prereq #, Δ, or ❑)
361952 1-15 cr

3980 Directed Instruction (prereq #, Δ, ❑)
160074 5 cr

R 5251 American Indians and the Cinema (§AmSt 5251)
857324 1430-1730 M, ScottH 4, Libertus R, Buffalohead E, 4 cr

5990 Directed Research (prereq by petition only, #, Δ, CLA approval)
563182 —1 1-15 cr
258204 —2 Libertus R, 1-15 cr

AMERICAN STUDIES (AmSt)
Liberal Arts

R 1003 American Cultures (SSci; CD)
★LECT 0945-1100 TTh, SciCB 375, Noble D, Child B
260762 —1 REC 1010-1100 M, ScottH 4, 4 cr
662962 —2 REC 1115-1205 T, WullH 140, 4 cr
162948 —3 REC 1115-1205 T, ScottH 4, 4 cr
957203 —4 REC 1220-1310 T, BuH 125, 4 cr
557012 —5 REC 0905-0955 W, ScottH 4, 4 cr
357402 —6 REC 1010-1100 W, ScottH 4, 4 cr
253780 —7 REC 1115-1205 Th, ScottH 4, 4 cr
157823 —8 REC 1220-1310 Th, LindH 315, 4 cr
062361 —9 REC 1220-1310 Th, WullH 220, 4 cr

R 1003H American Cultures (prereq honors stu or #)
★LECT 0945-1100 TTh, SciCB 375, Child B, Noble D
953037 —80 REC 1325-1415 Th, CivE 213, 4 cr

R 3111 Creative Americans and Their Worlds
663416 1430-1520 MWF, SmithH 100, 4 cr

R 3112 American Everyday Life: Violence in Everyday Life
271390 1415-1530 TTh, NichH 209, 4 cr

R 3113 American Cultural Diversity: American Indian Communities of the Great Lakes
873538 1245-1400 TTh, SmithH 100, Child B, 4 cr

R 3303 Proseminar: American Studies (prereq 3302) (CD; C/PE)
762192 1700-1950 W, ScottH 2, Mizelle B, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
760314 1-15 cr

R 5920 Topics in American Studies: Theories of Popular Culture (max 12 cr)
276251 1245-1400 TTh, EltH N119, Milich K, 4 cr

R 8203 American Studies Methodology (prereq admission to AmSt grad program) (A-F only)
563361 1010-1210 M, ScottH 2, Johnson L, 4 cr

R 8270 Politics, Economics and/or the Law (max 12 cr; prereq 8269 or # or Δ) (A-F only)
172864 1325-1520 T, BlegH 130, Valdes D, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
953443 1-18 cr

8777 Thesis Credits: Masters
962126 1-16 cr

R 8802 Dissertation Seminar (prereq #) (A-F only)
260518 1325-1525 Th, ScottH 103, Prell R, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
158060 1-36 cr

8970 Readings in American Civilization
560718 ar cr

ANCIENT NEAR EASTERN (ANE)
Classical and Near Eastern Studies
Liberal Arts

1003 The Bible: Wisdom, Poetry and Apocalyptic (§3003, RelA 3203, RelS 3203)
176171 1115-1230 TTh, NichH 45, 4 cr

3003 The Bible: Wisdom, Poetry and Apocalyptic (§1003, RelA 3203, RelS 3203)
976172 1115-1230 TTh, NichH 45, 4 cr

ANESTHESIOLOGY (Anes)
Medical School

R 3106 Advanced Respiratory Care Topics (prereq #)
758904 1325-1415 MTWThF, Mayo C559, Larsen R, 5 cr

R 3107 Individual Study in Respiratory Therapy (prereq #)
462185 1430-1520 W, Mayo C559, Larsen R, ar cr

5181 Externship in Clinical Practice of Anesthesiology (prereq regis med)
357478 Anderson W, 4.5-9 cr

5182 Independent Study, Anesthesiology (prereq regis med)
156406 Palahniuk R, ar cr

5186 Clinical Practice in Anesthesia (prereq CRNA, regis B.S. in nurs anes, 5086, #)
961171 Palahniuk R, 15 cr

5268 Seminar in Anesthesia (prereq CRNA, regis B.S. in anes)
255092 1500-1700 F, Mayo B580, Palahniuk R, 2 cr

8265 General Anesthesia
453454 Palahniuk R, 12 cr

8266 Regional Anesthesia
058164 Palahniuk R, 4 cr

8267 Pre-Postanesthetic Evaluation
262866 1530-1800 MTWTh, Mayo B580, Palahniuk R, 2 cr

8268 Seminar: Anesthesia
254069 1500-1700 F, Mayo B580, Palahniuk R, 2 cr

8269 Research in Anesthesia
460324 Palahniuk R, ar cr

ANIMAL AND PLANT SYSTEMS (AnPl)
Agricultural, Food, and Environmental Sciences

R 5060 Integrated Management of Cropping Systems (prereq Agro 3020 or Hort 3002, Soil 3125, or #) (A-F only)
456077 1325-1500 MWF, BorH 213, Simmons S, Malzer G, 4 cr

ANIMAL PHYSIOLOGY (AnPh)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
163145 1-18 cr

8777 Thesis Credits: Masters
154050 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
757199 1-36 cr

ANIMAL SCIENCE (AnSc)
Agricultural, Food, and Environmental Sciences

1143 Beginning Meats Judging and Grading (prereq 1510 or ¶1510) (A-F only)
160679 1245-1440 T, ABLMS 125, Epley R, 1 cr

1301 Management Techniques: Swine (prereq #) (S-N only)
455754 Hawton J, 1 cr

1510 Consumer Meat Science
754058 0800-0850 TTh, ABLMS 125, Epley R, 2 cr

3111 Introduction to Animal Behavior (§EEB 3111; prereq Biol 1008 or Biol 1009 or #)
★LECT 1010-1155 TTh, GrnH 110, Pusey A
555079 —1 REC 1325-1415 T, Ecology 150C, Pusey A, 4 cr
953331 —2 REC 1325-1415 Th, Ecology 150C, Pusey A, 4 cr

3131 Live Animal Performance and Selection
★LECT 1430-1520 TTh, PetH 108, Christians C
956424 —1 LAB 1545-1730 TTh, AnAren 115, Christians C, 3 cr

3141 Advanced Dairy Judging (prereq 1110)
654098 1520-1700 Th, HckrH 209, Seykora A, 1 cr

R 3305 Reproductive Physiology, Artificial Insemination, and Lactation (prereq 3301)
★LECT 0905-0955 MTWTh, HckrH 100, Hunter A
060884 —1 LAB 1535-1730 W, AnScVM 164, Hunter A, 5 cr
257392 —2 LAB 0905-1100 F, AnScVM 164, Hunter A, 5 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 3520 Horse Production (prereq 1530 or equiv) (A-F only)
174937 1400-1450 MWF, CentLib 4, 3 cr (ITV from Crookston)

5231 Dairy Cattle Breeding (prereq 3220 or #)
★LECT 1010-1100 MWF, HckrH 100, Hansen L
058780 —1 LAB 1010-1100 TTh, HckrH 100, Hansen L, 4 cr

5328 General Endocrine Physiology Laboratory (prereq 5327 or #)
856335 0905-1100 TTh, AnScVM 495, Wheaton J, 2 cr

5330 Current Topics in Endocrinology (prereq 3301, Biol 3021 or BioC 5001)
055099 1535-1625 W, AnScVM 495, Wheaton J, 1 cr

5601 Swine Production (prereq 3401...3220 rec)
★LECT 1220-1310 MWF, AnScVM 385, Shurson G, 4 cr
157921 —1 LAB 1220-1415 Th, VetS 450, Shurson G

5602 Sheep Production (prereq 3401 or #...3220, 5403 rec) (A-F only)
376189 1250-1445 MWF, CentLib 4, Christians C, Head W, 3 cr

5603 Beef Cattle Production (prereq 1401 or 3401...3220, 5403 rec)
★LECT 1430-1520 MWTh, ABLMS 125, DiCostanzo A, Woodward B, 4 cr
463546 —1 LAB 1535-1730 W, ABLMS 125, DiCostanzo A, Woodward B

5804 Dairy Farm Management (prereq 1520, 5403...3220 rec)
★LECT 1115-1205 MWF, HckrH 100, Reneau J, 4 cr
060139 —1 LAB 1325-1450 M, HckrH 100, Reneau J

5710 Special Problems (prereq #)
153179 ar cr

5715 Tutorial (prereq #)
758756 ar cr

8326 Immunoreproduction (prereq 5322 or #) (A-F only)
870915 1415-1620 TTh, HckrH 312, Hunter A, 4 cr

8332 Preservation of Spermatozoa and Embryo (prereq 5322, 3 cr upper division biochemistry, #)
357769 Crabo B, Hunter A, 5 cr (hrs ar) (AnScVM 495J)

R 8335 Molecular Biology Techniques in Animal Science (prereq Biol 5001, 5003 or equiv or #) (A-F only)
555793 0945-1100 TTh, AnScVM 495J, Foster D, 4 cr

8441 Research Techniques in Ruminant Nutrition (prereq 8440 or #...MicB 5321 rec) (A-F only)
475261 1300-1700 T, HckrH 70, Stern M, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
358923 1-18 cr

8742 Concepts and Developments in Swine Nutrition (prereq #)
275262 Pettigrew J, 2 cr

8750 Concepts and Developments in Meat Science and Technology (prereq #)
753878 Dayton W, 1 cr

8777 Thesis Credits: Masters
858747 1-16 cr

8810 Research in Animal Science (prereq #)
963812 ar cr

8820 Research in Animal Genetics (prereq #)
763326 ar cr

8830 Research in Animal Physiology (prereq #)
459822 ar cr

8840 Research in Animal Nutrition (prereq #)
362759 ar cr

8850 Research in Muscle Chemistry and Physiology (prereq #)
363197 ar cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
853001 1-36 cr

ANTHROPOLOGY (Anth)
Liberal Arts

R 1101 Human Origins (Biol/L; Envt)
★LECT 0800-0850 MWF, WilleyH 125, Johnston K
775007 —1 LAB 0905-0955 M, FordH 20, 5 cr
575008 —2 LAB 1010-1100 M, FordH 20, 5 cr
375009 —3 LAB 1115-1205 M, FordH 20, 5 cr
775010 —4 LAB 0800-0850 T, FordH 20, 5 cr
575011 —5 LAB 0905-0955 T, FordH 20, 5 cr
375012 —6 LAB 1010-1100 T, FordH 20, 5 cr
175013 —7 LAB 1115-1205 T, FordH 20, 5 cr
075014 —8 LAB 1220-1310 T, FordH 20, 5 cr
875015 —9 LAB 0800-0850 Th, FordH 20, 5 cr
675016 —10 LAB 0905-0955 Th, FordH 20, 5 cr
475017 —11 LAB 1010-1100 Th, FordH 20, 5 cr
275018 —12 LAB 1115-1205 Th, FordH 20, 5 cr
275021 —13 LAB 0905-0955 F, FordH 20, 5 cr
175022 —14 LAB 1010-1100 F, FordH 20, 5 cr
975023 —15 LAB 1115-1205 F, FordH 20, 5 cr

R 1101H Honors Course: Human Origins (prereq B avg or #)
★LECT 0800-0850 MWF, WilleyH 125, Johnston K
175019 —80 LAB 1325-1415 T, FordH 20, Johnston K, 5 cr

R 1102 Understanding Cultures (§5102) (SSci; IP)
★LECT 1115-1205 MWF, WilleyH 125, Barlow K
759471 —1 REC 0800-0850 T, FordH 15, 5 cr
861809 —2 REC 0905-0955 T, FordH 175, 5 cr
959730 —3 REC 0905-0955 T, FordH 50, 5 cr
863043 —4 REC 1010-1100 T, FordH 50, 5 cr
659141 —5 REC 1010-1100 T, FordH 15, 5 cr
153125 —6 REC 1115-1205 T, FordH 15, 5 cr
362180 —7 REC 0800-0850 Th, FordH 15, 5 cr
653937 —8 REC 0905-0955 Th, FordH 15, 5 cr
655963 —9 REC 0905-0955 Th, FordH 50, 5 cr
258462 —10 REC 1010-1100 Th, FordH 50, 5 cr
052977 —11 REC 1010-1100 Th, FordH 15, 5 cr
256291 —12 REC 1115-1205 Th, FordH 15, 5 cr
657390 —13 REC 1220-1310 Th, FordH 15, 5 cr

R 1102H Honors Course: Understanding Cultures (prereq GPA 3.0 or #)
★LECT 1115-1205 MWF, WilleyH 125, Barlow K
361739 —80 REC 1220-1315 W, FordH 290E, Barlow K, 5 cr

R 3111 Introduction to Archaeology
★LECT 0905-0955 MWF, FordH 120, Wells P
961526 —1 REC 1220-1310 W, FordH 20, 5 cr
259529 —2 REC 1325-1415 W, FordH 20, 5 cr
457553 —3 REC 1430-1520 W, FordH 20, 5 cr

R 3116 Ecological Anthropology (prereq 1102) (SSci; Envt)
755260 1415-1530 TTh, FordH 130, Gerlach L, 4 cr

R 3212 Indians of the Greater Southwest (CD)
359425 1115-1205 MWF, AndH 210, Dunnigan T, 4 cr

R 3960 Anthropology Proseminar
775024 1010-1100 MWF, FordH 150, McCorriston J, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
557978 ar cr

3992H Honors Tutorial (cannot be applied toward any CLA degree; prereq #) (S-N only)
259319 1 cr

R 5116 Ecological Anthropology (§3116; prereq 1102)
258686 1415-1530 TTh, FordH 130, Gerlach L, 4 cr

R 5141 Psychological Anthropology (prereq 1102 or 5102 or #, waived for public hlth, nurs, psy, soc, social work majs)
771782 1415-1530 TTh, FordH 150, Ingham J, 4 cr

R 5176 Environmental Archaeology (prereq 1101, 3111 or #)
475020 1010-1100 MWF, FordH 150, McCorriston J, 4 cr

R 5258 Anthropological Analysis of American Culture (prereq 1102 or 5102 or #)
571783 1115-1230 TTh, FordH 150, Ingham J, 4 cr

R 5910 Topics in Anthropology
161475 —1 0945-1100 TTh, FordH 150, Penn M, 4 cr
157708 —2 1430-1700 Th, FordH 175, Miller F, 4 cr

R 5960 Senior Seminar (prereq sr maj)
061162 —1 1220-1440 M, FordH 235, Gerlach L, 4 cr
158552 —2 1325-1530 W, FordH 290E, Johnston K, 4 cr

5961 Senior Research Project (prereq sr maj, #) (A-F only)
061761 4 cr

5970 Directed Readings (prereq #, Δ, CLA approval)
155876 2-4 cr

8003 Foundations of Social and Cultural Anthropology III (prereq anth grad stu or #)
054874 1325-1600 Th, FordH 50, Lipset D, 3 cr

R 8004 Foundations of Anthropological Archaeology (prereq anth grad stu or #)
054597 1325-1525 W, FordH 50, Wells P, 3 cr

8202 Research Methods in Social and Cultural Anthropology (prereq grad stu in anth or #)
360526 1415-1600 T, FordH 175, Miller F, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
561478 1-18 cr

8777 Thesis Credits: Masters
654053 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
662332 1-36 cr

8950 Directed Studies (prereq #)
158883 ar cr

APPLIED ECONOMICS (ApEc)
Agricultural, Food, and Environmental Sciences

R 1102 Principles of Macroeconomics (§Econ 1102) (SSci)
959663 —1 0800-0850 MTWTh, ClaOff B45, Welsch D, 4 cr
963695 —2 0905-0955 MTWTh, ClaOff B45, Welsch D, 4 cr

R 3002 Applied Microeconomics: Managerial Economics (prereq 3001, 1250 or Acct 1024 or #)
★LECT 0905-0955 MWF, McNH 33, Coggins J
759664 —1 LAB 1220-1420 W, ClaOff 17, Coggins J, 4 cr
557690 —2 LAB 1430-1630 W, ClaOff 17, 4 cr

3006 Applied Macroeconomics: Government and the Economy (§Econ 3102; prereq 1101, 1102 or Econ 1101, Econ 1102)
153691 1115-1205 MTWTh, VoTech R250, Stinson T, 4 cr

3007 Applied Macroeconomics: Policy, Trade and Development (prereq 1101, 1102 or Econ 1101, Econ 1102) (IP)
762676 0800-0955 TTh, McNH 33, Aziz F, 4 cr

3070 Agriculture and Economic Growth in Developing Countries (prereq 1101, 1102, or Econ 1101, Econ 1102) (IP)
775671 1325-1520 MW, VoTech R280, Welsch D, 4 cr

R 3260 Operations Management of Agribusinesses (prereq 3002, 3500 or #)
★LECT 1245-1400 TTh, VoTech 230, Olson K
556698 —1 LAB 1220-1420 W, VoTech 230, Olson K, 4 cr

R 3300 Agricultural and Food Sales (prereq GC 1537 or equiv or #) (A-F only)
874978 1220-1310 MWF, ClaOff B30, Nefstead W, 3 cr

R 3400 Markets, Marketing, and Prices (prereq 1101, 1102...Math 1142 recommended)
★LECT 1220-1310 MWF, McNH 33, Smith R
356699 —1 LAB 1430-1630 T, ClaOff 17, 4 cr
855511 —2 LAB 1430-1630 Th, ClaOff 17, 4 cr

3440 Livestock Marketing Economics (prereq 1101 or Econ 1101)
763696 1430-1520 MWF, BioSci 12, Buhr B, 3 cr

R 3450 Agricultural Input Marketing Economics (prereq 1101 or Econ 1101)
373468 1010-1150 TTh, ClaOff B42, Dahl D, 4 cr

3610 Resource Development and Environmental Economics (prereq 1101, 1102 or Econ 1101, Econ 1102 or #) (Envt)
461666 1010-1125 MWF, VoTech R285, Easter K W, 4 cr

R 3920 Agricultural Law (prereq 1101 or Econ 1101) (C/PE)
559665 1010-1150 MW, ClaOff B35, Dahl D, 4 cr

3990 Independent Study in Agricultural and Applied Economics (prereq #)
357691 ar cr

5020 Applied Linear Programming (prereq 3002 or Econ 3101 or #)
655512 1325-1505 TTh, ClaOff B30, Apland J, 4 cr

R 5030 Methods of Economic Data Analysis (prereq 5021 or equiv...familiarity with matrix algebra rec)
074977 0905-1045 TTh, McNH 197, McCullough G, 4 cr

5400 Intermediate Market and Price Analysis (prereq 3003 or Econ 3101 or #)
157692 1605-1800 MW, ClaOff B26, Hammond J, 4 cr

R 5440 Cooperatives and Agribusiness Organization (prereq 3002 or Econ 3101 or #)
455513 1010-1100 MTWTh, VoTech R280, Parliament C, 4 cr

5640 Financing State and Local Governments (prereq 3002 or Econ 3101 or #) (C/PE)
562677 1630-1950 Th, ClaOff B30, Honadle B, 4 cr

5890 Independent Study: Advanced Topics in Farm Management (prereq #)
160656 1-6 cr

5990 Special Topics and Independent Study in Applied Economics (prereq #)
658670 ar cr

8100 Graduate Seminar (prereq 2 qtrs registration in AgEc MS program, examining committee selected, #) (S-N only)
156700 1325-1520 W, ClaOff B26, 2 cr

8110 Master's Paper: Plan B Project (max 9 cr; prereq #) (S-N only)
255514 1-9 cr

8200 Advanced Topics in Agricultural and Applied Economics
563697 1-9 cr

8210 Applied Econometrics (prereq Econ 8201 or Econ 5261, Econ 8202 or Econ 5262)
261667 1430-1520 MWF, ClaOff B36, Tsur Y, 3 cr

8220 Applied Mathematical Programming (prereq Econ 5151 or MS-level operations research or #)
155515 1115-1230 MW, ClaOff B26, Apland J, 3 cr

8231 Agricultural Prices (prereq Econ 5151, 5152)
575672 1430-1545 MW, VoTech R375, Smith R, 3 cr

8264 Resource Economics (prereq Econ 5151, Econ 5152 or #)
363698 1325-1455 TTh, ClaOff B36, Homans F, 3 cr

8287 Production and Supply (prereq 5860 or equiv, Stat 5302 or equiv)
161668 0815-0930 TTh, ClaOff B36, Peterson W, 3 cr

8345 Seminar: Agricultural Marketing
359666 1430-1700 T, ClaOff B26, Hammond J, Roe T, 3 cr

8378 Seminar: Agricultural Development
653694 1010-1140 F, ClaOff 230, Roe T, Ruttan V, 1-3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
060657 1-18 cr

8777 Thesis Credits: Masters
458671 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
162679 1-36 cr

ARABIC (Arab)
Afro-American and African Studies Liberal Arts

R 1103 Beginning Arabic (prereq 1102)
758787 1115-1205 MTWThF, BlegH 115, Kadi S, 5 cr

R 3103 Intermediate Arabic (prereq 3102)
355665 1325-1520 MW, HHHCtr 30, Kadi S, 5 cr

R 3303 Arabic Drama in Translation (§MidE 3303)
471792 1415-1530 TTh, BlegH 240, AshShareef T, 4 cr

R 5103 Advanced Arabic (prereq 3103 or #)
453728 1245-1400 TTh, BlegH 215, Kadi S, 5 cr

R 5503 Arabic Drama
271793 1415-1530 TTh, BlegH 240, AshShareef T, 4 cr

ARCHITECTURE (Arch)
Architecture and Landscape Architecture

R 1301 Introduction to Architectural Drawing (§1010, 1041, LA 1301) (Vis) (A-F only) (course fee)
956908 —1 0905-1205 MW, Arch 50, 4 cr
160124 —2 1220-1520 TTh, Arch 50, 4 cr

R 1601 Design Professions and Society (C/PE)
★LECT 0800-0955 MW, NichH 211, Wilkins C
862930 —1 REC 0800-0850 T, Arch 20, 4 cr
855749 —2 REC 0800-0850 T, Arch 15, 4 cr
158437 —3 REC 0905-0955 T, Arch 20, 4 cr
156308 —4 REC 0905-0955 T, Arch 15, 4 cr
261619 —5 REC 0800-0850 Th, Arch 20, 4 cr
359621 —6 REC 0800-0850 Th, Arch 15, 4 cr
257649 —7 REC 0905-0955 Th, Arch 15, 4 cr
855430 —8 REC 0905-0955 Th, Arch 20, 4 cr

R 3311 Drawing for Design (§LA 3311; prereq pre-arch or arch or env dsgn or landscape arch maj, Arch/LA 1301, or #) (A-F only) (course fee)
157367 —1 0905-1205 TTh, Arch 50, 4 cr
060089 —2 1220-1520 TTh, Arch 55, 4 cr

R 3970 Directed Study (prereq 3081 or #)
456290 —1 Anderson L, ar cr
963244 —2 Clemence R, ar cr
153005 —3 Dittmar G, ar cr
557463 —4 Fisher T, ar cr
357867 —5 Grebner D, ar cr
362101 —6 Guzowski M, ar cr
061291 —7 Jara C, ar cr
255013 —8 LaVine L, ar cr
155143 —9 Morrish W, ar cr
058892 —10 Mulfinger D, ar cr
660175 —11 Piotrowski A, ar cr
660709 —12 Rauma J, ar cr
459951 —13 Robinson J, ar cr
054504 —14 Rockcastle G, ar cr
761799 —15 Satkowski L, ar cr
575137 —16 Solomonson K, ar cr
175139 —17 Weeks S, ar cr

R 5121 Architectural Design (prereq 5113, CE 3602, arch maj) (A-F only)
★LECT 1325-1730 MWF, Arch 30, 6 cr
154705 —1 LAB 1325-1730 MWF, Arch 230

R 5122 Architectural Design (prereq 5121, arch maj)
★LECT 1325-1730 MWF, Arch 30, 6 cr
460338 —1 LAB 1325-1730 MWF, Arch 230

R 5123 Architectural Thesis (I; prereq 5122, submit thesis plan qtr prior to wrtg, 800 hrs practical exp, 36 lab hrs, Δ) (A-F only)
561867 1325-1710 MTWThF, Arch 210, 240, 12 cr

R 5281 Architecture Studio I: Fundamentals of Space and Form (prereq 3311, 3412, arch maj, or #) (A-F only)
★LECT 1325-1730 MWF, Arch 35, 6 cr
960277 —1 LAB 1325-1730 MWF, Arch 230

R 5282 Architecture Studio II: Structure and Order (prereq 3311, 3412, 5281, arch maj, or #) (A-F only)
★LECT 1325-1415 MWF, Arch 60, 6 cr
862152 —1 LAB 1325-1730 MWF, Arch 230

R 5283 Architecture Studio III: Site, Context and Form (prereq 5282, arch maj, or #) (A-F only)
★LECT 1325-1730 MWF, Arch 20, 6 cr
359005 —1 LAB 1325-1730 MWF, Arch 230
258302 —2 LAB 1325-1730 MWF, Arch 230
960134 —3 LAB 1325-1730 MWF, Arch 230

R 5293 Architectural Design (prereq 5292, arch maj or #) (A-F only)
★LECT 1325-1730 MWF, Arch 45, 6 cr
855377 —1 LAB 1325-1730 MWF, Arch 220

R 5309 Representation in Architecture (§LA 5309; prereq Arch/LA 3311, Arch/LA prof cand) (A-F only)
461540 1220-1520 TTh, Arch 30, Piotrowski A, 4 cr

R 5351 AutoCAD I (prereq arch maj, 3081 or 8251 or #)
153576 1810-2120 W, Arch 145, 4 cr

R 5352 AutoCAD II (prereq arch maj, 5351 or #)
962563 0900-1230 S, Arch 145, 4 cr

R 5373 Intermediate Computer Methods in Architecture (prereq 5372, grad arch maj) (S-N only)
775136 1 cr

R 5383 Advanced Computer-Aided Design Visualization for Architecture (prereq arch or BED or LA maj) (A-F only)
★LECT 1325-1520 T, Arch 20, Anderson L, 4 cr
261779 —1 LAB 1325-1520 Th, Arch 145

R 5432 Modern Architecture (§5056; prereq arch maj or # or 3412) (A-F only)
071352 1010-1205 TTh, Arch 25, 4 cr

R 5450 Topics in Architecture Theory: Building Geneologies (prereq M Arch, 5401 or #) (A-F only)
762290 1535-1730 TTh, Arch 20, Jara C, 4 cr

R 5458 Architecture and Culture (prereq 3412, arch maj or #) (A-F only)
871353 1010-1205 WF, Arch 15, Robinson J, 4 cr

R 5461 North American Indian Architecture
760541 1010-1205 TTh, Arch 20, Tollefson L, 4 cr

R 5511 Construction Materials in Architecture (§3061; prereq grad arch maj or #) (A-F only)
★LECT 1010-1205 WF, Arch 40, Weeks S, 4 cr
157569 —1 LAB 1010-1205 M, Arch 25
855282 —2 LAB 1010-1205 M, Arch 40

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 5539 Daylighting and Architecture Design (§3065, 5959; prereq 5531, grad arch maj or #) (A-F only)
★LECT 1010-1205 W, JonesH 11, Guzowski M, 4 cr
063431 —1 LAB 1010-1205 M, JonesH 11

R 5573 Architectural Structures I: Wood and Steel Construction (prereq 5572, B.Arch or M.Arch, or #) (A-F only)
763682 0800-0955 TTh, Arch 40, Franck B, 4 cr

R 5724 The Meanings of Place (prereq #) (A-F only)
163508 1430-1730 T, BlegH 415, Quigley T, Martin J, 4 cr

R 5970 Directed Study (prereq #)
260048 —1 Anderson L, ar cr
055104 —2 Clemence R, ar cr
163856 —3 Dittmar G, ar cr
854083 —4 Fisher T, ar cr
560010 —5 Grebner D, ar cr
554725 —6 Guzowski M, ar cr
262771 —7 Jara C, ar cr
658054 —8 LaVine L, ar cr
563330 —9 Morrish W, ar cr
760121 —10 Mulfinger D, ar cr
757428 —11 Piotrowski A, ar cr
755890 —12 Rauma J, ar cr
153920 —13 Rhoades T, ar cr
453874 —14 Robinson J, ar cr
762824 —15 Rockcastle G, ar cr
163377 —16 Satkowski L, ar cr
059346 —17 Solomonson K, ar cr
375138 —18 Weeks S, ar cr

R 8253 Graduate Architectural Design I (prereq grad status in architecture) (A-F only)
★LECT 1325-1730 MWF, Arch 45, 6 cr
663111 —1 LAB 1325-1730 MWF, Arch 220
956827 —2 LAB 1325-1730 MWF, Arch 220

R 8256 Graduate Architectural Design II (prereq grad status in architecture) (A-F only)
★LECT 1325-1730 MWF, Arch 50, 6 cr
354323 —1 LAB 1325-1730 MWF, Arch 240

R 8257 Graduate Architectural Design III (prereq grad status in architecture) (A-F only)
★LECT 1325-1730 MWF, Arch 30, 6 cr
171804 —1 LAB 1325-1730 MWF, Arch 230

R 8258 Graduate Architectural Design III (prereq grad status in architecture) (A-F only)
★LECT 1325-1730 MWF, Arch 30, 6 cr
871806 —1 LAB 1325-1730 MWF, Arch 230

R 8777 Thesis Credits: Masters
962210 Anderson L, 1-16 cr

AREA STUDIES (Area)
Liberal Arts

R 3920 Topics in European Studies (A-F only)
659964 —1 1010-1125 MW, BlegH 350, Knutson A, 4 cr (Algeria: Colonization, Resistance, Independence, and Civil War) (FLIP Program; taught in French; prereq Δ)
963440 —2 1010-1125 MW, BlegH 210, Schissler H, 4 cr (Contemporary German History 1945-1995: From Capitulation to Reunification) (FLIP Program; taught in German; §Hist 3700; prereq Δ)
555034 —3 0945-1100 TTh, BlegH 215, Taylor M, 4 cr (The Greens in German and European Politics) (FLIP Program; taught in German; prereq Δ)
558788 —4 0945-1100 TTh, BlegH 250, Benraouane S, 4 cr (Education, Schools, and Immigrants in Contemporary France) (FLIP Program; taught in French; prereq Δ)
475244 —5 1115-1230 TTh, EE/CSci 2260, Spiering M, 4 cr (National Identity, Europeans, and the European Union) (§5920)

R 3930 Topics in Latin American Studies (A-F only)
455091 —1 1010-1125 MW, BlegH 245, Aagesen D, 4 cr (Nature and Society in Latin America) (FLIP Program; taught in Spanish; prereq Δ)
556815 —2 0815-0930 TTh, HHHCtr 30, Gold-Biss M, 4 cr (Democratization in the Americas in the 1990s) (FLIP Program; taught in Spanish; prereq Δ)

3970 Directed Studies (prereq #, Δ, ❑)
958495 1-15 cr

3990 Directed Research (prereq #, Δ, ❑) (A-F only)
456905 1-15 cr

5910 Topics in East Asian Studies: Chinese Law (§Law 5890) (A-F only)
871854 1325-1415 MTW, Law, Lee T, 2-4 cr

5920 Topics in European Studies: National Identity, Europeans, and the European Union (§Area 3920, sec 5)
275245 1115-1230 TTh, EE/CSci 2260, Spiering M, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
562470 1-15 cr

5990 Directed Research (prereq #, Δ, CLA approval) (A-F only)
360803 1-15 cr

ART (ArtS)
Liberal Arts

Materials fees are assessed at the time of registration for many Art courses. See page 20 for course numbers and fee amounts.

You must be on time for your first class meeting. If you are more than 15 minutes late, your instructor can assign your place in the course to another student.

NOTE: You must have permission from the instructor when you register for an Art course *after* the first class meeting.

R 1101 Drawing I (Vis)
★LECT 0905-1100 MW, ArtB 141, 4 cr
162481 —1 LAB 1100-1205 MW, ArtB 141 (ArtS, premaj ArtS, or MLK stu only)
459058 —2 LAB 1100-1205 MW, ArtB 141
★LECT 0905-1100 MW, ArtB 160, 4 cr
256968 —4 LAB 1100-1205 MW, ArtB 160
★LECT 1325-1520 MW, ArtB 141, Roode W, 4 cr
859946 —5 LAB 1520-1625 MW, ArtB 141, Roode W (ArtS, premaj ArtS, or MLK stu only)
158406 —6 LAB 1520-1625 MW, ArtB 141, Roode W
★LECT 1325-1520 MW, ArtB 160, 4 cr
056933 —8 LAB 1520-1625 MW, ArtB 160
★LECT 0905-1100 TTh, ArtB 150, 4 cr
962983 —9 LAB 1100-1205 TTh, ArtB 150 (ArtS, premaj ArtS, or MLK stu only)
653114 —10 LAB 1100-1205 TTh, ArtB 150
★LECT 1325-1520 TTh, ArtB 140, 4 cr
153271 —12 LAB 1520-1625 TTh, ArtB 140
★LECT 1325-1520 TTh, ArtB 141, 4 cr
155019 —13 LAB 1520-1625 TTh, ArtB 141 (ArtS, premaj ArtS, or MLK stu only)
854729 —14 LAB 1520-1625 TTh, ArtB 141
975247 —8 LECT 1800-2200 M, ArtB 140, Caglioti V, 4 cr
374538 —9 LECT 1800-2200 T, ArtB 140, 4 cr
174539 —10 LECT 1800-2200 W, ArtB 140, Caglioti V, 4 cr
574540 —11 LECT 1800-2200 Th, ArtB 150, 4 cr

R 1102 Drawing II (prereq 1101)
★LECT 0905-1100 TTh, ArtB 140, 4 cr
761916 —1 LAB 1100-1205 TTh, ArtB 140 (ArtS, premaj ArtS, or MLK stu only)
562274 —2 LAB 1100-1205 TTh, ArtB 140

R 1301 Sculpture (Vis)
★LECT 0905-1100 MW, ArtB 65, Rose T, 4 cr
354113 —1 LAB 1100-1205 MW, ArtB 65, Rose T (ArtS, premaj ArtS, or MLK stu only)
654330 —2 LAB 1100-1205 MW, ArtB 65, Rose T
★LECT 0905-1100 TTh, ArtB 65, 4 cr
654649 —4 LAB 1100-1205 TTh, ArtB 65

R 1302 Sculpture (Vis)
★LECT 0905-1100 MW, ArtB 30, Baldwin G, 4 cr
659737 —1 LAB 1100-1205 MW, ArtB 30, Baldwin G (ArtS, premaj ArtS, or MLK stu only)
657454 —2 LAB 1100-1205 MW, ArtB 30, Baldwin G
★LECT 1325-1520 TTh, ArtB 30, 4 cr
055474 —4 LAB 1520-1625 TTh, ArtB 30

R 1401 Introduction to Studio Arts (Vis; IP)
472179 1600-1800 TTh, BlegH 5, 4 cr

R 1404 Color (prereq 1101)
★LECT 0905-1100 TTh, ArtB 160, Lyon J, 4 cr
763309 —1 LAB 1100-1205 TTh, ArtB 160, Lyon J (ArtS, premaj ArtS, or MLK stu only)
662816 —2 LAB 1100-1205 TTh, ArtB 160

R 1510 Printmaking: Intaglio (max 8 cr) (Vis)
★LECT 0905-1100 TTh, ArtB 170, Bethke K, 4 cr
562484 —1 LAB 1100-1205 TTh, ArtB 170, Bethke K (ArtS, premaj ArtS, or MLK stu only)
263466 —2 LAB 1100-1205 TTh, ArtB 170, Bethke K

R 1520 Printmaking: Lithography (max 8 cr) (Vis)
★LECT 0905-1100 MW, ArtB 170, Krepps J, 4 cr
472182 —1 LAB 1100-1205 MW, ArtB 170, Krepps J (Arts, premaj Arts or MLK)
272183 —2 LAB 1100-1205 MW, ArtB 170, Krepps J

R 1540 Printmaking: Screen (max 8 cr) (Vis)
★LECT 1325-1520 TTh, ArtB 170, Bethke K, 4 cr
061890 —1 LAB 1520-1625 TTh, ArtB 170, Bethke K (ArtS, premaj ArtS, or MLK stu only)
658121 —2 LAB 1520-1625 TTh, ArtB 170, Bethke K

R 1602 Electronic Art (Vis)
★LECT 0905-1100 MW, AndH 250, 4 cr
655316 —2 LAB 1100-1205 MW, AndH 250
★LECT 1325-1520 TTh, AndH 250, 4 cr
972185 —4 LAB 1520-1625 TTh, AndH 250
874544 —3 LECT 1800-2200 W, AndH 250, 4 cr

R 1701 Photo Medium (Vis)
★LECT 1010-1205 TTh, ArtB 120, 4 cr
562579 —1 LAB 0905-1010 TTh, ArtB 120 (ArtS, premaj ArtS, or MLK stu only)
163484 —2 LAB 0905-1010 TTh, ArtB 120
★LECT 1325-1520 TTh, ArtB 120, 4 cr
861650 —4 LAB 1520-1625 TTh, ArtB 120
674545 —3 LECT 1800-2200 M, ArtB 120, 4 cr
474546 —4 LECT 1800-2200 T, ArtB 120, 4 cr

R 1811 Ceramics: Handbuilding (Vis)
★LECT 1010-1205 TTh, ArtB 10, Lane T, 4 cr
053594 —1 LAB 0905-1010 TTh, ArtB 10, Lane T (ArtS, premaj ArtS, or MLK stu only)
762080 —2 LAB 0905-1010 TTh, ArtB 10, Lane T

R 1812 Ceramics: Wheel Throwing (Vis)
★LECT 0905-1100 MW, ArtB 10, 4 cr
762354 —1 LAB 1100-1205 MW, ArtB 10 (ArtS, premaj ArtS, or MLK stu only)
957928 —2 LAB 1100-1205 MW, ArtB 10

R 3105 Introduction to Painting (prereq 1101, 1102, 1401, 1404)
★LECT 1325-1520 MW, ArtB 151, Morgan C, 4 cr
176436 —1 LAB 1520-1625 MW, ArtB 151, Morgan C (ArtS, premaj ArtS, or MLK stu only)
076437 —2 LAB 1520-1625 MW, ArtB 151, Morgan C
★LECT 0905-1100 TTh, ArtB 161, Cowette T, 4 cr
676151 —3 LAB 1100-1205 TTh, ArtB 161, Cowette T (ArtS, premaj ArtS, or MLK stu only)
476152 —4 LAB 1100-1205 TTh, ArtB 161, Cowette T

R 3110 Drawing (max 12 cr; prereq 1102, 1401)
★LECT 0905-1100 MW, ArtB 150, Morgan C, 4 cr
454927 —1 LAB 1100-1205 MW, ArtB 150, Morgan C (ArtS, premaj ArtS, or MLK stu only)
060111 —2 LAB 1100-1205 MW, ArtB 150, Morgan C

R 3112 Imaging the Human Form (prereq 3111)
★LECT 1325-1520 TTh, ArtB 161, Cowette T, 4 cr
976155 —1 LAB 1520-1625 TTh, ArtB 161, Cowette T (ArtS, premaj ArtS, or MLK stu only)
776156 —2 LAB 1520-1625 TTh, ArtB 161, Cowette T

R 3120 Painting (max 12 cr; prereq 1101, 1102, 1401, 1404, 3105, 4 cr of 3110 or ¶3110)
★LECT 0905-1100 MW, ArtB 151, Roode W, 4 cr
255948 —1 LAB 1100-1205 MW, ArtB 151, Roode W (ArtS, premaj ArtS, or MLK stu only)
757820 —2 LAB 1100-1205 MW, ArtB 151, Roode W
★LECT 0905-1100 TTh, ArtB 151, Feinberg D, 4 cr
376158 —3 LAB 1100-1205 TTh, ArtB 151, Feinberg D (ArtS, premaj ArtS, or MLK stu only)
176159 —4 LAB 1100-1205 TTh, ArtB 151, Feinberg D

R 3130 Watercolor (max 12 cr; prereq 1101, 1102, 1401, 1404)
★LECT 0905-1100 TTh, ArtB 141, 4 cr
556118 —1 LAB 1100-1205 TTh, ArtB 141

R 3303 Sculpture: Cast Metal (prereq 1301, 1302, 1401)
★LECT 1325-1520 TTh, ArtB 185, Potratz W, 4 cr
155076 —1 LAB 1520-1625 TTh, ArtB 185, Potratz W (ArtS, premaj ArtS, or MLK stu only)
759308 —2 LAB 1520-1625 TTh, ArtB 185, Potratz W

R 3304 Sculpture: Wood and Stone (prereq 1301, 1302, 1401)
★LECT 0905-1100 TTh, ArtB 30, Lucey S, 4 cr
455317 —1 LAB 1100-1205 TTh, ArtB 30, Lucey S (ArtS, premaj ArtS, or MLK stu only)
853595 —2 LAB 1100-1205 TTh, ArtB 30, Lucey S

R 3305 Sculpture: Kinetics (prereq 1301, 1302, 1401)
★LECT 1325-1520 MW, ArtB 65, Baldwin G, 4 cr
558581 —1 LAB 1520-1625 MW, ArtB 65, Baldwin G (ArtS, premaj ArtS, or MLK stu only)
156602 —2 LAB 1520-1625 MW, ArtB 65, Baldwin G

3411H Honors: Tutorial (prereq honors program candidate, Δ) (A-F only)
962370 2-4 cr

3412H Honors: Tutorial (prereq honors program candidate, Δ) (A-F only)
159278 2-4 cr

3413H Honors: Cross-Media Project (prereq honors program candidate, Δ) (A-F only)
554952 2-4 cr

3414H Honors: Cross-Media Project (prereq honors program candidate, Δ) (A-F only)
555812 2-4 cr

3415H Honors: Thesis (prereq honors program candidate, Δ) (A-F only)
363751 2 cr

3416H Honors: Thesis (prereq honors program summa candidate, Δ) (A-F only)
860790 2 cr

R 3420 Studio Arts Workshop
575252 1800-2200 T, ArtB 160, 4 cr

3444 Senior Project (prereq sr art studio maj, #, Δ) (S-N only)
363054 —1 Baldwin G, 2 cr
154792 —2 Bethke K, 2 cr
559469 —3 Cowette T, 2 cr
653758 —4 Feinberg D, 2 cr
858327 —7 Henkel J, 2 cr
363846 —8 Hoard C, 2 cr
858652 —10 Krepps J, 2 cr
154364 —11 Lane T, 2 cr
458959 —12 Lucey S, 2 cr
061727 —13 Lyon J, 2 cr
175254 —14 Morgan C, 2 cr
661049 —15 Pharis M, 2 cr
554594 —16 Potratz W, 2 cr
561951 —17 Roode W, 2 cr
961476 —18 Rose T, 2 cr
059203 —19 2 cr

R 3510 Printmaking: Intaglio (max 12 cr; prereq 1401, 4 cr of 1510 or #)
★LECT 1325-1520 MW, ArtB 170, Krepps J, 4 cr
476166 —1 LAB 1520-1625 MW, ArtB 170, Krepps J

R 3520 Printmaking: Lithography (max 12 cr; prereq 1401, 4 cr of 1520 or #)
★LECT 1325-1520 MW, ArtB 170, Krepps J, 4 cr
276167 —1 LAB 1520-1625 MW, ArtB 170, Krepps J

R 3602 Electronic Art (prereq 1401, 1602)
974549 1800-2200 Th, AndH 250, 4 cr

R 3710 Photography (max 16 cr; prereq 1401, 1701)
★LECT 1325-1520 MW, ArtB 120, Henkel J, 4 cr
155585 —1 LAB 1520-1625 MW, ArtB 120, Henkel J (ArtS, premaj ArtS, or MLK stu only)
963728 —2 LAB 1520-1625 MW, ArtB 120, Henkel J

R 3810 Intermediate Ceramics (max 12 cr; prereq 1401, 1811, 1812 or #)
★LECT 1325-1520 TTh, ArtB 10, Lane T, 4 cr
863091 —1 LAB 1520-1625 TTh, ArtB 10, Lane T (ArtS, premaj ArtS, or MLK stu only)
555969 —2 LAB 1520-1625 TTh, ArtB 10, Lane T

3970 Directed Study (max 8 cr; prereq 24 cr studio arts, #, Δ, ❑)
557298 —1 Baldwin G, 1-5 cr
853015 —2 Bethke K, 1-5 cr
154834 —3 Cowette T, 1-5 cr
954981 —4 Feinberg D, 1-5 cr
263788 —7 Henkel J, 1-5 cr
654828 —8 Hoard C, 1-5 cr
557673 —10 Krepps J, 1-5 cr
062764 —11 Lane T, 1-5 cr
254136 —12 Lucey S, 1-5 cr
954351 —13 Lyon J, 1-5 cr
075255 —14 Morgan C, 1-5 cr
653145 —15 Pharis M, 1-5 cr
954236 —16 Potratz W, 1-5 cr
752861 —17 Roode W, 1-5 cr
460341 —18 Rose T, 1-5 cr
663139 —19 1-5 cr

3980 Directed Instruction (max 8 cr; prereq #, Δ, ❑)
961316 —1 Baldwin G, 1-5 cr
657762 —2 Bethke K, 1-5 cr
159295 —3 Cowette T, 1-5 cr
161452 —4 Feinberg D, 1-5 cr
257750 —7 Henkel J, 1-5 cr
454622 —8 Hoard C, 1-5 cr
855475 —10 Krepps J, 1-5 cr
153884 —11 Lane T, 1-5 cr
657275 —12 Lucey S, 1-5 cr
163475 —13 Lyon J, 1-5 cr
875256 —14 Morgan C, 1-5 cr
562890 —15 Pharis M, 1-5 cr
255853 —16 Potratz W, 1-5 cr
757140 —17 Roode W, 1-5 cr
953233 —18 Rose T, 1-5 cr
753119 —19 1-5 cr

R 5110 Drawing (max 16 cr; prereq 12 cr of 3110 or #)
062117 1325-1520 TTh, ArtB 160, Lyon J, 4 cr

R 5120 Painting (max 16 cr; prereq 12 cr of 3120 or #)
255965 1325-1520 TTh, ArtB 151, 4 cr

R 5130 Watercolor (max 16 cr; prereq 12 cr of 3130)
953118 0905-1100 TTh, ArtB 141, 4 cr

5190 Advanced Entry: Drawing and Painting (max 16 cr; prereq #, Δ)
960053 —3 Cowette T, 4 cr
756795 —4 Feinberg D, 4 cr
663674 —13 Lyon J, 4 cr
475258 —14 Morgan C, 4 cr
661648 —17 Roode W, 4 cr

R 5330 Sculpture: Cast Metal (max 16 cr; prereq 3303)
160222 1325-1520 TTh, ArtB 185, Potratz W, 4 cr

R 5340 Sculpture: Wood and Stone (max 16 cr; prereq 3304)
562582 0905-1100 TTh, ArtB 30, Lucey S, 4 cr

R 5350 Sculpture: Kinetics (max 16 cr; prereq 3305)
961557 1325-1520 MW, ArtB 65, Baldwin G, 4 cr

5390 Advanced Entry: Sculpture (max 16 cr; prereq #, Δ)
963468 —1 Baldwin G, 4 cr
159645 —12 Lucey S, 4 cr
757672 —16 Potratz W, 4 cr
355472 —18 Rose T, 4 cr

R 5400 Concepts in Contemporary Art (prereq sr, studio art maj or #)
459562 0905-1310 F, SocSci 101, Lucey S, 4 cr

R 5420 Studio Arts Workshop
375253 1800-2200 T, ArtB 160, 4 cr

R 5510 Printmaking: Intaglio (max 16 cr; prereq 12 cr of 3510 or #)
176168 1325-1520 MW, ArtB 170, Krepps J, 4 cr

R 5520 Printmaking: Lithography (max 16 cr; prereq 12 cr of 3520 or #)
976169 1325-1520 MW, ArtB 170, Krepps J, 4 cr

5590 Advanced Entry: Printmaking (max 16 cr; prereq #, Δ)
553249 —2 Bethke K, 4 cr
463675 —10 Krepps J, 4 cr

R 5710 Photography (max 16 cr; prereq 12 cr of 3710 or #)
955953 1010-1205 MW, ArtB 120, Henkel J, 4 cr

5790 Advanced Entry: Photography (max 16 cr; prereq #, Δ)
755551 Henkel J, 4 cr

R 5810 Advanced Ceramics (max 16 cr; prereq 12 cr of 3810 or #)
758451 1325-1520 MW, ArtB 10, Hoard C, 4 cr

5890 Advanced Entry: Ceramics/Glass (max 16 cr; prereq #, Δ)
959646 —11 Lane T, 4 cr
760636 —15 Pharis M, 4 cr

5970 Directed Studies (max 12 cr; prereq 24 cr studio arts, #, Δ, CLA approval)
458069 —1 Baldwin G, 1-5 cr
653775 —2 Bethke K, 1-5 cr
557737 —3 Cowette T, 1-5 cr
761818 —4 Feinberg D, 1-5 cr
854925 —7 Henkel J, 1-5 cr
861065 —8 Hoard C, 1-5 cr
559648 —10 Krepps J, 1-5 cr
261961 —11 Lane T, 1-5 cr
757493 —12 Lucey S, 1-5 cr
153246 —13 Lyon J, 1-5 cr
675257 —14 Morgan C, 1-5 cr
356511 —15 Pharis M, 1-5 cr
561769 —16 Potratz W, 1-5 cr
162844 —17 Roode W, 1-5 cr
757798 —18 Rose T, 1-5 cr
658278 —19 1-5 cr

R 8100 20th Century Art Theories in Painting
453342 1325-1520 F, HHHCtr 30, 2 cr

8110 Drawing (max 12 cr)
958206 —3 Cowette T, 4 cr
153397 —4 Feinberg D, 4 cr
155473 —13 Lyon J, 4 cr
275259 —14 Morgan C, 4 cr
153674 —17 Roode W, 4 cr

8120 Painting (max 24 cr)
862068 —3 Cowette T, 4 cr
360431 —4 Feinberg D, 4 cr
762659 —13 Lyon J, 4 cr
675260 —14 Morgan C, 4 cr
960635 —17 Roode W, 4 cr

R 8300 Seminar: 20th-Century Art Theories in Sculpture (prereq MFA candidate in studio arts or #) (A-F only)
561304 1535-1730 M, ArtB 70, Rose T, 2 cr

Symbols

- **R** The letter R preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 8440 Seminar: Presentation and Instruction (max 4 cr; prereq MFA candidate or #)
276170 1010-1205 F, ArtB 141, Feinberg D, 2 cr

8510 Printmaking (max 36 cr)
662363 —2 Bethke K, 4 cr
658653 —10 Krepps J, 4 cr

8710 Photography (max 24 cr)
759647 1010-1205 MW, ArtB 120, Henkel J, 4 cr

R 8810 Ceramics (max 24 cr)
762063 1325-1520 MW, ArtB 10, Hoard C, 4 cr

ART HISTORY (ArtH)
Liberal Arts

R 1002 Introduction to the History of Art
359635 0905-0955 MWF, AndH 310, Marling K A, 4 cr

R 1921 Introduction to Film Study (§CLit 1921)
176283 1800-2100 M, AndH 310, Jenkins, 4 cr

R 3008 History of Ancient Art (§Clas 3008) (AH; IP)
976284 1820-2050 W, FolH 306, Cooper F, 4 cr

R 3009 History of Medieval Art
259448 0905-0955 MWF, FolH 306, Steyaert J, 4 cr

R 3011 History of Renaissance and Baroque Art
157370 —1 1010-1100 MWF, AndH 310, Stoughton M, 4 cr
776285 —2 1820-2050 Th, Stoughton M, 4 cr (Mpls Inst of Art)

R 3012 History of 19th, 20th Century Art
271406 1115-1230 TTh, AndH 310, Weisberg G, 4 cr

R 3014 Art of India (Vis; IP)
162536 0945-1100 TTh, AndH 310, Asher F, 4 cr

R 3035 Mythology in Western Art (§Clas 3035)
475177 —1 1115-1230 TTh, FolH 306, McNally S, 4 cr
576286 —2 1330-1600 W, McNally S, 4 cr (Mpls Inst of Art)

R 3586 African-American Artists on Film (§Afro 3586)
376287 1820-2050 W, JonesH 207B, Foster, 4 cr

R 3922 Art of the Film (prereq 3921)
171407 1325-1415 MW, 1325-1600 F, AndH 310, Silberman R, 4 cr

R 3930 Junior-Senior Seminar: Film Noir (prereq ArtH or Film Studies maj, sr or #)
971408 1415-1615 T, JonesH 202, Silberman R, 4 cr

R 3940 Topics in Art History
176288 1800-2100 T, AndH 310, Silberman R, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
060402 1-5 cr

3971 Major Project (prereq ArtH maj, #...Comp 3013 rec) (A-F only)
862491 1 cr

3975 Directed Museum Experience (prereq #, Director of Undergrad Studies) (S-N only)
162309 1-3 cr

R 5324 15th-Century Painting in Northern Europe (prereq 3009 or 3011 or grad student or #)
171410 1220-1310 MWF, JonesH 207A, Steyaert J, 5 cr

R 5357 18th-Century Art in France (§3303; prereq 3011 or grad student or #)
971411 1220-1310 MWF, JonesH 207B, Stoughton, 4 cr

R 5454 Art Nouveau (prereq one 3xxx art history course or grad or #)
771412 1415-1530 TTh, JonesH 207B, Weisberg G, 5 cr

R 5521 20th Century Art in the United States (prereq 4 cr of art hist)
571413 1325-1415 MWF, JonesH 207B, Marling K A, 5 cr

R 5767 Japanese Painting
371414 —1 1245-1400 TTh, JonesH 207A, Poor R, 4 cr
076289 —2 1820-2050 Th, JonesH 207B, Poor R, 4 cr

R 5775 Art of India, 2500 B.C.E.-300 B.C.E. (prereq 4 cr art hist or #)
275293 1545-1700 TTh, JonesH 207B, Asher F, 4 cr

R 5940 Topics: Art of the Film (prereq 3921-3922 or #)
376290 1800-2100 T, AndH 310, Silberman R, 4 cr

R 5950 Topics in Art History: Art in Late Antiquity (§Clas 5950; prereq #)
171415 1415-1530 TTh, JonesH 207A, McNally S, 4 cr

R 5960 Topics in Art History: Seminar: East Asian Temples (prereq #)
071416 0945-1100 TTh, JonesH 207B, Poor R, 4 cr

5970 Directed Readings (prereq sr, #, Δ, CLA approval)
959761 1-5 cr

5990 Directed Research (prereq sr, #, Δ, CLA approval)
353995 1-5 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
156373 1-18 cr

R 8770 Seminar: Art of India: Art of the Later Mughals (prereq #)
871417 1415-1615 T, JonesH 202, Asher C, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
154274 1-36 cr

R 8950 Seminar: Issues in the History of Art: Art Nouveau (prereq #)
760684 1415-1530 TTh, JonesH 207B, 1430-1530 F, JonesH 202, Weisberg G, 4 cr

8970 Directed Studies (prereq #)
556992 1-5 cr

8975 Directed Museum Studies (prereq #)
454829 1-3 cr

ASTRONOMY (Ast)
Institute of Technology

R 1015 Descriptive Astronomy Laboratories (§1025H; prereq high school algebra...high school trigonometry rec)
655736 —1 LAB 1710-1855 M, Phys 450, 1 cr
654733 —2 LAB 2020-2205 M, Phys 450, 1 cr
159905 —3 LAB 1900-2045 T, Phys 450, 1 cr

R 1019 Our Changing Planet (§EEB 1019, Geo 1019) (Phys/L; Envt)
★LECT 0905-0955 MTW, AndH 210, Rudnick L, 4 cr
158754 —1 REC 0905-1100 Th, PeikH 365
956889 —2 REC 0905-1100 Th, PeikH 385
261829 —3 REC 1220-1415 Th, PeikH 365
756909 —4 REC 1220-1415 Th, PeikH 385
052882 —5 REC 1430-1625 Th, PeikH 365
155840 —6 REC 1430-1625 Th, PeikH 385
154042 —7 REC 0905-1100 F, PeikH 365
753525 —8 REC 0905-1100 F, PeikH 385
454894 —9 REC 1220-1415 F, PeikH 365
954611 —10 REC 1220-1415 F, PeikH 385
357514 —11 REC 1430-1625 F, PeikH 365
953376 —12 REC 1430-1625 F, PeikH 385

R 1031 Exploring the Universe: A (Phys/NL; Envt)
✦359148—1 LECT 0905-0955 MTW, Phys 166, Cornuelle C, 4 cr
✦253021—2 LECT 1010-1100 MTW, Phys 150, Jones T J, 4 cr
✦352944—3 LECT 1115-1205 MTW, Phys 166, Jones T J, 4 cr
✦072274—4 LECT 1900-2015 MW, Phys 150, Garnett D, 4 cr
Registration in one of the following REC sections is also required:
055023 —1 REC 1800-1850 M, Phys B49
853161 —2 REC 2025-2115 M, Phys B49
153022 —3 REC 1325-1415 W, Phys B49
655932 —4 REC 1800-1850 W, Phys B49
755159 —5 REC 2025-2115 W, Phys B49
562355 —6 REC 0905-0955 Th, Phys B49
854018 —7 REC 1010-1100 Th, Phys B49
163511 —8 REC 1115-1205 Th, Phys B49
260342 —9 REC 1220-1310 Th, Phys B49
659074 —10 REC 1325-1415 Th, Phys B49
272300 —11 REC 0905-0955 F, Phys B49
972302 —12 REC 1010-1100 F, Phys B49
772303 —13 REC 1115-1205 F, Phys B49
572304 —14 REC 1220-1310 F, Phys B49

R 1032 Exploring the Universe: L (Phys/L; Envt)
✦157930—1 LECT 0905-0955 MTW, Phys 166, Cornuelle C, 4 cr
✦863804—2 LECT 1010-1100 MTW, Phys 150, Jones T J, 4 cr
✦261054—3 LECT 1115-1205 MTW, Phys 166, Jones T J, 4 cr
✦873541—4 LECT 1900-2015 MW, Phys 150, Garnett D, 4 cr
Registration in one of the following LAB sections is also required:
254878 —1 LAB 1010-1155 M, Phys 450
061193 —2 LAB 1220-1405 M, Phys 450
368510 —3 LAB 1430-1615 M, Phys 450
853368 —4 LAB 1710-1855 M, Phys 450
559214 —5 LAB 2020-2205 M, Phys 450
861924 —6 LAB 1010-1155 T, Phys 450
157443 —7 LAB 1220-1405 T, Phys 450
757302 —8 LAB 1600-1745 T, Phys 450
757168 —9 LAB 1900-2045 T, Phys 450
254461 —10 LAB 1010-1155 W, Phys 450
954169 —11 LAB 1220-1405 W, Phys 450
356525 —12 LAB 1430-1615 W, Phys 450
163226 —13 LAB 1710-1855 W, Phys 450
172306 —14 LAB 2020-2205 W, Phys 450
072307 —15 LAB 1010-1155 Th, Phys 450
872308 —16 LAB 1220-1405 Th, Phys 450
672309 —17 LAB 1010-1155 F, Phys 450
872311 —18 LAB 1220-1405 F, Phys 450

R 3051 Introduction to Astronomy and Astrophysics (prereq 1 yr calculus, Phys 1254 or #)
258252 1325-1415 MTWTh, Phys 133, Gehrz R, 4 cr

R 3970 Directed Studies (prereq #, Δ)
756070 1-5 cr

R 5163 Galactic Astronomy and the Interstellar Medium (prereq 3051 or #)
175487 1325-1430 MWF, Phys 143, Humphreys R M, 4 cr

R 5299H Senior Honors Astrophysics Research Seminar (prereq IT or CLA upper div honors stu, #) (S-N only)
455785 1430-1630 F, Phys 131, 1 cr

R 5362 Stellar Astrophysics (prereq 5321 or #)
673542 0905-0955 MTWTh, Phys 210, Kuhi L V, 4 cr

R 5970 Directed Studies (prereq #, Δ)
759423 1-5 cr

R 5990 Directed Research (prereq #, Δ)
958044 ar cr

R 8200 Seminar
256937 1430-1630 F, Phys 131, 1-3 cr

R 8483 Topics in Astrophysics (prereq #)
473543 1430-1545 TTh, Phys 143, Skillman E D, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
354600 1-18 cr

8777 Thesis Credits: Masters
952888 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
062960 1-36 cr

8990 Research in Astronomy and Astrophysics (prereq #)
361434 ar cr

BIOCHEMISTRY (BioC)
Biological Sciences

1401 Elementary Biochemistry (§3001; prereq Chem 1001 or 1 qtr college chem) (Biol/NL)
655154 1010-1100 MTWF, McNH 33, Anderson J, 4 cr

3021 Biochemistry (§Biol 5001; prereq Biol 1009, 8 cr organic chem)
158124 —1 1010-1115 MWF, HodsonH 495, Arneson M, 4 cr
457696 —2 1730-1910 MW, ClaOff B45, Fuchs J, 4 cr

3960 Research Topics in Biochemistry (S-N only)
760099 1535-1625 Th, GorL 342, Raftery M, 1 cr

R 5025 Laboratory in Biochemistry (prereq 3021 or ¶3021 or 5331 or ¶5331 or Biol 5001 or ¶Biol 5001)
★LECT 1145-1235 T, ClaOff B45, Flickinger M
655607 —1 LAB 0800-1140 T, BioSci 192, 198, Conti-Fine B, Flickinger M, 2 cr
155859 —2 LAB 1240-1620 T, BioSci 192, 198, Conti-Fine B, Flickinger M, 2 cr

5333 Molecular Mechanism of Gene Action (prereq 5332 or #)
159250 1325-1430 MWF, BorH 335, Simon J, Fuchs J, 4 cr

R 5418 Topics in Molecular Immunology (prereq MicB 5218) (A-F only)
063557 1430-1625 TTh, GorL 239, Conti-Fine B, 4 cr

R 5525 Physical Biochemistry: Solution Structure and Interactions of Biological Macromolecules (§MdBc 5525, Chem 5525; prereq 2 qtrs physical chemistry, 5331 or equiv)
761527 1010-1125 MWF, GorL 239, Bloomfield V, 4 cr

5529 Protein Structure and Folding (§MdBc 5529, Chem 5529; prereq 5331 or equiv, 1 qtr phys chem or #)
956438 1325-1505 TTh, WDH 2110, 2140, Banaszak L, Woodward C, others, 4 cr (Mpls)

5990 Directed Research (max 10 cr may count toward maj req; prereq #, Δ) (S-N only)
458332 ar cr

8003 Advanced Biochemistry III: Regulation of Metabolism and Biological Processes (§5752, MdBc 8003; prereq 8002 or MdBc 8002 or #)
273544 —1 LECT 0800-0905 MWF, McNH 197, Bernlohr D, LaPorte D, 4 cr (non-biochem maj only)
560282 —2 LECT 0800-0905 MWF, McNH 197, Bernlohr D, LaPorte D, 5 cr
★REC 0800-0905 Th, ClaOff B35

8094 Research and Literature Reports (S-N only)
360963 1200-1300 F, GorL 239, Bloomfield V, 1 cr

8194 Graduate Seminar (S-N only)
553056 1600-1730 W, GrnH 110, Nelsestuen G, 1 cr

8290 Current Research Techniques (prereq grad maj in biochem) (S-N only)
956116 1-3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
454023 1-18 cr

8777 Thesis Credit: Masters
959842 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
956794 1-36 cr

BIOCHEMISTRY, MEDICAL (MdBc)
Medical School

5053 Problems in Biochemistry (prereq Δ; biochem grad maj must register S-N)
857498 Van Ness B, 1-10 cr

5444 Muscle Contraction (§NSc 5444, Phsl 5444, VB 5444; prereq undergrad courses in biochemistry or physiology, #)
259322 1535-1705 TTh, MoosT 2571, 2585, Thomas D, Barnett V, 3 cr

R 5525 Physical Biochemistry: Solution Structure and Interactions of Biological Macromolecules (§BioC 5525, Chem 5525; prereq 2 qtrs physical chemistry, BioC 5331 or equiv)
657695 1010-1125 MWF, GorL 239, Bloomfield V, 4 cr (StP)

5529 Protein Structure and Folding (§BioC 5529, Chem 5529; prereq BioC 5331 or equiv or #)
156753 1325-1505 TTh, WDH 2110, 2140, Banaszak L, Egelman E, others, 4 cr

5533 Macromolecular Crystallography: Applications (prereq 5532) (S-N only)
953619 1535-1625 F, MoosT 2672, Ohlendorf D, 1 cr

8003 Advanced Biochemistry III: Regulation of Metabolism and Biological Processes (§5752, BioC 8003; prereq 8002 or BioC 8002 or #)
663710 —1 LECT 0800-0905 MWF, McNH 197, LaPorte D, Bernlohr D, 4 cr (non-biochem maj only) (StP)
759678 —2 LECT 0800-0905 MWF, McNH 197, LaPorte D, Bernlohr D, 5 cr (StP)
★REC 0800-0905 Th, ClaOff B35 (StP)

8094 Research and Literature Reports (prereq biochem grad stu or #) (S-N only)
259725 1220-1310 T, OwreH 4218, Ekker S, 1 cr

8290 Current Research Techniques (prereq grad maj in biochem, #) (S-N only)
458492 1-3 cr

BIOLOGY (Biol)
Biological Sciences

R 1009 General Biology (prereq high schl chem recommended) (Biol/L)
★LECT 0800-0850 MWF, WilleyH 175, Peifer R
256047 —1 LAB 0800-0945 TTh, KoltH S160, 5 cr
658099 —2 LAB 0800-0945 TTh, KoltH S167, 5 cr
560461 —3 LAB 0800-0945 TTh, KoltH S170, 5 cr
160852 —4 LAB 1010-1155 TTh, KoltH S160, 5 cr
354421 —5 LAB 1010-1155 TTh, KoltH S167, 5 cr
962336 —6 LAB 1220-1405 TTh, KoltH S167, 5 cr
556510 —7 LAB 1430-1615 TTh, KoltH S160, 5 cr
155893 —8 LAB 1010-1155 WF, KoltH S160, 5 cr
461358 —9 LAB 1010-1155 WF, KoltH S167, 5 cr
756747 —10 LAB 1220-1405 WF, KoltH S167, 5 cr
353821 —11 LAB 1220-1405 WF, KoltH S160, 5 cr
★LECT 1220-1310 MWF, MoosT 2650, Goldstein S
153831 —12 LAB 0800-0945 TTh, KoltH S177, 5 cr
963308 —13 LAB 1010-1155 TTh, KoltH S177, 5 cr
563196 —14 LAB 1010-1155 TTh, KoltH S170, 5 cr
954849 —15 LAB 1220-1405 TTh, KoltH S177, 5 cr
354564 —16 LAB 1220-1405 TTh, KoltH S170, 5 cr
263063 —17 LAB 1430-1615 TTh, KoltH S170, 5 cr
862815 —18 LAB 0800-0945 WF, KoltH S167, 5 cr
659401 —19 LAB 0800-0945 WF, KoltH S160, 5 cr
458153 —20 LAB 1010-1155 WF, KoltH S177, 5 cr
157028 —21 LAB 1010-1155 WF, KoltH S170, 5 cr
559004 —22 LAB 1430-1615 WF, KoltH S160, 5 cr
★LECT 1800-1915 TTh, MoosT 2650, Olfelt J
776254 —23 LAB 1930-2115 TTh, KoltH S160, 5 cr

R 1009H General Biology (prereq honors division or 3-4 yrs high school math, high school chem or Δ)
★LECT 1220-1310 MWF, MoosT 2650, Goldstein S
761981 —81 LAB 1220-1405 TTh, KoltH S160, 5 cr

R 1103 General Botany (§3012; prereq 1009) (Biol/L)
★LECT 1220-1310 MWF, BorH 335, Koukkari W (StP)
759342 —1 LAB 1010-1310 T, BioSci 176, 5 cr (StP)
159824 —2 LAB 1325-1625 W, BioSci 176, 5 cr (StP)
861437 —3 LAB 0800-1100 Th, BioSci 176, 5 cr (StP)
362969 —4 LAB 1220-1520 Th, BioSci 176, 5 cr (StP)

R 1106 General Zoology (§1806; prereq 1009 or 1202) (Biol/L)
★LECT 0800-0850 MWF, BorH 335, Megard O (StP)
160780 —1 LAB 0800-1100 T, BioSci 182, 5 cr (StP)
954995 —2 LAB 1220-1520 T, BioSci 182, 5 cr (StP)
554496 —3 LAB 0905-1205 W, BioSci 182, 5 cr (StP)
657423 —4 LAB 1220-1520 W, BioSci 182, 5 cr (StP)
263404 —5 LAB 0800-1100 Th, BioSci 182, 5 cr (StP)
362888 —6 LAB 1220-1520 Th, BioSci 182, 5 cr (StP)

R 1201 Evolutionary and Ecological Perspectives (§1008; no chem background required) (Biol/L)
★LECT 1220-1310 MWF, WilleyH 175, Naeem S
153442 —1 LAB 0905-1205 T, KoltH S179, 5 cr
153304 —2 LAB 0905-1205 T, KoltH S183, 5 cr
562145 —3 LAB 0905-1205 T, KoltH S187, 5 cr
654019 —4 LAB 1325-1625 T, KoltH S179, 5 cr
660127 —5 LAB 1325-1625 T, KoltH S183, 5 cr
862006 —6 LAB 1325-1625 T, KoltH S187, 5 cr
860272 —7 LAB 0905-1205 W, KoltH S179, 5 cr
362146 —8 LAB 0905-1205 W, KoltH S183, 5 cr
159989 —9 LAB 0905-1205 W, KoltH S187, 5 cr
258297 —10 LAB 1325-1625 W, KoltH S179, 5 cr
460128 —11 LAB 1325-1625 W, KoltH S183, 5 cr
458007 —12 LAB 1325-1625 W, KoltH S187, 5 cr
360901 —13 LAB 0905-1205 Th, KoltH S179, 5 cr
157507 —14 LAB 0905-1205 Th, KoltH S183, 5 cr
163363 —15 LAB 0905-1205 Th, KoltH S187, 5 cr
457567 —16 LAB 1325-1625 Th, KoltH S179, 5 cr
261538 —17 LAB 1325-1625 Th, KoltH S183, 5 cr
359540 —18 LAB 1325-1625 Th, KoltH S187, 5 cr
257568 —19 LAB 0905-1205 F, KoltH S179, 5 cr
155280 —20 LAB 1325-1625 F, KoltH S179, 5 cr
353575 —21 LAB 1325-1625 F, KoltH S183, 5 cr

R 1203 Organismal Adaptation and Diversity (§1103, 1106, 1806; prereq 1201, Chem 1051 or equiv or #)
★LECT 1325-1415 MWF, HodsonH 495, Phillips J (StP)
★REC 1010-1100 F, ClaOff B26 (StP)
159359 —1 LAB 0905-1100 MW, BioSci 163, 5 cr (StP)
★REC 1220-1310 F, ClaOff B26 (StP)
360204 —2 LAB 1115-1310 MW, BioSci 163, 5 cr (StP)
★REC 1430-1520 F, ClaOff B26 (StP)
373552 —3 LAB 1430-1625 MW, BioSci 163, 5 cr (StP)
★REC 1640-1730 F, ClaOff B26 (StP)
275505 —4 LAB 1640-1835 MW, BioSci 163, 5 cr (StP)
★REC 2045-2135 W, ClaOff B26 (StP)
175506 —5 LAB 1850-2045 MW, BioSci 163, 5 cr (StP)

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 1953 Biology Colloquium (S-N only)
060707 —1 1430-1625 M, Phys 131, Hanna K, 1 cr
259854 —2 1430-1625 T, Phys 131, Hanna K, 1 cr
756893 —3 1535-1730 W, ClaOff B35, Hanna K, 1 cr (StP)

R 1960 Biology Colloquium Project (prereq 1951 or 1952 or 1953, ¶1951 or ¶1952 or ¶1953, #) (S-N only)
255528 Hanna K, 1 cr

R 3003 Introduction to Computing in Biology (prereq 1009 or 1202 or equiv, declared biosci maj) (S-N only)
971893 —1 1430-1630 Th, BioSci 406, Phillips J, 2 cr (StP)
771894 —2 1430-1630 F, BioSci 406, Phillips J, 2 cr (StP)

R 3008 Ecology and Evolution (§5041, 5841; prereq 1009 or 1201, Math 1142 or Math 1251) (A-F only)
★LECT 1325-1440 MWF, ClaOff B45, Curtsinger J (StP)
073554 —1 LAB 1010-1240 T, BioSci 6, 4 cr (StP)
873555 —2 LAB 1325-1555 T, BioSci 6, 4 cr (StP)
673556 —3 LAB 0905-1135 W, BioSci 6, 4 cr (StP)
473557 —4 LAB 1010-1240 Th, BioSci 6, 4 cr (StP)
273558 —5 LAB 1325-1555 Th, BioSci 6, 4 cr (StP)
173559 —6 LAB 0905-1135 F, BioSci 6, 4 cr (StP)

R 3011 Animal Biology (§1106, 1806; prereq 1009 or 1202, Chem 1052)
★LECT 1010-1100 MWF, ClaOff B45, Goldstein S (StP)
958142 —1 LAB 0905-1045 TTh, BioSci 107, 5 cr (StP) (labs begin Th, Apr 3)
154557 —2 LAB 1220-1400 TTh, BioSci 107, 5 cr (StP) (labs begin Th, Apr 3)
154498 —3 LAB 1535-1715 TTh, BioSci 107, 5 cr (StP) (labs begin Th, Apr 3)
958383 —4 LAB 1800-1940 TTh, BioSci 107, 5 cr (StP) (labs begin Th, Apr 3)
356198 —5 LAB 1115-1255 WF, BioSci 107, 5 cr (StP) (labs begin F, Apr 4)
975507 —6 LAB 1330-1510 WF, BioSci 107, 5 cr (StP) (labs begin F, Apr 4)

R 3012 Plant Biology (§1103, 3812; prereq 1009 or 1202, Chem 1052)
★LECT 1115-1230 TTh, BorH 335, Wick S, Olszewski N (StP)
957962 —1 LAB 0905-1100 TTh, BioSci 151, 5 cr (StP)
060318 —2 LAB 0905-1100 TTh, BioSci 163, 5 cr (StP)
757462 —3 LAB 1325-1520 TTh, BioSci 151, 5 cr (StP)
754190 —4 LAB 1325-1520 TTh, BioSci 163, 5 cr (StP)
762936 —5 LAB 1535-1730 TTh, BioSci 151, 5 cr (StP)

3111 Animal Biology (§3011; prereq 1106 or 1806 and Chem 1052)
254217 1010-1100 MWF, ClaOff B45, Goldstein S, 4 cr (StP) (addtl hr ar)

R 3950H Undergraduate Seminar (S-N only)
460811 —81 1430-1600 M, BioSci 756, 2 cr (StP)
358193 —82 1325-1505 T, BioSci 260, Blumenfeld M, 2 cr (StP) (GCB)
956813 —83 1325-1505 M, BioSci 260, Blumenfeld M, 2 cr (StP) (GCB)
176462 —84 1220-1415 W, BioSci 406A, Santi P, 2 cr (StP)

3960H Honors Seminar (prereq Δ) (S-N only)
658314 —81 1535-1625 M, Ecology 505, Barnwell F, 1 cr (StP) (PBio)
461263 —82 1535-1625 T, Ecology 505, Barnwell F, 1 cr (StP) (PBio)

3980 Directed Instruction (max 8 cr; prereq #) (S-N only)
053479 Hanna K, 1-3 cr

5003 Genetics (§GCB 3022, GCB 5022; prereq 5001 or BioC 3021 or BioC 5331)
557852 1830-2010 MW, BorH 335, Lefebvre P, 4 cr (StP)

5004 Cell Biology (prereq 5001 or BioC 3021 or BioC 5331, 5003 or BioC 5333)
655896 1010-1100 MWF, FScN 15, Blumenfeld M, 4 cr (StP)

R 5013 Microbiology (§MicB 3103, 5105, VPB 3103; prereq 5001 or BioC 3021 or Bioc 5331)
★LECT 1245-1400 TTh, MoosT 2530, Hanson R, 5 cr
★REC 1415-1505 T, MoosT 2530
553087 —1 LAB 0905-1100 TTh, MoosT 2252, Hanson R

R 5125 Recombinant DNA Laboratory (§5825, MicB 5125, MicB 5425; prereq application necessary, Δ)
★LECT 1220-1310 WF, BioSci 12
062683 —1 LAB 1325-1725 WF, BioSci 192, 198, 4 cr (StP)

R 5150 Introduction to Neuroscience (§NSc 5150, Phsl 5150; prereq 3011 or equiv or Phsl 3055-3056 and BioC 3021 or equiv or #) (A-F only)
059539 1535-1705 TTh, MIrdH 5276, Miller R, 3 cr

5951 Social Uses of Biology (prereq 10 cr sciences)
160276 1820-2050 T, BioSci 70, Beatty J, Pratt, 3 cr (StP)

BIOMEDICAL ENGINEERING (BMEn)
Institute of Technology and Medical School

5003 Tissue Engineering (prereq IT upper div or grad or med stu) (A-F only)
462770 1430-1630 MW, MechE 202, Hubel A, 4 cr

R 5004 Applications of High-Performance Computing in Biomedical Engineering (prereq comput prog facility [any language], math thru calc) (A-F only)
876407 1430-1520 MWF, VinH 1, Gleason W, 4 cr

5701 Biomedical Applications of Heat Transfer in Humans (prereq Phsl 3053, Phsl 3056, Phsl 5441)
553445 1430-1600 TTh, Arch 35, 4-5 cr

5951 Bioelectric Stimulation (prereq Phsl 5441, engineering level calculus and physics)
158396 1010-1130 TTh, ChRC R208, Patterson R, 3 cr

8002 Internship in Biomedical Engineering (prereq biomed engineering grad stu or Δ) (S-N only)
453129 Tirrell M, 3 cr

R 8100 Biomedical Engineering Seminar (S-N only)
154484 —1 1535-1635 T, MechE 108, Finkelstein S, 1 cr

R 8200 Biomedical Engineering Seminar (S-N only)
454846 —1 1535-1635 T, MechE 108, Finkelstein S, 1 cr

R 8300 Biomedical Engineering Seminar (S-N only)
560783 —1 1535-1635 T, MechE 108, Finkelstein S, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
059489 1-18 cr

8770 Plan B Project (no cr toward PhD; prereq #) (A-F only)
561965 4 cr

8777 Thesis Credit: Masters
157751 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
154624 1-36 cr

8970 Independent Study (prereq #) (A-F only)
454345 Finkelstein S, 1-4 cr

8990 Directed Research (prereq #) (A-F only)
358775 Finkelstein S, 1-4 cr

BIOMEDICAL SCIENCE (BMSc)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
753234 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
454913 1-36 cr

8990 Research: Biomedical Science (prereq student enrolled in MD/PhD Program)
354581 ar cr

BIOPHYSICAL SCIENCES (BPhy)
Medical School

5138 Seminar: Biophysical Sciences
853242 1530-1620 F, Ritenour E R, ar cr

5157 Biophysics (prereq 28 cr between physics, biology, #...physical chemistry, physiology rec)
255139 1325-1520 TTh, MusEd 2, Schmitt O, 3 cr

5172 Radiation Biology (§Rad 5172, TRad 5172; prereq 5170, #)
263130 1615-1745 WF, UHosp 1243, Song C, others, 3 cr

R 5181 Physics of Nuclear Medicine Laboratory (prereq 5171 or #) (S-N only)
952955 1600-1730 Th, Mayo B216, Hasselquist B, 1 cr

5184 Diagnostic Radiological Physics Laboratory (prereq 5174 or #)
160978 1535-1735 T, Mayo B216, Geise R, 2 cr

8147 Physics of Magnetic Resonance Imaging (prereq 5174 or #) (A-F only)
161788 1200-1320 WF, Mayo B216, Hu X, Hammer B, 3 cr

8148 Medical Imaging Science (prereq 5174 or #) (A-F only)
176291 0900-1030 TTh, Mayo B216, Strother S, 3 cr

8223 Research
153075 ar cr

8298 Seminar
356119 1430-1625 F, MusEd 2, Schmitt O, ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
956083 1-18 cr

8777 Thesis Credits: Masters
556362 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
862328 1-36 cr

BIOSYSTEMS AND AGRICULTURAL ENGINEERING (BAE)
Institute of Technology

1060 Biosystems and Agricultural Engineering Orientation (S-N only)
555504 1430-1520 T, AmundH B75, Nieber J, 1 cr (Mpls)

3150 Biology for Engineering (prereq IT stu or pre-BAE maj, 3031, Biol 1009, ME 3301 or ¶ME 3301)
★LECT 0815-0930 TTh, BioAgEng 308, Subramanian A
255559 —1 LAB 1430-1710 W, BioAgEng 315, Subramanian A, 4 cr

3970 Directed Studies in Biosystems and Agricultural Engineering (prereq #)
353687 1-5 cr

5050 Intern Reports (prereq IT or CAFES stu in BAE, #) (S-N only)
262673 Chaplin J, 2 cr

R 5070 Instrumentation and Control for Biological Systems (prereq IT upper div or ForP maj or grad stu, EE 3009, EE 1400, ME 3900 or Stat 3091)
★LECT 1325-1415 MWF, BioAgEng 308, Ruan R
058665 —1 LAB 1430-1625 M, BioAgEng 105, Ruan R, 4 cr
156695 —2 LAB 1430-1625 W, BioAgEng 105, Ruan R, 4 cr

R 5072 Finite Element Method: Fundamentals and Applications (prereq IT upper div or grad IT maj, Math 3261)
160651 1220-1415 TTh, BioAgEng 308, Bhattacharya M, 4 cr

5140 Thermal Processes for Food (prereq IT upper div or grad IT maj, ME 5342 or ChEn 5103)
576174 0905-1100 MW, FordH 115, Bhattacharya M, 4 cr (Mpls)

5191 Special Problems in Biosystems and Agricultural Engineering (prereq #)
858666 1-5 cr

5192 Special Problems in Biosystems and Agricultural Engineering (prereq 5191, #)
956696 1-5 cr

8100 Seminar (prereq #, grad IT maj)
355505 Chaplin J, 1 cr (BioAgEng 106)

8190 Advanced Problems and Research (prereq 5191, 5192, Δ)
263693 2-6 cr

8191 Advanced Problems and Research (prereq 5191, 5192, Δ)
061663 2-6 cr

8192 Advanced Problems and Research (prereq 5191, 5192, Δ)
159662 2-6 cr

8500 Hydrologic Modeling: Small Watersheds (prereq CE 5405, grad IT maj)
174993 1415-1530 TTh, BioAgEng 106, Wilson B, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
557687 1-18 cr

8700 Coupled Moisture, Heat, and Chemical Transfer in Porous Media (prereq knowledge of diff equations, numerical solutions meth, a comput prog lang) (A-F only)
155506 0945-1100 TTh, BioAgEng 106, Nieber J, 4 cr

8777 Thesis Credits: Masters
153688 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
357688 1-36 cr

BUSINESS ADMINISTRATION (BA)
Management

R 1350 Introduction to Business and Business Careers (prereq 45 crs, CSOM stu) (A-F only)
★LECT 1415-1530 MW, BlegH 155
975197 —1 REC 1220-1310 Th, BlegH 205, 4 cr
775198 —2 REC 1325-1415 Th, BlegH 225, 4 cr

R 1550 Business Statistics: Data Sources, Presentation, and Analysis (prereq 30 cr completed; Math 1111 or equiv) (A-F only)
473591 —1 1010-1155 TTh, AndH 330, 4 cr
273592 —2 1325-1510 TTh, AndH 310, 4 cr

R 3000 Professional Skills (prereq soph, completion of 39 cr) (S-N only)
276346 1245-1425 Th, AndH 270, 2 cr

R 3040 International Environment of Business (prereq Mgmt 3001, 90 cr completed) (A-F only)
272507 1010-1155 MW, AndH 230, 4 cr

R 3998 Independent Study (prereq SMgt approval)
953426 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
956942 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
562338 1-36 cr

BUSINESS AND INDUSTRY EDUCATION (BIE)
Work, Community, and Family Education
Education and Human Development

R 1120 Communication Technology (§Ind 1120) (A-F only)
155313 1250-1550 TTh, VoTech 110, 3 cr

R 1302 Supervised Vocational-Technical Teaching (§Ind 1302; prereq #) (S-N only)
671421 Nilsen G, 3 cr

R 3131 Industrial Power Systems (§Ind 3031; prereq 1130) (A-F only)
471422 1250-1550 MW, VoTech 110, Shipley W, 3 cr

R 3150 Technical Development: Advanced (§Ind 3200; max 18 cr; prereq #) (A-F only)
856674 1-12 cr

R 3900 Independent Study (§Ind 3900; prereq #)
761480 3 cr

R 5030 Data Base Microcomputer Applications (prereq 5010 or equiv) (A-F only)
963146 1535-1805 M, ClaOff 17, Gunderson L, 3 cr

R 5040 Integrated Microcomputer Applications in Business and Industry Education (§BME 5365; prereq 5010, 5015, 5020, 5025, 5030 or equiv) (A-F only)
559908 1535-1805 Th, ClaOff 17, Lambrecht J, 3 cr

R 5150 Technical Development: Specialized (§Ind 5200; max 18 cr; prereq #) (A-F only)
055457 1-12 cr

R 5253 Supervisory Training (§HRD 5253; prereq VoEd 5340 or WCFE 5340) (A-F only)
563666 1600-1830 T, VoTech 220, 3 cr

R 5262 Customer Service Training (§BME 5262, HRD 5262) (A-F only)
161556 1600-1830 W, VoTech R285, Peterson S, 3 cr

R 5303 Instructional Aids (§Ind 5303; prereq educ or grad stu) (A-F only)
058228 1600-1830 W, VoTech 220, Norenberg C, 3 cr

R 5366 Management Development Practices (§HRD 5366; prereq prin of mgmt or superv crse or #)
663366 1845-2205 Th, VoTech R285, Zuber J, 4 cr

5500 Occupational Experience (max 15 cr; prereq #) (S-N only)
175111 1-5 cr

R 5510 Internship: Business and Industry Education (§BME 8600; max 12 cr) (S-N only)
160343 1-12 cr

R 5660 Instructional Methods (§HRD 5660) (A-F only)
271423 1600-1830 M, VoTech R280, Lewis T, 3 cr

R 5700 Field-Based Projects (§BME 5600; max 12 cr; prereq # or advisor approval) (S-N only)
753024 1-6 cr

R 5900 Directed Study (§Ind 5901; max 12 cr; prereq # or advisor approval) (S-N only)
261782 1-6 cr

R 8900 Research Problems: Business and Industry (§Ind 8900; max 9 cr; prereq advisor approval) (S-N only)
055166 4-9 cr

BUSINESS LAW (BLaw)
Management

Non-SMgt students should refer to page 10, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3058 Introduction to Law, the Law of Contracts and Sales Contracts (§8158; prereq Econ 1002) (A-F only)
653789 —1 0800-0930 TTh, BlegH 130, Andrews A, 4 cr
861891 —2 1010-1140 T, AndH 270, 1010-1140 Th, BlegH 255, Andrews A, 4 cr

R 3088 Law of Personal Property, Real Property, Wills and Estates (§8288; prereq 3058)
661990 1800-2100 M, BlegH 255, Troyer J, 4 cr

R 8158 Introduction to Law, the Law of Contracts and Sales Contracts (§3058; prereq Econ 1002, grad mgmt student or grad SMgt approval) (A-F only)
755808 1730-2100 W, BlegH 115, Andrews A, 4 cr

BUSINESS, GOVERNMENT AND SOCIETY (BGS)
Management

Non-SMgt students should refer to page 10, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3004 International Business (IP)
462977 1325-1510 TTh, BlegH 105, 4 cr

R 3014 Topics in International Business (A-F only)
971392 1115-1245 TTh, BlegH 105, 4 cr

R 3019 Topics in Business, Government and Society (prereq 3002 or #) (Envt) (A-F only)
775248 1730-2030 Th, CivE 202, Marcus A, 4 cr

R 8019 Topics in Business and Society (prereq grad mgmt student)
575249 1730-2030 Th, CivE 202, Marcus A, 4 cr

R 8019E Topics in Business and Society (prereq grad mgmt student)
975250 1730-2030 Th, CivE 202, Marcus A, 4 cr

CELL BIOLOGY AND NEUROANATOMY (CBN)
Medical School

1027 Anatomy for Kinesiology Students
★LECT 1220-1415 TTh, OwreH 2210, Serfass R, 4 cr
353415 —1 LAB 1430-1520 TTh, JacH 5166, 5170

R 3001 Human Anatomy (prereq one qtr college biology, soph or jr or sr)
257585 0800-0955 TTh, NichH 45, Bauer G E, 4 cr

R 3002 A Dissector's Guide to Culture: Humanistic Anatomy (prereq 45 cr, Biol 1009 or college-level general biology course)
★LECT 0800-0955 TTh, NichH 45, Bauer G E
372871 —1 LAB 0800-0955 W, JacH 5165, 6 cr

Symbols

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Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 3003 Human Anatomy Laboratory (prereq 3001 or ¶3001, 1 qtr college biol, soph or jr or sr)
055314 —1 LAB 0800-0955 W, JacH 5165, 5169, 5173, Bauer G E, 1 cr
353592 —2 LAB 1010-1205 W, JacH 5165, 5169, 5173, Bauer G E, 1 cr
157586 —3 LAB 1325-1520 W, JacH 5165, 5169, 5173, Bauer G E, 1 cr
855315 —4 LAB 1535-1730 W, JacH 5165, 5169, 5173, Bauer G E, 1 cr
153593 —5 LAB 1010-1205 T, JacH 5165, 5169, 5173, Bauer G E, 1 cr
962580 —6 LAB 1220-1415 T, JacH 5165, 5169, 5173, Bauer G E, 1 cr

5110 Neuroscience for Dental Students (prereq ¶Phsl 5100, registered dental freshman, #)
753668 1325-1415 MTTh, MoosT 2620, Elde R, 1.5 cr

5190 Advanced Anatomy (prereq regis med, #)
862748 1-10 cr

5500 General Gross Anatomy (prereq Phase D medical student or #)
162027 Robertson D, ar cr

5501 The Extremities (prereq Phase D medical student or #)
156798 Robertson D, ar cr

5502 Head and Neck (prereq Phase D medical student or #)
260776 Robertson D, ar cr

5504 The Endocrine System (prereq Phase D or #)
157109 Hamilton D, ar cr

5508 The Thorax (prereq Phase D or #)
863169 Robertson D, ar cr

5509 The Abdomen (prereq Phase D or #)
762323 Robertson D, ar cr

5510 Perineum, Genital-Urinary System and Pelvis (prereq Phase D or #)
160799 Robertson D, ar cr

8149 Advanced Cell Biology II (§GCB 8149; prereq Biol 5003, Biol 5004)
463272 1010-1150 TTh, BioSci 12, 4 cr (StP)

8155 Advanced Anatomy (prereq #)
661066 1-6 cr

8200 Research (max 20 cr; prereq #) (S-N only)
861907 1-10 cr

8207 Seminar: Cell Biology and Neuroanatomy (prereq #) (S-N only)
254556 1220-1310 F, MoosT 2580, Letourneau P, 1 cr

8210 Developmental Neurobiology (§NSc 8210; prereq 5111, Phsl 5112, #)
053756 McLoon S, 3 cr

8215 Molecular and Cellular Basis of Development (prereq Biol 5003, Biol 5004) (A-F only)
956388 Yost H J, 3 cr

8301 Molecular Biology of the Cytoskeleton (prereq #) (S-N only)
358145 Linck R, 2 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
856304 1-18 cr

8777 Thesis Credits: Masters
053059 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
161167 1-36 cr

CENTRAL ASIAN STUDIES (CAS)

Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 3511 Ancient Iran (§MELC 3511)
872504 1430-1520 MWF, FolH 38, Bashiri I, 4 cr

CHEMICAL ENGINEERING (ChEn)

Chemical Engineering and Materials Science
Institute of Technology

R 5101 Principles of Chemical Engineering I (prereq IT stu or ChEn maj, Math 3261, Phys 1253, Chem 3302, Chem 3306)
★LECT 1220-1310 MWF, FordH 55, Fredrickson A
259594 —1 REC 1010-1100 TTh, AmundH 162, 4 cr
257621 —2 REC 1010-1100 TTh, AmundH 104, 4 cr
055376 —3 REC 1115-1205 TTh, AmundH 158, 4 cr
657650 —4 REC 1220-1310 TTh, AmundH 116, 4 cr
455432 —5 REC 1220-1310 TTh, AmundH 124, 4 cr
963678 —6 REC 1325-1415 TTh, AmundH 162, 4 cr

R 5103 Principles of Chemical Engineering III (prereq 5102, upper division chem engr or mat sci maj)
★LECT 0905-0955 MWF, AmundH B75, Cussler E
163749 —1 REC 0800-0850 TTh, AmundH 162, 4 cr
263418 —2 REC 0905-0955 TTh, AmundH 104, 4 cr
556409 —3 REC 1220-1310 TTh, AmundH 120, 4 cr
163498 —4 REC 1220-1310 TTh, AmundH 156, 4 cr
752889 —5 REC 1430-1520 TTh, AmundH 240, 4 cr
660452 —6 REC 1430-1520 TTh, AmundH 116, 4 cr

R 5202 Chemical Engineering Thermodynamics and Kinetics (prereq 5201, upper division chem engr or mat sci maj)
★LECT 0800-0850 MWF, AmundH B75, McCormick A
857338 —1 REC 0800-0850 TTh, AmundH 104, 4 cr
061159 —2 REC 1115-1205 TTh, AmundH 104, 4 cr
062912 —3 REC 1220-1310 TTh, AmundH 158, 4 cr
763018 —4 REC 1220-1310 TTh, AmundH 104, 4 cr
263421 —5 REC 1430-1520 TTh, AmundH 124, 4 cr
459139 —6 REC 1535-1625 TTh, AmundH 124, 4 cr

R 5401 Chemical Engineering Laboratory (prereq 5102 or ¶, 5103 or ¶, upper division chem engr or mat sci maj)
★LECT 1010-1100 M, AmundH B75, Geankoplis C
457942 —1 LAB 1325-1730 M, AmundH 356, 4 cr
353916 —2 LAB 0800-1205 T, AmundH 356, 4 cr
353771 —3 LAB 1325-1730 T, AmundH 356, 4 cr
656482 —4 LAB 1010-1415 W, AmundH 356, 4 cr
355794 —5 LAB 0800-1205 Th, AmundH 356, 4 cr
353480 —6 LAB 1325-1730 Th, AmundH 356, 4 cr
856061 —7 LAB 1010-1415 F, AmundH 356, 4 cr

R 5502 Process Evaluation and Design (prereq upper div ChEn maj, 5501, 5601)
★LECT 1220-1310 MWF, AmundH B75, Schmidt L
853810 —1 REC 1430-1625 TTh, AmundH 156, 4 cr
757333 —2 REC 1430-1625 TTh, AmundH 158, 4 cr
252970 —3 REC 1430-1625 TTh, AmundH 162, 4 cr
161976 —4 REC 1220-1415 WF, AmundH 156, 4 cr
661651 —5 REC 1220-1625 F, AmundH 162, 4 cr

R 5604 Process Control Laboratory (prereq 5601)
162237 —1 LAB 1325-1730 M, AmundH 158, 2 cr
556295 —2 LAB 1325-1730 T, AmundH 120, 2 cr
762208 —3 LAB 1325-1730 W, AmundH 158, 2 cr
554689 —4 LAB 1325-1730 Th, AmundH 104, 2 cr
359649 —5 LAB 1325-1730 F, AmundH 158, 2 cr

R 5771 Colloids and Dispersions (prereq physical chemistry)
156387 1220-1310 MWF, AmundH 158, Evans D, 3 cr

R 5902 Special Topics
855153 ar cr

R 5903 Special Topics
754125 ar cr

R 5904 Special Topics
453924 ar cr

R 5905 Special Topics
053790 1430-1730 MWF, AmundH 104, ar cr

R 8401 Chemical Reaction Kinetics-Kinetics of Homogeneous Reactions (prereq #)
675131 1115-1205 MWF, AmundH 104, Carr R, 3 cr

8602 Molecular Theory of Equilibrium and Nonequilibrium Processes (prereq 8601)
475132 0905-0955 MWF, AmundH 104, Dahler J, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
163072 1-18 cr

R 8752 Models in Biochemical Engineering (prereq chem kinetics, chem reactor analy, math model, comput meth)
975278 1325-1520 MW, AmundH 162, Srienc F, 3 cr

8777 Thesis Credits: Masters
061016 1-16 cr

8803 Seminar (S-N only)
359814 1325-1625 TTh, FordH 55, 1 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
858957 1-36 cr

R 8901 Research in Chemical Engineering
063817 ar cr

R 8902 Research in Chemical Engineering
955726 1430-1730 MWF, AmundH 156, ar cr

R 8903 Research in Chemical Engineering
157944 1640-1835 F, AmundH 162, ar cr

CHEMICAL PHYSICS (ChPh)

8101 Chemical Physics Seminar (prereq chem phys grad stu) (S-N only)
961638 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
456807 1-18 cr

8777 Thesis Credits: Masters
957038 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
962157 1-36 cr

CHEMISTRY (Chem)
Institute of Technology

NOTE: You must take a chemistry placement exam if you intend to register for 1051. You may register for the course prior to taking the exam. But by the first day of class you must have completed the exam with a passing score or have sucessfully completed Chem 1001. Students who receive a non-passing score must start in Chem 1001. Placement exams are given during the summer, during fall orientation, and a *limited* number of times during winter and spring registration. (There is no fee for taking this exam: however, you may take the exam only once.) Call the Chemistry Student Services Office, 624-0026, for further information.

The Department of Chemistry strictly enforces the University's mandatory attendance rule. All students must attend the **first** meeting of their laboratory section to hold their place. After the first 15 minutes of each lab, open spaces are given to students on the waiting list. (Students in Chem 1001 must attend the first lecture period as well to hold their place.)

Every stu who checks into a lab must check out of the lab before the end of the quarter, even if she or he drops the course; otherwise a $25 check-out fee will be charged.

Materials and technical services fees are assessed at the time of registration for many Chemistry courses. See page 20 for course numbers and fee amounts.

R 1002 Basic Organic Chemistry (prereq 1001 or pass chem plcmnt exam; prim for forest, nurs stu; IT stu excl w/o spec perm) (Phys/L)
★LECT 1115-1205 MWF, SciCB 375, Ellis J, 4 cr
★REC 1115-1205 T, SmithH 231
958433 —1 LAB 1325-1610 T, SmithH 249
056303 —2 LAB 1325-1610 W, SmithH 249
★REC 1115-1205 Th, SmithH 231
961123 —3 LAB 1325-1610 Th, SmithH 249
455933 —4 LAB 1325-1610 F, SmithH 249

R 1003 Physical World, Chemistry (§1001-1002, 1008, 1051-1052; not for IT stu; prereq 1 yr hs algebra...1 yr hs chem rec) (Phys/L; Envt)
★LECT 0905-0955 MWThF, SmithH 231, Sun L, 5 cr
★REC 0905-0955 T, SmithH 231
854021 —1 LAB 1325-1525 T, SmithH 249
654599 —2 LAB 1325-1525 Th, SmithH 249

R 1008 Physical World, Chemistry (§any other college chem course; prereq 1 yr high school algebra...high school chem rec) (Phys/NL; Envt)
163677 0905-0955 MWThF, SmithH 231, Sun L, 4 cr

R 1051 Chemical Principles I (primarily for stu majoring in sci or eng; prereq 1001 or passing placement exam) (Phys/L; Envt)
★LECT 1010-1100 MWF, SmithH 100, Mann K, 4 cr
★REC 0800-0850 T, SmithH 331
159149 —1 LAB 0905-1150 T, SmithH 110
★REC 0800-0850 Th, SmithH 231
257022 —2 LAB 0905-1150 Th, SmithH 110
★REC 1010-1100 T, SmithH 231
963289 —3 LAB 1325-1610 T, SmithH 110
254170 —4 LAB 1325-1610 W, SmithH 110
★REC 1010-1100 Th, SmithH 231
275052 —5 LAB 1325-1610 Th, SmithH 110

R 1052 Chemical Principles II (prereq 1051) (Phys/L; Envt)
★LECT 0905-0955 MWF, SmithH 100, Stein A, 4 cr
★REC 0800-0850 T, SciCB 175
162925 —1 LAB 0905-1150 T, SmithH 210
★REC 0800-0850 T, SmithH 231
653095 —2 LAB 1325-1610 T, SmithH 210
855024 —3 LAB 1325-1610 W, SmithH 210
★REC 0800-0850 Th, SmithH 331
072484 —4 LAB 0905-1150 Th, SmithH 210
★REC 0905-0955 Th, SmithH 331
872485 —5 LAB 1325-1610 Th, SmithH 210
258543 —6 LAB 1325-1610 F, SmithH 210
★LECT 1220-1310 MWF, SmithH 100, Stein A, 4 cr
★REC 0800-0850 T, SciCB 125
463434 —7 LAB 0905-1150 T, SmithH 210
★REC 1220-1310 T, SmithH 231
659284 —8 LAB 1325-1610 T, SmithH 210
162147 —9 LAB 1325-1610 W, SmithH 210
★REC 0800-0850 Th, SciCB 125
175318 —10 LAB 0905-1150 Th, SmithH 210
★REC 1220-1310 Th, SciCB 375
175321 —11 LAB 1325-1610 Th, SmithH 210
875323 —12 LAB 1325-1610 F, SmithH 210

R 1052H Honors Chemical Principles II (prereq 1051H, IT honors stu) (Phys/L) (A-F only)
★LECT 0905-0955 MWF, SciCB 375, Leopold K, 4 cr
162089 —80 REC 1325-1415 M, SmithH 121
★LAB 1325-1610 T, SmithH 249A
863849 —81 REC 1325-1415 T, SmithH 231
★LAB 1325-1610 W, SmithH 249A
162738 —82 REC 1325-1415 W, SmithH 121
★LAB 1325-1610 Th, SmithH 249A
659124 —83 REC 1325-1415 Th, SmithH 111
★LAB 1325-1610 F, SmithH 249A

R 3301 Organic Chemistry I (§3331; prereq 1052 or equiv) (A-F only)
459044 —1 1010-1100 TWThF, SciCB 325, Tabakovic I, 4 cr
052946 —2 1325-1415 TWThF, SciCB 325, Cramer C, 4 cr

R 3302 Organic Chemistry II (prereq 3301, 3305 or ¶3305) (A-F only)
863348 —1 1115-1205 TWThF, SciCB 325, Cornille J, 4 cr
159426 —2 1430-1520 TWThF, SciCB 325, Cramer K, 4 cr

R 3303 Organic Chemistry III (prereq 3302, 3306 or ¶3306) (A-F only)
862989 0905-0955 TWThF, SciCB 175, Gray G, 4 cr

R 3305 Organic Chemistry Laboratory I (prereq 3301 or ¶3301) (A-F only)
★LECT 1010-1100 M, SciCB 175, Cornille J
162360 —1 LAB 1220-1610 M, SmithH 349, 2 cr
160205 —2 LAB 1220-1610 T, SmithH 349, 2 cr
159077 —3 LAB 1220-1610 W, SmithH 349, 2 cr
854889 —4 LAB 1220-1610 Th, SmithH 349, 2 cr
058231 —5 LAB 1220-1610 F, SmithH 349, 2 cr
★LECT 1325-1415 M, SciCB 175, Cornille J
657101 —6 LAB 0800-1150 T, SmithH 349, 2 cr
072341 —7 LAB 0800-1150 W, SmithH 349, 2 cr
872342 —8 LAB 0800-1150 Th, SmithH 349, 2 cr
672343 —9 LAB 0800-1150 F, SmithH 349, 2 cr

R 3306 Organic Chemistry Laboratory II (prereq 3302 or ¶3302, 3305) (A-F only)
★LECT 1115-1205 M, SciCB 175, Cramer K
458914 —1 LAB 1220-1610 M, SmithH 349, 2 cr
161833 —2 LAB 1220-1610 T, SmithH 349, 2 cr
054776 —3 LAB 1220-1610 W, SmithH 349, 2 cr
960473 —4 LAB 1220-1610 Th, SmithH 349, 2 cr
272345 —5 LAB 1220-1610 F, SmithH 349, 2 cr
★LECT 1430-1520 M, SciCB 125, Cramer K
972347 —6 LAB 0800-1150 T, SmithH 349, 2 cr
772348 —7 LAB 0800-1150 W, SmithH 349, 2 cr
572349 —8 LAB 0800-1150 Th, SmithH 349, 2 cr
972350 —9 LAB 0800-1150 F, SmithH 349, 2 cr

R 3336 Organic Chemistry Laboratory III (prereq 3302, 3306) (A-F only)
856562 1220-1310 M, SmithH 231, O'Doherty G, 3 cr (approx 10 hrs wk lab ar) (open lab times: 1220-1700, MTWTh)

R 3701 Introduction to Inorganic Chemistry (§5731; prereq 3302 or ¶3302, Chem or ChEn maj) (A-F only)
755419 1115-1205 MTWF, SmithH 331, Gladfelter W, 4 cr

3970 Directed Study (prereq #)
954866 ar cr

3993 Special Topics in Chemistry (prereq 1 qtr 1000-level chem or #) (S-N only)
958089 1220-1310 Th, SmithH 231, 1 cr

R 5126 Modern Analytical Chemistry (prereq 3302, 3306, ChEn maj)
★LECT 0800-0930 TTh, SciCB 375, Evans J, Swofford H, 4 cr
359019 —1 LAB 1325-1715 M, KoltH 297
063414 —2 LAB 1325-1715 T, KoltH 297
760944 —3 LAB 0800-1150 W, KoltH 297
356458 —4 LAB 1325-1715 W, KoltH 297
259367 —5 LAB 0930-1315 Th, KoltH 297
054583 —6 LAB 1325-1715 Th, KoltH 297
159863 —7 LAB 1325-1715 F, KoltH 297

R 5130 Analytical Chemistry (prereq 3302, 3306) (A-F only)
159841 1010-1100 MWF, SciCB 375, Swofford H, 3 cr

R 5131 Analytical Chemistry Laboratory (prereq 5130 or ¶5130, CLA or IT chem maj) (A-F only)
★REC 1220-1310 MW, SmithH 331
158356 —1 LAB 1325-1610 MW, SmithH 310, 2 cr
★REC 1220-1310 TTh, SmithH 331
854410 —2 LAB 1325-1610 TTh, SmithH 310, 2 cr

R 5139 Chromatography and Separation Science (prereq chem maj or grad stu, 5133, 5140 or equiv or #) (A-F only)
262883 0800-0930 MWF, SmithH 331, Carr P, 4 cr

5302 Interpretation of Organic Spectra (§8302; prereq 3303 or equiv)
355360 0905-1100 TTh, SmithH 111, Liu B, 4 cr

5332 Advanced Organic Chemistry II (§8332; prereq 3303, #) (A-F only)
153232 1415-1530 TTh, SmithH 331, Noland W, 4 cr

R 5525 Physical Biochemistry: Solution Structure and Interactions of Biological Macromolecules (§BioC 5525, MdBc 5525; prereq 2 qtrs phys chem, BioC 5331 or equiv)
263726 1010-1125 MWF, GorL 239, 4 cr (StP)

R 5533 Quantum Chemistry (prereq 1052, Math 3252 or ¶Math 3252 or Math 3261 or ¶Math 3261, Phys 1253 or ¶Phys 1253)
359330 1325-1415 MTWF, SciCB 125, Piotrowska J, 4 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **I** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 5538 Physical Chemistry Laboratory (prereq 5501 or 5535 or ¶5535, non-chem maj)
461876 —1 LAB 1325-1625 T, KoltH 284, Barbara P, 1 cr
960098 —2 LAB 1325-1625 W, KoltH 284, Barbara P, 1 cr
159886 —3 LAB 1325-1625 Th, KoltH 284, Barbara P, 1 cr

R 5740 Inorganic Chemistry Laboratory (prereq 5702 or ¶5702, chem maj) (A-F only)
★LECT 1115-1205 Th, SmithH 331, Mann K
361210 —1 LAB 1220-1610 MW, KoltH 250, 3 cr
453244 —2 LAB 1220-1610 MF, KoltH 250, 3 cr
163783 —3 LAB 1220-1610 TTh, KoltH 250, 3 cr
963132 —4 LAB 1220-1610 WF, KoltH 250, 3 cr

5803 Chemistry of Industry (prereq chem sr or grad stu or #)
059881 0800-0850 MWF, SmithH 121, 4 cr

5970 Directed Study in Chemistry (prereq any 5xxx chem course, #)
562467 ar cr

R 8135 Mass Spectrometry (prereq #) (A-F only)
675050 1830-2130 TTh, SmithH 331, Evans J, 3 cr

8190 Seminar: Modern Problems in Chemical Instrumentation and Analysis (prereq chem grad stu or #) (S-N only)
262267 1430-1815 F, SmithH 331, 1 cr

8191 Seminar Presentation: Modern Problems in Chemical Instrumentation and Analysis (prereq chem grad stu, #) (A-F only)
861731 1430-1815 F, SmithH 331, 1 cr

8290 Seminar: Materials Chemistry (prereq chem grad stu or #) (S-N only)
760801 1640-1900 Th, SmithH 231, 1 cr

8291 Seminar Presentation: Materials Chemistry (prereq chem grad stu, #) (A-F only)
753363 1640-1900 Th, SmithH 231, 1 cr

8302 Interpretation of Organic Spectra (prereq 1 yr undergrad organic chem or #)
554644 0905-1100 TTh, SmithH 111, Liu B, 4 cr

8332 Advanced Organic Chemistry II (§5332; prereq Chem grad stu, 3303 or #) (A-F only)
160348 1415-1530 TTh, SmithH 331, Noland W, 4 cr

8390 Seminar: Organic Chemistry (prereq chem grad stu or #) (S-N only)
057161 1535-1800 F, SmithH 231, 1 cr

8391 Seminar Presentation: Organic Chemistry (prereq chem grad stu, #) (A-F only)
153058 1535-1800 F, SmithH 231, 1 cr

R 8404 Bioorganic Chemistry IV (prereq 3303 or equiv) (A-F only)
472487 1010-1100 MWF, SmithH 111, Liu B, 4 cr

8533 Introductory Quantum Mechanics and Spectroscopy (prereq 8532)
458122 1430-1520 MTWF, SmithH 231, Lipsky S, 4 cr

8548 Advanced Statistical Mechanics (prereq 8547) (A-F only)
662007 1325-1415 MTWF, SmithH 111, Siepmann I, 4 cr

8560 Seminar: Biological Systems (prereq chem grad stu or #) (S-N only)
962160 1535-1700 T, SmithH 231, 1 cr

8581 Seminar Presentation: Biological Systems (prereq chem grad stu, #) (A-F only)
155621 1535-1700 T, SmithH 231, 1 cr

8590 Seminar: Physical Chemistry (prereq chem or chem phys grad stu) (S-N only)
062330 1535-1800 M, SmithH 331, 1 cr

8591 Seminar Presentation: Physical Chemistry (prereq chem or chem phys grad stu or #) (A-F only)
653422 1535-1800 M, SmithH 331, 1 cr

8612 Advanced Topics in Polymer Science (prereq 8611 or #)
372336 1430-1600 TTh, SmithH 111, Lodge T, 3 cr

8666 Doctoral Pre-Thasis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
254881 1-18 cr

8756 X-Ray Crystallography (prereq chem grad stu or #) (A-F only)
172337 1430-1520 MWF, SmithH 111, Britton D, 4 cr

8762 Chemistry of the Elements (prereq chem grad stu or #)
163461 1415-1530 TTh, SmithH 121, Pignolet L, 4 cr

8777 Thesis Credits: Masters
859297 1-16 cr

8790 Seminar: Modern Problems in Inorganic Chemistry (prereq chem grad stu or #) (S-N only)
758241 1640-1900 Th, SmithH 231, 1 cr

8791 Seminar Presentation: Modern Problems in Inorganic Chemistry (prereq chem grad stu, #) (A-F only)
361353 1640-1900 Th, SmithH 231, 1 cr

8881 M.S. Plan B Project I (prereq grad chem or grad chem phys maj, Δ) (A-F only)
656109 4 cr

8882 M.S. Plan B Project II (prereq grad chem or grad chem phys maj, Δ) (A-F only)
653890 1-4 cr

8883 M.S. Plan B Project III (prereq grad chem or grad chem phys, Δ) (A-F only)
662203 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
161287 1-36 cr

8990 Research in Chemistry (prereq chem grad stu or Δ) (S-N only)
463210 ar cr

8993 Special Topics in Chemistry (prereq Δ)
462509 1010-1100 MWF, SmithH 331, Munson E, ar cr

CHICANO STUDIES (Chic)
Liberal Arts

R 3105 Introduction to Chicano Studies: The Beginnings (§AmSt 3105) (Hist; IP)
656286 0800-0850 MWF, ScottH 4, Rodriguez R, 4 cr

R 3213 Chicano Music and Art (prereq 1106 or GC 1275, 1107 or GC 1276) (Vis; CD)
254735 0945-1100 TTh, ScottH 4, Green S, 4 cr

R 3442 Chicano History Since 1900 (§Hist 3442) (Hist; CD)
871286 1115-1230 TTh, BlegH 215, Valdes D, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
563795 ar cr

5970 Directed Studies (prereq #, Δ, CLA approval)
256095 ar cr

CHILD AND ADOLESCENT PSYCHIATRY (CAPy)
Medical School

R 5203 Child and Adolescent Psychiatry for Psychology Interns (prereq #)
954110 1-5 cr

R 5204 Diagnostic Methods in Child and Adolescent Psychiatry (prereq med stu, #)
560380 ar cr

R 5520 Outpatient Clinical Child and Adolescent Psychiatry for Primary Care Physicians (prereq regis med stu) (A-F only)
862409 Realmuto G, 4.5-9 cr

R 5603 Inpatient Clinical Child Psychiatry for Primary Care Physicians (prereq med stu, #)
061095 Borchardt C, ar cr

5638 Prevention Science II: Designing Programs for the Prevention of Delinquency, Criminal Offending, and Substance Abuse
361630 0830-1530 S, MoosT 2620, August G, 1 cr (Apr 5)

5647 Building Friendships and Peer Relationship Skills: Interventions for Socially Rejected Children
873684 0830-1600 S, MoosT 2620, August G, 1 cr (Apr 26)

R 8100 Readings in Child, Adolescent, and Family Psychiatry (prereq MD, #)
257215 1 cr

R 8200 Outpatient Clinical Child and Adolescent Psychiatry (prereq MD, #)
553218 Jensen J, 3 cr

R 8212 Clinical Inpatient Child Psychiatry (prereq MD, #)
857954 Borchardt C, 3 cr

R 8214 Inpatient Clinical Adolescent Psychiatry (prereq MD, #)
458041 Borchardt C, 3 cr

R 8216 Pediatric Psychiatry Liaison (prereq MD, #)
257330 Jensen J, 3 cr

R 8228 Research in Child and Adolescent Psychiatry (prereq MD, #)
858196 August G, 1 cr

R 8233 Mental Health Administration and Training Seminar (prereq MD, #)
459884 Jensen J, 1 cr

R 8248 Residential Child and Adolescent Treatment (prereq MD, #)
160107 Jensen J, 3 cr

R 8301 Seminar in Child, Adolescent, and Family Psychiatry (prereq MD, #)
262205 1 cr

CHILD PSYCHOLOGY (CPsy)
Education and Human Development

R 1301 Introductory Child Psychology (§3309, 5301; prereq 5 cr introductory psychology) (SSci)
★LECT 0945-1100 TTh, EE/CSci 3210, Masten A, Nelson C, 4 cr (addtl hr ar)
156204 —1 REC 1325-1415 M, BuH 123
757204 —2 REC 1115-1205 T, BuH 123
852897 —3 REC 1325-1415 W, BuH 123
358050 —4 REC 1115-1205 Th, BuH 123
661441 —5 REC 0905-0955 F, NichH 109
963051 —6 REC 1325-1415 F, BuH 123
562730 —2 LECT 1820-2050 W, SciCB 125, Sen M, 4 cr (addtl hr ar)

R 3308 Research Methods in Child Psychology (prereq 1301, Psy 1001) (A-F only)
457259 —1 1820-2050 M, ChDev 105, Heinrich M, 4 cr (addtl hr ar)
253312 —2 1115-1230 TTh, NichH 209, Yonas A, 4 cr (addtl hr ar)

R 3309 Introductory Child Psychology for the Social Sciences (§1301, 5301; prereq Psy 1001) (SSci)
★LECT 0945-1100 TTh, EE/CSci 3210, Masten A, Nelson C, 4 cr
856836 —1 REC 1325-1415 M, BuH 123
757347 —2 REC 1115-1205 T, BuH 123
759373 —3 REC 1325-1415 W, BuH 123
254430 —4 REC 1115-1205 Th, BuH 123
655977 —5 REC 0905-0955 F, NichH 109
358498 —6 REC 1325-1415 F, BuH 123
663500 —2 LECT 1820-2050 W, SciCB 125, Sen M, 4 cr (addtl hr ar)

R 3330 Directed Experiences (prereq 1301 or equiv) (A-F only)
558497 1820-2050 W, NichH 213, Bales D, 4 cr (addtl 4 day hrs per week required)

3343 Introduction to Cognitive Development (prereq 1301 or #)
555261 1325-1505 MW, NichH 213, Pick H, 4 cr

3960 Senior Project in Child Psychology (3960†, 2 qtr reg req; max 4 cr; prereq 1301, sr, #) (A-F only)
655915 —1 1220-1310 T, WullH 220, Ramirez M, 2 cr (2nd qtr only)
459948 —2 1745-1835 Th, WullH 220, Ramirez M, 2 cr (2nd qtr only)

R 3980 Directed Instruction (max 4 cr; prereq #) (S-N only)
157460 1-4 cr

5302 Infancy (prereq 1301 or #)
075496 1820-2050 Th, NichH 109, Carver L, 4 cr (addtl hr ar)

5303 Adolescent Psychology (§3303; prereq 5 cr introductory psychology)
753251 1600-1740 MW, NichH 211, Weinfield N, 4 cr (addtl hr ar)

5305 Multidisciplinary Perspectives on Aging (§AdEd 5440, HSU 5009, Nurs 5780, PA 5414, Phar 5009, PubH 5520, PubH 5737, Soc 5960, SW 5024)
659334 1640-1825 MW, MoosT 2690, 4 cr

5311 Introduction to Developmental Psychopathology (§3311; prereq 1301 or equiv, 3308 or Psy 1005)
359375 1820-2050 T, FordH 120, Jimerson S, 4 cr (addtl hr ar)

5331 Processes of Social Development (§3331; prereq 1301 or equiv)
072372 0945-1100 TTh, NichH 213, Crick N, 4 cr

5334 Children and Youth in Society (prereq 4 cr in child psychology) (C/PE)
857940 1545-1700 TTh, NichH 211, Sesma A, 4 cr (addtl hr ar)

5341 Perceptual Development (prereq 1301 or #, 3308 or Psy 1005)
872373 1245-1400 TTh, NichH 211, Pick A, 4 cr

R 5353 Development During the School Years (prereq 4 cr psych)
459285 1535-1715 TTh, BorH 335, Thomas R, 4 cr (StP)

R 5970 Directed Study in Child Psychology (prereq #)
653887 ar cr

R 5990 Directed Research in Child Psychology (prereq #)
158074 ar cr

8303 Developmental Psychology: Social and Emotional Processes (prereq doctoral stu or #)
053675 1325-1500 TTh, ChDev 172, Hartup W, Sroufe L, 4 cr

8310 Seminar: History of Child Development (S-N only)
654120 0830-1000 Th, ChDev 172, Weinberg R, 1 cr

8320 Seminar: Current Issues in Teaching Developmental Psychology
755095 1515-1645 T, ChDev 172, Collins W, 1 cr

8330 Directed Field Experiences (prereq #) (S-N only)
956410 1-6 cr

R 8360 Seminar: Developmental Psychology
661231 —1 1010-1240 T, ChDev 172, Maratsos M, 3 cr (Topics in the Ethology of Child Behavior)
675498 —6 1100-1330 W, ChDev 172, Masten A, Nelson C, 3 cr (Topics in Developmental Neuropsychobiology)
475499 —7 0930-1200 Th, LindH 305, Braswell L, 3 cr (Topics in Applied Child Development)
875497 —8 Gunnar M, 1 cr (Developmental Psychology) (ChDev 172)
176221 —9 1325-1530 F, SocSci 101, Mortimer J, 3 cr (Mental Health and Adjustment in the Early Life Course) (§PubH 8861, sec 2, Soc 8090, sec 2; prereq #)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
163002 1-18 cr

8777 Thesis Credit: Masters
360445 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
662735 1-36 cr

8970 Independent Study
859266 ar cr

8990 Research Problems
159385 ar cr

CHINESE (Chn)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 1013 Beginning Modern Chinese (prereq 1012)
876293 —1 LECT 0905-0955 TTh, WullH 220, Chen Y
076292 —2 LECT 1010-1100 TTh, WullH 220, Chen Y
Registration in one of the following REC sections is also required:
✦676294 —1 REC 1010-1100 MTWThF, FolH 142, 5 cr
✦476295 —2 REC 1115-1205 MTWThF, FolH 142, 5 cr
✦276296 —3 REC 1220-1310 MTWThF, FolH 142, 5 cr
✦176297 —4 REC 1325-1415 MTWThF, FolH 142, 5 cr

R 1015 Accelerated Beginning Chinese (prereq 1014) (A-F only)
262642 0800-0850 MTWThF, FolH 142, 5 cr

R 3023 Intermediate Modern Chinese (prereq 3022)
★LECT 0905-0955 TTh, FolH 38, Shi M
761026 —1 REC 1010-1100 MWF, PeikH 215, 5 cr
153456 —2 REC 1010-1100 MWF, KoltH S138, 5 cr
155523 —3 REC 1430-1520 MWF, FolH 142, 5 cr

R 3033 Introductory Classical Chinese (prereq 3032 or #)
752990 1325-1415 MWF, LindH 203, Wang S, 4 cr

R 3043 Third Year Modern Chinese (prereq 3042)
053224 1115-1230 TTh, FolH 326, Chen J, 4 cr

R 3091 Filmic Construction of Modern Identity in China (A-F only) (Vis; IP)
976477 1715-1900 TTh, FolH 306, Shi M, 4 cr

R 3970 Directed Studies (prereq #, Δ, ❑)
657082 1-15 cr

R 5043 Third Year Modern Chinese (prereq 3042)
463207 1115-1230 TTh, FolH 326, Chen J, 4 cr

R 5105 Readings in Chinese Vernacular Fiction (prereq 3041)
572383 1430-1545 MW, FolH 334, Chen J, 4 cr

R 5460 Topics in Chinese Literature: Sung Tz'u (max 12 cr; prereq 3033)
372384 1730-2000 T, FolH 334, Yeh C, 4 cr

R 5970 Directed Studies (prereq #, Δ, CLA approval)
653999 1-4 cr

R 8650 Seminar: Chinese Linguistics (prereq 5451, 5452)
172380 1325-1520 T, FolH 426, Wang S, 4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
960201 1-18 cr

R 8777 Thesis Credits: Masters
857288 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
258722 1-36 cr

CIVIL ENGINEERING (CE)
Institute of Technology

R 3020 Computer Applications in Civil Engineering I (prereq civil engineering, geo-engineering or mining engineering maj, Math 1231) (A-F only)
061744 0800-0955 MW, CivE 205, Voller V, 4 cr

R 3100 Introduction to Surveying and Mapping (prereq Math 1251, IT stu) (A-F only)
★LECT 1220-1415 TTh, CivE 210, Johnson G
062876 —1 LAB 0905-1205 T, CivE 194, Johnson G, 4 cr
561321 —2 LAB 1430-1730 T, CivE 194, Johnson G, 4 cr
257196 —3 LAB 0905-1205 Th, CivE 194, Johnson G, 4 cr
357013 —4 LAB 1430-1730 Th, CivE 194, Johnson G, 4 cr

R 3200 Introduction to Transportation Engineering (prereq Phys 1251, IT stu) (A-F only)
★LECT 1010-1100 MWF, Arch 35, Michalopoulos P,
158835 —1 REC 1115-1205 M, CivE 213, Michalopoulos P, 4 cr
655641 —2 REC 1115-1205 W, CivE 213, Michalopoulos P, 4 cr
557947 —3 REC 1115-1205 Th, CivE 213, Michalopoulos P, 4 cr
155160 —4 REC 1115-1205 F, CivE 213, Michalopoulos P, 4 cr

R 3300 Soil Mechanics (prereq AEM 3016, IT stu) (A-F only)
★LECT 1430-1625 TTh, CivE 210, Crouch S
662220 —1 LAB 1430-1625 M, CivE 350, Crouch S, 4 cr
063364 —2 LAB 0905-1100 T, CivE 350, Crouch S, 4 cr
161055 —3 LAB 1430-1625 W, CivE 350, Crouch S, 4 cr
756943 —4 LAB 0905-1100 Th, CivE 350, Crouch S, 4 cr

R 3400 Fluid Mechanics (§AEM 5200; prereq Math 3261, AEM 1015 or AEM 3016, IT stu or ForP or pre-BAE maj) (A-F only)
★LECT 0800-0955 TTh, CivE 212, Farell C
254752 —1 LAB 1010-1310 M, CivE 277, Farell C, 4 cr
261023 —2 LAB 1010-1310 T, CivE 277, Farell C, 4 cr
354628 —3 LAB 1010-1310 W, CivE 277, Farell C, 4 cr
961736 —4 LAB 1010-1310 Th, CivE 277, Farell C, 4 cr

R 3500 Principles of Environmental Engineering (prereq Chem 1052, Phys 1253) (A-F only)
571699 0800-0955 WF, CivE 212, Dwyer D, 4 cr

R 5055 Engineering Geostatistics (§GeoE 5555; prereq sr or grad stu in CE or GeoE or Geo, Stat 3091 or #) (A-F only)
271700 1220-1415 TTh, CivE 205, Barnes R, 4 cr

5099 Advanced Design, Analysis, Research or Tutorial in Civil Engineering (prereq approval by faculty adviser) (A-F only)
454281 ar cr

R 5200 Geometric Design of Highways (prereq 3200 or #, IT or grad stu) (A-F only)
171701 1640-1835 TTh, CivE 212, Davis G, 4 cr

R 5302 Applied Rock Mechanics (§GeoE 5302; prereq 3300 or #, IT upper div or grad stu) (A-F only)
162634 0905-1100 TTh, Arch 60, Detournay E, 4 cr

R 5304 Design of Highway and Airport Pavements (prereq 3300, 5603, IT or grad stu) (A-F only)
254024 1640-1835 MW, CivE 210, Snyder M, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 5401 Water Resources Engineering (prereq 3400 or #, IT or grad stu) (A-F only)
★LECT 1220-1310 MWF, CivE 212, Song C
771703 —1 REC 1430-1730 M, CivE 202, Song C, 4 cr
571704 —2 REC 1430-1730 T, CivE 202, Song C, 4 cr
371705 —3 REC 1430-1730 W, CivE 202, Song C, 4 cr
171706 —4 REC 1430-1730 Th, CivE 202, Song C, 4 cr

R 5402 Computational Hydraulics (prereq 5401, CSci 3101 or #, IT stu or grad) (A-F only)
771717 0905-1100 MW, CivE 213, Parker G, 4 cr

R 5405 Hydrology and Hydrologic Design (prereq IT stu or grad) (A-F only)
★LECT 0905-0955 MWF, CivE 210, Foufoula E
557057 —1 REC 1220-1415 M, CivE 202, Foufoula E, 4 cr
454524 —2 REC 1220-1415 T, CivE 202, Foufoula E, 4 cr
754464 —3 REC 1220-1415 W, CivE 202, Foufoula E, 4 cr
060982 —4 REC 1220-1415 Th, CivE 202, Foufoula E, 4 cr

R 5500 Analysis and Design of Water Supply Systems (prereq IT or grad stu, 3400, 5401 or #) (A-F only)
★LECT 0800-0850 MWF, CivE 210, Reid K
871708 —1 REC 1010-1205 M, CivE 202, Reid K, 4 cr
671709 —2 REC 1010-1205 T, CivE 202, Reid K, 4 cr
071710 —3 REC 1010-1205 W, CivE 202, Reid K, 4 cr
871711 —4 REC 1010-1205 Th, CivE 202, Reid K, 4 cr

R 5507 Environmental Engineering Laboratory (prereq 5506 and either 5500 or 5501 or #) (A-F only)
659219 1115-1205 MWF, CivE 212, Brezonik P, 4 cr

R 5513 Solid and Hazardous Waste Processing II (prereq 5512 or #) (A-F only)
362079 0800-0955 TTh, CivE 202, Hepworth M, 4 cr

R 5540 Analysis of Groundwater-Soil Pollution Abatement Technology (prereq 5401, 5501 or #, IT maj or grad) (A-F only)
255383 1220-1415 MW, CivE 210, Maier W, 4 cr

R 5600 Linear Structural Systems (prereq AEM 1015, 3016, IT stu or grad) (A-F only)
★LECT 1010-1205 MW, CivE 210, Stolarski H
959355 —1 REC 1325-1415 M, CivE 212, Stolarski H, 4 cr
462221 —2 REC 1430-1520 M, CivE 213, Stolarski H, 4 cr
857372 —3 REC 1535-1625 M, CivE 213, Stolarski H, 4 cr
760202 —4 REC 1640-1730 M, CivE 213, Stolarski H, 4 cr

R 5603 Introduction to Construction Materials (prereq IT upper div stu, AEM 3016) (A-F only)
★LECT 0800-0955 T, 0800-0850 Th, CivE 210, Labuz J
756179 —1 LAB 1325-1625 M, CivE 350, Labuz J, 4 cr
355049 —2 LAB 1325-1625 T, CivE 350, Labuz J, 4 cr
258770 —3 LAB 1325-1625 W, CivE 350, Labuz J, 4 cr
255934 —4 LAB 1325-1625 Th, CivE 350, Labuz J, 4 cr

R 5610 Design of Metal Structures: Introduction (prereq 5600, 5603, upper division IT stu or grad) (A-F only)
★LECT 1010-1205 TTh, CivE 210, Hajjar J
254945 —1 REC 1325-1415 T, CivE 205, Hajjar J, 4 cr
456225 —2 REC 1430-1520 T, CivE 213, Hajjar J, 4 cr
758434 —3 REC 1535-1625 T, CivE 213, Hajjar J, 4 cr
656305 —4 REC 1640-1730 T, CivE 205, Hajjar J, 4 cr

R 5613 Intermediate Reinforced Concrete Design (prereq 5611, IT or grad stu) (A-F only)
761124 1325-1520 MW, CivE 205, French C, 4 cr

R 5703 Project Management (prereq sr standing, IT maj) (A-F only)
455706 1640-1835 TTh, CivE 210, Smith K, 4 cr

R 8022 Numerical Methods for Free and Moving Boundary Problems (prereq 8605 or #)
671712 1430-1625 TTh, Arch 45, Voller V, 4 cr

R 8099 Civil Engineering Research (prereq #)
561948 —1 1535-1730 TTh, CivE 214, Newcomb D, 4 cr
461425 —2 1-5 cr

R 8302 Soil/Rock Plasticity and Limit Analysis (§GeoE 8302; prereq 3300) (A-F only)
471713 1220-1415 MW, CivE 213, Drescher A, 4 cr

R 8402 Introduction to the Theory and Measurement of Turbulent Flows (prereq 8401 or #)
761849 1325-1520 TTh, CivE 212, Farell C, 4 cr

R 8501 Physical and Chemical Processes for Water and Wastewater Treatment-Part II (prereq 5500, 5501, 5506 or #) (A-F only)
158558 1010-1205 MW, CivE 214, Semmens M, 3 cr

R 8551 Seminar: Models of Aquatic Environments (prereq 8550)
271714 1220-1415 TF, CivE 213, Stefan H, 4 cr

R 8610 Shell Structures (prereq #)
171715 1010-1205 MW, CivE 205, Shield C, 4 cr

R 8621 Structural Dynamics II (prereq 8620 or #)
971716 1010-1205 TTh, CivE 205, Schultz A, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
154171 1-18 cr

8699 Seminar: Structures (S-N only)
357481 0905-0955 F, CivE 205, 1 cr

8777 Thesis Credits: Masters
361725 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
060920 1-36 cr

CLASSICAL CIVILIZATION (ClCv)
Classical and Near Eastern Studies Liberal Arts

3340 Practicum in Archaeological Field Techniques (§Clas 3340, Clas 5340; prereq ClCv maj or #, one course in ancient art or archaeology)
659432 1010-1600 TTh, JonesH, Cooper F, 4 cr (fieldwork 1015-1600 Th, May-June)

3970 Directed Studies (prereq #, Δ, ❑)
157319 1-15 cr

3980 Directed Instruction (prereq #)
758465 ar cr

3990 Directed Research (prereq #, Δ or ❑)
161802 1-15 cr

CLASSICS (Clas)
Classical and Near Eastern Studies Liberal Arts

1006 Age of Nero (Hist)
872549 1115-1205 MWF, NichH 209, Sheets G, 4 cr

R 1042 Greek and Roman Mythology (AH)
★LECT 1115-1205 MF, NichH 45, Erickson G
653839 —1 REC 1115-1230 T, FolH 208, 4 cr
154758 —2 REC 1115-1230 T, FolH 50, 4 cr
358422 —3 REC 1115-1230 T, FolH 38, 4 cr
255691 —4 REC 1115-1230 W, Phys 236A, 4 cr
954396 —5 REC 1115-1230 W, FordH 175, 4 cr
155837 —6 REC 1115-1230 W, LindH 320, 4 cr
754982 —7 REC 1115-1230 Th, FolH 208, 4 cr
861728 —8 REC 1115-1230 Th, FolH 50, 4 cr
361188 —9 REC 1115-1230 Th, FolH 38, 4 cr

R 1042H Greek and Roman Mythology (prereq regis honors div) (AH)
★LECT 1115-1205 MF, NichH 45, Erickson G
362745 —80 REC 1115-1230 W, BuH 125, Erickson G, 4 cr

1045 Basic Program in Technical Terminology and Word Study
554451 1535-1700 TW, NichH 45, 3 cr

1048 Greek and Latin Terminology in the Medical and Biological Sciences (§1141; prereq 1045 or ¶)
355083 1535-1700 TW, NichH 45, 2 cr

1141 Greek and Latin Terminology for Nursing (§1048)
154140 1535-1700 TW, NichH 45, 3 cr

3035 Mythology in Western Art (§ArtH 3035) (AH)
175187 1115-1230 TTh, FolH 306, McNally S, 4 cr

3046 Advanced Etymology: Vocabulary of the Sciences and Humanities (prereq 1045 or ¶)
058472 1535-1700 TW, NichH 45, 2 cr

3340 Practicum in Archaeological Field Techniques (§5340, ClCv 3340; prereq Grk or Lat or Clas or Hebr or ANE or ClCv maj or #, one course in ancient art or archaeology)
556958 1010-1600 TTh, Cooper F, 4 cr (fieldwork, 1015-1600 Th, May-June)

3970 Directed Studies (prereq #, Δ, ❑)
961770 1-5 cr

5340 Practicum in Archaeological Field Techniques (§3340, ClCv 3340; prereq Grk or Lat or Clas or Hebr or ANE or ClCv maj or #, one course in ancient art or archaeology)
263810 1010-1600 TTh, Cooper F, 4 cr (fieldwork, 1015-1600 Th, May-June)

R 5950 Topics: Art in Late Antiquity (§ArtH 5950) (A-F only)
072551 1415-1530 TTh, JonesH 207A, McNally S, 4 cr

5960 Topics in the Literature of Classical Antiquity: The Voice of Women in Greek Literature and Society (prereq #, Δ)
763097 1415-1530 TTh, NichH 209A, Lardinois A, 4 cr

R 5970 Directed Studies (prereq #, Δ, CLA approval)
261880 1-5 cr

5980 Directed Instruction (prereq #, Δ, CLA approval)
258218 4 cr

5990 Directed Research (prereq #, Δ, CLA approval)
262365 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
753444 1-18 cr

8777 Thesis Credits: Masters
861325 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
261359 1-36 cr

CLINICAL AND POPULATION SCIENCES (CAPS)
Veterinary Medicine

5014 Veterinary Public Health (VPH) Clinic Rotation (prereq 3rd or 4th yr vet med stu) (S-N only)
058424 Pullen M, 4-24 cr

5015 Advanced Veterinary Public Health (VPH) Clinic Rotation (prereq CAPS regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
253438 Pullen M, 4 cr

5114 Large Animal Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
458749 Ames T, 4-24 cr

5115 Advanced Large Animal Medicine (prereq CAPS regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
157300 Ames T, 4 cr

5153 Diagnostic and Therapeutic Techniques II (prereq #)
655672 —1 LAB 1300-1550 Th, AnScVM 135, Ames T, Valberg S, others, 1 cr
357089 —2 LAB 1300-1550 T, AnScVM 135, Ames T, Valberg S, others, 1 cr

5160 Large Animal Medicine (prereq 5151 or #)
562758 0800-0850 MWTh, 1100-1150 T, 1000-1050 WTh, VetS 145, Ames T, Valberg S, others, 6 cr

5185 Introduction to Animal Nutrition (prereq VPB 5210, VPB 5212, VPB 5306 or #)
952986 1100-1150 TWThF, AnScVM 125, Olson W, Armstrong J, 2 cr (1st 5 weeks)

5214 Large Animal Surgery (prereq 3rd or 4th yr vet med stu) (S-N only)
953782 Turner T, Santschi L, 4-24 cr

5215 Advanced Large Animal Surgery (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
457164 Turner T, Santschi L, 4 cr

5224 Equine Lameness (prereq 3rd or 4th yr vet med stu) (S-N only)
162908 Turner T, 4-24 cr

5225 Advanced Equine Lameness (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
162004 Turner T, 4 cr

5234 Equine Podiatry (prereq 3rd or 4th yr vet med stu) (S-N only)
954494 Turner T, 4-24 cr

5235 Advanced Equine Podiatry (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
254010 Turner T, 4 cr

5244 Bovine Surgery (prereq 3rd or 4th yr vet med stu) (S-N only)
561237 Trent A, 4-24 cr

5245 Advanced Bovine Surgery (prereq regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
261474 Trent A, 4 cr

5254 Equine Surgery (prereq #) (S-N only)
172208 Turner T, 4-24 cr

5270 Economics and Practice Management (prereq regis vet med or #) (A-F only)
957251 0800-0950 Th, AnScVM 135, 2 cr

5271 Law and Ethics in Veterinary Medicine (prereq regis vet med or #) (A-F only)
255870 1000-1150 W, AnScVM 135, Waddell J, 2 cr

5276 Advanced Zoo Animal Medicine (prereq regis 3rd or 4th yr vet med, LACS 5275 or #) (S-N only)
754089 1500-1550 M, VetTchHos A325, Farnsworth R, 1 cr

5352 Large Animal Surgery (prereq #) (A-F only)
★LECT 0800-0850 MTWF, AnScVM 135, Turner T, Trent A, others, 5 cr
059122 —1 LAB 1300-1550 T, Turner T, Trent A, others
157782 —2 LAB 1300-1550 Th, Turner T, Trent A, others

5356 Equine Colic Team (5356†; prereq vet med stu, 5355) (S-N only)
057337 Santschi L, 1 cr

5357 Advanced Colic Team (5357†; prereq vet med stu, 5356) (S-N only)
754612 Santschi L, 1 cr

5514 Equine Theriogenology (prereq 3rd or 4th yr vet med stu) (S-N only)
258980 Troedsson M, 4-24 cr

5535 Advanced Dairy Palpation (prereq regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
763360 Fahning M, 4 cr

5544 Dairy Theriogenology Management (prereq 5534, regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
058004 Olson J, 4-24 cr

5545 Advanced Dairy Theriogenology Management (prereq regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
958223 Olson J, 4 cr

5550 Diagnostics and Obstetrics in Theriogenology (prereq regis vet med or grad or #)
659785 1000-1150 M, VetS 145, Fahning M, 2 cr

5551 Theriogenology Diagnostics Laboratory (prereq regis vet med or grad or #)
160049 —1 LAB 1400-1650 M, Fahning M, Seguin B, 1 cr (Animal Holding Facility)
562162 —2 LAB 0900-1150 F, Seguin B, Fahning M, 1 cr (Animal Holding Facility)

5604 Analytical Techniques in Veterinary Medicine I (prereq #) (S-N only)
275133 Marsh W, 4-24 cr

5614 Swine Disease Diagnostics, Therapeutics, and Prevention (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
758143 Joo H, 4-24 cr

5815 Advanced Swine Disease Diagnostics, Therapeutics, and Prevention (prereq IV track or grad or #) (A-F only)
262916 Joo H, 4 cr

5624 Swine Production Systems (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
354497 Dial G, 4-24 cr

5625 Advanced Swine Production Systems (prereq grad stu or IV track or #) (A-F only)
156227 Dial G, 4 cr

5834 Swine Nutrition (prereq regis 3rd or 4th yr vet med or grad stu or #)
962420 Dial G, 4-24 cr

5635 Advanced Swine Nutrition (prereq grad stu or # or IV track) (A-F only)
357092 Dial G, 4 cr

5644 Swine Economics, Financial Management and Marketing (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
655980 Marsh W, 4-24 cr

5645 Advanced Swine Economics, Financial Management and Marketing (prereq IV track or grad stu or #) (A-F only)
563022 Marsh W, 4 cr

5650 Veterinary Epidemiology and Statistics (prereq 10 cr biol, 12 cr chem or #)
★LECT 1000-1050 MWF, AnScVM 125, Marsh W, Morrison R, 4 cr
354368 —1 LAB 0800-1050 T, AnScVM 125, Marsh W, Morrison R
763388 —2 LAB 0800-1050 Th, AnScVM 125, Marsh W, Morrison R

5651 Veterinary Community Medicine (prereq VPB 5503, 5703 or equiv or #)
061226 0900-0950 MWF, AnScVM 135, Pullen M, Robinson R, 3 cr

5663 International Animal Disease Problems (prereq #)
053904 1000-1150 F, AnScVM 135, Pullen M, Robinson R, 1 cr (1st 5 weeks)

5672 Perspectives: Animal-Human Relationships and Community Health (prereq #)
153327 1600-1740 T, AnScVM 125, Dunlop R, 3 cr

5673 Problems in Disease Control and Eradication (prereq PubH 5330 or #)
572206 Robinson R, ar cr

5680 Problems in Veterinary Epidemiology and Public Health (prereq 5650 or equiv or #)
661326 Pullen M, Robinson R, ar cr

5684 Swine Virology and Immunology (prereq 3rd or 4th yr vet med stu) (S-N only)
153554 Molitor T, 4-24 cr

5694 Epidemiology and Biostatistics (prereq #) (S-N only)
062537 Marsh W, 4-24 cr

5714 Equine Sports and Preventive Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
454328 Turner T, 4-24 cr

5715 Advanced Equine Sports and Preventive Medicine (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
972204 Turner T, 4 cr

5814 Dairy Disease Control, Parasitology, Youngstock Management (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
963177 Ames T, 4-24 cr

5815 Advanced Dairy Disease Control, Parasitology, Youngstock Management (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
560895 Ames T, 4 cr

5824 Mastitis, Milking Machines, and Milk Quality (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
557995 Farnsworth R, 4-24 cr

5825 Advanced Mastitis, Milking Machines, and Milk Quality (prereq grad stu or # or IV track) (A-F only)
062344 Farnsworth R, 4 cr

5834 Ruminant Nutrition (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
162383 Olson W, 4-24 cr

5835 Advanced Ruminant Nutrition (prereq CAPS regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
859770 Olson W, 4 cr

5844 Applied Dairy Nutrition (prereq 5834, regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
256985 Olson J, 4-24 cr

5845 Advanced Dairy Nutrition (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
162424 Olson J, 4 cr

5854 Dairy Record Analysis, Epidemiology, and Economics (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
355956 Fetrow J, 4-24 cr

5855 Advanced Dairy Record Analysis, Epidemiology, and Economics (prereq IV track or grad stu or #) (A-F only)
154727 Fetrow J, 4 cr

5914 Advanced Building Design and Total Herd Evaluation (prereq regis 3rd or 4th yr vet med or grad stu or #) (S-N only)
261040 Pijoan C, 4-24 cr

5915 Advanced Building Design and Total Herd Evaluation (prereq regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
654455 Pijoan C, 4 cr

5924 Beef Production Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
856027 Fetrow J, 4-24 cr

5925 Advanced Beef Production Medicine (prereq CAPS regis vet med 3rd or 4th yr or grad or # or IV track) (A-F only)
359988 Fetrow J, 4 cr

5944 Small Ruminant Health and Production (prereq 3rd or 4th yr vet med stu) (S-N only)
156431 Wolf C, 4-24 cr

5945 Advanced Small Ruminant Health and Production (prereq CAPS regis vet med 3rd or 4th yr grad or # or IV track) (A-F only)
159670 Wolf C, 4 cr

5954 Directed Studies (prereq #) (S-N only)
772205 1-12 cr

5955 Advanced Directed Studies (prereq #) (A-F only)
372207 1-6 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

8193 Advances in Clinical Immunobiology (prereq grad or #)
155711 Molitor T, ar cr

8194 Problems in Diagnostic Virology, Serology and Immunology (prereq grad or #)
454202 Molitor T, ar cr

8195 Preventive Veterinary Medicine
154249 ar cr

8197 Metabolic and Nutritionally Induced Diseases of Cattle (prereq grad stu, #)
460520 2 cr

8199 Problems in Economics of Animal Health
457875 1-3 cr

8290 Advanced Veterinary Medicine (prereq 5162, SACS 5172, #)
553929 ar cr

8291 Advanced Diagnosis and Therapeutics of Animal Diseases (prereq 5162, SACS 5172, #)
758448 Ames T, ar cr

8292 Seminar: Veterinary Medicine (prereq #)
961297 Valberg S, Wilson J, ar cr

8293 Medical Conference (prereq 5162, SACS 5172, #)
255786 ar cr

8299 Research in Veterinary Medicine
554157 ar cr

8390 Seminar: Veterinary Surgery (prereq DVM degree or equiv)
858943 1500-1650 M, HckrH 100, Trent A, Turner T, others, ar cr

8392 Advanced Large Animal Surgery (prereq DVM degree or equiv, #)
156907 Turner T, Trent A, others, ar cr

8393 Problems in Large Animal Orthopedics (prereq 5365, #)
454572 Turner T, Trent A, others, 3 cr

8397 Large Animal Anesthesia (prereq SACS 5380, #)
163265 Raffe M, Robinson E, ar cr

8593 Advanced Endocrinology of Reproduction (prereq grad stu) (A-F only)
553364 Seguin B, 2 cr

8594 Special Problems in Animal Reproduction (prereq 5570, #)
561772 ar cr

8595 Seminar: Veterinary Obstetrics (prereq #)
963020 1 cr

8790 Problems in Veterinary Clinical Pharmacology and Therapeutics (prereq grad or #)
954477 3 cr

CLINICAL LABORATORY SCIENCE (CLS)

Laboratory Medicine and Pathology
Medical School

5064 Introduction to Clinical Immunohematology (prereq #) (A-F only)
158897 0905-0955 MTTh, MoosT 2520, Hallgren H, 3 cr

5065 Introduction to Clinical Immunohematology: Laboratory (prereq #) (A-F only)
161306 1220-1520 TTh, MoosT 3349, Hallgren H, 2 cr

5120 Seminar: Clinical Laboratory Science (prereq #) (S-N only)
754917 1200-1300 W, PWB 15194, 1 cr

5125 Practicum Teaching (§MedT 5125; prereq #)
959971 1-3 cr

5128 Elements of Laboratory Administration (§MedT 5128; prereq #)
661892 Karni K, 3 cr

5130 Practicum in Laboratory Administration (§MedT 5130; prereq #)
361790 3 cr

5135 Advanced Clinical Microbiology (§MedT 5135; prereq #)
756201 Wells C L, 1-5 cr

5138 Clinical Microbiology Seminar (§MedT 5138; prereq #)
855041 1115-1205 F, PWB 15194, Wells C L, Ferrieri P, 1 cr

5145 Development of Medical Technology (§MedT 5145; prereq #)
957900 3 cr

5155 Advanced Clinical Hematology (§MedT 5155; prereq #)
053482 5 cr

5165 Advanced Clinical Immunohematology (§MedT 5165; prereq #)
157966 5 cr

5175 Advanced Clinical Chemistry (§MedT 5175; prereq #)
354659 5 cr

5179 Chemistry Seminar (§MedT 5179; prereq #)
156297 1 cr

5180 Advanced Chemistry (prereq #)
153070 Hallgren H, 1-5 cr

5196 Computer Methodology in the Delivery of Health Care I: Physiological Monitoring and Testing (§HInf 5433; prereq HInf 5432 or #)
860398 1115-1230 TTh, MoosT 2154, Finkelstein S, 3 cr

5274 Immunohematology III: Transfusion Medicine (A-F only)
958951 3 cr

5282 Advanced Immunohematology Practicum III (prereq #) (S-N only)
555101 2 cr

R 5330 Clinical Chemistry III (§MedT 5330; prereq Chem 3301, Chem 3302, Chem 3305, Chem 3306, MdBc 5300, MdBc 5301) (A-F only)
061632 1010-1100 TTh, MoosT 2520, Tsai M, 2 cr

R 5331 Clinical Chemistry III: Laboratory Applications (§MedT 5331; prereq Chem 3301, Chem 3302, Chem 3305, Chem 3306, MdBc 5300, MdBc 5301) (A-F only)
559634 1220-1625 M, 0800-1205 F, Brunzel N, 2 cr

5765 Hematology (prereq #) (course fee)
★LECT 1325-1415 WF, MoosT 2520, Lofsness K
159323 —1 LAB 1430-1625 WF, MoosT 3317, Lofsness K, 4 cr

5768 Advanced Hematology (prereq #)
459223 Brunning R, ar cr

5864 Research Seminar (prereq #)
653744 1200-1300 M, Mayo C231, 1 cr (Todd Amph)

5865 Departmental Seminar (prereq #)
163427 0800-0900 W, Mayo D230, 1 cr (Eustis Amph)

8777 Thesis Credits: Masters
159054 1-16 cr

COGNITIVE SCIENCE (CgSc)

Liberal Arts

8000 Philosophy of Cognitive Science (prereq #) (A-F only)
454569 1430-1700 W, FordH 155, Savage C W, 4 cr

8001 Proseminar in Cognitive Science (prereq CgSc minor) (S-N only)
371719 1900-2100 Th, EltH 204, Fletcher C R, 1 cr

COMMUNICATION DISORDERS (CDis)

Liberal Arts

1301 Introduction to Communication Disorders (§3101)
676148 1010-1205 TTh, ShevH 3, Haroldson S, 4 cr

1304 The Physics and Biology of Spoken Language (Phys/L)
175070 1430-1625 MW, ShevH 3, Speaks C, 4 cr

R 3100 Clinical and Research Observation (S-N only)
660001 —1 0800-1200 W, MoosT 6274, Moller K, Starr C, 2 cr
355679 —2 1700-1900 W, 0900-1030 F, ShevH 125, Haroldson S, 2 cr
658734 —3 1230-1600 Th, MoosT 6274, Moller K, Starr C, 2 cr
154607 —4 van Deusen D J, 2 cr
161466 —5 Hinderscheit L, 2 cr (off-campus)
571721 —6 Doyle S, 2 cr (ShevH 205B)
371722 —7 Carlstrom J, 2 cr (ShevH 119H)

3101 Introduction to Communication Disorders (§1301)
752987 1010-1205 TTh, ShevH 3, Haroldson S, 4 cr

5103 Communication Disorders and Cultural Diversity (CD)
360400 1010-1205 MW, BuH 123, Siegel G, 4 cr

5301 Introduction to Acoustics
159659 1010-1205 MW, 1010-1100 F, ShevH 3, Speaks C, 5 cr

5305 Language Acquisition
157684 0800-0955 MW, ShevH 3, Windsor J, 4 cr

5306 Hearing Science (prereq 5301, 5302 or #)
862183 0800-0955 TTh, ShevH 3, Schlauch R, 4 cr

5502 Stuttering
863740 1430-1625 TTh, ShevH 3, Haroldson S, 4 cr

5504 Normal and Disordered Child Phonology (prereq 5302, 5303, or #)
256498 1430-1625 MW, BuH 123, Broen P, 4 cr

5607 Language Assessment, Intervention: Later Stages (prereq 5305 or #)
456855 1220-1415 MW, ShevH 3, Windsor J, 4 cr

5608 Language Assessment, Intervention: Adults (prereq 5302 or #)
056480 1700-1845 TTh, ShevH 3, Brookshire R, 4 cr

5703 Communication Problems of the Hearing-Impaired (prereq 5701 or #)
256615 1640-1940 M, 1640-1835 W, ShevH 3, Carney A, 5 cr

5705 Objective Measures of Auditory Function (prereq 5701 or #)
171723 1500-1800 Th, Margolis R, 3 cr

5900 Topics in Communication Disorders: Communicative Approaches to Challenging Behavior in Persons with Severe Developmental Disabilities
058178 1325-1625 F, ShevH 3, Reichle J, 3 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
763391 ar cr

8520 Clinical Education in Speech-Language Pathology (prereq communication disorders grad stu) (S-N only)
658409 1-6 cr

8521 Clinical Education in Speech-Language Pathology (prereq communication disorders grad stu) (S-N only)
456922 1-6 cr

8590 Seminar: Current Issues in Speech-Language Pathology
354290 —1 1430-1730 M, ShevH 125, Stemberger J, 3 cr
758935 —2 1220-1520 Th, ShevH 125, Starr C, 3 cr
071724 —3 1220-1520 F, ShevH 125, Solomon N, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
559150 1-18 cr

8717 Seminar: Hearing
659236 1535-1835 T, ShevH 119H, Van Tasell D, 3 cr

8720 Clinical Education in Audiology (prereq CDis grad stu) (S-N only)
960439 1-6 cr

8721 Clinical Education in Audiology (prereq CDis grad maj) (S-N only)
153330 1-6 cr

8777 Thesis Credits: Masters
160785 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
158115 1-36 cr

8990 Research
255710 —1 ar cr
257599 —2 ar cr

COMPARATIVE LITERATURE (CLit)

Cultural Studies and Comparative Literature
Liberal Arts

R 5910 Topics in Comparative Literature (prereq reading knowledge of French or German or Spanish, or #)
571797 —1 1245-1400 TTh, VinH 113, Jha P, 4 cr (The Literary Institution)
371798 —2 1245-1400 TTh, PeikH 225, Liu C, 4 cr

5970 Directed Readings (prereq #, Δ, CLA approval)
156115 1-4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
154736 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
653906 1-36 cr

R 8910 Advanced Comparative Literature Seminar (prereq 8001-8002-8003 or #)
058066 1430-1700 T, FolH 246, Brewer M, 4 cr

8970 Directed Reading (prereq grad stu in comparative lit, Δ)
358162 1-4 cr

COMPARATIVE STUDIES IN DISCOURSE AND SOCIETY (CSDS)

Cultural Studies and Comparative Literature
Liberal Arts

R 5910 Topics in Comparative Studies in Discourse and Society (prereq jr or sr maj or grad stu)
358999 —1 1430-1600 MW, LindH 217, Vidal H, 4 cr (Poetics of States of Emergencies) (§Span 5533)
771832 —2 1325-1625 Th, FolH 334, Sarles H, 4 cr (Pragmatics from Peirce to G.H. Mead and Today) (§CSCL 5910, sec 3)
176252 —3 1245-1400 TTh, EltH N119, Milich K, 4 cr

5970 Directed Studies (prereq grad stu, #)
060223 ar cr

R 8003 Basic Research Seminar in Comparative Studies in Discourse and Society (prereq Δ) (A-F only)
563599 4 cr (FolH 350)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
061341 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
558306 1-36 cr

R 8910 Advanced Topics in the Comparative Study of Discourse and Society
157417 —1 1325-1625 M, FolH 350, Leppert R, 4 cr (Adorno)
258171 —2 1535-1730 T, BlegH 350, Disch L, 3 cr (Feminist Theory) (§Pol 8260, sec 1, WoSt 8610, sec 2)
375687 —3 1630-1830 W, FolH 350, Leppert R, 4 cr (Pedagogy for Cultural Studies) (A-F only)
660984 —4 1325-1625 F, BlegH 330, Pomata G, 4 cr

8970 Directed Studies (prereq grad stu or #)
657860 ar cr

COMPOSITION AND COMMUNICATION (Comp)

Liberal Arts

R 1011 Writing Practice I (§Rhet 1101; prereq assignment to category 2 or 3)
053109 —1 0800-0850 MF, 0800-0955 W, LindH 303, 5 cr
054762 —2 0905-0955 MF, 0905-1100 Th, LindH 303, 5 cr
161077 —3 0905-1100 MW, LindH 315, 5 cr
256064 —4 1010-1100 MF, 1010-1205 T, LindH 303, 5 cr
956200 —5 1010-1100 MTWF, AkerH 211, 5 cr (non-native English speakers only) (go to KlaCt 127 for permission)
756151 —6 1115-1205 MF, 1115-1310 T, LindH 315, 5 cr
463840 —7 1115-1205 MF, 1115-1310 Th, LindH 303, 5 cr
156793 —8 1220-1310 MWThF, AkerH 225, 5 cr (non-native English speakers only) (go to KlaCt 127 for permission)
063770 —9 1220-1310 MF, 1220-1415 W, LindH 303, 5 cr
153383 —10 1325-1415 MF, LindH 320, 1325-1520 T, LindH 303, 5 cr
963745 —11 1325-1415 MF, 1325-1520 Th, LindH 303, 5 cr
654909 —12 1325-1520 MW, LindH 315, 5 cr
162990 —13 1430-1520 MTWF, LindH 325, 5 cr
257148 —14 1430-1520 MWThF, AkerH 211, 5 cr
875211 —15 1430-1625 MW, LindH 320, 5 cr

R 1014 Writing Practice I and Cultural Diversity (CD)
072209 —1 0800-0955 MW, AkerH 317, 5 cr
172211 —2 1220-1310 MF, AkerH 317, 1220-1415 W, Arch 40, 5 cr
372210 —3 1325-1415 MF, 1325-1520 T, MechE 221, 5 cr

R 1015 Writing Practice and the Environment (Envt) (A-F only)
075207 1325-1415 MTWF, FolH 334, 5 cr

R 1027 Intermediate Expository Writing (prereq fulfillment of Writing Practice req)
653064 —1 0905-0955 MWF, FordH 40, 4 cr
653081 —2 1010-1100 MWF, Phys 236A, 4 cr
560928 —3 0945-1100 TTh, VinH 207, 4 cr
756960 —4 1245-1400 TTh, VinH 6, 4 cr
360171 —5 1415-1530 TTh, VinH 1, 4 cr

R 3011 Writing about Literature (prereq fulfillment of Writing Practice req, jr)
663478 —1 1325-1415 MWF, BuH 125, 4 cr
861972 —2 1430-1520 MWF, AmundH 124, 4 cr
861244 —3 1115-1230 TTh, VinH 364, 4 cr
157698 —4 1245-1400 TTh, VinH 301, 4 cr
775203 —5 1415-1530 TTh, VinH 311, 4 cr

R 3012 Writing in the Humanities (prereq fulfillment of Writing Practice req, jr)
154686 —1 0800-0850 MWF, Arch 20, 4 cr
458170 —2 0905-0955 MWF, Arch 60, 4 cr
458962 —3 1430-1520 MWF, AkerH 319, 4 cr
055524 —4 1115-1230 TTh, SmithH 121, 4 cr
175201 —5 1245-1400 TTh, VinH 207, 4 cr
575199 —6 1415-1530 TTh, VinH 113, 4 cr

R 3013 Writing for the Arts (prereq fulfillment of Writing Practice req, jr)
657406 —1 0800-0850 MWF, LindH 315, 4 cr
155084 —2 0905-0955 MWF, LindH 320, 4 cr
558984 —3 1430-1520 MWF, LindH 303, 4 cr
453695 —4 0815-0930 TTh, LindH 315, 4 cr
162682 —5 1245-1400 TTh, LindH 325, 4 cr
675212 —6 1415-1530 TTh, LindH 320, 4 cr

R 3014 Writing in the Social Sciences (prereq fulfillment of Writing Practice req, jr)
959162 —1 0800-0850 MWF, LindH 320, 4 cr
959047 —2 0905-0955 MWF, AkerH 309, 4 cr
758885 —3 1010-1100 MWF, AkerH 317, 4 cr
458329 —4 1220-1310 MWF, LindH 315, 4 cr
261765 —5 1220-1310 MWF, Arch 20, 4 cr
256114 —6 1325-1415 MWF, AkerH 319, 4 cr
261068 —7 1325-1415 MWF, AkerH 225, 4 cr
160777 —8 1430-1520 MWF, AkerH 225, 4 cr
559276 —9 1430-1520 MWF, AkerH 309, 4 cr
459190 —10 0815-0930 TTh, VinH 207, 4 cr
660189 —11 0815-0930 TTh, VinH 2, 4 cr
963762 —12 0945-1100 TTh, VinH 2, 4 cr
757834 —13 0945-1100 TTh, FordH 170, 4 cr
060660 —14 1115-1230 TTh, LindH 340, 4 cr
958674 —15 1245-1400 TTh, VinH 2, 4 cr
556703 —16 1245-1400 TTh, VinH 313, 4 cr
475213 —17 1415-1530 TTh, VinH 6, 4 cr
275214 —18 1415-1530 TTh, VinH 301, 4 cr

R 3015 Writing about Science (prereq fulfillment of writing practice req, jr)
257246 —1 1010-1100 MWF, AkerH 215, 4 cr
958870 —2 1115-1205 MWF, AkerH 317, 4 cr
957329 —3 1220-1310 MWF, AkerH 313, 4 cr
462381 —4 0815-0930 TTh, FordH 170, 4 cr
855525 —5 0815-0930 TTh, VinH 313, 4 cr
175215 —6 1115-1230 TTh, LindH 325, 4 cr

R 3022 Critical Reading and Writing for Management (prereq 1011 or equiv, Mgmt or Pre-Mgmt stu with more than 60 cr)
356993 —1 0800-0850 MWF, AkerH 313, 4 cr
258848 —2 0905-0955 MWF, SmithH 121, 4 cr
956505 —3 1325-1415 MWF, AkerH 309, 4 cr
361983 —4 0945-1100 TTh, VinH 313, 4 cr
075210 —5 1245-1400 TTh, VinH 209, 4 cr
875208 —6 1415-1530 TTh, VinH 207, 4 cr

R 3027 Advanced Expository Writing (prereq fulfillment of Writing Practice req, jr)
554112 —1 0905-0955 MWF, AkerH 215, 4 cr
353107 —2 1010-1100 MWF, MechE 202, 4 cr
654568 —3 1325-1415 MWF, NichH 109, 4 cr (non-native English speakers only) (go to KlaCt 127 for permission)
455673 —4 1325-1415 MWF, AkerH 215, 4 cr
854942 —5 0815-0930 TTh, VinH 364, 4 cr
758675 —6 1245-1400 TTh, SmithH 121, 4 cr
175206 —7 1415-1530 TTh, VinH 2, 4 cr

R 3031 Technical Writing for Engineers (prereq fulfillment of Writing Practice req, jr, IT stu)
259997 —1 0800-0850 MWF, FordH 160, 4 cr
954267 —2 0905-0955 MWF, AkerH 211, 4 cr (non-native English speakers only) (go to KlaCt 127 for permission)
157143 —3 1010-1100 MWF, Arch 45, 4 cr
859168 —4 1115-1205 MWF, AkerH 313, 4 cr
753816 —5 1430-1520 MWF, AkerH 215, 4 cr
057032 —6 0815-0930 TTh, Arch 30, 4 cr
356704 —7 0945-1100 TTh, VinH 364, 4 cr
575204 —8 1115-1230 TTh, AkerH 209, 4 cr

Symbols

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- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 3032 Preprofessional Writing for Business (prereq fulfillment of Writing Practice req, mgmt or mort sci maj, jr)
162875 —1 0800-0850 MWF, Arch 50, 4 cr
258316 —2 0905-0955 MWF, AkerH 209, 4 cr
654845 —3 1010-1100 MWF, Arch 60, 4 cr
263824 —4 1115-1230 TTh, AkerH 319, 4 cr
655526 —5 1245-1400 TTh, VinH 213, 4 cr

R 3033 Writing for the Health Sciences (prereq fulfillment of Writing Practice req, more than 60 credits)
760376 —1 0800-0850 MWF, AkerH 211, 4 cr
154131 —2 0905-0955 MWF, FordH 160, 4 cr
161279 —3 1010-1100 MWF, AkerH 309, 4 cr
462008 —4 0815-0930 TTh, AkerH 317, 4 cr
763701 —5 0945-1100 TTh, AkerH 309, 4 cr
958710 —6 1415-1530 TTh, VinH 213, 4 cr

R 3051 Feminist Expository Writing (§WoSt 3104; prereq fulfillment of writing practice requirement, jr, WoSt maj or min or Δ)
160245 0905-0955 MWF, Arch 45, 4 cr

COMPUTER SCIENCE (CSci)
Institute of Technology

An IT computer fee is assessed at the time of registration for *all* CSci courses except 1001, 3311, 5201, 5211, 5400, 5421, 5703, 8102, 8110, 8161, 8163, 8350, 8360, 8403, 8404, 8421, 8561, 8571, 8701, 8702, and 8703. See page 22 for more information on this fee.

R 3101 An Introduction to Computer Applications for Scientists and Engineers (prereq 1 qtr calculus)
★LECT 0905-0955 MWF, EE/CSci 3210, Mobasher B
460453 —1 REC 0905-0955 T, LindH 203, 4 cr
061386 —2 REC 0905-0955 T, EE/CSci 3115, 4 cr
162410 —3 REC 1010-1100 T, LindH 203, 4 cr
054390 —4 REC 1010-1100 T, Arch 15, 4 cr

R 3113 Introduction to Procedural Programming in C (§3121, 3322, 5113; prereq precalc or #)
★LECT 0800-0850 MWF, Phys 150, Dovolis C
862698 —1 LAB 1325-1725 M, EE/CSci 2120, 4 cr
660676 —2 LAB 0800-1200 T, EE/CSci 2120, 4 cr
158690 —3 LAB 1325-1725 T, EE/CSci 2120, 4 cr
156719 —4 LAB 1730-2130 T, EE/CSci 2120, 4 cr
155554 —5 LAB 0800-1200 Th, EE/CSci 2120, 4 cr
763715 —6 LAB 1325-1725 Th, EE/CSci 2120, 4 cr
161685 —7 LAB 0905-1305 F, EE/CSci 2120, 4 cr
559682 —8 LAB 0900-1300 S, EE/CSci 2120, 4 cr

R 3311 Discrete Structures of Computer Science (§3400; prereq 3317, 3321)
★LECT 1810-2040 M, MechE 108, 202, Kumar V
359070 —1 REC 0905-0955 Th, EE/CSci 2260, 4 cr
363393 —2 REC 1010-1100 Th, EE/CSci 2260, 4 cr

R 3316 The Structure of Computer Programming I (prereq 1 qtr calc or #)
★LECT 1325-1415 MWF, EE/CSci 3210, Carlis J
553512 —1 REC 0800-0850 T, EE/CSci 1260, 4 cr
954723 —2 REC 0905-0955 T, EE/CSci 1260, 4 cr
059749 —3 REC 1220-1310 T, EE/CSci 1260, 4 cr
359909 —4 REC 1325-1415 T, EE/CSci 1260, 4 cr

R 3317 The Structure of Computer Programming II (prereq 3316)
★LECT 1325-1415 MWF, Phys 166, Johnson D
163680 —1 REC 1010-1100 T, EE/CSci 1260, 4 cr
161654 —2 REC 1115-1205 T, EE/CSci 1260, 4 cr
759650 —3 REC 1430-1520 T, EE/CSci 1260, 4 cr
375088 —4 REC 1535-1625 T, EE/CSci 1260, 4 cr

R 3321 Algorithms and Data Structures I (§3105, 3121; prereq knowledge of C or 3113 or #)
★LECT 1010-1100 MWF, EE/CSci 3210, Riedl J
860367 —1 REC 0800-0850 Th, EE/CSci 1260, 4 cr
357836 —2 REC 0905-0955 Th, EE/CSci 1260, 4 cr
059458 —3 REC 1010-1100 Th, EE/CSci 1260, 4 cr
053806 —4 REC 1115-1205 Th, EE/CSci 1260, 4 cr
156454 —5 REC 1220-1310 Th, EE/CSci 1260, 4 cr
354743 —6 REC 1325-1415 Th, EE/CSci 1260, 4 cr

R 3322 Algorithms and Data Structures II (§5121; prereq 3311)
★LECT 1115-1205 MWF, NichH 211, Saad Y
953359 —1 REC 0905-0955 T, LindH 302, 4 cr
854245 —2 REC 1010-1100 T, LindH 302, 4 cr
461215 —3 REC 1115-1205 T, EE/CSci 3210, 4 cr
571735 —4 REC 1115-1205 T, LindH 217, 4 cr

3977 Industrial Student Coop Assignment (may be repeated for cr 4 times; prereq #) (S-N only)
175092 2 cr

R 5102 Introduction to Systems Programming (no grad cr for CSci maj; prereq 3327, 5101 or #)
756778 —1 1115-1230 TTh, MechE 212, Tsai W T, 4 cr

R 5103 Introduction to Operating Systems (§5502; prereq 3322, 5102, ¶5201 or #)
256663 1640-1755 TTh, EE/CSci 3210, Heimdahl M, 4 cr

R 5106 Structure of Higher Level Languages (no grad cr for CSci maj; prereq 3321, 3327, 3317 or #)
171737 1810-2040 Th, EE/CSci 3210, Mobasher B, 4 cr

R 5107 Computer Graphics I (prereq 3322, 3327 or #)
261393 1545-1700 TTh, EE/CSci 3115, Barry P, 4 cr

R 5113 Introduction to Object-Oriented Programming Using C++ (§3121, 3321, 3322; prereq backgrnd in C lang prog equiv to 3113, no grad cr for CSci maj)
873491 1640-1755 MW, EE/CSci 3230, Li Z, 4 cr

R 5121 Algorithms and Data Structures II (§3322; prereq 3311; CSci maj should take 3322)
★LECT 1115-1205 MWF, NichH 211, Saad Y
660130 —1 REC 0905-0955 T, LindH 302, 4 cr
955936 —2 REC 1010-1100 T, LindH 302, 4 cr
253164 —3 REC 1115-1205 T, EE/CSci 3210, 4 cr
371736 —4 REC 1115-1205 T, LindH 217, 4 cr

R 5199 Problems in Languages and Systems (prereq #)
176249 1430-1545 W, LindH 305, 1 cr

R 5201 Computer Architecture (no grad cr for CSci maj; prereq 3327 or #)
063221 —1 0945-1100 TTh, MechE 108, Yew P C, 4 cr

R 5211 Data Communications and Computer Networks (prereq 5102 or #)
661620 —1 1245-1400 TTh, MechE 108, Borchers A, 4 cr

R 5221 Advanced Computer Networks and Their Applications (prereq 5211 or #) (A-F only)
157711 —1 1545-1700 TTh, EE/CSci 3125, Zhang Z L, 4 cr

R 5281 Computer Aided Design of VLSI (prereq 3311 or #)
473493 1545-1700 TTh, EE/CSci 3230, Shragowitz E, 4 cr

R 5301 Numerical Computation (no grad cr for CSci maj; prereq Math 3261,knowledge of a prog lang or #; informal lab)
★LECT 1415-1530 TTh, EE/CSci 3230, Fox D
175089 —1 REC 0905-1035 M, EE/CSci 1260, 4 cr
575090 —2 REC 1115-1245 M, EE/CSci 1260, 4 cr
375091 —3 REC 1430-1600 M, EE/CSci 1260, 4 cr

R 5302 Analysis of Numerical Algorithms (prereq 5301 or #)
253486 1415-1530 TTh, EE/CSci 3210, Boley D, 4 cr

R 5306 Numerical Methods for Partial Differential Equations (prereq 5302, differential equations or advanced calculus)
963647 1245-1400 TTh, LindH 217, Petzold L, 4 cr

R 5400 Introduction to Automata Theory (no grad cr for CSci maj; prereq 3311 or #)
657373 1640-1755 TTh, Arch 50, Du D Z, 4 cr

R 5511 Artificial Intelligence I (prereq 3322 or #)
273494 1245-1400 TTh, AkerH 209, Slagle J, 4 cr

R 5531 Artificial Intelligence Programming Techniques (prereq 5511 or #)
173495 1115-1230 TTh, EE/CSci 3111, Gini M, 4 cr

R 5551 Introduction to Intelligent Robotic Systems (prereq 5511 or #) (A-F only)
871739 1245-1400 TTh, Phys 210, Papanikolopoulos N, 4 cr

R 5703 Database System Design (prereq 5702 or #)
857081 1640-1755 MW, EE/CSci 3210, Srivastava J, 4 cr

R 5799 Problems: Information Science (prereq #)
476250 1010-1125 MW, EE/CSci 2120, 4 cr

5990 Advanced Project Laboratory (no grad cr; may be repeated for cr; prereq 5102, upper div CSci stu, #)
075093 4 cr

R 8110 Human Computer Interaction and UI Technology (prereq 5110 or 5111 or #)
171740 1545-1700 TTh, LindH 215, Konstan J, 3 cr

R 8221 Special Research Topics in Computer Networking (prereq 5211 or #) (A-F only)
871742 —1 1640-1930 W, EE/CSci 3125, Du David, 3 cr

R 8299 Seminar: Machine Design (prereq #)
971750 Yew P C, 1 cr

R 8350 Advanced Parallel Numerical Methods (§5307, 8307; prereq 5301, 5151 or #)
973496 1415-1530 TTh, LindH 217, Park H, 3 cr

R 8421 Advanced Algorithm Design (§8402; prereq 5421 or #)
773497 0945-1100 TTh, AkerH 317, Teng S, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
652948 1-18 cr

R 8705 Scientific Databases and Applications (prereq 5702 or #)
573498 1415-1530 TTh, LindH 215, Shekhar S, 3 cr

8760 Plan B Project (prereq #, CSci maj) (S-N only)
258994 3 cr

8777 Thesis Credits: Masters
163789 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
059329 1-36 cr

R 8899 Computer Science Colloquium (prereq grad) (S-N only)
754061 —1 1430-1530 M, MechE 108, Du D Z, 1 cr

CONSERVATION BIOLOGY (CBio)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed prelim orals)
655025 1-18 cr

8777 Thesis Credits: Masters
560976 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
558239 1-36 cr

CONTROL SCIENCE AND DYNAMICAL SYSTEMS (CSDy)
Institute of Technology

8668 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
259076 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
162858 1-36 cr

R 8899 Seminar in Control and Dynamical Systems (prereq #) (S-N only)
662234 —1 1430-1530 F, MechE 108, Georgiou T, 1-3 cr

COPTIC (Copt)
Classical and Near Eastern Studies
Liberal Arts

5300 Readings in Coptic (prereq 5012 or equiv)
371753 1115-1230 TTh, FolH 426, Sellew P, 4 cr

CULTURAL STUDIES AND COMPARATIVE LITERATURE (CSCL)
Liberal Arts

R 1301 Discourse and Society I: Reading Culture (AH)
663108 —1 0905-0955 MWF, FolH 218, Van Cleve J, 4 cr
561366 —2 1010-1100 MWF, NichH 109, Jenemann D, 4 cr
752973 —3 1115-1205 MWF, FolH 306, Falla J, 4 cr
357299 —4 0815-0930 TTh, FolH 50, Kincaid A, 4 cr
161573 —5 1415-1530 TTh, VinH 313, 4 cr

R 1302 Discourse and Society II: Meaning and History (Hist)
057080 —1 0905-0955 MWF, BuH 120, Marcus C, 4 cr
460033 —2 1415-1530 TTh, VinH 209, Lekas M, 4 cr

R 1303 Discourse and Society III: Knowledge, Persuasion, and Power (AH)
455852 —1 0905-0955 MWF, FordH 60, Lee D, 4 cr
055877 —2 1010-1100 MWF, NichH 211, Knighton A, 4 cr
257795 —3 1820-2050 M, FolH 326, 4 cr
175571 —4 1415-1530 TTh, NichH 211, 4 cr

R 3172 Music as Discourse (§Hum 3172) (Vis)
975572 1820-2050 T, FolH 214, Thomas G, 4 cr

R 3174 Poetry as Cultural Critique (§Engl 3910, Hum 3174)
675565 1115-1205 MWF, LindH 302, Damon M, 4 cr

R 3175 Comedy: Text and Theory (AH)
957086 0945-1100 TTh, NichH 211, Thomas G, 4 cr

R 3321 Theories of Culture (prereq jr or sr or #) (AH)
259577 1220-1310 MWF, FolH 38, Mowitt J, 4 cr

R 3331 Science and the Humanities (prereq jr or sr or #) (Phil)
775573 1820-2050 T, FolH 138, McLemore E, 4 cr

R 3361 Visions of Nature: The Natural World and Political Thought (§EEB 3006) (Envt; C/PE)
955421 1830-2010 TTh, FolH 50, Regal P, 4 cr

R 3456 Sexualities: From Perversity to Diversity (prereq CSCL 1301 or 1302 or 1303 or any WoSt courses)
671757 1245-1400 TTh, NichH 209, Messer-Davidow E, 4 cr

R 3474 The Political Novel (§Hum 3738; prereq jr or sr or #)
375575 1820-2050 W, FolH 214, Campbell B, 4 cr

R 3910 Topics in Cultural Studies and Comparative Literature (prereq jr or sr or #)
175576 1820-2050 Th, FolH 214, Chateau J, 4 cr

R 3979 Issues in Cultural Pluralism (§AmSt 3113) (CD; C/PE)
471758 1115-1205 MWF, Phys 133, Sarles H, 4 cr

R 5154 Theoretical Constructions of Space (§Hum 5154; prereq jr or sr or grad stu or #)
271759 1245-1400 TTh, FolH 38, Archer J, 4 cr

R 5910 Topics in Cultural Studies and Comparative Literature (prereq jr or sr or grad stu or #)
454152 —1 1245-1400 TTh, LindH 302, Sugnet C, 4 cr
975569 —2 1415-1530 TTh, NichH 209A, Lardinois A, 4 cr
275570 —3 1325-1625 Th, FolH 334, Sarles H, 4 cr (Pragmatics from Peirce to G.H. Mead and Today) (§CSDS 5910, sec 2)

5970 Directed Studies (prereq jr or sr or grad stu, #)
259692 ar cr

5970H Directed Studies: Honors (prereq jr or sr or grad stu, #)
957721 ar cr

CURRICULUM AND INSTRUCTION (CI)
Education and Human Development

R 1000 Schooling, Learning, and Society (A-F only)
562615 1325-1520 TTh, PeikH 28, Manning J, Golez F, 4 cr

R 3001 Survey of Art Activities (§ArEd 3001; prereq non-art ed maj) (A-F only)
160060 0905-1205 TTh, PeikH 40, Frenzel M, 4 cr

R 3045 Contemporary Crafts (§ArEd 3020) (A-F only)
562923 1325-1625 MW, PeikH 40, 4 cr

3680 Student Teaching in Second Languages and Cultures (§SeEd 3631; prereq #) (S-N only)
060271 Tedick D, Jorstad H, others, 3 cr

R 5008 Theory and Practice of Teaching Art in Elementary Schools (§ArEd 5308) (A-F only)
671502 1300-1620 MW, PeikH 40, Di Blasio M, 4 cr (Elem post-bacs only)

R 5045 Advanced Contemporary Crafts (§ArEd 5020; prereq 3045 or ArEd 3020 or #) (A-F only)
454460 1325-1620 MW, PeikH 40, 4 cr

R 5052 Introduction to Art Therapy (§ArEd 5201) (A-F only)
471503 1640-2010 M, PeikH 40, DiBlasio M, 3 cr

5080 Internship in Art Education (§ArEd 5600; prereq #)
657020 DiBlasio M, 2-9 cr

5085 Practicum: Art Education (§ArEd 5605; prereq #)
860899 Freedman-Norberg K, 2-9 cr

5086 Student Teaching in Art Education (§ArEd 3600; prereq 5150, 5110 or (SeEd 3150 or Elem 3101)) (S-N only)
663433 Bridges B, 3-12 cr

R 5130 Introduction to Curriculum Studies (§CISy 5600) (A-F only)
257800 1630-2000 M, PeikH 28, Nunneley R, 4 cr

R 5145 Curriculum Topics (§CISy 5100; max 6 cr)
363572 —1 1640-1915 Th, PeikH 46, Narvaez D, 1 cr
555485 —2 1325-1445 TTh, PeikH 46, Golez F, 1 cr
176727 —7 1630-2000 W, PeikH 28, Ceglowski D, 1 cr (Apr 16, 23, May 7, June 4, 11)
076728 —8 1630-2000 W, PeikH 28, Ceglowski D, 1 cr (Apr 2, 9, 30, May 21, 28)

R 5153 Thematic Instruction for Middle Grades (§AdEd 5191, Educ 5191, Elem 5191, SeEd 5291)
371509 1630-1830 W, PeikH 46, Post T, 2 cr

R 5172 Teaching Students with Learning Difficulties (§Elem 5107) (A-F only)
863222 1630-1915 M, PeikH 46, Watts S, 3 cr

5180 Clinical Experience in Elementary School Teaching (§Elem 5212) (S-N only)
561271 Buggey J, 6-12 cr

R 5183 Applying Instructional Methods in the Elementary School (max 4 cr; §Elem 5211) (S-N only)
771510 Buggey J, 2 cr

5186 School-Related Projects in Curriculum and Instruction (§5090, 5480, 5583, 5669, 5764; prereq CI MEd stu or #)
753637 —1 Anderson G, 1-12 cr
762662 —2 Avery P, 1-12 cr
571511 —3 Balli S, 1-12 cr (Rochester)
371512 —4 Balli S, 1-12 cr
471548 —5 Beach R, 1-12 cr
171513 —6 Di Blasio M, 1-12 cr
071514 —7 Finley F, 1-12 cr
271549 —8 Freedman-Norberg K, 1-12 cr
871515 —9 Golez F, 1-12 cr
671516 —10 Graves M, 1-12 cr
471517 —11 Heller P, 1-12 cr
271518 —12 Hooper S, 1-12 cr
171519 —13 Jorstad H, 1-12 cr
271521 —14 Lambrecht J, 1-12 cr
171522 —15 Lawrenz F, 1-12 cr
971523 —16 Narvaez D, 1-12 cr
771524 —17 Orton R, 1-12 cr
571525 —18 Post T, 1-12 cr
371526 —19 Stochl J, 1-12 cr
171527 —20 Tedick D, 1-12 cr
071528 —21 Walker C, 1-12 cr

5187 Practicum: Improvement of Teaching in Elementary or Pre-Kindergarten Schools (§Elem 5602; prereq MEd stu in elem educ or early childhood educ) (S-N only)
955029 —1 Avery P, 4 cr
154467 —2 Buggey L, 4 cr
263290 —3 Cogan J, 4 cr
460131 —4 Finley F, 4 cr
553025 —5 Galle L, 4 cr
260907 —6 Heller P, 4 cr
058505 —7 Johnson R, 4 cr
359358 —8 Lawrenz F, 4 cr (Rochester)
159216 —9 Manning J, 4 cr
454314 —10 Monson D, 4 cr
457374 —11 Phinney M, 4 cr
957234 —12 Post T, 4 cr
153098 —13 Stochl J, 4 cr
858926 —14 Taylor B, 4 cr
258784 —15 Watts S, 4 cr
876729 —16 Ceglowski D, 4 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

5190 Directed Individual Study in Curriculum and Instruction (§CISy 5509; max 6 cr; prereq #)
562291 —1 Hooper S, 1-6 cr
461618 —2 Narvaez D, 1-6 cr

5195 Directed Study in Elementary and Secondary Education (max 6 cr; §SeEd 5351; prereq educ or grad stu)
855735 —1 Avery P, ar cr
158432 —2 Beach R, ar cr
458296 —3 Finley F, ar cr
058147 —4 Heller P, ar cr
154168 —5 Johnson R, ar cr
558919 —6 Lawrenz F, ar cr

R 5252 Contemporary Programs for Young Children (§Elem 5378; prereq MEd stu in early childhood educ)
475101 1630-1915 M, PeikH 225, Carlson L, 3 cr

R 5253 Cognitive and Creative Learning in Early Childhood Education (§Elem 3379; prereq CPsy 1301 or CPsy 5301) (A-F only)
175103 1630-1915 T, PeikH 315, 3 cr

5280 Student Teaching in the Kindergarten (prereq 5250, 6 cr elem stu tchg or current elem license) (S-N only)
656627 Hansen H, Buggey L, 3-6 cr

R 5281 Student Teaching in the Nursery School (§Elem 3604; prereq approval of maj advisor and director of stu teaching) (S-N only)
975104 1630-1815 W, PeikH 225, Galle L, 3-6 cr

5300 Technology for Teaching and Learning (A-F only)
660595 1630-2010 M, EddyH 62, Balli S, 2 cr

R 5331 Instructional Systems: Trends and Issues (max 9 cr) (A-F only)
273429 1630-1915 T, PeikH 25, Balli S, 3 cr

R 5360 Teaching Via the Internet (A-F only)
171530 1630-2000 W, EddyH 62, Lambrecht J, 4 cr

R 5367 Interactive Multimedia Instruction (§CISy 5207; prereq 5363 or 5337 or #) (A-F only)
173567 1630-2000 T, PeikH 355, Hooper S, 4 cr

R 5401 Literature for the Elementary School (§Elem 5300) (A-F only)
673430 1630-2010 W, PeikH 335, Monson D, 4 cr (TC-Inservice)

R 5411 Reading Difficulties: Assessment and Instruction (§Elem 5334; prereq 5410 or 5450) (A-F only)
461196 1630-2000 M, PeikH 28, Taylor B, Smith, 4 cr

R 5414 Literacy Development in the Primary Grades (§Elem 5337; prereq 3410 or elem tchg exp or #) (A-F only)
457097 1630-2010 M, PeikH 48, Phinney M, 4 cr (TC-Inservice)

5440 Teaching Literature in Secondary Schools (§SeEd 5321) (A-F only)
471534 1640-2010 T, PeikH 46, Scapple S, 4 cr

R 5472 Teaching Film, Television, and Media Studies (§SeEd 5326) (A-F only)
873569 1630-1915 Th, PeikH 48, Beach R, 3 cr

R 5500 Teaching Science in the Elementary School (§Elem 5346; prereq elem educ postbac or #)
171536 1010-1100 MWF, PeikH 385, Johnson R, 3 cr (¶5506)

R 5506 Teaching Health in the Elementary Schools (§Elem 5213; prereq elem postbac or #)
971537 0905-0955 MWF, PeikH 385, Buggey J, Johnson R, 1 cr (¶5500)

5534 Foundations of Science Education (§SeEd 5706; prereq MEd or grad stu) (A-F only)
856156 1630-2000 W, PeikH 385, Finley F, 4 cr

5535 Advanced Methods of Secondary Science Teaching and Assessment (§SeEd 5398; prereq MEd or grad stu or #) (A-F only)
771538 1630-2000 T, PeikH 365, Heller P, 4 cr

R 5537 Workshop: Science Education (max 16 cr; §SeEd 5394)
275102 1640-2010 M, PeikH 385, Finley F, 4 cr

5572 Seminar: Reflecting on Clinical Experience in Science Teaching (§SeEd 5705; ¶5582 required; prereq 5331 or (SeEd 5702, SeEd 5703) or #)
356301 1730-2000 Th, PeikH 385, Heller P, 3 cr

5580 Applying Science Methods in Middle and Secondary Schools (max 10 cr; §SeEd 5701, SeEd 5703; prereq post bac sci ed stu or #, ¶5530 or ¶5531) (A-F only)
276217 1115-1325 W, PeikH 365, Lindow L, 3 cr

5631 Second Language Curriculum (§SeEd 5801; prereq postbac stu)
155022 1325-1520 MWF, PeikH 215, Tedick D, 3 cr

5632 Second Language Instruction (§SeEd 5802; prereq postbac stu)
854732 1325-1520 TTh, PeikH 215, Walker C, 3 cr (SLC postbacs only)

5633 Second Language Research (§SeEd 5803; max 6 cr; prereq SLC postbac licensure graduate; 6 cr taken after compl of lic)
853578 1640-1810 T, PeikH 335, Walker C, 6 cr

5660 Special Topics in the Teaching of Second Languages and Cultures (§SeEd 5191; max 10 cr)
858635 1640-1800 M, PeikH 215, Jorstad H, 2 cr

R 5662 Critical Issues in Second Language Curriculum (§SeEd 5189)
860059 1640-2010 W, PeikH 215, Tedick D, 4 cr

5680 Practicum: Teaching Second Languages and Cultures in Elementary Schools (§Elem 5320; prereq 5619 or Elem 5319 or ¶5619, #) (S-N only)
362356 Jorstad H, Tedick D, Walker C, 3 cr

5684 Clinical Experiences in Second Languages (max 12 or 18 cr; prereq MEd/init lic stu)
273656 1535-1625 TTh, PeikH 215, Fortune T, Guderyon S, 6 cr (SLC postbacs only)

5690 Directed Study in Second Languages and Cultures (§SeEd 5351; prereq educ or grad stu)
961199 —1 Jorstad H, ar cr
562565 —2 Paige M, ar cr
560542 —3 Tedick D, ar cr
358565 —4 Walker C, ar cr

R 5700 Teaching Social Studies in the Elementary School (§Elem 5361; prereq 5110 or Elem 3101 or equiv, postbac stu)
571539 1115-1205 MWF, PeikH 385, Buggey J, 3 cr (post-bacs only)

R 5743 Seminar: Reflecting on the Clinical Experience in Social Studies Education (prereq soc std post bac or #) (A-F only)
857727 1630-1915 W, PeikH 315, Avery P, 3 cr

R 5821 Teaching Mathematics in the Elementary School (§Elem 3391; prereq 5110 or Elem 3100, Elem 3101, Math 1005, Math 1006)
971540 0800-0850 MWF, PeikH 385, Lin P J, Haller S, 3 cr

8099 Problems: Art Education (§ArEd 8900; prereq #)
958920 —1 DiBlasio M, ar cr
556586 —2 Freedman-Norberg K, ar cr

R 8132 Curriculum and Instruction Core: Research Methods in Curriculum and Instruction (§CISy 8103; prereq PhD stu or #) (A-F only)
360543 1630-1915 M, PeikH 155, Lawrenz F, 3 cr

R 8136 Curriculum Reform and Social Change (§CISy 8600; prereq 5100 or 5130 or CISy 5600 or Elem 5100 or #)
771541 1630-2000 T, PeikH 31, Courtney M, 4 cr

R 8161 Planning a Research Experience (prereq 8160)
571542 1630-1915 W, PeikH 48, Graves M, 3 cr

R 8190 Problems: Improvement of Instruction (§Elem 8991; prereq #)
462011 —1 Avery P, ar cr
056947 —2 Cogan J, ar cr
256159 —3 Finley F, ar cr
359991 —4 Hansen H, ar cr
554031 —5 Heller P, ar cr
856528 —6 Johnson R, ar cr
754884 —7 Manning J, ar cr
054602 —8 Monson D, ar cr
962076 —9 Lawrenz F, ar cr
852950 —10 Phinney M, ar cr
156809 —11 Post T, ar cr
461408 —12 Stochl J, ar cr
856948 —13 Taylor B, ar cr
255741 —14 Watts S, ar cr

8199 Problems: Curriculum Studies (§CISy 8501; prereq PhD stu)
158566 Freedman-Norberg K, 3-9 cr

R 8290 Problems: Teaching Kindergarten (§Elem 8976; prereq #)
058150 Hansen H, 3 cr

R 8361 Advanced Courseware and Design: Issues (§CISy 8411; prereq 5364 or CISy 5212 or #)
371543 1630-2000 M, PeikH 33, Hooper S, 4 cr

8390 Problems: Instructional Systems (§CISy 8501; prereq #)
263001 —1 Hooper S, ar cr
661925 —2 Lambrecht J, ar cr

R 8420 Research in Composition (§Elem 8316; prereq 5425 or Elem 5316 or 5460 and #)
171544 1630-1915 T, PeikH 225, Phinney M, 4 cr

8492 Readings in English Education and Reading (§SeEd 8895)
853094 Beach R, 1-3 cr

R 8493 Problems: Teaching English and Reading (§SeEd 8896)
462784 —1 Manning J, ar cr
863432 —2 Monson D, ar cr
662296 —3 Phinney M, ar cr
871546 —4 Taylor B, ar cr
071545 —5 Watts S, ar cr

8590 Problems: Science Education (§SeEd 8871; prereq #)
752942 —1 Finley F, ar cr
860479 —2 Heller P, ar cr
857369 —3 Johnson R, ar cr
659544 —4 Lawrenz F, ar cr

R 8630 Research in Second Languages and Cultures Education (§SeEd 8188)
257571 0900-1230 S, PeikH 215, Jorstad H, 4 cr

R 8650 Seminar: Special Topics in Second Languages and Cultures Research (A-F only)
671547 1640-1915 Th, PeikH 215, Walker C, 3 cr

8694 Problems: Second Languages and Cultures Education (§SeEd 8894; max 8 cr)
158227 —1 Jorstad H, ar cr
156082 —2 Paige M, ar cr
061923 —3 Tedick D, ar cr
956231 —4 Walker C, ar cr

8698 Readings in Second Languages and Cultures Education (§SeEd 8898)
163288 —1 Jorstad H, 1-4 cr
263144 —2 Paige M, 1-4 cr
463000 —3 Tedick D, 1-4 cr
552943 —4 Walker C, 1-4 cr

R 8750 Problems: Social Studies Education (§SeEd 8801; prereq 5741, 5740, or SeEd 5150, SeEd 5152, SeEd 5156, SeEd 8104 or #)
155165 —1 Avery P, 3-9 cr
062358 —2 Cogan J, 3-9 cr

DANCE (Dnce)
Theatre Arts
Liberal Arts

R 1003 Fundamental Modern III (prereq 1002 or # or Δ)
956214 1115-1245 TTh, NorrisH M153, Maddux M, 1 cr

R 1006 Fundamental Ballet III (prereq 1005 or # or Δ)
460954 0750-0920 MW, NorrisH 67, Gilliland L, 1 cr

R 1009 Fundamentals of Jazz III (prereq 1008)
171441 0930-1100 TTh, NorrisH M153, Young C, 1 cr

R 1030 Beginning Modern III (max 4 cr; prereq 1020 or # or Δ)
660791 1325-1455 MTThF, NorrisH 67, Mann P, 2 cr

R 1034 International Folk I
971442 1115-1205 MF, NorrisH M151, Maddux M, 1 cr

R 1060 Beginning Ballet III (max 4 cr; prereq 1050 or # or Δ)
159368 0750-0920 MWF, NorrisH M153, Mathis B, 2 cr

R 1090 Beginning Jazz III (max 2 cr; prereq 1080 or # or Δ)
061078 1115-1245 TTh, NorrisH 80, Sealy Z, 1 cr

R 3030 Intermediate Modern III (max 4 cr; prereq 3020 or # or Δ)
762273 1325-1455 MTThF, NorrisH 80, Thompson E, 2 cr

R 3060 Intermediate Ballet III (max 4 cr; prereq 3050 or # or Δ)
157295 0930-1100 MWF, NorrisH M153, Gilliland L, 2 cr

R 3090 Intermediate Jazz III (max 2 cr; prereq 3080 or # or Δ)
255917 0750-0920 TTh, NorrisH M153, Young C, 1 cr

R 3313 Composition III (prereq 3312 or # or Δ)
★LECT 1115-1245 MF, NorrisH M153, Shapiro D
362115 —1 LAB 1115-1245 W, NorrisH M153, Shapiro D, 3 cr

R 3330 Topics in Dance Theory: Laban Movement Analysis II (prereq Δ)
557544 1325-1455 W, NorrisH 80, Loeb B, 1 cr

R 3401 Dance History I (prereq 1101) (Vis; IP)
975006 0750-0920 TTh, NorrisH 201, Barker B, 4 cr

R 3402 Dance History II (prereq 1101) (Vis; IP)
756862 0930-1100 TTh, NorrisH 201, Barker B, 4 cr

R 3700 Dance Repertory Theatre and Reconstruction (prereq concurrent enrollment in a technique class, audition, #) (A-F only)
959632 1510-1710 MTWThF, NorrisH 67, Cheng M, 3 cr (addtl hrs ar)

R 3901 Theatre Arts/Dance Senior Seminar (prereq sr, theatre or dance maj) (A-F only)
358002 1115-1245 TTh, NorrisH 201, Cheng M, 4 cr

R 5030 Advanced Modern III (max 9 cr; prereq 5020 or # or Δ)
854536 1325-1455 MTWThF, NorrisH M153, Smith J, 3 cr

R 5060 Advanced Ballet III (max 6 cr; prereq 5050 or # or Δ)
271437 0930-1100 MWF, NorrisH 67, Mathis B, 2 cr

R 5090 Advanced Jazz III (max 3 cr; prereq 5080 or # or Δ)
753508 0930-1100 TTh, NorrisH 67, Sealy Z, 1 cr

R 5100 Dance Practicum
553879 2 cr

R 5314 Composition VI (prereq Δ or 5313)
★LECT 1115-1245 MF, NorrisH 67, Smith J
160956 —1 LAB 1115-1245 W, NorrisH 67, Smith J, 3 cr

R 5616 Teaching Modern Dance (prereq # or Δ, intermediate level competency in modern)
471436 0750-0930 MF, NorrisH 201, Maddux M, 4 cr

R 5700 Workshop: Dance Performance (prereq concurrent registration in a technique class, Δ) (A-F only)
354998 1510-1710 MTWThF, NorrisH M153, Smith J, 3 cr (addtl hrs ar)

R 5910 Topics in Dance (max 12 cr; prereq #, Δ)
154968 1 cr

DANISH (Dan)
German, Scandinavian, and Dutch Liberal Arts

R 1103 Beginning Danish (prereq 1102)
162228 1600-1730 MWTh, FolH 326, Petersson T, 5 cr

R 1106 Intermediate Danish (prereq 1105)
852964 1325-1450 MWF, VinH 206, Petersson T, 5 cr

R 3670 Advanced Danish (max 28 cr; prereq 1106 or equiv)
862555 1415-1530 TTh, PeikH 225, Houe P, 4 cr

DENTAL HYGIENE (DH)
Dentistry

1093 Cariology (prereq 1091, 1092) (A-F only)
759468 1300-1415 W, 1000-1115 F, MoosT 6410, Majerus G, 3 cr

1094 Periodontology (prereq 1091, 1092) (A-F only)
★LECT 1010-1150 Th, MoosT 5125, Osborn J, 3 cr
461084 —1 CLN 1330-1600 Th, MoosT 8127, Osborn J

1192 The Dental Hygiene Care Process: Clinical Application II (prereq 1191) (A-F only)
★LECT 0800-0850 M, MoosT 6410, Stoltenberg J
362339 —1 CLN 0930-1215 MW, 1315-1615 MTF, 1700-1945 T, Stoltenberg J, others

3050 Research Methods in Dental Hygiene (A-F only)
959713 0800-0915 MF, MoosT 5125, Newell K, 3 cr

3095 Adjunct Clinical Procedures (prereq 1202) (A-F only)
760250 1100-1300 T, MoosT 8127, 1345-1615 T, MoosT 4160, Dittmar S, Romero E, 2 cr

3097 Social, Economic and Practice Factors in Oral Health (prereq dent hyg stu) (A-F only)
158284 1100-1215 T, 1330-1445 Th, MoosT 5125, Newell K, 3 cr

3176 General and Oral Pathology (A-F only)
362034 1115-1205 T, 0800-0940 Th, MoosT 2580, Vickers R, 3 cr

3195 The Dental Hygiene Care Process: Clinical Application V (prereq 3194) (A-F only)
★LECT 1315-1400 Th, MoosT 5125, Stoltenberg J
061856 —1 CLN 1700-1945 T, 0730-1215 Th, 0930-1215 WF, 1315-1615 WThF, Stoltenberg J, others

3198 The Dental Hygiene Care Process: Clinical Application VIII (prereq 3197) (A-F only)
★LECT 0800-0850 W, MoosT 5125, Newell K, 5 cr
957198 —1 CLN 0930-1215 MWF, 1315-1615 MTWF, 1700-1945 T, 0730-1215 Th, MoosT, Stoltenberg J

3204 Dental Hygiene Care for Individuals with Disabilities (prereq 3194) (A-F only)
859736 0945-1125 M, MoosT 5125, Blue C, 2 cr

3275 Oral Radiology I (A-F only)
263273 0745-0940 F, MoosT 2620, Kuba R, 2 cr

3276 Oral Radiology II: Theory and Principles of Radiology (prereq dent hyg jr) (A-F only)
153349 Kuba R, 2 cr

3280 Clinical Oral Radiology (3278-3279-3280-3281-3282-3283†; prereq 3279, dent hyg jr or sr) (A-F only)
954320 0 cr

DENTISTRY (Dent)
Dentistry

5000 Fixed Prosthodontics Technique Lectures (A-F only)
662069 1325-1415 W, MoosT 2690, 1 cr (1430-1520 M, MoosT 2690, Mar 31) (one time only)

5003 Fixed Prosthodontics Laboratory (A-F only)
060156 1430-1700 MW, MoosT 4170A, 4170, 3 cr (1530-1700 M, MoosT 4170A, 4170, Mar 31)

5007 Fixed Prosthodontics II (A-F only)
263841 0745-0835 F, MoosT 2530, 1 cr

5008 Porcelain Veneers
258820 1 cr

5009 Fixed Prosthodontics: Independent Study
456497 ar cr

5012 Fixed Prosthodontics Clinic (prereq 5011) (A-F only)
457181 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 9139, 9160, 9346, 3 cr

5017 Fixed Prosthodontics Clinic (prereq 5016) (A-F only)
260468 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 9139, 9160, 9346, 2 cr

5030 Geriatric Dentistry and Special Patient Care (S-N only)
558211 1010-1205 T, Mayo 100, 2 cr

5053 Dental Auxiliary Utilization Clinic (DAU I, II) (prereq 5052) (S-N only)
261913 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 9139, 9160, 9346, 0 cr

5055 Health Ecology: Independent Study
357898 ar cr

5070 Health Ecology Elective
954091 ar cr

5073 Advanced General Dentistry Elective
657485 ar cr

5075 Health Ecology: Dental Associateships
956987 ar cr

5093 Professional Problem Solving (prereq 5092) (A-F only)
660113 1535-1730 T, MoosT 2690, 1 cr (Apr 8) (one time only for testing)

5096 Professional Problem Solving (prereq 5095) (A-F only)
061808 0 cr

5099 Professional Problem Solving (prereq 5098) (A-F only)
260423 1 cr

5100 Genetics: An Introduction for Dental Students (S-N only)
175027 1430-1520 TF, MoosT 2620, 1 cr (Apr 1-May 9)

5150 Operative Dentistry I (A-F only)
755873 0745-0930 TTh, MoosT 2620, 2 cr (0745-0930 TTh, MoosT 2620, Apr 1-15; 0745-0835 TTh, MoosT 2620, Apr 17-May 6)

5153 Operative Dentistry Lab I (A-F only)
156034 0840-1230 TTh, MoosT 4170A, 4170, 4 cr

5157 Patient Management II (§5452) (A-F only)
160715 0745-0835 F, MoosT 2690, 2 cr (0745-0835 T, Apr 1, MoosT 2690)

5158 Operative Dentistry: Independent Study
757042 ar cr

5163 Operative Dentistry Clinic (prereq 5162) (A-F only)
159225 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 9160, 9327, 9346, 3 cr

5167 Operative Dentistry Clinic (†5165-5166-5167; prereq 5166) (A-F only)
257179 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 9160, 9327, 9346, 4 cr

5170 Seminar: Operative Dentistry
062456 1 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

5172 Esthetic Direct Anterior Restoratives (prereq 5160)
358338 1 cr

5173 Clerkship in Operative Dentistry (prereq 5160, 5165) (S-N only)
861440 2 cr

5175 Esthetic Dentistry Clinic (prereq 5172)
159984 1 cr

5182 Patient Management III (prereq 5181) (S-N only)
058889 0930-1215 MTWThF, 1315-1615 MTWThF, 1 cr

5186 Patient Management IV (prereq 5185) (S-N only)
260809 0845-1200 MTWThF, 1300-1600 MTWThF, 1 cr

5200 Current Literature Seminar (S-N only)
158740 0840-0930 T, 2 cr

5201 Current Literature Seminar (S-N only)
256923 1000-1200 MWF, 2 cr (1st week only) (Mar 31, Apr 2, 4)

5211 Introduction to Clinical Preventive Dentistry II (S-N only)
754819 1000-1200 MWF, 1 cr

5212 Introduction to Comprehensive Clinics (S-N only)
363829 1325-1415 W, MoosT 2620, 1 cr

5250 Oral Pathology: Independent Study
155918 ar cr

5252 Oral Pathology (prereq 5251) (A-F only)
358484 0840-0930 WF, MoosT 2530, 3 cr (2 hr lab ar)

5315 Oral and Maxillofacial Surgery III (A-F only)
754500 1430-1520 Th, MoosT 2530, 1 cr

5319 Oral Surgery Clinic Rotation (A-F only)
853791 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 7407, 7411, 7412, 7413, 7415, 7416, 7417, 7430, 7434, 7438, 7442, 7446, 7448, 1 cr

5320 Oral and Maxillofacial Surgery: Independent Study
556426 ar cr

5330 Nitrous Oxide Inhalation Analgesia/Emergency Drug Utilization (S-N only)
155635 1 cr

5335 Oral and Maxillofacial Surgery Clinic Elective Rotation (prereq 5310, 5311, 5315) (S-N only)
457827 ar cr

5372 Orthodontics II (prereq 5371) (A-F only)
253133 0745-0835 W, 1325-1415 Th, MoosT 2520, 2 cr

5376 Orthodontic Laboratory (S-N only)
556183 0745-0930 M, MoosT 4210, 4210A, 4222, 4222E, 1 cr

5378 Orthodontic Clinic Rotation (5377-5378†; prereq 5377) (S-N only)
558967 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 6345, 1 cr

5380 Orthodontics
353298 2 cr

5385 Orthodontics: Independent Study
861115 ar cr

5401 Pediatric Dentistry I (A-F only)
355133 1325-1415 F, MoosT 2620, 1 cr

5411 Clinical Pediatric Dentistry (prereq 5410) (A-F only)
558032 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 6125, 6168, 0 cr

5414 Clinical Pediatric Dentistry (prereq 5413) (A-F only)
053272 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 6125, 6168, 5 cr

5420 Pediatric Dentistry: Independent Study
158978 ar cr

5425 Treatment of the Difficult Pediatric Patient
461134 1 cr

5452 Patient Management II (A-F only)
154574 0745-0835 F, MoosT 2690, 1 cr

5460 Periodontology: Independent Study
161290 ar cr

5467 Periodontology Clinic (prereq 5466) (A-F only)
160133 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 8150, 8327, 8348, 2 cr

5470 Periodontology Clinic (prereq 5469) (A-F only)
154176 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 8150, 8327, 8348, 2 cr

5475 Clinical Seminar in Periodontology
154582 1 cr

5476 Periodontology Seminar
355990 2 cr

5477 Bacteriology and Immunology of Periodontal Disease
353897 1 cr

5478 Treatment of More Complicated Periodontal Patients
154937 ar cr

5551 Removable Prosthodontics II Lecture (A-F only)
755887 1325-1415 TTh, MoosT 2690, 2 cr (1220-1415 T, Apr 1; 2 hr session, one time only)

5553 Removable Prosthodontics: Independent Study
563229 ar cr

5555 Removable Prosthodontics Dentures Laboratory (A-F only)
754528 1430-1700 TTh, MoosT 4210A, 4210, 4222E, 4222, 3 cr

5560 Special Prosthodontics (A-F only)
758210 0930-1215 MF, MoosT 9227, 1325-1700 F, MoosT 4210, 3 cr

5564 Removable Prosthetics Clinic (prereq 5563) (A-F only)
062392 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 9160, 9139, 9346, 3 cr

5567 Removable Prosthodontics (A-F only)
153134 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 9139, 9160, 9346, 2 cr

5568 Review: Partial Removable Prosthetics
660144 1 cr

5569 Removable Prosthetics
056110 ar cr

5570 Seminar: Restorative Dentistry
261362 ar cr

5573 Treatment of the Difficult Prosthodontic Patient
054454 1 cr

5575 Overview of Implants Used in Dentistry
457262 1 cr

5577 Advanced Complete Denture Prosthetics (prereq 3rd yr dent stu) (A-F only)
154641 1 cr

5601 Introduction to Biomaterials II (A-F only)
458931 0840-0930 MW, MoosT 2620, 1430-1700 Th, MoosT 4170, 4 cr (0745-0930 W, MoosT 2620, Apr 9, 16, 23, 30) (0840-0930 MW, MoosT 2620, Mar 31, Apr 2, May 5, 7, 12, 14, 19, 21, 28, June 2, 4)

5602 Biomaterials: Independent Study
361742 ar cr

5624 Endodontic Technique (prereq 5623) (A-F only)
553252 1430-1730 W, MoosT 4210A, 4210, 4222, 4222E, 1 cr

5625 Endodontics (A-F only)
762032 0745-0835 MW, MoosT 2690, 2 cr

5628 Endodontics Clinic (prereq 5627) (S-N only)
953295 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 8150, 8223, 8348, 2 cr

5630 Endodontics: Independent Study (S-N only)
757073 ar cr

5644 Hospital Dentistry (prereq 5643) (S-N only)
963275 0845-1200 MTWThF, 1300-1600 MTWThF, PWB 7302, 1 cr

5654 Oral Anatomy: Independent Study
456998 ar cr

5675 Oral Biology: Fundamental and Applied (A-F only)
754156 2 cr

5677 Dental Research Training
857016 3 cr

5680 Oral Biology: Independent Study
858991 ar cr

5751 Occlusion (A-F only)
★LECT 0840-0930 M, MoosT 2690, 3 cr
★LAB 0930-1230 Th, MoosT 4210, 4210A, 4222, 4222E
554367 —1 CLN 0745-0930 Th, MoosT 8127

5755 Occlusion: Independent Study (prereq #) (S-N only)
556488 ar cr

5775 Oral Radiology I (A-F only)
153859 0745-0930 F, MoosT 2620, 2 cr

5780 Oral Radiology Clinic (A-F only)
160883 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 7221, 7223, 7225, 7226, 7227, 7234, 7235, 7238, 7240, 7241, 7245, 2 cr

5781 Advanced Clinical Roentgenology
459724 ar cr

5785 Oral Radiology: Independent Study
658765 ar cr

5788 Oral Radiology Preclinical Laboratory (prereq 5787) (S-N only)
154386 1325-1415 M, MoosT 2690, 1 cr (Mar 31) (one time only)

5802 Oral Medicine/Diagnosis (prereq 5801) (A-F only)
161368 —1 CLN 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 9227, 2 cr
958934 —2 CLN 2 cr

5806 Emergency Clinic (prereq 5805) (S-N only)
656210 0845-1200 MTWThF, 1300-1600 MTWThF, MoosT 9227, 2 cr

5807 Treatment Planning: Independent Study
560234 ar cr

5810 Physical Evaluation I (A-F only)
358291 0745-0835 MW, MoosT 2620, 1 cr (Mar 31, Apr 2, May 5, 7, 12, 14, 19, 21, 28, June 2, 4)

5815 Oral Medicine Elective
854827 2 cr

5852 Treatment Planning Clinic (5850-5851-5852†; prereq 5851) (A-F only)
361482 0930-1215 MTWThF, 1315-1615 MTWThF, MoosT 9227, 1 cr

5853 Treatment Planning Clinic (A-F only)
155031 1 cr

5900 Dental Clinic (S-N only)
960974 ar cr

5901 Dental Clinic Elective (S-N only)
556152 ar cr

5945 Geriatric Hospital Dentistry
353902 ar cr

5953 Advanced General Dentistry Seminar IV (S-N only)
159801 ar cr

5958 Advanced General Dentistry Clinical Administration IV (S-N only)
156347 ar cr

5963 Advanced General Dentistry Clinic IV (S-N only)
960828 ar cr

5967 Advanced General Dentistry Clinic VIII (S-N only)
056494 ar cr

5973 General Practice Seminar IV (S-N only)
553008 ar cr

5977 General Practice Clinical Administration IV (S-N only)
153750 ar cr (Anoka Metro Regional Treatment Center)

5983 General Practice Clinic IV (S-N only)
261328 ar cr

5987 General Practice Clinic VIII (S-N only)
354239 ar cr (Anoka Metro Regional Treatment Center)

5989 Advanced Clinical Geriatric Dentistry
354712 ar cr (Wilder Senior Health Center)

5990 Field Experience: Administration in a Multidisciplinary Health Center
160455 ar cr (Wilder Senior Health Center)

5994 Oral Health Services for Older Adults III
156261 ar cr

8127 Teaching and Evaluation: Dentistry II (prereq 8126)
456161 3 cr

8400 Craniomandibular Disorders: Selected Topics (prereq 8440) (A-F only)
054115 3 cr

8440 TMJ and Craniofacial Pain; Advanced Theory and Principles (prereq #) (A-F only)
255626 3 cr

8441 Seminars in TMJ and Craniofacial Pain (prereq #) (A-F only)
960859 1 cr

8442 Advanced Clinical TMJ and Craniofacial Pain (prereq #) (A-F only)
659446 1-4 cr

8443 Current Literature in TMJ and Craniofacial Pain (prereq #) (A-F only)
660077 1 cr

8777 Thesis Credits: Masters
859056 1-16 cr

DERMATOLOGY (Derm)
Medical School

5182 Preceptorship in Dermatology (prereq regis med)
960408 1300-1645 W, DiehlH 220, PWB 4274, Dahl M, Smith N, others, ar cr

5183 Advanced Dermatology (prereq 5181 or 5182)
962112 Dahl M, ar cr

5184 Special Course in Dermatology
555809 Dahl M, ar cr

5185 Research in Dermatology (prereq 5182)
561433 Dahl M, Hordinsky M, ar cr

8225 Clinical Dermatology
260101 Dahl M, others, ar cr

8226 Clinical Seminar
560797 1300-1700 WF, PWB 4272, Dahl M, others, ar cr

8227 Histology of the Skin
058908 1500-1600 WF, PWB 4272, Rest B, others, ar cr

8228 Research: Dermatology and Related Basic Sciences
262978 Dahl M, Hordinsky M, ar cr

8229 Electron Microscopy in Dermatology
261815 Zelickson A, ar cr

8230 Functional Biology of the Skin
163758 Dahl M, ar cr

8231 Clinics in Dermatology for Non-Dermatologists
154520 Dahl M, ar cr

8232 Seminar: Dermatologic Histopathology and Mycology
655803 Dahl M, Lindholm J, ar cr

DESIGN, HOUSING, AND APPAREL (DHA)
Human Ecology

R 1300 Introduction to Design (§1501) (AH)
575400 1830-2130 M, McNH 33, Lunning N, 3 cr

R 1301 Introduction to Visual Communication and Graphic Design
375401 1535-1825 TTh, ClaOff B35, Redmond P, 4 cr

R 1323 Design Process: Drawing I (§1523; prereq dsgn or hsg or apparel maj or pre-maj)
960263 0800-1100 MW, McNH 258, Asdi A, 4 cr

R 1325 Design Process: Two-Dimensional Design I (§1525; prereq dsgn or hsg or apparel maj or pre-maj)
175402 1530-1820 MW, McNH 262, 4 cr

R 1328 Design Process: Color (§1528; prereq 1300, 1323, 1325, or equiv, dsgn or hsg or apparel maj or pre-maj)
055281 —1 LAB 1115-1415 TTh, McNH 262, Waldron C, 4 cr
075403 —2 LAB 1830-2120 TTh, McNH 262, Otto B, 4 cr

R 1334 Introduction to Computer Applications to Design (prereq DHA premaj, basic keyboarding exp, or #) (A-F only)
875404 —1 LAB 1530-1820 T, McNH 305, 2 cr
675405 —2 LAB 1530-1820 Th, McNH 305, 2 cr

R 1401 Residential Technology (§1801; prereq soph or #, Phys 1001 or Phys 1041)
755730 0800-0955 MW, McNH 10, Bunker-Hellmich L, 4 cr

R 1621 Intermediate Drafting (§Dsgn 1550; prereq demonstrated proficiency in basic drafting tech)
475406 1530-1720 MWF, McNH 480, 4 cr

R 1642 Interior Design Studio II (§1555; prereq 1641, dsgn or hsg or apparel maj or pre-maj) (course fee)
176350 1530-1820 M, 1530-1720 WF, McNH 475, Wilwerding J, 4 cr

R 3216 Textile Analysis (prereq Phys 1001)
★LECT 0905-0955 MWF, VoTech R285, LaBat K
755517 —1 LAB 1115-1245 TTh, McNH 322, 5 cr
163699 —2 LAB 1325-1455 TTh, McNH 322, 5 cr

R 3232 Clothing Design Studio III (prereq 1231, 3211, pass portfolio review)
961669 0905-1205 TTh, McNH 205, 212, Amir-Fazli H, 4 cr

R 3301 Production for the Graphic Designer (prereq pass portfolio review for degree prog)
275407 1830-2120 TTh, McNH B3, 4 cr

R 3323 Design Process: Drawing II (prereq 1323, DHA maj) (A-F only)
175408 1530-1820 TTh, McNH 258, Ampah F, 4 cr

R 3334 Computer Application to Design Problems (prereq 1323, 1325, 1328, 1334 or #) (A-F only)
975409 1830-2120 TTh, McNH 305, Cameron J, 4 cr

R 3335 Design Process: Materials (§3535; prereq 1323 or 1523, 1325 or 1525, 1325 or 1528, or #, Δ)
271485 1115-1415 TTh, McNH 258, Waldron C, 4 cr

R 3351 Graphic Design I (prereq 3301, 3350, pass portfolio review for degree prog, or #)
555163 1115-1415 MW, McNH B3, Martinson B, 4 cr

R 3353 Graphic Design III (prereq 3352, pass portfolio review for degree prog, or #)
275410 1530-2120 TTh, McNH B3, Chu S, 4 cr

R 3463 Housing and Community (§3863; prereq 1400 or 1851, or #)
663206 0905-1100 TTh, McNH 10, Ziebarth A, 4 cr

R 3622 Interior Design Presentation and Detailing (prereq pass int dsgn portfolio review) (A-F only)
975488 1830-2120 TTh, McNH 475, Yao T, 4 cr

R 3643 Interior Design Studio III (§3553; prereq 3622 or 3550, #, Δ) (course fee)
975412 1830-2120 MW, McNH 480, Iverson C, 4 cr

R 5115 20th-Century Interiors and Furnishings (§5515; prereq 5114 or #)
860224 1115-1205 MWF, McNH 33, Erickson A, 3 cr

R 5118 History of Costume: 19th and 20th Centuries (§5518; prereq 3117 or 3517 or #)
656806 1325-1505 TTh, McNH 144, Williams G, 4 cr

5130 Internship in Design, Housing, and Apparel (prereq complet 1/2 prof seq, submit plan approved in advance by adviser, intern super, #) (S-N only)
358694 1-4 cr

R 5170 Special Topics in Design, Housing, and Apparel: Mackintosh in Context
976351 0905-1010 MW, McNH 144, 3 cr

5180 Directed Study in Design, Housing, and Apparel (max 8 cr; prereq #)
560671 1-4 cr

R 5212 Clothing and Human Behavior (prereq jr or sr or #)
562288 1010-1205 MW, McNH 216, Eicher J, 4 cr

R 5218 Pattern Development III (§TexC 3221; prereq 3218 or TexC 3218)
776352 1430-1700 TTh, McNH 205, 212, Bean D, 4 cr

R 5232 Clothing Design Studio V (§Dsgn 5544; prereq 5231 or Dsgn 5231)
859204 0800-0955 MWF, McNH 205, 212, Amir-Fazli H, 4 cr

R 5254 Performance Evaluation: Fabrics and Garments (§TexC 5627; prereq 3216 or TexC 3216)
471484 1115-1310 MW, McNH 340, LaBat K, 5 cr

R 5350 Advanced Typographic Design (prereq 3350, 3351, or #) (A-F only)
875399 1830-2120 MW, McNH B3, 4 cr

R 5461 Housing Management (prereq 1101, 3463 or #)
671483 1530-1755 MW, McNH 10, Ziebarth A, 5 cr

R 5465 Housing in World Perspective I (§5865; prereq 3463 or 3863, or #) (IP)
871482 1530-1735 TTh, McNH 146, 4 cr

R 5634 Interior Design Codes and Environmental Issues (A-F only)
071481 1115-1230 TTh, McNH 10, Ginthner D, 3 cr

R 5645 Interior Design Studio V (§Dsgn 5552; prereq 3216 or TexC 3621, 3631 or Dsgn 3557, 3633 or Dsgn 3548, 3643 or Dsgn 3553, #) (course fee)
458881 0800-1050 TTh, McNH 475, Guerin D, 4 cr

5647 Interior Design Thesis (§5555; prereq 5612 or 5575, 5645 or 5552, 5646 or 5554)
052994 —1 1535-1625 MW, McNH 216, Erickson A, 6 cr (addtl hrs ar)
053725 —2 1535-1625 MW, McNH 216, Guerin D, 6 cr (addtl hrs ar)
171480 —3 1535-1625 MW, McNH 216, Ginthner D, 6 cr (addtl hrs ar)

8180 Directed Study in Design, Housing, and Apparel (max 8 cr; prereq #) (A-F only)
273043 1-4 cr

8190 Readings in Design, Housing, and Apparel (max 8 cr; prereq #) (A-F only)
973045 1-4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
262429 1-18 cr

8777 Thesis Credits: Masters
757297 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
861955 1-36 cr

DEVELOPMENT STUDIES AND SOCIAL CHANGE (DSSC)

8110 Approaches to Knowledge and Truth: Defining Ways of Knowing in Development Studies and Social Change (prereq DSSC minor or #)
659155 1535-1735 F, BlegH 350, Cunningham W, Disch L, 3 cr

8212 Field Research Methodology in Development Studies and Social Change (prereq DSSC minor or #, 8211)
261412 1535-1705 W, BlegH 245, Kelliher D, Aminzade R, 1 cr

DUTCH (Dtch)
German, Scandinavian, and Dutch
Liberal Arts

R 1103 Beginning Dutch (§1110; prereq 1102)
860143 1115-1240 MWF, FolH 326, Van der Sanden, 5 cr

R 1106 Intermediate Dutch (prereq 1105)
155630 0905-1030 MWF, FolH 50, Van der Sanden, 5 cr

R 3510 Topics in Dutch Culture: Image of Dutchness (no knowledge of Dutch req)
662556 1640-1835 T, FolH 326, Spiering M, 4 cr

3970 Directed Studies (prereq 1105, #, Δ, ❑)
254668 1-5 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
971487 1-5 cr

EAST ASIAN STUDIES (EAS)
Area Studies Programs
Liberal Arts

R 1463 Introduction to East Asia in Modern Times (§Hist 1463, 3463) (Hist; IP)
★LECT 1115-1205 MWF, AndH 350
259563 —1 REC 1220-1310 M, HHHCtr 30, 4 cr
757588 —2 REC 1430-1520 M, BlegH 210, 4 cr
455320 —3 REC 1220-1310 W, BlegH 115, 4 cr
453597 —4 REC 1430-1520 W, BlegH 245, 4 cr
557589 —5 REC 1220-1310 F, BlegH 245, 4 cr
253598 —6 REC 1430-1520 F, BlegH 245, 4 cr

3464 Early Modern China, 1350-1750 (§Hist 3464)
671497 0945-1100 TTh, BlegH 230, Waltner A, 4 cr

8061 Scope and Methods of East Asian Studies (§RAS 8061) (A-F only)
376175 0945-1100 TTh, SocSci 1383, 4 cr

8777 Thesis Credits: Masters
154209 1-16 cr

ECOLOGY, EVOLUTION AND BEHAVIOR (EEB)
Biological Sciences

R 1019 Our Changing Planet (§Ast 1019, Geo 1019) (Phys/L; Envt)
★LECT 0905-0955 MTW, AndH 210, Murthy V, 4 cr (Mpls)
662055 —1 REC 0905-1100 Th, PeikH 365 (Mpls)
158194 —2 REC 0905-1100 Th, PeikH 385 (Mpls)
755646 —3 REC 1220-1415 Th, PeikH 365 (Mpls)
361823 —4 REC 1220-1415 Th, PeikH 385 (Mpls)
955015 —5 REC 1430-1625 Th, PeikH 365 (Mpls)
056141 —6 REC 1430-1625 Th, PeikH 385 (Mpls)
459920 —7 REC 0905-1100 F, PeikH 365 (Mpls)
160486 —8 REC 0905-1100 F, PeikH 385 (Mpls)
254895 —9 REC 1220-1415 F, PeikH 365 (Mpls)
461201 —10 REC 1220-1415 F, PeikH 385 (Mpls)
163078 —11 REC 1430-1625 F, PeikH 365 (Mpls)
855945 —12 REC 1430-1625 F, PeikH 385 (Mpls)

R 3001 Introduction to Ecology (open to jrs and above but not to biol majs) (Biol/NL; Envt)
★LECT 1220-1310 MWF, HodsonH 495, 4 cr
558192 —1 REC 1220-1310 T, HodsonH 495
260065 —2 REC 1325-1415 W, GrnH 110
656725 —3 REC 1220-1310 Th, HodsonH 495

R 3006 Visions of Nature: The Natural World and Political Thought (biosci stu may not apply these cr toward the maj) (Envt; C/PE)
862586 1830-2010 TTh, FolH 50, Regal P, 4 cr (Mpls)

R 3111 Introduction to Animal Behavior (§3811, AnSc 3111; prereq Biol 1008 or Biol 1009 or Biol 1201 or Biol 1202 or #)
★LECT 1010-1155 TTh, GrnH 110, Pusey A
956973 —1 REC 1325-1415 T, Ecology 150C, 4 cr
257358 —2 REC 1325-1415 Th, Ecology 150C, 4 cr

R 5002 Ecology of Minnesota (prereq college-level biol crse or #)
775265 1700-2000 T, Ecology 150C, Tester J, 3 cr

R 5004 Earth System: Geosphere/Biosphere Interactions (§Geo 5631; prereq Geo 3202, Geo 3301 or #)
★LECT 1010-1145 TTh, PillsH 121, Davis M (Mpls)
975264 —1 LAB 4 cr

R 5016 Ecological Plant Geography (prereq Biol 5041 or Biol 5841, PBio 3201 or Bot 3201 or ¶PBio 3201 or #) (course fee)
171861 1325-1415 MWF, Ecology 150C, Cushing E, 5 cr (field trips: two of following Apr 26-27, May 3-4, May 17-18)

5042 Quantitative Genetics (prereq Biol 5003 or GCB 3022, stat crse or #) (A-F only)
575266 1245-1430 TTh, Ecology 505, Shaw R, 4 cr

R 5051 Analysis of Populations (prereq Biol 5041 or Biol 5841 or #)
856917 0945-1130 TTh, Ecology 150C, Siniff D, 4 cr

R 5134 Introduction to Ornithology (prereq Biol 1106 or Biol 3011) (course fee)
★LECT 0800-0850 TTh, Ecology 150C, Zink R, (field trips W or Th plus 2 weekends Apr 11-13, May 16-18)
353155 —1 LAB 0905-1230 T, Ecology 160, 5 cr
554143 —2 LAB 0905-1230 Th, Ecology 160, 5 cr

R 5156 Comparative Animal Physiology (prereq Biol 1106 or Biol 1806 or Biol 3011, Chem 3302 or #)
156610 0800-0850 MWF, Ecology 150C, Schmid W, 3 cr

R 5157 Animal Physiology Laboratory (prereq Biol 3011 or Biol 3111 or 5156 or 5323 or Ent 5030 or FW 5459 or GCB 5114 or AnSc 3301 or ¶ or #) (A-F only)
862622 1325-1625 TTh, SnH 28, Phillips R, Schmid W, 3 cr

R 5323 Mechanisms of Behavior (prereq 3111 or Biol 3011 or #) (A-F only)
662914 0905-0955 MWF, Ecology 150C, Phillips R, 3 cr

R 5621 Limnology Laboratory (§Geo 5621; prereq 5601 or Geo 5601 or #)
558791 1325-1730 Th, BioSci 192, Megard R, 2 cr

5970 Directed Studies (max 10 cr may count toward maj req; prereq #, Δ) (S-N only)
953815 ar cr

5990 Directed Research (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
960196 ar cr

8390 Graduate Seminar (prereq #)
375267 —1 Sterner R, 1 cr
576191 —2 1600-1700 W, 1 cr
376192 —3 ar cr

8391 Advanced Work in Ecology and Behavioral Biology (prereq #)
962871 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
163220 1-18 cr

8777 Thesis Credits: Masters
658958 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
859784 1-36 cr

8990 Graduate Research (prereq #)
055796 ar cr

ECONOMICS (Econ)
Liberal Arts

R 1101 Principles of Microeconomics (§1104; prereq plane geometry and interm algebra at GC 0623 and GC 0631 level) (SSci; IP)
★LECT 0905-0955 MWF, WilleyH 175, Sotkiewicz P
956181 —1 REC 1115-1205 M, BlegH 120, 4 cr
562937 —2 REC 1115-1205 M, BlegH 250, 4 cr
658846 —3 REC 1220-1310 M, BlegH 115, 4 cr
662377 —4 REC 1220-1310 M, BlegH 255, 4 cr
862992 —5 REC 1325-1415 M, AndH 210, 4 cr
359943 —6 REC 1325-1415 M, BlegH 215, 4 cr
361904 —7 REC 1430-1520 M, BlegH 115, 4 cr
461442 —8 REC 1430-1520 M, BlegH 260, 4 cr
★LECT 0815-0930 TTh, WilleyH 175, Matheson V
853130 —9 REC 0905-0955 M, BlegH 205, 4 cr
153089 —10 REC 1010-1100 M, BlegH 115, 4 cr
253861 —11 REC 1220-1310 M, BlegH 225, 4 cr
254685 —12 REC 1325-1415 M, BlegH 120, 4 cr
253911 —13 REC 1325-1415 M, BlegH 135, 4 cr

R 1102 Principles of Macroeconomics (§1105; prereq 1101 or equiv, plane geom, interm alg at GC 0623, GC 0631 level) (SSci; IP)
★LECT 0905-0955 MWF, WilleyH 125, Gecan R
154789 —1 REC 1115-1205 W, AndH 330, 4 cr
162780 —2 REC 1220-1310 W, BlegH 255, 4 cr
763486 —3 REC 1325-1415 W, BlegH 215, 4 cr
361109 —4 REC 1325-1415 W, BlegH 120, 4 cr
957492 —5 REC 1430-1520 W, BlegH 260, 4 cr
★LECT 1115-1205 MWF, WilleyH 175, Lutterman M
056768 —6 REC 1010-1100 F, BlegH 255, 4 cr
352863 —7 REC 1010-1100 F, BlegH 205, 4 cr
959940 —8 REC 1220-1310 F, BlegH 255, 4 cr
162304 —9 REC 1325-1415 F, BlegH 110, 4 cr
759454 —10 REC 1325-1415 F, BlegH 135, 4 cr

R 1104 Principles of Microeconomics (§1101; prereq 1 qtr calc) (SSci; IP)
354063 1115-1205 MWF, BlegH 420, Saha S, 4 cr

R 1105 Principles of Macroeconomics (§1102; prereq 1104 or equiv, 1 qtr calc) (SSci; IP)
256565 1220-1310 MWF, BlegH 135, 4 cr

R 3101 Microeconomic Theory (§3105; prereq 1101, 1102 or equiv, 1 qtr calc)
854343 —1 0905-0955 MWF, BlegH 420, 4 cr
060285 —2 1010-1100 MWF, BlegH 230, 4 cr
556104 —3 1115-1205 MWF, BlegH 155, 4 cr
353978 —4 1220-1310 MWF, BlegH 205, 4 cr

R 3102 Macroeconomic Theory (prereq 3101 or equiv)
654439 —1 1115-1205 MWF, BlegH 5, 4 cr
553946 —2 1325-1415 MWF, BlegH 115, 4 cr

R 3103 Welfare Economics (prereq 3101 or equiv)
863172 1115-1230 TTh, BlegH 240, Chu T, 4 cr

R 3103H Honors Course: Welfare Economics (prereq 3101 or equiv, 1 qtr calc...B avg rec)
857131 0945-1100 TTh, BlegH 115, Chipman J, 5 cr

R 3105 Managerial Economics (§3101, BGS 3001; not open to Econ maj; prereq 1101, 1102 or equiv, 1 qtr calc)
★LECT 1415-1530 TTh, BlegH 120, Oneto M
662864 —1 REC 0905-0955 F, BlegH 255, Zhao R, 4 cr

R 3701 Money and Banking (§5701, 5721; not open to Econ maj; prereq 1101, 1102 or equiv)
★LECT 1115-1230 TTh, BlegH 10, Bangs J
159080 —1 REC 0905-0955 W, BlegH 115, 4 cr
154333 —2 REC 1010-1100 W, BlegH 135, 4 cr
955614 —3 REC 1115-1205 W, BlegH 225, 4 cr
863303 —4 REC 1220-1310 W, BlegH 225, 4 cr

3951 Major Project Seminar (prereq 3101, 3102, 3103 or equiv)
363409 Higgins M, 2 cr

3970 Directed Studies (prereq #, Δ, ❑)
661035 ar cr

5163 Microeconomic Analysis (§8003; prereq 5162)
★LECT 1115-1230 TTh, BlegH 420, Richter M, 5 cr
855623 —1 REC 1545-1700 Th, BlegH 205, Park T

5166 Macroeconomic Theory (prereq 5165)
★LECT 1415-1530 TTh, BlegH 140, Chari V V, 5 cr
058374 —1 REC 1545-1700 T, BlegH 140, Krueger D

R 5171 History of Economic Thought (prereq 3101, 3102, 3103, or equiv)
062179 1220-1310 MWF, BlegH 260, Hatch J, 4 cr

R 5211 Principles of Econometrics (§3231, 5231; prereq 1101, 1102 or equiv, 1 qtr calc, Stat 3011-3012 or equiv, fam w/Eomput)
★LECT 0905-0955 MWF, BlegH 105, Kosyakovsky B, 4 cr
075241 —1 REC 0800-0850 Th, BlegH 125, Zhao R

5263 Introduction to Econometrics (no grad cr; prereq 5262)
★LECT 1415-1545 MW, BlegH 220, Ohanian L, 5 cr
563134 —1 REC 1415-1545 F, BlegH 145, Quinn J

R 5337 Comparative Economic Systems (§5307; prereq 3101, 3102 or equiv) (IP)
975233 1325-1415 MWF, BlegH 105, Arimura T, 4 cr

R 5401 International Economics (§5431, 5432; not open to Econ maj; prereq 1101, 1102 or equiv) (IP)
855699 —1 1220-1310 MWF, BlegH 420, 4 cr
657325 —2 1325-1415 MWF, BlegH 420, 4 cr

R 5431H Honors Course: International Trade (§5401; prereq 3101, 3102, 3103 or equiv, 1 qtr calc...B avg rec)
663691 —80 1115-1230 TTh, BlegH 120, 5 cr (undergrads only)
361661 —81 1115-1230 TTh, BlegH 120, 4 cr (grad stu only)

R 5531 Labor Economics (§3501; prereq 3101, 3102 or equiv)
859865 1245-1400 TTh, AndH 210, Rogerson R, 4 cr

R 5611 Resource and Environmental Economics (prereq 3101 or equiv, 1 qtr calc)
955502 0945-1100 TTh, BlegH 260, Foster E, 4 cr

R 5623 Housing Markets and Public Policy in the United States (prereq 1101, 1102 or equiv)
259062 0945-1100 TTh, BlegH 135, Swan C, 4 cr

R 5721 Money and Banking (§3701, 5701; prereq 3101, 3102 or equiv)
275231 1325-1415 MWF, BlegH 260, Bajari P, 4 cr

R 5733 Intertemporal Economics and Money (prereq 3101, 3103 or equiv, Math 1251-1252, 1261 or equiv)
759521 1415-1530 TTh, BlegH 260, Huang X D, 4 cr

R 5741H Honors Course: Business Cycles (prereq 3101, 3102, Stat 3011 or equiv, 1 qtr calculus...B avg rec)
462672 —80 1245-1400 TTh, AndH 330, 5 cr (undergrads only)
755503 —81 1245-1400 TTh, AndH 330, 4 cr (grad stu only)

R 5831H Honors Course: Cost Benefit Analysis (prereq 3101, 3103 or equiv, 1 qtr calc...B avg rec)
453101 —80 1415-1530 TTh, BlegH 215, Angelides P, 5 cr (undergrads only)
960912 —81 1415-1530 TTh, BlegH 215, Angelides P, 4 cr (grad stu only)

5970 Directed Studies (prereq #, Δ, CLA approval)
554823 ar cr

8003 Microeconomic Analysis (prereq 8002)
★LECT 1115-1230 TTh, BlegH 420, Richter M, 4 cr
075238 —1 REC 1545-1700 Th, BlegH 205, Park T

8103 Microeconomic Theory (prereq 8102)
★LECT 0945-1100 TTh, BlegH 105, Hurwicz L, 4 cr
054647 —1 REC 1545-1700 Th, BlegH 225, Aswal N

8106 Macroeconomics Theory (prereq 8105)
★LECT 1415-1530 TTh, BlegH 140, Chari V V, 4 cr
862958 —1 REC 1545-1700 T, BlegH 140, Krueger D

8118 Non-Cooperative Game Theory (prereq 8117)
262155 1245-1400 TTh, BlegH 120, McLennan A, 3 cr

8183 Advanced Topics in Microeconomics (prereq 8182)
954060 1245-1400 TTh, BlegH 125, Jordan J, 3 cr

8193 Workshop in Mathematical Economics (prereq 8192)
759857 1535-1730 M, BlegH 210, Allen B, ar cr

8203 Econometric Analysis (prereq 8202)
★LECT 1415-1545 MW, BlegH 220, Ohanian L, 4 cr
459450 —1 REC 1415-1545 F, BlegH 145, Quinn J

8208 Applied Econometrics (prereq 8206, ¶8103, ¶8106, ¶Stat 5133)
★LECT 1115-1230 TTh, BlegH 245, Keane M, 3 cr
276198 —1 REC 1115-1230 F, BlegH 210, Hora M

8213 Econometrics (prereq 8212, ¶8103, ¶8106)
862040 1245-1400 TTh, BlegH 240, Keane M, 3 cr

8293 Workshop in Econometrics
561027 1535-1705 T, BlegH 130, Geweke J, ar cr

8313 Human Resources and Development (prereq 8103, 8105)
256453 0945-1100 TTh, HHHCtr 30, Chari V V, 3 cr

8403 International Trade and Payments Theory (prereq 8402)
152887 1115-1230 TTh, BlegH 230, 3 cr

8493 Workshop in Trade and Development (prereq 8492)
861289 1535-1705 T, AndH 350, ar cr

8583 Advanced Topics in Labor Economics
855590 1115-1230 TTh, RarigC 616, Rogerson R, 3 cr

8603 Industrial Organization and Government Regulation (prereq 8602)
260292 0945-1100 TTh, SocSci 101, Holmes T, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
663805 1-18 cr

8683 Advanced Topics in Industrial Organization
160018 0905-0955 MWF, Mayo D330, Feldman R, 3 cr

8693 Workshop in Applied Microeconomics (prereq 8692)
454636 1535-1705 W, BlegH 205, ar cr

8706 Financial Economics (prereq 8102, 8105)
175232 1415-1530 TTh, HHHCtr 30, Werner J, 3 cr

8777 Thesis Credits: Masters
063848 1-16 cr

8793 Workshop in Macroeconomics (prereq 8792)
653291 1535-1705 Th, BlegH 210, Ohanian L, ar cr

8803 Public Economics (prereq 8802)
256307 1245-1400 TTh, BlegH 245, Foster E, 3 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
558063 1-36 cr

8990 Individual Research
755825 ar cr

Education: See also Adult Education; Agricultural Education; Business and Industry Education; Child Psychology; Curriculum and Instruction; Educational Policy and Administration; Educational Psychology; Family Education; Kinesiology; Mathematics Education; Recreation, Park, and Leisure Studies; and Work, Community, and Family Education.

EDUCATION (Educ)
Education and Human Development

3001 Exploring the Teaching Profession (max 6 cr; prereq early admission for Initial Licensure MEd Program) (S-N only)
070895 1535-1835 T, WullH 250, Bents M, 1 cr (Apr 8, 29, May 20)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
854312 1-18 cr

8777 Thesis Credits: Masters
656367 1-16 cr (Work, Community, and Family Education)

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
263855 —1 1-36 cr (Curriculum and Instruction)
258834 —2 1-36 cr (Work, Community, and Family Education)
553137 —3 1-36 cr (Recreation, Park, and Leisure Studies)

Symbols

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H Honors course (follows the course number).
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# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

EDUCATIONAL ADMINISTRATION (EdAd)

Educational Policy and Administration
Education and Human Development

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq EdD stu who has not passed oral prelims)
962501 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
859400 1-36 cr

EDUCATIONAL POLICY AND ADMINISTRATION (EdPA)

Educational Policy and Administration
Education and Human Development

R 5090 School and Society (§3090, SPFE 5090; prereq FoE stu or sr or post BA in ed or CLA mus ed maj or tchg maj or ❑) (A-F only)
057841 —1 1245-1400 TTh, WullH 140, 3 cr

5099 Directed Study (max 9 cr; prereq #)
557219 ar cr

5128 Workshop: Educational Administration
156616 —1 1640-1840 Th, NichH 213, McKendall V, 1 cr (Apr 3, 17, May 1, 15, 29)
273205 —2 1535-1805 M, NichH 109, Mestenhauser J, 1 cr (March 31, Apr 7, 14, 21) (Higher Education and Its Role in the Development of the Arab Middle East) (§WCFE 5102, sec 1)
173206 —3 1535-1805 W, WullH 140, Wahlstrom K, 1 cr (Apr 30, May 7, 14, 21) (Contemporary Developments in Education in the Central and Eastern European Countries of the Former Soviet Union) (§WCFE 5102, sec 2)

5141 Critical Issues in Contemporary Education
175134 1640-1910 M, WullH 140, 3 cr

5156 History of Ideas in American Education
162786 1640-1910 M, WullH 220, Bagley A, 3 cr

5169 Ethnic Groups and Communities: Perspectives on Families, Children, and Youth
061405 1535-1735 TTh, WullH 220, Lundy-Dobbert M, 3 cr

5182 Comparative Philosophies of Education
454555 1640-1910 T, WullH 140, 3 cr

5190 Sociology of Education (§Soc 5953)
671628 1535-1855 T, NichH 213, Louis K S, Simmons V, 4 cr

5204 Financing Elementary and Secondary Schools
855718 1640-1910 W, NichH 209, Sederberg C, 3 cr

5211 Social Design and Educational Futures
653033 1640-1910 T, NichH 207, Harkins A, 3 cr

5212 School Budgeting
261569 1640-1910 T, BuH 123, Sederberg C, 3 cr

5222 Introduction to Policy Research (I; only grad stu may reg S-N, all others must reg A-F)
159953 —1 1640-1910 W, WullH 220, Mazzoni T, 3 cr

5224 Legal Implications of Acts by School Boards, Administrators, and Teachers (A-F only)
976463 1640-1910 M, RarigC 616, 3 cr

5227 Public School Personnel Programs
555339 1640-1910 W, ChDev 105, Alkire G, 3 cr

5240 Seminar: Clinical Experiences in Educational Administration (§8240) (S-N only)
860353 1640-1910 Th, NichH 209, Schultz T, 1-9 cr

5265 Administering the High School Program
353608 1640-1910 Th, NichH 209A, 3 cr

5272 Problems: Educational Policy and Administration (§8272)
857436 1-3 cr

R 5285 Principles and Methods of Evaluation (§EPsy 5240)
057449 1640-1940 T, Arch 30, McKendall V, 3 cr

5540 Seminar: The College Student (§EPsy 5451; prereq 6 cr psy or educ psy)
962269 1640-1915 Th, BuH 123, Hendel D, 3 cr

5607 Applied International Development Education (§AdEd 5607) (A-F only)
858330 1640-2010 T, NichH 209, Paige R M, 4 cr

8172 Classic Readings in Anthropology and Education (prereq 5171 or anth grad stu)
973207 1430-1700 W, BuH 125, Lundy-Dobbert M, 3 cr

8225 Program Evaluation Theory and Models: Qualitative and Quantitative Alternatives (prereq 5285 or EPsy 5240 or equiv or #) (A-F only)
773208 1640-1910 T, NichH 209A, 3 cr

8228 Problems: Higher Education (prereq #)
158485 ar cr

R 8229 Seminar: Higher Education (I; prereq #)
660158 —1 1-4 cr
359490 —2 1115-1345 T, BuH 240, Mestenhauser J, 1 cr (Apr 1, 8, 15, 22, 29)
861275 —3 1535-1805 M, ChDev 105, Cogan J, 1 cr (Apr 28, May 5, 12, 19)
853676 —4 1535-1805 M, BuH 108, Boyer C, 3 cr
660693 —5 1640-1915 W, NichH 209A, Lewis D, 1-4 cr (Plan B for MA)

8230 Seminar: Dissertation Research in Higher Education (S-N only)
963096 1640-1840 M, BuH 240, Lewis D, 1 cr (alt M bgn 2nd week of qtr)

8238 Seminar: Theory and Research (prereq educ admin or educ policy and admin maj or #)
162245 1640-1910 M, SmithH 121, Mazzoni T, 3 cr

8241 Seminar: Internship in Educational Administration (S-N only)
963471 1640-1910 Th, NichH 209, Schultz T, 0-9 cr

8255 Leadership and Administration in Higher Education (prereq 5201, 5250)
757025 —1 1640-1910 T, SmithH 111, Anderson M, 3 cr

R 8261 Problems: Social and Philosophical Foundations of Education (prereq #)
761415 —1 ar cr
153724 —2 1430-1600 W, ChDev 105, Lundy-Dobbert M, 1 cr (alt W bgn Apr 2)

8268 Seminar: Social and Educational Futures (max 6 cr; prereq 5209 or 5210 or 5211 or #)
156946 0905-1135 S, HHHCtr 20, Harkins A, 1-6 cr

8270 Problems: Elementary School Administration (prereq #)
953510 ar cr

8271 Problems: Secondary School Administration (prereq #)
460212 ar cr

8273 Field Study (prereq #)
361031 0-10 cr

8603 Seminar: International Development Education (prereq 5603)
962045 Mestenhauser J, 3 cr

8605 Problems: International Education Research (prereq 5605)
656479 3-6 cr

8686 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
062926 1-18 cr

8777 Thesis Credits: Masters
958366 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
856416 1-36 cr

EDUCATIONAL PSYCHOLOGY (EPsy)

Education and Human Development

R 1801 American Sign Language I
753895 1010-1205 MW, ChDev 105, 5 cr

R 1602 American Sign Language II (prereq 1601 or #)
462445 0800-0955 TTh, NichH 109, 5 cr

R 1603 American Sign Language III (prereq 1602 or #)
556331 1010-1205 TTh, CivE 212, 5 cr

R 3601 American Sign Language IV (prereq 1603)
753329 0800-0955 TTh, AmundH 124, 5 cr

R 3602 American Sign Language V (prereq 3601)
655669 0800-0955 TTh, ChDev 105, 5 cr

R 5112 Knowing, Learning, and Thinking (A-F only)
155652 1730-2050 W, BuH 125, Samuels S J, 4 cr

R 5114 Psychology of Student Learning (A-F only)
663321 1640-1910 W, NichH 109, van den Broek P, 3 cr

R 5115 Psychology of Adult Learning (A-F only)
160083 1640-2010 T, PeikH 155, Tennyson R, 4 cr

R 5116 Behavior Analysis in Education (A-F only)
857999 1640-2030 M, PeikH 325, Deno S, 4 cr

R 5130 Personality and Social Development (prereq 5 cr introductory psychology) (A-F only)
253696 1640-1910 W, SciCB 175, Erickson V L, 3 cr

R 5135 Human Relations Workshop (S-N only)
★LECT 1700-1930 M, BuH 120, Puncochar J
059394 —1 REC 1945-2200 M, BuH 120, 6 cr

R 5221 Basic Principles of Measurement (prereq 5260 or 8260 or PsyF 5110 or 8110)
759034 1640-1755 MW, FolH 214, Davenport E, 3 cr

R 5229 Classroom Assessment Methods (prereq concurrent participation in practice tchg or similar field exp) (A-F only)
563814 1640-1830 TTh, AkerH 209, Garfield J, 2 cr (May 6-June 5)

R 5240 Principles and Methods of Evaluation (§EdPA 5285)
458234 1640-1940 T, Arch 30, McKendall V, 3 cr

R 5246 Evaluation Colloquium (max 6 cr) (S-N only)
655333 1640-1840 Th, NichH 213, McKendall V, 1 cr (Apr 3, 17, May 1, 15, 29)

R 5260 Introductory Statistical Methods
158390 —1 1010-1200 MW, BuH 120, Davenport E, 4 cr
153487 —2 1640-1820 TTh, NichH 122, Hendrix V, 4 cr

R 5263 Statistics for Preprofessional Students (A-F only)
671760 1220-1415 TTh, BuH 120, Terwilliger J, 4 cr

R 5401 Counseling Procedures (A-F only)
462090 1640-1910 M, BuH 125, Wambach C, 3 cr

R 5433 Developmental Career Counseling of Women
471761 1640-1910 T, BuH 125, Hansen L, 3 cr

R 5451 Seminar: The College Student (§EdPA 5540; prereq 6 cr in psychology or educational psychology) (A-F only)
254363 1640-1915 Th, BuH 123, Hendel D, 3 cr

R 5600 Childhood Language Development: Classroom Implications (A-F only)
463174 1640-1930 T, NichH 109, Turnure J, 3 cr

R 5601 Education of Exceptional Children (A-F only)
154260 1640-2030 W, BuH 120, Taborn J, 4 cr

R 5602 Computer Technology in Special Education
976480 1640-1930 T, PeikH 325, Robinson S, 3 cr

R 5604 Transition From School to Work and Community Living for Persons With Special Needs (A-F only)
755999 1640-2030 W, PeikH 155, Utke R, 4 cr

R 5615 Educational Interventions for Learning Disabilities (prereq 5612) (A-F only)
055801 1640-1930 T, PeikH 215, Espin C, 3 cr

R 5621 Methods and Materials for Students with Mild to Moderate Mental Retardation (prereq 5601 or PsyS 5101 or equiv) (A-F only)
271762 1640-2030 Th, PeikH 335, Rynders J, 4 cr

R 5624 Biomedical and Physical Aspects of Developmental Disabilities (A-F only)
062909 1640-1930 T, BuH 120, Azar J, 3 cr

R 5641 Models of Service Delivery to Students with Hearing Loss (prereq 5644 or #) (A-F only)
753217 1640-1930 Th, PeikH 325, Rose S, 3 cr

5842 Classroom Communication Through ASL (max 6 cr; prereq educ or grad stu, fingerspelling skills and conversational sign skills, #)
058617 1640-1840 T, ChDev 105, Holte D, 2 cr

R 5847 Aural and Speech Programming for Children with Hearing Loss (A-F only)
954916 1220-1600 T, PeikH 325, van Deusen D, 4 cr

R 5657 Educational Interventions for Students with Emotional Disturbances or Behavioral Disorders (prereq 5656) (A-F only)
457794 1640-1930 W, FolH 38, Davis C, 3 cr

R 5672 Advanced Braille (prereq 5671 or PsyS 5171, ed or grad stu) (A-F only)
153822 1640-1930 Th, BuH 125, Knowlton M, 3 cr

R 5881 Methods and Materials for Infants and Preschool Children with Developmental Disabilities (prereq 12 cr in education or #) (A-F only)
461716 1640-2030 M, PeikH 315, McEvoy M, 4 cr

R 5704 Workshop: Interventions and Practices in Educational and Human Service Programs (S-N only)
460789 Abery B, ar cr

R 5751 Student Teaching: Deaf, Hard-of-Hearing (prereq #) (S-N only)
072081 Rose S, ar cr

R 5752 Student Teaching: Learning Disabled (prereq #) (S-N only)
872082 Espin C, ar cr

R 5753 Student Teaching: Early Childhood Special Education (prereq #) (S-N only)
672083 McEvoy M, ar cr

R 5754 Student Teaching: Emotional Behavioral Disorders (prereq #) (S-N only)
472084 Davis C, ar cr

R 5755 Student Teaching: Mild to Moderate Intellectual Disabilities (prereq #) (A-F only)
272085 Turnure J, ar cr

R 5756 Student Teaching: Moderate to Severe Disabilities (prereq #) (A-F only)
172086 Hupp S, ar cr

R 5757 Student Teaching: Physical and Health-Related Disabilities (prereq #) (S-N only)
972087 Knowlton M, ar cr

R 5758 Student Teaching: Visual Impairments (prereq #) (S-N only)
772088 Knowlton M, ar cr

5849 Assessment of the Preschool Child (prereq statistics or measurement or grad course in assessment)
762760 1640-1930 W, PeikH 325, McConnell S, 3 cr

5900 Independent Study (max 12 cr; prereq #) (A-F only)
157269 —1 ar cr (special ed maj only)
053207 —2 ar cr (counseling maj only)
558287 —3 ar cr (school psych maj only)
356220 —4 ar cr (psych foundations)
657597 —5 Weinsheimer J, ar cr

R 8115 Psychology of Instruction (prereq course in learning and/or instructional psychology)
862684 1640-1910 Th, FolH 426, Tennyson R, 3 cr

8129 Research Problems: Learning and Cognition (prereq #)
262253 van den Broek P, Samuels S J, others, ar cr

8169 Research Problems: Social Psychology (prereq #)
253469 Johnson D W, Maruyama G, ar cr

8239 Problems: Measurement (max 9 cr)
562727 Terwilliger J, 3 cr

8247 Internship: Evaluation (max 12 cr; prereq #)
759048 Stockdill S, 3 cr

8259 Problems: Evaluation (prereq 5243 or 8245 or PsyF 5621 or 8525)
260261 Stockdill S, ar cr

8261 Statistical Methods (prereq 8260)
954205 0800-0850 MWF, BuH 120, MacEachern D, 3 cr

R 8262 Statistical Methods (prereq 8261)
462753 —1 1640-1755 MW, BuH 123, Hummel T, 3 cr
361207 —2 0905-0955 MWF, BuH 123, MacEachern D, 3 cr
454409 —3 0945-1100 TTh, BuH 123, Edwards L, 3 cr

R 8265 Factor Analysis (prereq 5261, 8261 or ¶5261 or PsyF 5111, 8111 or #)
753847 1015-1130 TTh, PeikH 325, Davenport E, 3 cr

R 8266 Analysis of Results from Nonexperimental Research (prereq 8261 or PsyF 8511 or equiv or #)
053496 0905-1100 MW, PeikH 325, Friedman L, 4 cr

R 8279 Problems: Statistics for Students in Education and Psychology
353818 —1 MacEachern D, Edwards L, others, ar cr
475180 —3 1220-1410 TTh, ElthN668, Edwards L, 4 cr (§Psy 8970, sec 1)

R 8403 Social/Cultural Contexts of Counseling: Theory and Procedures (prereq CSPP MA or PhD stu or #) (A-F only)
961140 1430-1710 Th, BuH 120, Hansen L, 3 cr

R 8404 Group Counseling: Theory and Procedures (prereq CSPP MA or PhD stu or #) (A-F only)
155854 1325-1610 T, BuH 123, Romano J, 3 cr

R 8410 Seminar: Advanced Counseling Research (prereq CSPP PhD stu or #) (A-F only)
162150 1010-1205 MW, BuH 329, 4 cr

R 8413 Personality Assessment of Adults (prereq CSPP or counseling psy doct stu) (S-N only)
175182 0905-1205 F, BuH 125, Skovholt T, 3 cr

R 8431 Masters Seminar: CSPP (max 6 cr; prereq MA stu, #) (A-F only)
757087 0905-1100 T, 0905-0955 Th, BuH 125, Hummel T, 4 cr

8435 Integrative Seminar: School Counseling (max 9 cr; prereq CSPP stu in schl counselor licensure prog; not open to sr or MEd stu) (A-F only)
971764 1535-1810 W, BuH 240, Cognetta P, 3 cr

8450 Psychological Aspects of Counseling Supervision (prereq CSPP doctoral stu or #) (A-F only)
153254 1010-1205 Th, BuH 240, 3 cr

R 8504 Counseling Practicum III (prereq CSPP MA stu or #) (A-F only)
160432 1010-1205 Th, BuH 125, Skovholt T, 4 cr

R 8508 Group Counseling Skills (prereq CSPP grad stu, 8404, or #) (S-N only)
662590 0905-1045 W, BuH 125, Romano J, 2 cr

8509 Supervision Practicum (prereq 8450, CSPP doctoral stu or #) (A-F only)
760569 Skovholt T, 2 cr

R 8510 Internship: CSPP (max 9 cr for MA and spec stu, 18 cr for PhD stu) (A-F only)
857422 —1 Romano J, 1-6 cr
158804 —2 Romano J, 1-6 cr
361093 —3 Hansen L, 1-6 cr

8515 Counseling Practicum: University Counseling Services (8513-8514-8515†; max 12 cr; prereq 8514) (S-N only)
561089 1430-1625 Th, EddyH 202, Levin J, Loper R, 4 cr

R 8520 Counseling Practicum: Advanced (max 9 cr; prereq CSPP doctoral stu) (S-N only)
259224 —1 1430-1625 W, BuH 239, Skovholt T, 3 cr
957380 —2 1430-1625 Th, EddyH 202, Levin J, Loper R, 3 cr

8521 Practice in Student Personnel Work (max 9 cr; prereq 8404, 8504, 5420, 5451 or #) (A-F only)
254296 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
360770 1-18 cr

R 8701 Advanced Practicum (prereq #)
562808 ar cr

8702 Seminar: Special Education (prereq #)
154422 1325-1615 M, BuH 120, Espin C, 3 cr

8777 Thesis Credits: Masters
060805 1-16 cr

R 8812 Assessment Approaches in School Psychology III (A-F only)
159197 1325-1625 T, PeikH 155, Spicuzza R, 3 cr

R 8813 Assessment Practicum in School Psychology (prereq school psy stu or #, ¶8810, ¶8811, ¶8812) (A-F only)
253102 1535-1735 Th, PeikH 375, Spicuzza R, 2 cr (prereq ¶ 8812) (school psych major only)

8817 Social-Emotional Intervention and Consultation (prereq EPsy maj) (A-F only)
860661 0905-1200 T, ElthH 303, Christenson S, 3 cr

8818 Intervention Practicum in School Psychology (prereq school psy stu or #, ¶8815 or ¶8816 or ¶8817) (A-F only)
462591 0905-1100 M, ElthH 303, Casey A, 1 cr (prereq ¶ 8816)

R 8820 Seminar: Research in School Psychology (max 6 cr) (S-N only)
455950 1325-1520 W, CivE 212, McConnell S, 1 cr (Apr 2, 16, 30, May 14, 28, June 11)

R 8821 Seminar: School Psychology (A-F only)
258073 1325-1520 M, ChDev 105, Spicuzza R, 2 cr

8831 Practicum: School Psychological Services (!; prereq EPsy maj with schl psych subprog or #)
356959 0815-0930 Th, ElthH 303, Casey A, 1-5 cr

8832 Clinical Practice in School Psychology (!; prereq 8810)
862457 0815-0930 Th, ElthH 303, Casey A, 1-5 cr

8840 Internship: School Psychological Services (!; prereq EPsy maj with schl psych subprog or #) (S-N only)
658829 —1 Casey A, 1-15 cr (school psych PhD stu only)
253200 —2 Casey A, 1-15 cr (school psych specialist stu only)

8841 Internship: Instruction and Supervision in School Psychology (prereq EPsy maj with schl psych subprog or #) (A-F only)
358842 Spicuzza R, 3 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
056978 1-36 cr

8900 Research Problems
158423 —1 ar cr (special ed maj only) (prereq #)
058259 —2 ar cr (counseling maj only) (prereq #)
061792 —3 ar cr (school psych maj only)
854780 —4 ar cr (psych foundations) (prereq #)

R 8905 Landmark Issues and Great Controversies in Educationsl Psychology (prereq first yr stu admitted to doctoral program in education psychology or #)
257005 1325-1555 W, BuH 120, Samuels S J, 3 cr

8910 Directed Study (prereq #)
553266 —1 ar cr (special ed maj only)
461828 —2 ar cr (counseling maj only)
861258 —3 ar cr (school pysch maj only)
953247 —4 ar cr (psych foundations)
658393 —5 1325-1625 T, BuH 125, Friedman L, 3 cr
276248 —6 1325-1520 W, CivE 212, McConnell S, 1 cr (Apr 9, 23, May 7, 21, June 4)

ELECTRICAL ENGINEERING (EE)
Institute of Technology

An IT computer fee is assessed at the time of registration for EE 5505, 5506, 5511, 5512, 5571, 5572, 5666, 5852, 5853, 5860, 5863, 5874, 8362, 8363, 8364, and 8451 (8451 spring quarter, Harjani, only). See page 22 for more information on this fee.

R 1400 Circuits Laboratory (prereq 3009 or ¶3009, IT maj or pre-BAE maj)
153361 —1 LAB 1535-1730 M, EE/CSci 3160, Ernie D, 1 cr
960750 —2 LAB 0800-0955 T, EE/CSci 3160, 1 cr
562257 —3 LAB 1535-1730 W, EE/CSci 3160, 1 cr
157880 —4 LAB 1010-1205 Th, EE/CSci 3160, 1 cr

R 3005 Electronic Circuits and Systems (not for EE maj; prereq 3009) (A-F only)
562100 1220-1310 MTWF, EE/CSci 3210, Holte J, 4 cr

R 3006 Circuits and Electronics Laboratory (prereq non-EE maj, IT stu, 3005 or ¶3005) (A-F only)
857341 —1 LAB 1325-1520 M, EE/CSci 3160, Holte J, 1 cr
353852 —2 LAB 1010-1205 T, EE/CSci 3160, 1 cr
059234 —3 LAB 1325-1520 T, EE/CSci 3160, 1 cr
560122 —4 LAB 1535-1730 T, EE/CSci 3160, 1 cr
161461 —5 LAB 1325-1520 W, EE/CSci 3160, 1 cr
460078 —6 LAB 1325-1520 Th, EE/CSci 3160, 1 cr
162343 —7 LAB 1430-1625 F, EE/CSci 3160, 1 cr

R 3009 Linear Circuits I (prereq IT stu, Math 3261, Phys 1253) (A-F only)
★LECT 1115-1205 MTWF, EE/CSci 3230, Nathan M, 4 cr
857260 —1 REC 1325-1415 W, LindH 320, (elec engr maj only)
654912 —2 REC 1430-1520 W, AkerH 317
657213 —3 REC 1430-1520 W, AkerH 313, (elec engr maj only)
158907 —4 REC 1535-1625 W, EE/CSci 3115

R 3010 Linear Circuits II (prereq IT stu, grade of C or better in 3009; Math 3261, Phys 1253 or ¶Phys 1253) (A-F only)
★LECT 1220-1310 MWThF, EE/CSci 3230, 4 cr
056057 —1 REC 1325-1415 M, LindH 325
562985 —2 REC 1430-1520 M, EE/CSci 3115
962403 —3 REC 1535-1625 M, EE/CSci 3115
963227 —4 REC 1325-1415 T, LindH 315, (IT Honors stu)

R 3012 System Design (prereq upper div EE maj, 3011) (A-F only)
★LECT 0905-0955 MTWF, EE/CSci 3111, Tannenbaum A, 4 cr
755789 —1 REC 1325-1415 M, EE/CSci 3230
757994 —2 REC 1430-1520 M, EE/CSci 3111
961445 —3 REC 1535-1625 M, EE/CSci 3111

R 3021 Probability in Engineering Systems (prereq upper div EE maj, 3011) (A-F only)
★LECT 1010-1100 MTWF, EE/CSci 3111, Buckley K, 4 cr
157675 —1 REC 1430-1520 T, EE/CSci 2260
155487 —2 REC 1535-1625 T, EE/CSci 2260

R 3062 Analog and Digital Electronics (prereq upper div IT, 3061, 3351, ¶3401) (A-F only)
★LECT 1325-1415 MTWF, EE/CSci 3111, Peria W, 4 cr
172239 —1 REC 1430-1520 M, EE/CSci 2260
572240 —2 REC 1430-1520 T, LindH 340

R 3063 Semiconductor Devices (prereq upper div IT, 3010 or ¶3010, Phys 3501) (A-F only)
★LECT 1115-1205 MWThF, EE/CSci 3210, Chou S, 4 cr
373678 —1 REC 1325-1415 M, EE/CSci 2260
173679 —2 REC 1325-1415 T, EE/CSci 3115
573680 —3 REC 1430-1520 T, LindH 315
373681 —4 REC 1535-1625 T, LindH 315
173682 —5 REC 1640-1730 T, LindH 303

R 3110 Electric and Magnetic Fields (prereq upper div IT stu, Phys 1254, Math 3252) (A-F only)
★LECT 1010-1100 MTWF, EE/CSci 3230, Lee T S, 4 cr
153280 —1 REC 1430-1520 T, EE/CSci 3115
159757 —2 REC 1535-1625 T, LindH 303
554708 —3 REC 1640-1730 T, EE/CSci 2260
654750 —4 REC 1430-1520 W, EE/CSci 3115

R 3111 Electromagnetic Waves (prereq 3110, upper division elec engr maj)
★LECT 1010-1100 MWThF, AkerH 209, Gopinath A, 4 cr
154106 —1 REC 1325-1415 W, EE/CSci 3230
054356 —2 REC 1430-1520 W, EE/CSci 3111
358369 —3 REC 1325-1415 Th, LindH 315, (EE honors stu)
954527 —4 REC 1430-1520 Th, EE/CSci 3115

R 3352 Introduction to Microprocessors (prereq IT soph, CSci 3113) (A-F only)
★LECT 0800-0850 MWF, EE/CSci 3210, Kain R, 4 cr
754352 —1 LAB 1535-1730 M, EE/CSci 3130
661357 —2 LAB 0800-0955 T, EE/CSci 3130
760927 —3 LAB 1010-1205 T, EE/CSci 3130
157202 —4 LAB 1325-1520 T, EE/CSci 3130
854150 —5 LAB 1535-1730 T, EE/CSci 3130
955628 —6 LAB 0800-0955 Th, EE/CSci 3130
460226 —7 LAB 1010-1205 Th, EE/CSci 3130
257747 —8 LAB 1220-1415 Th, EE/CSci 3130
Registration in one of the following REC sections is also required:
562372 —1 REC 1325-1415 W, EE/CSci 2260
362163 —2 REC 1430-1520 W, EE/CSci 2260
260924 —3 REC 1535-1625 W, EE/CSci 3111
153165 —4 REC 1325-1415 Th, EE/CSci 3115
563005 —5 REC 1430-1520 Th, EE/CSci 2260

R 3401 Junior Electrical Engineering Laboratory (prereq 3400, ¶3062) (A-F only)
855489 —1 LAB 0800-1100 Th, EE/CSci 3146, Ernie D, 2 cr
363684 —2 LAB 1115-1415 Th, EE/CSci 3146, Ernie D, 2 cr
961655 —3 LAB 1430-1730 F, EE/CSci, Ernie D, 2 cr

R 3402 Junior Electrical Engineering Laboratory (prereq 3401, ¶3063) (A-F only)
761656 —1 LAB 1430-1730 M, EE/CSci 3146, Ernie D, 2 cr
159653 —2 LAB 0800-1100 T, EE/CSci 3146, Ernie D, 2 cr
857677 —3 LAB 1115-1415 T, EE/CSci 3146, Ernie D, 2 cr
055491 —4 LAB 1430-1730 T, EE/CSci 3146, Ernie D, 2 cr
653680 —5 LAB 1430-1730 W, EE/CSci 3146, Ernie D, 2 cr
162665 —6 LAB 1430-1730 Th, EE/CSci 3146, Ernie D, 2 cr

3476 Industrial Assignment I (prereq regis in co-op program)
556197 Champlin K, 2 cr

3477 Industrial Assignment II (prereq 3476)
762385 Champlin K, 2 cr

R 5053 Design of Digital Circuits (prereq upper division elec engr maj or grad IT maj, 3062 or #) (A-F only)
355987 0800-0850 MWF, EE/CSci 3230, Champlin K, 3 cr

R 5090 Digital Circuit Design Laboratory (prereq 3402 or ¶3402, ¶5053) (A-F only)
258154 Champlin K, 1 cr (EE/CSci 3144)

R 5162 Solid-State Transducers (prereq 3060, 3111, Phys 3501 or #, IT stu or grad IT maj)
752892 1010-1100 MWF, LindH 320, Polla D, 3 cr

R 5255 Digital Control Systems (prereq upper div EE maj or grad IT maj, 3351, 3352 or equiv, 5002 or ¶5002, 5253 or #) (A-F only)
158799 1430-1520 MWF, EE/CSci 3230, Georgiou T, 3 cr

R 5290 Digital Control Systems Laboratory (prereq 5291, ¶5255) (A-F only)
856965 Georgiou T, 1 cr (EE/CSci 2188)

R 5322 Electromechanical Processes and Devices (prereq IT stu or grad IT maj, 3402 or ¶3402, 5300 or #) (A-F only)
260731 —1 LECT 0905-0955 MWF, EE/CSci 2260, Mohan N, 4 cr
★LAB (lab ar)

R 5358 Digital Design with Programmable Logic (prereq EE upper div maj or grad IT maj or adult spec, 3351, 3352)
★LECT 0815-0930 TTh, EE/CSci 3230, Kinney L, 4 cr
675145 —1 LAB 0945-1100 Th, EE/CSci 4138, Kinney L, 4 cr
475146 —2 LAB 1245-1400 Th, EE/CSci 4138, Kinney L, 4 cr
275147 —3 LAB 1415-1530 Th, EE/CSci 4138, Kinney L, 4 cr
175148 —4 LAB 1545-1700 Th, EE/CSci 4138, Kinney L, 4 cr

R 5450 Senior Design Project (prereq elec engr sr, 3012, 3062, 3110, 3351, 3352, 3402; first-day attendance is mandatory)
058990 1430-1730 T, EE/CSci 3111, Peria W, 2 cr

5470 Directed Study (prereq Δ)
355651 ar cr

5478 Industrial Assignment III (prereq 3477, regis in co-op program)
154073 Champlin K, 2 cr

5479 Industrial Assignment IV (prereq 5478)
263287 Champlin K, 2 cr

R 5492H Honors Project (prereq 5491H)
756098 1325-1625 Th, EE/CSci 3111, Kaveh M, 3 cr

R 5514 Real-Time Digital Signal Processing Lab (prereq EE sr or IT grad stu or adult spec, 3352, 5002 or 5511 or #) (A-F only)
★LECT
172251 —1 LAB 1535-1730 M, EE/CSci 4144, 3 cr
275150 —2 LAB 1535-1730 T, EE/CSci 4144, 3 cr
175151 —3 LAB 1535-1730 W, EE/CSci 4144, 3 cr

5575 Computer-Aided VLSI Design Laboratory (5574-5575†; prereq 5574, 5572 or ¶, IT sr, IT adult spec or grad IT maj)
358419 1535-1735 MWF, EE/CSci 4138, Sobelman G, 3 cr

R 5606 Antenna Theory and Design (prereq 3111 or #)
163565 —1 1115-1205 MWF, MechE 102, Champlin K, 3 cr

R 5631 Photonic Devices (prereq EE sr or grad IT maj, 5630 or 5661) (A-F only)
857808 —1 1430-1520 MWF, EE/CSci 3125, Cohen P, 3 cr

R 5637 Physical Optics Laboratory (prereq 5625 or #, EE sr or grad stu or adult spec) (A-F only)
972252 Leger J, 3 cr

R 5672 Basic Microelectronics Laboratory (5670-5672†; prereq 5670 or ¶5670, IT sr or grad stu or adult spec) (A-F only)
263564 —1 LAB 1325-1625 M, EE/CSci 1165, Campbell S, 1 cr
061534 —2 LAB 1325-1625 T, EE/CSci 1165, Campbell S, 1 cr
359537 —3 LAB 1325-1625 W, EE/CSci 1165, Campbell S, 1 cr
557561 —4 LAB 1325-1625 Th, EE/CSci 1165, Campbell S, 1 cr

5673 Advanced Microelectronics (prereq IT sr or grad stu or adult spec, 5670, 5672 or ¶5672) (A-F only)
558435 0905-0955 MWF, EE/CSci 3115, Campbell S, 3 cr

R 5680 Principles of Thin Film Technology (prereq IT sr or grad IT maj)
362504 1245-1400 TTh, EE/CSci 2260, Judy J, 4 cr

R 5690 Fundamentals of Microelectromechanical Systems (prereq IT or hlth sci maj, #) (A-F only)
★LECT 1325-1415 MWF, AkerH 211, Polla D, Robbins W P
776304 —1 LAB 1400-1700 Th, EE/CSci 1165, 4 cr

R 5704 Digital Communication (prereq upper div EE maj or grad IT maj, 5203, 3021 or Stat 3091 or #) (A-F only)
460405 1010-1100 MWF, EE/CSci 2260, Moon J, 3 cr

R 5712 Kalman Filtering and Applications (prereq 5702, 3021 or Stat 3091, grad stu or #) (A-F only)
861535 —1 1115-1230 TTh, MechE 102, Lee E, 3 cr

R 5752 Computer Aided Design of Control Systems (prereq 5751 or #, grad IT maj)
263743 —1 1325-1425 MWF, MechE 102, Teel A, 3 cr

R 5760 Biological System Modelling and Analysis (prereq #)
259756 —1 0800-0850 MWF, EE/CSci 3125, Holte J, 4 cr

R 5807 Power System Protection (prereq IT sr or IT grad stu or IT adult spec, 3010, 5300, 5310, or #) (A-F only)
372241 1535-1705 MW, EE/CSci 2260, Wollenberg B, 3 cr

R 5854 Advanced Computer Networks (prereq grad IT maj or EE adult spec, CSci 5211 or #) (A-F only)
072257 —1 1245-1400 TTh, MechE 102, Cherkassky V, 3 cr

R 5860 Microcomputer Architecture (prereq IT grad, 5355 or #)
672259 O'Keefe M, 4 cr

R 5874 Simulation and Test in Digital Design (prereq CSci 3113 or equiv, 5851, IT sr or grad stu or adult spec)
755274 1430-1520 MWF, EE/CSci 3210, Vinnakota B, 3 cr

R 5952 Special Topics in Electrical Engineering (prereq IT grad or adult spec or #)
072260 —1 1640-1930 T, MechE 102, Dutt S, 3 cr

R 5953 Special Topics in Electrical Engineering (prereq IT grad stu or adult spec or #)
973403 —1 0945-1100 TTh, MechE 102, Ruden P, 3 cr

R 8090 Electronics Seminar (prereq #) (S-N only)
153571 1535-1625 W, EE/CSci 3230, Nathan, Higman T, 1 cr

R 8190 Seminar: Quantum Electronics (prereq #) (S-N only)
055488 Gopinath A, Leger J, ar cr

R 8192 Seminar: Magnetics (prereq #) (S-N only)
557916 —1 1325-1415 F, MechE 108, Judy J, ar cr

R 8205 Image Processing and Applications (prereq 5002, 5700, grad standing or #)
572254 —1 1245-1400 TTh, EE/CSci 3125, Tewfik A, 3 cr

R 8451 Advanced Topics in Electrical Engineering (prereq #)
159846 1330-1630 M, FordH 150, Polla D, ar cr

8460 Plan B Project (prereq EE grad maj) (A-F only)
956018 4 cr

8461 Plan B Project (prereq 8460, EE grad maj) (A-F only)
954043 2-4 cr

8492 Graduate Seminar (prereq 8491) (S-N only)
156056 1535-1705 Th, MechE 108, Vinnakota B, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
157801 1-18 cr

8777 Thesis Credits: Masters
058830 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
160950 1-36 cr

EMERGENCY MEDICINE (EmMd)
Medical School

5501 Emergency Medicine: Hennepin County Medical Center (prereq regis med stu)
174856 ar cr (Mar 17-June 5)

5511 Emergency Medicine: St. Paul Ramsey Medical Center (prereq regis med stu)
974857 ar cr (Mar 17-June 5)

ENDODONTICS (Endo)
Dentistry

5302 Advanced Clinical Endodontics (A-F only)
857162 ar cr

5306 Advanced Clinical Endodontics (A-F only)
358825 ar cr

5312 Advanced Endodontic Emergency (S-N only)
256257 1 cr

5316 Advanced Endodontic Emergency (S-N only)
353429 1 cr

5332 Review of Cases (S-N only)
463773 1 cr

5336 Review of Cases (S-N only)
262463 1 cr

5400 Advanced Endodontics for Postgraduate Dental Fellows (S-N only)
560069 1 cr

8003 Research in Endodontics
260888 ar cr

8312 Seminar: Endodontics (A-F only)
755694 2 cr

8316 Seminar: Endodontics (prereq 8315, #) (A-F only)
053918 2 cr

8335 Endodontic-Periodontics Seminar
053935 1 cr

ENGLISH AS A SECOND LANGUAGE (ESL)
Liberal Arts

0201 Basic Grammar (prereq high schl graduate, non-native Engl speaker, see Minnesota English Center for override) (S-N only)

0206 Beginning Oral Skills (prereq high schl graduate, non-native Engl speaker with lower level proficiency in Engl; see Minnesota English Center for override) (S-N only)

0207 Basic Reading and Composition (prereq high schl graduate, non-native Engl speaker with lower level proficiency in Engl; see Minnesota English Center for override) (S-N only)

0211 Lower Intermediate Grammar (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0216 Lower Intermediate Oral Skills (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0217 Lower Intermediate Reading and Composition (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0221 Upper Intermediate Grammar (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0226 Upper Intermediate Oral Skills (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0227 Upper Intermediate Reading and Composition (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0231 Advanced Grammar (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0232 The Written Word (prereq non-native Engl speakers; see Minnesota English Center for override) (S-N only)

0233 Advanced Composition (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0234 Advanced Listening Comprehension (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0235 Advanced Speaking/Pronunciation (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0237 Advanced Reading/Composition (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0238 Pronunciation (prereq high schl graduate, non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0241 Grammar through Writing (prereq non-native Engl speaker; see Minnesota English Center for override) (S-N only)

0251 International Business English (prereq non-native Engl speakers; see Minnesota English Center for override) (S-N only)

8777 Thesis Credits: Masters
159328 1-16 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
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§ Credit will not be granted if credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

ENGLISH LANGUAGE AND LITERATURE (Engl)

Liberal Arts

R 1005 Introduction to Literature (Lit)
172136 0905-0955 MWF, LindH 302, 4 cr

R 1016H Honors Course: Introduction to American Literature (prereq honors regis or Δ)
675551 1415-1530 TTh, PeikH 335, 4 cr

R 1017 Introduction to Modern Poetry (Lit)
461912 1115-1205 MWF, Phys 170, Firchow P, 4 cr

R 1018 Introduction to Modern Fiction (Lit)
955242 1220-1310 MWF, LindH 229, Zeit T, 4 cr

R 1019 Introduction to Modern Drama (Lit)
562646 1010-1100 MWF, LindH 203, Leyasmeyer A I, 4 cr

R 1241 Introduction to Shakespeare (Lit)
272121 1535-1625 MWF, LindH 215, Green J, 4 cr

R 1591 Literature of American Minorities (Lit; CD)
161516 1535-1625 MWF, AkerH 319, Sulit M T, 4 cr

R 1591H Honors Course: Literature of American Minorities (prereq honors regis or Δ)
172122 1535-1625 MWF, LindH 203, 4 cr

R 1595 Introduction to "Third World" Literatures in English (Lit; IP)
359862 1325-1415 MWF, Phys 210, Dutt R, 4 cr

R 3008 Techniques of Literary Study (prereq pre-Engl or Engl maj or min only)
972123 —1 1325-1415 MWF, LindH 302, Solotaroff R, 4 cr
772124 —2 0945-1100 TTh, LindH 315, Geffen A, 4 cr

R 3009H Honors Course: Modern Literary Theory (prereq English maj or minor honors stu, 3008, 16 cr lit, or Δ)
972137 0905-0955 MWF, LindH 217, Copeland R, 4 cr

R 3113 Survey of English Literature (prereq 46 or more credits) (Lit)
★LECT 0905-0955 MW, AndH 270, Elfenbein A, Hirsch G
156509 —1 REC 0905-0955 F, LindH 229, 4 cr
560802 —2 REC 0905-0955 F, LindH 203, 4 cr
260339 —3 REC 0905-0955 F, FordH 150, 4 cr
253357 —4 REC 0905-0955 F, FordH 130, 4 cr

R 3241 Shakespeare (§3243) (Lit)
957105 —1 0815-0930 TTh, LindH 215, Berg J, 4 cr
154199 —2 0815-0930 TTh, LindH 215, Berg J, 4 cr (Engl maj/premaj only)

R 3241H Honors Course: Shakespeare (prereq honors regis or Δ)
572125 1010-1100 MWF, LindH 215, Hancher C, 4 cr

R 3242 Shakespeare (§3243) (Lit)
161816 —1 0815-0930 TTh, LindH 217, Haley D, 4 cr
856884 —2 0815-0930 TTh, LindH 217, Haley D, 4 cr (Engl maj/premaj only)

R 3413 Survey of American Literature, 1900-1945 (Lit)
★LECT 1010-1100 MW, Phys 133, Janette M
459075 —1 REC 1010-1100 F, LindH 302, 4 cr
054020 —2 REC 1010-1100 F, LindH 217, 4 cr
455737 —3 REC 1010-1100 F, LindH 229, 4 cr

R 3455 American Short Story (Lit)
753556 1115-1205 MWF, AkerH 209, Solotaroff R, 4 cr

R 3671 The Novel (Lit)
372126 0815-0930 TTh, AkerH 309, Weinsheimer J, 4 cr

R 3851 The English Language (§5851) (SSci)
772138 1600-1715 TTh, LindH 203, Escure G, 4 cr

R 3853 Gender and the English Language (SSci; CD)
572139 1600-1715 TTh, LindH 320, Bridwell-Bowles L, 4 cr

R 3910 Topics in English and North American Literature: Poetry and Cultural Studies (§CSCL 3174)
772141 1115-1205 MWF, LindH 302, Damon M, 4 cr

R 3960 Junior-Senior Seminar (prereq Engl maj jr or sr, Comp 3011 or Comp 3012 or Comp 3013, Δ)
057774 —1 1220-1310 MWF, LindH 325, Janette M, 4 cr (Cather, Woolf, and Hurston)
757977 —2 1325-1415 MWF, LindH 215, Hancher M, 4 cr (Street Ballads)
963373 —3 1430-1520 MWF, LindH 229, Firchow P, 4 cr (Utopian/Dystopian Fiction)

3961 Senior Paper (prereq Engl maj, sr, 3960 or ¶3960 or EngW 3960 or ¶EngW 3960, maj advisor permission) (S-N only)
862801 1 cr

3961H Honors Senior Paper (prereq honors candidacy Engl maj, sr, 3960 or ¶ or EngW 3960 or ¶, Engl hon adv permission) (S-N only)
957511 1 cr

3963H Honors Thesis (prereq honors candidacy in Engl, consent of Engl honors adviser)
556801 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
154145 1-15 cr

3980 Directed Instruction (prereq #, Δ, ❑)
154985 ar cr

3980H Honors Directed Instruction (prereq CLA honors stu, #, Δ, honors div, ❑) (A-F only)
975541 3-4 cr

R 5133 19th-Century British Poetry
172127 1600-1715 TTh, LindH 217, Luke D, 4 cr

R 5173 Restoration and 18th-Century Drama (prereq 3241 or 3242)
572142 1245-1400 TTh, FordH 130, Haley D, 4 cr

R 5175 Modern Drama Since 1920
372143 1220-1310 MWF, LindH 217, Leyasmeyer A I, 4 cr

R 5433 American Poetry: Since 1940
072128 1430-1520 MWF, LindH 203, Damon M, 4 cr

R 5452 American Novel (prereq grad stu or Engl maj or Δ)
172144 1415-1530 TTh, FordH 115, Geffen A, 4 cr

R 5483 Folklore (prereq 5481 or 5482)
875550 1245-1400 TTh, LindH 305, Steckert E, 4 cr

R 5593 The Afro-American Novel (§Afro 5593)
975555 1415-1530 TTh, AndH 330, Wright J, 4 cr

R 5714 Modern and Contemporary Critical Theory
872129 0945-1100 TTh, LindH 215, Messer-Davidow E, 4 cr

R 5831 Development of American English
172130 1415-1530 TTh, LindH 229, Brown R, 4 cr

R 5854 Modern Irish Language (prereq 5853)
872146 0905-0955 MTWThF, LindH 340, Stenson N, 5 cr

R 5862 World Englishes
775556 1245-1400 TTh, LindH 229, Escure G, 4 cr

R 5910 Topics in English and North American Literature
154879 —1 1115-1205 MWF, LindH 215, Bennett C, 4 cr (Orlando's Voyage: The Questioning Identity in Gay and Lesbian Literature)
575560 —2 1115-1230 TTh, LindH 215, Luke D, 4 cr (Old Age in Modern Literature and Film)

R 5920 Topics in Anglophone Literature: Literature of South Africa and Zimbabwe
072131 0945-1100 TTh, LindH 217, Sugnet C, 4 cr

R 5940 Figures in English and North American Literature: Eliot, Auden, and Larkin
175559 0905-0955 MWF, LindH 215, Ostrem W, 4 cr

R 5950 Figures in Anglophone Literature: Ken Saro-Wiwa
872132 1245-1400 TTh, LindH 302, Sugnet C, 4 cr

5970 Directed Studies
958769 1-4 cr

R 8050 Studies in Special Subjects
157255 —1 1535-1750 M, LindH 202, Mowitt J, 4 cr (Postcoloniality and Film Theory)
672147 —2 1220-1435 W, LindH 202, Ross D, 4 cr (Writing for Publication)
775542 —3 2 cr

R 8113 Proseminar in 17th-Century Studies
575557 1820-2035 T, LindH 303, Clayton R, 4 cr

R 8115 Proseminar in the English Romantic Movement
375558 1220-1435 M, LindH 340, Elfenbein A, 4 cr

R 8210 Medieval Studies: Piers Plowman
472134 1535-1750 W, LindH 202, Copeland R, 4 cr

R 8240 Shakespeare: Shakespearean Tragedy and Gender
355326 1535-1750 T, LindH 202, Garner S, 4 cr

R 8480 Studies in Folklore: Horror, Alterity, and Stigma in Folklore, Literature and Film
860708 1535-1750 Th, LindH 305, Stekert E, 4 cr

R 8530 Studies in 19th-Century American Literature: The Culture of U.S. Imperialism, 1850-1900
662539 1220-1435 T, LindH 202, Roth M, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
654313 1-18 cr

R 8710 Studies in Criticism: Racial Confusion in American Fiction
375561 1535-1750 W, LindH 303, Bennett C, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
062036 1-36 cr

8970 Independent Reading (prereq #, Δ)
960067 1-15 cr

ENGLISH: CREATIVE AND PROFESSIONAL WRITING (EngW)

English Language and Literature
Liberal Arts

Students who want to register in those 5000-level courses with a Δ in the prereq statement must submit an application form, a letter of introduction to the instructor, and, in most cases, a 10-page manuscript to the Creative Writing Office, 209 Lind Hall by Friday, February 28, 1997. For more information call 625-6366.

R 1101 Introduction to Creative Writing (Lit)
★LECT 1430-1545 Th, AkerH 209
053286 —1 REC 1430-1625 T, AkerH 211, Reckin A, 4 cr
061369 —2 REC 1430-1625 T, AkerH 317, Homeister C, 4 cr
161301 —3 REC 1430-1625 T, AkerH 313, Melin K, 4 cr
762175 —4 REC 1430-1625 T, LindH 302, Coppley-Woods H, 4 cr (MLK stu only)

R 1103 Introduction to Poetry Writing (§Engl 1104; prereq 1101 or equiv)
775220 1245-1400 TTh, FordH 115, Willoughby J, 4 cr

R 3103 Intermediate Poetry Writing (§Engl 3104; prereq 1101 or 1103)
575221 1545-1700 TTh, LindH 216, 4 cr

R 3960 Writing Workshop for Majors (prereq Comp 3xxx, 3102 or 3103, Engl maj, jr or sr, Δ)
953992 1615-1845 W, VinH 213, Fitzgerald M, 4 cr

R 5130 Topics in Advanced Creative Writing (prereq Engl grad stu or Δ)
457102 1615-1845 M, LindH 303, Browne M, 4 cr (The Art of Revision)
376757 1615-1845 W, LindH 315, Dorris M, 4 cr (Building Character) (prereq #)

R 5310 Reading as Writers: Writing From Life: Varieties of Nonfiction Prose (prereq Δ)
658586 1615-1845 Th, LindH 303, Sprengnether M, 4 cr

5970 Directed Study in Writing (prereq #, Δ, CLA approval)
462817 1-4 cr

R 8110 Seminar: Writing of Fiction: Long Stories and Novellas (prereq Δ)
453776 1500-1730 F, LindH 202, Fitzgerald M, 4 cr

R 8130 Seminar: Writing of Literary Nonfiction: First Person Singular (prereq Δ)
271583 1615-1845 T, LindH 340, Hampl P, 4 cr

R 8990 Creative Project Credits: MFA (prereq 8140 or 8150 or 8160, Creative Writing MFA candidate, #)
056656 1-16 cr

ENTOMOLOGY (Ent)
Agricultural, Food, and Environmental Sciences

3005 Insect Biology (prereq Biol 1009 or equiv) (Biol/NL) (A-F only)
263337 1430-1520 MWF, HodsonH 495, Weller S, 3 cr

R 3020 Honey Bee Biology and Management (prereq Biol 1009 or #) (A-F only)
★LECT 0945-1100 TTh, HodsonH 485, Spivak M
158910 —1 LAB 1115-1230 TTh, HodsonH 485, 4 cr

5215 Insects in Relation to Plant Diseases (§PlPa 5215; prereq one course in ent and plant pathology, or #) (A-F only)
376337 0945-1100 TTh, HodsonH 480, Ragsdale D, 3 cr

R 5250 Forest and Shade Tree Entomology (prereq any two forest, zool, bot, biol, or agri sci crses)
★LECT 1115-1205 MWF, HodsonH 490, Ascerno M
454071 —1 LAB 1220-1415 F, HodsonH 485, 4 cr
462929 —2 LAB 1430-1625 F, HodsonH 485, 4 cr

5900 Basic Entomology (prereq #)
158771 ar cr

5910 Special Problems in Entomology (prereq #)
462302 —1 ar cr
275116 —2 Fallon A, 1 cr (Introduction to Molecular Entomology)

R 5920 Special Lectures in Entomology
657079 —1 1630-1830 T, HodsonH 480, Reed C, 2 cr
060822 —2 ar cr

8050 Toxicology (prereq 15 cr including 1005 or equiv or #, inorganic and organic chemistry)
671242 1245-1400 TTh, HodsonH 490, Fallon A, 3 cr

8300 Graduate Seminar (prereq #) (S-N only)
453762 1430-1530 Th, HodsonH 490, Ragsdale D, 1 cr

8500 Research in Entomology (prereq #) (S-N only)
856206 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
860904 1-18 cr

8777 Thesis Credits: Masters
361322 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
654702 1-36 cr

ENTREPRENEURSHIP (Entr)
Management

R 8082 Business Formation: Opportunity Identification and Resource Assembly (§Mgmt 8082, Mktg 8082; prereq MBA stu or ❑) (A-F only)
674531 1730-2100 W, BlegH 205, Rao D, 4 cr

R 8087 New Product/Business Design and Development (§MBA 8500; prereq MBA stu or ❑) (A-F only)
574537 1115-1245 TTh, BlegH 220, 4 cr

ENVIRONMENTAL SCIENCE (ES)
Soil, Water, and Climate
Agricultural, Food, and Environmental Sciences

R 1010 Issues in the Environment (Envt; C/PE) (A-F only)
976124 1010-1100 MWF, FordH 120, Molina J, 3 cr (Mpls)

3050 Field or Work Experience in Environmental Science (A-F only)
562548 Underwood J, 1-4 cr

FAMILY EDUCATION (FE)
Work, Community, and Family Education
Education and Human Development

R 5315 Evaluation in Family Education (§HEEd 5315) (A-F only)
258431 1600-1830 Th, VoTech 230, Plihal J, 3 cr

R 5406 Special Topics in Parent and Family Education (§HEEd 5406)
371607 1600-1745 M, VoTech R375, Rossmann M, 2 cr

R 5407 Family Education (A-F only)
556300 1600-1830 T, VoTech R380, Rossmann M, 3 cr

R 5416 Parent Education: Advanced (§HEEd 5416; prereq 5405 or #) (A-F only)
060979 1600-1830 W, VoTech R380, Thomas R, 3 cr

R 5450 Critical Pedagogy (§AdEd 5450, VoEd 5450, WCFE 5450) (S-N only)
057662 1600-1830 Th, VoTech R380, McClelland J, 3 cr

R 5600 Practicum: Adult Education (§HEEd 5600; prereq 5320 or AdEd 5411, #) (S-N only)
575073 1800-2000 M, VoTech R390, Chisholm J, 1-9 cr

5900 Independent Study in Family Education (max 12 cr; §HEEd 5900; prereq #)
559360 1-3 cr

8900 Problems: Family Education (§HEEd 8900)
754738 1-9 cr

FAMILY PRACTICE AND COMMUNITY HEALTH (FPCH)
Medical School

5500 Preceptorship in Clinical Family Practice (prereq regis med)
259885 Seim H, ar cr

5501 Rural Physician Associate Program (†5501; prereq completion of 8 academic quarters of medical school)
463269 Swentko W, 0-18 cr

5505 Problem-Focused Interactive Learning (prereq medicine, pediatrics, surgery and neurology)
952860 Seim H, 4.5 cr

5511 Urban Community Ambulatory Medicine (prereq Clin Med IV, Primary Care Clerkship immediately prior)
470898 Cole P, 12 cr

5516 Research in Human Sexuality (prereq #)
661228 Coleman E, ar cr

5518 In-Patient Family Medicine (prereq clinical rotation in Internal Medicine) (S-N only)
270899 Newman, MacDonald M, ar cr

5519 Clinical Practice of Occupational Medicine (prereq 4th yr med stu) (S-N only)
070900 Seim H, ar cr

5520 Rural Rotation in Family Practice (prereq regis med)
455916 Seim H, 4.5-9 cr

5521 Clinical Practice Preceptorship: Kenai, Alaska (prereq regis med) (S-N only)
870901 Hanson P, 9 cr

5523 Family Practice Clerkship: Duluth, MN (prereq med stu)
670902 Day T, 4.5 cr

5525 Cardiovascular Medicine in the Community Hospital (prereq regis med)
058214 Current D, Sharkey S, ar cr

5530 Clinical Problems in Family Practice (prereq regis med)
362230 Idrogo M, ar cr

5531 Population Based Primary Care Clerkship (prereq 3rd yr med stu; int med, ped, obst rotations completed) (A-F only)
470903 Seim H, ar cr

5533 Traditional Indian Medicine (prereq 3rd or 4th yr med stu)
270904 Hill G, ar cr

5535 Community Health in Family Practice (prereq minimum of two 6-week rotations from the following: Med, Ped, Obst or Surg)
559486 Potts J, 4.5-9 cr

5537 Primary Care Sports Medicine (prereq 3rd or 4th yr regis med stu) (S-N only)
170905 Johnson R, 4.5-9 cr

5538 Sports Medicine in Duluth (prereq 3rd or 4th yr med stu)
970906 Webb, 6 cr

5550 Ambulatory Care Rotation/Family Practice (prereq minimum of two 6-week rotations from the following: med, peds, OB/Gyn or surgery)
956892 Seim H, 9 cr

5555 Sexual Counseling for Family Physicians (prereq completion of medical school)
559035 Coleman E, 2 cr

5560 Alcohol and Drug Addiction Treatment Center (prereq regis med)
259479 Current D, Briggs T, 4.5 cr

5564 Family Practice Seminar (prereq med stu) (S-N only)
359764 1-3 cr

5569 Obstetrics in Family Practice (prereq 3rd or 4th yr med stu) (S-N only)
770907 Seim H, ar cr

5580 Community Emergency Medicine
161337 others, ar cr

5585 Sexual Problems in Clinical Practice (prereq med student, #)
153991 Coleman E, ar cr

Symbols

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Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
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✦ This symbol will precede the call numbers of a course with multiple section types (e.g., LECT, LAB, REC) without automatic registration. You must select and register for one of each of the parts of the course.

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5595 Research in Family Practice: Independent Study
658264 Seim H, ar cr

5597 Clinical Decision Making (prereq # or 2nd or 3rd yr resident)
761138 —1 Idrogo M, 2 cr
359246 —2 Idrogo M, 2 cr

5599 Undergraduate Independent Study
362017 Seim H, ar cr

5652 Principles of Geriatrics
158270 0800-1000 T, Pacala J, 1 cr

5903 Community Health Rotation (prereq #)
261376 Lindblom M, ar cr

5955 Directed Study (prereq #)
158236 Coleman E, 1-15 cr

5956 Human Sexuality Throughout the Life Cycle for the Primary Care Physician (prereq #, college level introductory course in human sexuality)
561450 Coleman E, 3 cr

5968 Computers in Theory and Practice
660323 Gepner G, ar cr

5970 Psychological Crisis Intervention Workshop (prereq 1st yr resident in family practice)
660998 0800-1630 F, PWB 3167, 2 cr (clinic conf rm)

8201 Clinical Family Medicine
859834 Jacott W, ar cr

8208 Family Medicine Conferences
456919 Seim H, 1 cr

8210 Family Medicine Grand Rounds
953121 1220-1310 W, MoosT 2690, Asp D, others, 0-1 cr (3rd W per month)

8215 Seminar: Psychosomatic Medicine (prereq 2nd yr resident or #)
357318 1300-1630 TTh, 0800-1630 F, PWB 6240, Kelly J, 2 cr (Huff I, II)

FAMILY SOCIAL SCIENCE (FSoS)
Human Ecology

1001 Introduction to Family Relationships
575509 —1 0800-0940 TTh, AmundH 116, 4 cr (Mpls)
775508 —2 1700-1840 TTh, McNH 198, Tornatore J, 4 cr

1025 Parenthood
775511 —1 1115-1255 MW, AmundH 124, Nelson, 4 cr (Mpls)
975510 —2 1700-1840 MW, BorH 365, Frazer M, 4 cr

3231 Planning for Education and Career (prereq declared maj in FSoS)
163291 0905-1045 W, GrnH 110, Goodman W, 2 cr

R 3600 Family Issues Across the Lifespan (prereq intro course in psy, soc) (SSci; CD) (A-F only)
575512 1600-1810 TTh, GrnH 110, Tubbs C, 5 cr

R 5001 Human Sexual Behavior (prereq 90 cr, 3600 or grad stu in social, behavioral, educational, health science, human service program, or #)
375513 0905-1115 MW, BioSci 12, Lally C, 5 cr

5200 Family Systems (prereq intro course in psy, soc)
671645 —1 0800-1010 TTh, BorH 335, Doherty W, 5 cr
476300 —2 0800-0920 MWF, WullH 140, Daneshpour M, 5 cr (Mpls)

5202 Family Psychology: The Study of Close Relationship Processes (prereq 3600 for FSoS maj; Psy 3201 for psych maj and others)
563425 1545-1725 TTh, HodsonH 495, Boss P, 4 cr

5206 Undergraduate Research Internship (max 15 cr; prereq 5205, #)
661858 3-6 cr

R 5218 Family Financial Management (prereq 3260 or equiv)
961574 0905-1045 MW, McNH 198, Zuiker V, 4 cr

R 5220 Family Economics (prereq 3260 or #)
157479 1325-1505 MW, McNH 198, Rettig K, 4 cr

5230 Independent Study in Family Social Science (max 16 cr)
257294 1-5 cr

R 5249 Fieldwork: Directed Community Work Experience (max 15 cr; prereq 3231, FSoS or human relationships maj, #) (S-N only)
661715 1115-1255 W, McNH 198, Goodman W, 5-15 cr

R 5251 Aging Families (prereq 3600 or 5200 or SW 5024 or #)
175514 1325-1505 TTh, McNH 198, 4 cr

R 5255 Approaches to Family Policy (prereq 3260 or 3600 and SW 3202 or #)
555731 1115-1255 TTh, McNH 198, Zimmerman S, 4 cr

8215 Clinical Issues in Marital and Family Therapy (prereq 8214) (A-F only)
171648 1325-1645 W, McNH 375, Doherty W, 4 cr

8222 Internship in Teaching College Level Family Courses II (prereq 8221, #) (S-N only)
654781 2 cr

8223 Internship in Teaching College Level Family Courses III (prereq 8222, #) (S-N only)
558001 2 cr

8230 Directed Study in Family Social Science (prereq #)
163847 4 cr

8251 Problems: Family Social Science (A-F only)
271650 —1 1325-1645 M, McNH 375, Olson D, 4 cr (Couple and Family Therapy Research) (prereq 8214, 8255 or #)
971649 —2 0905-1135 T, McNH 375, Rettig K, 3 cr (Integrative Research Seminar) (prereq 8205, 8266, grad stu in FSoS or #)

8256 Family Theory Development: A Systemic Perspective (prereq 8255 or equiv or #, postmaster's stu)
171651 1325-1535 TTh, McNH 375, Maddock J, 5 cr

8270 Practicum in Family Research (prereq #) (S-N only)
457083 —1 1-5 cr (McNH 278)
659396 —2 Grotevant H, 1-5 cr (Adoptive Family Relationships)
560427 —3 Rosenblatt P, 1-5 cr (Qualitative Family Research)
961333 —4 Stum M, 1-5 cr (Decision Making in Aging Families)
260728 —5 Zimmerman S, 1-5 cr (Family Policy)
260874 —6 Hogan M, 1-5 cr (Family-Child Ecology)
355925 —7 Danes S, 1-5 cr (Family Business Issues)
862135 —8 Maddock J, 1-5 cr (Power/Control in Close Relationships)
455043 —9 Maddock J, 1-5 cr (Sexual Meaning Survey)
763004 —10 Boss P, 1-5 cr (Ambiguous Loss)
161928 —11 Rettig K, 1-5 cr (Consequences of Divorce Decisions)
656529 —12 Bauer J, 1-5 cr (Family Economic Well-Being)
162357 —13 Detzner D, 1-5 cr (Aging Families in Crisis)
359151 —14 Doherty W, 1-5 cr (Families and Health)
360574 —15 Olson D, 1-5 cr (Healthy and Problem Families)
875516 —16 Maddock J, 1-5 cr (Child and Family Sexual Abuse)

8318 Family of Origin II (prereq family therapy interns only) (S-N only)
962594 1325-1505 M, McNH 377, Goodman W, 2 cr

8501 Family Therapy Practicum (prereq 8500, #) (S-N only)
075515 1325-1645 F, McNH 375, Maddock J, 4 cr

8551 Internship in Marital and Family Therapy (prereq 8214, 8215, #) (S-N only)
771653 1-7 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
761270 1-18 cr

8777 Thesis Credits: Masters
160169 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
563828 1-36 cr

FINANCE (BFin)
Management

Non-SMgt students should refer to page 10, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3000 Finance Fundamentals (prereq Acct 1050) (A-F only)
571654 1535-1705 MW, BlegH 145, Gibson G, 4 cr

R 3100 Financial Management (prereq 3000) (A-F only)
060836 1115-1245 MW, BlegH 145, Dothan M, 4 cr

R 3200 Financial Markets and Interest Rates (prereq 3000 or #) (A-F only)
561481 1115-1245 TTh, BlegH 145, 4 cr

R 3300 Securities Analysis and Portfolio Management (§8300; prereq 3000) (A-F only)
371655 1535-1705 TTh, BlegH 420, Legg T, 4 cr

R 3400 International Financial Management (prereq 3000...3100 rec) (A-F only)
563439 1325-1455 MW, BlegH 145, Chang C, 4 cr

R 3500 Advanced Corporate Finance (prereq 3000, 3100 or #) (A-F only)
558659 0905-1035 MW, BlegH 145, Gahlon J, 4 cr

R 3502 Options: Markets and Uses (prereq 3300 or #) (A-F only)
557172 0905-1035 TTh, BlegH 420, Chowdhury M, 4 cr

R 8150 Theory of Finance (prereq MBA 8040 or #, grad mgmt/IR student or grad SMgt approval) (A-F only)
555874 1325-1510 MW, BlegH 230, Dothan M, 4 cr

R 8400 International Financial Management (prereq 8150 or #, grad mgmt student or grad SMgt approval) (A-F only)
071657 1010-1155 MW, BlegH 240, Chang C, 4 cr

R 8604 Options Markets (prereq 8150 or #, grad mgmt student or grad SMgt approval) (A-F only)
959937 1730-2100 Th, BlegH 415, Runkle D, 4 cr

R 8606 Investment Banking (§8605; prereq 8150 or #, grad mgmt student or grad SMgt approval) (A-F only)
152999 1535-1720 MW, BlegH 420, Harris E, 4 cr

R 8810 Corporate Finance (§8821; prereq 8801, PhD stu) (A-F only)
175277 0905-1205 T, BlegH 435, Chang C, 4 cr

8850 Independent Study in Finance (prereq #, grad mgmt student or grad SMgt approval)
554207 1-4 cr

8900 Directed Research in Finance (max 24 cr; prereq PhD stu in finance, completion of coursework for PhD degree) (S-N only)
954141 ar cr

FINNISH (Fin)
German, Scandinavian, and Dutch
Liberal Arts

R 1103 Beginning Finnish (prereq 1102)
954429 1115-1240 MWF, PeikH 155, Sinks T, 5 cr

R 1106 Intermediate Finnish (prereq 1105 or equiv)
763455 1325-1450 MWF, PeikH 155, Sinks T, 5 cr

R 3670 Advanced Finnish (max 28 cr; prereq 1106 or equiv)
171553 4 cr

FISHERIES AND WILDLIFE (FW)

Natural Resources

R 1002 Wildlife: Ecology, Values and Human Impact (Envt)
757431 1115-1230 TTh, Arch 40, Kitts J, 3 cr (Mpls)

5393 Special Problems: Fisheries Biology (prereq #)
854407 —1 Adelman I, ar cr
959579 —2 Kapuscinski A, ar cr
963602 —3 Newman R, ar cr
561576 —4 Sorensen P, ar cr
259580 —5 Spangler G, ar cr

5398 Special Problems: Wildlife Biology (prereq #)
954799 —1 Cohen Y, ar cr
153612 —2 Cooper J, ar cr
762595 —3 Cuthbert F, ar cr
160575 —4 Kitts J, ar cr
158592 —5 Newman R, ar cr
576241 —6 Smith J, ar cr

5565 Fisheries and Wildlife Ecology and Management: Field Trip (prereq Δ)
876536 1 cr (Mar 22-30)

R 5570 Avian Conservation (prereq EEB 5134 or grad stu or #) (A-F only)
★LECT 0905-0955 MWF, HodsonH 490, Andersen D
671600 —1 LAB 1430-1625 W, HodsonH 480, Andersen D, 4 cr

8200 Seminar (S-N only)
555826 ar cr

8364 Research in Fisheries Biology (prereq fisheries grad) (S-N only)
152923 ar cr

8377 Research in Wildlife Biology (prereq wildlife grad) (S-N only)
952969 ar cr

8448 Fishery Science (prereq # or fisheries grad stu)
376242 0915-1100 TTh, HodsonH 490, Spangler G, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
062148 1-18 cr

8777 Thesis Credits: Masters
260003 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
061758 1-36 cr

FLUID MECHANICS (FlMe)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
253097 1-18 cr

8777 Thesis Credits: Masters
156390 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
356833 1-36 cr

FOOD SCIENCE AND NUTRITION (FScN)

Agricultural, Food, and Environmental Sciences, and Human Ecology

1102 Food: Safety, Risks, and Technology (C/PE)
071917 1525-1705 TTh, FScN 15, Labuza T, 4 cr

R 1612 Principles of Nutrition (prereq high school chemistry and biology) (Biol/NL)
★LECT 0800-0850 MWF, Arch 25, Martini M, (Mpls)
959078 —1 REC 0905-0955 M, Arch 20, 4 cr (Mpls)
356377 —2 REC 0905-0955 M, Arch 15, 4 cr (Mpls)
463224 —3 REC 1325-1415 T, Arch 60, 4 cr (Mpls)
975586 —4 REC 1325-1415 T, Arch 45, 4 cr (Mpls)

3136 Food Processing II (prereq 3135)
★LECT 0905-0955 MWF, FScN 15, Smith D
252886 —1 LAB 1010-1310 T, FScN 150, Smith D, 4 cr

3400 Food Marketing Communications (prereq Rhet 1222)
★LECT 1430-1610 W, McNH 146, Asp E
671919 —1 LAB 1430-1610 MF, McNH 126, 4 cr

R 5100 General Seminar (prereq sr or #) (A-F only)
159491 —1 1115-1205 T, ABLMS 222, Mullan L, 1 cr
071920 —2 1220-1310 T, ABLMS 222, Mullan L, 1 cr

5110 Food Chemistry (prereq 3102, BioC 3031 or Biol 5001)
954639 1430-1520 MW, 1325-1505 T, FScN 15, Csallany A, 4 cr

5111 Independent Study in Food Science and Nutrition (prereq Δ)
453003 1-5 cr

5122 Control Systems in Food Microbiology (prereq 5120)
262348 1010-1205 Th, ABLMS 125, Zottola E, 2 cr

R 5123 Food Fermentations and Biotechnology (prereq 5120)
★LECT 1325-1415 MW, FScN 15, McKay L
062943 —1 LAB 1115-1310 W, FScN 218, 3 cr

5316 Quantitative Light Microscopy in Agriculture and Food Research (prereq Biol 1009 or Chem 1052)
★LECT 0905-0955 TTh, FScN 255, Fulcher R G
671922 —1 LAB 1010-1240 T, FScN 218, 4 cr

5512 Meat Technology (prereq 5110)
★LECT 1605-1745 Th, FScN 23, Addis P
275603 —1 LAB 1325-1725 F, ABLMS 135, 4 cr

5523 Technology of Fermented Dairy Products (prereq 5110, 5123)
★LECT 0800-0855 MWTh, FScN 15, Bastian E
271924 —1 LAB 1220-1520 Th, FScN 150, 4 cr

5612 Experimental Nutrition (prereq 3612, ¶Biol 5001)
★LECT 1220-1310 T, ABLMS 135, Gallaher D
759826 —1 LAB 1220-1625 Th, ABLMS 135, Gallaher D, 2 cr

5614 Nutrition Education (prereq 3610)
976298 1710-2000 T, FScN 15, Splett P, 3 cr

5624 Human Protein and Energy Utilization (prereq 5622)
763813 1630-1810 MW, ClaOff B30, Kurzer M, 4 cr

R 5642 Field Experience in Community Nutrition (prereq course in human nutrition, #)
★LECT 1220-1415 M, ABLMS 222, Hanson M, Hutchins A, (CUP students only)
253388 —1 LAB 0800-1200 MWF, Hanson M, Hutchins A, 3 cr (CUP students only)

5664 Field Experience in Clinical Nutrition (prereq course in human nutrition, #)
★LECT 1930-2100 Th, ABLMS 222, Hanson M, Hutchins A, (CUP students only)
660936 —1 LAB 0800-1650 MTWThF, Hanson M, 9 cr (CUP students only)

5667 Applied Medical Nutrition Therapy III (prereq 5666 or ¶5666)
062442 1700-1930 Th, ABLMS 125, Hanson M, 3 cr

5750 Principles of Foodservice Management (prereq 3730 or 3732, Mgmt 3001)
653436 1220-1400 MW, ABLMS 125, Mullan L, 4 cr

8101 Research Seminar (prereq #) (S-N only)
463384 1 cr

8205 General Seminar (prereq #) (S-N only)
563117 1605-1700 M, FScN 15, McKay L, 1 cr

R 8401 Independent Study: Food Science (prereq Δ)
358730 1-5 cr

R 8621 Independent Study: Nutrition (prereq #)
063400 1-9 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
856450 1-18 cr

8777 Thesis Credits: Masters
360784 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
658328 1-36 cr

FOREST PRODUCTS (ForP)

Wood and Paper Science
Natural Resources

R 3300 Wood Industry Tours (prereq 1301, jr or sr or #) (course fee)
958982 Petersen H, 2 cr (field trip Mar 24-28, travel arrangements must be made with dept before Feb 20)

3301 Industrial Internship (!; prereq forest products cooperative educ stu) (A-F only)
857887 —1 Bowyer J, 2 cr
871661 —2 Massey J, 2 cr
671662 —3 Ramaswamy S, 2 cr
471663 —4 Seavey R, 2 cr
271664 —5 Tschirner U, 2 cr

3305 Grading Standards and Product Performance (prereq 1301, 1303 or #) (A-F only)
173570 1430-1625 W, KaufL 302, Bowyer J, Petersen H, others, 2 cr

3312 Building Materials Estimating
971666 1430-1620 T, KaufL 125, Petersen H, 2 cr

3325 Directed Study Experience (prereq #)
156986 —1 Bowyer J, 1-5 cr
875418 —2 Gertjejansen R, 1-5 cr
775489 —3 Muvandamina M, 1-5 cr
375415 —4 Petersen H, 1-5 cr
875435 —5 Tschirner U, 1-5 cr

3361 Introduction to Adhesives (prereq BioC 1301, Phys 1042)
★LECT 0905-1020 TTh, KaufL 125, Sarkanen S
653341 —1 REC 0905-1020 F, KaufL 125, Sarkanen S, 3 cr

5303 Wood Deterioration (prereq 1301 or #)
★LECT 1325-1415 MW, 1430-1520 Th, KaufL 125, Schmidt E
662024 —1 LAB 1535-1625 Th, KaufL 125, Schmidt E, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

5306 Analysis of Production Systems (prereq 1301 or #...3300 rec)
062506 1010-1125 MW, McNH 197, Bowyer J, 3 cr

5310 Pulp and Paper Process Laboratory (prereq 5305 or #)
★LECT 1325-1415 Th, KaufL 125, Muvundamina M
261958 —1 LAB 1535-1820 Th, KaufL 58, 60, Muvundamina M, 3 cr

5314 Pulp and Paper Process Operations II: Paper Machine Operations, Finishing and Converting (prereq 5305, 5310, 5311-5312, 5315, 5321, 5359, CE 3400, ME 3301, ME 5342)
★LECT 1325-1415 MW, KaufL 302, Ramaswamy S
175439 —1 LAB 1425-1620 W, KaufL 58, Ramaswamy S, 3 cr

5315 Paper Engineering Laboratory (prereq 5305, 5310 or current registration 5310, 5312; 5306 recommended; or #)
★LECT 1325-1415 T, KaufL 125, Ramaswamy S
854620 —1 LAB 1535-1820 T, KaufL 60, Ramaswamy S, 2 cr

5316 Coated Product Development (prereq 5359)
760930 1220-1310 TTh, GrnH 110, Tschirner U, 2 cr

5331 Undergraduate Seminar (prereq ForP major; must be taken prior to senior year) (A-F only)
157488 1010-1205 F, BioSci 12, Massey J, 2 cr

5355 Mechanics and Structural Design with Wood Products (prereq 5301)
954088 1115-1310 TTh, KaufL 302, Larson T, 4 cr (Mpls)

5356 Advanced Forest Products Marketing (prereq 3303 or #)
155747 1900-2130 M, KaufL 125, Bowyer J, Steklenski P, 3 cr

5361 Adhesion and Adhesives (prereq Chem 3302 or Chem 5520)
★LECT 0905-1020 TTh, KaufL 125, Sarkanen S
363457 —1 REC 0905-1020 F, KaufL 125, Sarkanen S, 3 cr

5401 Senior Topics (prereq sr, #)
562792 —1 Bowyer J, ar cr
675419 —2 Gertjejansen R, ar cr
475440 —3 Muvandamina M, ar cr
175416 —4 Schmidt E, ar cr
675436 —5 Tschirner U, ar cr

8300 Research Problems
657003 —1 Bowyer J, ar cr
875421 —2 Gertjejansen R, ar cr
275441 —3 Muvandamina M, ar cr
075417 —4 Schmidt E, ar cr
475437 —5 Tschirner U, ar cr

8301 Research Problems
754559 ar cr

8302 Research Problems
257053 ar cr

8303 Advanced Topics: Panel Products Technology
657499 Gertjejansen R, 2 cr

8306 Seminar: Forest Products
158776 1535-1720 M, KaufL 125, 2 cr

FOREST RESOURCES (FR)
Natural Resources

3225 Directed Study Experience (prereq fr or soph, #)
658913 —1 Anderson D, 1-5 cr
255321 —2 Bauer M, 1-5 cr
163590 —3 Baughman M, 1-5 cr
961560 —4 Blinn C, 1-5 cr
063591 —5 Bolstad P, 1-5 cr
761561 —6 Burk T, 1-5 cr
159564 —7 Carlson S, 1-5 cr
957590 —8 Ek A, 1-5 cr
955323 —9 Ellefson P, 1-5 cr
153599 —10 Furnier G, 1-5 cr
258705 —11 Gregersen H, 1-5 cr
956732 —12 Hoganson H, 1-5 cr
155577 —13 Johnson G, 1-5 cr
158706 —14 Lime D, 1-5 cr
461697 —15 Mohn C, 1-5 cr
959694 —16 Perry J, 1-5 cr
557723 —17 Puettmann K, 1-5 cr
255576 —18 Reich P, 1-5 cr
953720 —19 Rose D, 1-5 cr
962711 —20 Splett P, 1-5 cr
060691 —21 Sucoff E, 1-5 cr

3250 Role of Renewable Natural Resources in Developing Countries (§5250, LAS 3250) (Envt) (A-F only)
153917 1535-1705 W, BorH 335, Gregersen H, Rose D, 2 cr

R 3500 Arboriculture (prereq Biol 1103, Hort 1021 or 1100) (A-F only)
163694 1325-1455 MW, GrnH 19, Johnson G, 3 cr

R 5130 Geographic Information Systems in Natural Resources (prereq jr or sr or grad or #) (A-F only)
★LECT 1430-1520 TTh, HodsonH 495, Bolstad P
575445 —1 LAB 1010-1205 W, NatResAd 35, Bolstad P, 3 cr
975443 —2 LAB 1325-1525 W, NatResAd 35, Bolstad P, 3 cr
775444 —3 LAB 0800-1000 Th, NatResAd 35, Bolstad P, 3 cr

5153 Advanced Forest Hydrology (prereq 5114 or #)
★LECT 1010-1125 TTh, GrnH 326, Brooks K
753038 —1 LAB 1535-1705 Th, GrnH 203, Brooks K, 4 cr

5215 Forest Fire Ecology and Management (prereq 1100, Itasca session, 3103, 5100 or #)
858439 1115-1205 TTh, GrnH 19, 2 cr

5218 Assessment and Modeling of Forests (Itasca Session; prereq Math 1142 or Math 1211, Stat 3011 or Stat 5021, NRES 5210)
863656 0905-0955 MWF, HodsonH 495, Burk T, 3 cr

5225 Directed Study Experience (prereq jr or sr or grad stu, #)
958450 —1 Anderson D, 1-5 cr
362583 —2 Bauer M, 1-5 cr
360560 —3 Baughman M, 1-5 cr
158583 —4 Blinn C, 1-5 cr
162584 —5 Bolstad P, 1-5 cr
160561 —6 Brooks K, 1-5 cr
058584 —7 Burk T, 1-5 cr
556605 —8 Carlson S, 1-5 cr
755324 —9 Ek A, 1-5 cr
863592 —10 Ellefson P, 1-5 cr
561562 —11 Furnier G, 1-5 cr
959565 —12 Gregersen H, 1-5 cr
757591 —13 Hoganson H, 1-5 cr
162710 —14 Johnson G, 1-5 cr
160690 —15 Lime D, 1-5 cr
458704 —16 Mohn C, 1-5 cr
156731 —17 Perry J, 1-5 cr
455575 —18 Puettmann K, 1-5 cr
663724 —19 Reich P, 1-5 cr
661696 —20 Rose D, 1-5 cr
159693 —21 Splett P, 1-5 cr
175442 —22 Sucoff E, 1-5 cr

5231 Range Management (prereq Biol 1103 or #) (Envt)
963325 0800-0850 MWF, GrnH 203, Brooks K, 3 cr

5232 Management of Recreational Lands (prereq completion of lower div requirements, jr or sr) (Envt)
★LECT 1010-1100 MWF, KaufL 302, Anderson D, 4 cr
253245 —1 REC 1115-1205 Th, AlderH 415, Anderson D

5250 Role of Renewable Natural Resources in Developing Countries (§3250, LAS 3250) (Envt) (A-F only)
161007 1535-1705 W, BorH 335, Gregersen H, Rose D, 2 cr

R 5270 Forest Management and Planning (prereq ApEc 1101 or Econ 1101, ApEc 1102 or Econ 1102, 5218, ¶NRES 5260) (A-F only)
861664 1415-1530 TTh, NatResAd 100, Rose D, 3 cr

5403 Fundamentals of Natural Resource Education (prereq elem schl tchrs or #)
758630 1830-2120 F, 0830-1700 S, 0900-1600 Sun, Woodlake Nature Center, Richfield, April 4-6; 1830-2130 T, GrnH 203, May 13, Vogt C, Ek A, 1-3 cr

R 5412 Advanced Remote Sensing (prereq 5262 or #)
553719 0905-0955 MWF, GrnH 203, Bauer M, 4 cr

R 5460 Water Quality: The International Dimension (prereq 5114 or NRES 3060, one ecology crse, jr or sr) (Envt)
056382 1325-1415 MWF, GrnH 203, Perry J, 3 cr

5500 Urban Forest Management (prereq 3500) (A-F only)
655140 0945-1115 TTh, GrnH 19, Johnson G, 4 cr

8100 Research Problems: Silviculture
154302 Puettmann K, ar cr

8101 Research Problems: Forest-Tree Physiology
660953 Reich P, Sucoff E, ar cr

8102 Problems: Forest-Tree Genetics
161041 Furnier G, Mohn C, ar cr

8103 Research Problems: Forest Hydrology
457911 Brooks K, Perry J, ar cr

8104 Research Problems: Forest Ecology
561402 Reich P, Sucoff E, others, 1-8 cr

8107 Seminar: Forest Resources
656076 1430-1520 MW, GrnH 203, 1 cr

8112 Research Problems: Physiological Ecology
953300 Reich P, Sucoff E, 1-8 cr

8200 Research Problems: Forest Management
158351 Blinn C, Hoganson H, others, ar cr

8201 Research Problems: Forest Economics
755713 Gregersen H, Ellefson P, others, ar cr

8202 Research Problems: Forest Biometry
159796 Burk T, Ek A, ar cr

8203 Research Problems: Forest Recreation
155067 Anderson D, Lime D, others, ar cr

8204 Research Problems: Forest Policy
855668 Baughman M, Ellefson P, others, ar cr

8205 Research Problems: Remote Sensing
962806 Bauer M, Bolstad P, ar cr

8207 Economic Analysis of Forestry Projects (prereq #)
161153 Gregersen H, 3 cr

8301 Teaching Practicum (prereq #, Δ) (S-N only)
163489 2-4 cr

FORESTRY (Fors)
Natural Resources

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
158924 1-18 cr

8777 Thesis Credits: Masters
954687 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
762239 1-36 cr

FRENCH (Fren)
French and Italian
Liberal Arts

R 1101 Beginning French
258350 —1 0800-0850 MTWThF, FolH 214, 5 cr
854553 —2 1325-1415 MTWThF, MurH 311, 5 cr

R 1102 Beginning French (prereq 1101 or equiv)
761253 —1 0800-0850 MTWThF, FolH 326, 5 cr
861230 —2 0905-0955 MTWThF, FolH 326, 5 cr
153215 —3 1115-1205 MTWThF, PeikH 225, 5 cr

R 1103 Beginning French (prereq 1102 or equiv)
861020 —1 0800-0850 MTWThF, FolH 240, 5 cr
563067 —2 0905-0955 MTWThF, FolH 208, 5 cr
154719 —3 1010-1100 MTWThF, FolH 326, 5 cr
062070 —4 1115-1205 MTWThF, FolH 340, 5 cr
959856 —5 1220-1310 MTWThF, FolH 240, 5 cr
054986 —6 1325-1415 MTWThF, FolH 138, 5 cr

R 1104 Intermediate French (prereq 1103 or Entrance Proficiency Test)
163341 —1 0905-0955 MTWThF, PeikH 225, 5 cr
063753 —2 1010-1100 MTWThF, FolH 240, 5 cr
162979 —3 1115-1205 MTWThF, PeikH 315, 5 cr
161709 —4 1430-1520 MTWThF, FolH 240, 5 cr

R 1105 Intermediate French (prereq 1104 or Entrance Proficiency Test)
753184 —1 0800-0850 MTWThF, FolH 38, 5 cr
559021 —2 0905-0955 MTWThF, PeikH 315, 5 cr
955127 —3 1115-1205 MTWThF, VinH 213, 5 cr
160701 —4 1325-1415 MTWThF, FolH 326, 5 cr

R 1106 Intermediate French (prereq 1105 or Entrance Proficiency Test; end-of-qtr proficiency test will be required)
659351 —1 0800-0850 MTWThF, FolH 246, 5 cr
154128 —2 0905-0955 MTWThF, FolH 340, 5 cr
361806 —3 1010-1100 MTWThF, FolH 208, 5 cr
859137 —4 1220-1310 MTWThF, FolH 214, 5 cr
153974 —5 1325-1415 MTWThF, FolH 340, 5 cr
962367 —6 1325-1415 MTWThF, FolH 214, 5 cr

R 3014 French Phonetics (prereq 1106)
957699 0905-0955 MWF, FordH 70, 4 cr

R 3015 French Composition and Communication (prereq 1106 and Graduation Proficiency Test)
557222 —1 1010-1125 MWF, LindH 325, 4 cr
256839 —2 0905-1100 TTh, FolH 306, Liu C, 4 cr

R 3016 Advanced French Composition and Communication (prereq 3015 or #)
256405 —1 1010-1110 MWF, FolH 426, Akehurst F, 4 cr
152914 —2 0905-1035 TTh, FolH 246, 4 cr

R 3017 Stylistics Through Translation (prereq 3016 or superior achievement in 3015 or #)
053191 1010-1100 MWF, PeikH 225, 4 cr

R 3020 Topics in French Communication: Business French (prereq 3015)
256744 1325-1415 MWF, NichH 207, Marecaux M L, 4 cr

R 3101 Introduction to French Literary Texts: Poetry (prereq 3016 or equiv) (Lit; IP)
863057 1220-1310 MWF, FolH 138, Robinson P, 4 cr

R 3103 French Literary Texts: Novel (prereq 3101 or above) (Lit; IP)
056124 —1 1325-1415 MWF, FolH 246, Sivert E, 4 cr
562453 —2 1115-1230 TTh, FolH 138, Noakes S, 4 cr

R 3290 Topics in French Literature (prereq 3101, 3103)
072033 1010-1100 MWF, KoltH S137, Paganini M, 4 cr

R 3513 French Civilization and Culture (prereq 3015) (IP)
457343 —1 1115-1205 MWF, FordH 160, Preckshot J, 4 cr
872034 —2 1325-1415 MWF, LindH 305, Preckshot J, 4 cr

R 3603 20th-Century French Theatre in Translation (knowledge of Fren helpful but not necessary)
672035 1115-1230 TTh, FolH 246, Brewer M, 4 cr

3800 CIEE Language/Culture Program in Brittany (prereq 1105)
460873 1-54 cr

3970 Directed Readings (prereq undergrad student, #, Δ, ❑)
962241 1-5 cr

3980 Directed Instruction (prereq 3015, #, Δ, ❑)
462834 3-5 cr

R 5105 Topics in Criticism (prereq 3209 or above)
472036 1220-1310 MWF, FolH 426, Brewer D, 4 cr

R 5702 Structure of French: Morphology and Syntax I (prereq 3016...5701, Ling 3001 or Ling 5001 rec)
272037 1430-1600 MW, VinH 6, Barnes B, 4 cr

5800 CIEE Contemporary Film Program in Paris (prereq 1105 or #)
162066 1-45 cr

R 5940 Topics in Early Modern French Prose (1600-1900) (prereq 3219 or above)
172038 1245-1400 TTh, PeikH 225, Liu C, 4 cr

R 8110 Seminar in Problems of Medieval Writing (max 15 cr)
272040 —1 1430-1555 MW, MurH 311, Akehurst F, 3-5 cr (Tensions and Convergences in the Relation Between History and Literature)
972039 —2 1430-1700 Th, FolH 246, Noakes S, 3-5 cr (Courtly Literature)

R 8190 Seminar in Problems of 20th Century Writing: Acts of Memory and Testimony: The Occupation, the Holocaust (max 15 cr)
172041 1430-1700 T, FolH 246, Brewer M, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
153800 1-18 cr

8777 Thesis Credits: Masters
263080 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
254508 1-36 cr

8970 Directed Readings
761866 1-5 cr

8980 Directed Teaching (prereq #, Δ)
060996 1-5 cr

8990 Ph.D. Topics (prereq PhD stu in French) (S-N only)
662766 1-7 cr

GENERAL COLLEGE (GC)

Sections and courses marked BC (Base Curriculum) are recommended for students who are in their first year of enrollment and have not had prior college work in that subject area. Sections and courses marked TC (Transition Curriculum) are recommended for students who are in their second year of enrollment and have completed freshman composition. Credit equivalents for noncredit courses in GC are as follows: 0401, 0402, 0623, 0643—4-credit equivalent; 0611, 0615, 0616, 0617, 0618, 0621, 0625, 0631—5-credit equivalent. For further information, go to 25 Appleby Hall.

For GC 0401, 0402, 0419, 0611, 0615, 0616, 0617, 0618, 0621, 0623, 0625, 0631, and 0643, course fees are assessed instead of tuition. See page 20 for fee amounts. Credits for these courses will *not* count in the tuition plateau but will count towards the assessment of the student services fee.

NOTE: The restriction *GC stu only* is enforced through March 14, 1997. After March 14, other students may register for these courses.

R 0621 Elementary Algebra (prereq GC math placement or arithmetic with C grade or better)
657146 1325-1415 M, 1325-1520 TTh, FolH 104, 0 cr (BC)

R 0623 Plane Geometry: Programmed Study (prereq GC math placement or elem algebra, #)
952972 1220-1415 TThF, ApH 319, 0 cr (BC)

R 0625 Intermediate Algebra, Part I (prereq GC math placement or elem algebra with grade of C or better)
552893 —1 0800-0850 M, 0800-0955 TTh, ApH 3, 0 cr (BC)
157899 —2 1220-1310 M, 1220-1415 TTh, ApH 302, 0 cr (BC)
561318 —3 1325-1415 M, ApH 226, 1220-1415 WF, FolH 104, 0 cr (BC)

R 0631 Intermediate Algebra, Part II (prereq GC math placement or 0625 with grade of C or better)
054681 —1 1010-1100 M, 1010-1205 TTh, FolH 104, 0 cr (BC)
853418 —2 1220-1310 M, 1220-1415 WF, ApH 303, 0 cr (BC)
057970 —3 0905-0955 M, 0800-0955 WF, ApH 3, 0 cr (BC)
456418 —4 1325-1415 M, 1220-1415 WF, ApH 3, 0 cr (BC)

R 0643 Mathematics: Programmed Study (prereq #)
758093 1220-1415 TThF, ApH 319, 0 cr (BC)

R 1042 Reading in Content Areas (max 9 cr; prereq Commanding English enrollment, #)
462980 —1 0800-0955 TTh, ApH 223, 3 cr (BC) (Commanding English stu only)
162889 —2 0800-0955 TTh, ApH 102, 3 cr (BC) (Commanding English stu only)
452983 —3 1010-1205 TTh, ApH 223, 3 cr (BC) (Commanding English stu only)
555647 —4 1220-1415 TTh, ApH 223, 3 cr (BC) (Commanding English stu only)

R 1076 Career Planning
571833 —1 1220-1415 W, ApH 226, 2 cr (BC)
371834 —2 0905-1100 F, ApH 102, 2 cr (BC) (TRIO stu only)

R 1086 Supplemental Instruction Seminar (max 6 cr) (A-F only)
376712 —1 1220-1350 TTh, ApH 239, 1 cr (TRIO stu only) (concurrent reg in 1132, sec 5, is required)
176713 —2 1115-1205 TTh, 1115-1205 F, ApH 239, 1 cr
076714 —3 1010-1140 MW, ApH 239, 1 cr

R 1111 Science in Context: Weather and Climate (Phys/NL)
159166 0800-0955 MW, 0800-0850 F, SciCB 125, Johnson A, 5 cr (lab time assigned first two days of class) (BC) (GC stu only)

R 1112 Ecological Evaluation of Environmental Problems (Biol/NL; Envt)
158012 —1 0800-0955 MW, 0800-0850 F, ApH 319, Hatch J, 5 cr (BC) (GC stu only)
171835 —2 0800-0955 TTh, 0905-0955 F, ApH 319, 5 cr (BC) (GC stu only)

R 1131 Biological Science: Principles (Biol/L)
★LECT 1115-1205 MTWTh, SciCB 125, Jensen M, 5 cr (TC)
163752 —1 LAB 0800-0955 MW, ApH 309, (TC)
263208 —2 LAB 0905-1100 MW, ApH 309, (TC)
262477 —3 LAB 1220-1415 MW, ApH 309, (TC)
655087 —4 LAB 1325-1520 MW, ApH 309, (TC)
656966 —5 LAB 0800-0955 TTh, ApH 309, (TC)
153778 —7 LAB 1220-1415 TTh, ApH 309, (TC)
171858 —8 LAB 1325-1520 TTh, ApH 309, (TC)
★REC 1220-1310 MWF, ApH 41, (TRIO stu only)
959369 —6 LAB 0905-1100 TTh, ApH 309, (TC) (TRIO stu only)

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 1132 Biological Science: The Human Body (Biol/NL; Biol/L with 1137)
453292 —1 0800-0955 MW, 0905-0955 Th, ApH 303, Jensen M, 5 cr (BC) (GC stu only)
762306 —2 1010-1205 MW, 1010-1100 F, ApH 319, Wilcox K, 5 cr (BC) (GC stu only)
853905 —3 1010-1205 MW, 1010-1100 F, ApH 319, Wilcox K, 5 cr (BC) (Commanding English stu only) (GC stu only)
359697 —4 1430-1625 MW, 1430-1520 F, ApH 319, Wilcox K, 5 cr (BC) (GC stu only)
576711 —5 1430-1625 MW, 1430-1520 F, ApH 319, Wilcox K, 5 cr (BC) (TRIO stu only) (concurrent reg in 1086, sec 1, is required)

R 1137 Biological Science Laboratory: The Human Body (prereq 1132 or ¶1132) (Biol/L with 1132)
258445 —1 LAB 0800-0955 MW, ApH 311, 2 cr (BC)
061954 —2 LAB 1010-1205 MW, ApH 311, 2 cr (BC)
157854 —3 LAB 0800-0955 TTh, ApH 311, 2 cr (BC)
757185 —4 LAB 1010-1205 TTh, ApH 311, 2 cr (BC)
356167 —5 LAB 1220-1415 TTh, ApH 311, 2 cr (BC)

R 1160 Investigations in Physical Science (prereq 1 yr high school algebra or 0616 or 0621 or equiv)
460775 1010-1205 MWF, ApH 322, Snowden F, 5 cr (BC) (addtl 2 hrs ar) (GC stu only)

R 1166 Principles of Chemistry (prereq 0621 or Math Level D or high schl algebra or equiv) (Phys/NL)
458346 —1 LECT 1010-1100 MTWThF, SciCB 125, Uthe R, 5 cr (BC)
362681 —2 LECT 1010-1100 MTWThF, SciCB 125, Uthe R, 5 cr (BC)(GC stu only)
★REC 1115-1200 MWF, ApH 41

R 1173 Geology of the National Parks (Phys/L)
152971 1325-1415 MWF, 1325-1520 TTh, ApH 325, Uthe D, 5 cr (TC)

R 1211 People and Problems (SSci; CD)
963793 —1 1010-1205 MW, 1010-1100 F, ApH 226, Thoen G, 5 cr (BC)
861101 —2 1220-1415 TTh, 1325-1415 F, ApH 103, Johnson F, 5 cr (BC)
059251 —3 1220-1415 TTh, 1325-1415 F, ApH 103, Johnson F, 5 cr (BC) (Commanding English stu only)

R 1231 United States: Growth of National Power (Hist)
071836 1010-1205 TTh, 1115-1205 F, ApH 103, Buckley T, 5 cr

R 1233 United States: Government and Politica (SSci)
452952 1010-1205 TTh, 1115-1205 F, ApH 3, Kahn P, 5 cr (BC)

R 1235 United States: Law in Society (SSci; C/PE)
963194 1010-1205 MW, 1010-1100 F, ApH 103, Kahn P, 5 cr (BC)

R 1251 World History (IP)
557706 —1 1010-1205 MW, 1010-1100 F, ApH 3, Ghere D, 5 cr (BC)
971859 —2 1430-1625 MW, 1430-1520 F, ApH 302, Ghere D, 5 cr (BC)

R 1281 Psychology in Modern Society (SSci)
★LECT 1115-1205 F, SciCB 125, Wambach C, 5 cr (BC)
671838 —1 REC 1010-1100 MTWTh, ApH 128, Wambach C
871837 —2 REC 1115-1205 MTWTh, ApH 128, Wambach C

R 1284 Behavior Problems of Children
262558 1220-1415 TTh, ApH 3, Latts S, 4 cr (TC)

R 1285 Cultural Anthropology (SSci; IP)
263192 —1 0800-0955 TTh, 0905-0955 F, ApH 103, Johnson F, 5 cr (BC)
257697 —2 0800-0955 TTh, 0905-0955 F, ApH 103, Johnson F, 5 cr (BC) (Commanding English stu only)

R 1311 Art: General Arts (Vis; IP)
557902 —1 1010-1205 TTh, ApH 302, 4 cr (BC) (Commanding English stu only)
155991 —2 1010-1205 TTh, ApH 302, 4 cr (BC) (GC stu only)

R 1312 Identity, Community, and Culture: Connections in the Arts and Humanities (Vis; CD) (A-F only)
★LECT 1010-1205 MW, NichH 213, 5 cr (BC)
871840 —1 REC 0800-0955 Th, ApH 302
671841 —2 REC 1010-1205 Th, ApH 201
471842 —3 REC 0800-0955 F, ApH 201
271843 —4 REC 1010-1205 F, ApH 201

R 1365 Literatures of the United States (Lit; CD)
154047 1010-1205 TTh, ApH 303, Noble G, 4 cr (BC) (GC stu only)

R 1371 Literature: Reading Short Stories (Lit)
054468 —1 0800-0955 MW, ApH 302, Gidmark J, 4 cr (BC)
056236 —2 1010-1205 MW, ApH 303, Adamson D, 4 cr (BC)
171844 —3 1430-1625 MW, ApH 303, 4 cr (BC)

R 1375 Film and Society (prereq completion of 24 cr) (Vis; CD)
754173 —1 1010-1205 M, ApH 302, 1010-1205 W, 1115-1205 F, ApH 102, Yahnke R, 4 cr (TC)
159919 —2 1010-1205 MW, 1010-1100 F, ApH 302, Yahnke R, 4 cr (TC)

R 1422 Writing Laboratory: Communicating in Society (prereq 1421)
763827 —1 0800-0955 MW, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
654232 —2 0800-0955 MW, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
153425 —3 1010-1205 MW, ApH 321, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
956164 —4 1010-1205 MW, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
762189 —5 1220-1415 MW, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
163380 —6 1220-1415 MW, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC)
853919 —7 1430-1625 MW, ApH 204, 4 cr (microcomputer instruction, uses IBM PC)
162822 —8 1430-1625 MW, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
655798 —9 0800-0955 MWF, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (Commanding English stu only) (BC)
062327 —10 1010-1205 MWF, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (Commanding English stu only) (BC)
157877 —11 1430-1625 MWF, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (Commanding English stu only) (BC)
654215 —12 0800-0955 TTh, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
061985 —13 0800-0955 TTh, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
359103 —14 0800-0955 TTh, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC)
555065 —15 1010-1205 TTh, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC)
157426 —16 1010-1205 TTh, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
560105 —17 1220-1415 TTh, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
152993 —18 1220-1415 TTh, ApH 321, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
259384 —19 1220-1415 TTh, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (BC)
560430 —20 1220-1415 TTh, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
363068 —21 1430-1625 TTh, ApH 227, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
763245 —22 1430-1625 TTh, ApH 219, 4 cr (microcomputer instruction, uses Macintosh PC) (BC)
761057 —23 1430-1625 TThF, ApH 204, 4 cr (microcomputer instruction, uses IBM PC) (Commanding English stu) (BC)
176341 —24 1010-1205 MW, ApH 204, 4 cr (BC)

R 1454 Statistics (prereq intermediate algebra or 0631) (Math)
255772 —1 0800-0955 MW, 0905-0955 F, ApH 117, 5 cr (TC)
154204 —2 1220-1415 MW, 1220-1310 F, ApH 117, 5 cr (TC)

R 1456 Functions and Problems of Logic (Math)
052901 1010-1205 TTh, ApH 226, 4 cr (TC)

R 1461 Oral Communication: Speaking and Creativa Thinking
056513 1220-1415 TTh, ApH 102, Owen-Cruise S, 4 cr (microcomputer instruction, uses IBM PC) (BC)

R 1463 Multicultural Oral Communication (CD)
863365 1010-1205 TTh, ApH 102, Owen-Cruise S, 4 cr (BC)

R 1464 Oral Communication: Group Process and Discussion
060934 1220-1415 MW, ApH 102, 4 cr (BC)

R 1481 Creativity: Art Laboratory: Experiences in the Media (Vis)
657471 1220-1415 TThF, ApH 201, James P, 4 cr (BC)

R 1511 Introduction to Business and Society (SSci)
754397 0800-0955 TTh, 0800-0850 F, ApH 226, Kroll P, 5 cr (BC)

R 1571 Introduction to Microcomputer Applications (prereq elem algebra)
962885 1010-1205 MW, ApH 117, 5 cr (addtl hr ar) (microcomputer instruction, uses Macintosh PC) (TC)

R 1721 Marriage, Family and Personal Fulfillment
571847 1430-1625 MW, 1430-1520 F, ApH 226, Thoen G, 5 cr (TC)

R 1728 Special Topics: Family Life
258932 1220-1415 MW, ApH 103, Latts S, 4 cr (TC)

R 1814 The American Indian in American Law
462767 0800-0955 MW, ApH 226, Stanford F, 4 cr (TC)

R 1816 African-American Literature (prereq 1421, 1422) (Lit; CD)
162285 —1 LECT 1220-1415 TTh, ApH 303, Bellamy L, 4 cr (TC)
555521 —2 LECT 1220-1415 TTh, ApH 303, Bellamy L, 4 cr (TC) (GC stu only)
★REC 1430-1520 TTh, ApH 41

R 1851 Multicultural Relations (CD)
371848 —1 1220-1415 MW, ApH 319, 4 cr (BC)
171849 —2 1220-1415 TTh, ApH 226, 4 cr (BC)

GENETICS AND CELL BIOLOGY (GCB)
Biological Sciences

3008 The Biology of Cancer (prereq Biol 1009 or Biol 1202)
658068 1325-1440 TTh, BorH 335, McKinnell R, 3 cr

3960 Research Topics (prereq 15 cr biology) (S-N only)
858862 1325-1415 M, BioSci 12, Johnson R, 1 cr

R 5015 Histology: Cell and Tissue Organization (prereq Biol 5004 or #)
★REC 0815-0930 TTh, HodsonH 495
758028 —1 LAB 1010-1150 TTh, SnH 13, 5 cr
461067 —2 LAB 1220-1400 TTh, SnH 13, 5 cr
462851 —3 LAB 1535-1715 TTh, SnH 13, Cunningham W, 5 cr
775251 —4 LAB 1010-1150 WF, SnH 13, 5 cr

5024 The Genetics of Development (prereq Biol 5003 or #)
354029 1115-1220 MWF, BioSci 70, Herman R, Shaw J, 4 cr

R 5030 Laboratory: Genetics (prereq 3022 or 5022 or Biol 5003 or BioC 5333)
363460 —1 LAB 1010-1240 MW, BioSci 245, 2 cr
254282 —2 LAB 1430-1700 MW, BioSci 245, 2 cr

5073 Advanced Human Genetics (prereq 5034 or #)
357156 0905-1010 MWF, PWB 5254, King R, 4 cr (Mpls)

5134 Endocrinology (prereq Biol 3011 or Biol 3111, Biol 5001 or BioC 3021 or BioC 5331 or #)
054969 0905-1010 MWF, BioSci 70, Herman W, 4 cr

5970 Directed Studies (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
556765 ar cr

5990 Directed Research (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
457391 ar cr

8149 Advanced Cell Biology II (prereq Biol 5003, Biol 5004)
763780 1010-1150 TTh, BioSci 12, Hays T, 4 cr

8900 Seminar (S-N only)
159189 —1 1200-1300 Th, MoosT 2520, King R, 1 cr (Mpls)
954382 —2 1535-1705 Th, McNH 33, 1 cr

8910 Journal Clubs (S-N only)
757770 1200-1250 T, BioSci 260, 1 cr

8912 Genetic Counseling in Practice (prereq admission to genetic counseling emphasis within genetics master's program or #) (A-F only)
561030 0905-1105 Th, MoosT 16104, LeRoy B, 4 cr (Mpls)

8970 Directed Studies (prereq #)
458816 ar cr

8990 Research (prereq #) (S-N only)
560878 ar cr

Geometry: See General College; Mathematics.

GEOGRAPHY (Geog)
Liberal Arts

R 1302 The World Around Us (SSci; IP)
★LECT 1115-1230 TTh, BlegH 5, Rice J
658636 —1 REC 0905-0955 MW, BlegH 445, 5 cr
856660 —2 REC 1010-1100 MW, BlegH 445, 5 cr
755436 —3 REC 1115-1205 MW, BlegH 445, 5 cr
963650 —4 REC 1220-1310 MW, BlegH 445, 5 cr
261622 —5 REC 0905-0955 TTh, BlegH 445, 5 cr
659625 —6 REC 0905-0955 TTh, AndH 210, 5 cr
171995 —7 REC 1010-1100 TTh, BlegH 415, 5 cr
071996 —8 REC 1010-1100 TTh, BlegH 445, 5 cr
871997 —9 REC 1325-1415 TTh, BlegH 445, 5 cr

R 1425 Introduction to Meteorology (§Soil 1425) (Phys/L)
★LECT 1220-1310 MWF, GrnH 110, Johnson A, Klink K, others, (StP)
561092 —1 LAB 0800-0850 TTh, BorH 375, 4 cr (StP)
160303 —2 LAB 0905-0955 TTh, BorH 375, 4 cr (StP)

R 3101 Geography of the United States and Canada (§3102) (SSci; CD)
655624 1010-1100 MWF, WilleyH 175, Hart J, 4 cr

3131 Middle America (§LAS 3134)
675517 1830-2100 M, BlegH 120, Aagesen D, 4 cr

3141 Africa (§Afro 3141) (SSci; IP)
475518 1830-2100 W, BlegH 415, Owusu F, 4 cr

3161 Europe (SSci; IP)
671998 1220-1310 MWF, AndH 330, Sidorov, 4 cr

3331 Economic Geography (SSci; IP)
275519 1010-1100 MWF, AndH 330, Sheppard E, 4 cr

3371 Introduction to Urban Geography (SSci)
473400 1830-2100 M, BlegH 415, VanDrasek B, 4 cr

3421 Climatology (prereq 1401 or 1425 or Soil 1262 or Phys 1071 or #)
152937 1415-1530 TTh, BorH 375, Skaggs R, 4 cr (StP)

3431 Introduction to Plant and Animal Geography
675520 1430-1700 W, BlegH 115, Squires R, 4 cr

R 3511 Introduction to Cartography (prereq 5 cr in geog or #)
★LECT 1010-1100 MWF, BlegH 415, Hsu M
172001 —1 REC 1430-1625 T, BlegH 455, 5 cr
072002 —2 REC 1220-1415 W, BlegH 455, 5 cr
872003 —3 REC 1430-1625 Th, BlegH 455, 5 cr

3530 Cartography Internship (max 10 cr; prereq #) (S-N only)
163346 2-5 cr

3940 Directed Field Study (prereq #) (A-F only)
254525 2-4 cr

3970 Directed Readings (prereq #, Δ, ❑)
154414 1-15 cr

5001 Modes of Geographic Inquiry
672004 1220-1410 MF, BlegH 415, Sheppard E, 4 cr

5132 South America (Envt; IP)
472005 1220-1450 W, BlegH 425, Weil C, 4 cr

5176 Scandinavia in the 19th and 20th Centuries (§Hist 3273) (A-F only)
272006 0945-1100 TTh, BlegH 155, Rice J, 4 cr

5361 The Geography of Land Ownership (prereq #)
172007 1415-1530 TTh, BlegH 445, Squires R, 4 cr

5426 Climate Variations (prereq 3421 or Soil 3421, or #)
676229 0800-1000 TTh, BlegH 430, Skaggs R, 4 cr

R 5444 Water Resources, Individuals, and Institutions (§WRes 5101)
475521 1430-1630 MWF, PeikH 165, Brown D, 4 cr

5530 Cartography Internship (max 10 cr; prereq #) (S-N only)
162321 2-5 cr

R 5563 Advanced Geographic Information Systems (prereq 5562 or LA 5562 or #) (A-F only)
153061 1415-1530 TTh, BlegH 330, Veregin H, 4 cr

5605 Geographical Perspectives on Urban Planning I (IP; C/PE)
972008 0945-1100 TTh, BlegH 330, Miller R, 4 cr

R 5856 The Meanings of Place (§AmSt 3920, AmSt 5920, Arch 5956; prereq #) (A-F only)
463188 1430-1730 T, BlegH 415, Martin J, 4 cr

8001 Proseminar: Geography and Cultural Ecology (prereq #)
772009 1325-1520 Th, BlegH 460, Samatar A, Weil C, 3 cr

8330 Seminar: Rural Geography (prereq #)
363166 1325-1515 M, BlegH 430, Hart J, 3 cr

8400 Seminar: Physical Geography (prereq #)
458590 1325-1520 F, BlegH 460, Brown D, Gersmehl P, 3 cr

8420 Seminar: Climatology (prereq #)
172010 1325-1520 Th, BlegH 430, Klink K, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
154882 1-18 cr

8777 Thesis Credits: Masters
554935 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
159099 1-36 cr

8970 Directed Readings
860837 1-5 cr

8990 Research Problems
454197 ar cr

GEOLOGICAL ENGINEERING (GeoE)
Civil Engineering
Institute of Technology

R 5302 Applied Rock Mechanics (§CE 5302; prereq 3300 or #, IT upper div or grad stu) (A-F only)
653873 0905-1100 TTh, Arch 60, Detournay E, 4 cr

R 5555 Engineering Geostatistics (prereq Stat 3091 or #, IT upper div stu or grad) (A-F only)
271499 1220-1415 TTh, CivE 205, Barnes R, 4 cr

R 5662 Special Geo-Engineering Problems (prereq IT sr or #) (A-F only)
159104 ar cr

R 8302 Soil/Rock Plasticity and Limit Analysis (§CE 8302; prereq 3300) (A-F only)
071500 1220-1415 MW, CivE 213, Drescher A, 4 cr

R 8352 Modelling Geomechanical Processes (prereq geo-eng grad maj or #) (A-F only)
871501 1010-1205 TTh, CivE 214, Fairhurst C, 4 cr

R 8603 Seminar: Geo-Engineering (prereq #) (S-N only)
761172 1115-1205 F, CivE 205, ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
556944 1-18 cr

R 8777 Thesis Credits: Masters
760071 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
659267 1-36 cr

GEOLOGY AND GEOPHYSICS (Geo)
Institute of Technology

R 1001 The Dynamic Earth: An Introduction to Geology (Phys/L; Envt)
★LECT 1115-1205 MWF, SmithH 100, Edwards R L, 4 cr
472439 —1 LAB 0905-1100 M, FordH 180
472442 —3 LAB 0905-1100 M, FordH 185
172444 —5 LAB 1220-1415 M, FordH 180
772446 —7 LAB 1430-1625 M, FordH 180
372448 —9 LAB 1430-1625 M, FordH 185
572450 —11 LAB 0905-1100 T, FordH 180
172452 —13 LAB 0905-1100 T, FordH 185
272457 —15 LAB 1115-1310 T, FordH 180
175450 —17 LAB 1115-1310 T, FordH 185
875452 —19 LAB 1325-1520 T, FordH 180
475454 —21 LAB 1325-1520 T, FordH 185
175456 —23 LAB 0905-1100 W, FordH 180
775458 —25 LAB 0905-1100 W, FordH 185
975460 —27 LAB 1220-1415 W, FordH 180
575462 —29 LAB 1430-1625 W, FordH 180
175464 —31 LAB 1430-1625 W, FordH 185
875466 —33 LAB 0905-1100 Th, FordH 180
475468 —35 LAB 0905-1100 Th, FordH 185
675470 —37 LAB 1115-1310 Th, FordH 180
475633 —39 LAB 1115-1310 Th, FordH 185
975474 —41 LAB 1325-1520 Th, FordH 180
575476 —43 LAB 1325-1520 Th, FordH 185
175478 —45 LAB 0905-1100 F, FordH 180
375480 —47 LAB 1220-1415 F, FordH 180

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

★LECT 1325-1415 MWF, SmithH 100, Hooke R L, 4 cr
672441 —2 LAB 0905-1100 M, FordH 180
672455 —4 LAB 0905-1100 M, FordH 185
972445 —6 LAB 1115-1310 M, FordH 185
572447 —8 LAB 1430-1625 M, FordH 180
172449 —10 LAB 1430-1625 M, FordH 185
372451 —12 LAB 0905-1100 T, FordH 180
072453 —14 LAB 0905-1100 T, FordH 185
875449 —16 LAB 1115-1310 T, FordH 180
075451 —18 LAB 1115-1310 T, FordH 185
675453 —20 LAB 1325-1520 T, FordH 180
275455 —22 LAB 1325-1520 T, FordH 185
975457 —24 LAB 0905-1100 W, FordH 180
575459 —26 LAB 0905-1100 W, FordH 185
775461 —28 LAB 1115-1310 W, FordH 185
375463 —30 LAB 1430-1625 W, FordH 180
075465 —32 LAB 1430-1625 W, FordH 185
675467 —34 LAB 0905-1100 Th, FordH 180
275469 —36 LAB 0905-1100 Th, FordH 185
475471 —38 LAB 1115-1310 Th, FordH 180
175473 —40 LAB 1115-1310 Th, FordH 185
775475 —42 LAB 1325-1520 Th, FordH 180
375477 —44 LAB 1325-1520 Th, FordH 185
075479 —46 LAB 0905-1100 F, FordH 180
175481 —48 LAB 1115-1310 F, FordH 185

R 1002 Historical Geology (Phys/L)
★LECT 1220-1310 MWF, PillsH 110, Sloan R, 4 cr
158843 —1 LAB 1325-1520 M, FordH 85
858912 —2 LAB 1010-1205 T, FordH 85
661844 —3 LAB 1430-1625 T, FordH 85
863026 —4 LAB 1115-1310 Th, FordH 85

R 1011 Volcanoes of the Earth (Phys/NL)
258591 1115-1205 MTWF, PillsH 110, Stout J, 4 cr

R 1012 Planet Earth (Phys/NL; Envt)
757705 1430-1520 MTWF, Phys 133, Murthy V R, 4 cr

R 1019 Our Changing Planet (§Ast 1019, EEB 1019) (Phys/L; Envt)
★LECT 0905-0955 MTW, AndH 210, Alexander E, Murthy V R, 4 cr
559780 —1 REC 0905-1100 Th, PeikH 365
362387 —2 REC 0905-1100 Th, PeikH 385
163159 —3 REC 1220-1415 Th, PeikH 365
356881 —4 REC 1220-1415 Th, PeikH 385
854195 —5 REC 1430-1625 Th, PeikH 365
163055 —6 REC 1430-1625 Th, PeikH 385
654747 —7 REC 0905-1100 F, PeikH 365
654473 —8 REC 0905-1100 F, PeikH 385
859994 —9 REC 1220-1415 F, PeikH 365
061937 —10 REC 1220-1415 F, PeikH 385
455172 —11 REC 1430-1625 F, PeikH 365
862362 —12 REC 1430-1625 F, PeikH 385

R 1081 Conspiracies, Fraud, and Deception in Earth History
576482 1220-1310 M, PillsH 121, Pfannkuch H O, 1 cr

R 3006 Water and Society (prereq 1001 or 1004 or 1012 or 1019 or 1601 or #)
376483 0905-0955 MWF, PillsH 121, Pfannkuch H O, 3 cr

R 3007 Planets of the Solar System (prereq 1001 or 1004 or 1012 or 1019 or #)
176484 1030-1200 MW, PillsH 121, Karato S, Yuen D, 3 cr

R 3211H Honors Earth Science (§1001; prereq selection for IT Honors Curr or consent of IT Honors Office) (Phys/NL)
★LECT 0905-0955 MWF, Phys 131, Kohlstedt D, 4 cr
159412 —80 REC 0905-0955 Th, PillsH 110
559830 —81 REC 1010-1100 Th, PillsH 110

R 3301 Geochemical Principles (prereq Chem 1051, Chem 1052)
★LECT 1325-1415 MWF, PillsH 110, Alexander E C, Edwards R, 4 cr
558144 —1 REC 0905-0955 MW, PillsH 100
163274 —2 REC 1325-1415 TTh, PillsH 100

R 3402 Petrology (prereq 3401 or #) (course fee)
★LECT 1430-1520 MWF, PillsH 110, Weiblen P, 4 cr
254248 —1 LAB 1220-1415 MW, PillsH 125
060268 —2 LAB 1220-1415 TTh, PillsH 125

3990 Problems in Geology and Geophysics (prereq #, Δ)
161418 1-6 cr

R 5010 Field Workshop (prereq geo, geophys, geo-eng maj or #) (course fee)
175447 —1 2 cr
375446 —2 2 cr (Field Methods)

R 5020 Laboratory Workshop (prereq geo, geophys, geo-eng maj or #)
972462 Kelts K, 2 cr (CivE 662)

R 5155 Vertebrate Paleontology II (prereq 5154 or EEB 5114)
772463 1430-1520 MWF, PillsH 105, Sloan R, 5 cr

R 5201 Structural Geology (prereq 3402, 5101 or #) (course fee)
★LECT 0905-1100 MW, PillsH 110, 4 cr
862443 —1 LAB 1325-1520 M, PillsH 100
360137 —2 LAB 0905-1100 T, PillsH 100

R 5251 Geomorphology (prereq 1001, Math 1031, or #) (course fee)
453826 0905-1205 TTh, PillsH 125, Hooke R, 4-5 cr (field trips 0800-1800 T, weeks 2-6 of the qtr)

R 5313 Aqueous Geochemistry (prereq 5311, Chem 5520 or #)
754187 1325-1500 TTh, PillsH 121, 4 cr

R 5508 Mineral and Rock Rheology (prereq 3201, Phys 1253)
372465 Karato S, 4 cr

R 5561 Magnetism: Physics, Geophysics, and Engineering (§EE 5561, Phys 5561; prereq Phys 1251)
172466 Moskowitz B, 3 cr

5621 Limnology Laboratory (§EEB 5621; prereq 5601 or EEB 5601 or #)
356184 1325-1730 Th, BioSci 192, Megard R, 2 cr (StP)

R 5631 Earth System: Geosphere/Biosphere Interactions (§EEB 5004; prereq 3202, 3301 or #)
★LECT 1010-1145 TTh, PillsH 121, Leventer A, Davis M, 4 cr
072467 —1 LAB Leventer A

R 5642 Quantitative Hydrogeology (prereq 1001, Chem 1052, Math 1252, Phys 1105; Geo maj: core curriculum thru 3402; or #)
★LECT 1630-1800 MW, PillsH 110, Person M
054549 —1 REC 1630-1730 T, PillsH 110, 4 cr

R 5655 Continental Sedimentary Environments (prereq 5651 or #) (course fee)
075448 0800-0955 TF, PillsH 110, Kleinspehn K, 4 cr

R 5701 Scientific Visualization (prereq CSci 3101, CSci 3102 or CSci 3113 or #)
076342 1415-1530 TTh, Phys 210, Barry P, Morin P, 4 cr

5980 Seminar: Current Topics in Geology and Geophysics (prereq #)
753461 1-6 cr

5990 Senior Thesis (max 6 cr; prereq sr geology or geophysics maj, #)
956021 2 cr

8098 Seminar: Current Topics in Geology and Geophysics (prereq #) (S-N only)
757896 —1 Shanks W, Seyfried W, others, 1-6 cr
876343 —2 Banerjee S, 1-6 cr

8099 Research in Geology and Geophysics (prereq #) (S-N only)
158938 1-6 cr

R 8202 Advanced Structural Geology (prereq 5201)
172458 1325-1415 MWF, PillsH 121, Hudleston P, Lan L, 3 cr

R 8543 Principles of Rock Magnetism (prereq 5541 or #)
676344 Banerjee S, Moscowitz B, 3 cr

R 8618 Finite Element Methods in Subsurface Flow and Transport Problems (prereq #)
972459 1200-1500 T, PillsH 207C, Person M, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
955161 1-18 cr

8777 Thesis Credits: Masters
957847 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
856030 1-36 cr

GERMAN (Ger)

German, Scandinavian, and Dutch Liberal Arts

R 1101 Beginning German (§1000)
955130 —1 0800-0850 MTWThF, KoltH S132, 5 cr
756912 —2 1115-1205 MTWThF, KoltH S132, 5 cr
455799 —3 1325-1415 MTWThF, KoltH S137, 5 cr

R 1102 Beginning German (§1110; prereq 1101 or 1000)
059752 —1 0905-0955 MTWThF, KoltH S132, 5 cr
457469 —2 1115-1205 MTWThF, KoltH S133, 5 cr
559326 —3 1325-1415 MTWThF, KoltH S136, 5 cr
356203 —4 1325-1415 MTWThF, KoltH S135, 5 cr

R 1103 Beginning German (§1110; prereq 1102 or 5 cr of 1110)
253360 —1 0905-0955 MTWThF, FolH 240, 5 cr
163458 —2 0905-0955 MTWThF, KoltH S133, 5 cr
162097 —3 1010-1100 MTWThF, KoltH S132, 5 cr
959131 —4 1115-1205 MTWThF, KoltH S134, 5 cr
955676 —5 1220-1310 MTWThF, KoltH S132, 5 cr
162982 —6 1325-1415 MTWThF, KoltH S134, 5 cr

R 1104 Intermediate German (prereq 1103 or 10 cr of 1110 or Entrance Standard proficiency test)
559973 —1 1115-1205 MTWThF, FolH 240, 5 cr
663027 —2 1325-1415 MTWThF, KoltH S133, 5 cr

R 1105 Intermediate German (prereq 1104 or placement)
154266 —1 0800-0850 MTWThF, FolH 234, 5 cr
761804 —2 1010-1100 MTWThF, FolH 234, 5 cr
854844 —3 1325-1415 MTWThF, FolH 234, 5 cr

R 1106 Intermediate German (prereq 1105 or placement)
759230 —1 0905-0955 MTWThF, FolH 234, 5 cr
662475 —2 1010-1100 MTWThF, FolH 38, 5 cr
261037 —3 1115-1205 MTWThF, FolH 234, 5 cr
462266 —4 1220-1310 MTWThF, FolH 234, 5 cr
175545 —5 1325-1415 MTWThF, FolH 240, 5 cr

R 3011 Conversation and Composition (prereq graduation proficiency test)
058777 1325-1415 MWThF, Phys 157, 4 cr

R 3012 Conversation and Composition (prereq 3011)
461182 1430-1520 MTWF, NichH 109, 4 cr

R 3013 Conversation and Composition (prereq 3012)
054227 —1 0800-0850 MTThF, FolH 344, 4 cr
760300 —2 1715-1900 TTh, FolH 344, 4 cr

R 3016 Techniques of Translation (prereq 3013)
672052 1245-1400 TTh, PeikH 315, 4 cr

R 3020 Advanced Communication Skills for FLIP Students (prereq admittance to German Foreign Language Immersion Program (FLIP))
472053 1325-1415 MWF, FolH 38, Metcalf E M, 5 cr

R 3021 Business German (prereq 3012 or equiv)
156633 1815-1930 MTh, FolH 114, Metcalf E M, 4 cr

R 3104 Reading and Analysis of Prose (prereq 3012 or ¶3012) (Lit)
454362 1325-1415 MWF, LindH 217, 4 cr

R 3105 Reading and Analysis of Drama and Poetry (prereq 3012 or ¶3012) (Lit)
272054 1010-1100 MWF, KoltH S136, Duroche L, 4 cr

R 3341H Proseminar in German: Minority Literature (prereq CLA honors stu or #)
972056 0945-1100 TTh, VinH 301, Teraoka A, 4 cr

R 3442 Twentieth-Century Literature: 1918-1933 (prereq 3104, 3105)
772057 1115-1205 MWF, FordH 70, Weiss G, 4 cr

R 3503 Contemporary Austria (prereq 1106 or graduation proficiency test)
576126 1415-1530 TTh, WulfH 140, Boomgaarden B, 4 cr

R 3513 German Civilization and Culture: 1800 to Present
259143 1430-1520 MF, 1430-1625 W, FolH 234, Weiss G, 4 cr

3590 Directed Studies: German-Speaking Countries (prereq 3501, #)
761009 5 cr

R 3610 German Authors and/or Topics in Translation: Fairy Tales, Feminism, and the Brothers Grimm (max 12 cr; no knowledge of German req; prereq non maj or minor)
372059 1220-1310 MWF, FolH 50, Zipes J, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
156146 1-5 cr

R 5101 The Analysis of German (prereq 1106, Ling 3001 or Ling 5001 or #)
075546 1430-1520 MWF, FolH 344, Fullerton G, 4 cr

R 5102 The Analysis of German (prereq 1106, Ling 3001 or Ling 5001 or #)
772060 1220-1310 MWF, FolH 344, Fullerton G, 4 cr

R 5722 Middle High German Language
376127 1245-1400 TTh, NichH 209A, Firchow E, 4 cr

5970 Directed Studies (prereq #,Δ, CLA approval)
461005 1-5 cr

R 8003 Basic Seminar in German Literature (prereq 8002, German grad maj or #) (A-F only)
875547 1325-1520 Th, FolH 426, Teraoka A, 4 cr

R 8340 Topics in 20th-Century German Literature (max 12 cr)
172063 —1 1430-1625 T, FolH 234, McCormick R, Schissler H, 4 cr (Social and Cultural History of the Fifties in West Germany)
072064 —2 1535-1730 Th, PeikH 155, Stockenstrom G, 4 cr (Epic Theater) (§Scan 8611)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
162075 1-18 cr

R 8743 Gothic and Methods of Comparative Germanic Linguistics (prereq 8742)
073571 1325-1520 M, FolH 306, Liberman A, 4 cr

8777 Thesis Credits: Masters
956844 1-16 cr

R 8801 Dissertation Seminar (S-N only)
872051 1325-1520 W, FolH 426, Joeres R E, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
059170 1-36 cr

8990 Reading and Research (prereq #)
157068 3-6 cr

GERMANIC PHILOLOGY (GPhl)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
962787 1-18 cr

8777 Thesis Credits: Masters
653355 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
459433 1-36 cr

GERONTOLOGY (Gero)

5105 Multidisciplinary Perpectives on Aging (§AdEd 5440, CPsy 5305, Nurs 5780, Phar 5009, PubH 5737, SW 5024, Soc 5960)
674514 1640-1825 MW, MoosT 2690, Krichbaum K, 4 cr

GRADUATE SCHOOL (Grad)

R 8100 Teaching in Higher Education (prereq #)
159726 —1 1800-2100 T, HckrH 210, Everley M, 3 cr (StP)
361577 —2 1430-1730 Th, NichH 109, Evans C, 3 cr

R 8150 Practicum for Instructors in Higher Education (prereq #) (S-N only)
570908 —1 1430-1645 T, HckrH 210, Smith J, 3 cr (StP)
370909 —2 1430-1645 T, HckrH 100, Everley M, 3 cr (StP)

R 8200 Professional Communication Skills (prereq #) (S-N only)
776125 Smith S, 3 cr

GREEK (Grk)
Classical and Near Eastern Studies Liberal Arts

R 1103 Selections from Greek Literature (§1020, 3051-3052; prereq 1102 or equiv)
261006 —1 0905-0955 MTWThF, FolH 344, 5 cr
776190 —2 0905-0955 MTWThF, FolH 104, 5 cr

3106 Greek Poetry (prereq 1122 or 3052 or 3105 or Δ)
153772 0905-0955 MWF, FolH 426, Hershbell J, 5 cr

3951 Major Project (prereq Grk-Lat or Grk maj, three 3xxx courses in Greek or #) (A-F only)
260194 5 cr

3960H Honors Tutorial (prereq Δ)
958903 5 cr

3970 Directed Studies (prereq #, Δ, ❑)
858876 1-5 cr

5380 Greek Literature: Lyric (max 12 cr)
971943 0800-0850 MWF, FolH 426, Hershbell J, 4 cr

5970 Directed Studies (prereq #,Δ, CLA approval)
353964 1-5 cr

5980 Directed Teaching (prereq #, Δ, CLA approval)
357951 ar cr

5990 Directed Research (prereq #, Δ, CLA approval)
163332 ar cr

8120 Greek Text Course (prereq 3052 or Δ, non-maj)
163162 0905-0955 MWF, FolH 426, Hershbell J, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
259286 1-18 cr

8777 Thesis Credits: Masters
058729 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
156163 1-36 cr

HEALTH INFORMATICS (HInf)
Laboratory Medicine and Pathology Medical School

5432 Health Informatics III: Organizational Context (prereq 5430, 5431, elem algebra, prog, stat, or #)
455818 1115-1205 MTWTh, PWB 6210, Gatewood L, 4 cr

5433 Computer Methodology in Delivery of Health Care I: Physiological Monitoring and Testing (prereq 5432 or #)
755100 1115-1230 TTh, MoosT 2154, Finkelstein S, 3 cr

R 5436 Seminar: Health Informatics (S-N only)
655106 —1 1535-1625 Th, Mayo C231, Ellis L, 1 cr (Todd Amph)

5446 Professional Studies in Health Informatics (prereq health informatics maj, 5432, PubH 5454 or #) (A-F only)
674965 1415-1505 Th, PWB 6210, 1 cr

5470 Topics in Health Informatics (prereq #)
059086 ar cr

8407 Advanced Topics in Health Informatics III (prereq 5432, 5435, 5452 or #)
474966 0900-1030 TTh, PWB 6210, Strother S, 3 cr

8449 Advanced Readings in Health Informatics (prereq 5432, PubH 5434, #)
452871 1-3 cr

8450 Research in Health Informatics (prereq #)
453230 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
455026 1-18 cr

8777 Thesis Credits: Masters
054552 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
153506 1-36 cr

HEALTH SCIENCE UNITS (HSU)
Health Sciences

5009 Multidisciplinary Perspectives on Aging (§AdEd 5440, CPsy 5305, Nurs 5780, Phar 5009, PA 5414, PubH 5737, Soc 5960, SW 5024)
858781 1640-1825 MW, MoosT 2690, 4 cr

5010 Public Health Approaches to AIDS (§PubH 5010; prereq upper div or grad or hlth sci grad stu)
760586 1640-1920 W, MoosT 2620, Rothenberger J, Rhame F, 3 cr

R 5011 The Teaching-Learning Process in the Health Care Setting (§PubH 5064)
457746 1535-1820 M, MoosT 2571, 2585, Garloff D, 3 cr

R 5027 Human Sexual Behavior (§FSoS 5001; prereq upper division, 12 cr in social, behavioral or health science or grad in behavioral, social, educational, health science or human service prog or #)
776299 0905-1115 MW, BioSci 12, Lally C, 5 cr

5210 Terminology of the Health Sciences
660872 Zaske D, 2 cr (for information go to WDH 5-120 before first day of quarter or call 624-2442)

HEBREW (Hebr)
Classical and Near Eastern Studies Liberal Arts

R 1103 Beginning Hebrew (prereq 1102)
656093 —1 1325-1415 MTWThF, FolH 50, Reinberg M, 5 cr
774522 —2 1810-2015 TTh, Shendar J, Rees R, 5 cr (Beth-El Synagogue, St Louis Pk)

Symbols

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† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
\# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

3010 Acquiring Hebrew Fluency (prereq 1013 or #)
172886 1325-1415 MWF, LindH 229, Shendar J, 4 cr

R 3013 Intermediate Hebrew (prereq 3012)
756425 1010-1100 MTWThF, FolH 138, Paradise J, 5 cr

3017 Advanced Modern Hebrew (prereq 3016)
057791 0800-0850 MWF, FolH 50, Reisman D, 4 cr

3301 Modern Hebrew Essay (prereq 3017 or #)
871529 0905-0955 MWF, FolH 142, Reisman D, 4 cr

3980 Directed Instruction (prereq #, Δ, ❑)
275181 1-5 cr

5970 Directed Readings (prereq 3013, #, Δ, CLA approval)
558015 ar cr

5990H Honors Course: Research (prereq 5970, #, Δ, CLA approval)
356072 ar cr

HINDI (Hndi)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 1103 Beginning Hindi (prereq 1102)
462638 0905-0955 MTWThF, FolH 334, 5 cr

R 5133 Intermediate Hindi (prereq 5132)
463126 1325-1455 MWF, KlaCt 186, 5 cr

HISTORY (Hist)
Liberal Arts

R 1013 Introduction to World History (Hist; IP) (A-F only)
★LECT 1010-1100 MWF, AndH 210, Farmer E
857159 —1 REC 0800-0850 MW, BlegH 350, 5 cr
356508 —2 REC 0905-0955 MW, BlegH 240, 5 cr
453390 —3 REC 1220-1310 MW, BlegH 245, 5 cr
061081 —4 REC 1325-1415 MW, BlegH 435, 5 cr
153948 —5 REC 0800-0850 TTh, BlegH 350, 5 cr
957220 —6 REC 0905-0955 TTh, BlegH 255, 5 cr
256212 —7 REC 1010-1100 TTh, BlegH 125, 5 cr
752908 —8 REC 1010-1100 TTh, BlegH 130, 5 cr
961235 —9 REC 0905-0955 WF, BlegH 250, 5 cr
956990 —10 REC 1115-1205 WF, BlegH 330, 5 cr
257313 —11 REC 1220-1310 WF, HHHCtr 30, 5 cr
155045 —12 REC 1325-1415 WF, BlegH 150, 5 cr

R 1013H Honors: Introduction to World History (A-F only)
★LECT 1010-1100 MWF, AndH 210, Farmer E
263032 —80 REC 1115-1205 MW, BlegH 150, 5 cr

R 1033 Introduction to European Civilization: 1750 to Present (§1023) (Hist; IP)
★LECT 0945-1100 TTh, WilleyH 175, Kieft D
458430 —1 REC 0800-0850 MW, HHHCtr 30, 5 cr
152940 —2 REC 0905-0955 MW, BlegH 350, 5 cr
360767 —3 REC 1220-1310 MW, BlegH 210, 5 cr
056446 —4 REC 1325-1415 MW, HHHCtr 60, 5 cr
154730 —5 REC 1010-1100 MF, BlegH 215, 5 cr
157166 —6 REC 0800-0850 TTh, BlegH 245, 5 cr
062005 —7 REC 0800-0850 TTh, BlegH 260, 5 cr
161922 —8 REC 1115-1205 TTh, BlegH 415, 5 cr
255156 —9 REC 1220-1310 TTh, BlegH 255, 5 cr
854875 —10 REC 1220-1310 TTh, BlegH 115, 5 cr
057368 —11 REC 1325-1415 TTh, BlegH 415, 5 cr
161192 —12 REC 0800-0850 WF, BlegH 105, 5 cr
156230 —13 REC 0800-0850 WF, BlegH 420, 5 cr
453518 —14 REC 0905-0955 WF, BlegH 215, 5 cr
363362 —15 REC 1115-1205 WF, HHHCtr 25, 5 cr
854598 —16 REC 1220-1310 WF, BlegH 350, 5 cr

R 1033H Honors Course: Introduction to European Civilization
★LECT 0945-1100 TTh, WilleyH 175, Kieft D
459903 —80 REC 1325-1415 TTh, HHHCtr 60, Kieft D, 5 cr

R 1302 American History (§1302H) (Hist; CD)
★LECT 1220-1310 MWF, WilleyH 125, Evans S
572898 —1 REC 0800-0850 MW, BlegH 245, 5 cr
372899 —2 REC 0800-0850 MW, BlegH 260, 5 cr
172900 —3 REC 1115-1205 MW, BlegH 415, 5 cr
972901 —4 REC 1115-1205 MW, BlegH 10, 5 cr
772902 —5 REC 0800-0850 TTh, BlegH 255, 5 cr
572903 —6 REC 0800-0850 TTh, BlegH 420, 5 cr
372904 —7 REC 0800-0850 TTh, BlegH 135, 5 cr
172905 —8 REC 0905-0955 TTh, BlegH 140, 5 cr
072906 —9 REC 1220-1310 TTh, BlegH 415, 5 cr
872907 —10 REC 1430-1520 TTh, AndH 230, 5 cr
672908 —11 REC 0800-0850 WF, BlegH 135, 5 cr
472909 —12 REC 0800-0850 WF, BlegH 145, 5 cr
872910 —13 REC 0905-0955 WF, BlegH 120, 5 cr
672911 —14 REC 0905-0955 WF, BlegH 230, 5 cr
472912 —15 REC 1115-1205 WF, 5 cr
272913 —16 REC 1115-1205 WF, BlegH 235, 5 cr
172914 —17 REC 1325-1420 WF, BlegH 245, 5 cr

R 1302H Honors Course: American History (§1302) (Hist; CD)
★LECT 1220-1310 MWF, WilleyH 125, Evans S
772916 —80 REC 1115-1205 MW, Evans S, 5 cr

3053 Ancient Civilization
059282 1245-1400 TTh, AndH 350, Evans J, 4 cr

3273 Modern Scandinavia Since 1807
663142 —1 LECT 0945-1100 TTh, BlegH 155, Metcalf M, Rice J, 4 cr
576465 —2 LECT 0945-1100 TTh, BlegH 155, Metcalf M, Rice J, 5 cr (prereq ability to read Danish or Norwegian or Swedish, #)
★REC

3283 Intellectual and Cultural History of Modern Europe (§Hum 3283)
358811 1010-1100 MWF, BlegH 235, Thayer J, 4 cr

R 3403 Survey of Latin American History: 1929 to Present (§LAS 3403) (Hist; IP)
★LECT 0945-1100 TTh, AndH 350, McCaa R
962143 —1 REC 0905-0955 M, BlegH 230, 4 cr
156008 —2 REC 1115-1205 M, BlegH 330, 4 cr
757929 —3 REC 1325-1415 T, BlegH 210, 4 cr
160477 —4 REC 0800-0850 Th, BlegH 210, 4 cr
259353 —5 REC 1220-1310 Th, BlegH 210, 4 cr
855931 —6 REC 1115-1205 F, BlegH 245, 4 cr

3422 The World and the West (§1422)
172928 0815-0930 TTh, BlegH 115, Kopf D, 4 cr

3442 Survey of Chicano History, 1900 to Present (§Chic 3442, LAS 3442)
072954 1115-1230 TTh, BlegH 215, Valdes D, 4 cr

R 3463 Introduction to East Asia in Modern Times (§1463, EAS 1463) (Hist; IP)
★LECT 1115-1205 MWF, AndH 350
661519 —1 REC 1220-1310 M, HHHCtr 30, 4 cr
359523 —2 REC 1430-1520 M, BlegH 210, 4 cr
057547 —3 REC 1220-1310 W, BlegH 115, 4 cr
655249 —4 REC 1430-1520 W, BlegH 245, 4 cr
062540 —5 REC 1220-1310 F, BlegH 245, 4 cr
260521 —6 REC 1430-1520 F, BlegH 245, 4 cr

3464 Early Modern China, 1350-1750 (§5464)
372921 0945-1100 TTh, BlegH 230, Waltner A, 4 cr

3636 Russian History from the Origins to Peter the Great (§5132) (Hist; IP)
555745 0905-0955 MWF, BlegH 135, Noonan T, 4 cr

3681 Irish History
561254 1115-1205 MWF, BlegH 135, Altholz J, 4 cr

R 3700 Topics in European History
172931 1010-1125 MW, BlegH 210, 4 cr

3703 European Cities, 1500-1800 (IP)
972932 1115-1230 TTh, BlegH 155, Phillips C, 4 cr

3704 Daily Life in Europe, 1348-1750 (Hist; IP)
776223 0945-1100 TTh, BlegH 240, Phillips C, 4 cr

3716 Spain from 1700 to the Present
976222 1220-1505 W, BlegH 10, Phillips W, 4 cr

3723 Europe Since World War II
772933 0905-0955 MWF, BlegH 155, Munholland K, 4 cr

3748 The Austrian Republic from World War I to Present
075577 Kaser, 4 cr

3823 United States in the 20th Century: 1960 to the Present (CD; C/PE)
255254 1010-1100 MWF, AndH 350, Berman H, 4 cr

3883 History of American Foreign Relations (IP)
560766 1115-1205 MWF, BlegH 215, Brauer K, 4 cr

R 3955 Introduction to Historical Research (prereq Δ, to be taken prior to 3961)
463353 —1 1325-1520 M, 4 cr
059718 —2 1010-1205 T, BlegH 350, 4 cr

R 3961 Major Paper (prereq Δ)
161847 —1 1325-1520 M, Thayer J, 5 cr
159032 —2 1010-1205 T, BlegH 255, 5 cr
158258 —3 1325-1520 W, 5 cr
159085 —4 1325-1520 Th, Buckley T, 5 cr

3970 Directed Studies (prereq #, Δ, ❑)
763410 1-15 cr

3990 Directed Research (prereq #, Δ, ❑)
953264 1-15 cr

5063 History of Greece 400-200 B.C.
160410 1115-1230 TTh, BlegH 330, Kelly T, 4 cr

5074 History of Rome: A.D. 180-395
672925 0945-1100 TTh, BlegH 245, Evans J, 4 cr

R 5200 Topics in European History (prereq #)
075580 —1 1535-1720 T, BlegH 205, Munholland K, 4 cr (Workshop on French Language, Sources, and Collections)
076227 —2 1220-1505 W, BlegH 10, Phillips W, 4 cr (Modern Spain)

5266 Modern Russia: The 20th Century
663495 1010-1100 MWF, BlegH 420, Stavrou T, 4 cr

5286 Diplomatic History of Europe, 1945 to Present
160527 1115-1230 TTh, AndH 230, Kieft D, 4 cr

5332 American Constitutional History
372935 1115-1230 TTh, BlegH 250, Murphy P, 4 cr

R 5444 Problems in Central and Southern African History: Slavery, Missionaries, and Early Social and Cultural History
875581 1325-1520 W, Atkins K, 4 cr

R 5620 Selected Topics in Medieval History: Late Medieval France (prereq #) (A-F only)
172936 1325-1520 Th, BlegH 350, Reyerson K, 4 cr

R 5650 Early Modern Europe 1450-1650 (max 12 cr; prereq #) (A-F only)
872938 1325-1520 F, BlegH 140, Tracy J, 4 cr

R 5653 Proseminar: English History: Tudor and Stuart Periods (5651-5652-5653†; prereq 5652)
672939 1325-1520 Th, Lehmberg S, 4 cr

5873 Proseminar: Modern England: 1783 to Present (5671-5672-5673†; prereq 5672)
675579 1535-1730 W, BlegH 110, Altholz J, 4 cr

R 5766 New Interpretations and Approaches in Russian History (prereq #)
072940 1325-1520 W, BlegH 415, Stavrou T, Noonan T, 4 cr

R 5842 Proseminar: American Economic History (prereq #)
672942 1430-1620 W, BlegH 350, Green G, 4 cr

R 5865 Proseminar: Afro-American History
472943 1325-1520 Th, BlegH 210, Dillard A, 4 cr

R 5872 Proseminar: Intellectual History of the United States in 19th, 20th Centuries (5871-5872†; prereq 5871, #)
272944 1800-2000 T, ScottH 2, Noble D, 4 cr

R 5950 Proseminar: Historical Topics: Medicine and the Modern State (§HMed 5130; max 16 cr; prereq 5940)
162545 1325-1525 T, AmundH 104, Eyler J, 4 cr

R 5962 Proseminar: Expansion of Europe (prereq 5961)
172945 1325-1520 M, OMWL 462, Phillips W, Urness C, 4.cr (Bell Library)

5970 Directed Studies (prereq #,Δ, CLA approval)
954818 1-15 cr

5990 Directed Research (prereq #, Δ, CLA approval)
554479 1-15 cr

8113 Medieval History (8111-8112-8113†; prereq 8112)
772947 1325-1520 W, SocSci 680, Bachrach B, 3 cr

R 8150 Seminar in English History: Medieval English Court Records (prereq #)
176226 1325-1520 T, WaLib 301, Hanawalt B, 3 cr

R 8347 Social History of American Women (prereq 5857-5858, #)
358226 1325-1520 T, SocSci 1383, Evans S, 4 cr

8402 Latin-American History (8401-8402-8403†; prereq 8401, #)
372949 1325-1520 M, BlegH 245, McCaa R, 3 cr

8403 Latin-American History (8401-8402-8403†; prereq 8402)
772950 1325-1520 T, BlegH 130, Valdes D, 3 cr

8466 Research in Late Imperial China: Yuan, Ming and Qing (prereq reading knowledge of Chinese, #)
572951 1430-1620 F, OMWL, Farmer E, 3 cr (East Asian Library)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
357304 1-18 cr

8715 Research on European Women's History, 1450-1750 (prereq 5715, one European language, #)
172953 1545-1700 T, HHHCtr 30, Pomata G, 4 cr

8777 Thesis Credits: Masters
357268 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
256288 1-36 cr

8970 Directed Studies (prereq #)
153747 1-15 cr

8990 Directed Research (prereq #)
359408 1-15 cr

HISTORY OF MEDICINE (HMed)
Medical School

R 3403 Health Care in Modern History (Hist)
★LECT 1010-1100 MW, LindH 302, Eyler J
262074 —1 REC 1325-1415 W, LindH 216, 4 cr
162920 —2 REC 1010-1100 Th, LindH 216, 4 cr
155733 —3 REC 1115-1205 Th, LindH 216, 4 cr

R 5035 The Germ Theory and the Medical Profession
370912 1330-1530 T, LindH 216, Eyler J, 4 cr

8632 Directed Study (prereq #)
158289 3-15 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
260129 1-18 cr

8777 Thesis Credits: Masters
359747 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
863060 1-36 cr

HISTORY OF SCIENCE AND TECHNOLOGY (HSci)
Institute of Technology

R 1713 Technology and Western Civilization: 19th and 20th Centuries (§3713) (Hist; IP)
★LECT 1325-1415 MWF, Phys 170, Seidel R
263497 —1 REC 1325-1415 T, LindH 340, 4 cr
955757 —2 REC 1010-1100 W, LindH 303, 4 cr
362955 —3 REC 1325-1415 W, LindH 325, 4 cr
356346 —4 REC 0905-0955 Th, LindH 320, 4 cr
460248 —5 REC 1325-1415 Th, LindH 340, 4 cr
257912 —6 REC 1115-1205 F, LindH 320, 4 cr

R 1813 Introduction to History of Science: Modern Science (§3813) (Hist; IP)
★LECT 0905-0955 MWF, FordH 55, Norberg A
559052 —1 REC 1220-1310 M, LindH 320, 4 cr
457195 —2 REC 0905-0955 T, LindH 303, 4 cr
059136 —3 REC 1115-1205 W, LindH 303, 4 cr
063784 —4 REC 0905-0955 Th, LindH 325, 4 cr
459819 —5 REC 1325-1415 Th, Phys 143, 4 cr
162318 —6 REC 1010-1100 F, LindH 315, 4 cr

3244 History of Ecology and Environmentalism (§5244)
175562 1325-1520 TTh, AlderH 415, Beatty J, 4 cr (StP)

R 3713 Technology and Western Civilization: 19th and 20th Centuries (§1713) (Hist; IP)
★LECT 1325-1415 MWF, Phys 170, Seidel R
762872 —1 REC 1325-1415 T, LindH 340, 4 cr
260986 —2 REC 1010-1100 W, LindH 303, 4 cr
659026 —3 REC 1325-1415 W, LindH 325, 4 cr
562243 —4 REC 0905-0955 Th, LindH 320, 4 cr
061338 —5 REC 1325-1415 Th, LindH 340, 4 cr
554806 —6 REC 1115-1205 F, LindH 320, 4 cr

R 3813 Introduction to History of Science: Modern Science (§1813) (Hist; IP)
★LECT 0905-0955 MWF, FordH 55, Norberg A
463286 —1 REC 1220-1310 M, LindH 320, 4 cr
358453 —2 REC 0905-0955 T, LindH 303, 4 cr
262303 —3 REC 1115-1205 W, LindH 303, 4 cr
560444 —4 REC 0905-0955 Th, LindH 325, 4 cr
162206 —5 REC 1325-1415 Th, Phys 143, 4 cr
259434 —6 REC 1010-1100 F, LindH 315, 4 cr

5244 History of Ecology and Environmentalism (§3244)
075563 1315-1520 TTh, AlderH 415, Beatty J, 4 cr (StP)

5925 History of 20th-Century Physics (§Phys 5925; prereq general physics or #)
472070 1245-1400 TTh, LindH 215, Stuewer R, 4 cr

5990 Directed Research (prereq #, Δ, CLA approval)
960165 1-15 cr

8111 Historiography of Science and Technology (prereq Hsci grad stu or #)
356427 1535-1705 M, Phys 236A, Stuewer R, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
452949 1-18 cr

8777 Thesis Credits: Masters
257876 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
161984 1-36 cr

8900 Seminar: History of Early Physical Sciences (prereq #)
875564 1430-1700 W, LindH 216, Shapiro A, 4 cr

8920 Seminar: History of Biological Sciences (prereq #)
475566 Shapiro A, 4 cr (StP)

8970 Directed Study (max 15 cr; prereq #)
356251 1-5 cr

8990 Directed Research (max 15 cr; prereq #)
658720 1-5 cr

HONORS COLLOQUIA (HCol)
Honors Program
Liberal Arts

R 1010 Geology Gone Wrong (prereq fr or soph, regis honors div)
771992 1325-1520 W, PillsH 207C, Stefanie Brachfeld, Carol Ormand, Michelle Markley, Douglas Allen, 2 cr

R 1020 The Art and "Troubles" of Modern Ireland: 1790s-Present (prereq fr or soph, regis honors div)
571993 1430-1625 W, JonesH 207A, Joel Hollander, 2 cr

R 1030 The Concept of Totalitarianism in Political Theory, Literature, and Popular Discourse (prereq fr or soph, regis honors div)
371994 1245-1430 Th, JohH 101, Paul Soper, 2 cr

R 1040 Decolonizing International Relations Theory: Third World Views of the Postwar International System (prereq fr or soph, regis honors div)
156025 1115-1310 T, JohH 101, Himadeep Muppidi, 2 cr

R 1050 Myth in Contemporary Performance (prereq fr or soph, regis honors div)
062490 1325-1520 T, RarigC 210, Aravind Adyanthaya, 2 cr

1970 Honors Colloquium: Directed Studies (prereq fr or soph, regis honors div, #, Δ)
458864 1-4 cr

HONORS SEMINAR (HSem)
Honors Program
Liberal Arts

R 3020 Mathematics: Art? Science? or Dehumanizing Dogma? (prereq jr or sr, reg honors div)
672701 1245-1430 TTh, VinH 364, Paul Garrett, 4 cr

R 3030 Preventing Pollution: Innovative Approaches to Environmental Management (§CE 5099, Mgmt 5101, PA 5793, PubH 5150; prereq jr or sr, reg honors div)
274399 1730-2030 Th, CivE 202, Dean Abrahamson, Malcolm Hepworth, Alfred Marcus, Ken Sexton, 3 cr

R 3040 Understanding Diversity: An International Focus (§HE 5150H; prereq jr or sr, reg honors div)
875340 0905-1100 W, FordH 50, Oliver Williams, Maura Sullivan, Sonya Davila Williams, 2 cr (Apr 2-May 7)

R 3050 War and Violence: Impact on Families and Communities (§HE 5150H; prereq jr or sr, reg honors div)
675341 1430-1625 W, McNH 22, Constance Fabumni, Boris Kalanj, 2 cr

R 3080 Interdisciplinary Views of Persuasion (§Jour 5731H; prereq jr, sr, reg honors div)
971988 0945-1100 TTh, MurH 320, William Wells, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 3120 Seeking Solutions to Global Health Issues (§Nurs 5482H; prereq jr, sr, reg honors div) (IP)
763603 1430-1625 Th, WDH 4180, Laura Duckett, Karen Brand, 4 cr

3970 Honors Seminar: Directed Studies (prereq jr, sr, reg honors div, #, Δ)
753850 1-5 cr

HORTICULTURAL SCIENCE (Hort)
Agricultural, Food, and Environmental Sciences

R 1010 Home Horticulture (no cr for hort emphasis sequence)
675582 1830-2100 MW, HrG 172, Foulk D, 4 cr

R 1022 Herbaceous Landscape Plants
★LECT 1220-1310 TTh, AlderH 415, Anderson N
853970 —1 LAB 1010-1205 TTh, AlderH 423, Anderson N, 5 cr
753122 —2 LAB 1325-1520 TTh, AlderH 423, Anderson N, 5 cr

R 3002 Horticultural Cropping Systems (prereq 1036, Biol 1103) (A-F only)
★LECT 1325-1415 MWF, AlderH 415, Strefeler M
658667 —1 LAB 1535-1730 MW, HrG 172, 5 cr

R 3072 Turf Management (prereq Soil 3125, PBio 1103, Hort 1036 or Agro 3020)
★LECT 1115-1205 MWF, AlderH 405, White D
058360 —1 LAB 1325-1730 M, AlderH 405, White D, 4 cr

3097 Horticulture Practicum (prereq upper division horticulture emphasis or sequence, Δ) (S-N only)
253424 2-4 cr

5000 Professional Experience Program (prereq #) (S-N only)
861292 4 cr

R 5015 Restoration and Reclamation Ecology (prereq 1 crse in plant biol or botany and ecology) (Envt)
★LECT 0905-0955 MW, AlderH 415, Galatowitsch S
756697 —1 LAB 0800-0955 F, AlderH 415, Galatowitsch S, 4 cr

R 5041 Landscape Design and Implementation (§3040; prereq 3030 or 5030)
★LECT 1010-1205 T, AlderH 405, Pedersen B
973661 —1 LAB 1010-1625 Th, AlderH 405, Pedersen B, 5 cr

5048 Nursery Management II (5046-5047-5048†; prereq 5047)
★LECT 0800-0955 TTh, AlderH 415, Calkins J
060366 —1 LAB 1220-1625 T, HrG 172, 174, Calkins J, 4 cr

R 5054 Commercial Floriculture Production Practices (prereq 1036, 3002, PBio 3131)
★LECT 1010-1100 MWF, AlderH 415, Erwin J
159466 —1 LAB 1220-1415 MW, HrG 174, Erwin J, 4 cr

5091 Directed Studies (prereq 8 cr upper division hort course, Δ)
259174 2-6 cr

8007 Extension Horticulture Practicum (max 6 cr; prereq 12 grad cr)
461909 1-5 cr

8042 Horticultural Seminar (S-N only)
054065 1535-1700 W, AlderH 415, 1 cr

8051 Advanced Problems in Horticultural Crop Breeding (prereq #)
661004 3-9 cr

8052 Advanced Problems in Physiology of Horticultural Crops (prereq #)
956469 3-9 cr

8062 Discussions in Plant Hardiness (prereq #)
756313 1220-1310 F, AlderH 398, Li P, 1 cr

8065 Discussions in Postharvest Physiology (prereq #)
363748 Li P, Tong C, 1 cr

8066 Discussions in Horticultural Research (S-N only)
163453 1545-1700 Th, AlderH 310, Smith A, 1 cr

8090 Graduate Horticultural Research (prereq Δ) (S-N only)
756215 1-18 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
954026 1-18 cr

8777 Thesis Credits: Masters
854276 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
760040 1-36 cr

HUMAN ECOLOGY (HE)
Human Ecology

R 1191 Career Planning Strategies (S-N only)
653954 1325-1510 W, McNH 144, Exline J, 2 cr

5003 Field Experience (max 15 cr; prereq #)
162366 1-5 cr

5130 Independent Study in Home Economics (max 16 cr; prereq #)
654392 1-5 cr

R 5150H Honors Seminar (max 6 cr; prereq admission to Honors Program)
875337 —80 0905-1100 W, FordH 50, Williams O, Davila-Williams S, others, 2 cr (Apr 2-May 7)
475339 —81 1430-1625 W, McNH 22, Fabumni C, Kalanj B, 2 cr

HUMAN RESOURCE DEVELOPMENT (HRD)
Work, Community, and Family Education
Education and Human Development

R 5104 Survey: Human Resource Development and Adult Education (§AdEd 5104) (A-F only)
260616 1845-2205 M, VoTech R280, Peterson S, 4 cr

R 5253 Supervisory Training (§BIE 5253; prereq VoEd 5340 or WCFE 5340) (A-F only)
857663 1600-1830 T, VoTech 220, 3 cr

R 5262 Customer Service Training (§BIE 5262) (A-F only)
255349 1600-1830 W, VoTech R285, Peterson S, 3 cr

R 5366 Management Training Practices (§BIE 5366; prereq prin of mgmt or superv crse or #)
353446 1845-2205 Th, VoTech R285, Zuber J, 4 cr

R 5660 Instructional Methods (§BIE 5660, Ind 5360) (A-F only)
871658 1600-1830 M, VoTech R280, Lewis T, 3 cr

R 5750 Personnel Training and Development (A-F only)
858294 1845-2205 T, VoTech 230, Richburg A, 4 cr

R 5760 Organization Development (§VoEd 5760) (A-F only)
060125 1845-2205 W, VoTech R285, Lynham S, 4 cr

R 5770 Human Resource Development: Special Topics: Evaluation in Human Resource Development (prereq curr design crse, 5760 or VoEd 5760 or #)
159581 1600-1830 M, VoTech R285, Pucel D, 3 cr

R 5780 Internship: Human Resource Development (max 15 cr; prereq 5750)
554014 McLean G, ar cr

R 5790 Strategic Planning in Human Resource Development (prereq 5750 or 5760) (A-F only)
362499 1845-2205 Th, VoTech R280, Arnold D, 4 cr

R 5794 Consulting in Human Resource Development (prereq 5750 or 5760 or #)
759213 0800-1300 S, CentLib 4, 3 cr (Apr 5-May 10)

R 8750 Advanced Theories in Human Resource Development (prereq 5750, 5760 or #)
761785 1845-2205 M, VoTech R275, Swanson R, 4 cr

HUMANITIES (Hum)
Liberal Arts

1117 European Heritage: Renaissance, Reformation (IP)
572495 0945-1100 TTh, BlegH 235, Norwood J, 4 cr

3117 European Heritage: Renaissance, Reformation (§1117, Rhet 3323; prereq jr or sr or #) (IP)
372496 0945-1100 TTh, BlegH 235, Norwood J, 4 cr

3283 Intellectual and Cultural History of Modern Europe (§Hist 3283)
462283 1010-1100 MWF, BlegH 235, Thayer J, 4 cr

3635 Hinduism: From Guptas to 13th Century (§SALC 3635, SoAS 3635)
174971 1245-1400 TTh, FordH 150, Kliger G, 4 cr

3910 Topics in the Humanities (prereq jr or sr or #)
172497 —1 1315-1530 T, AndH 270, Bachrach B, 4 cr (The Carolingian Renaissance)
072498 —2 1325-1520 W, BlegH 135, Evans J, 4 cr (I, Claudius)

5910 Topics in the Humanities: The Carolingian Renaissance (prereq jr or sr or grad stu)
872499 1315-1530 T, AndH 270, Bachrach B, 4 cr

INDUSTRIAL ENGINEERING/ OPERATIONS RESEARCH (IEOR)
Mechanical Engineering
Institute of Technology

R 5020 Engineering Cost Accounting, Analysis and Control (prereq 3000, IT or grad...ME 3900 rec)
571864 —1 0905-0955 MWThF, MechE 212, Arora S, 4 cr

R 5040 Introduction to Operations Research (prereq IT or grad stu, Math 1261...3000 rec)
371865 0800-0850 MWThF, MechE 202, 4 cr

R 5071 Human Factors in System Design (prereq 5070 and/or 5010, IT stu or grad)
★LECT 1430-1520 MW, LindH 215, Kvalseth T
957489 —1 REC 1535-1740 W, MechE 221, 4 cr

R 5180 Applied Industrial Engineering (prereq 3000, 5010, 5020, 5030, 5040, #, Δ)
454748 3-5 cr

R 5198H Industrial Engineering Upper Division Honor Thesis I (5198H-5199H†; prereq upper div ind eng honors stu)
554109 4 cr

R 5199H Industrial Engineering Upper Division Honor Thesis II (5198H-5199H†; prereq 5198H, upper div ind eng honors stu)
856285 4 cr

R 5254 Design Morphology with Applications (prereq completion of sequences ME 3201/3 or 5, ME 3303 or 5342, upper div mech engr maj)
★LECT 1325-1415 TTh, MechE 18
255951 —1 LAB 1325-1730 TTh, MechE 18, 4 cr

R 5255 Engineering Design Project (prereq ME upper div stu, 5254)
★LECT 1325-1415 TTh, MechE 18, 4 cr
255271 —1 LAB 1325-1730 TTh, MechE 18

R 5351 Analysis of Production Processes (prereq 5020, IT stu or grad...backgrd in all indus engr areas rec-3000, 5010, 5030, 5040)
174355 1430-1810 M, MechE 18, 4 cr

R 5445 Topics in Management Science (prereq 5010, 5020, 5030, 5040, IT stu or grad)
575171 1430-1625 MW, LindH 302, Dooley K, 3-5 cr

R 5446 Discrete Event Simulation: Introduction and Applications (prereq Math 1231, ME 3900, IT or grad stu)
861700 1115-1310 TTh, LindH 320, Benjaafar S, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
160771 1-18 cr

8773 Graduate Seminar (S-N only)
558905 1535-1635 W, MechE 108, 1 cr (bgns 2nd W)

8774 Graduate Seminar (S-N only)
459061 1535-1635 W, MechE 108, 1 cr (bgns 2nd W)

8775 Graduate Seminar (S-N only)
563750 1535-1635 W, MechE 108, 1 cr (bgns 2nd W)

8777 Thesis Credits: Masters
057855 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
154856 1-36 cr

INDUSTRIAL RELATIONS (IR)
Management

Non-SMgt students should refer to page 10, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3002 Personnel and Industrial Relations (prereq 90 cr completed or in progress, Econ 1101, Econ 1102, Psy 1001) (A-F only)
556040 —1 0800-0945 MW, BlegH 255, 4 cr
854262 —2 1010-1155 MW, BlegH 205, 4 cr
259868 —3 0800-0945 TTh, BlegH 205, 4 cr

R 5990 Independent Study in Personnel and Industrial Relations (prereq SMgt or grad SMgt approval)
054678 1-8 cr

R 8001 Introduction to Quantitative Methods and Techniques for Industrial Relations (prereq IR grad stu or Δ)
★LECT 1730-2100 M, HHHCtr 30
357741 —1 LAB 1730-2100 W, HHHCtr 35, 4 cr

R 8002 An Introduction to Industrial Relations (§3002; prereq Econ 1101, 1102, Psy 1001, IR MA student or Δ)
954768 1730-2100 T, BlegH 245, 4 cr

R 8004 Design and Management of Organizations for a Changing World (prereq 8002 or #, IR grad maj or Δ, IR grad maj must reg A-F)
257151 1325-1510 TTh, HHHCtr 15, 4 cr

R 8006 Introduction to Labor Market Analysis (prereq 8002 or #, IR grad maj or Δ, IR grad maj must reg A-F)
058312 —1 1535-1720 MW, HHHCtr 15, 4 cr
259627 —2 0800-0945 TTh, HHHCtr 15, 4 cr

R 8007 Collective Bargaining: Private and Public Sectors (prereq 8002 or #, IR grad maj or Δ, IR grad maj must reg A-F)
261796 —1 1325-1510 MW, HHHCtr 15, 4 cr
257442 —2 1010-1155 TTh, HHHCtr 15, 4 cr

R 8013 Staffing and Selection: Strategic and Operational Concerns (prereq 8003 or #, IR grad maj or Δ, IR grad maj must reg A-F)
257957 1730-2100 T, BlegH 105, 4 cr

R 8016 Human Resource Planning (§8036; prereq 8006 or #, IR grad maj or Δ, IR grad maj must reg A-F)
957167 1730-2100 M, BlegH 245, 4 cr

R 8022 International Human Resource Management (prereq 8002 or MBA 8015 or # or Δ, IR maj must reg A-F)
474529 1730-2100 M, HHHCtr 15, 4 cr

R 8025 Employer Sponsored Employment Benefits Programs (prereq 8005 or #, IR grad maj or Δ, IR grad maj must reg A-F)
156812 1730-2100 Th, BlegH 210, 4 cr

R 8026 Human Resources and Firm Performance (prereq 8006 or #, IR grad maj or Δ, IR grad maj must reg A-F)
363653 1730-2100 T, HHHCtr 15, 4 cr

R 8033 Employee Development: Creating a Competitive Advantage (prereq 8003 or #, IR grad maj or Δ, IR grad maj must reg A-F)
755033 1730-2100 Th, HHHCtr 30, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
954737 1-18 cr

R 8777 Thesis Credits: Masters
159810 1-16 cr

R 8800 Advanced Quantitative Research Methods (prereq IR core or #, IR PhD maj or Δ, IR grad maj must register A-F)
672245 1325-1710 W, SocSci 101, 4 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
161256 1-36 cr

R 8990 Independent Study in Industrial Relations (prereq #, IR grad maj must reg A-F)
554210 ar cr

INFORMATION AND DECISION SCIENCES (IDSc)
Management

Non-SMgt students should refer to page 10, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3030 Information Systems and Information Management (prereq BA 1001 or exp using Windows and Internet) (A-F only)
★LECT 1220-1335 MW, HHHCtr 25
458394 —1 LAB 0945-1045 Th, BlegH 90, 4 cr
259305 —2 LAB 1100-1200 Th, BlegH 90, 4 cr
★LECT 1430-1545 MW, BlegH 215
162200 —3 LAB 1215-1315 Th, BlegH 90, 4 cr
856786 —4 LAB 1330-1430 Th, BlegH 90, 4 cr

R 3120 Information Systems Application Development II (prereq 3110) (A-F only)
575378 —1 1325-1510 TTh, RarigC 610, Naumann J D, 4 cr
576305 —2 1535-1720 TTh, BlegH 115, 4 cr

R 3130 Business Process Analysis and Design (prereq 3110 or #) (A-F only)
575395 —1 1220-1405 M, BlegH 330, 1220-1405 W, BlegH 90, 4 cr
376306 —2 1430-1615 M, 1430-1615 W, BlegH 90, 4 cr

R 3990 Information Systems Industry Internship (prereq 3120 or ¶3120, Δ) (A-F only)
375396 1-4 cr

R 8110 Individual Productivity with Information Technology (§8103) (A-F only)
461344 1535-1720 MW, BlegH 255, 4 cr

R 8140 Managing Information Services (§8101; prereq 8120, 8130 or #) (A-F only)
954317 1325-1655 T, BlegH 225, Chervany N, 4 cr

R 8420 Financial Information Systems and Technologies (prereq MBA 8225, MBA 8230 or #) (A-F only)
175397 1730-2100 M, BlegH 225, Kauffman R, 4 cr

R 8430 Advanced Database Design and Administration (prereq 8130 or equiv or #, grad SMgt student or #) (A-F only)
962398 1730-2100 W, BlegH 220, Everest G, 4 cr

R 8440 Advanced Information Systems Development (prereq 8130 or equiv or #) (A-F only)
152985 1730-2100 Th, BlegH 255, March S, 4 cr

R 8702 Behavioral Decision Theory (prereq PhD stu or #) (A-F only)
972249 1415-1600 TTh, BlegH 435, Curley S, 4 cr

R 8990 Readings in Information and Decision Sciences (prereq PhD stu, #) (A-F only)
860952 ar cr

R 8995 Graduate Research in Information and Decision Sciences (prereq PhD stu, #) (A-F only)
959338 ar cr

INSTITUTE OF TECHNOLOGY (IofT)
Institute of Technology

R 1312 Exploration and Management of Careers in Science and Engineering (prereq IT stu or prospective IT stu) (S-N only)
073392 1325-1415 T, LindH 203, Schnell A, Kurtt S, 2 cr

INSURANCE (Ins)
Management

Non-SMgt students should refer to page 10, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 5200 Insurance Theory and Practice (prereq CSOM jr or sr or grad stu, equiv or #)
775279 —1 1525-1710 TTh, BlegH 145, Whitman A, 4 cr
175280 —2 1745-2045 T, BlegH 145, Whitman A, 4 cr

8990 Readings in Risk Management and Insurance (prereq consent of advisor, #, grad SMgt approval)
954298 ar cr

8995 Graduate Research in Risk Management and Insurance (prereq grad SMgt approval)
063381 ar cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

INTERDEPARTMENTAL STUDY (ID)
Liberal Arts

R 1011 Career Exploration and Planning (course fee)
273396 —1 1220-1415 T, FordH 50, 2 cr
975152 —2 1010-1205 W, LindH 340, 2 cr
775153 —3 1325-1520 Th, SmithH 231, 2 cr

3101 An Introduction to Marxism
855881 0945-1100 TTh, FolH 50, Marquit E, 4 cr

3180 HECUA Off-Campus Study Program: City Arts (prereq #)
056317 1-24 cr (off-campus) (for information call Mia Bolte, Office for Special Learning Opportunities 626-2044)

R 3207 Community, Service, and Self (3205-3206-3207†; prereq 3206) (C/PE; CD; practicum)
062618 1220-1350 W, FolH 306, Rubright D, 2 cr

R 3211 Internship: Perspectives on Work (prereq acceptance into internship program in Office for Special Learning Opportunities, Δ)
073683 1535-1725 W, FolH 306, White A, 6 cr

R 3252 Metro Internship Seminar (3251-3252†; prereq 3251, Δ) (A-F only)
953085 Weaver M, 4 cr (for information call Mary Beth Weaver, Director 625-3800)

3610 Living and Learning in the Academic Community (S-N only)
476149 1530-1730 Th, 1 cr (Argyle House)

R 3925 Strategic Career Planning (course fee)
055636 0905-1100 F, FordH 50, 2 cr

3970 Directed Studies (prereq consult with Office for Special Learning Opportunities, JohH 220, Δ)
558029 1-15 cr

5970 Directed Studies (prereq Δ)
459738 1-4 cr

INTERDISCIPLINARY ARCHEOLOGICAL STUDIES (InAr)
Liberal Arts

R 8002 Advanced Theory in Archaeology (prereq InAr grad maj or #)
555938 1325-1525 W, FordH 50, Wells P, 4 cr

8100 Interdisciplinary Seminar (prereq InAr grad maj or #) (A-F only)
374992 1325-1625 W, FordH 30, Rapp G, 4 cr

R 8120 Interdisciplinary Seminar (prereq grad maj or #)
271504 4 cr

8200 Directed Readings (prereq Δ)
760345 ar cr

8300 Directed Research (prereq Δ)
060058 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
263435 1-18 cr

8777 Thesis Credits: Masters
557236 1-16 cr

8888 Thesis Credit: Doctoral (max 18 cr per quarter)
458010 1-36 cr

INTERDISCIPLINARY MEDICINE (InMd)
Medical School

5000 Independent Study, Student Status (prereq regis med, Medical School Student Affairs Office approval)
557849 0 cr

5001 Directed Study I (prereq regis med, Medical School Student Affairs Office approval)
553459 0 cr

5002 Directed Study II (prereq regis med, Medical School Student Affairs Office approval)
157734 0 cr

5003 Research (prereq regis med, Medical School Student Affairs/Curriculum Office approval)
357108 0 cr

5004 Directed Study III (prereq regis med, Medical School Student Affairs/Curriculum Office approval)
463031 0 cr

INTERFACIAL ENGINEERING, CENTER FOR (CIE)
Institute of Technology

8001 Strategies for Interfacial Engineering (prereq IT grad stu, 5101) (A-F only)
263385 3 cr

INTERNATIONAL RELATIONS (IntR)
Liberal Arts

R 3620 Foreign Language News Coverage of International Events (prereq IntR maj or #, completion of college language requirement in language of course) (A-F only)
260454 —1 0905-1100 F, BlegH 350, Chateau J, 2 cr (French)
056043 —2 0905-1100 F, BlegH 210, Guerra D, 2 cr (Spanish)
158303 —3 1010-1205 F, HHHCtr 30, Telser-Gadow B, 2 cr (German)

R 3900 Topics in International Relations (prereq 12 cr in social sciences)
★LECT 0905-0955 MW, BlegH 210, Koenig-Loring M (Research Methods in International Relations) (A-F only)
175271 —1 REC 0800-0850 F, BlegH 350, 4 cr
075272 —2 REC 0905-0955 F, BlegH 225, 4 cr
872258 —2 LECT 0815-0930 TTh, BlegH 330, Moses R, 4 cr (Intellectuals and Activists in International Relations)
372255 —3 LECT 1245-1400 TTh, BlegH 435, Thompson K, 4 cr (Women and War: Gender and International Conflict)
075269 —4 LECT 1415-1530 TTh, BlegH 245, Cherin E, 4 cr (The Gulf War in Perspective)

3960 Field Studies/Internship in International Studies (max 8 cr for international relations maj; prereq Δ)
158172 1-8 cr

3970 Directed Studies (prereq #, Δ, ❑)
159815 1-15 cr

R 3981 Major Project Seminar (prereq Δ) (A-F only)
061825 1325-1510 T, BlegH 350, 4 cr

3990H Honors: Supervised Research Paper (prereq sr honors candidate in international relations, #, Δ, ❑)
762743 1-5 cr

R 3991H Junior Research Seminar (prereq jr honors international relations maj) (A-F only)
456273 1415-1530 TTh, BlegH 250, 3 cr

INTERPERSONAL RELATIONSHIPS RESEARCH (IRel)

8001 Proseminar in Interpersonal Relationships Research (max 3 cr; prereq int rel res grad minor) (S-N only)
861745 1430-1545 W, ChDev 108, Sroufe L A, 1 cr

ITALIAN (Ital)
French and Italian
Liberal Arts

R 1103 Beginning Italian (prereq 1102)
163184 —1 0800-0850 MTWThF, KoltH S133, 5 cr
359179 —2 0905-0955 MTWThF, KoltH S134, 5 cr
362308 —3 1010-1100 MTWThF, KoltH S133, 5 cr

R 1106 Intermediate Italian (prereq 1105)
260714 —1 0905-1020 MWF, FolH 246, 5 cr
461991 —2 1115-1230 MWF, FolH 246, 5 cr

R 3503 Introduction to Italian Civilization and Culture: 1860-1945 (prereq 3015, 3016)
175389 1115-1230 MW, FolH 208, Ferlito S, 4 cr

3970 Directed Readings (prereq undergrad, #, Δ, ❑)
362423 1-5 cr

R 5411 Petrarch and Petrarchism (prereq 3015)
475387 1245-1400 TTh, FolH 246, Martinez R, 4 cr

R 8209 Literary Criticism
371672 1535-1650 MW, KoltH S136, Ferlito S, 4 cr

8777 Thesis Credits: Masters
760054 1-16 cr

8970 Directed Readings
362986 1-5 cr

JAPANESE (Jpn)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 1013 Beginning Japanese (prereq 1012)
653520 —1 LECT 0905-0955 TTh, FolH 218, Szatrowski P
056950 —2 LECT 1010-1100 TTh, FolH 218, Szatrowski P
562789 —3 LECT 1115-1205 TTh, FolH 218, Szatrowski P
Registration in one of the following REC sections is also required:
✦554885 —1 REC 0905-0955 MTWThF, FolH 214, 5 cr
✦854603 —2 REC 1010-1100 MTWThF, FolH 214, 5 cr
✦953099 —3 REC 1115-1205 MTWThF, FolH 214, 5 cr
✦753802 —4 REC 1220-1310 MTWThF, FolH 218, 5 cr
✦656451 —5 REC 1325-1415 MTWThF, FolH 218, 5 cr

R 3023 Intermediate Japanese (prereq 3022)
858151 —1 LECT 0905-0955 TTh, PeikH 155
162505 —2 LECT 1010-1100 TTh, PeikH 155
Registration in one of the following REC sections is also required:
✦262012 —1 REC 1010-1100 MWF, FolH 218, 5 cr
✦658927 —2 REC 1115-1205 MWF, FolH 218, 5 cr
✦053370 —3 REC 1220-1310 MWF, PeikH 215, 5 cr

R 3033 Third Year Japanese (prereq 3032)
359134 —1 1430-1520 MWF, FolH 218, 5 cr
159676 —2 1535-1625 MWF, FolH 218, 5 cr

R 3053 Advanced Japanese Conversation and Composition (§5053; prereq 3033 or #)
359716 1535-1625 MWF, FolH 344, 4 cr

R 3090H Honors Course: Tutorial (prereq Δ)
754545 1-4 cr

R 3166 Japanese Film (knowledge of Japanese not necessary) (CD; IP) (A-F only)
162643 1430-1700 TTh, FolH 306, Pradt S, 4 cr

R 3970 Directed Studies (prereq #, Δ, ❑)
461988 1-15 cr

R 5053 Advanced Japanese Conversation and Composition (§3053; prereq 3033 or #)
658071 1535-1625 MWF, FolH 344, 4 cr

R 5970 Directed Studies in Japanese (prereq #, Δ, CLA approval)
554711 1-15 cr

R 8650 Seminar: Japanese Linguistics (prereq 5451, 5452 or #)
157126 1430-1700 T, FolH 218, Szatrowski P, 4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
957024 1-18 cr

R 8777 Thesis Credits: Masters
260793 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
556149 1-36 cr

JEWISH STUDIES (JwSt)
Classical and Near Eastern Studies
Liberal Arts

3521 The Holocaust (§RelS 3541)
975183 1430-1545 MW, AndH 310, Feinstein S, 4 cr

5970 Directed Readings (max 12 cr; prereq #, Δ, CLA approval)
953071 1-12 cr

JOURNALISM AND MASS COMMUNICATION (Jour)

Liberal Arts

R 1001 Introduction to Mass Communication (SSci) (A-F only)
854004 1115-1230 TTh, MurH 105, Dicken-Garcia H, 4 cr

R 3004 Information for Mass Communication (prereq jour maj or min, fr comp or exempt, Δ) (A-F only)
455138 1220-1310 MWF, MurH 105, Hansen K, 4 cr

R 3006 Visual Communication (prereq jour maj or min status, 3004, Δ) (A-F only)
072355 1010-1205 MW, MurH 105, Schwartz D, 4 cr

R 3011 News Writing (prereq jour maj or minor, fr comp or exempt, pass 40wpm keybrd test w/ 6 or fewer errors, Δ) (A-F only)
★LECT 0800-0850 MW, MurH 105, Huntzicker W, 4 cr
472358 —1 LAB 0905-1100 M, MurH 212
272359 —2 LAB 1115-1310 M, MurH 212
672360 —3 LAB 0800-0955 F, MurH 212
472361 —4 LAB 1010-1205 F, MurH 212

R 3101 Reporting (prereq jour maj, 3004, 3011, pass 40 wpm keybrd test with 6 or fewer errors, Δ) (A-F only)
953409 —1 1325-1520 MW, MurH 212, Domke D, 4 cr
259644 —2 1010-1205 TTh, MurH 212, Babcock W, 4 cr

R 3121 Public Affairs Reporting (prereq jour maj, 3004, C or higher in 3101, pass 40 wpm keybrd test w/6 or fewer errors, Δ) (A-F only)
953930 0800-0955 TTh, MurH 20, Dornfeld S, 4 cr

R 3155 Publications Editing (prereq jour maj, 3004, C or higher in 3101, pass 40 wpm keybrd test w/6 or fewer errors, Δ) (A-F only)
★LECT 0905-1205 MW, MurH 315, 320, Berg P
362809 —1 LAB 0905-1100 F, MurH 315, 4 cr (not all lab hrs required)

R 3173 Magazine Writing (prereq jour maj, 3004, C or higher in 3101, pass 40 wpm keybrd test w/ 6 or fewer errors, Δ) (A-F only)
060478 1245-1400 TTh, MurH 320, Roberts N, 4 cr

R 3251 Advertising and Public Relations Research (prereq jour maj, 3004, 3159 or 3201, Δ) (A-F only)
372367 0945-1100 TTh, MurH 311, Zhao, 4 cr

R 3321 Basic Media Graphics (prereq jour maj status, 3004, Δ) (A-F only)
374524 1220-1520 MW, MurH 315, 320, 4 cr

R 3451 Television and Radio News (prereq jour maj, 3004, C or higher in 3101, pass 40 wpm keybrd test w/6 or fewer errors, Δ) (A-F only)
861647 1115-1230 TTh, MurH 207, Gilbert M, 4 cr

R 3741 Racial Minorities and the Mass Media (open to non-jour maj, jour maj must have crse appr on prog plan, pre-jour maj shld not enrl) (CD) (A-F only)
859073 1545-1700 TTh, MurH 105, Doyle K, 4 cr

R 3745 Mass Media and Popular Culture (open to non-jour maj; jour maj must have crse appr on prog plan; pre-jour shld not enroll) (A-F only) (SSci)
872356 0945-1100 TTh, MurH 105, Griffin M, 4 cr

R 3970 Projects in Journalism (max 8 cr; prereq jour maj or min status, 3004, #, Δ, ❑) (A-F only)
860823 1-4 cr

3980 Directed Instruction (max 2 cr; prereq maj stat, adv appr, 1 prof crse for prof maj, 1 adv appr crse for mass comm maj, Δ, ❑) (S-N only)
754285 1-2 cr

R 3990 Special Topics in Mass Communication: Introduction to International Communication (prereq non-jour maj; jour maj must have crse appr on prog plan; pre-jour maj shld not enrl) (A-F only)
574523 1415-1530 TTh, MurH 308, Luther C, 4 cr

R 5131 Interpretive Reporting (prereq jour maj, 3004, 3121 or 3173 or 5155, Δ, pass 40 wpm keybrd test 6 or fewer errors) (A-F only)
161807 1415-1545 TTh, MurH 320, Huntzicker W, 4 cr

R 5251 Psychology of Advertising (prereq jour maj or min status, 3004, Psy 1001, Δ) (A-F only)
358596 1325-1520 MW, MurH 105, Faber R, 4 cr

R 5274 Advertising in Society (prereq jour maj or min, 3004, Δ) (C/PE) (A-F only)
972364 1115-1230 MW, MurH 308, Wackman D, 4 cr

R 5442 Advanced Television News (prereq jour maj, 3004, 3451, pass 40 wpm keyboarding test with 6 or fewer errors, Δ) (A-F only)
572352 0945-1100 TTh, MurH 207, Gilbert M

R 5501 Communication and Public Opinion I (prereq 16 cr soc sci; jour maj must hav crse appr on prog plan; pre-jour maj shld not enrl) (A-F only)
772365 0905-0955 MWF, MurH 308, Domke D, 4 cr

R 5601 History of Journalism (prereq jour maj or min status, 3004, Δ) (A-F only)
754979 0945-1100 TTh, MurH 308, Roberts N, 4 cr

R 5615 History of Visual Communication in the Mass Media (prereq jour maj or min status, 3004, Δ) (A-F only)
255352 1245-1530 TTh, MurH 105, Griffin M, 4 cr

R 5725 The Management of Media Organizations (prereq jour maj or min status, 3004, Δ) (A-F only)
572366 0815-0930 TTh, MurH 311, Finnegan J Sr, Pine C, 4 cr

R 5731H Honors Course: Communications Problems and Issues (§HSem 3080; prereq jour maj or min status, 3004, sr, #, Δ, honors div registration) (A-F only)
555471 0945-1100 TTh, MurH 320, Wells W, 4 cr

R 5825 World Communication Systems (jour maj must have crse appr on prog plan; pre-jour maj should not enroll) (A-F only)
158597 1010-1100 MWF, MurH 308, Akhavan-Majid R, 4 cr

R 5970 Advanced Projects in Journalism (max 8 cr; prereq jour maj or min status, 3004, #, B avg, Δ, ❑) (A-F only)
662895 1-4 cr

R 5970H Honors Course: Advanced Projects in Journalism (max 8 cr; prereq jour maj or min status, 3004, #, B avg, Δ, ❑, honors div registration) (A-F only)
656773 1-4 cr

R 8501 Seminar: The Process of Quantitative Mass Communication Research (prereq 12 cr in soc sci, stat course or ¶) (A-F only)
776478 1010-1205 TTh, MurH 30, Wackman D, 4 cr

R 8620 Seminar: Advertising Research (prereq 5251 or #, Δ) (A-F only)
072369 1010-1205 MW, MurH 30, Faber R, 4 cr

R 8650 Seminar: Mass Communication Theory (prereq proseminars, #, Δ) (A-F only)
661780 1415-1700 Th, MurH 30, Zhao X, 4 cr

R 8661 Seminar: History of Mass Communication (prereq 5601, #, Δ) (A-F only)
372370 1220-1520 W, MurH 30, Dicken-Garcia H, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
658149 1-18 cr

R 8679 Seminar: Research Methods in Media Ethics and Law (prereq Δ) (A-F only)
172371 1415-1700 T, MurH 30, Babcock W, 4 cr

R 8681 Seminar: International Mass Communication (prereq 5801 or 5825 or #, Δ) (A-F only)
273611 1220-1520 M, MurH 30, Akhavan-Majid R, 4 cr

8777 Thesis Credits: Masters
755842 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
959341 1-36 cr

R 8970 Advanced Projects in Mass Communication (max 8 cr; prereq grad maj or min in mass comm, #, Δ) (A-F only)
056060 1-4 cr

KINESIOLOGY (Kin)

School of Kinesiology and Leisure Studies

Education and Human Development

R 1871 Introduction to Kinesiology (PEL) (A-F only)
655574 0815-0930 TTh, AkerH 209, Shaffer S, 3 cr

R 1990 Directed Study (prereq #) (A-F only)
954673 —1 Pickert R, 1-6 cr
153027 —2 Walker A, 1-6 cr

R 1999 Active Wellness: Individuals and Communities (A-F only)
758658 0800-0930 MW, CookeH 400, Meath J, 3 cr

R 3001 Lifetime Fitness and Health (A-F only)
363071 0800-1000 TTh, CookeH 214, 215, Halvorsen D, 4 cr

R 3111 Mechanics of Movement (prereq CBN 1027, EHD stu or #; PEL) (A-F only)
163467 0800-0850 MWF, CookeH 214, 325, Tranchida D, 3 cr

R 3115 Physiological Application to Sports (§3386; prereq human anat or #; PEL) (A-F only)
657177 1815-2030 M, CookeH 400, Gaskill S, 3 cr

R 3131 History and Philosophy of Kinesiology and Sport (prereq Kin maj or #; PEL)
458086 1010-1200 MW, CookeH 214, Larsen J, 4 cr

R 3132 Motor Development (prereq Kin maj or #; PEL) (A-F only)
157653 0905-0955 MWF, CookeH 214, 3 cr

R 3135 Motor Learning and Human Performance (prereq Kin maj or #; PEL) (A-F only)
172430 1220-1310 MWF, CookeH 400, Smith T, 3 cr

R 3150 Introduction to Evaluation (prereq Kin maj or #; PEL) (A-F only)
772432 1325-1505 TTh, CookeH 400, 325, Engelhardt A, 4 cr

R 3172 Football Coaching (PEL) (A-F only)
156199 0905-1000 TTh, FbComp 210, 2 cr

R 3176 Swimming and Diving Coaching (PEL) (A-F only)
455964 0905-1045 T, UAqCtr, Campbell C, 2 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 3310 Athletic Training Laboratory (prereq 3114) (A-F only)
161458 0905-1100 T, BFAB 144, Marshall J, 1 cr (Trng Rm)

R 3327 Teaching Physical Education in the Elementary School (prereq elem educ maj) (A-F only)
172427 1325-1440 TTh, NorrisH 3, M151, Skemp K, 3 cr

R 3624 Student Teaching: Coaching (prereq #; PEL) (S-N only)
262480 1830-2000 W, CookeH 400, Radtke D, 3 cr (1 hr ar)

R 3625 Supervised Practical Experience (max 12 cr; prereq #; PEL) (S-N only)
153352 —1 1615-1800 T, CookeH 220B, Pickert R, 1-12 cr
663514 —2 1615-1800 T, CookeH 222B, Spletzer E, 1-12 cr

R 3900 Directed Study (max 12 cr; prereq #) (A-F only)
563621 —1 Anderson B, 1-12 cr
161595 —3 Burton A, 1-12 cr
875192 —4 Smith T, 1-12 cr
955385 —5 Hancock P, 1-12 cr
363622 —7 Kane M, 1-12 cr
061596 —9 Krotee M, 1-12 cr
559598 —11 Leon A, 1-12 cr
557625 —13 Pickert R, 1-12 cr
755386 —15 Serfass R, 1-12 cr
853628 —17 Spletzer E, 1-12 cr
355682 —21 Wade M, 1-12 cr
861180 —23 Walker A, 1-12 cr
356962 —25 Wiese-Bjornstal D, 1-12 cr

R 5102 Practicum: Developmental/Adapted Physical Education (max 6 cr; prereq 5100; PEL) (S-N only)
259272 1815-2045 T, CookeH 214, Burton A, 1-6 cr

R 5126 Advanced Psychological and Sociological Dimensions of Physical Activity (prereq Kin maj or #; PEL) (A-F only)
359960 1115-1230 TTh, CookeH 214, Wiese-Bjornstal D, 3 cr

R 5135 Motor Learning and Human Performance (prereq 3135 or #; PEL) (A-F only)
863396 1615-1815 T, CookeH 206, Smith T, 3 cr (1 hr ar)

R 5136 Psychology of Coaching (A-F only)
558483 1615-1815 Th, CookeH 215, Krotee M, 3 cr (1 hr ar)

R 5163 Developmental Motor Assessment (PEL) (A-F only)
759163 1815-2045 W, CookeH 206, Burton A, 3 cr

R 5371 Sociology of Sport (§Soc 5371; prereq Kin maj or #) (A-F only)
463367 1615-1830 T, CookeH 215, Krotee M, 4 cr (1 hr ar)

R 5380 Computer Applications in Kinesiology (prereq Kin maj or #) (A-F only)
972428 0945-1100 TTh, NorrisH 3, 3 cr

R 5388 Exercise Testing, Conditioning, and Cardiac Rehabilitation (day school stu must reg A-F; prereq 3386 or equiv, 5387 or #)
772429 1600-1800 MW, CookeH 400, Serfass R, Leon A, 4 cr (1 hr ar)

R 5455 Recreational Sports (§Rec 5455; prereq Kin or Rec maj or #) (A-F only)
857985 1615-1845 M, CookeH 206, Anderson B, 3 cr

R 5510 Women in Sport and Leisure (§Rec 5510) (A-F only)
354080 1245-1400 TTh, CookeH 214, Kane M, 3 cr

R 5530 Biological and Physical Foundations of Education (prereq stu in Foundation of Educ prog or Educ Teacher Licensure Prog) (A-F only)
860062 1630-1820 TTh, Arch 35, Rodgerson R, 2 cr (Apr 1-May 1)

R 5563 Clinical Experience III: Physical Education (prereq 5562, admission to init lic/MEd PE prog or #; PEL) (A-F only)
154226 1615-1815 M, CookeH 215, Spletzer E, 9 cr

R 5620 Advanced Athletic Training (prereq 3114, CBN 1027, Kin maj or #; PEL) (A-F only)
153294 1010-1100 MWF, FbComp 210, Mays S, 3 cr

R 5981 Problems (prereq MEd candidate, #; PEL) (A-F only)
560590 —1 Anderson B, ar cr
258607 —3 Burton A, ar cr
675193 —4 Smith T, ar cr
262611 —5 Hancock P, ar cr
360591 —7 Kane M, ar cr
158608 —9 Krotee M, ar cr
756635 —11 Leon A, ar cr
555387 —13 Pickert R, ar cr
163623 —15 Serfass R, ar cr
861597 —17 Spletzer E, ar cr
860241 —21 Wade M, ar cr
858022 —23 Walker A, ar cr
154078 —25 Wiese-Bjornstal D, ar cr

R 5983 Readings: Kinesiology (max 9 cr; prereq CEHD or grad stu, #) (A-F only)
357626 —1 Anderson B, ar cr
355388 —3 Burton A, ar cr
475194 —4 Smith T, ar cr
159600 —5 Hancock P, ar cr
157627 —7 Kane M, ar cr
155389 —9 Krotee M, ar cr
653629 —11 Leon A, ar cr
162612 —13 Pickert R, ar cr
160592 —15 Serfass R, ar cr
958609 —17 Spletzer E, ar cr
959095 —21 Wade M, ar cr
057953 —23 Walker A, ar cr
663352 —25 Wiese-Bjornstal D, ar cr

R 8126 Seminar: Psychological and Sociological Dimensions of Physical Activity (prereq 5126 or #)
461232 1325-1555 T, CookeH 110, Wiese-Bjornstal D, 3 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
461926 1-18 cr

R 8777 Thesis Credits: Masters
660449 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
959727 1-36 cr

R 8980 Graduate Research Seminar (prereq #) (S-N only)
463756 —5 1430-1625 M, Mariucci 141B, Hancock P, 1 cr
863625 —9 1430-1625 M, CookeH 214, 1-9 cr
959601 —11 1430-1625 M, URecCtr 27J, Leon A, 1-9 cr
661598 —21 1430-1625 M, CookeH 20, Wade M, Burton A, 1-9 cr

R 8981 Research Problems (prereq 8980 or #) (S-N only)
057628 —1 Anderson B, ar cr
155392 —3 Burton A, ar cr
275195 —4 Smith T, ar cr
053630 —5 Hancock P, ar cr
962613 —7 Kane M, ar cr
060593 —9 Krotee M, ar cr
853631 —11 Leon A, ar cr
860594 —15 Serfass R, ar cr
258610 —17 Spletzer E, ar cr
156851 —21 Wade M, ar cr
472425 —23 Walker A, ar cr
272426 —25 Wiese-Bjornstal D, ar cr

LABORATORY MEDICINE AND PATHOLOGY (LaMP)

Laboratory Medicine and Pathology
Medical School

3050 Pathology for Mortuary Science (prereq elementary anatomy, elementary microbiology)
★LECT 1325-1535 TWTh, JOAd 2125, Estensen R, 4 cr
253956 —1 LAB 1535-1730 T, MoosT 3331, 3349

5100 Systemic Pathology for Dental Students (prereq 5099 or qualification) (A-F only)
★LECT 0840-0930 TWF, MoosT 2690, Estensen R, 3 cr
258235 —1 LAB 0930-1230 T, MoosT 2690, Estensen R

5113 Surgical Pathology: University Hospitals (prereq 3rd or 4th yr medical student)
563456 Manivel C, ar cr

5114 Surgical Pathology: Hennepin County Medical Center (prereq 3rd or 4th yr medical student)
857971 Linzie B, ar cr

5115 Surgical Pathology: Veterans Administration Hospital (prereq 3rd or 4th yr medical student)
459836 Guzman M, ar cr

5118 Endocrine Pathology: St. Paul Ramsey Hospital (prereq 3rd or 4th yr medical student)
059833 Lakatua D, ar cr

5119 Forensic Pathology: Medical Examiner's Office, Hennepin County Medical Center (prereq 3rd or 4th yr medical student)
162455 ar cr

5125 Chronobiology (prereq 3rd or 4th yr medical student, #)
361854 Halberg F, ar cr

5141 Problems in Experimental Pathology (prereq 3rd or 4th yr medical student, #)
159371 ar cr

5150 Anatomic Pathology in a Hospital Setting: University Hospitals (prereq 3rd or 4th yr medical student)
552991 Anderson R E, ar cr

5151 Anatomic Pathology in a Hospital Setting: Hennepin County Medical Center (prereq 3rd or 4th yr medical student)
355911 Anderson W R, ar cr

5152 Anatomic Pathology in a Hospital Setting: Veterans Administration Hospital (prereq 3rd or 4th yr medical student)
155725 Niehans G, ar cr

5153 Anatomic Pathology in a Hospital Setting: St. Paul-Ramsey Medical Center (prereq 3rd or 4th yr medical student)
153084 Posalaky Z, ar cr

5158 Cardiac Pathology: United Hospital (prereq 3rd or 4th yr medical student, #)
462493 Rose A, Titus J, ar cr

5177 Pathology for Allied Health Students: General and System Pathology (prereq Anat 1004, physiology or ¶)
560721 1010-1205 TTh, MoosT 2620, Wilkie M, Linne J, 4 cr

5181 Laboratory and Clinical Hematology (prereq #)
954365 Brunning R, ar cr

5184 Immunohematology in Blood Banking (prereq #)
058102 McCullough J, ar cr

5185 Laboratory Problems in Blood Coagulation (prereq #)
153979 Edson R, ar cr

5186 Laboratory Medicine in a Community Hospital (prereq 4th yr medical student, #)
160035 Apple F, ar cr

5187 Clinical Pathology Externship (prereq #)
259403 0800-1310 MTWThF, MoosT 2571, 2585, Ward P, ar cr

5188 Clinical Pathology Externship: Methodist Hospital (prereq #)
459299 Manoles E, ar cr

5192 Laboratory Medicine for Primary Care: Virginia (prereq 4th yr medical student, #)
559858 Knabe G, ar cr

5193 Clinical Pathology Externship: Hibbing Hospital (prereq #)
554577 Uncini T, ar cr

5195 Computer Applications in Medical Research (prereq #)
153982 Ellis L, ar cr

5210 Surgical Pathology for Post-M.D.s (prereq regis med fellow special, #) (S-N only)
453891 1-10 cr

5211 Autopsies for Post-M.D.s (prereq regis med fellow special, #) (S-N only)
656434 1-10 cr

5212 Advanced Neuropathology for Post-M.D.s (prereq regis med fellow special, #)
252967 Clark H B, 1-5 cr

5213 Laboratory Medicine for Post-M.D.s (prereq regis med fellow special, #) (S-N only)
557186 1-10 cr

LANDSCAPE ARCHITECTURE (LA)

Architecture and Landscape Architecture

R 1301 Introduction to Landscape Architecture Drawing (Vis) (A-F only) (course fee)
155563 —1 0905-1205 MW, Arch 50, 4 cr
163718 —2 1220-1520 TTh, Arch 50, 4 cr

3200 Landscape Architecture Practicum (prereq landscape architecture student, #) (S-N only)
759874 —1 Galatowitsch S, 1-6 cr
560685 —2 Koepke J, 1-6 cr
458699 —3 Martin R, 1-6 cr
256727 —4 Nassauer J, 1-6 cr
955564 —5 Neckar L, 1-6 cr
063719 —6 Pitt D, 1-6 cr
561691 —7 Sykes R, 1-6 cr

R 3311 Drawing for Design (§Arch 3311; prereq arch or env dsgn or landscape arch maj, Arch/LA 1301, or #) (A-F only) (course fee)
658698 —1 0905-1205 TTh, Arch 50, 4 cr
456726 —2 1220-1520 TTh, Arch 55, 4 cr

R 3413 History of Landscape Architecture (§1022) (Vis) (A-F only)
★LECT 1640-1830 TTh, SmithH 100, Neckar L, 4 cr
653923 —1 REC 1745-1835 Th, Arch 20, Neckar L
357058 —2 REC 1745-1835 Th, Arch 15, Neckar L

5131 Directed Studies in Landscape Architecture History and Theory (prereq LA student or Δ) (A-F only)
163816 —1 Galatowitsch S, 1-6 cr
459688 —2 Koepke J, 1-6 cr
257716 —3 Martin R, 1-6 cr
755565 —4 Nassauer J, 1-6 cr
453714 —5 Neckar L, 1-6 cr
157717 —6 Pitt D, 1-6 cr
555566 —7 Sykes R, 1-6 cr

5133 Directed Studies in Landscape Architecture Technology (prereq LA student, Δ) (A-F only)
859302 —1 Galatowitsch S, 1-6 cr
253715 —2 Koepke J, 1-6 cr
462705 —3 Martin R, 1-6 cr
360686 —4 Nassauer J, 1-6 cr
158700 —5 Neckar L, 1-6 cr
156728 —6 Pitt D, 1-6 cr
355567 —7 Sykes R, 1-6 cr

5134 Directed Studies in Emerging Areas for Landscape Architecture (prereq LA student, Δ) (A-F only)
063171 —1 Galatowitsch S, 1-6 cr
363720 —2 1010-1205 F, Arch 20, Koepke J, 2 cr
361692 —3 Martin R, 1-6 cr
155568 —4 Nassauer J, 1-6 cr
163721 —5 Neckar L, 1-6 cr
161693 —6 Pitt D, 1-6 cr
259689 —7 Sykes R, 1-6 cr

5200 Directed Studies in Landscape Architecture Design (§5132; prereq #)
356928 —1 Galatowitsch S, 1-6 cr
957718 —2 Koepke J, 1-6 cr
055569 —3 Martin R, 1-6 cr
153716 —4 Nassauer J, 1-6 cr
160687 —5 Neckar L, 1-6 cr
058701 —6 Pitt D, 1-6 cr
162707 —7 Sykes R, 1-6 cr

5212 Ecological Informants of Design (§3082; prereq 5211, LA maj) (A-F only)
★LECT 1430-1800 MWF, Arch 25, Nassauer J
357934 —1 LAB 1400-1730 MWF, Arch 240, Nassauer J, 6 cr

R 5221 Planted Form (prereq 5211, 5213) (A-F only)
★LECT 1010-1205 W, Arch 20
161119 —1 LAB 0800-1200 F, Arch 240, 5 cr

R 5572 Landscape Construction: Spatial Performance (A-F only)
★LECT 1325-1425 TTh, Arch 15, Pitt D
459402 —1 LAB 1425-1625 TTh, Arch 240, Pitt D, 4 cr

8223 Regional Landscape Design (§5107; prereq LA/Geog/PA 5562 or FR 5130, 8222, LA student or Δ) (A-F only)
★LECT 1430-1830 MWF, Arch 60, Pitt D
575154 —1 LAB 1400-1800 MWF, 1425Univ, 6 cr

R 8234 Advanced Landscape Planning and Design (§5110, 8110; prereq LA grad maj, terminal qtr of study) (A-F only)
★LECT 1430-1830 MWF, Arch 40, Martin R
375155 —1 LAB 1400-1800 MWF, Arch 5, 6 cr

8500 Landscape Architecture Research Project (prereq 8283 or #) (A-F only)
454264 —1 Galatowitsch S, 1-6 cr
060688 —2 Koepke J, 1-6 cr
459691 —3 Martin R, 1-6 cr
157720 —4 Morrish W, 1-6 cr
055572 —5 Nassauer J, 1-6 cr
953717 —6 Neckar L, 1-6 cr
962708 —7 Pitt D, 1-6 cr
876195 —8 Sykes R, 1-6 cr

R 8574 Landscape Construction: Mechanical Systems (§3069; prereq 8221, LA student or #) (A-F only)
★LECT 0905-0955 TTh, Arch 45, Sykes R
859459 —1 LAB 1010-1205 TTh, 1425Univ, Sykes R, 4 cr

8600 Landscape Architecture Education (prereq M.L.A. candidate or #) (A-F only)
061713 —1 Galatowitsch S, 1-4 cr
860689 —2 Koepke J, 1-4 cr
658703 —3 Martin R, 1-4 cr
256730 —4 Nassauer J, 1-4 cr
858702 —5 Neckar L, 1-4 cr
956729 —6 Pitt D, 1-4 cr
355570 —7 Sykes R, 1-4 cr

8777 Thesis Credits: Masters
959114 —1 Galatowitsch S, 1-16 cr
063722 —2 Koepke J, 1-16 cr
061694 —3 Martin R, 1-16 cr
659690 —4 Morrish W, 1-16 cr
757719 —5 Nassauer J, 1-16 cr
155571 —6 Neckar L, 1-16 cr
262706 —7 Pitt D, 1-16 cr
676196 —8 Sykes R, 1-16 cr

8820 Survey of Landscape Architecture Research (§8284; prereq LA maj) (S-N only)
152890 1220-1310 W, Arch 15, Koepke J, 1 cr

LATIN (Lat)

Classical and Near Eastern Studies Liberal Arts

1103 Selections from Latin Literature (§3051-3052; prereq 1102 or equiv)
261331 —1 1010-1100 MTWThF, FolH 344, 5 cr
858098 —2 1325-1415 MTWThF, FolH 344, 5 cr

3106 Latin Poetry (prereq 1122H or 3052 or 3105 or Δ)
158468 —1 0800-0850 MWF, FolH 334, Sonkowsky R, 5 cr
158891 —2 1325-1415 MWF, SmithH 331, Krevans N, 5 cr

3457 Advanced Undergraduate Latin (prereq 3106 or 4 yrs high school Latin or Δ)
672276 1010-1100 MWF, PeikH 315, Sonkowsky R, 5 cr

3951 Major Project (prereq Greek-Latin or Latin maj, three 3xxx courses in Latin or #) (A-F only)
457066 5 cr

3960H Honors Tutorial (prereq Δ)
361465 5 cr

3970 Directed Studies (prereq #, Δ, ❑)
556247 1-5 cr

R 5012 Prose Composition (prereq 3106 or Δ)
472277 1325-1415 MWF, CivE 214, Sheets G, 4 cr

R 5410 Latin Literature of Late Antiquity (max 12 cr)
272278 1325-1625 M, LindH 216, Nicholson O, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
553378 1-5 cr

5980 Directed Instruction (prereq #, Δ, CLA approval)
654067 ar cr

5990 Directed Research (prereq #, Δ, CLA approval)
361076 ar cr

8120 Latin Text Course (prereq 3052 or Δ, non-maj)
157157 —1 0800-0850 MWF, FolH 334, Sonkowsky R, 4 cr
557883 —2 1010-1100 MWF, PeikH 315, Sonkowsky R, 4 cr
657227 —3 1325-1415 MWF, SmithH 331, Krevans N, 4 cr

8267 Graduate Survey: Latin Literature of Late Antiquity (prereq #)
472280 1325-1625 Th, FordH 70, Nicholson O, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
253519 1-18 cr

8777 Thesis Credits: Masters
162195 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
553042 1-36 cr

LATIN AMERICAN STUDIES (LAS)

Area Studies Programs Liberal Arts

3134 Middle America (§Geog 3131)
575185 1630-2100 M, BlegH 120, 4 cr

3250 Role of Renewable Natural Resources in Developing Countries (§FR 3250, FR 5250)
263306 1535-1705 W, BorH 335, Gregersen H, Rose D, 2 cr (StP)

R 3403 Survey of Latin American History: 1929 to Present (§Hist 3403) (Hist; IP)
★LECT 0945-1100 TTh, AndH 350, McCaa R, 4 cr
761267 —1 REC 0905-0955 M, BlegH 230, 4 cr
056155 —2 REC 1115-1205 M, BlegH 330, 4 cr
360960 —3 REC 1325-1415 T, BlegH 210, 4 cr
154016 —4 REC 0800-0850 Th, BlegH 210, 4 cr
254458 —5 REC 1220-1310 Th, BlegH 210, 4 cr
958996 —6 REC 1115-1205 F, BlegH 245, 4 cr

3442 Survey of Chicano History, 1900 to Present (§Chic 3442, Hist 3442)
971568 1115-1230 TTh, BlegH 215, Valdes D, 4 cr

5132 South America (§Geog 5132) (Envt; IP)
771569 1220-1450 W, BlegH 425, Weil C, 4 cr

Symbols

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¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

LEARNING AND ACADEMIC SKILLS (LASk)
Liberal Arts

R 1001 Becoming a Master Student
853208 —1 0905-0955 MW, EddyH 102, 2 cr
260390 —2 1010-1100 MW, EddyH 102, 2 cr
158180 —3 1115-1205 MW, EddyH 102, Wark D, 2 cr (study skills using self-hypnosis)
262897 —4 1220-1310 MW, EddyH 102, 2 cr
256825 —5 1325-1415 MW, EddyH 102, 2 cr
556863 —6 1430-1520 MW, EddyH 102, 2 cr
853824 —7 0905-0955 TTh, EddyH 102, 2 cr
260955 —8 1010-1100 TTh, EddyH 102, 2 cr
663173 —9 1115-1205 TTh, EddyH 102, 2 cr
154811 —10 1220-1310 TTh, EddyH 102, 2 cr
160648 —11 1325-1415 TTh, EddyH 102, 2 cr
753685 —12 1430-1520 TTh, EddyH 102, 2 cr

R 1101 Academic Success (prereq #) (S-N only)
161130 1 cr (individualized study for academic probation students only; go to EddyH 104 or call 624-7546 for information before 1st day of class)

R 1201 Effective Job Search and Interview Skills for Non-Native Students (A-F only)
662671 1325-1415 TTh, EddyH 20, 2 cr

LINGUISTICS (Ling)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 3001 Introduction to Linguistics (§5001) (SSci)
★LECT 1115-1205 MTW, AmundH 240, Stenson N
059847 —1 REC 1115-1205 Th, NichH 213, 5 cr
353320 —2 REC 1115-1205 Th, NichH 109, 5 cr
153652 —3 REC 1115-1205 F, FolH 208, 5 cr

R 3051H Honors Course: Linguistics (prereq candidacy for honors in linguistics or #)
057046 4 cr

R 3601 Introduction to Historical Linguistics (§5601; prereq 3001 or #)
954303 1010-1100 MWF, NichH 209, Fullerton G L, 4 cr

R 3812 Ethnic Bilingualism in the United States (knowledge of ling or a non-English language helpful) (CD)
161158 0905-0955 MWF, FolH 38, Downing B, 4 cr

R 3970 Directed Studies (prereq linguistics maj, #, Δ, ❑)
562159 1-5 cr

R 3971 Senior Project (prereq #) (S-N only)
156977 1 cr

R 5202 Introduction to Syntax (prereq 5201)
561836 1415-1530 TTh, NichH 122, Hegarty M, 4 cr

R 5211 Semantics (prereq 5011, 5202 or #)
861695 1325-1415 MWF, FordH 130, Hegarty M, 4 cr

R 5212 Linguistic Pragmatics (prereq 5002, 5201 or #)
572013 1115-1205 MWF, FolH 138, Gundel J, 4 cr

R 5601 Introduction to Historical Linguistics (§3601; prereq 5001 or #)
662380 1010-1100 MWF, NichH 209, Fullerton G L, 4 cr

R 5742 Linguistic Description of Modern English (prereq 5741)
359781 1415-1530 TTh, FolH 38, Gundel J, 4 cr

R 5970 Directed Studies (prereq linguistics or ESL maj, #, Δ, CLA approval)
163338 1-5 cr

R 8310 Seminar in Phonology (prereq 5304, 5602 or #)
372014 1430-1625 W, FordH 175, Stemberger J, 4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
653369 1-18 cr

R 8731 Research Methods in Language Acquisition (prereq 5702 or 5805 or CDis 5305 or CPsy 5345 or #)
258347 0945-1100 TTh, FolH 426, Tarone E, Bosher S, 4 cr

R 8777 Thesis Credits: Masters
263015 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
755792 1-36 cr

R 8900 Independent Study (prereq Ling maj, #)
255061 1-5 cr

LOGISTICS MANAGEMENT (LM)
Management

Non-SMgt students should refer to page 10, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 5020 Advanced Logistics Management (prereq 3000 or 5030 or equiv) (A-F only)
155960 —1 1730-2100 M, BlegH 330, Beier F, 4 cr (BSB only)
463563 —2 1730-2100 M, BlegH 330, Beier F, 4 cr (DMBA only)

8990 Readings in Logistics Management (prereq consent of advisor, #, grad SMgt approval) (A-F only)
856190 ar cr

8995 Graduate Research in Logistics Management (prereq grad SMgt approval) (A-F only)
961400 ar cr

MANAGEMENT (Mgmt)
Management

Non-SMgt students should refer to page 10, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3001 Fundamentals of Management (§8001) (A-F only)
462364 —1 0800-0945 MW, BlegH 110, Flaherty C, 4 cr
458198 —2 1010-1155 MW, BlegH 110, 4 cr
353009 —3 1325-1510 TTh, BlegH 145, 4 cr

R 3004 Business Policy: Strategy Formulation and Implementation (prereq sr, completion of business core courses or equiv of final core course) (A-F only)
153433 —1 0905-1110 MW, BlegH 260, Russo M, 5 cr
657048 —2 0905-1110 TTh, BlegH 335, Russo M, 5 cr
656918 —3 1115-1320 TTh, BlegH 260, Russo M, 5 cr

R 3008 Entrepreneurship and the Smaller Enterprise (prereq completion of the business core courses or #)
357609 1535-1715 TTh, BlegH 105, Rao D, 4 cr

R 5101 Advanced Topics in Management (prereq sr or grad, #, SMgt approval)
853726 —1 1730-2100 W, BlegH 335, Seeley W, ar cr
675291 —2 1730-2030 Th, CivE 202, Marcus A, 4 cr

R 8033 Managing the Strategy Process (prereq grad mgmt stu or grad SMgt approval, 8032) (A-F only)
858280 —1 1010-1155 MW, BlegH 255, Bruderer E, 4 cr
662640 —2 1325-1510 MW, BlegH 225, Bruderer E, 4 cr

R 8040 International Business (§BGS 3004; prereq grad mgmt stu or grad SMgt approval, 3001 or 8001 or MBA 8010)
153190 —1 1730-2100 T, BlegH 225, Berg D, 4 cr

R 8082 Business Formation: Opportunity Identification and Resource Assembly (§Entr 8082, Mktg 8082; prereq MBA stu or ❑) (A-F only)
974535 1730-2100 W, BlegH 205, Rao D, 4 cr

R 8101 Seminar in Strategic Management (prereq PhD student or grad SMgt approval)
055586 1325-1640 T, BlegH 335, Van de Ven A, 4 cr

R 8402 Seminar in Strategy Implementation (prereq PhD student or #, grad SMgt approval)
475292 1325-1640 W, BlegH 210, Bromiley P, 4 cr

R 8990 Readings in Management Theory and Administration (prereq 2nd yr grad stu, requisite intro courses, consent of adviser, #, grad SMgt approval)
461098 ar cr

R 8995 Graduate Research in Management Theory and Administration (prereq 2nd yr grad stu, requisite intro courses, consent of adviser, #, grad SMgt approval)
454491 ar cr

MANAGEMENT OF TECHNOLOGY (MOT)
Management and Technology

8121 Managing in a Technical Environment (!8121; prereq MOT stu) (A-F only)
857100 1245-1630 FS, WBOB 150, Erickson B, 4 cr

R 8131 Problem Formulation and Managerial Decision Making (§MBA 8070; prereq MOT stu) (A-F only)
557365 0800-1145 FS, WBOB 150, Adams C, 2 cr (alt F, S)

R 8133 Communications in a Technical Environment (!8133; prereq MOT stu) (A-F only)
853080 0800-1145 FS, WBOB 150, Bell M, 4 cr

R 8134 Support and Control of Manufacturing Processes (prereq MOT stu) (A-F only)
156065 0800-1145 FS, WBOB 150, Ramalingam S, 4 cr (alt F, S)

R 8212 Managing Internal and External Interfaces in New Product Development (prereq MOT stu) (A-F only)
872745 1245-1630 FS, WBOB 150, John G, 4 cr

R 8224 Pivotal Technologies for the 1990's (§ME 8701; !8224; prereq MOT stu) (A-F only)
058875 —1 0800-1145 FS, WBOB 150, Bar Cohen A, 4 cr (alt F, S)
061050 —2 0800-1145 FS, WBOB 150, Bar Cohen A, 4 cr (alt F, S)

R 8232 Managing Innovation in a Technological Environment (prereq MOT stu) (A-F only)
453339 1245-1630 FS, WBOB 150, Shenhar A, 4 cr (alt F, S)

R 8234 Project (!8234; prereq MOT stu) (A-F only)
453115 0800-1145 FS, WBOB 150, Shulman Y, 4 cr (alt F, S)

R 8900 Conflict Management (prereq MOT stu) (S-N only)
272748 1245-1630 FS, WBOB 150, Fiutak T, 1 cr

MARKETING (Mktg)
Management

Non-SMgt students should refer to page 10, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3000 Principles of Marketing (prereq Econ 1101 or equiv) (A-F only)
655820 —1 0800-0945 MW, BlegH 225, Iacovo L, 4 cr
763343 —2 1535-1720 MW, BlegH 225, Mahi H, 4 cr
758854 —3 0800-0945 TTh, BlegH 225, Rudelius C, 4 cr
055734 —4 1325-1510 TTh, BlegH 205, Rudelius C, 4 cr

R 3010 Marketing Research (prereq 3000, OMS 1020/BA 1550 or equiv)
159720 1325-1510 TTh, BlegH 255, Stone L, 4 cr

R 3030 Sales Management (prereq 3000)
371963 1010-1155 MW, BlegH 340, Hansen R, 4 cr

R 3050 Marketing Communications (prereq 3000)
171964 1325-1510 MW, BlegH 205, Ritson M, 4 cr

R 3065 Retail Management (prereq 3000)
955077 1010-1155 TTh, BlegH 225, Brennan D, 4 cr

R 3080 Marketing Strategy (§3020; prereq 3000, sr status recommended)
660581 1535-1720 TTh, BlegH 255, Bergen M, 4 cr

R 8051 Marketing Research (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
754903 1325-1510 MW, BlegH 335, John D, 4 cr

R 8053 Marketing Research: Advanced Topics and Fieldwork (prereq 8051, grad mgmt student or grad SMgt approval)
558595 1325-1510 TTh, BlegH 115, Childers T, 4 cr

R 8074 Product Policy (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
756103 1010-1155 MW, BlegH 105, Shocker A, 4 cr

R 8076 Sales Management (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
061579 1730-2100 T, BlegH 340, Walker O, 4 cr

R 8082 Business Formation: Opportunity Identification and Resource Assembly (§Entr 8082, Mgmt 8082; prereq MBA stu or ❑) (A-F only)
274533 1730-2100 W, BlegH 205, Rao D, 4 cr

R 8088 Strategic Marketing (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
857291 —1 1010-1155 TTh, BlegH 205, Bergen M, 4 cr
453065 —2 1325-1510 TTh, BlegH 150, Bergen M, 4 cr

R 8840 Seminar: Theory and Methods of Measurement (prereq MBA 8045 or MBA 8210 or equiv or Δ, grad mgmt student or grad SMgt approval)
871966 Childers T, 4 cr (PhD students only) (Mgmt/Econ 1275)

R 8990 Readings in Marketing (prereq MBA 8045 or MBA 8210 or equiv or Δ, consent of advisor, #, grad mgmt student, grad SMgt approval)
163839 ar cr

R 8995 Graduate Research in Marketing (prereq MBA 8045 or MBA 8210 or equiv or Δ, consent of advisor, #, grad mgmt student, grad SMgt approval)
258168 ar cr

MASTER OF BUSINESS ADMINISTRATION (MBA)
Management

R 5500 Managerial Communication (prereq MBA stu) (A-F only)
156762 1730-2100 T, BlegH 115, McClenahan C, 4 cr

MATERIALS SCIENCE (MatS)
Chemical Engineering and Materials Science
Institute of Technology

R 3400 Mechanical Properties of Materials (prereq 2nd yr IT student)
★LECT 1430-1520 MWF, AmundH B75, Chelikowsky J
862829 —1 LAB 1535-1805 M, AmundH 410, 4 cr
757106 —2 LAB 1535-1805 W, AmundH 410, 4 cr
753492 —3 LAB 1535-1805 F, AmundH 410, 4 cr

R 5013 Introduction to Electrical and Magnetic Properties of Materials (prereq upper division IT, 5011 or #)
557494 —1 1115-1205 MWThF, EE/CSci 3125, Palmstrom C, 4 cr

R 5102 Diffusion and Solid State Kinetics (prereq upper division IT, 5101, 5001 or ChEn 5001 or #)
553297 0905-0955 MWThF, AmundH 162, Francis L, 4 cr

R 5304 Failure Analysis (prereq 5012, AEM 5016 or #)
★LECT 1010-1100 MWF, AmundH 162, Sivertsen J
257666 —1 LAB 1430-1530 TTh, AmundH 410, 4 cr

R 5455 Electrochemical Engineering (§ChEn 5455; prereq upper division IT, ChEn 5201 or MatS 5101 or grad or #)
161122 1430-1520 MWF, AmundH 120, Smyrl W, 4 cr

5481 Special Problems in Physical Metallurgy and Materials Science (prereq sr)
157885 ar cr

R 5482 Special Problems in Physical Metallurgy and Materials Science (prereq sr)
762998 ar cr

5483 Special Problems in Physical Metallurgy and Materials Science (prereq sr)
655686 ar cr

R 5500 Senior Design Project (prereq sr material science maj)
353494 1325-1415 Th, AmundH 158, 2 cr

R 5613 Polymer Laboratory (prereq 5610 or 5630 or Chem 8611) (course fee)
053045 —1 LAB 1325-1715 M, SmithH 249A, Tirrell M, Lodge T, 2 cr
553753 —2 LAB 0800-1150 T, SmithH 249A, Lodge T, Tirrell M, 2 cr

R 5820 Thin Films and Interfaces of Microelectronic Materials (prereq 5013 or #)
153156 1220-1310 MWF, AmundH 120, Weaver J, 3 cr

R 8114 Symmetry and Scattering in Soft Materials
763438 1115-1205 MWF, AmundH 162, Ward M, 3 cr

R 8311 Theories of Mechanical Behavior of Solids
456029 1010-1205 TTh, AmundH 156, Gerberich W, 3 cr

R 8460 Oxidation of Metals (prereq 5102 or #)
872664 1325-1415 MWF, AmundH 120, Shores D, 4 cr

8472 Seminar: Materials Science and Engineering (prereq 8471) (S-N only)
057502 1325-1625 TTh, FordH 55, 1 cr

8480 Selected Topics in Materials Science and Engineering
254167 ar cr

R 8481 Selected Topics in Materials Science and Engineering (prereq 8480)
759390 1010-1100 MWF, AmundH 104, Wentzcovitch R, 3 cr

R 8521 Topics in Electron Microscopy
862037 1535-1730 TTh, AmundH 116, Carter C, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
762502 1-18 cr

8777 Thesis Credits: Masters
463742 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
158088 1-36 cr

MATHEMATICS (Math)
Institute of Technology

R 1001 Excursions in Mathematics (prereq 3 yrs high schl math, placement exam or GC 0631 with grade of C or better) (Math)
★LECT 1115-1205 MWF, VinH 1
152968 —1 REC 1115-1205 TTh, VinH 301, 4 cr
857047 —2 REC 1115-1205 TTh, VinH 207, 4 cr

R 1031 College Algebra and Probability (§1051, 1151, 1111, 1201; prereq 3 yrs high school math, plcmnt exam or GC 0631 with C or better) (Math)
★LECT 0905-0955 MWF, ClaOff B30 (StP)
557754 —1 REC 0905-0955 TTh, ClaOff B42, 4 cr (StP)
★LECT 1115-1205 MWF, FordH 155
360302 —2 REC 1115-1205 TTh, FordH 155, 4 cr
559441 —3 REC 1115-1205 TTh, FordH 55, 4 cr
062733 —4 REC 1220-1310 TTh, FordH 55, 4 cr
962465 —5 REC 1220-1310 TTh, Arch 35, 4 cr
★LECT 1325-1415 MWF, VinH 16
560086 —6 REC 1115-1205 TTh, MurH 308, 4 cr
654683 —7 REC 1115-1205 TTh, MurH 311, 4 cr
156048 —8 REC 1220-1310 TTh, SciCB 325, 4 cr
162164 —9 REC 1220-1310 TTh, AmundH 240, 4 cr
758238 —10 REC 1220-1415 TTh, VinH 211, Camacho D, 4 cr (TRIO stu only)
★LECT 1430-1520 MWF, FordH 120
559133 —11 REC 1325-1415 TTh, VinH 16, 4 cr
360350 —12 REC 1430-1520 TTh, VinH 211, 4 cr

R 1051 Precalculus I (§1031, 1111, 1201, 1008, 1151; prereq 3 yrs hi sch math, placemnt exam or GC 0631 C or bet)
★LECT 0905-0955 MWF, Arch 40
153514 —1 REC 0800-0850 TTh, VinH 206, 4 cr
054003 —2 REC 0800-0955 TTh, ApH 239, Camacho D, 4 cr (TRIO stu only)
458105 —3 REC 0905-0955 TTh, FordH 285, 4 cr
★LECT 1220-1310 MWF, Arch 50
255996 —4 REC 1115-1205 TTh, AmundH 116, 4 cr
158849 —5 REC 1220-1310 TTh, MurH 308, 4 cr

R 1131 Finite Mathematics (prereq 3 1/2 yrs high school math or grade of C or better in 1031 or 1181, pre-bus or soc and behav sci students) (Math)
★LECT 1115-1205 MWF, AmundH 116
661701 —1 REC 1115-1205 TTh, KoltH S138, 5 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 1142 Short Calculus (§1211, 1411H; prereq 3 1/2 yrs hs math or grade of C or better in 1031 or 1181 or 1151) (Math)
★LECT 0800-0850 MWF, McNH 198 (StP)
061260 —1 REC 0800-0850 TTh, ClaOff B42, 5 cr (StP)
254976 —2 REC 0905-0955 TTh, GrnH 110, 5 cr (StP)
★LECT 1430-1520 MWF, SciCB 175
562856 —3 REC 1220-1310 TTh, MurH 311, 5 cr
162259 —4 REC 1220-1310 TTh, Phys 131, 5 cr
562260 —5 REC 1430-1520 TTh, WullH 220, 5 cr
158874 —6 REC 1430-1520 TTh, SciCB 375, 5 cr
775539 —7 REC 1535-1625 TTh, FordH 285, 5 cr
175540 —8 REC 1535-1625 TTh, Arch 30, 5 cr

R 1151 Precalculus II (§1111, 1201, 1008; prereq 3 1/2 yrs hi sch math, plcmnt exam or 1051 grade of C or better) (Math)
★LECT 1325-1415 MWF, SciCB 375
058844 —1 REC 1010-1100 TTh, AmundH 120, 4 cr
153867 —2 REC 1010-1100 TTh, AmundH 124, 4 cr
763195 —3 REC 1115-1205 TTh, FordH 115, 4 cr
855900 —4 REC 1115-1205 TTh, Arch 60, 4 cr
175531 —5 REC 1220-1310 TTh, FordH 170, 4 cr
075532 —6 REC 1220-1310 TTh, FordH 160, 4 cr

R 1251 One-Variable Differential and Integral Calculus I (§1142, 1451H, 1211, 1411H; prereq 4 yrs high schl math incl trig, or C grade or better in 1201 or 1008, 1111, or equiv)
★LECT 0905-0955 MWF, VinH 16
254539 —1 REC 0800-0850 TTh, VinH 209, 4 cr
761365 —2 REC 0800-0850 TTh, VinH 301, 4 cr
157739 —3 REC 0905-0955 TTh, FordH 160, 4 cr
159751 —4 REC 0905-0955 TTh, VinH 16, 4 cr
★LECT 1115-1205 MWF, VinH 16
553333 —5 REC 1010-1100 TTh, Arch 40, 4 cr
160732 —6 REC 1010-1100 TTh, FordH 120, 4 cr
062957 —7 REC 1115-1205 TTh, VinH 113, 4 cr
360879 —8 REC 1115-1205 TTh, VinH 6, 4 cr
★LECT 1325-1415 MWF, FordH 55
556748 —9 REC 1220-1310 TTh, NichH 207, 4 cr
155787 —10 REC 1220-1310 TTh, NichH 216, 4 cr
254928 —11 REC 1430-1520 TTh, SciCB 175, 4 cr
162125 —12 REC 1430-1520 TTh, SciCB 125, 4 cr

R 1252 One-Variable Differential and Integral Calculus II (§1452H, 1221, 1421H; prereq C grade or better in 1251)
★LECT 0905-0955 MWF, Arch 25
461389 —1 REC 0905-0955 TTh, VinH 1, 4 cr
663335 —2 REC 0905-0955 TTh, FordH 55, 4 cr
553994 —3 REC 1010-1100 TTh, Arch 45, 4 cr
355004 —4 REC 1010-1100 TTh, SciCB 175, 4 cr
★LECT 1115-1205 MWF, OwreH 2210
259420 —5 REC 1115-1205 TTh, VinH 2, 4 cr
161760 —6 REC 1115-1205 TTh, FordH 170, 4 cr
157000 —7 REC 1220-1310 TTh, FordH 70, 4 cr
458377 —8 REC 1220-1310 TTh, VinH 16, 4 cr
★LECT 1325-1415 MWF, FordH 155
756764 —9 REC 1220-1310 TTh, KoltH S140, 4 cr
252872 —10 REC 1220-1310 TTh, KoltH S138, 4 cr
957265 —11 REC 1325-1415 TTh, SciCB 175, 4 cr
961719 —12 REC 1325-1415 TTh, Phys 166, 4 cr
★LECT 1430-1520 MWF, Arch 55
757266 —13 REC 1430-1520 TTh, Phys 170, 4 cr
263502 —14 REC 1430-1520 TTh, NichH 213, 4 cr
254007 —15 REC 1535-1625 TTh, Arch 55, 4 cr
258459 —16 REC 1535-1625 TTh, Arch 50, 4 cr

R 1261 Calculus III (§1241, 1553H, 3551H; prereq 1252 or 1353 or equiv)
★LECT 0905-0955 MWF, SciCB 325
157071 —1 REC 0905-0955 TTh, VinH 311, 4 cr
163212 —2 REC 0905-0955 TTh, FordH 120, 4 cr
259790 —3 REC 1010-1100 TTh, FordH 285, 4 cr
160827 —4 REC 1010-1100 TTh, FordH 155, 4 cr
★LECT 1115-1205 MWF, Arch 35
055703 —5 REC 1010-1100 TTh, VinH 16, 4 cr
157281 —6 REC 1010-1100 TTh, VinH 1, 4 cr
258753 —7 REC 1115-1205 TTh, VinH 16, 4 cr
259093 —8 REC 1115-1205 TTh, VinH 1, 4 cr
★LECT 1220-1310 MWF, Arch 25
363135 —9 REC 1220-1310 TTh, SciCB 175, 4 cr
056849 —10 REC 1220-1310 TTh, VinH 1, 4 cr
760992 —11 REC 1325-1415 TTh, SciCB 375, 4 cr
858392 —12 REC 1325-1520 TTh, VinH 206, 4 cr (Emerging Scholars)
★LECT 1325-1415 MWF, WullH 140
858067 —13 REC 1220-1310 TTh, Phys 170, 4 cr
254914 —14 REC 1220-1310 TTh, Phys 133, 4 cr
054258 —15 REC 1430-1520 TTh, Arch 10, 4 cr
262902 —16 REC 1430-1520 TTh, PillsH 110, 4 cr
★LECT 1430-1520 MWF, SciCB 375
561853 —17 REC 1430-1520 TTh, FordH 120, 4 cr
954964 —18 REC 1430-1520 TTh, AkerH 225, 4 cr
858361 —19 REC 1535-1625 TTh, Arch 60, 4 cr
763052 —20 REC 1535-1625 TTh, SciCB 125, 4 cr

R 1353 Calculus: Concepts, Explorations, and Applications (§1261; prereq 1352, #)
★LECT 0905-0955 TTh, Arch 35
460596 —1 REC 0905-0955 M, VinH 20, 0905-1100 W, VinH 206, 4 cr
758613 —2 REC 0905-0955 M, VinH 301, 0905-1100 W, VinH 209, 4 cr
056639 —3 REC 1325-1415 M, FordH 160, 1325-1520 W, VinH 301, 4 cr
855394 —4 REC 1325-1415 M, VinH 1, 1325-1520 W, VinH 209, 4 cr
★LECT 1325-1415 TTh, Arch 35
475535 —5 REC 0905-1100 M, VinH 206, 0905-0955 W, VinH 20, 4 cr
275536 —6 REC 0905-1100 M, VinH 209, 0905-0955 W, VinH 301, 4 cr
175537 —7 REC 1325-1520 M, VinH 301, 1325-1415 W, FordH 175, 4 cr
975538 —8 REC 1325-1520 M, VinH 209, 1325-1415 W, VinH 1, 4 cr

R 1553H Honors: Linear and Nonlinear Analysis I (prereq 1251-1252 or 1551H-1552H or equiv, grade of C or better required to continue in sequence, consent of IT Honors Office)
★LECT 1010-1100 MWF, Arch 30, Sperber S
160326 —80 REC 0905-0955 TTh, VinH 20, 4 cr
862961 —81 REC 1010-1100 TTh, VinH 311, 4 cr

R 3001 Actuarial Science Seminar (prereq 1221 or 1421, soph) (S-N only)
359053 1115-1205 T, Arch 15, 1 cr

R 3107 Topics in Elementary Mathematics (no cr for IT stu; prereq C or better in 3106)
472408 1430-1625 TF, FordH 50, 4 cr

R 3142 Linear Algebra (§1241, 1261; prereq 1252 or 1221)
161564 1220-1310 MTWThF, VinH 206, 5 cr

R 3251 Multivariable Differential Calculus (§3211, 3311, 3521H, 3552H; prereq 1 yr calc, e.g. 1261 or 1353)
★LECT 1115-1205 MWF, MechE 18
154896 —1 REC 1010-1100 TTh, FordH 55, 4 cr
556393 —2 REC 1010-1100 TTh, AmundH 116, 4 cr
554983 —3 REC 1115-1205 TTh, VinH 20, 4 cr
258414 —4 REC 1115-1205 TTh, VinH 311, 4 cr
★LECT 1430-1520 MWF, Arch 10
559066 —5 REC 1325-1415 TTh, PillsH 110, 4 cr
761883 —6 REC 1325-1415 TTh, FolH 306, 4 cr
056270 —7 REC 1430-1520 TTh, ScottH 4, 4 cr
853497 —8 REC 1430-1520 TTh, LindH 203, 4 cr

R 3252 Multivariable Integral Calculus (§3311/3331 or 3211/3331 or 3551H or 3552H; prereq 1252, ¶3251)
★LECT 1010-1100 MWF, VinH 16
253150 —1 REC 1010-1100 TTh, VinH 20, 4 cr
553980 —2 REC 1010-1100 TTh, VinH 211, 4 cr
559228 —3 REC 1115-1205 TTh, VinH 211, 4 cr
453809 —4 REC 1115-1205 TTh, VinH 313, 4 cr
★LECT 1325-1415 MWF, Arch 25
254234 —5 REC 1220-1310 TTh, PillsH 110, 4 cr
363118 —6 REC 1220-1310 TTh, Phys 166, 4 cr
662279 —7 REC 1430-1520 TTh, Arch 60, 4 cr
059119 —8 REC 1430-1520 TTh, AkerH 215, 4 cr

R 3261 Differential Equations with Linear Algebra (§3221, 3321, 3531H, 3551H; prereq 1 yr calc, e.g. 1261 or 1353)
★LECT 0905-0955 MWF, Arch 35
962837 —1 REC 0905-0955 TTh, VinH 211, 4 cr
160729 —2 REC 0905-0955 TTh, VinH 113, 4 cr
256999 —3 REC 1010-1100 TTh, VinH 213, 4 cr
760975 —4 REC 1010-1100 TTh, VinH 113, 4 cr
★LECT 1220-1310 MWF, VinH 16
459321 —5 REC 1115-1205 TTh, NichH 216, 4 cr
353012 —6 REC 1115-1205 TTh, NichH 207, 4 cr
659818 —7 REC 1220-1310 TTh, VinH 20, 4 cr
354550 —8 REC 1220-1310 TTh, VinH 311, 4 cr

R 3262 Sequences, Series, and Foundations (prereq 1261)
★LECT 0905-0955 MWF, Arch 30
057922 —1 REC 0905-0955 TTh, VinH 6, 4 cr
255898 —2 REC 1010-1100 TTh, VinH 6, 4 cr

R 3356 Calculus Concepts, Explorations, and Applications (prereq 3355, grade of C or better to continue in sequence)
★LECT 1115-1205 WF, FordH 120
573419 —1 REC 0905-0955 T, VinH 213, 4 cr
★LAB 0905-1100 Th, LindH 1
773421 —2 REC 1115-1205 T, VinH 209, 4 cr
★LAB 1115-1310 Th, LindH 1
373423 —3 REC 1325-1415 T, Phys 143, 4 cr
★LAB 1325-1520 Th, LindH 1

R 3551H Honors: Linear and Nonlinear Analysis II (prereq 1553H with C grade of better, consent of IT Honors Office)
★LECT 1010-1100 MWF, VinH 20
153697 —80 REC 1010-1100 TTh, VinH 209, 4 cr

R 5056 Theory of Interest (prereq 1252 or equiv)
362390 1115-1205 MWF, VinH 6, 4 cr

R 5059 Actuarial Mathematics III (prereq 5058)
662847 1325-1415 MWF, VinH 311, Agard S, 4 cr

R 5152 Elementary Mathematical Logic (§5163; prereq one 32XX math course or equiv or #)
256260 1010-1100 MWF, VinH 364, Fuhrken E G, 4 cr

R 5164 Mathematical Logic (prereq 5163)
663450 1430-1520 MWF, FordH 285, Richter W, 4 cr

R 5209 Theory of Numbers (prereq one 32XX math course or equiv or #)
855878 0905-0955 MWF, VinH 207, 4 cr

R 5243 Linear Algebra with Applications (prereq 5242)
★LECT 1115-1205 MWF, VinH 301
056706 —1 REC 1115-1205 Th, FordH 60, 4 cr

R 5246 Introduction to Modern Algebra II (§5283; prereq 5245)
558175 0905-0955 MWF, VinH 2, Eagon J, 4 cr

R 5247 Introduction to Modern Algebra III (§5284; prereq 5246)
163198 0905-0955 MWF, VinH 313, White D, 4 cr

R 5284 Fundamental Structures of Algebra (prereq 5283)
057158 0905-0955 MWF, VinH 364, Webb P, 4 cr

R 5333 Geometry III (prereq 5332)
558368 1325-1510 M, 1325-1415 WF, VinH 207, Aeppli A, 4 cr

R 5337 Computational Methods in Elementary Geometry (prereq multivar calc or 3251 or #)
276265 1630-1915 W, LindH 26, Sullivan J, 2-4 cr

R 5343 Introduction to Algebraic Topology (prereq 5342)
275522 1325-1415 MWF, VinH 211, Gershenson H, 4 cr

R 5428 Mathematical Modeling (prereq 2 yrs elem calc)
758191 1220-1310 MWF, VinH 207, Weinberger H, 4 cr

R 5459 Methods of Applied Mathematics (prereq 5458)
961848 —1 1115-1205 MWF, MechE 212, Miracle C, 4 cr

R 5465 The Mathematics of Industrial Problems (prereq 2 yrs calc includ 3262 or equiv, famil with FORTRAN, Pascal, or C)
257411 1325-1415 MWF, VinH 113, Littman W, 4 cr

R 5467 Introduction to the Mathematics of Wavelets (prereq 2 yrs calc or #)
158678 1115-1205 MWF, VinH 207, Jodeit M, 4 cr

R 5475 Analysis of Numerical Methods (prereq 5474) (A-F only)
463403 1115-1205 MWF, VinH 2, Lee H, 4 cr

R 5479 Applied Numerical Analysis of Partial Differential Equations (prereq 5478)
962109 1010-1100 MWF, VinH 313, Cockburn B, 4 cr

R 5512 Differential Equations with Applications I (prereq 3261 or equiv or #...3262 rec)
163730 1010-1100 MWF, VinH 2, 4 cr

R 5521 Introduction to Ordinary Differential Equations (prereq one sophomore sequence or #...some previous abstract math rec) (A-F only)
354967 1115-1205 MWF, VinH 206, 4 cr

R 5523 Introduction to Ordinary Differential Equations (prereq 5522) (A-F only)
963356 1010-1100 MWF, VinH 207, Leung C, 4 cr

R 5533 Dynamical Systems and Chaos (prereq 5532)
854360 1325-1415 MWF, SmithH 231, Moeckel R, 4 cr

R 5553H Honors: Complex Analysis and Related Topics (§3541H, 5568; prereq c or better in 3552H)
★LECT 1220-1310 MWF, VinH 301, Hejhal D
553803 —80 REC 1220-1310 T, 1325-1415 Th, Arch 20, 4 cr

R 5569 Operational Mathematics (§5573; prereq 5568)
159760 1325-1415 MWF, VinH 6, Green L, 4 cr

R 5573 Elementary Partial Differential Equations (§5568; prereq 5572)
054101 1115-1205 MWF, VinH 313, Sattinger D, 4 cr

R 5607 Advanced Calculus: A Rigorous Approach (§5613; prereq 2 yrs calculus)
161315 1220-1310 MWF, VinH 6, 4 cr

R 5608 Multivariable Advanced Calculus (§5614; prereq 3252, 5606-5607 recommended)
554322 1220-1310 MWF, VinH 113, Storvick D, 4 cr

R 5614 Introduction to Analysis (prereq 5613)
462896 —1 1220-1310 MWF, VinH 313, Agard S, 4 cr
660290 —2 1430-1520 MWF, VinH 311, Jodeit M, 4 cr

R 5679 Probability (§5681, Stat 5131; prereq 3252 or equiv)
760149 1220-1310 MWF, VinH 20, Fristedt B, 4 cr

R 5683 Probability and Stochastic Processes (prereq 5682)
562744 1010-1100 MWF, VinH 301, Fristedt B, 4 cr

R 5702 Graph Theory and Optimization (prereq 3251 or equiv...3XXX linear algebra rec)
363314 1220-1310 MWF, VinH 211, Goldman J, 4 cr

R 5703 Constructive Combinatorics (prereq 5701, knowledge of a computer language)
163301 1545-1700 TTh, FordH 130, Reiner V, 4 cr

R 5900 Tutorial Course in Advanced Mathematics (prereq #)
360185 ar cr

R 8000 Preparation for Teaching College Mathematics (!; prereq grad stu in doct prog in math, beyond 1st yr, good acad stand with dept, #) (S-N only)
175523 1600-1730 W, VinH 206, Keynes H, 1-2 cr

R 8202 General Algebra (prereq 8201)
461313 1115-1205 MWF, FordH 50, Roberts J, 3 cr

R 8266 Topics in Number Theory (prereq 8267)
775525 1010-1100 MWF, VinH 6, Garrett P, 1-3 cr

R 8292 Topics in Algebra (prereq 8291)
575526 0905-0955 MWF, VinH 6, Lyubeznik G, 1-3 cr

R 8302 Manifolds/Topology (prereq 8301)
957184 1325-1415 MWF, FordH 115, Chow B, 3 cr

R 8367 Riemannian Geometry (prereq 8366)
457701 1325-1415 MWF, NichH 216, Green L, 3 cr

R 8447 Numerical Analysis of Ordinary and Partial Differential Equations (prereq 8446) (A-F only)
454751 1115-1205 MWF, VinH 311, Lowengrub J, 1-3 cr

R 8502 Theory of Ordinary Differential Equations (prereq 8501)
860935 1010-1100 MWF, VinH 113, Sibuya Y, 3 cr

R 8552 Theory of Partial Differential Equations (prereq 8551)
163744 1430-1520 MWF, VinH 113, Meyers N, 3 cr

R 8562 Calculus of Variations, Minimal Surfaces (prereq 8561)
375527 1430-1520 MWF, VinH 211, Nitsche J, 3 cr

R 8592 Topics in Partial Differential Equations (prereq 8591)
154154 1115-1205 MWF, VinH 20, Fabes E, 1-3 cr

R 8602 Real Analysis (prereq 8601)
058309 1220-1310 MWF, VinH 213, Safonov, 3 cr

R 8654 Introduction to Stochastic Processes (prereq 8653)
175528 1115-1205 MWF, VinH 211, Jain N, 3 cr

R 8658 Measure Theory and Probability (prereq 8657)
957296 1010-1100 MWF, VinH 211, Sethuraman S, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
759907 1-18 cr

R 8670 Introduction to Combinatorial Theory (prereq 8669)
075529 1115-1205 MWF, VinH 113, White D, 3 cr

R 8692 Topics in the Theory of Probability (prereq 8691)
654196 1325-1415 MWF, FordH 285, Krylov N, 3 cr

R 8702 Complex Analysis (prereq 8701)
656790 1430-1520 MWF, FordH 130, Marden A, 3 cr

8777 Thesis Credits: Masters
454670 1-16 cr

R 8802 Functional Analysis (prereq 8801)
455690 1220-1310 MWF, VinH 209, Sverak V, 3 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
754822 1-36 cr

R 8992 Reading and Research (prereq 8991)
754335 ar cr

MATHEMATICS EDUCATION (MthE)

Curriculum and Instruction
Education and Human Development

R 5030 Teaching Mathematics: Geometric Structures (§5083; prereq 5020, 5620, math ed stu or #, ¶5630, does not apply to MEd or grad prog) (A-F only)
971604 1010-1205 MTWThF, PeikH 375, Orton R, 3 cr

R 5355 Mathematics for Diverse Learners (prereq CI 5821 or #) (A-F only)
755839 1630-2010 T, PeikH 385, Orton R, 4 cr

R 5366 Technology-Assisted Mathematics Instruction (prereq CI 5362 or CISy 5006 or equiv, math ed or grad stu or #) (A-F only)
771605 1630-2010 Th, EddyH 62, Burgeson J, 4 cr

R 5630 Clinical Experiences in Teaching Geometry (prereq 5620, math ed stu or #, ¶5030) (S-N only)
973434 1600-1900 M, PeikH 375, Capistran R, 2 cr

5680 Practicum in Mathematics Education (max 9 cr; prereq #) (A-F only)
756800 —1 Orton R, 1-9 cr
557818 —2 Post T, 1-9 cr
055622 —3 Stochl J, 1-9 cr

8500 Theory and Classical Research in Mathematics Education (prereq 5311 or 5312 or #)
773435 1630-1915 T, PeikH 375, Stochl J, 3 cr

8680 Internship: Mathematics Education
163203 —1 Orton R, ar cr
056107 —2 Post T, ar cr
559729 —3 Stochl J, ar cr

8980 Problems: Mathematics Education (prereq 8500 or 8570)
659866 —1 Orton R, ar cr
559083 —2 Post T, ar cr
662489 —3 Stochl J, ar cr

MECHANICAL ENGINEERING (ME)

Mechanical Engineering
Institute of Technology

An IT computer fee is assessed at the time of registration for ME 1010, 1012, 1025, 3020, 3203, 5203, 5220, 5225, 5226, 5227, 5260, 5265, 5268, 5271, 5288, and 5351. See page 22 for more information on this fee.

R 1025 Engineering Graphics (prereq Math 1251 or equiv, IT stu or pre-BAE maj)
360073 —1 LECT 1010-1100 MTWThF, Arch 10, Berhe T, 4 cr
157983 —2 LECT 1325-1415 MTWThF, Arch 10, Berhe T, 4 cr
★LAB (open hrs, ElectE 118)

R 3020 Mechanical Engineering Computation (prereq IT stu, Math 3261, CSci 3101)
055121 0800-0850 MWThF, MechE 221, Kelso F, 4 cr

R 3203 Analysis of Mechanism Systems (prereq ME upper div, AEM 3036 or equiv, 3020)
★LECT 1010-1100 MWF, MechE 18, Chase T
160181 —1 REC 1430-1625 M, MechE 221, 4 cr
858974 —2 REC 1010-1205 T, MechE 202, 4 cr
762841 —3 REC 1430-1625 W, MechE 18, 4 cr

Symbols

- **R** The letter R preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 3205 Engineering Systems Design (prereq AEM 3016, upper division mech engr maj)
★LECT 1220-1310 MWF, MechE 221, Chase T
254329 —1 REC 1325-1520 W, MechE 221, 4 cr
963499 —2 REC 1430-1625 Th, MechE 221, 4 cr

R 3301 Thermodynamics (prereq IT or ForP or pre-BAE maj, Chem 1014 or Chem 1052 or Phys 1252, Math 3261 or equiv)
860868 —1 0800-0850 MTWThF, Arch 55, 4 cr
062263 —2 1010-1100 MTWThF, Arch 55, 4 cr

R 3303 Applied Thermodynamics (§3305; prereq 3301 or equiv, upper division mech engr or aerospace engr maj)
057113 —1 0800-0850 MTWThF, Arch 10, 4 cr
172435 —2 0905-0955 MTWThF, Arch 10, 4 cr

R 3303H Applied Thermodynamics (§3303; prereq ME upper div honors stu)
160066 0905-0955 MTWThF, Arch 10, 4 cr

R 3701 Basic Measurements Laboratory I (prereq 3301 or ¶, upper division mech engr maj)
755629 —1 LECT 1220-1310 T, Arch 10, Davidson J, 2 cr
★LAB (open lab ar, MechE 370-388)

R 3701H Basic Measurement Laboratory I §3701; prereq ME upper div honors stu)
654957 —80 LECT 1220-1310 T, Arch 10, Davidson J, 2 cr
★LAB

R 3702 Basic Measurements Laboratory II (prereq 3701, upper division mech engr maj)
959954 —1 LECT 1220-1310 Th, Arch 10, Davidson J, 2 cr
★LAB (open lab ar, MechE 370-388)

R 3702H Basic Measurements Laboratory II (§3702; prereq 3701, ME upper div honors stu)
975166 —80 LECT 1220-1310 Th, Arch 10, Davidson J, 2 cr
★LAB

R 3741 Industrial Assignment (!; prereq ME undergrad, regis in co-op prog)
959033 Marple V, 2 cr

R 3742 Industrial Assignment (!; prereq 3741)
162464 Marple V, 2 cr

R 3743 Industrial Assignment (!; prereq 3742)
556166 Marple V, 2 cr

R 5190 Advanced Engineering Problems (prereq #, Δ)
557835 2-4 cr

R 5198H Mechanical Engineering Upper Division Honor Thesis I (5198H-5199H†; prereq upper div ME honors stu)
862071 4 cr

R 5199H Mechanical Engineering Upper Division Honor Thesis II (5198H-5199H†; prereq upper div ME honors stu)
752875 4 cr

R 5203 Advanced Analysis and Synthesis of Mechanical Systems (prereq 3203 or equiv, IT stu or grad...computer programming desirable)
354662 0905-0955 MWF, MechE 18, Erdman A, 3-4 cr

R 5207 Experimental Stress Analysis (prereq AEM 3016, IT upper division or grad)
457889 —1 LECT 0800-0850 MWF, MechE 18, Klamecki B, 4 cr
★LAB (3 hr lab ar)

R 5230 Acoustics and Vibration Laboratory (prereq 3701, 3702, 3201, ME upper div) (A-F only)
★LECT 1325-1415 M, MechE 202, Frohrib D
657843 —1 LAB 1430-1730 M, MechE 357, 2 cr
557043 —2 LAB 1430-1730 T, MechE 357, 2 cr
755968 —3 LAB 1430-1730 W, MechE 357, 2 cr
462865 —4 LAB 1430-1730 F, MechE 357, 2 cr

R 5231 Mechatronics Laboratory (prereq 3701, 3702, 3201, ME upper div) (A-F only)
★LECT 1325-1415 M, Arch 40, Stelson K
454779 —1 LAB 0905-1205 T, ElectE 304, 2 cr
963843 —2 LAB 1430-1730 T, ElectE 304, 2 cr
856349 —3 LAB 1430-1730 W, ElectE 304, 2 cr
176235 —4 LAB 0905-1205 Th, ElectE 304, 2 cr
976236 —5 LAB 0905-1205 F, ElectE 304, 2 cr
776237 —6 LAB 1430-1730 F, ElectE 304, 2 cr

R 5254 Design Morphology with Applications (prereq upper div ME maj, 1025, 3201, 3205, 3303, 5342 or #)
★LECT 1325-1415 TTh, MechE 18
759860 —1 LAB 1325-1730 TTh, Arch 40, 4 cr

R 5255 Engineering Design Project (prereq 5254, upper division mech engr maj)
★LECT 1325-1415 TTh, MechE 18
760958 —1 LAB 1325-1730 TTh, Arch 40, 4 cr

R 5260 Engineering Materials and Processing (prereq ME upper div, 3020, Phys 1253, Chem 1052, AEM 3016, MatS 3400, safety glasses req)
★LECT 1325-1415 MWF, Arch 55, Stelson K
863267 —1 REC 1430-1625 M, MechE 70, 4 cr
954379 —2 REC 0800-0955 T, MechE 70, 4 cr
457052 —3 REC 1010-1205 T, MechE 70, 4 cr
358792 —4 REC 1220-1415 T, MechE 70, 4 cr
753394 —5 REC 0800-0955 W, MechE 70, 4 cr
459108 —6 REC 1010-1205 W, MechE 70, 4 cr
354788 —7 REC 1430-1625 W, MechE 70, 4 cr
756294 —8 REC 1010-1205 Th, MechE 70, 4 cr
854388 —9 REC 1220-1415 Th, MechE 70, 4 cr
360994 —10 REC 1010-1205 F, MechE 70, 4 cr
155823 —11 REC 1430-1625 F, MechE 70, 4 cr

R 5265 Computer-Assisted Product Realization (prereq 5260 or equiv; IT sr or grad stu, course in engr computer language)
257327 —1 LECT 1535-1835 M, Arch 10, Ramalingam S, 4 cr
★LAB

R 5272 Non-Contact Sensing (2 cr lab option; prereq IT or grad stu, 5283 or equiv)
256811 1115-1310 WF, MechE 202, Donath M, 4 cr

R 5283 Industrial Instrumentation and Automatic Control (prereq 3201 or equiv, IT stu or grad)
155613 —1 1430-1625 MW, MechE 102, Ogata K, 4 cr

R 5285 Control Systems Laboratory (prereq 5283 or equiv, IT or grad IT maj)
158082 1115-1205 TTh, Arch 10, Donath M, 2 cr

R 5288 Modelling and Simulation of Dynamic Systems (prereq 5283 or equiv, IT stu or grad)
154669 0905-1100 WF, AkerH 319, Ogata K, 4 cr

R 5342 Heat Transfer (prereq IT upper div or grad or ForP stu, 3301, CE 3400 or AEM 3200)
753010 0905-0955 MTWThF, Arch 55, 4 cr

R 5342H Heat Transfer (§5342; prereq 3301, CE 3400 or AEM 3200, ME upper div honors stu)
659883 0905-0955 MTWThF, Arch 55, 4 cr

R 5344 Thermodynamics of Fluid Flow (§AEM 5201; prereq CE 3400 or AEM 3200, IT stu or grad)
153182 1115-1205 MTWThF, MechE 221, Sparrow E, 4 cr

R 5346 Intermediate Heat Transfer (prereq 5342, upper div IT or grad stu)
072436 0905-0955 MTWThF, MechE 202, Sparrow E, 4 cr

R 5370 Transport Phenomena Laboratory (prereq upper div ME maj, 3303, 3701, 3702, AEM 3200 or CE 3400, 5342)
★LECT 1220-1310 MF, Arch 10, Strykowski P
675162 —1 LAB 1325-1725 M, MechE 260, 4 cr
475163 —2 LAB 1325-1725 T, MechE 260, 4 cr
275164 —3 LAB 1325-1725 W, MechE 260, 4 cr

R 5443 Turbomachinery (prereq 3301 or equiv, IT stu or grad) (A-F only)
154929 0800-0850 MTWThF, MechE 321, Simon T, 4-5 cr

R 5470 Energy Conversion Systems Laboratory (prereq upper div ME stu, 3303, 3701, 3702, AEM 3200 or CE 3400)
★LECT 1220-1310 MF, MechE 321, Hofeldt D
875158 —1 LAB 1325-1725 M, MechE 460, 4 cr
675159 —2 LAB 1325-1725 T, MechE 460, 4 cr
075160 —3 LAB 1325-1725 W, MechE 460, 4 cr

R 5480 Biological Fluid Flow (prereq CE 3400, AEM 3200 or equiv, IT stu or grad)
560055 —1 1220-1310 MWF, MechE 102, 3-4 cr

R 5604 Heating and Cooling Loads in Buildings (prereq 5603)
157099 0905-1100 TTh, MechE 221, Kuehn T, 4 cr

R 5620 Clean Room Technology and Particle Monitoring (prereq 3303 or #, IT or grad stu)
560850 1010-1205 TTh, Phys 133, Pui D, 4 cr

R 5630 Thermal Environmental Engineering Senior Laboratory (prereq 3701, 3702, ¶5603; formerly 5703-4-5, Lab sections E-1, E-2) (A-F only)
★LECT 1115-1205 T, Arch 55, Kuehn T, Ramsey J
462252 —1 LAB 1115-1310 W, MechE 362, 2 cr
262186 —2 LAB 1115-1310 Th, MechE 362, 2 cr
656126 —3 LAB 1115-1310 F, MechE 362, 2 cr

R 5741 Industrial Assignment and Design Project (!; prereq 3742)
055135 Marple V, 4 cr

R 5742 Industrial Assignment and Design Project (!; prereq 5741)
557480 Marple V, 4 cr

R 8252 New Product Design and Development (prereq 8251)
261653 1115-1245 TTh, BlegH 220, Durfee W, Erdman A, 4 cr

R 8280 Multivariable Control Systems I (prereq 5283 or equiv) (A-F only)
276234 0905-1100 WF, MechE 221, 4 cr

R 8332 Radiation (prereq 8331)
158950 —1 1245-1400 TTh, MechE 212, 3 cr

R 8352 Advanced Computation of Fluid Flow and Heat Transfer (prereq 8351 or #)
161905 1325-1455 WF, LindH 340, Patankar S, 3 cr

R 8372 Optical Diagnostics of Flow Systems (prereq IT grad)
872437 1115-1245 TTh, MechE 18, 3 cr

R 8445 Advanced Combustion (prereq 8443, 8444 or #...5446 rec)
672438 1220-1340 TTh, MechE 202, Fletcher E, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
557933 1-18 cr

8770 Mechanical Engineering Research (prereq Δ)
763214 0905-1100 MW, LindH 216, ar cr

8771 Mechanical Engineering Research (prereq 8770, Δ)
257361 ar cr

8772 Mechanical Engineering Research (prereq 8771, Δ)
257067 ar cr

R 8773 Graduate Seminar (S-N only)
160009 —1 1535-1635 W, MechE 108, 1 cr (bgns 2nd W)

R 8774 Graduate Seminar (prereq 8773) (S-N only)
559374 —1 1535-1635 W, MechE 108, 1 cr (bgns 2nd W)

R 8775 Graduate Seminar (prereq 8774) (S-N only)
462316 —1 1535-1635 W, MechE 108, 1 cr (bgns 2nd W)

8777 Thesis Credits: Masters
958058 1-16 cr

R 8800 Modern Developments in Mechanical Engineering (S-N only)
154243 —1 1535-1730, MTWThF, MechE 212, 1 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
458475 1-36 cr

MEDICAL TECHNOLOGY (MedT)
Medical School

3001 Basic Techniques in Laboratory Science (prereq previous enroll in NAACLS/CAHEA accredited med lab tech prog) (S-N only)
354127 Karni K, 3 cr

5064 Introduction to Clinical Immunohematology (prereq MicB 5235) (A-F only)
157362 0905-0955 MTTh, MoosT 2520, Hallgren H, 3 cr

5065 Introduction to Clinical Immunohematology (prereq MicB 5235) (A-F only)
561464 1220-1520 TTh, MoosT 3349, Hallgren H, 2 cr

5082 Applied Clinical Chemistry (prereq 5113) (S-N only)
154713 0700-1600 MTWThF, Hanson N, 4 cr (University Hospital labs)

5084 Applied Clinical Virology (prereq 5100, 5102) (S-N only)
157894 0800-1630 MTWThF, Stratton C, 1 cr (University Hospital labs)

5085 Applied Clinical Hematology (prereq 5077, 5078, 5765 or CLS 5765) (S-N only)
056219 0715-1600 MTWThF, Lofsness K, Swinehart C, 4 cr (University Hospital labs)

5086 Applied Clinical Immunohematology (prereq 5064, 5065) (S-N only)
458282 0730-1600 MTWThF, Hallgren H, 4 cr (University Hospital labs)

5088 Applied Diagnostic Microbiology (prereq 5100, 5102) (S-N only)
159409 0730-1600 MTWThF, Wells C, 4 cr (University Hospital labs)

5069 Specialty Rotation (prereq completion of med tech preclin prof crses, 5064, 5065, 5078, 5100, 5102, 5113, 5765) (S-N only)
856173 0730-1630 MTWThF, UHosp, Karni K, 1 cr (University Hospital labs)

5090 Special Laboratory Methods (prereq #)
454149 2 cr

5092 Honors Program: Laboratory Methods (prereq #)
861079 5 cr

5106 Directed Research Microbiology (A-F only)
076194 ar cr

5120 Seminar
761298 1-3 cr

5125 Practicum: Teaching (max 3 cr)
359876 ar cr

5130 Practicum in Laboratory Administration (prereq #)
156865 3 cr

5135 Advanced Clinical Microbiology (prereq #)
★LECT Wells C
862877 —1 LAB Wells C, 5 cr

5145 Development of Medical Technology
960019 3 cr

5155 Advanced Clinical Hematology (prereq #)
260227 5 cr

5165 Advanced Clinical Immunohematology (prereq #)
762130 5 cr

5175 Advanced Clinical Chemistry (prereq #)
954561 5 cr

5179 Chemistry Seminar (prereq #)
454006 1 cr

R 5330 Clinical Chemistry III (prereq Chem 3301, Chem 3302, Chem 3305, Chem 3306, MdBc 5300, MdBc 5301) (A-F only)
853659 1010-1100 TTh, MoosT 2520, Tsai M, 2 cr

R 5331 Clinical Chemistry III: Laboratory Applications (prereq Chem 3301, Chem 3302, Chem 3305, Chem 3306, MdBc 5300, MdBc 5301) (A-F only)
162648 1220-1625 M, 0800-1205 F, Brunzel N, 2 cr

5765 Hematology (§CLS 5765; prereq MedT stu or #)
★LECT 1325-1415 WF, MoosT 2520, Lofsness K
657907 —1 LAB 1430-1625 WF, MoosT 3317, Lofsness K, 4 cr

MEDICINAL CHEMISTRY (MedC)
Pharmacy

5140 Therapeutics of Natural Substances (prereq org chem, physiol) (A-F only)
276380 0800-0955 Th, WDH 7135, Staba E, 2 cr

5161 Therapeutic Agents I (prereq 5152) (A-F only)
363667 1010-1100 MTTh, MoosT 2530, Hanna P, 3 cr

5165 Therapeutic Agents V (prereq 5161, 5164) (A-F only)
775282 1115-1205 MW, MoosT 2620, Vince R, 2 cr

5170 Pharmaceutical Biotechnology (prereq 5152) (A-F only)
761642 0800-0955 Th, MoosT 2530, Shier W, 2 cr

5970 Directed Studies (prereq #)
675274 1-5 cr

5999 Special Problems (prereq #)
475275 1-5 cr

8100 Medicinal Chemistry Seminar
161886 1535-1730 T, MoosT 2520, Vince R, ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
458783 1-18 cr

8700 Advanced Concepts in Drug Design (prereq 5600 or #) (A-F only)
071609 Wagner C R, Nagasawa H, 2 cr

8777 Thesis Credits: Masters
154677 1-16 cr

8800 Laboratory Techniques (prereq Chem 3303 or #)
875273 ar cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
061467 1-36 cr

8900 Research in Medicinal Chemistry (prereq Chem 3303 or #)
562971 ar cr

MEDICINE (Med)
Medical School

5500 Medicine Externship I (prereq regis med student)
363040 Parenti C, 9 cr

5501 Externship in Medicine (prereq regis med student, 5500)
854441 Parenti C, 9 cr

5505 Infectious Disease Research at the University Hospital
160195 Jordan C, ar cr

5507 Research in Oncology (prereq regis med student)
957878 Ginder G, ar cr

5508 Preceptorships in Internal Medicine (prereq regis med)
060190 Nath K, ar cr

5509 Research in Rheumatology
763178 Messner R, ar cr

5511 Research in Gastroenterology
154672 Steer C, ar cr

5512 Research in Hematology
155957 Jacob H, 1-18 cr

5518 Research in Endocrinology (prereq regis med student)
756991 Robertson P, ar cr

5521 Infectious Diseases, Clinical Aspects at the University Hospitals
262737 Jordan C, 6-9 cr

5522 Medical Gastroenterology
758871 Soltis R, 6-9 cr

5523 Medical Endocrinology, Metabolism and Clinical Pharmacology
753489 Robertson P, 6-9 cr

5525 Cardiovascular Medicine
954348 Bache R, ar cr

5526 Medical Oncology Outpatient/Consulation (prereq 5500)
953183 Luikart S, 4.5-9 cr

5527 Contemporary Problems in Investigative Cardiology
460999 Bache R, 9 cr

5528 Clinical Hematology
561982 Weisdorf D, ar cr

5531 Clinical Rheumatology
956259 Messner R, ar cr

5532 Pulmonary Disease
363491 Bitterman P, ar cr

5533 Clinical Allergy at University Hospitals
758398 Blumenthal M, 4.5-9 cr

5534 Research in Allergy (prereq regis med)
554224 Blumenthal M, 9 cr

5548 Clinical Genetics
362471 King R, 9 cr

5554 Fluid Electrolyte, Acid-Base Metabolism
159443 Ma K V, 6-9 cr

5556 Renal Consultation (prereq 5500)
154980 Nath K, 6-9 cr

5557 Research in Nephrology (prereq 5500 at Univ Hosp)
154405 Nath K, ar cr

5562 Clinical Nephrology (prereq 5500)
661147 Rao V K, 6-9 cr

5570 Clinical Medicine in the General Clinical Research Center (prereq 5500)
159135 Bantle J, ar cr

5580 Coronary Care Unit (CCU) at VA (prereq 5500, other basic externships)
358887 Pierpont G, 6-9 cr

5581 Medicine Intensive Care Unit at Hennepin County Medical Center (prereq regis med stu)
762161 Leatherman J, 6-9 cr

5582 Clinical Elective in Medical Intensive Care: Ramsey (prereq completion of pre-clinical course work, sr med stu preferred)
558130 Marini J, 6-9 cr

5583 Fundamentals of Clinical Oncology (prereq 5500 or Ped 5501)
163606 Peterson B, 6 cr

5590 Preceptorships in Internal Medicine
160231 McCollister R, ar cr

5596 Occupational Health
161170 Lohman W, 4.5 cr

5597 Research in Occupational Health
260406 Mandel J, Miles, 9 cr

8201 Clinical Medicine
556457 Ferris T, ar cr

8202 Clinical Conference
363331 Ferris T, 1 cr

8203 Clinical Radiology Conference
162240 Ferris T, 1 cr

8204 Pathology Conference
654943 Ferris T, 1 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
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❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are automatically registered when registering for a corresponding part of the same course (e.g., lab).
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Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

8205 Electrocardiographic Conference
960795 Tuna N, 1 cr

8206 Nephrology Seminar
163394 Ferris T, 3 cr

8209 Tumor Clinical Conference
255108 Kennedy B J, 1 cr

8210 Infectious Disease Seminar
161774 Jordan C, ar cr

8211 Diseases of the Cardiovascular System
960022 Cohn J, ar cr

8212 Diseases of the Chest
756165 Bitterman P, ar cr

8213 Diseases of the Kidney
456757 Ferris T, ar cr

8214 Diseases of Diabetes, Endocrinology, Metabolism
659463 Oppenheimer J, ar cr

8215 Diseases of Hematology
455625 Jacob H, ar cr

8216 Diseases of Gastroenterology
156194 Rank J, ar cr

8217 Diseases of Oncology
262382 Kennedy B J, ar cr

8220 Research in Medicine
162450 Ferris T, ar cr

8221 Topics in Medicine
554188 Ferris T, ar cr

8223 Topics in Related Basic Science
260163 Ferris T, ar cr

MEDIEVAL STUDIES (MeSt)
Liberal Arts

R 3610 Topics in Medieval Studies
857212 0905-0955 MWF, BlegH 135, Noonan T, 4 cr

R 5610 Topics in Medieval Studies (prereq 1 yr work in some area of Middle Ages, reading knowledge of appropriate language)
357271 —1 1325-1520 T, RarigC 610, Hanawalt B, 4 cr
459674 —2 1415-1530 TTh, PeikH 315, Grimstad K, 4 cr
353382 —3 1325-1520 Th, BlegH 350, Reyerson K, 4 cr

8030 Medieval Studies Colloquium (prereq #) (S-N only)
057256 Hanawalt B, 1 cr

R 8130 Seminar in Medieval Studies (prereq #) (A-F only)
860305 —1 1325-1520 W, HHHCtr 20, Bachrach B, 4 cr
456709 —2 1535-1750 W, LindH 202, Copeland R, 4 cr
176445 —3 1430-1700 Th, FolH 246, Hanawalt B, Noakes S, 1-5 cr

MICROBIAL ENGINEERING (MicE)
Biological Sciences

5990 Teaching Practicum (A-F only)
458203 0-1 cr

8777 Thesis Credits: Masters
957752 1-16 cr

8950 Special Topics (A-F only)
771989 1-4 cr

MICROBIOLOGY (MicB)
Medical School

R 5105 Biology of Microorganisms (§3103, Biol 5013, VPB 3103; prereq 5 cr biol sci, Biol 5001 or BioC 3021 or BioC 5331 or #) (course fee)
★LECT 1245-1400 TTh, MoosT 2530, 5 cr
★REC 1415-1505 T, MoosT 2530
262415 —1 LAB 0905-1100 TTh, MoosT 2252

5206 Microbiology for Medical Students (prereq ¶5205, regis med fr, all others #)
754044 1325-1415 MThF, 1220-1415 T, 1325-1520 W, PWB 2470, Schlievert P, 5 cr (Mar 8-24)

R 5424 Biology of Viruses (prereq Biol 5003 and one of the following: 5105 or Biol 5004 or Biol 5013) (course fee)
761107 1010-1100 MWF, MoosT 2690, Plagemann P, 3 cr

R 5425 Virology and Microbial Genetics Laboratory (§Biol 5125; prereq Biol 5001 or BioC 3021 or BioC 5331, GCB 3022 or GCB 5022 or Biol 5003, 5424 or ¶5424) (A-F only)
159239 1115-1415 TTh, MoosT 2252, Plagemann P, Schiff L, others, 3 cr

5611 Microbial Ecology (§Soil 5605; prereq 3103 or 5105 or Biol 5013 or Soil 5610 or #) (Envt) (A-F only)
954575 0945-1100 TTh, BorH 375, Sadowsky M, 3 cr (StP)

5900 Topics in Microbiology (prereq sr microbiology maj, 5105 or Biol 5013) (A-F only)
058939 1535-1625 M, PWB 6224, Rogers P, 1 cr

5970 Directed Studies (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
453941 ar cr

5990 Directed Research (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
959274 ar cr

8421 Eukaryotic Molecular Virology and Tumor Biology (prereq biochem, cell biol, microbiol crsewrk or #)
761477 1010-1125 MF, MoosT 2580, Conklin K, Schiff L, 3 cr

R 8910 Seminar (prereq #)
754092 1200-1300 M, Mayo C231, 1 cr

MICROBIOLOGY, IMMUNOLOGY, AND MOLECULAR PATHOBIOLOGY (MIMP)
Microbiology
Medical School

5992 Practicum: Teaching (§MicB 5992; prereq microbiol or MIMP grad stu or #) (A-F only)
473669 1 cr

8218 Frontiers of Immunology III: Clinical Immunology (§MicB 8218, Path 8218; prereq 8216, 8217)
673668 1535-1705 MWTh, MoosT 2580, Gray B, Mueller D, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
173665 1-18 cr

8777 Thesis Credits: Masters
073666 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
873667 1-36 cr

R 8920 Seminar: Student Research Topics (prereq MIMP maj) (S-N only)
774990 —1 1530-1630 F, MoosT 5125, Jenkins M, 1 cr
574991 —2 1530-1630 F, CentLib 4, Jenkins M, 1 cr (StP)

8990 Research in Microbiology, Immunology, and Molecular Pathobiology (§MicB 8990; prereq MicB or Path or MIMP grad maj or #)
773662 Jenkins M, others, ar cr

MIDDLE EASTERN LANGUAGES AND CULTURES (MELC)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 3511 Ancient Iran (§CAS 3511) (Hist; IP)
371591 1430-1520 MWF, FolH 38, Bashiri I, 4 cr

MILITARY SCIENCE (Mil)

0100 Leadership Laboratory (prereq fr or soph) (A-F only)
662086 0645-0745 Th, Armory 100, Eidert M, 0 cr

0300 Advanced Leadership Laboratory (prereq enrolled as a military science advanced course cadet or #) (A-F only)
161032 0645-0745 Th, Armory 100, Talley B, 0 cr

1003 Basic Military Skills (prereq fr or soph) (A-F only)
659768 0645-0745 Th, Armory 100, Eidert M, 1 cr

R 1022 Introduction to Leadership (prereq 1011) (A-F only)
476099 —1 0905-0955 MW, Armory 116, Eidert M, 2 cr
176100 —2 1325-1415 MW, Armory 116, Eidert M, 2 cr

1203 Leadership: Small Unit Training, Tactics and Terrain Association (prereq completed one yr of ROTC, prior military experience or #) (A-F only)
155868 0645-0745 Th, Armory 100, Larson S, 1 cr

1222 Military Skills II (A-F only)
754223 —1 0800-0850 MW, Armory 116, Larson S, 2 cr
662993 —2 1325-1415 MW, Armory 116, Larson S, 2 cr

3130 Military Science III: Leadership Laboratory (max 3 cr) (A-F only)
656868 0645-0745 Th, Armory 100, Talley B, 1 cr

R 3133 Small Unit Tactics (A-F only)
453227 0815-0930 TTh, Armory 116A, Talley B, 3 cr

3140 Military Science IV: Leadership Laboratory (max 3 cr) (A-F only)
057189 0645-0745 Th, Armory 100, Oravis J, 1 cr

R 3143 Military Law, Service Orientation (A-F only)
754951 0800-0850 T, Armory 103, Oravis J, 2 cr

3970 Directed Studies (prereq #, Δ) (A-F only)
456239 1-3 cr

MOLECULAR, CELLULAR, DEVELOPMENTAL BIOLOGY, AND GENETICS (MCDG)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
661195 1-18 cr

8777 Thesis Credits: Masters
355021 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
553302 1-36 cr

8950 Teaching Practicum (prereq MCDG maj or Δ) (S-N only)
171673 1 cr

8970 Directed Studies (prereq MCDG maj or Δ)
071674 ar cr

8990 Research (prereq MCDG maj or Δ) (S-N only)
871675 ar cr

MORTUARY SCIENCE (Mort)
Medical School

3010 Funeral Service Law (A-F only)
159273 0800-0955 TTh, JOAd 2125, Kroshus J, 4 cr

3030 Chemistry (prereq introductory course in general chemistry, regis in mortuary science) (A-F only)
154663 1010-1205 TTh, OwreH 2210, Mathews M, 4 cr

3073 Funeral Service Counseling (prereq regis in mortuary science) (A-F only)
476264 1010-1205 MW, JOAd 2125, Tibetts S, 3 cr

3080 Funeral Service Practicum (prereq have completed all requirements for graduation with the exception of 3080, Δ) (S-N only)
261071 Mathews M, Kroshus J, others, 15 cr

3090 Independent Study (prereq regis in mortuary science)
954897 Kroshus J, Tibbetts S, others, 1-3 cr

MUSEUM STUDIES (MSt)

R 8013 Museum Practices: Technical and Administrative Departments (prereq 8010 or #)
770860 1535-1730 W, ArtMuseum 211, King L, 3 cr

8016 Internship (prereq 8010, prereq permission of Director of Graduate Studies in Museum Studies)
162116 Murdock G, 1-6 cr

MUSIC (Mus)
Music
Liberal Arts

R 1001 Fundamentals of Music (§1003, 1004; prereq non-mus maj) (Vis)
★LECT 1430-1520 MWF, FergH 225, Campbell B, 4 cr
561299 —1 REC 1010-1100 F, FergH 105
654182 —2 REC 1115-1205 F, FergH 105
260325 —3 REC 1220-1310 F, FergH 105
156218 —4 REC 1325-1415 F, FergH 105

R 1051 Piano Class for Non-Music Majors (Vis)
160696 —1 0800-0850 TTh, FergH 259, 2 cr
874866 —2 1430-1520 TTh, FergH 259, 2 cr
474868 —3 1535-1625 TTh, FergH 259, 2 cr

R 1052 Piano Class for Non-Music Majors (prereq 1051) (Vis)
754898 1115-1205 TTh, FergH 259, 2 cr

R 1153 Piano: Class Lessons (prereq 1152) (A-F only)
761995 —1 0800-0850 MW, FergH 259, 2 cr
461361 —2 0800-0850 MW, FergH 265, 2 cr
857484 —3 0905-0955 MF, FergH 259, 2 cr
062165 —4 1010-1100 MF, FergH 259, 2 cr
354824 —5 0905-0955 TTh, FergH 265, 2 cr
557592 —6 1010-1100 TTh, FergH 259, 2 cr

R 1160 Voice: Class Lessons
153196 —1 1010-1100 MW, FergH 90, 2 cr
158163 —2 1115-1205 MW, FergH 90, 2 cr
260910 —3 1115-1205 TTh, FergH 90, 2 cr
658815 —4 1430-1520 WF, FergH 90, 2 cr

R 1163 Diction for Singers III (prereq 1162 or #)
158415 1010-1100 MW, FergH 123, del Santo J, 1 cr

R 1166 Diction for Singers VI (prereq 1165 or #)
861339 1115-1205 TTh, FergH 123, Weller L, 1 cr

1340 Jazz Ensemble (max 6 cr; prereq audition, #) (A-F only)
454510 —1 1640-1830 M, 1740-1930 W, FergH 95, McCurdy R, 1 cr (Jazz I)
154002 —2 1220-1310 TThF, FergH 95, 1 cr (Jazz II)

R 1440 Ensemble (prereq #)
856853 —1 1430-1625 F, FergH 123, Van J, 1 cr (guitar)
762905 —2 Miller F, 1 cr (harp)
459934 —3 Shockley R, 1 cr (piano)
662038 —4 1 cr (strings)
058343 —6 McCurdy R, 1 cr (Jazz Combo I)
153909 —7 Ashworth T, 1 cr (Trombone Quartet)
759762 —8 1535-1625 M, FergH 95, Ashworth T, 1 cr (Trombone Choir)
361174 —9 Anderson J, 1 cr (woodwind)
653274 —10 Baldwin D, 1 cr (Brass Quintet)
059735 —11 1 cr (Jazz Combo II)
156803 —12 1800-2000 M, FergH 225, Davis S, 1 cr (Gospel Choir)

R 1512 Ear-Training and Sight-Singing II (prereq 1511, ¶1532) (A-F only)
056334 —1 LAB 0905-0955 TTh, FergH 149, 1 cr
362406 —2 LAB 0905-0955 TTh, FergH 203, 1 cr
563084 —3 LAB 1010-1100 TTh, FergH 149, 1 cr
654411 —4 LAB 1010-1100 TTh, FergH 203, 1 cr

R 1523 Keyboard Skills (prereq 1522) (A-F only)
159779 0905-0955 TTh, FergH 259, Shockley R, 2 cr

R 1532 Theory II: Diatonic Tonality (prereq 1531, 1152 or 1522, ¶1512) (A-F only)
★LECT 0800-0850 TTh, FergH 225, 3 cr
463241 —1 REC 0905-0955 WF, FergH 149
354161 —2 REC 0905-0955 WF, FergH 203
261992 —3 REC 1010-1100 WF, FergH 149
860742 —4 REC 1010-1100 WF, FergH 203

1804 World Music
758711 1115-1205 MTWTh, FergH 225, Kagan A, 4 cr

3020 Campus Orchestra (prereq audition, #)
856738 1535-1730 M, 1800-2000 W, FergH 85, Barnes E, 1 cr

3290 Jazz Singers (prereq #)
957458 1535-1730 TTh, FergH 81, McCurdy R, 1 cr

R 3333 Jazz Improvisation III (prereq 3332 or #)
862118 1115-1205 MWTh, FergH 95, 2 cr

R 3353 Jazz Class Piano (prereq 1153 or #)
672570 1115-1205 MW, FergH 259, Hamilton J, 2 cr

3410 University Wind Bands (A-F only)
763181 —1 1325-1520 MWF, FergH 95, Kirchhoff C, 1 cr (Wind Ensemble) (prereq audition,#)
358789 —2 1535-1730 TTh, FergH 95, Kirchhoff C, 1 cr (Symphonic Band) (prereq audition, #)
054339 —3 1830-2000 TTh, FergH 95, Kirchhoff C, 1 cr (University Band)

3420 Orchestra (prereq audition, #) (A-F only)
353270 1325-1520 MTTh, FergH 85, Clark K, 1 cr

3430 Chorus (prereq audition, #) (Vis)
857467 —1 1535-1625 MWF, FergH 90, Romey K, Lancaster T, 1 cr (Women's Chorus)
955662 —2 1535-1625 TTh, FergH 90, 1535-1625 F, FergH 225, Romey K, 1 cr (Men's Chorus)
861163 —3 1325-1415 MTWTh, 1900-2200 Th, FergH 90, Romey K, 1 cr (Concert Choir)
057287 —4 1900-2200 Th, Romey K, 1 cr (Choral Union)

R 3440 Ensemble (prereq #)
657339 —1 1430-1625 F, FergH 123, Van J, 1 cr (guitar)
553414 —2 Miller F, 1 cr (harp)
259935 —3 Shockley R, 1 cr (piano)
161329 —4 1 cr (strings)
560136 —6 1 cr (Jazz Combo I)
954334 —7 Ashworth T, 1 cr (Trombone Quartet)
255805 —8 1535-1625 M, FergH 95, Ashworth T, 1 cr (Trombone Choir)
857209 —9 Anderson J, 1 cr (woodwind)
456970 —10 Baldwin D, 1 cr (Brass Quintet)
557964 —11 1 cr (Jazz Combo II)
661875 —12 1800-2000 M, FergH 225, Davis S, 1 cr (Gospel Choir)
253908 —14 1 cr (Tuba-Euphonium Choir)

3441 Basic Conducting (prereq Mus maj, 1533) (A-F only)
★LECT 1010-1100 F, FergH 225, Kirchhoff C
856609 —1 REC 1010-1100 TTh, FergH 85, Kirchhoff C, 2 cr
055328 —2 REC 1115-1205 TTh, FergH 85, Kirchhoff C, 2 cr

3453 Accompanying Skills (max 3 cr; prereq 3452) (A-F only)
162142 1115-1205 M, FergH 3, 1 cr

R 3512 Ear Training and Sight Singing V (prereq 1513, ¶3532) (A-F only)
156364 —1 0800-0850 TTh, FergH 149, 1 cr
556507 —2 0800-0850 TTh, FergH 203, 1 cr
453910 —3 1115-1205 TTh, FergH 149, 1 cr
261183 —4 1115-1205 TTh, FergH 203, 1 cr

R 3532 Theory V: 20th Century Theory (prereq 1533, ¶3512) (A-F only)
257182 0905-1100 MW, FergH 225, Cherlin M, 3 cr

3551 Composition (3551-3552-3553†; prereq 3532, #) (A-F only)
472571 1220-1415 M, FergH 203, Zaimont J, 2 cr

3606 History of Western Music (prereq 3531 or #) (IP) (A-F only)
★LECT 0905-1100 TTh, FergH 225, Hepokoski J, 5 cr
359795 —1 REC 0905-0955 F, FergH 225

3970 Directed Studies (prereq #, Δ, ❑)
061999 1-15 cr

3995 Major Project (prereq sr, #, Δ) (A-F only)
559410 2 cr

R 5016 Trumpet Pedagogy (prereq 12 cr of lower division trumpet lessons)
354175 0905-0955 TTh, FergH 24, Baldwin D, 2 cr

5270 Stage Movement and Acting for Singers (prereq audition, #) (A-F only)
172573 —1 Gisselman G, 2 cr (Beginning Level)
776187 —2 Gisselman G, 2 cr (Advanced Level)

5290 Jazz Singers (prereq #)
759096 1535-1730 TTh, FergH 81, McCurdy R, 1 cr

R 5300 Jazz Rhythm Section Techniques (prereq jazz studies maj or #) (A-F only)
959050 1430-1520 Th, FergH 3, Yeshaya A, 1 cr

R 5303 Advanced Jazz Class Piano (prereq keyboard maj, #, 5302)
674867 1115-1205 MW, FergH 259, Hamilton J, 2 cr

R 5310 Piano Pedagogy Practicum (max 3 cr; prereq ¶5351-5352-5353 or ¶5354-5355-5356 or #) (A-F only)
053367 Shockley R, 1 cr

R 5323 Suzuki Violin Pedagogy (prereq 5322)
562887 1220-1415 W, FergH 203, Bjork M, 2 cr

R 5326 Advanced Suzuki Violin Pedagogy (prereq 5325)
154940 0905-1100 T, FergH 224, Bjork M, 2 cr

5340 Jazz Ensemble (max 6 cr; prereq audition, #) (A-F only)
057435 —1 1640-1830 M, 1740-1930 W, FergH 95, McCurdy R, 1 cr (Jazz I)
453955 —2 1220-1310 TThF, FergH 95, 1 cr (Jazz II)

5341 Jazz Pedagogy (prereq 3532) (A-F only)
258140 1010-1100 MW, FergH 95, McCurdy R, 2 cr

5342 Jazz Theory (prereq 3532 or #) (A-F only)
174931 Yesha A, 2 cr

R 5350 Orchestral Repertoire (A-F only)
374930 1325-1520 F, FergH 81, Fleezanis J, 1 cr

R 5356 Advanced Piano Pedagogy (prereq 5355) (A-F only)
272572 0905-1100 W, FergH 205, Shockley R, 2 cr

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R 5360 Woodwind Ensemble (prereq audition)
962059 —1 1325-1415 Th, FergH 81, Anderson J, 1 cr (Clarinet Choir)
558953 —2 1220-1310 Th, FergH 72, 1 cr (Flute Choir)
854973 —3 1 cr (Woodwind Quintet)
063302 —4 1 cr (Saxophone Quartet)
660886 —5 1 cr

R 5361 Violin Pedagogy I (prereq 12 cr in 1205 or 1206 or 1305 or 1306 or #)
976186 0905-1100 F, FergH 72, O'Reilly S, 2 cr

R 5370 Vocal Pedagogy Practicum (max 3 cr; prereq sr or grad stu, #) (A-F only)
354886 1325-1415 TTh, FergH 115, Ware C, 1 cr

R 5373 Diction for Singers (prereq 5372)
072582 1115-1205 TTh, FergH 81, Weller L, 2 cr

R 5377 Vocal Pedagogy (prereq sr or grad stu, 5375, #) (A-F only)
156235 1430-1520 MW, FergH 115, Ware C, 2-3 cr

5380 Brass Choir (prereq #)
055846 1535-1730 TTh, FergH 85, Baldwin D, 1 cr (Brass Choir)

5390 Percussion Ensemble (prereq #)
555910 1535-1730 WF, FergH 95, Meza F, 1 cr

R 5393 Woodwind Literature and Pedagogy II (prereq 5392) (A-F only)
176185 1115-1245 TTh, Anderson J, 3 cr

5410 University Wind Bands (A-F only)
456130 —1 1325-1520 MWF, FergH 95, Kirchhoff C, 1 cr (Wind Ensemble) (prereq audition, #)
660029 —2 1535-1730 TTh, FergH 95, Kirchoff L, 1 cr (Symphonic Band) (prereq audition, #)
755954 —3 1830-2000 TTh, FergH 95, Kirchoff L, 1 cr (University Band)

5420 Orchestra (prereq audition, #) (A-F only)
057192 1325-1520 MTTh, FergH 85, Clark K, 1 cr

R 5423 Vocal Accompanying Skills and Repertoire (prereq Italian, German, French diction, accompanying or grad vocal maj) (A-F only)
455866 1115-1310 W, FergH 240, 2 cr

5430 University Chorus (prereq #)
657910 —1 1535-1625 MWF, FergH 90, Romey K, 1 cr (Women's Chorus)
257134 —2 1535-1625 TTh, FergH 90, 1535-1625 F, FergH 225, Romey K, 1 cr (Men's Chorus)
356430 —3 1325-1415 MTWTh, FergH 90, 1900-2200 Th, ar, Romey K, 1 cr (Concert Choir)
060755 —4 1900-2200 Th, Romey K, 1 cr (Choral Union)

R 5440 Ensemble (prereq #)
663304 —1 1430-1625 F, FergH 123, Van J, 1 cr (guitar)
961025 —2 Miller F, 1 cr (harp)
658457 —3 Shockley R, 1 cr (piano)
253181 —4 1 cr (strings)
254833 —6 McCurdy R, 1 cr (Jazz Combo)
158317 —7 Ashworth T, 1 cr (Trombone Quartet)
953894 —8 1535-1625 M, FergH 95, Ashworth T, 1 cr (Trombone Choir)
854228 —9 Anderson J, 1 cr (woodwind)
057130 —10 Baldwin D, 1 cr (Brass Quintet)
654442 —11 1 cr (Jazz Combo II)
452885 —12 1800-2000 M, FergH 225, Davis S, 1 cr (Gospel Choir)
153769 —14 1 cr (Tuba-Euphonium Choir)

5470 Opera Workshop and Ensemble (prereq ability to sing arias satisfactorily, # by audition)
154820 1535-1730 MTTh, FergH 99, Sutton E, 1 cr

5480 Opera Theatre (prereq advanced ability to sing arias satisfactorily, by audition, #)
154221 1535-1730 MTTh, FergH 99, Sutton E, 2 cr

5490 Chamber Singers (prereq audition, #)
963485 1220-1310 MTWTh, 1900-2200 Th, FergH 90, Lancaster T, 1 cr

R 5523 Advanced Keyboard Skills (prereq 5522) (A-F only)
372580 1325-1415 MW, FergH 259, Billmeyer D, 2 cr

R 5541 Counterpoint I (prereq 3531, 3511 or equiv) (A-F only)
772575 1220-1415 WF, FergH 149, Lubet A, 4 cr

R 5550 Composition (prereq 3532 or equiv, 3553 or grad, #) (A-F only)
961252 —1 Zaimont J, 2 cr
954074 —2 Lubet A, 2 cr

R 5563 Orchestration (prereq 5562) (A-F only)
255867 1115-1205 MW, FergH 149, Zaimont J, 2 cr

5647 20th-Century European/American Music (prereq 3606 or equiv, 12 cr undergrad music hist, 5532 or equiv, # for undergrads) (A-F only)
157210 0905-1100 MW, FergH 105, Jackson D, 4 cr

5733 Percussion Literature III (prereq 5732) (A-F only)
976401 Meza F, 2 cr (FergH 29)

R 5746 Piano Literature (prereq 12 cr of MusA 1201 or MusA 1301 or #) (A-F only)
754013 1535-1830 T, FergH 115, McNab D, 2 cr

R 5749 Organ Literature (prereq 3606, 3532, or #) (A-F only)
172581 1325-1520 Th, FergH 213, Billmeyer D, 2 cr

R 5795 Digital Music Synthesis and Processing Techniques (prereq 5793)
656921 1325-1520 Th, FergH 215, 2 cr (addtl hrs ar)

R 5810 Asian Music: Performance (prereq #)
172578 Kagan A, 2 cr

R 5864 American Fiddle Traditions (prereq #) (A-F only)
372577 0905-1100 TTh, FergH 107, Kagan A, 4 cr

R 5950 Topics in Music
572576 —1 1010-1205 M, 1115-1205 Th, FergH 240, Palmer R, 2 cr (Opera Accompanying and Coaching) (prereq accompanying maj) (A-F only)
175036 —2 0905-1100 TTh, FergH 105, Harness K, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval) (A-F only)
356976 1-5 cr

R 8373 Wind Ensemble/Band Conducting III (prereq wind conducting maj or #) (A-F only)
054180 Kirchhoff C, 4 cr

R 8380 Orchestral Conducting (prereq #) (A-F only)
663285 4-5 cr

8389 Performance and Document: Orchestral Conducting (prereq 12 cr of 8380, #) (A-F only)
060917 4 cr

8399 Performance: Choral Conducting (prereq 5384, 5385, #) (A-F only)
453602 Lancaster T, 4 cr

R 8403 Sonata Seminar (prereq accompanying maj; strings and winds by audition, #) (A-F only)
160088 1115-1310 T, FergH 240, 2 cr

8550 Composition (max 18 cr; prereq compl of undergrad maj sequence in music theory and composition , #)
561903 —1 Zaimont J, 3 cr
462204 —2 Lubet A, 3 cr

R 8572 Composers' Laboratory II (prereq 8570, 8571) (A-F only)
855914 1220-1415 T, FergH 149, Zaimont J, 2 cr

R 8582 Schenkerian Theory and Analysis II (prereq 8581) (A-F only)
972574 1535-1730 MW, FergH 105, Damschroder D, 4 cr

R 8590 Topics in 20th-Century Analysis (prereq #) (A-F only)
854035 1535-1730 TTh, FergH 149, Cherlin M, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
255027 1-18 cr

8755 Choral Literature: Classical Era Through the Twentieth Century (prereq grad student, #)
462588 0905-1100 MWF, FergH 115, Lancaster T, 4 cr

8777 Thesis Credits: Masters
453177 1-16 cr

R 8840 Seminar in Musicology (A-F only)
857890 1325-1520 MW, FergH 108, Grayson D, 4 cr

8852 Sonata Theory II (prereq 8851, #) (A-F only)
576188 1325-1520 TF, FergH 108, Hepokoski J, 4 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
055619 1-36 cr

8990 Special Problems (prereq Δ)
655588 2-12 cr

8999 Recital Credits: Doctoral (max 12 cr per qtr; prereq Doctor of Musical Arts students) (S-N only)
154543 —1 6 cr

MUSIC APPLIED (MusA)
Music
Liberal Arts

See Applied Music chart on the next page.

MUSIC EDUCATION (MuEd)
Liberal Arts

1201 Introduction to Music Education (A-F only)
162819 1115-1205 T, FergH 105, Hamilton H, 1 cr

1801 Introduction to Music Therapy (A-F only)
160804 1010-1100 F, FergH 151, Furman C, 2 cr

3416 Choral Laboratory II (prereq music educ or music therapy maj) (A-F only)
153139 1010-1205 MW, FergH 107, McCoy C, 4 cr

3500 String Techniques I (prereq music education or music therapy maj or #) (A-F only)
163033 1010-1100 MWF, FergH 81, Bjork M, 3 cr

R 3501 String Techniques II (prereq music education or music therapy maj or #) (A-F only)
872292 1220-1310 MWF, FergH 81, Remenikova T, 3 cr

3503 Woodwind Techniques (prereq music education or music therapy maj or #) (A-F only)
962319 0905-0955 MTWTh, FergH 85, Schultz S, 4 cr

3504 Brass Techniques (prereq music education or music therapy maj or #) (A-F only)
960893 0905-0955 MTWTh, FergH 81, Haack P, 4 cr

3516 Instrumental Laboratory II (prereq music education or music therapy maj or #) (A-F only)
760894 1010-1205 MW, FergH 85, Schultz S, 4 cr

3650 Student Teaching in Music (prereq #) (A-F only)
560038 —1 1430-1625 T, FergH 157, Schultz S, 6-18 cr
960179 —2 1535-1700 W, FergH 157, McCoy C, Hamilton H, 6-18 cr

3806 Music Therapy Techniques III (3805-3806†; prereq 3805) (A-F only)
455611 1115-1310 T, 1115-1205 Th, FergH 151, Hamilton H, 3 cr

R 3850 Field Experiences: Music Therapy (max 12 cr; prereq 3800, 3804) (A-F only)
063168 —1 1220-1310 Th, FergH 151, Furman C, 2 cr
553882 —2 1220-1310 Th, FergH 150, Hamilton H, 2 cr
354709 —3 1325-1415 Th, FergH 151, Furman C, 2 cr
757915 —4 1325-1415 Th, FergH 150, Hamilton H, 2 cr

3851 Internship: Music Therapy (3851-3852†; prereq #) (S-N only)
761396 Furman C, 6 cr

3852 Internship: Music Therapy (3851-3852†; prereq #) (S-N only)
659799 Furman C, 6 cr

5750 Topics in Music Education: Music in the Interdisciplinary Curriculum (max 12 cr; prereq educ or mus ed grad stu or #)
672293 1640-1845 M, FergH 107, McCoy C, 3 cr

5802 Psychology of Music II (prereq 3801)
855816 1010-1100 MTWTh, FergH 157, Haack P, 4 cr

APPLIED MUSIC (MusA) COURSES

Courses in applied music are classified according to nine modes: elective (with or without credit), principal, major, secondary required, secondary elective, principal beyond requirement, major beyond requirement, minor, and transfer student, as well as 3 levels: 1000-, 3000-, and 8000-level (graduate level). You may not register for a course in applied music for credit until you pass the required applied entrance exam. The examining committee will determine the mode(s) for which you may register. You should consult the School of Music, 100 Ferguson Hall, regarding the mode and level appropriate for your degree program. Studio class is required for all undergraduates registering at the x2xx, x3xx, x6xx, x7xx, or 19xx levels. Specific times for these classes will be available from the applied instructor.

Fees for applied music courses are based on individual lessons: 1 half-hour lesson per week for two credits; 2 half-hour lessons or 1 hour lesson per week for 4 credits. See the chart below for individual amounts. Music fees are course fees: they are applied *in addition to* tuition.

NOTE: Call numbers for courses in applied music will be posted outside 100 Ferguson Hall and must be listed on your Course Request form. Do not call the music office for these numbers.

Instrument	Elective	Principal	Major	Secondary Required	Secondary Elective	Principal Beyond Requirement	Major Beyond Requirement	Minor	Transfer Student
Fee per 2 cr	$125	$50	$50	$65	$65	$65	$65	$65	$50
Fee per 4 cr	n.a.	$100	$100	$130	n.a.	$130	$130	n.a.	$100
Accomp/ Coach			8324						
Baritone	1118, 3118, 5118	1218, 3218, 8218	1318, 3318, 8318	1418, 3418, 8418	1518, 3518, 8518	1618, 3618, 8618	1718, 3718, 8718	3818	1918
Bassoon	1114, 3114, 5114	1214, 3214, 8214	1314, 3314, 8314	1414, 3414, 8414	1514, 3514, 8514	1614, 3614, 8614	1714, 3714, 8714	3814	1914
Cello	1107, 3107, 5107	2107, 3107, 8107	1307, 3307, 8307	1407, 3407, 8407	1507, 3507, 8507	1607, 3607, 8607	1707, 3707, 8707	3807	1907
Clarinet	1112, 3112, 5112	1212, 3212, 8212	1312, 3312, 8312	1412, 3412, 8412	1512, 3512, 8512	1612, 3612, 8612	1712, 3712, 8712	3812	1912
Double Bass	1108, 3108, 5108	1208, 3208, 8208	1308, 3308, 8308	1408, 3408, 8408	1508, 3508, 8508	1608, 3608, 8608	1708, 3708, 8708	3808	1908
Flute	1109, 3109, 5109	1209, 3209, 8209	1309, 3309, 8309	1409, 3409, 8409	1509, 3509, 8509	1609, 3609, 8609	1709, 3709, 8709	3809	1909
French Horn	1115, 3115, 5115	1215, 3215, 8215	1315, 3315, 8315	1415, 3415, 8415	1515, 3515, 8515	1615, 3615, 8615	1715, 3715, 8715	3815	1915
Guitar	1123, 3123, 5123	1223, 3223, 8223	1323, 3323, 8323	1423, 3423, 8423	1523, 3523, 8523	1623, 3623, 8623	1723, 3723, 8723	3823	1923
Harp	1122, 3122, 5122	1222, 3222, 8222	1322, 3322, 8322	1422, 3422, 8422	1522, 3522, 8522	1622, 3622, 8622	1722, 3722, 8722	3822	1922
Harpsicord	1102, 3102, 5102	1202, 3202, 8202	1302, 3202, 8302	1402, 3402, 8402	1502, 3502, 8502	1602, 3602, 8602	1702, 3702, 8702	3802	1902
Oboe	1111, 3111, 5111	1211, 3211, 8211	1311, 3311, 8311	1411, 3411, 8411	1511, 3511, 8511	1611, 3611, 8611	1711, 3711, 8711	3811	1911
Organ	1103, 3103, 5103	1203, 3203, 8203	1303, 3303, 8303	1403, 3403, 8403	1503, 3503, 8503	1603, 3603, 8603	1703, 3703, 8703	3803	1903
Percussion	1121, 3121, 5121	1221, 3221, 8221	1321, 3321, 8321	1421, 3421, 8421	1521, 3521, 8521	1621, 3621, 8621	1721, 3721, 8721	3821	1921
Piano	1101, 3101, 5101	1201, 3201, 8201	1301, 3301, 8301	1401, 3401, 8401	1501, 3501, 8501	1601, 3601, 8601	1701, 3701, 8701	3801	1901
Saxophone	1113, 3113, 5113	1213, 3213, 8213	1313, 3313, 8313	1413, 3413, 8413	1513, 3513, 8513	1613, 3613, 8613	1713, 3713, 8713	3813	1913
Trombone	1117, 3117, 5117	1217, 3217, 8217	1317, 3317, 8317	1417, 3417, 8417	1517, 3517, 8517	1617, 3617, 8617	1717, 3717, 8717	3817	1917
Trumpet	1116, 3116, 5116	1216, 3216, 8216	1316, 3316, 8316	1416, 3416, 8416	1516, 3516, 8516	1616, 3616, 8616	1716, 3716, 8716	3816	1916
Tuba	1119, 3119, 5119	1219, 3219, 8219	1319, 3319, 8319	1419, 3419, 8419	1519, 3519, 8519	1619, 3619, 8619	1719, 3719, 8719	3819	1919
Viola	1106, 3106, 5106	1206, 3206, 8206	1306, 3306, 8306	1406, 3406, 8406	1506, 3506, 8506	1606, 3606, 8606	1706, 3706, 8706	3806	1906
Violin	1105, 3105, 5105	1205, 3205, 8205	1305, 3305, 8305	1405, 3405, 8405	1505, 3505, 8505	1605, 3605, 8605	1705, 3705, 8705	3805	1905
Voice	1104, 3104, 5104	1204, 3204, 8204	1304, 3304, 8304	1404, 3404, 8404	1504, 3504, 8504	1604, 3604, 8604	1704, 3704, 8704	3804	1904

5804 Music in Therapy (prereq music educ or music therapy grad stu or #) (A-F only)
355018 Furman C, 3 cr

5970 Independent Study (prereq music educ/ therapy or grad stu, #, Δ)
056026 1-4 cr

8880 Master's Research Project (prereq 5112 or #)
753301 1-8 cr

8990 Research Problems (prereq knowledge of elementary statistics, Δ)
357397 1-12 cr

NATURAL RESOURCES AND ENVIRONMENTAL STUDIES (NRES)

Natural Resources

R 1201 Conservation of Natural Resources (§FR 1201) (Envt)
558600 0945-1100 TTh, HodsonH 495, Mohn C, Blinn C, 3 cr

3001 Colloquium in Natural Resources and Environmental Studies
453731 1115-1205 T, AlderH 415, 1 cr

R 3010 Ethics and Values in Resource Management (C/PE)
★LECT 1010-1100 MW, ABLMS 125, Kitts J, Carlson S
062991 —1 REC 1010-1100 F, McNH 198, Kitts J, Carlson S, 3 cr
057225 —2 REC 1115-1205 F, McNH 198, Kitts J, Carlson S, 3 cr

3050 Experience and Training in a Field Setting (prereq #) (A-F only)
054146 Splett P, 1-4 cr

R 3060 Water Quality in Natural Resource Management (§5060; prereq Math 1142, Phys 1001, Phys 1005, Geo 1001, Biol 1009) (Biol/ NL; Envt)
653825 0800-0850 MWF, GrnH 110, Perry J, 3 cr

R 3202 Leadership and Management Skills Development (prereq jr or sr) (A-F only)
760653 0800-0915 TTh, GrnH 19, Laursen S, 3 cr

3225 Directed Study Experience (prereq fr or soph, #)
355701 —1 Anderson D, 1-5 cr
162603 —2 Bauer M, 1-5 cr
160584 —3 Baughman M, 1-5 cr
358601 —4 Blinn C, 1-5 cr
856626 —5 Bolstad P, 1-5 cr
055362 —6 Brooks K, 1-5 cr
457729 —7 Burk T, 1-5 cr
455592 —8 Carlson S, 1-5 cr
653730 —9 Ek A, 1-5 cr
662718 —10 Ellefson P, 1-5 cr
960697 —11 Furnier G, 1-5 cr
558712 —12 Gregersen H, 1-5 cr
056740 —13 Johnson G, 1-5 cr
255593 —14 Kitts J, 1-5 cr
358713 —15 Lime D, 1-5 cr
856741 —16 Mohn C, 1-5 cr
155594 —17 Perry J, 1-5 cr
963731 —18 Puettmann K, 1-5 cr
961705 —19 Reich P, 1-5 cr
159703 —20 Rose D, 1-5 cr
857730 —21 Splett P, 1-5 cr
955595 —22 Sucoff E, 1-5 cr

5001 Colloquium in Natural Resources and Environmental Studies (prereq jr or sr) (A-F only)
462719 —1 0905-0955 M, GrnH 19, Vondracek B, 1 cr
572612 —2 1115-1205 T, AlderH 415, 1 cr

R 5060 Water Quality in Natural Resource Management (§3060; prereq Math 1142, Phys 1001,Phys 1005,Geo 1001,Biol 1009,1 ecol crse,jr or sr) (Envt)
★LECT 0800-0850 MWF, GrnH 110, Perry J
863284 —1 REC 1220-1310 M, GrnH 19, 3 cr

R 5101 Integrated Natural Resource Planning (prereq 5240, FR 5270, 5210 or FR 5218, 1 crse each: rec mgt, ecol, hydrl, or #, sr or grad)
★LECT 1115-1205 TTh, GrnH 203, Rose D, Anderson D, others
757509 —1 REC 1430-1530 F, GrnH 203, Rose D, Anderson D, others, 5 cr
★LAB 1630-1830 W, GrnH 203, Rose D, Anderson D, others

5225 Directed Study Experience (prereq jr or sr or grad stu, #)
263211 —1 Anderson D, 1-5 cr
663609 —2 Bauer M, 1-5 cr
661584 —3 Baughman M, 1-5 cr
859588 —4 Blinn C, 1-5 cr
857615 —5 Bolstad P, 1-5 cr
855363 —6 Brooks K, 1-5 cr
659589 —7 Burk T, 1-5 cr
657616 —8 Carlson S, 1-5 cr
655364 —9 Ek A, 1-5 cr
253732 —10 Ellefson P, 1-5 cr
862720 —11 Furnier G, 1-5 cr
760698 —12 Gregersen H, 1-5 cr
158714 —13 Johnson G, 1-5 cr
755596 —14 Kitts J, 1-5 cr
763732 —15 Lime D, 1-5 cr
761706 —16 Mohn C, 1-5 cr
059704 —17 Perry J, 1-5 cr
563733 —18 Puettmann K, 1-5 cr
561707 —19 Reich P, 1-5 cr
859705 —20 Rose D, 1-5 cr
657731 —21 Splett P, 1-5 cr
555597 —22 Sucoff E, 1-5 cr

R 5242 Management of Natural Resources Conflict (prereq 5240 or #) (A-F only)
362650 1415-1530 TTh, GrnH 19, Ellefson P, McKay D, 3 cr

5260 Economics and Natural Resources Management (prereq AgEc 1101 or Econ 1101, AgEc 1102 or Econ 1102) (A-F only)
360624 1245-1400 TTh, ClaOff B35, Gregersen H, 3 cr

NAVAL SCIENCE (Nav)

R 0204 Professional Training in Naval Science (S-N only)
661116 0650-0850 T, Armory 202, Matkin J, 0 cr

R 1103 Sea Power (A-F only)
658975 1325-1415 MWF, Armory 205, Steen A, 3 cr

R 1203 Seamanship and Ship Operations (A-F only)
657132 0905-0955 MWF, Armory 12A, Vellella R, 3 cr

R 3303 Naval Weapons Systems (A-F only)
660533 1115-1205 MTWF, Armory 202, Covington N, 4 cr

R 3403 Principles of Naval Management III (prereq 3402) (A-F only)
371669 1010-1100 TTh, Armory 202, Fitzgerald J S, 2 cr

R 3454 Amphibious Warfare III (prereq 3453 or #) (A-F only)
771670 1430-1520 TTh, Armory 205, Matkin J, 2 cr

NEUROLOGY (Neur)

Medical School

5120 Selected Problems in Neurology (prereq regis med)
155649 Swaiman K, ar cr

5122 Pediatric Neurology: Health Care Psychology Interns (prereq #)
759941 Shapiro E, ar cr

5125 Neuroimmunology Research (S-N only)
654151 Birnbaum G, ar cr

5510 Externship in Clinical Neurology (prereq regis med)
963180 Swaiman K, ar cr

5541 Pediatric Neurology: Neurochemistry (prereq regis med)
760264 Lockman L, ar cr

5542 Pediatric Neurology (prereq regis med)
262401 Lockman L, ar cr

5544 Clinical Electroencephalography (prereq regis med)
462106 Torres F, ar cr

5545 Electromyography (prereq regis med)
259921 Kennedy W, ar cr

5599 Subinternship in Clinical Neurology (prereq 5510, course director recommendation, med stu) (S-N only)
159421 Rottenberg D, ar cr

8200 Clinical Neurology
753881 Swaiman K, ar cr

8201 Clinical Pediatric Neurology
361305 Lockman L, ar cr

8202 Research in Neurology
061243 Swaiman K, ar cr

8203 Applied Electroencephalography
663030 Torres F, ar cr

8204 Applied Electromyography
563473 Parry G, Sung J H, ar cr

8205 Applied Neuropathology
956780 ar cr

8221 Neurochemical Aspects of Selected Clinical Disorders
156249 Swaiman K, 2 cr

8233 Neurological Clinical Pathological Conference
361417 Swaiman K, 1 cr

8236 Research in Neuropathology
552957 Sung J H, ar cr

R 8704 Survey of Neuropathology
159791 Sung J H, 1 cr

8705 Neurological-Neurosurgical Conference (§Rad 0124)
458265 Swaiman K, 1 cr

NEUROSCIENCE (NSc)

5034 Psychobiology of Vision (§Psy 5034; prereq Psy 3031, except for grad students, or #)
762158 0945-1100 TTh, EltH 150, Burkhardt D, 4 cr

R 5150 Introduction to Neuroscience (§Phsl 5150, Biol 5150; prereq Biol 3011 or eqiv or Phsl 3055-3056, BioC 3021 or eqiv, or #)
460601 1535-1705 TTh, MlrdH 5276, Miller R, 3 cr

5203 Computational Neuroscience III: Neural Systems and Information Processing (§Phsl 5203; prereq 5202 or equiv)
158379 1430-1600 MW, MlrdH 5276, Soechting J, 5 cr

5444 Muscle Contraction (§MdBc 5444, Phsl 5444, VB 5444; prereq undergrad courses in biochem or physiology or #)
154445 1535-1650 TTh, MoosT 2571, 2585, Thomas D, Donaldson S, others, 3 cr

5660 Behavioral Neuroscience (prereq NSc maj or min or #)
353933 Georgopoulos A, 4 cr

8207 Seminar: Psychopharmacology (max 3 cr, §Phcl 8207; prereq #)
754254 Sparber S, 1 cr (Mlrd 3260)

8210 Developmental Neurobiology (§CBN 8210; prereq CBN 5111, Phsl 5112 or #)
263774 McLoon S, Letourneau P, 3 cr

8216 Selected Topics: Neurophysiology (§Phsl 8216; prereq CBN 5111, Phsl 5112 or equiv, or #)
671273 1 cr

8217 Selected Topics: Systems and Computational Neuroscience (prereq CBN 5111, Phsl 5112, or equiv, or #) (S-N only)
762712 Soechting J, 2 cr

8324 Readings in Neurobiology (§NSu 8324; prereq Phsl 8104 or #)
962174 1 cr

8333 Lab Neuroscience (prereq NSc grad stu or Δ) (S-N only)
653856 —1 LAB Ebner T, ar cr
163257 —2 LAB Ebner T, ar cr

8450 Teaching in Neuroscience (prereq #) (S-N only)
460629 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
362292 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
058357 1-36 cr

NEUROSURGERY (NSu)

Medical School

5200 Neurosurgery Specialty Course (prereq 3rd or 4th yr med stu)
962031 Hall W, ar cr

5500 Externship at the University Hospitals (prereq regis med)
863107 Hall W, others, 4.5-9 cr

5510 Externship at Veterans Hospital (prereq regis med)
954852 Wen D, 4.5-9 cr

5511 Externship at Hennepin County Medical Center (prereq regis med)
158857 Rockswold G, Bergman T, 4.5-9 cr

5512 Externship at St. Paul Ramsey Hospital (prereq regis med)
962272 Ganz W, 4.5-9 cr

5520 Neurosurgical Investigation (prereq regis med)
262138 Ebner T, Low W, ar cr

8305 Neurosurgical Diagnosis
360932 Maxwell R, Erickson D, others, 4 cr

8308 Neurosurgical Problems and Management
954219 Maxwell R, Erickson D, others, 4 cr

8311 Operative Neurosurgery
156932 Maxwell R, Erickson D, others, 4 cr

8316 Neurosurgical Research
761091 Ebner T, Low W, 6 cr

8318 Neuroradiological Conference
257263 1630-1730 F, Mayo C231, Maxwell R, Erickson D, others, 1 cr (Todd Amph)

8320 Neurosurgical Conference
053319 0800-1100 S, Mayo D417, Maxwell R, Haines S, others, 2 cr

8324 Readings in Neurobiology (§NSc 8324; prereq 8104, consent of Medical School)
956875 Ebner T, Low W, ar cr

8330 Neurosurgery Literature Seminar
162772 2000-2200 Th, Mayo D417, Maxwell R, Erickson D, others, 2 cr

NORWEGIAN (Nor)
German, Scandinavian, and Dutch
Liberal Arts

R 1103 Beginning Norwegian (prereq 1102)
957864 1220-1310 MTWThF, KoltH S136, Vraa K, 5 cr

R 1106 Intermediate Norwegian (prereq 1105 or equiv)
953412 0905-1030 MWF, VinH 213, Fjeld T, 5 cr

R 3670 Advanced Norwegian (max 28 cr; prereq 1106 or equiv)
453440 1245-1400 TTh, NichH 122, Zagar M, 4 cr

NURSING, SCHOOL OF (Nurs)

R 5140 Restoration and Enhancement of Health in the Acutely Ill Across the Life Span (prereq 5040, 5041, 5042 or ¶5042)
759244 1220-1415 TF, OwreH 2230, Pederson C, 4 cr

R 5141 Practicum: Ill Children/Aged (prereq ¶5140)
★LAB 1010-1205 T, WDH 4120
259482 —1 CLN 8 cr (WTh)
★LAB 1430-1625 T, WDH 4120
454765 —2 CLN 8 cr (WTh)
★LAB 0800-0955 F, WDH 4120
856352 —3 CLN 8 cr (WTh)
★LAB 1010-1205 F, WDH 4120
853886 —4 CLN 8 cr (WTh)

R 5142 Advanced Interpersonal Communications (prereq 5042, admission to the School of Nursing or #)
254427 —1 LECT 1010-1205 T, WDH 4180, Tomlinson P, 2 cr
055992 —2 LECT 1010-1205 T, WDH 6194, 2 cr
454412 —3 LECT 1010-1205 F, WDH 4180, 2 cr
057404 —4 LECT 1010-1205 F, WDH 4150, 4176, Saline E, 2 cr
★REC 0905-0955 T, OwreH 2210

R 5216 Expansion of the Clinical Role of the RN (prereq 5214, 5215, RN)
352989 1640-1835 T, WDH 4178, Brand K, 3-5 cr

R 5420 Applied Clinical Research (prereq 5440)
358758 0905-1205 Th, MoosT 2690, Lindquist R, 3 cr

R 5420H Applied Clinical Research I (prereq nurs honors stu)
656143 1430-1625 T, WDH 4178, Brand K, Duckett L, 1 cr

R 5446 Healthy and High Risk Childbearing Familiea (prereq 5140, 5141, 5142, 5440 or ¶5440, 5445, 5450)
★LECT 1010-1205 M, WDH 2120, 2130, 5 cr
★REC 0800-0955 T, WDH 4180
659916 —1 CLN 0700-1500 W, Fairbanks D, (off-campus)
557379 —2 CLN 0700-1500 F, Fairbanks D, (off-campus)
059492 —3 CLN 0700-1500 F, Goering M, (off-campus)
057936 —4 CLN Rabinowitz L, (off-campus)

R 5447 Families with Children: Practicum (prereq 5140, 5141, 5142, 5440 or ¶5440, 5445, 5450)
★LECT 0800-0955 M, WDH 2120, 2130, Alaniz K, Friedrich C, others, 3 cr
154890 —1 CLN

R 5448 Practicum: Nursing Care of Individuals, Groups, and Populations in the Community (prereq 5140, 5141, 5142, 5440 or ¶5440, 5445, 5450)
★LECT 0800-0955 M, WDH 4180, 6 cr
663075 —1 CLN 0830-1630 W, Lia-Hoagberg B, Struthers R, (off-campus)
155943 —2 CLN 0830-1630 W, Kerr M, (off-campus)
756814 —3 CLN 0830-1630 W, Niewolny C, (off-campus)
875306 —4 CLN Weisensee M, (off-campus)

R 5449 Practicum: Nursing Care of Individuals, Groups, and Populations with Mental Health Problems (prereq 5140, 5141, 5142, 5440 or ¶5440, 5445, 5450)
★LECT 1010-1205 M, WDH 4180, 4 cr
157305 —1 CLN 0830-1130 T, 1600-2100 W, Saline E, (meets 1st 5 wks) (UMHC)
859154 —2 CLN 0830-1130 T, 1600-2100 W, Saline E, (meets 2nd 5 wks) (UMHC)
357447 —3 CLN 1000-1400 WF, Quast S, (meets 1st 5 wks) (off-campus)
754741 —4 CLN 1000-1400 WF, Quast S, (meets 2nd 5 wks) (off-campus)

R 5460 Leadership/Followership/Management (prereq 5440)
161435 1220-1415 TTh, WDH 4180, Hansen H, 4 cr

R 5462 Professional Issues (prereq 5440)
258963 1430-1625 T, WDH 4180, Feldman B, 2 cr

R 5480 Special Topics (prereq admission to School of Nursing or #)
557740 1115-1205 Th, WDH 4180, Weisensee M, 1-2 cr

R 5482H Seeking Solutions to Global Health Issues (prereq sr nursing honors stu, or #) (IP)
153120 1430-1625 Th, WDH 4180, Duckett L, Brand K, 2 cr

R 5609 Special Educational Experiences in Nursing (prereq #)
757476 —1 1535-1940 Th, Kaas M, 4 cr
759812 —2 ar cr

5620 Independent Study in Nursing Topics (prereq #)
554899 1-9 cr

R 5644 SPSS Programming and Data Analysis (prereq infer stat, grad or prof college stu; # for undergrads)
★LECT 1325-1415 M, WDH 4150, 4176, Savik K, 2 cr
475308 —1 LAB 1430-1520 M, WDH 2160A, Savik K
275309 —2 LAB 1535-1625 M, WDH 2160A, Savik K

R 5711 Spirituality and Nursing Practice (prereq nurs sr or RN for undergrad cr, RN with bac deg for grad cr)
157670 —1 1745-1945 W, MoosT 5125, Gustafson M, 2 cr (ITV) (TC stu only)
755467 —2 1745-1945 W, Gustafson M, 2 cr (ITV) (outstate stu only)

R 5780 Multidisciplinary Perspectives on Aging (§AdEd 5440, CPsy 5305, HSU 5009, Phar 5009, PA 5414, PubH 5737, SW 5024, Soc 5960)
356847 1640-1835 MW, MoosT 2690, 4 cr

5799 Self-Directed Study as a Means of Accomplishing Nursing Electives (prereq #)
058858 ar cr

5881 The Biology of Cancer (§GCB 3008; prereq Biol 1009, grad nurs stu)
863012 1325-1440 TTh, BorH 335, McKinnell R, 3 cr (StP)

5884 Employee Health Services and Cost Containment (§PubH 5166; prereq occup hlth nurs or grad nurs stu)
253374 1010-1205 M, 0905-1100 W, Mayo 1250, McGovern P, 3 cr

R 5886 Field Problems in Occupational Health (§PubH 5218; prereq PubH 5211 or grad nurs stu, or #)
059766 0800-1100 F, Mayo 1250, Olson D, 3 cr

5888 Geriatric Assessment (§Phar 5870, SAPh 5870; prereq phar, nurs, soc wrk, phys ther, pubh, fam pract or dent stu) (A-F only)
675310 1535-1830 MT, 4 cr

R 5929 Primary Care: Synthesis of Advanced Pediatric Nursing Practice for the Child, Family, and Community (prereq grad nurs stu, 5925, 5926, #)
475311 1220-1520 W, WDH 4178, Lindeke L, 7-9 cr (cln ar)

R 5932 Primary Care: Assessment and Management of Adult and Elderly Health (prereq grad nurs student, 5810, ¶5933, #)
275312 —1 1115-1730 W, MoosT 5125, Kubik M, 3-6 cr (ITV) (TC stu only)
175313 —2 1115-1730 W, Kubik M, 3-6 cr (ITV) (outstate stu only)

R 5933 Primary Care Practicum: Adult and Elderly Health (prereq grad nurs student, 5810, ¶5932, #)
975314 Kubik M, Smith K, others, 5 cr

R 5940 Nursing Assessment of the Elderly (prereq a basic history taking and physical assessment course, #)
361644 1010-1205 W, WDH 4178, Feldt K, 2 cr

R 5941 Care of the Elderly I: Physiological Concepts (prereq grad stu)
163503 1325-1520 W, PWB 6224, Zwygart-Stauffacher, 2 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 5943 Care of the Elderly II: Psychosocial Concepts (prereq grad nurs student, knowledge of adult hum dev across life span, or #)
255464 1535-1730 W, WDH 4178, Ryden M, Feldt K, 2 cr

R 5948 Advanced Practice Roles (prereq nurs grad stu, 12 grad cr)
375320 —1 1325-1520 T, MoosT 5125, Kaas M, 2-3 cr (ITV to MSU) (TC stu only)
075322 —2 1325-1520 T, Kaas M, 2-3 cr (ITV to MSU) (outstate stu only)

R 5949 Practicum: Advanced Practice Nursing (prereq grad nurs stu, 12 grad cr, 5948 or ¶5948)
459643 —1 Bata-Jones B, Kubik M, 4-8 cr (FNP stu only)
957671 —2 1115-1310 T, WDH 4178, Feldt K, Zwygart-Stauffacher, 4-8 cr (GNP stu only)
555468 —3 4-8 cr (CNS stu only)

R 5954 Oncology Issues (prereq 5950, 5952, or #, grad nurs stu)
553672 1535-1730 W, WDH 4155, Post-White J, 2 cr

R 5955 Oncology Practicum III (prereq grad nurs stu, 5954 or ¶5954, 5953, or #)
962658 Post-White J, 3 cr

R 8001 Special Educational Experiences in Nursing (prereq #)
354287 —1 ar cr
754240 —2 Avery M, 2 cr

8009 Special Topics (prereq #)
452997 3 cr

R 8010 Structure of the Discipline of Nursing (prereq nurs grad student or #)
762287 1325-1625 W, WDH 4150, 4176, 3 cr

R 8011 Moral and Ethical Positions in Nursing (prereq grad nurs stu or #)
352961 —1 1325-1625 M, MoosT 5125, Block D, 3 cr (ITV UMD to TC ¶ Rochester) (TC stu only)
963423 —2 1325-1625 M, Block D, 3 cr (ITV UMD to TC and Rochester) (outstate stu only)
475373 —3 1640-1940 W, WDH 4150, 4176, Corcoran-Perry S, 3 cr

R 8014 Research in Nursing (prereq inferential statistics)
760037 —1 0905-1205 T, WDH 4150, 4176, DeHart S, 3 cr
863673 —2 1640-1940 W, WDH 4180, Feldman B, 3 cr
675324 —3 1800-2100 T, Vellenga B, 3 cr (ITV MSU to BSU)

R 8030 Nursing Intervention Models (8 cr must be completed before any cr is given; prereq 8012, 8011 or ¶8011, #)
★LECT 0905-1310 W, WDH 2120, 2130, Avery M, 8 cr (cln ar)
975328 —1 LAB 1325-1520 W, WDH 2120, 2130, Avery M

R 8042 Community-Based Public Health Nursing Interventions (prereq nurs grad stu, nurse grad stu in related field, 5960, or #)
062408 1640-1940 T, WDH 4180, Lia-Hoagberg B, 3 cr

R 8050 Problems in Nursing (prereq #) (S-N only)
857775 —1 Avery M, 1-9 cr
856223 —2 Bearinger L, 1-9 cr
563019 —3 Bliss D, 1-9 cr
459089 —4 Bull M, 1-9 cr
162352 —5 Corcoran-Perry S, 1-9 cr
657051 —6 Crisham P, 1-9 cr
161850 —7 DeHart S, 1-9 cr
556913 —8 Duckett L, 1-9 cr
856500 —9 Edwardson S, 1-9 cr
157765 —10 Egan E, 1-9 cr
055829 —11 Feldman B, 1-9 cr
154977 —12 Gross C, 1-9 cr
157952 —13 Hansen H, 1-9 cr
859445 —14 Hooper R, 1-9 cr
858814 —15 Josten L, 1-9 cr
156177 —16 Kaas M, 1-9 cr
660788 —17 Krichbaum K, 1-9 cr
554076 —18 Leonard B, 1-9 cr
360283 —19 Lia-Hoagberg B, 1-9 cr
062411 —20 Lindeke L, 1-9 cr
855086 —21 Lindquist R, 1-9 cr
560329 —22 Miller M, 1-9 cr
058861 —23 Newman M, 1-9 cr
559746 —24 Pederson C, 1-9 cr
159457 —25 Post-White J, 1-9 cr
054843 —26 Ryden M, 1-9 cr
358114 —27 Sime A, 1-9 cr
054342 —28 Snyder M, 1-9 cr
256341 —29 Tomlinson P, 1-9 cr
654523 —30 Vellenga B, 4 cr
058391 —31 1-9 cr
258851 —32 0905-1205 Th, 1325-1625 Th, WDH 4155, Sime A, 1-9 cr
163668 —33 1-9 cr

8051 Special Topics in Nursing Research
557477 —1 Avery M, 1-9 cr
157667 —2 Bearinger L, 1-9 cr
855461 —3 Bliss D, 1-9 cr
553669 —4 Bull M, 1-9 cr
957668 —5 Corcoran-Perry S, 1-9 cr
655462 —6 Crisham P, 1-9 cr
953670 —7 DeHart S, 1-9 cr
462655 —8 Duckett L, 1-9 cr
860630 —9 Edwardson S, 1-9 cr
058648 —10 Egan E, 1-9 cr
456676 —11 Feldman B, 1-9 cr
455463 —12 Gross C, 1-9 cr
063669 —13 Hansen H, 1-9 cr
859641 —14 Hooper R, 1-9 cr
757669 —15 Josten L, 1-9 cr
155465 —16 Kaas M, 1-9 cr
753671 —17 Krichbaum K, 1-9 cr
262656 —18 Leonard B, 1-9 cr
660631 —19 Lia-Hoagberg B, 1-9 cr
858649 —20 Lindeke L, 1-9 cr
162657 —21 Lindquist R, 1-9 cr
460632 —22 Miller M, 1-9 cr
158650 —23 Newman M, 1-9 cr
256677 —24 Pederson C, 1-9 cr
955466 —25 Post-White J, 1-9 cr
163671 —26 Ryden M, 1-9 cr
061646 —27 Sime A, 1-9 cr
659642 —28 Snyder M, 1-9 cr
058651 —29 Tomlinson P, 1-9 cr
156678 —30 Vellenga B, 1-9 cr
355469 —31 1-9 cr
063672 —32 1-9 cr

R 8060 Advanced Clinical Nursing (prereq #)
457035 —1 LECT 3-9 cr
✦055958 —2 LECT Lia-Hoagberg B, Sieving R, 4 cr
✦275326 —4 LECT 0905-1310 W, WDH 2120, 2130, Avery M, 4 cr
✦475325 —3 CLN Avery M, 5 cr

R 8111 Moral and Ethical Development in Nursing Science (prereq 8011 or equiv, nurs grad stu or #)
860739 1325-1730 W, MoosT 2146, Crisham P, 4 cr

R 8115 Advanced Nursing Research Practicum (6 cr must be completed as prog req, may be spread over 3 qtrs; prereq doct nurs stu, #) (S-N only)
975331 —1 Avery M, 1-6 cr
775332 —2 Bearinger L, 1-6 cr
575333 —3 Bliss D, 1-6 cr
375334 —4 Bull M, 1-6 cr
175335 —5 Corcoran-Perry S, 1-6 cr
075336 —6 Crisham P, 1-6 cr
675338 —7 DeHart S, 1-6 cr
175344 —8 Duckett L, 1-6 cr
975345 —9 Edwardson S, 1-6 cr
775346 —10 Egan E, 1-6 cr
575347 —11 Feldman B, 1-6 cr
375348 —12 Gross C, 1-6 cr
175349 —13 Hansen H, 1-6 cr
575350 —14 Hooper R, 1-6 cr
375351 —15 Josten L, 1-6 cr
175352 —16 Kaas M, 1-6 cr
075353 —17 Krichbaum K, 1-6 cr
875354 —18 Leonard B, 1-6 cr
675355 —19 Lewis M, 1-6 cr
475356 —20 Lia-Hoagberg B, 1-6 cr
275357 —21 Lindeke L, 1-6 cr
275360 —22 Lindquist R, 1-6 cr
975362 —23 Pederson C, 1-6 cr
575364 —24 Post-White J, 1-6 cr
375365 —25 Ryden M, 1-6 cr
175366 —26 Sime A, 1-6 cr
075367 —27 Snyder M, 1-6 cr
875368 —28 Tomlinson P, 1-6 cr
675369 —29 Vellenga B, 1-6 cr
075370 —30 1-6 cr
875371 —31 1-6 cr
675372 —32 1-6 cr

R 8120 Conceptual and Methodological Issues in the Study of Family Health (prereq 5920, 8114 or equiv, or #)
775329 0905-1205 F, WDH 4155, Tomlinson P, 3 cr

R 8210 Theory Development in Nursing (prereq 8110, #) (S-N only)
657812 1325-1625 Th, WDH 4150, 4176, Egan E, 3 cr

R 8221 Seminar: Developing Nursing Knowledge II (prereq PhD nurs stu or #; nurs grad maj must take both 8220 and 8221 but need not take them in order) (S-N only)
158785 1010-1205 Th, WDH 4178, Snyder M, 1 cr (meets every other week)

R 8314 Nurse-Midwifery Management During Childbearing (prereq #)
★LECT 1325-1520 W, 0905-1310 W, WDH 4155, Avery M
★REC (cln conf ar)
457293 —1 CLN 6-10 cr (cln ar)

R 8425 Psychiatric-Mental Health Nursing: Role Development (prereq #)
★LECT 1535-1730 T, MoosT 5125, Kaas M, Lewis M, 6 cr (cln ar) (ITV TC to MSU) (TC stu only)
259952 —1 REC (cln ar)
★LECT 1535-1730 T, Kaas M, Lewis M, 6 cr (cln ar) (ITV TC to MSU) (MSU stu only)
557513 —2 REC (cln ar)

R 8451 Teaching-Learning Process in Nursing (prereq 8030, ¶course in learning theory, nurs grad stu or #)
358467 —1 LECT 0905-1205 W, WDH 4150, 4176, Krichbaum K, 4 cr
★LAB 1325-1625 W, WDH 4150, 4176, Krichbaum K

8509 Special Topics: Nursing Education (prereq #)
953278 ar cr

R 8609 Special Topics in Nursing Supervision (prereq #)
863401 —1 ar cr
175330 —2 Hansen H, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
257232 1-18 cr

8777 Thesis Credits: Masters
558872 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
062103 1-36 cr

Nutrition: See Food Science and Nutrition.

NUTRITION (Nutr)
Food Science and Nutrition
Agricultural, Food, and Environmental Sciences, and Human Ecology

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
558080 1-18 cr

8745 Seminar (prereq #) (S-N only)
053434 1605-1700 T, FScN 23, Reicks M, 1 cr

8777 Thesis Credits: Masters
559715 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
263399 1-36 cr

8990 Graduate Research (prereq #)
160889 2-5 cr

OBSTETRICS AND GYNECOLOGY (Obst)
Medical School

5500 Externship in Obstetrics and Gynecology: Primary Health Care of Women (prereq regis med)
957315 Twiggs L, others, ar cr

5520 Obstetrics and Gynecology Externship in Clinical Practice (prereq regis med)
653453 Twiggs L, others, 4.5 cr

5540 Advanced Externship in Obstetrics and Gynecology (prereq 5500)
961395 Twiggs L, others, ar cr

5560 Research in Reproduction (prereq 5500)
656420 Twiggs L, others, ar cr

5575 Gynecological Pathology and Diagnostic Cytology (prereq 5500)
956326 Okagaki T, Brooker D, others, 9 cr

5590 Preceptorship in Obstetrics and Gynecology (prereq 5500)
159208 Twiggs L, others, 0-0 cr

8201 Advanced Obstetrics and Gynecology I
354578 Twiggs L, others, ar cr

8202 Advanced Obstetrics and Gynecology I (prereq 8201)
459383 Twiggs L, others, ar cr

8203 Advanced Obstetrics and Gynecology I (prereq 8202)
561741 Twiggs L, others, ar cr

8204 Advanced Obstetrics and Gynecology I (prereq 8203)
059864 Twiggs L, others, ar cr

8205 Advanced Obstetrics and Gynecology II
362096 Twiggs L, others, ar cr

8206 Advanced Obstetrics and Gynecology II (prereq 8205)
059797 Twiggs L, others, ar cr

8207 Advanced Obstetrics and Gynecology II (prereq 8206)
261135 Twiggs L, others, ar cr

8208 Advanced Obstetrics and Gynecology II (prereq 8207)
663190 Twiggs L, others, ar cr

8209 Advanced Obstetrics and Gynecology III
460436 Twiggs L, others, ar cr

8210 Advanced Obstetrics and Gynecology III (prereq 8209)
954771 Twiggs L, others, ar cr

8211 Advanced Obstetrics and Gynecology III (prereq 8210)
062814 Twiggs L, others, ar cr

8212 Advanced Obstetrics and Gynecology III (prereq 8211)
253066 Twiggs L, others, ar cr

8213 Advanced Obstetrics and Gynecology IV (prereq 8212)
356329 Twiggs L, others, ar cr

8214 Advanced Obstetrics and Gynecology IV (prereq 8213)
852883 Twiggs L, others, ar cr

8215 Advanced Obstetrics and Gynecology IV (prereq 8214)
660306 Twiggs L, others, ar cr

8218 Advanced Obstetrics and Gynecology IV (prereq 8215)
161914 Twiggs L, others, ar cr

8217 Seminar: Obstetrics and Gynecology IV (prereq 8216)
456483 Twiggs L, others, ar cr

8218 Seminar: Obstetrics and Gynecology (prereq 8217)
260356 Twiggs L, others, ar cr

8219 Seminar: Obstetrics and Gynecology (prereq 8218)
056401 Twiggs L, others, ar cr

8221 Seminar: Obstetrics and Gynecology (prereq 8219)
354869 Twiggs L, others, ar cr

8222 Gynecological Oncology (prereq 8221)
463238 Twiggs L, ar cr

8223 Gynecological Oncology (prereq 8222)
959310 Twiggs L, others, ar cr

8224 Gynecological Endocrinology I (prereq 8223)
958321 Twiggs L, others, ar cr

8225 Gynecological Endocrinology II (prereq 8224)
360462 Twiggs L, others, ar cr

8226 Obstetrical Physiology and Anesthesiology (prereq 8225)
256792 Twiggs L, others, ar cr

8227 Preceptorship in Clinical Practice (prereq 8226)
859882 Twiggs L, others, ar cr

8228 Selected Aspects of Radiation Therapy (prereq 8227)
362972 Twiggs L, others, ar cr

8229 Selected Aspects of Medical Oncology (prereq 8228)
558273 Twiggs L, others, ar cr

8230 Research in Reproduction (prereq 8229)
363202 Twiggs L, ar cr

8777 Thesis Credits: Masters
656871 1-16 cr

OCCUPATIONAL THERAPY (OT)

Physical Medicine and Rehabilitation
Medical School

8777 Thesis Credits: Masters
775797 1-16 cr

OPERATIONS AND MANAGEMENT SCIENCES (OMS)

Management

Non-SMgt students should refer to page 10, Carlson School of Management Courses, before attempting to register for the 3000- and 5000-level courses listed below.

R 3000 Introduction to Operations Management (A-F only)
160298 —1 1325-1510 MW, BlegH 140, 4 cr
158065 —2 1010-1155 TTh, BlegH 110, 4 cr
459769 —3 1325-1510 TTh, BlegH 220, 4 cr

R 5155 Methods for Quality and Productivity Improvement (prereq 1020 or MBA 8020 or #) (A-F only)
372319 1730-2100 W, BlegH 340, 4 cr

R 8051 Management of Service Operations (prereq 3000 or MBA 8050 or #) (A-F only)
457617 1730-2100 M, BlegH 335, 4 cr

R 8057 Process, Technology, and Innovation in the Operations Function (prereq 3000 or MBA 8050 or #) (A-F only)
956262 1325-1510 MW, BlegH 340, 4 cr

R 8058 Operations Strategy (prereq 3000 or MBA 8050 or #) (A-F only)
461764 1010-1155 TTh, BlegH 340, 4 cr

R 8651 Experimental Design (prereq 8650 or #) (A-F only)
857095 1010-1155 TTh, BlegH 210, 4 cr

R 8735 Operations Forecasting and Inventory Research (prereq PhD stu or #) (A-F only)
372322 0905-1205 W, BlegH 335, 4 cr

8990 Readings in Operations and Management Science (prereq #, Grad Schl of Mgmt approval) (A-F only)
258042 ar cr

8995 Graduate Research in Operations and Management Science (prereq #, Grad Schl of Mgmt approval) (A-F only)
858215 ar cr

OPHTHALMOLOGY (Oph)

Medical School

5100 Introduction to Anatomy, Histology, and Embryology (prereq physician or vet med student)
658202 0715-0830 Th, PWB 9335, Cameron J D, 1 cr

5180 Externship (prereq regis med)
657387 ar cr

5190 Research Problems (prereq regis med)
963759 ar cr

8101 Clinical Ophthalmology
754433 0800-1700 MTWThF, PWB 9100, Krachmer J, others, 8 cr (Eye Clinic)

8106 Strabismus Management (prereq grad physician or grad in veterinary science)
156512 0800-0900 M, PWB 9339, Summers G, 1 cr

8116 Glaucoma, Lens and Anterior Segment Trauma (prereq grad physican or grad in veterinary science)
957654 1400-1500 F, PWB 9339, Wright M, 3 cr

8119 Clinical Pathological Correlations in Ophthalmology (prereq grad physician or grad in veterinary sci)
254704 1500-1630 F, PWB 9339, Cameron J D, 1 cr

8120 Scope of Ophthalmic Pathology (prereq grad physician or grad in veterinary science)
363426 1630-1730 F, PWB 9339, Cameron J D, 2 cr

8131 Practical Ocular Surgery
756845 0800-1200 MTWThF, Krachmer J, others, 3 cr (Mayo OR)

8142 Ophthalmic Pathology Laboratory
356170 1330-1530 T, PWB 9335, Cameron J D, 2 cr

8152 Ophthalmology Laboratory
461117 Krachmer J, 15 cr

8155 Special Topics in Ophthalmology (prereq #)
754755 Krachmer J, 1-3 cr

ORAL AND MAXILLOFACIAL SURGERY (OSur)

Dentistry

5257 Ambulatory General Anesthesia
361336 1 cr

5275 Oral Pathology Review
660404 1 cr

5276 Medicine for the Oral Surgeon (prereq participation in an oral surgery residency program)
656384 2 cr

5280 Advanced Oral and Maxillofacial Surgery for Postgraduate Dental Fellows (S-N only)
460842 1 cr

8250 Advanced Oral and Maxillofacial Surgery
863785 ar cr

Symbols

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H Honors course (follows the course number).
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† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

8251 Seminar: Oral Surgery
158261 ar cr

8252 Research in Oral and Maxillofacial Surgery
154081 ar cr

8253 Problems in Oral and Maxillofacial Surgery
852933 ar cr

8254 Topics: Oral Surgery
059976 1 cr

8255 General Surgery
159192 ar cr

8258 Anesthesia II Seminar
360395 1 cr

8280 Oral and Maxillofacial Surgery Clinical Pathology Conference
459979 1 cr

ORAL BIOLOGY (OBio)
Dentistry

8001 Research in Oral Biology
160925 ar cr

8002 Tutorial in Oral Biology
455849 ar cr

8023 Topics in Oral Biology (prereq #)
462798 1-3 cr

8030 Seminar (S-N only)
957993 1 cr

8103 Topics in Cariology (prereq possession of a dental degree or PhD) (A-F only)
555695 1-2 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
155935 1-18 cr

8777 Thesis Credits: Masters
560007 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
154100 1-36 cr

ORAL PATHOLOGY (OPat)
Dentistry

5017 Oral Pathology Clinic
860210 ar cr

8002 Oral Pathology (prereq 5251, 5252)
757879 —1 LECT ar cr
★LAB

8003 Oral Pathology (prereq 5251, 5252)
860076 ar cr

8004 Histopathology
960358 2 cr

8006 Current Literature Review
154419 1 cr

8008 Clinical Oral Pathology
154963 1 cr

8011 Surgical Oral Pathology
154476 —1 LECT ar cr
★LAB

8015 Methods of Genetic Counseling and Treatment
562369 1 cr

8300 Human Development Genetics I (prereq GCB 3022, BioC 5970, Path 5101 or #)
258882 2 cr

8302 Seminar: Human Developmental Genetics
163422 ar cr

ORTHODONTICS (Otho)
Dentistry

5003 Clinical Orthodontics
656983 ar cr

8001 Research in Orthodontics
355827 ar cr

8202 Growth and Development
162349 ar cr

8206 Orthodontic Diagnosis and Treatment Planning
157465 ar cr

8210 Orthodontic Seminar
154341 ar cr

8218 Topic in Orthodontics
063283 ar cr

ORTHOPAEDIC SURGERY (OrSu)
Medical School

5180 Orthopaedics I (prereq regis med)
062800 Ogilvie J, others, 6 cr

5185 Orthopaedics II: Externship in Orthopaedic Surgery (prereq regis med)
063252 Ogilvie J, others, ar cr

5186 Research Problems in Orthopaedic Surgery (prereq regis med)
863463 Ogilvie J, others, ar cr

5187 Externship in Orthopaedic Surgery and Fractures (prereq regis med)
958125 Koop S, 4.5-9 cr

5188 Externship in Orthopaedic Surgery and Fractures-Gillette Children's Hospital (prereq regis med)
959193 Koop S, 4.5-9 cr

5190 Externship in Orthopaedic Surgery and Fractures-Veterans Hospital (prereq regis med)
757221 McElfresh E, ar cr

5191 Orthopaedic Externship at Hennepin County Medical Center (prereq regis med)
753458 Kyle R, ar cr

5192 Preceptorship in Orthopaedic Surgery (prereq regis med jr or sr)
657034 Johnston R, others, ar cr

5193 Scoliosis and Other Spinal Deformities (prereq general orthopaedic course or elective clerkship in orthopaedic surgery)
060416 9 cr

5194 Orthopaedic Externship (prereq regis 3rd or 4th yr med stu)
862460 Aadalen R, 4.5-9 cr

8401 Orthopaedic Conference
457455 Ogilvie J, others, 3 cr

8403 Fractures
753766 Kyle R, 5 cr

8405 Orthopaedic Diagnosis
558208 Ogilvie J, others, 3 cr

8407 Pediatric Orthopaedics
761222 Koop S, 5 cr

8408 Orthopaedic Problems and Management
859767 Ogilvie J, others, 5 cr

8409 Orthopaedic Problems and Management
957136 Aamoth G, 5 cr

8410 Orthopaedic Pathology
259045 Ogilvie J, others, 2 cr

8411 Orthopaedic Operative Surgery
157787 Ogilvie J, others, 5 cr

6412 Orthopaedic Anatomy
159130 Putnam M, 2 cr

8416 Orthopaedic Research
655767 Ogilvie J, 5 cr

OTOLARYNGOLOGY (Otol)
Medical School

5102 Introduction to the Basic Sciences in Otolaryngology, II: Head and Neck (prereq #)
652979 Lassman F, others, 3 cr

5200 Surgical Specialty: Otolaryngology (prereq regis med student)
961011 Hom D, ar cr

5500 Primary Care-ENT Elective
754853 Hom D, ar cr

5501 Surgical-ENT Elective
758496 Hom D, ar cr

5503 Research Basic Science (prereq regis med student)
162178 Hom D, ar cr

5504 Externship in Otolaryngology: Overseas (prereq fourth-year medical student or perm of course director...knowledge of German rec)
860918 Hom D, Boies L, 4.5-9 cr

5970 Directed Studies (prereq #)
153285 ar cr

8230 Clinical Otorhinolaryngology
058763 Adams G, others, 6 cr

8231 Surgery of Ear, Nose, and Throat
161824 Adams G, others, 4 cr

8232 Maxillofacial Surgery
556250 Adams G, Boies L, others, 1 cr

8233 Plastic and Reconstructive Surgery of the Head and Neck
553199 Adams G, Boies L, others, 1 cr

R **8234 Anatomy of the Head and Neck and Temporal Bone Dissection**
059377 Levine S, Gapany M, 2 cr

8235 Roentgenology of the Head and Neck
155912 2 cr

8236 Pharmacology in ENT
959744 2 cr

8237 Endoscopy
253407 Adams G, others, 2 cr

8238 Pathology of the Ear, Nose, and Throat
159118 Adams G, others, 2 cr

8239 Otoneurology
363300 Anderson J, Levine S, 2 cr

8240 Allergy
560251 2 cr

8241 Tumor Clinic
153229 Adams G, others, 1 cr

8242 Audiology and Speech Pathology
955869 Hunter L, others, 2 cr

8243 Introduction to Research Methodology
053787 Daly, others, 2 cr

8244 Seminar: Current Literature
259417 Gapany M, others, 1 cr

8245 Master's Thesis Research
156171 ar cr

8246 Ph.D. Thesis Research
661827 ar cr

8248 Readings in Auditory Physiology (prereq #)
161931 Santi P, 1-3 cr

8249 Seminar: Current Topics in Cochlear Anatomy (prereq #) (S-N only)
863298 Santi P, 1 cr

8250 Advanced Biochemistry of the Auditory System (prereq MdBc 5100, MdBc 5101 or equiv or #)
662427 Juhn S, 2 cr

8262 Advanced Clinical Audiology (prereq Otol grad maj, 8242 or #) (A-F only)
758045 Margolis R, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
256808 1-18 cr

8777 Thesis Credits: Masters
161749 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
255819 1-36 cr

PATHOBIOLOGY (Path)
Laboratory Medicine and Pathology
Medical School

5110 Seminar: Pathology (prereq #) (S-N only)
559164 1200-1300 M, Mayo C231, 1 cr (Todd Amph)

5865 Departmental Seminar (prereq #) (S-N only)
562307 0800-0900 W, Mayo D230, 1 cr (Eustis Amph)

8110 Pathobiology III (prereq 8108, 8109)
860806 0905-0955 MWF, MoosT 2580, LeBien T W, 3 cr

8201 Research
856187 ar cr

8263 Pathophysiology of Environmental Disease (prereq PubH 8261 or #)
358243 1325-1415 MWF, MoosT 2580, Garry V, 3 cr

8300 Current Topics in Medical Genetics (prereq # or Δ)
171897 Hirsch B, Orr H, 2 cr

PEDIATRIC DENTISTRY (Pedo)
Dentistry

5405 Advanced Pediatric Dentistry for Postgraduate Dental Fellows (S-N only)
059069 1 cr

5414 Advanced Clinical Pedodontics
057242 0900-1200 MThF, 1400-1600 T, MoosT 6125, ar cr

8290 Hospital Pedodontics I (S-N only)
254931 0830-1200 TW, PWB 7302, ar cr

8291 Hospital Pedodontics II (S-N only)
454118 1300-1600 MTWThF, ar cr

8292 Pedodontic Literature
158244 0800-0900 F, MoosT 6162, ar cr

8294 Pedodontic Diagnosis and Treatment Planning
154615 0800-0900 M, MoosT 6162, ar cr

PEDIATRICS (Ped)
Medical School

5501 Pediatric Externship (prereq successful completion of Year 2 Clinical Medicine III Pediatrics)
057919 Moller J, 9 cr

R 5512 Pediatric Acting Internship
159121 Moller J, ar cr

5520 Pediatrics Ambulatory Course (prereq 2nd yr clinical pediatrics)
055605 Moller J, ar cr

5531 Psychology Internship (prereq psych fellow specialist)
855167 Robiner W, 12 cr

5533 Pediatric Clinical Allergy at University Hospital (prereq 3rd or 4th yr medical student)
157314 Blumenthal M, 4.5-9 cr

R 5534 Pediatric Cardiology at the University Hospital
161878 Moller J, ar cr

R 5535 Pediatric Infectious Diseases
762371 Ferrieri P, ar cr

R 5536 Pediatric Hematology/Oncology/Bone Marrow Transplantation at the University Hospital
660810 Orchard P, ar cr

R 5537 Pediatric Endocrinology and Metabolism at the University
558158 ar cr

R 5538 Pediatric Gastroenterology and Nutrition
054275 Sharp H, ar cr

5539 Neonatal Medicine Externship
058911 Boros S, ar cr

R 5540 Pediatric Neurology
560735 Swaiman K, ar cr

R 5543 Pediatric Nephrology at University
457245 Fish A, ar cr

R 5544 Pulmonary Disease in Pediatrics
156518 Warwick W, ar cr

R 5548 Pediatric Genetics at the University
356055 Pierpont M, 9 cr

R 5553 Adolescent Medicine
455687 Remafedi G, ar cr

R 5555 Neonatal Clerkship (prereq 5501 or 5512)
458847 Opitz J, ar cr

R 5556 Clinical Pediatrics Clerkship (prereq 5501 or 5512)
354614 Moller J, ar cr

5559 Pediatric Critical Care Medicine (prereq 5501 and/or 5512)
076101 Zier J, 4.5-9 cr

5560 Research/Special Problems in Pediatrics (prereq regis med) (S-N only)
063462 Moller J, ar cr

5566 Evolution of American Pediatrics (S-N only)
774858 Clawson C, 1-2 cr

8204 Residency in Pediatrics (prereq #)
457388 Shannon M, ar cr

8206 Pediatric Special Interest (prereq #)
058052 Shannon M, ar cr

PERIODONTICS (Pero)
Dentistry

5123 Periodontal Practice Management Seminar (prereq grad students studying in the dental specialty of periodontology) (S-N only)
755985 1220-1315 Th, MoosT 7580, 1 cr

5300 Advanced Periodontics for Postgraduate Dental Fellows (S-N only)
158852 1 cr

8000 Advanced Clinical Periodontology
656353 1330-1615 MTTh, 0945-1215 TWThF, MoosT 7470, ar cr

8200 Lectures
355858 1215-1315 M, MoosT 7360, 1 cr

8300 Seminar: Periodontology
354435 ar cr

8305 Periodontic Prosthodontic Seminar
858845 1220-1315 T, MoosT 6410, 1 cr

8335 Dental Implantology: A Multidisciplinary Offering (prereq grad stu in dentistry) (A-F only)
361143 1330-1530 Th, MoosT 6410, 2 cr

8400 Anatomy of Normal and Observed Periodontium (A-F only)
854861 2 cr

8450 Bacteriology and Immunology of Periodontal Diseases (A-F only)
853029 1 cr

PHARMACEUTICS (Phm)
Pharmacy

8100 Seminar: Pharmaceutics
361367 1600-1700 Th, MoosT 2520, Grant D J W, 1 cr

8101 Readings in Pharmaceutics
761219 1600-1700 W, WDH 7193, 1 cr

8105 Pharmacokinetics Research Seminar (prereq grad in pharmaceutics majoring in pharmacokinetics) (S-N only)
862393 Sawchuk R, Zimmerman C, 1 cr

8200 Research Problems (S-N only)
560881 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
754027 1-18 cr

8777 Thesis Credits: Masters
660368 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
856058 1-36 cr

PHARMACEUTICS, UNDERGRAD (Phmc)
Pharmaceutics
Pharmacy

5452 Principles of Drug Delivery II (prereq 5451, ¶5923) (A-F only)
457665 1115-1205 MTThF, MoosT 2530, Suryanarayanan, 4 cr

5471 Biopharmaceutics I (prereq 5452, 5460, ¶Phcy 5926) (A-F only)
575283 0905-0955 M, WDH 7135, 0905-1100 W, MoosT 2520, Wiedmann T, 3 cr

5685 Clinical Pharmacokinetics (prereq 5680) (A-F only)
662458 1325-1520 Th, MoosT 5125, Sawchuk R, 2 cr

5730H Pharmaceutics Seminar (prereq #) (A-F only)
353222 1 cr

5970 Directed Studies (prereq #)
055118 1-5 cr

5999 Special Problems (prereq #)
753783 ar cr

PHARMACOLOGY (Phcl)
Medical School

1450 Drugs and Society: Concepts of Drug Action (prereq upper div stu or #)
161094 Walseth T, 2 cr (MlrdH 3260)

5109 Problems in Pharmacology (prereq grad or upper div stu or #)
162139 Loh H, ar cr

8112 Advanced Pharmacology III (prereq biochem, physiol background, 5111 or #) (A-F only)
753749 1530-1730 T, 1530-1630 Th, MlrdH 3260, Loh H, others, 3 cr

8204 Seminar: Selected Topics in Pharmacology (prereq 5111 or #)
860949 1215-1300 T, MoosT 3110, Walseth T, 1 cr

8207 Seminar: Psychopharmacology (§NSc 8207; prereq #)
757154 Sparber S, 1 cr (MlrdH 3260)

8208 Neuropsychopharmacology (§NSc 8208; prereq 5111, Psy 5018, Psy 5062 or #) (A-F only)
571900 Sparber S, Wilcox G, 3 cr (MlrdH 3260)

8209 Current Research in Drug Metabolism (prereq #) (A-F only)
561335 Holtzman J, 1 cr (MlrdH 3260)

8214 Toxicology (prereq MdBc 5101 or #) (A-F only)
057998 Holtzman J, 2 cr (MlrdH 3260)

8216 Immunopharmacology (prereq MicB 5216 or equiv or #)
371901 Regal J, 2 cr (MlrdH 3260)

8219 Advanced Toxicology (prereq 8214 or #)
171902 Holtzman J, 1 cr (MlrdH 3260)

8261 Molecular Toxicology (§PubH 8261, prereq 5262, Biol 5001, #)
062845 Holtzman J, 3 cr

8269 Toxicology Seminar (§PubH 8269; prereq 8261, #) (S-N only)
762886 Holtzman J, 1 cr

Symbols

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- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
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- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
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8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
354466 1-18 cr

8777 Thesis Credits: Masters
562842 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
357142 1-36 cr

PHARMACY PRACTICE (Phar)
Pharmacy

5009 Multidisciplinary Perspectives on Aging (§AdEd 5440, CPsy 5305, HSU 5009, PA 5414, PubH 5737, Soc 5960, SW 5024)
854794 1640-1825 MW, MoosT 2690, 4 cr

5210 Terminology of the Health Sciences (§HSU 5210)
853774 Zaske D, 2 cr (for information go to WDH 7115 before first day of quarter)

5220 Ethical Issues in Pharmacy (prereq pharmacy stu or #)
755579 1325-1520 T, WDH 7135, Morley P, 2 cr

5291 Specialty Externship (prereq #)
658751 Rodriguez R, 1-12 cr

5308 Assessment of the Medicated Patient (prereq third yr phar stu or #) (S-N only)
753282 1010-1205 F, MoosT 2620, Kubik M, 1 cr

5390 Community Practice Externship (prereq third yr phar student) (A-F only)
753721 —1 LECT 0800-0955 T, WDH 7135, Johnson J, 7 cr
★REC

5395 B.S. Clerkship (prereq third yr pharmacy student) (A-F only)
462025 —1 LECT 1430-1625 W, WDH 7135, Fletcher C, 7 cr
★REC

5501 Pathophysiology and Therapeutics: Pulmonary Diseases (prereq 3rd yr pharmacy stu) (A-F only)
660046 1325-1520 M, 1325-1415 W, MoosT 2650, O'Connell M, 3 cr

5502 Pathophysiology and Therapeutics: Nervous System Disorders (prereq 3rd yr pharmacy stu) (A-F only)
256890 1010-1205 MW, WDH 7135, Graves N, 3 cr

5509 Pathophysiology and Therapeutics: Psychiatric Disorders (prereq 3rd yr pharmacy stu) (A-F only)
454698 0800-0955 WF, WDH 7135, Kern C, 3 cr

5512 Pathophysiology and Therapeutics: Eye, Ear, Nose, Throat and Skin Disorders (prereq 3rd yr pharmacy stu) (A-F only)
558404 1010-1205 Th, WDH 2120, 2130, Larson T, 1 cr (2nd 5 weeks)

5513 Pathophysiology and Therapeutics: Arthritis and Related Disorders (prereq 3rd yr pharmacy stu) (A-F only)
756490 1010-1205 TTh, WDH 2120, 2130, Johnson T, 2 cr (1st 5 weeks)

5515 Neuroanatomy (prereq 3rd yr pharmacy stu) (S-N only)
158205 Graves N, 1 cr (independent study ar, WDH 5120)

5550 Pharmacy Practice Clerkship: Acute Care (prereq PharmD IV student) (A-F only)
957122 4-12 cr

5551 Pharmacy Practice Clerkship: Clinical Pharmacokinetics (prereq PharmD IV student) (A-F only)
153148 4 cr

5552 Pharmacy Practice Clerkship: Pediatrics (prereq PharmD IV student) (A-F only)
153240 4 cr

5553 Pharmacy Practice Clerkship: Clinical Elective I (prereq PharmD IV student) (A-F only)
857226 4-12 cr

5554 Pharmacy Practice Clerkship: Special Elective I (prereq PharmD IV student) (A-F only)
063851 4-12 cr

5555 Pharmacy Practice Clerkship: Clinical Elective II (prereq PharmD IV student) (A-F only)
856092 4-12 cr

5556 Pharmacy Practice Clerkship: Clinical Elective III (prereq PharmD IV student) (A-F only)
763830 4-12 cr

5557 Pharmacy Practice Clerkship: Special Elective II (prereq PharmD IV student) (A-F only)
858425 4-12 cr

5558 Pharmacy Practice Clerkship: Special Elective III (prereq PharmD IV student) (A-F only)
261460 4-12 cr

5770H Hospital Pharmacy Seminar (prereq #) (A-F only)
152878 1 cr

5821 Pharmacotherapy I (prereq 5812, ¶Phcy 5923) (A-F only)
855458 1010-1205 W, 1010-1100 F, MoosT 2530, Uden D, 3 cr

5823 Pharmacotherapy III (prereq Phsl 5100, Phcl 5101, ¶Phcl 5102, ¶MedC 5163) (A-F only)
176378 1010-1205 T, 1115-1205 Th, WDH 7135, Guay D, 3 cr

5824 Pharmacotherapy IV (prereq MedC 5163, Phcl 5101, Phmc 5460, ¶5926) (A-F only)
375284 1325-1520 M, MoosT 2650, O'Connell M, 2 cr

5825 Pharmacotherapy V (prereq MedC 5164, Phmc 5460, ¶Phcy 5926) (A-F only)
175285 1325-1625 T, 1325-1520 Th, WDH 7135, Rotschafer J, 5 cr

5830 Pharmacy and the Health Care System (A-F only)
953667 1325-1520 MW, MoosT 2530, Schondelmeyer S, 4 cr

5853 Pharmacy Practice in an Ambulatory Care Setting (prereq 2nd yr phar stu) (A-F only)
075286 Larson T, 3 cr

5865 Pharmacy Clerkship I (S-N only)
876441 1 cr

5866 Pharmacy Clerkship II (prereq PharmD II stu)
676442 1 cr

5870 Geriatric Assessment (prereq 3rd yr pharm stu) (A-F only)
976379 1800-2100 MT, WDH 7135, O'Connell E, 4 cr

5880 Pharmacotherapy: Gastrointestinal Disorders (prereq Phsl 5100, Phcl 5101, Phcl 5102, MedC 5163) (A-F only)
376533 Guay D, 1 cr

5970 Directed Studies (prereq #)
163016 1-5 cr

5999 Special Problems (prereq #)
657972 ar cr

PHARMACY, INTERDEPARTMENTAL (Phcy)
Pharmacy

R 5923 Pharmacy Laboratory III (prereq ¶Phar 5821, ¶Phmc 5452) (A-F only)
★LECT 0905-0955 T, MoosT 2530, Remmel R
662654 —1 LAB 0800-1100 M, WDH 3150, 1 cr
860627 —2 LAB 1325-1625 T, WDH 3150, 1 cr
153666 —3 LAB 0905-1205 Th, WDH 3150, 1 cr
675226 —4 LAB 0800-1100 F, WDH 3150, 1 cr

R 5926 Pharmacy Laboratory VI (prereq ¶Phar 5824, ¶Phar 5825, ¶Phmc 5471) (A-F only)
★LECT 0800-0850 M, MoosT 2520, Zimmerman C
675288 —1 LAB 0800-0955 T, WDH 3150, 1 cr
475289 —2 LAB 1325-1520 W, WDH 3150, 1 cr
875290 —3 LAB 0905-1100 Th, WDH 3150, 1 cr

PHILOSOPHY (Phil)
Liberal Arts

R 1001 Introduction to Logic (Math)
★LECT 0905-0955 MWF, NichH 45, Owens J
456760 —1 REC 0905-0955 T, FordH 155, 5 cr
453793 —2 REC 0905-0955 T, FordH 130, 5 cr
559262 —3 REC 1010-1100 T, AmundH 158, 5 cr
753833 —4 REC 1010-1100 T, FordH 130, 5 cr
156137 —5 REC 1115-1205 T, LindH 229, 5 cr
360106 —6 REC 1115-1205 T, AmundH 124, 5 cr
558824 —7 REC 1325-1415 Th, FordH 170, 5 cr
059962 —8 REC 1325-1415 Th, FordH 40, 5 cr
160821 —9 REC 1430-1520 Th, FordH 155, 5 cr
★LECT 1115-1205 MWF, AmundH B75, Kac M
857078 —10 REC 1010-1100 T, FordH 175, 5 cr
357335 —11 REC 1115-1205 T, AmundH 120, 5 cr
862345 —12 REC 1325-1415 T, AmundH 156, 5 cr
353348 —13 REC 1010-1100 Th, FordH 60, 5 cr
960943 —14 REC 1010-1100 Th, FordH 40, 5 cr
654621 —15 REC 1325-1415 Th, FordH 175, 5 cr

R 1002 Introduction to Philosophy (Phil)
★LECT 1010-1100 MWF, FordH 155, Lewis D
462333 —1 REC 0905-0955 T, LindH 325, 5 cr
153707 —2 REC 1010-1100 T, LindH 325, 5 cr
463790 —3 REC 1010-1100 T, LindH 229, 5 cr
562694 —4 REC 1115-1205 T, LindH 203, 5 cr
658992 —5 REC 1115-1205 T, FordH 130, 5 cr
859719 —6 REC 1325-1415 T, AmundH 158, 5 cr
376368 —7 REC 0905-0955 Th, FordH 60, 5 cr
176369 —8 REC 1010-1100 Th, LindH 320, 5 cr
376371 —9 REC 1115-1205 Th, AmundH 120, 5 cr
176372 —10 REC 1325-1415 Th, FordH 155, 5 cr

R 1002H Honors Course: Introduction to Philosophy (prereq honors regis or #)
953572 1245-1400 TTh, FordH 285, Savage C, 5 cr

R 1004 Introduction to Political Philosophy (Phil; C/PE)
★LECT 1325-1415 MWF, Phys 150, Root M
355598 —1 REC 1115-1205 T, AkerH 215, 5 cr
363734 —2 REC 1220-1310 T, LindH 203, 5 cr
361708 —3 REC 1430-1520 T, AkerH 209, 5 cr
272958 —4 REC 1115-1205 Th, FordH 40, 5 cr (concurrent registration in 1007 is also required)
172959 —5 REC 1325-1415 Th, AmundH 156, 5 cr
472960 —6 REC 1430-1520 Th, LindH 315, 5 cr

R 1007 Introduction to Political Philosophy Practicum (prereq ¶1004)
272961 1325-1415 MWF, Phys 150, Root M, 2 cr (concurrent registration in 1004, REC 4, is also required)

R 3003 General History of Western Philosophy (Phil)
★LECT 1115-1230 TTh, FordH 120, Gunderson K
759020 —1 REC 1010-1100 M, FordH 50, 5 cr
560119 —2 REC 1010-1100 W, FordH 175, 5 cr
862300 —3 REC 1115-1205 W, FordH 150, 5 cr

R 3004 General History of Western Philosophy (Phil)
★LECT 1245-1400 TTh, AkerH 319, Hopkins J
972963 —1 REC 1325-1415 M, FordH 50, 5 cr
772964 —2 REC 1220-1310 W, FordH 40, 5 cr
572965 —3 REC 1325-1415 F, FordH 50, 5 cr

R 3302 Moral Problems of Contemporary Society (Phil; C/PE)
★LECT 0945-1100 TTh, AmundH B75, Brandt C
557866 —1 REC 0905-0955 M, FordH 50, 5 cr
253049 —2 REC 1010-1100 M, FordH 130, 5 cr
960229 —3 REC 1115-1205 M, FordH 130, 5 cr
076373 —4 REC 1325-1415 M, AmundH 156, 5 cr
876374 —5 REC 0905-0955 W, LindH 203, 5 cr
676375 —6 REC 1010-1100 W, FordH 40, 5 cr
476376 —7 REC 1115-1205 W, LindH 203, 5 cr
276377 —8 REC 1325-1415 W, FordH 160, 5 cr

R 3305 Medical Ethics
160536 1430-1700 T, AkerH 319, Hopkins J, 5 cr

3781 Existentialism (prereq 3003 or 3004 or #)
372966 1325-1415 MWF, AmundH B75, Lewis D, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
052879 1-5 cr

3980 Directed Instruction (prereq #, Δ, ❑)
955967 1-5 cr

5008 Aristotle (prereq one qtr history of philosophy or #)
172967 1325-1415 MWF, FordH 70, Peterson S, 4 cr

5041 Locke (prereq 3003 or #)
072968 1415-1530 TTh, LindH 305, Gunderson K, 4 cr

5203 Symbolic Logic III (prereq 5202)
★LECT 1115-1205 MWF, FordH 40, Hanson W
256310 —1 REC 1115-1205 TTh, FordH 50, 4 cr

5222 Philosophy of Mathematics (prereq 5202 or 5-level course in mathematics)
872969 1245-1400 TTh, FordH 60, Hellman G, 4 cr

5501 Principles of Aesthetics (prereq 3502 or #)
172970 1415-1530 TTh, FordH 60, Eaton M, 4 cr

R 5611 Philosophy of the Social Sciences I (prereq 12 cr in philosophy or social sciences or #)
054714 1430-1520 MWF, FordH 55, Root M, 4 cr

5970 Directed Studies and Research (prereq #, Δ, CLA approval)
757249 1-5 cr

5990 Directed Studies and Research (prereq #, Δ, CLA approval)
157322 1-5 cr

8090 Seminar in History of Philosophy
461537 1535-1730 T, FordH 359, Scheman N, 4 cr

8110 Seminar: Metaphysics (prereq 5101 or #)
072971 1430-1700 W, FordH 359, Owens J, 4 cr

8180 Seminar: Philosophy of Language
360672 1535-1730 Th, FordH 359, Wallace J, 4 cr

8610 Seminar: Philosophy of the Physical Sciences
872972 1535-1730 T, FordH 120, Hellman G, 4 cr

8640 Seminar: Philosophy of Psychology (§CgSc 8000; prereq grad student in philosophy or psychology or #)
158964 1430-1700 W, FordH 155, Savage C, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
262009 1-18 cr

8777 Thesis Credits: Masters
058441 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
063266 1-36 cr

8970 Directed Study and Research (prereq passing grade on written prelim exam for PhD in philosophy, #)
961879 1-4 cr

8990 Directed Study and Research (prereq passing grade on written prelim exam for PhD in philosophy, #)
054857 1-4 cr

PHYSICAL EDUCATION (PE)

School of Kinesiology and Leisure Studies
Education and Human Development

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. You are encouraged to consider carefully any limits on your health or physical fitness and to consult a doctor if you have any questions about your health or about your ability to participate safely in the physical activities required for the course.

R 1004 Diving, Springboard (prereq 1007 or #)
953068 0800-0850 TTh, UAqCtr, 1 cr (Natatorium Diving Well)

R 1007 Swimming (prereq non-swimmer)
357111 —1 0800-0850 MW, CookeH 10, 1 cr
153321 —2 0905-0955 MW, CookeH 10, 1 cr

R 1014 Conditioning
954270 —1 0800-0850 MW, FieldHse, 1 cr
362020 —2 0905-0955 MW, FieldHse, 1 cr
763164 —3 1010-1100 MW, FieldHse, 1 cr
160091 —4 1115-1205 MW, FieldHse, 1 cr
061145 —5 0800-0850 TTh, FieldHse, 1 cr
556068 —6 0905-0955 TTh, FieldHse, 1 cr
453180 —7 1010-1100 TTh, FieldHse, 1 cr
961915 —8 0905-0955 MW, Gym, 1 cr (StP)

R 1015 Weight Training
154436 —1 0905-1100 M, URecCtr, 1 cr
259028 —2 0800-0850 MW, URecCtr, 1 cr
257960 —3 0905-0955 MW, URecCtr, 1 cr
763312 —4 0905-1100 T, URecCtr, 1 cr
654697 —5 0800-0850 TTh, URecCtr, 1 cr
759714 —6 1010-1100 MW, Gym 15, 1 cr (StP)

R 1016 Posture and Individual Exercise (moderate intensity)
453468 1325-1415 TTh, CookeH 308, 1 cr

R 1029 Handball
053076 1010-1100 TTh, URecCtr, 1 cr

R 1032 Badminton
363085 —1 0800-0855 TTh, URecCtr, 1 cr
560217 —2 0905-0955 TTh, URecCtr, 1 cr

R 1033 Foil Fencing
053854 0905-0955 TTh, CookeH 308, 1 cr

R 1034 Judo (facility fee)
755758 1325-1415 TTh, Gym, 1 cr (StP)

R 1035 Karate (facility fee)
860322 —1 0905-0955 MW, CookeH 308, 1 cr
759440 —2 1010-1100 MW, CookeH 308, 1 cr

R 1036 Racquetball
853838 —1 0905-0955 MW, URecCtr, 1 cr
555888 —2 1010-1100 MW, URecCtr, 1 cr

R 1037 Squash Racquets
154372 0905-0955 TTh, URecCtr, 1 cr

R 1038 Tennis
158440 —1 0800-0850 MW, FieldHse, TCts, 1 cr
858277 —2 0905-0955 MW, FieldHse, TCts, 1 cr
263242 —3 1010-1100 MW, FieldHse, TCts, 1 cr
759275 —4 0800-0850 TTh, FieldHse, TCts, 1 cr
054616 —5 0905-0955 TTh, FieldHse, TCts, 1 cr
261846 —6 1010-1100 TTh, FieldHse, TCts, 1 cr
962305 —7 0905-0955 MW, Gym, 1 cr (StP)
563344 —8 1010-1100 MW, Gym, 1 cr (StP)

R 1041 Cycling (supply own bicycle)
154257 0905-0955 TTh, Gym, 1 cr (StP)

R 1042 Orienteering
662976 —1 0905-0955 TTh, Armory 116, Larson S, 1 cr
556376 —2 1010-1100 TTh, Armory 116, Larson S, 1 cr
175120 —3 1325-1415 TTh, Armory 116, Larson S, 1 cr

R 1043 Beginning Horse Riding (facility fee)
975121 —1 1220-1520 M, CookeH 215, 1 cr (St. Croix Equestrian Ctr) (1st day meet in CookeH 215)
775122 —2 1220-1520 W, CookeH 215, 1 cr (St. Croix Equestrian Ctr) (1st day meet in CookeH 215)
575123 —3 0800-1100 F, CookeH 215, 1 cr (St. Croix Equestrian Ctr) (1st day meet in CookeH 215)
375124 —4 1200-1500 Sun, CookeH 215, 1 cr (St. Croix Equestrian Ctr) (1st day meet in CookeH 215)
175125 —5 1500-1800 Sun, CookeH 215, 1 cr (St. Croix Equestrian Ctr) (1st day meet in CookeH 215)

R 1044 Self Defense
854939 —1 0800-0850 MW, NorrisH M151, 1 cr
054521 —2 0905-0955 TTh, NorrisH M151, 1 cr

R 1048 Bowling (moderate intensity) (facility fee)
176307 1115-1205 MW, StCen, 1 cr (StP)

R 1050 Golf (moderate intensity)
660256 —1 0905-0955 MTWTh, Clubhouse, Golf Course, 1 cr (May 5-June 5)
157806 —2 1010-1100 MTWTh, Clubhouse, Golf Course, 1 cr (May 5-June 5)
763035 —3 1115-1205 MTWTh, Clubhouse, Golf Course, 1 cr (May 5-June 5)
753346 —4 1220-1310 MTWTh, 1 cr Clubhouse, Golf Course (May 5-June 5)

R 1059 Track and Field
854357 1010-1100 TTh, FieldHse, BFAB Track, 1 cr

R 1060 Tumbling and Floor Exercise
253147 0800-0855 TTh, PeikG G100, 1 cr

R 1072 Soccer
255903 —1 1010-1100 MW, FieldHse, BFAB Soccer Fields, BFAB 101, 1 cr
354001 —2 1325-1415 TTh, FieldHse, BFAB Soccer Fields, BFAB 101, 1 cr

R 1073 Softball
956441 —1 0905-0955 MW, FieldHse, BFAB Softball Fields, BFAB 101, 1 cr
461103 —2 1010-1100 MW, FieldHse, BFAB Softball Fields, BFAB 101, 1 cr
154428 —3 1325-1415 MW, FieldHse, BFAB Softball Fields, BFAB 101, 1 cr

R 1074 Volleyball
162312 —1 0800-0850 MW, URecCtr, 1 cr
657793 —2 0905-0955 MW, URecCtr, 1 cr

R 1107 Intermediate Swimming (prereq proficient ability to swim 100 meters)
861082 0905-0955 TTh, UAqCtr, 1 cr (Natatorium West)

R 1133 Fencing (prereq 1033)
556880 1010-1100 TTh, CookeH 308, 1 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 1138 Intermediate Tennis (prereq 1038 or equiv)
656031 —1 1115-1205 MW, FieldHse, TCts, 1 cr
257344 —2 1115-1205 TTh, FieldHse, TCts, 1 cr

R 1160 Intermediate Tumbling and Floor Excercise (prereq 1060 or equiv)
053031 0905-0955 TTh, PeikG G100, 1 cr

R 1205 Scuba and Skin Diving (prereq 1107 or equiv) (facility fee)
159970 1010-1205 T, UAqCtr, 1010-1205 Th, CookeH 15, 1 cr (Wet classroom)

R 1306 Lifeguard Training (prereq ability to swim 500 meters)
360851 1010-1205 MW, UAqCtr, 1 cr (Natatorium East)

R 1410 Water Safety Instructor (prereq prof swim abil in 4 basic strokes, pass skill and written pre-test before admit)
163114 0800-0955 TTh, UAqCtr, 2 cr (Natatorium)

R 1497 Directed Study (prereq 3 cr in physical education, #)
354502 Pickert R, 1-6 cr

PHYSICAL MEDICINE AND REHABILITATION (PMed)
Medical School

5161 Theory of Physical Medicine, Rehabilitation Applied to Medical Sciences Lectures
158471 1535-1625 MTThF, 1535-1730 W, MoosT 2530, Reisman J, Carey J, 5 cr

5222 Therapeutic and Evaluation Procedures III (prereq regis PT)
956925 0800-0955 MTWTh, 1325-1520 Th, 0800-1205 F, ChRC R220, Coleman K, Gardner M, 4 cr

5281 Theory of Therapeutic Exercise (prereq regis PT)
156963 1325-1415 MF, 1325-1520 W, ChRC R208, Scudder G, Thompson L, 4 cr

5283 Techniques of Therapeutic Exercise (prereq regis PT)
157863 1010-1205 MTWTh, ChRC R220, Scudder G, Coleman K, others, 4 cr

5292 Introduction to Research (prereq regis PT)
463448 1325-1520 TTh, Mayo C368, DiFabio R, 2 cr

5294 Independent Study in Physical Therapy (prereq regis PT stu or #)
962949 Ellingham C, ar cr

5295 Clinical Education in Physical Therapy (prereq regis PT)
358128 Ellingham C, 15 cr

5296 Pediatric Evaluation and Treatment Planning (prereq regis PT or #) (S-N only)
160598 Ellingham C, ar cr

5341 Introduction to Assessment and Intervention Processes (prereq regis OT) (A-F only)
554305 1325-1520 MTThF, ChRC R255, R262, Anderson D, 5 cr

5342 Compensatory Rehabilitation: Assessment and Intervention (prereq regis OT) (A-F only)
059931 1010-1205 MW, 0800-1205 F, ChRC R255, R262, Meyers C, Schaber P, 6 cr

5392 Methods of Scientific Research (prereq regis OT) (A-F only)
161198 0800-0955 M, 1325-1520 W, ChRC R262, Reisman J, 4 cr

R 5395 Independent Study in Occupational Therapy (prereq #)
175358 Reisman J, ar cr

5396 Field Work Education in Occupational Therapy (prereq regis OT) (S-N only)
658426 Meyers C, ar cr

5398 Fieldwork Education in Occupational Therapy (prereq reg occup ther prog) (S-N only)
156972 Meyers C, ar cr

5410 Adult Rehabilitation Medicine (prereq regis med)
059816 Dykstra D, ar cr

5411 Rehabilitation Medicine: Children (prereq regis med)
155692 ar cr

5414 Physical Medicine and Rehabilitation for the Family Physician (prereq regis med)
962756 Dykstra D, ar cr

5415 Private Practice in Physical Medicine and Rehabilitation (prereq regis med)
758739 Eckman M, 4.5-9 cr

5416 Physical Medicine and Rehabilitation at St. Paul Ramsey (prereq regis med)
953751 Timming R, ar cr

5814 Physiological Assessment in Physical Therapy
559231 Thompson L, 1-3 cr

5817 Special Topics in Physical Therapy
354984 DiFabio R, 1-3 cr

5841 Instrumentation and Analysis Techniques (prereq Phys 1031, 1032 or equiv)
155134 1640-1810 TTh, ChRC R208, Patterson R, 3 cr

5951 Bioelectric Stimulation (prereq Phsl 5441, eng level calculus and physics)
975359 1010-1130 TTh, ChRC R208, Patterson R, 3 cr

8103 Clinic (prereq regis PT)
254279 Ellingham C, ar cr

8130 Seminar: Current Literature in Physical Therapy
563392 DiFabio R, Scudder G, 1 cr

8140 Physiological Assessment in Physical Therapy
853113 Thompson L, 1 cr

8170 Special Topics in Physical Therapy (prereq #)
156423 DiFabio R, 1 cr

8172 Educational Administration (prereq #)
256033 Allison J, ar cr

8180 Physiological Bases for Therapeutic Exercise
160939 3 cr

8185 Problems in Physical Therapy (prereq regis PT)
455883 DiFabio R, ar cr

8188 Teaching Practicum (max 8 cr; prereq #)
559293 Ellingham C, ar cr

8192 Research Design in Physical Therapy (prereq #)
962384 DiFabio R, 3 cr

8193 Research Problems in Physical Therapy (prereq 8192 or #)
858344 DiFabio R, ar cr

8195 Research in Physical Therapy (prereq #)
254511 DiFabio R, ar cr

8200 Physical Medicine and Rehabilitation Service
753203 Dykstra D, others, ar cr

8205 Readings in Physical Medicine and Rehabilitation (max 2 cr)
158826 0900-1000 M, ChRC R208, Dykstra D, 2 cr

8206 Conference on Physical Medicine and Rehabilitation
061324 0800-0900 F, ChRC R208, Dykstra D, others, 2 cr

8207 Basic and Applied Physiatry
954835 0800-0900 M, 1400-1600 F, ChRC R208, Dykstra D, others, 2 cr

8210 Research in Physical Medicine
462736 Dykstra, Patterson R, ar cr

8212 Electromyography (prereq #)
560749 1300-1700 MTWThF, ChRC R311, Dykstra D, others, ar cr

8214 Readings in Electromyography (max 3 cr; prereq #)
253925 0900-1000 F, ChRC R208, Dykstra D, others, 1 cr

8220 Seminar: Physical Medicine and Rehabilitation
757008 0800-0900 W, ChRC R208, Dykstra D, others, 2 cr

PHYSICAL THERAPY (PT)
Physical Medicine and Rehabilitation
Medical School

8777 Thesis Credits: Masters
575798 1-16 cr

PHYSICS (Phys)
Institute of Technology

The policy of the Physics department is to provide access to all physics courses to all qualified students. To facilitate lab and recitation scheduling, it may be necessary for some students to register for "to be assigned" lab sections. These sections are opened as published sections fill and require approval (i.e., magic numbers) from 148 Physics. You *must* attend the first day of lecture to receive your lab assignment or have it confirmed.

R 1001 The Physical World (§any phys courses; no cr for IT stu; prereq 1 yr high school alg) (Phys/NL) (companion lab is 1005)
254993 0800-0850 MTWF, Phys 133, 4 cr

R 1005 Physics Laboratory (no cr for IT students; prereq 1001 or ¶1001) (Phys/L)
353138 —1 LAB 1220-1415 T, 1 cr
159788 —2 LAB 1535-1730 T, 1 cr
160219 —3 LAB 1115-1310 W, 1 cr
160858 —4 LAB 1430-1625 W, 1 cr
258123 —5 LAB 1325-1520 Th, 1 cr
161783 —6 LAB 1220-1415 F, 1 cr

R 1042 Introductory Physics (prereq 1041) (Phys/L)
★LECT 1430-1520 MTWF, Phys 150, 5 cr
★REC 1430-1520 Th, VinH 20
063395 —1 LAB 0800-0955 T, Phys
★REC 1430-1520 Th, FordH 170
153318 —2 LAB 1220-1415 T, Phys
★REC 1430-1520 Th, FordH 40
253763 —3 LAB 0800-0955 F, Phys
★REC 1430-1520 Th, CivE 213
654389 —4 LAB 1535-1730 W, Phys
★REC 1430-1520 Th, AkerH 319
757946 —5 LAB 1220-1415 Th, Phys
★REC 1535-1625 Th, Phys 157
062862 —6 LAB 1535-1730 F, Phys
★REC 1535-1625 Th, Phys 236A
654487 —7 LAB 1220-1415 W, Phys
★REC 1535-1625 Th, AkerH 313
061288 —8 LAB 0800-0955 W, Phys
★REC 1535-1625 Th, AkerH 317
156292 —9 LAB 0800-0955 Th, Phys
★REC 1535-1625 Th, AkerH 211
160293 —10 LAB 1640-1835 T, Phys
★REC 1535-1625 Th, AkerH 225
876312 —11 LAB 1640-1835 Th, Phys

R 1106 General Physics (no cr for IT students; prereq 1105, ¶1109) (Phys/NL) (companion lab is 1109)
957816 1220-1310 MTWThF, Phys 150, 4 cr

R 1109 General Physics Laboratory (prereq ¶1106 or #, 1108)
357190 —1 LAB 0800-0955 T, Phys, 1 cr
759017 —2 LAB 1115-1310 T, Phys, 1 cr
156891 —3 LAB 1430-1625 T, Phys, 1 cr
853869 —4 LAB 1745-1925 T, Phys, 1 cr
155885 —5 LAB 0905-1100 W, Phys, 1 cr
055863 —6 LAB 1325-1520 W, Phys, 1 cr
459173 —7 LAB 1430-1625 Th, Phys, 1 cr
854519 —8 LAB 1745-1925 Th, Phys, 1 cr
859879 —9 LAB 1010-1205 F, Phys, 1 cr
955760 —10 LAB 1325-1520 F, Phys, 1 cr
759292 —11 LAB 1640-1835 F, Phys, 1 cr
254265 —12 LAB 1010-1205 S, Phys, 1 cr

R 1252 General Physics II (§1452H; prereq 1251, Math 1252 or ¶Math 1252) (Phys/L)
★LECT 0905-0955 MTWF, Phys 150, 4 cr
★REC 0800-0850 Th, Phys 157
152976 —1 LAB 1220-1415 W, Phys
★REC 0800-0850 Th, Phys 236A
955046 —2 LAB 1430-1625 T, Phys
★REC 0800-0850 Th, AkerH 313
058262 —3 LAB 1010-1205 Th, Phys
★REC 0800-0850 Th, LindH 302
260745 —4 LAB 1430-1625 F, Phys
★REC 0800-0850 Th, LindH 229
262088 —5 LAB 1640-1835 W, Phys
★REC 0800-0850 Th, AkerH 211
554756 —6 LAB 1220-1415 T, Phys
★REC 0800-0850 Th, AkerH 215
652920 —7 LAB 1010-1205 T, Phys
★REC 0905-0955 Th, Phys 143
759194 —8 LAB 1640-1835 Th, Phys
★REC 0905-0955 Th, Phys 157
759079 —9 LAB 1430-1625 W, Phys

★REC 0905-0955 Th, Phys 236A
055751 —10 LAB 1220-1415 Th, Phys
★REC 0905-0955 Th, AkerH 313
262933 —11 LAB 1010-1205 F, Phys
★REC 0905-0955 Th, LindH 302
160415 —12 LAB 1640-1835 T, Phys
★REC 0905-0955 Th, LindH 229
158155 —13 LAB 1430-1625 Th, Phys
★REC 0905-0955 Th, AkerH 211
160916 —14 LAB 1220-1415 F, Phys

R 1253 General Physics III (§1453H; prereq 1252, Math 1261 or ¶Math 1261) (Phys/L)
★LECT 0800-0850 MTWF, Phys 166, 4 cr
★REC 0800-0850 Th, LindH 203
161838 —1 LAB 1220-1415 T, Phys
★REC 0800-0850 Th, Arch 45
456144 —2 LAB 1220-1415 W, Phys
★REC 0800-0850 Th, Arch 60
658216 —3 LAB 1430-1625 Th, Phys
★REC 0800-0850 Th, AkerH 225
155921 —4 LAB 1430-1625 F, Phys
★REC 0800-0850 Th, AkerH 319
156020 —5 LAB 1010-1205 Th, Phys
★REC 0905-0955 Th, AkerH 215
853354 —6 LAB 1220-1415 Th, Phys
★REC 0905-0955 Th, LindH 203
960814 —7 LAB 1430-1625 T, Phys
★REC 0905-0955 Th, AkerH 319
155529 —8 LAB 1220-1415 F, Phys
★REC 0905-0955 Th, Arch 25
373020 —9 LAB 1430-1625 W, Phys
★LECT 0905-0955 MTWF, Phys 133, 4 cr
★REC 0800-0850 Th, Arch 25
173021 —10 LAB 1430-1625 W, Phys
★REC 0800-0850 Th, CivE 213
073022 —11 LAB 1220-1415 Th, Phys
★REC 0800-0850 Th, VinH 213
157448 —12 LAB 1430-1625 T, Phys
★REC 0800-0850 Th, SmithH 111
158933 —13 LAB 1220-1415 F, Phys
★REC 0800-0850 Th, SmithH 121
153375 —14 LAB 1640-1835 Th, Phys
★REC 0905-0955 Th, VinH 213
855170 —15 LAB 1430-1625 F, Phys
★REC 0905-0955 Th, SmithH 121
856237 —16 LAB 1220-1415 W, Phys
★REC 0905-0955 Th, VinH 206
173027 —17 LAB 1220-1415 T, Phys
★REC 0905-0955 Th, VinH 209
973028 —18 LAB 1430-1625 Th, Phys
★LECT 1115-1205 MTWF, Phys 150, 4 cr
★REC 1115-1205 Th, Phys 236A
773029 —19 LAB 0800-0955 F, Phys
★REC 1115-1205 Th, LindH 217
173030 —20 LAB 1640-1835 Th, Phys
★REC 1115-1205 Th, LindH 229
754609 —21 LAB 1430-1625 F, Phys
★REC 1115-1205 Th, AkerH 215
758367 —22 LAB 1430-1625 Th, Phys
★REC 1115-1205 Th, Arch 15
054325 —23 LAB 1640-1835 W, Phys
★REC 1115-1205 Th, LindH 203
963809 —24 LAB 0800-0955 T, Phys
★REC 1115-1205 Th, Arch 45
453308 —25 LAB 1220-1415 W, Phys
★REC 1220-1310 Th, Phys 143
256016 —26 LAB 1640-1835 F, Phys
★REC 1220-1310 Th, Phys 157
854472 —27 LAB 1430-1625 W, Phys
★REC 1220-1310 Th, Phys 236A
459917 —28 LAB 1430-1625 T, Phys
★REC 1220-1310 Th, Arch 20
056379 —29 LAB 1220-1415 F, Phys
★REC 1220-1310 Th, Arch 15
263077 —30 LAB 1640-1835 T, Phys
★REC 1220-1310 Th, LindH 203
873040 —31 LAB 0800-0955 Th, Phys
★REC 1220-1310 Th, Arch 45
473042 —32 LAB 0800-0955 W, Phys
★LECT 1430-1520 MTWF, Phys 166, 4 cr
★REC 1430-1520 Th, AkerH 317
173044 —33 LAB 1010-1205 F, Phys
★REC 1430-1520 Th, Phys 157
773046 —34 LAB 0800-0955 Th, Phys
★REC 1430-1520 Th, Phys 236A
573047 —35 LAB 1640-1835 T, Phys
★REC 1535-1625 Th, AkerH 215
373048 —36 LAB 0800-0955 F, Phys
★REC 1535-1625 Th, AkerH 319
662931 —37 LAB 1010-1205 W, Phys
★REC 1535-1625 Th, CivE 213
661410 —38 LAB 1640-1835 Th, Phys

R 1453H Honors Physics III (§1253, 1291, 1331, 1431H; prereq 1452H, consent of IT Honors office) (Phys/L)
661956 —80 LAB 0800-0955 T
160964 —81 LAB 1325-1520 T
863477 —82 LAB 1220-1415 W
755081 —83 LAB 1430-1625 W
959808 —84 LAB 1220-1415 Th
359487 —85 LAB 1430-1625 Th
873572 —86 LAB 1325-1520 F
★LECT 1115-1205 MTWF, Phys 131, 4 cr
460386 —80 REC 0800-0850 Th, Phys 143
356265 —81 REC 1010-1100 Th, Phys 143
654361 —82 REC 1115-1205 Th, Phys 143
854486 —83 REC 1115-1205 Th, Phys 157

R 1912 Laboratory-Based Physics for Teachers (1911-1912†; no credit for IT students; prereq 1911) (Phys/L) (A-F only)
558676 1535-1730 MTTh, Phys, 4 cr

R 3501 Modern Physics (no cr for phys majs; §3512-3513; prereq 1253 or 1453, Chem 1052, Math 3261)
355634 1730-1900 TTh, Phys 170, 4 cr

R 3513 Quantum Physics II (prereq 3512)
059315 1010-1100 TWF, Phys 131, 3 cr

R 3516 Modern Physics Laboratory (prereq 3515)
★LECT 1010-1100 M, Phys 131
155098 —1 LAB 1430-1730 M, Phys 62, 2 cr
954947 —2 LAB 1430-1730 T, Phys 62, 2 cr
156258 —3 LAB 0800-1100 Th, Phys 62, 2 cr
857839 —4 LAB 1430-1730 Th, Phys 62, 2 cr

R 3970 Directed Studies (prereq #, Δ)
959811 1-5 cr

R 5023 Introduction to Electric and Magnetic Fields (prereq Math 3261 or equiv)
863205 0905-0955 MTWF, Phys 170, 4 cr

R 5053 Classical Physics (prereq 5052)
661732 1010-1100 MTWF, Phys 210, 4 cr

R 5123 Methods of Experimental Physics III (prereq 5122 or #)
453986 1220-1310 MWF, Phys 170, 4 cr (lab ar)

R 5124 Experimental Project (prereq 5123, #)
154770 ar cr

R 5153 Quantum Mechanics (prereq 5152)
554093 1115-1205 MTWF, Phys 210, 4 cr

R 5211 Introductory Solid State Physics (prereq 5101, 5202 or equiv)
854617 1325-1415 MTWF, Phys 131, 4 cr

R 5301 Introduction to Nuclear Physics (prereq 5101 or equiv)
253309 1640-1730 MTThF, Phys 143, 4 cr

R 5371 Introduction to Elementary Particle Physics (prereq 5101 or equiv)
159765 1325-1415 MTWF, Phys 236A, 4 cr

R 5400H Junior Honors Seminar (prereq IT or CLA upper div honors student, #) (S-N only)
458458 1640-1755 T, Phys 236A, 1 cr

R 5410H Senior Honors Seminar (prereq IT or CLA upper div honors student, #) (S-N only)
457410 1640-1755 Th, Phys 157, 1 cr

R 5553 Topics in Physics for Biology and Medicine: Light, Atoms, and Nuclei (prereq general physics and calculus)
473008 —1 1115-1205 MTWThF, MechE 108, 5 cr

R 5561 Magnetism: Physics, Geophysics, and Engineering (§EE 5561, Geo 5561; prereq 1253 or 1453)
973000 0905-0955 MWF, Phys 236A, 3 cr

R 5801 Modern Optics (prereq 5024 or #)
573002 0745-0850 MWF, Phys 236A, 4 cr

R 5911 Concepts in Physics (prereq general physics or #)
173004 1640-1755 TTh, Phys 133, 4 cr

R 5925 History of 20th-Century Physics (§HSci 5925; prereq general physics or #)
673007 1245-1400 TTh, LindH 215, 4 cr

R 5950 Colloquium Seminar (prereq beginning grad stu or adv undergrad in physics) (S-N only)
753153 1535-1705 W, Phys 131, ar cr

R 5970 Directed Studies (prereq #, Δ)
359120 1-5 cr

R 5990 Directed Research (prereq 3rd yr, Δ)
257893 ar cr

R 8123 Relativistic Quantum Field Theory (prereq 8122 or #)
355052 1325-1415 MWF, AkerH 317, 3 cr

R 8164 Plasma Physics (prereq 8163)
772995 1325-1415 MWF, AkerH 313, 3 cr

R 8200 Seminar: Condensed Matter Physics (prereq #) (S-N only)
754562 1325-1500 Th, Phys 131, ar cr

R 8223 Solid-State Physics (prereq 8222)
555650 1430-1520 W, Phys 131, 1430-1625 F, Phys 157, 3 cr

R 8300 Seminar: Nuclear Physics (prereq #) (S-N only)
061064 1430-1625 W, Phys 157, ar cr

R 8370 Seminar: Elementary Particle Physics (prereq #) (S-N only)
460310 1325-1500 T, Phys 157, ar cr

8373 Elementary Particle Physics (prereq 8372)
275617 1535-1700 MT, Phys 157, 3 cr

R 8383 Modern Quantum Field Theory and Its Applications (prereq 8382) (A-F only)
072999 1535-1625 MWF, Phys 143, 3 cr

R 8400 Seminar: Space Physics (prereq #) (S-N only)
856240 1430-1625 T, Phys 236A, ar cr

R 8500 Plan B Project (no cr toward PhD; prereq #) (S-N only)
659169 1220-1310 MWF, Phys 143, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
056527 1-18 cr

8777 Thesis Credits: Masters
363443 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
455947 1-36 cr

R 8950 Seminar: Problems of Physics Teaching and Higher Education (prereq #)
762483 1535-1730 T, Phys 166, 1 cr

R 8990 Research in Physics (prereq #)
654974 ar cr

Symbols

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Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

PHYSIOLOGY (Phsl)
Medical School

3091H Honors Course: Readings in Physiology (prereq honors candidates in physiology, Δ)
352992 Branton D, ar cr

3092H Honors Course: Problems in Physiology (prereq honors candidates in physiology, Δ)
462994 Branton D, ar cr

3970 Directed Studies (prereq #, Δ)
762337 ar cr

5101 Neuroscience for Dental Students (prereq courses in biochemistry and human anatomy, ¶CBN 5110)
★LECT 1325-1415 MTTh, MoosT 2620, 1.5 cr
959923 —1 LAB 0745-0930 M, MoosT 3110 (Mar 31, Apr 7, 14, 21)

5111 Human Physiology (prereq 5110, 1st yr med stu or grad stu)
★LECT 1010-1100 MTWThF, PWB 2470, Wangensteen O, 4 cr
663772 —1 LAB 1430-1730 Th, MoosT 3110
860384 —2 LAB 1430-1730 F, MoosT 3110
362728 —3 LAB 1430-1730 M, MoosT 3110

5112 Human Neuroscience B (CBN 5111-Phsl 5112†; prereq first year med student or grad, CBN 5111)
554241 0905-0955 MTWThF, PWB 2470, 3 cr (lab ar)

5113 Problems in Physiology (prereq #)
558466 ar cr

R 5150 Introduction to Neuroscience (§Biol 5150, NSc 5150; prereq Biol 3011 or equiv or 3055-3056, BioC 3021 or equiv, or #) (A-F only)
555356 1535-1705 TTh, MIrdH 5276, Miller R, 3 cr

5203 Computational Neuroscience III: Neural Systems and Information Processing (§NSc 5203; prereq 5202)
161718 1430-1600 MW, MIrdH 5276, Soechting J, 5 cr

5444 Muscle Contraction (§MdBc 5444, NSc 5444, VB 5444; prereq undergrad courses in biochemistry or physiology, #)
163100 1535-1705 TTh, MoosT 2571, 2585, 3 cr

5552 Readings in Physiology
962028 ar cr

5553 Research in Physiology
756442 ar cr

8113 Problems in Physiology (prereq #)
862099 ar cr

8202 Readings in Physiology
855766 ar cr

8203 Research in Physiology
754139 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
763147 1-18 cr

8777 Thesis Credits: Masters
757865 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
254671 1-36 cr

PLANT BIOLOGY (PBio)
Biological Sciences

R 1009 Minnesota Plant Life (suitable for non maj) (course fee)
★LECT 1220-1310 TTh, BorH 365, Wetmore C (4 field trips 1200-1600 T, 2nd half of quarter)
560363 —1 LAB 1010-1205 TTh, BioSci 115, 4 cr
254962 —2 LAB 1325-1520 TTh, BioSci 115, 4 cr

R 1012 Plants Useful to Humans (Biol/NL; Envt)
262799 1535-1715 MW, FordH 120, Gleason F, 4 cr (Mpls)

3131 Survey of Plant Physiology (§5131; prereq Biol 1103 or Biol 3012 or Biol 3812, 3021 or 5331 or Biol 5001)
760460 1220-1310 MTWF, ClaOff B25, Soulen T, 4 cr

R 3201 Introductory Plant Systematics (prereq Biol 1103 or Biol 3012)
★LECT 1220-1310 MF, BorH 365, Cholewa A
259742 —1 LAB 1325-1625 MF, BioSci 176, 4 cr

5001 Basic Botany (prereq Biol 1008 or Biol 1009, #, Δ)
454121 ar cr

5131 Survey of Plant Physiology (§3131; prereq Biol 1103 or Biol 3012 or Biol 3812, BioC 3021 or BioC 5331 or Biol 5001)
★LECT 1220-1310 MTWF, ClaOff B25, Soulen T
553316 —1 REC 1220-1310 Th, BioSci 70, 4 cr

5182 Plant Metabolism (prereq 5131 or equiv, biochem course)
372546 0945-1100 TTh, BioSci 70, Soulen T, 3 cr

5960 Special Topics (prereq #, Δ)
261698 —1 ar cr (hrs ar; BioSci 756)
057726 —2 1530-1630 T, McNH 33, 0900-1000 W, BioSci 406A, Olszewski N, Marks M D, 2 cr

R 5970 Directed Studies (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
456340 ar cr

5990 Directed Research (max 10 cr may be counted toward maj req; prereq #, Δ) (S-N only)
357822 ar cr

8287 Plant Molecular Biology (prereq BioC 5753 or GCB 5034)
172547 0815-0930 TTh, BioSci 70, Olszewski N, Rubenstein I, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
162293 1-18 cr

8777 Thesis Credits: Masters
359442 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
556071 1-36 cr

8910 Journal Club (prereq Δ) (S-N only)
072548 1200-1300 Th, BioSci 648, Berman J, 1 cr

8950 Seminar (prereq #)
961428 1 cr

8990 Research Problems (prereq #, Δ)
056186 ar cr

PLANT BREEDING (PlBr)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
455740 1-18 cr

8777 Thesis Credits: Masters
059945 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
258493 1-36 cr

PLANT PATHOLOGY (PlPa)
Agricultural, Food, and Environmental Sciences

R 1001 The Good, Bad and Ugly Effect of Microorganisms on Plants and Human Society
853502 1325-1520 Th, BorH 365, Dill-Macky R, 2 cr

R 3001 Management and Control of Field Crop Diseases (prereq Biol 1009 or equiv)
★LECT 0905-0955 MWF, BorH 365, Meronuck R
663464 —1 LAB 1325-1520 W, BorH 296, Meronuck R, 4 cr

3090 Research in Plant Pathology (prereq 1001 or equiv or #)
354211 ar cr

5000 Professional Experience Program (prereq #)
857386 Percich J, 4 cr

5090 Issues in Plant Pathology: Plant Bacteriology
★LECT 0800-0850 W, BorH 295, Danesh D
775363 —1 LAB 1010-1205 MW, BorH 295, 3 cr

R 5203 Physiological and Molecular Plant-Microbe Interactions (prereq intro biochem or plant phys crse or #)
657924 1325-1415 MWF, 1430-1520 M, BorH 491, Young N, Zeyen R, 3 cr

R 5209 Biochemistry of Plant Disease (prereq organic chem or biochem or equiv) (A-F only)
356086 0905-0955 MWF, BorH 491, Mirocha C J, 3 cr

R 5212 Diseases of Forest and Shade Trees
★LECT 0905-0955 TTh, BorH 365, Blanchette R
853967 —1 LAB 1500-1645 MW, BorH 295, Blanchette R, 4 cr

R 5213 Plant Nematology (prereq 3001 or 3002 or 5201, 5202) (A-F only)
★LECT 1220-1310 TTh, BorH 291, MacDonald D
454605 —1 LAB 1325-1520 TTh, BorH 291, 4 cr

5215 Insects in Relation to Plant Diseases (§Ent 5215; prereq one course in entomology and plant pathology, or #) (A-F only)
154033 0945-1100 TTh, HodsonH 480, Lockhart B, Ragsdale D, 3 cr

5999 Special Workshop in Plant Pathology (prereq #)
761687 1-4 cr

8090 Advanced Procedures and Research in Plant Pathology
554191 ar cr

8200 Current Topics in Plant Pathology (prereq #)
062893 1010-1205 F, BorH 491, Kinkel L, 2 cr

8500 Research in Plant Pathology (S-N only)
658877 1-8 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
059427 1-18 cr

8777 Thesis Credits: Masters
556135 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
854813 1-36 cr

POLISH (Plsh)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 3003 Intermediate Polish (§1106; prereq 3002 or #)
571573 0905-0955 MTWThF, NichH 209A, Polakiewicz L, 5 cr

5900 Topics
175223 1820-2050 Th, FolH 326, 4 cr

R 5970 Directed Readings (prereq #, Δ, CLA approval)
358324 1-4 cr

POLITICAL SCIENCE (Pol)
Liberal Arts

R 1001 American Government and Politics (SSci; C/PE)
263709 —2 LECT 1325-1415 MTWThF, AndH 230, Kirshner O, 5 cr (this lecture has no recitation sections)
775301 —3 LECT 1830-2145 T, BlegH 135, 5 cr (this lecture has no recitation sections)
★LECT 1010-1100 MTW, WilleyH 125, Stimson J
460307 —1 REC 0905-0955 Th, BlegH 350, 5 cr
862944 —2 REC 0905-0955 Th, BlegH 210, 5 cr
863155 —3 REC 1010-1100 Th, BlegH 350, 5 cr
760331 —4 REC 1010-1100 Th, BlegH 435, 5 cr
656112 —5 REC 1115-1205 Th, BlegH 350, 5 cr
856142 —6 REC 1115-1205 Th, BlegH 435, 5 cr
753976 —7 REC 1220-1310 Th, BlegH 350, 5 cr
062232 —8 REC 1220-1310 Th, BlegH 225, 5 cr
156252 —9 REC 1010-1100 F, BlegH 245, 5 cr
862880 —10 REC 1010-1100 F, BlegH 105, 5 cr
660760 —11 REC 1010-1100 F, BlegH 135, 5 cr
163372 —12 REC 1115-1205 F, BlegH 350, 5 cr

R 1025 World Politics (SSci; IP)
761897 1115-1205 MWF, AndH 310, Price R, 4 cr

R 1041 Contemporary Political Ideologies (SSci; C/PE)
972686 0905-0955 MWF, AndH 330, Janara L, 4 cr

R 1054 Government and Politics in a Changing World (SSci; IP)
757624 1220-1310 MWF, AndH 230, 4 cr

R 1061 Introduction to Political Thought
457777 1115-1230 TTh, AndH 350, Zumbrunnen J, 4 cr

R 3051 Introduction to Political Analysis (SSci)
861146 0905-0955 MWF, BlegH 5, 4 cr

3070 Directed Field Studies (prereq #, Δ) (A-F only)
853158 1-4 cr

3080 Internship (!; max 8 cr; prereq Δ) (S-N only)
260244 4 cr

R 3085 Introduction to Political Research (prereq 3051 or #)
062134 —1 0815-0930 TTh, BlegH 105, Flanigan W, 4 cr (pol sci maj only)
154431 —2 0815-0930 TTh, BlegH 105, Flanigan W, 4 cr

3110H Honors Work in Selected Fields (max 6 cr; prereq political science honors program maj, 3109H)
163024 1-6 cr

R 3306 Presidential Power and Politics (prereq 1001 or equiv or #)
772687 0905-0955 MWF, AndH 350, 4 cr

R 3477 Political Development (prereq 1054 or 3051 or #)
575302 1010-1100 MWF, BlegH 150, Kalaycioglu E, 4 cr

R 3610 Topics in Political Theory: Contemporary Controversies (§5610; prereq 3051 or 1061 or 8 cr in soc sci or #)
073201 0945-1100 TTh, AndH 230, Ball T, 4 cr

R 3739 Politics of Race, Class, and Ethnicity (prereq 6 cr in social science) (CD)
372689 1325-1415 MWF, AndH 350, Nimtz A, 4 cr

R 3835 International Relations (SSci; IP)
353303 1010-1100 MWF, BlegH 5, Duvall R, 4 cr

R 3836 Foreign Policy Decision Making
559147 1220-1310 MWF, AndH 350, Sampson M, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
856089 1-6 cr

R 5315 State Government and Politics (prereq 1001 or equiv or #)
772690 1430-1520 MWF, BlegH 420, Gray V, 4 cr

R 5327 Local Government and Politics (prereq 1001 or equiv or #)
858005 1245-1400 TTh, BlegH 110, Scott T, 4 cr

R 5410 Advanced Topics in Government and Politics: Human Rights (prereq 3051 or non-political science grad or #) (IP)
053627 1010-1100 MWF, BlegH 155, Sikkink K, 4 cr

R 5471 Politics of Russia and the Commonwealth of Independent States (prereq 3051 or non-political science grad student or #) (IP)
175299 0945-1100 TTh, BlegH 120, Davidheiser E, 4 cr

R 5477 Middle Eastern Government and Politics (prereq 3051 or non-political science grad student or #) (IP)
976348 1325-1415 MWF, AndH 330, Kalaycioglu E, 4 cr

R 5481 Comparative Political Economy (prereq 3051 or non-pol sci grad stu or #)
372692 1430-1520 MWF, BlegH 235, Freeman J, 4 cr

R 5502 Principles of the American Constitution II (prereq 1001 or equiv, 3309 or 5501 or senior standing)
176347 1115-1230 TTh, AndH 370, Vogel H, 5 cr

R 5610 Topics in Political Theory: Contemporary Controversies (§3610; prereq 3051 or 1061 or 8 cr soc sci or non-pol sci grad stu or #)
572688 0945-1100 TTh, AndH 230, Ball T, 4 cr

R 5889 The Politics of Global Economic Relations (prereq 3835 or non-political science grad student or #)
375298 1820-2050 M, BlegH 420, Kirshner O, 4 cr

8102 Approaches to Political Research (prereq pol sci grad maj or Δ)
575297 1230-1500 T, SocSci 101, Flanigan W, 3 cr

8103 Political Science as a Profession (prereq pol sci grad stu) (S-N only)
662833 1325-1520 Th, SocSci 1314, Fogelman E, 3 cr

8121 Introduction to Quantitative Analysis (prereq pol sci grad stu or Stat 5021 or #)
760989 1535-1730 TTh, SocSci 1383, Flanigan W, 4 cr

8140 Individual Readings and Research in Methodology (prereq pol sci grad maj or #, Δ)
662301 1-3 cr

8160 Selected Topics in Models and Methods: Qualitative Methods (prereq pol sci grad maj or #)
655543 1535-1730 M, BlegH 350, Kelliher D, 3 cr

8220 Philosophy of Political Inquiry (prereq pol sci grad maj or #) (A-F only)
372675 1535-1730 Th, SocSci 101, Farr J, 3 cr

8240 Individual Reading and Research in Political Thought (prereq pol sci grad maj or #, Δ)
759082 1-3 cr

8260 Topics in Political Theory: Feminist Theory (§CSDS 8910, sec 3, WoSt 8610, sec 2; prereq pol sci grad maj or #) (A-F only)
762922 1535-1730 T, BlegH 350, Disch L, 3 cr

8309 Proseminar in Political Psychology (§Psy 8211, 8212, 8213; prereq 8308) (S-N only)
361045 1130-1230 F, SocSci 1450, Rahn W, 1 cr

8325 State Politics and Intergovernmental Relations (prereq pol sci grad maj or #) (A-F only)
375303 1535-1730 M, SocSci 1383, Gray V, 3 cr

8340 Individual Reading and Research in American Politics (prereq pol sci grad maj or #, Δ)
458735 1-3 cr

8400 International Relations (prereq pol sci grad maj or Δ)
472683 1230-1500 M, SocSci 1450, Duvall R, 4 cr

8405 International Political Economy (prereq pol sci grad maj or #)
075305 1535-1730 W, HHHCtr 30, Kapstein E, 3 cr

8608 Government and Politics of Russia and the Commonwealth of Independent States (prereq pol sci grad maj or #)
175304 1325-1520 Th, SocSci 101, Davidheiser E, 3 cr

8640 Individual Readings and Research in Comparative Politics (prereq pol sci grad maj or #, Δ)
258476 1-3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
755162 1-18 cr

8777 Thesis Credits: Masters
362910 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
956360 1-36 cr

8990 Directed Readings in Political Science (prereq 45 cr in 8XXX-level pol sci courses) (S-N only)
860787 1-7 cr

PORTUGUESE (Port)
Spanish and Portuguese
Liberal Arts

R 1003 Beginning Portuguese (prereq 1002 or #)
071576 0905-1020 MWF, FolH 116, 5 cr

R 3910 Topics in Luso-Brazilian Literature (prereq Span 3104 or #)
871577 1115-1205 MWF, FolH 116, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
162416 1-5 cr

R 5910 Topics in Luso-Brazilian Cultures (prereq Span 3104 or SpPt 3104 or Δ)
662685 1430-1730 T, FolH 116, Arenas F, 4 cr

5970 Directed Readings (max 15 cr; prereq #, Δ, CLA approval)
853127 1-5 cr

5990 Directed Research (prereq #, Δ, CLA approval)
354208 1-5 cr

8777 Thesis Credits: Masters
060335 1-16 cr

PROSTHODONTICS (Pros)
Dentistry

5200 Fixed Prosthodontics Seminar for Postgraduate Dental Fellows (S-N only)
757056 1 cr

8005 Advanced Clinical Prosthodontics I
860854 ar cr

8006 Advanced Clinical Prosthodontics II (prereq #)
762404 ar cr

8017 Seminar: Advanced Prosthodontics (prereq #)
053921 ar cr

8020 Applied Gnathology (prereq #)
357061 ar cr

8032 Principles of Maxillofacial Care (prereq #)
859042 ar cr

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❑ Approval of the college offering the course is required for registration.
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PSYCHOLOGY (Psy)

Liberal Arts

R 1001 Introduction to Psychology (SSci)
★LECT 1325-1415 MTWTh, WilleyH 175, Peterson G, others, 5 cr
856481 —1 REC 0905-0955 F, ChDev 105
054812 —2 REC 0905-0955 F, BlegH 260
157703 —3 REC 0905-0955 F, WullH 220
954138 —4 REC 1010-1100 F, ChDev 105
360333 —5 REC 1010-1100 F, BlegH 260
760197 —6 REC 1010-1100 F, WullH 220
160262 —7 REC 1010-1100 F, BlegH 225
953216 —8 REC 1115-1205 F, BlegH 225
162495 —9 REC 1115-1205 F, BuH 123
457200 —10 REC 1115-1205 F, BuH 120
058035 —11 REC 1220-1310 F, BlegH 225
653386 —12 REC 1220-1310 F, BuH 123
863270 —13 REC 1220-1310 F, BuH 120
961462 —14 REC 1220-1310 F, ChDev 105
158382 —15 REC 1325-1415 F, BlegH 225
161430 —16 REC 1325-1415 F, ChDev 105
360140 —17 REC 1325-1415 F, BlegH 255
858120 —18 REC 1430-1520 F, BlegH 255

R 1005 Introductory Laboratory Psychology (1004-1005†; prereq 1004) (SSci)
★LECT 1010-1100 M, SciCB 325, Fox P, Peterson G
856898 —1 LAB 1325-1625 T, EltH 50, 4 cr
354953 —2 LAB 1325-1625 T, EltH 60, 4 cr
161766 —3 LAB 0905-1205 W, EltH 50, 4 cr
757848 —4 LAB 0905-1205 W, EltH 60, 4 cr
254198 —5 LAB 1325-1625 W, EltH 50, 4 cr
262110 —6 LAB 1325-1625 W, EltH 60, 4 cr
059301 —7 LAB 0905-1205 Th, EltH 50, 4 cr
461277 —8 LAB 0905-1205 Th, EltH 60, 4 cr
163282 —9 LAB 1325-1625 Th, EltH 50, 4 cr

R 3101 Introduction to Personality (§5101; prereq 1001) (SSci)
555972 0945-1100 TTh, SmithH 100, Tellegen A, 4 cr

R 3201 Introduction to Social Psychology (prereq 1001)
954513 1010-1100 MWF, NichH 45, Rothman A, 4 cr

R 3604 Introduction to Abnormal Psychology (§5604H; prereq 1001)
262320 1415-1530 TTh, SmithH 100, Butcher J, 4 cr

R 3617 Introduction to Clinical Psychology (prereq 3604 or 5604H, 3801 or equiv) (A-F only)
962448 0945-1100 TTh, WullH 140, Katsanis J, 4 cr

R 3666 Human Sexuality (prereq 1001) (A-F only)
257389 1115-1230 TTh, SmithH 100, Laube H, 4 cr

R 3902 Major Project in Psychology (prereq 1005, 3801, jr or sr psychology maj)
761303 —1 1430-1625 T, BuH 120, 4 cr
160312 —2 1325-1520 W, FordH 40, 4 cr
061775 —3 1010-1205 Th, ChDev 105, 4 cr
063428 —4 1010-1205 F, EltH N119, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
061100 1-8 cr

3990 Directed Research (prereq #, Δ, ❑)
853063 1-8 cr

R 5013 Psychology of Learning (prereq 5012, 1005, 3011 or EEB 3111 or #, except grad students)
055278 0905-0955 MWF, EltH N119, Overmier J, 4 cr

R 5014 Psychology of Human Learning and Memory (prereq 1005 or 3011 or 3051 or # except for student in honors sequence, grad students)
555132 0945-1100 TTh, BuH 120, Fox P, 4 cr

R 5034 Psychobiology of Vision (§NSc 5034; prereq 3031 or #)
156106 0945-1100 TTh, EltH 160, Burkhardt D, 4 cr

R 5038 Introduction to Neural Networks (prereq 3061 or 5061, Math 3261 or equiv or #) (A-F only)
159354 1115-1230 TTh, EltH N119, Kersten D, 4 cr

R 5141 Psychology of Women (prereq 1001)
160480 1415-1530 TTh, EltH N119, Frazier P, 4 cr

R 5202 Attitudes and Social Behavior (prereq 3201 or #)
561111 1325-1415 MWF, EltH N119, Borgida E, 4 cr

R 5702 Psychology of Individual Behavior in Organizations (prereq 3801 or equiv, 8 cr in psychology or #)
863494 1245-1400 MW, MurH 308, Kanfer R, 4 cr

R 5900H Honors Seminar: Psychology (prereq psychology honors maj or #) (S-N only)
161072 1430-1625 W, EltH N227, Fletcher C, 1 cr

5901H Honors Project (prereq sr, #) (A-F only)
060075 4-8 cr

5960 Topics in Psychology (prereq 1001, #)
876102 Pazandak C, 4 cr (meets Th)

R 8019 Seminar: Readings in Behavior Theory (prereq 5017, 5012 or #)
258087 1325-1520 T, EltH N227, Overmier J, 3 cr

R 8031 Seminar: Visual Perception (§NSc 8031; prereq 5031 or #)
155537 Legge G, Kersten D, 1 cr

R 8056 Seminar: Psychology of Language (prereq 5054, #)
162813 1245-1400 TTh, EltH 225, Fletcher C, 3 cr

R 8070 Seminar: Psychopharmacology (prereq #)
663156 Hatsukami D, Overmier J, others, 1 cr (MlrdH 3260)

R 8114 Scientific Study of Psychopathology (8114-8115†; prereq #)
361062 1300-1530 W, EltH N450, Leon G, 3 cr

R 8115 Scientific Study of Psychopathology (8114-8115†; prereq 8114, #)
057564 0900-1200 W, EltH N668, Luciana M, 3 cr

R 8121 Achievement Motivation and Women (prereq 8 cr psychology, grad student, #)
553347 1325-1555 W, EltH N491, Faunce P, 3 cr

R 8206 Seminar: Research in Social Psychology (prereq 8205, #)
157059 1220-1420 T, EltH N305, Snyder M, 3 cr

R 8208 Advanced Social Psychology: The Self (prereq #)
253214 1010-1155 W, EltH N227, Rothman A, Berscheid E, 3 cr

R 8213 Proseminar in Political Psychology (§Pol 8309; prereq acceptance into the PhD minor in Political Psychology) (S-N only)
755002 1130-1230 F, SocSci 1450, Borgida E, 1 cr

R 8410 Perspectives in Learning, Perception, and Cognition (prereq post-baccalaureate status) (S-N only)
762970 1535-1730 Th, FordH 120, Van den Broek P, 1 cr

R 8502 Counseling Psychology II: Assessment (prereq counseling psych stu or #)
★LECT 1430-1610 W, EltH N595, Dawis R
954284 —1 LAB 1325-1520 F, EltH N595, Dawis R, 4 cr

R 8516 Practicum in Student Counseling (prereq 8501, 8502, 8503 or equiv) (S-N only)
253987 1430-1625 Th, EddyH 202, Loper R, 4 cr

R 8519 Practicum in Counseling Psychology (prereq 8518) (S-N only)
961929 Hansen J, 1-4 cr

R 8522 Pre-Practicum in Applied Psychology (prereq 8521) (S-N only)
954415 1300-1630 M, EltH N595, Keierleber D, 1 cr

R 8541 Multicultural Issues in Counseling (prereq grad student in counseling psychology or #) (S-N only)
875614 Haynes H, 2 cr

R 8560 Advanced Practicum/Internship in Counseling Psychology (max 24 cr; prereq #) (S-N only)
260843 Hansen J, Frazier P, 1-6 cr

R 8613 Professional Methods in Clinical Psychology I: Assessment (prereq clinical psychology maj)
★LECT 1220-1350 TTh, EltH N423, Grove W, 4 cr
660869 —1 LAB 1430-1645 W, EltH N423, Grove W, others

R 8620 Practicum in Clinical Psychology (prereq #) (S-N only)
653257 2 cr

R 8622 Professional Methods in Clinical Psychology II: Adult Behavior Therapy (prereq clinical psychology maj, 8611, 8612, 8613)
776481 0900-1200 W, EltH N423, Kanfer F, 4 cr

R 8632 Professional Methods in Clinical Psychology III: Descriptive Psychopathology (prereq clinical psychology maj, 8611, 8612, 8613)
056253 1530-1700 TTh, EltH N423, Iacono W, 3 cr

R 8660 Seminar: The Psychopathic Personality: Theory and Research (prereq #)
259675 1010-1155 T, EltH N227, Lykken D, 2 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
359215 1-18 cr

8777 Thesis Credits: Masters
161721 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
153957 1-36 cr

R 8900 Seminar: Behavioral Genetics (prereq #)
159376 McGue M, 2 cr

R 8970 Seminar: Special Areas of Psychology and Related Sciences (prereq #)
454443 —1 1220-1400 TTh, EltH N668, Cudeck R, 4 cr
675615 —2 Ackerman P, Kanfer R, 2 cr
461859 —3 1220-1420 Th, EltH N227, Snyder M, 1-6 cr
963857 —4 McGue M, 1-6 cr (EltH)
654778 —5 1630-1800 T, Mayo D330, Gershenson C, Kane R, others, 1 cr
762757 —6 1220-1415 TTh, EltH N647, Bouchard T, 4 cr
856769 —7 1535-1735 M, EltH N423, Iacono W, 3 cr
462171 —8 1430-1530 T, EltH 440, Iacono W, 1 cr
657440 —9 Iacono W, McGue M, 1-6 cr
856433 —10 Berscheid E, 1-6 cr (EltH N305)
162061 —11 Ones D, 1-6 cr (EltH N491)

R 8980 Directed Teaching in Psychology (prereq #)
759938 1-6 cr

R 8990 Research Problems (prereq #)
160097 1-6 cr

PUBLIC AFFAIRS (PA)

R 5002 Planning and Management of Organizational Relations (prereq publ aff or planning or sci/tech pol or publ hlth maj or #) (A-F only)
663481 —1 1535-1720 MW, BlegH 140, Stone M, 4 cr
658555 —2 1535-1720 MW, BlegH 135, Bryson J, 4 cr
656577 —3 1535-1720 MW, HHHCtr 25, Diaz W, 4 cr

R 5012 Policy Analysis II (prereq 5011, publ aff or planning or sci/tech pol or publ hlth maj or #) (A-F only)
957007 —1 LECT 1535-1720 TTh, BlegH 135, Archibald S, 4 cr
★LAB 0905-0955 F, BlegH 90
654277 —2 LECT 1535-1720 TTh, BlegH 220, Hoenack S, 4 cr
356041 —3 LECT 1535-1720 TTh, AndH 230, 4 cr

R 5112 Organizational Design and Change (prereq 5002, grad or publ hlth stu or adult spec or #)
172693 0815-0930 TTh, HHHCtr 60, Stone M, 3 cr

R 5123 Financial Management in Public and Nonprofit Organizations (prereq grad or publ hlth stu or adult spec or #)
163355 1415-1530 TTh, HHHCtr 20, 3 cr

5125 State and Local Public Finance (§ApEc 5640; prereq grad or publ hlth stu or adult spec or #)
475423 1630-1950 Th, ClaOff B30, Honadle B, 4 cr

R 5191 Topics in Public and Independent Sector Management: Policies and Practices of Philanthropy (prereq grad or publ hlth stu or adult spec or #)
255500 1730-2000 Th, HHHCtr 25, Diaz W, 3 cr

R 5221 Law and Urban Land Use (prereq grad or publ hlth stu or adult spec or #)
662346 1815-2045 W, HHHCtr 25, Sellergren D, 3 cr

R 5251 Environmental Planning (prereq grad or publ hlth stu or adult spec or #)
755498 —1 LECT 1115-1230 TTh, HHHCtr 60, Bolan R, 4 cr
★LAB 1115-1230 F, BlegH 440, Bolan R

R 5396 Topics in Policy Analysis: Seminar on Participatory Policy Analysis (prereq 5395, grad or publ hlth stu or adult spec or #)
873586 1815-2045 W, HHHCtr 30, Meyers S, 3 cr

R 5413 Seminar: Aging and Disability Policy (prereq grad or publ hlth or adult spec or #)
973501 1245-1400 TTh, HHHCtr 30, Eustis N, 3 cr

R 5442 Seminar on Women and Public Policy (prereq grad or publ hlth stu or adult spec or #)
462428 0945-1100 TTh, BlegH 220, Kenney S, 3 cr

R 5451 Racial Inequality and Public Policy (prereq grad or publ hlth stu or adult spec or #)
873393 1010-1150 MW, HHHCtr 30, Myers S, 4 cr

R 5494 Topics in Social Policy: Child Welfare Policy (prereq grad or publ hlth stu or adult spec or #)
462669 0815-1045 W, HHHCtr 25, Ards S, 3 cr

R 5496 Topics in Social Policy: Women, Reproductive Health, and Population Policy in Developing Countries (prereq grad or publ hlth stu or adult spec or #)
555499 1415-1530 TTh, HHHCtr 25, Myntti C, 3 cr

R 5522 Development Planning and Policy Analysis (prereq 5022, 5501, 5502 or equiv or #, grad or publ hlth stu or adult spec or #)
372479 1010-1150 MW, HHHCtr 20, Assaad R, 4 cr

R 5622 Managing Urban Growth and Change (prereq grad or publ hlth stu or adult spec or #)
275424 1220-1400 TTh, HHHCtr 25, Luce T, 4 cr

R 5741 Economics of Environmental and Resource Policy (prereq grad or publ hlth stu or adult spec or #)
972476 1010-1150 MW, HHHCtr 60, Archibald S, Renwick M, 4 cr

5793 Topics in Technology, Energy and Environmental Policy: Preventing Pollution: Innovative Approaches to Environmental Management (prereq grad or publ hlth stu or adult spec or #)
173500 1730-2030 Th, CivE 202, Marcus A, Abrahamson D, 3 cr

R 5795 Topics in Technology, Energy and Environmental Policy: Ethics and Technology in Health Care (prereq grad or publ hlth stu or adult spec or #)
175425 0945-1100 TTh, HHHCtr 60, Keller K, 3 cr

R 5891 Topics in Foreign Policy: Comparative Public Policy (prereq grad or publ hlth stu or adult spec or #)
975426 1535-1805 T, HHHCtr 60, Kapstein E, 3 cr

5892 Topics in Foreign Policy: Strategies for Sustainable Development (prereq grad or publ hlth stu or adult spec or #)
759339 1815-2045 M, HHHCtr 25, Bochniarz Z, 3 cr

R 5893 Topics in Foreign Policy: The Successor States of the Soviet Union: Policy and Politics (prereq grad or publ hlth stu or adult spec or #)
358436 0815-0930 TTh, HHHCtr 20, Sturua M, 3 cr

R 5895 Topics in Foreign Policy: Resources for National Security (prereq grad or publ hlth stu or adult spec or #)
775427 1535-1805 M, HHHCtr 20, Kapstein E, 3 cr

R 5903 Computer Applications in Public Affairs (!; prereq grad or publ hlth stu or adult spec or #) (S-N only)
953684 0800-1000 MW, BlegH 90, Archibald S, 1 cr

R 5905 Proposal Writing (prereq grad or publ hlth stu or adult spec or #)
876472 1245-1400 TTh, HckrH 302, Mikelonis-Paraskov V,3 cr (StP)

R 5965 General Topics: Conflict Managment Seminar (prereq grad or publ hlth stu or adult spec or #)
060528 1325-1525 M, Fiutak T, 1 cr (alt M)

R 5966 General Topics: Application of Mediation Methods (prereq grad or publ hlth stu or adult spec or #)
862670 1245-1515 W, HHHCtr 186, Fiutak T, 3 cr

R 5998 General Topics: Leadership: Professional Practice in Public Affairs (prereq grad or publ hlth stu or adult spec or #) (A-F only)
253729 1245-1515 M, HHHCtr 20, DeCramer G, 3 cr

R 8300 Case Studies in Policy Analysis (prereq 5011, 5012, #)
575428 1815-2045 M, HHHCtr 20, Brandl J, 3 cr

R 8391 Advanced Topics in Policy Analysis: Research Methods in Social and Labor Policy
★LECT 0945-1215 T, HHHCtr 20, Kleiner M
361126 —1 LAB 1245-1335 T, HHHCtr 20, Kleiner M

R 8426 Human Resources and Organizational Performance (prereq 5022, microecon)
460646 1730-2100 T, HHHCtr 20, Kleiner M, 4 cr

R 8492 Advanced Topics in Social Policy: Public Policy Plan B Seminar
176199 Levison D, 2 cr

8703 Technology, Energy, and Environmental Policy: Plan B Seminar (prereq 1st yr Humphrey Institute grad stu) (S-N only)
773015 Archibald S, Abrahamson D, others, 1 cr

8706 Technology, Energy, and Environmental Policy: Plan B Seminar (prereq 2nd yr Humphrey Institute grad stu) (S-N only)
573016 Archibald S, Abrahamson D, others, 1 cr

8901 Plan B Tutorial (prereq public affairs or planning maj who have completed core crses in PA: 5001, 5002, 5011, 5012, 5021, 5022) (S-N only)
861471 —1 4 cr
355262 —2 Abrahamson D, 4 cr
663559 —3 Adams J, 4 cr
561528 —4 Archibald S, 4 cr
659530 —5 Ards S, 4 cr
257554 —6 Assaad R, 4 cr
361529 —7 Bolan R, 4 cr
459531 —8 Brandl J, 4 cr
157555 —9 Brookins G, 4 cr
155263 —10 Bryson J, 4 cr
653565 —11 Eustis N, 4 cr
362549 —12 Hoenack S, 4 cr
860529 —13 Kapstein E, 4 cr
458556 —14 Keller K, 4 cr
456578 —15 Kenny S, 4 cr
055264 —16 Kleiner M, 4 cr
258557 —17 Kudrle R, 4 cr
256579 —18 Levison D, 4 cr
855265 —19 Luce T, 4 cr
259532 —20 Lukermann B, 4 cr
260647 —21 Myers S, 4 cr
775430 —22 Schuh G, 4 cr
575431 —23 Stone M, 4 cr

8910 Independent Study (may be taken once toward masters deg in publ aff, plan or sci/tech pol; prereq publ aff, plan or sci/tech pol maj or #)
063185 —1 3 cr
655266 —2 Abrahamson D, 1-3 cr
762550 —3 Adams J, 1-3 cr
562551 —4 Archibald S, 1-3 cr
656580 —5 Ards S, 1-3 cr
561531 —6 Assaad R, 1-3 cr
159533 —7 Bolan R, 1-3 cr
456581 —8 Brandl J, 1-3 cr
155269 —9 Brookins G, 1-3 cr
863561 —10 Bryson J, 1-3 cr
361532 —11 Eustis N, 1-3 cr
959534 —12 Hoenack S, 1-3 cr
757557 —13 Kapstein E, 1-3 cr
455270 —14 Keller K, 1-3 cr
153568 —15 Kenny S, 1-3 cr
362552 —16 Kleiner M, 1-3 cr
060531 —17 Kudrle R, 1-3 cr
953569 —18 Levison D, 1-3 cr
162553 —19 Luce T, 1-3 cr
860532 —20 Lukermann B, 1-3 cr
558662 —21 Myers S, 1-3 cr
375432 —22 Schuh G, 1-3 cr
175433 —23 Stone M, 1-3 cr

PUBLIC HEALTH (PubH)

3001 Personal and Community Health (§3004, GC 3114)
854469 1220-1310 MWF, PWB 2470, Rothenberger J, 3 cr

3301 Perspectives: Interrelationships of People and Animals in Society Today (§5301, CVM 3100, CVM 5100)
159029 1600-1740 T, AnScVM 125, Dunlop R, 2-3 cr (StP)

5004 Field Instruction in Public Health (prereq #)
853953 ar cr

R 5005 Topics in Public Health (prereq #)
658118 0905-1100 W, Mayo A387, Rothenberger J, 3 cr

5010 Public Health Approaches to AIDS (prereq upper div or grad stu or #)
155540 1640-1920 W, MoosT 2620, Rothenberger J, 3 cr

R 5026 Psychosocial Approaches to Health Behavior Change (A-F only)
753945 1325-1625 T, Mayo A367, Finnegan J, Lytle L, 3 cr (prereq publ hlth stu, epi, HSRP, HSRP/A, biostat, or env hlth grad stu or #)

R 5028 Organizational and Institutional Settings of Community Health Education (prereq 5026, 5027, comm hlth educ maj or #) (A-F only)
953054 1245-1400 TTh, Mayo D325, Wolfson M, 3 cr

R 5030 Prevention of High Risk Behavior Among Adolescents (prereq CHE or PubH Nutr or Epi MPH or Epi grad stu or #, 2nd yr master's recommended, 1 grad behav sci crse such as 5026) (A-F only)
375589 0905-1205 T, Mayo A387, Perry C, 3 cr

R 5084 Internship in Health Education Practice I (prereq health educ maj and community health educ maj or #) (S-N only)
153903 ar cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 5085 Internship in Health Education Practice II (prereq health educ maj and community health educ maj or #) (S-N only)
256355 ar cr

5090 Research Topics in Health Education (prereq health educ maj and community health educ maj or #)
456984 —1 Finnegan J, 2-8 cr
356587 —2 Forster J, 2-8 cr
255285 —3 French S, 2-8 cr
063574 —4 Garrard J, 2-8 cr
161542 —5 Henrickus D, 2-8 cr
459545 —6 Jeffery R, 2-8 cr
863575 —7 Jones-Webb R, 2-8 cr
961543 —8 Kushi L, 2-8 cr
259546 —9 Lando H, 2-8 cr
157572 —10 Lazovich D, 2-8 cr
155286 —11 Luepker R, 2-8 cr
053580 —12 Lytle L, 2-8 cr
362566 —13 McGovern P, 2-8 cr
060545 —14 Murray D, 2-8 cr
858568 —15 Neumark-Sztainer D, 2-8 cr
156588 —16 Perry C, 2-8 cr
860546 —17 Pirie P, 2-8 cr
056589 —18 Rothenberger J, 2-8 cr
761690 —19 Wagenaar A, 2-8 cr
859686 —20 Williams C, 2-8 cr
775590 —21 Wolfson M, 2-8 cr
376354 —22 2-8 cr

5096 Community Health Education Master's Research Project (prereq health educ maj and community health educ maj or #)
859980 —1 Finnegan J, ar cr
955287 —2 Forster J, ar cr
663576 —3 French S, ar cr
761544 —4 Garrard J, ar cr
159547 —5 Henrickus D, ar cr
957573 —6 Jeffery R, ar cr
755288 —7 Jones-Webb R, ar cr
853581 —8 Kushi L, ar cr
757574 —9 Lando H, ar cr
555289 —10 Lazovich D, ar cr
653582 —11 Luepker R, ar cr
162567 —12 Lytle L, ar cr
660547 —13 McGovern P, ar cr
658569 —14 Murray D, ar cr
356590 —15 Neumark-Sztainer D, ar cr
955290 —16 Perry C, ar cr
463577 —17 Pirie P, ar cr
561545 —18 Rothenbeger J, ar cr
657714 —19 Wagenaar A, ar cr
455561 —20 Williams C, ar cr
575591 —21 Wolfson M, ar cr
676358 —22 ar cr

5097 Topics: Selected Readings (prereq grad student in health sciences)
161810 —1 Finnegan J, ar cr
755291 —2 Forster J, ar cr
263578 —3 French S, ar cr
361546 —4 Garrard J, ar cr
959548 —5 Henrickus D, ar cr
557575 —6 Jeffery R, ar cr
555292 —7 Jones-Webb R, ar cr
453583 —8 Kushi L, ar cr
062568 —9 Lando H, ar cr
460548 —10 Lazovich D, ar cr
058570 —11 Luepker R, ar cr
862569 —12 Lytle L, ar cr
260549 —13 McGovern P, ar cr
858571 —14 Murray D, ar cr
156591 —15 Neumark-Sztainer D, ar cr
355293 —16 Perry C, ar cr
163579 —17 Pirie P, ar cr
161547 —18 Rothenberger J, ar cr
853712 —19 Wagenaar A, ar cr
062702 —20 Williams C, ar cr
375592 —21 Wolfson M, ar cr
276363 —22 ar cr

R 5150 Topics: Environmental and Occupational Health
958464 —1 ar cr (prereq #)
875600 —2 1730-2030 Th, CivE 202, Sexton K, 3 cr (Preventing Pollution: Innovative Approaches to Environmental Management) (prereq publ hlth or grad stu or honors undergrad or #) (A-F only)

5152 Environmental Health
158762 0800-0850 TTh, MoosT 2520, Vesley D, 2 cr

R 5154 Practicum in Environmental and Occupational Health (§Nurs 5882; prereq env hlth maj or grad nurs stu) (S-N only)
959825 1-6 cr

R 5158 Health Risk Evaluation (prereq environmental health stu or #)
753914 1640-1940 W, MoosT 2520, Sexton K, 3 cr

5159 Seminar: Environmental Health (prereq environmental health student) (S-N only)
257490 1535-1625 W, WDH 2110, 2140, Brosseau L, 2 cr

R 5166 Employee Health Services and Cost Containment (§Nurs 5884; prereq occ hlth nurs stu or grad nurs stu)
753167 1010-1100 M, 0905-1100 W, Mayo 1250, McGovern P, 3 cr

R 5197 Topics: Injury Prevention in the Workplace, Community, and Home (§5597; prereq #)
458895 Gerberich S, 1-3 cr

R 5212 Ventilation Control of Environmental Hazards (prereq 5210 or #)
353124 1325-1625 F, Mayo 1250, Vincent J, 3 cr

R 5218 Field Problems in Occupational Health (§Nurs 5886; prereq 5211 or 5210, env hlth maj or nurs grad student or #)
855895 0800-1100 F, Mayo 1250, Olson D, 3 cr

R 5233 Biological Safety (prereq #)
058682 1325-1520 M, Mayo 1250, Vesley D, 2 cr

5246 Legal Framework of Public Health Policy II (prereq 5245)
475602 1730-2030 T, Mayo A387, Austin M, 3 cr

R 5250 Environmental and Occupational Health Master's Project (prereq env hlth maj, #) (S-N only)
259269 —1 1-4 cr
663044 —2 Barber D, 1-4 cr
154803 —3 Brosseau L, 1-4 cr
858246 —4 Church T, 1-4 cr
159161 —5 Gerberich S, 1-4 cr
759888 —6 Greaves I, 1-4 cr
359473 —7 Johnson R, 1-4 cr
254959 —8 Maldonado G, 1-4 cr
757963 —9 Mandel J, 1-4 cr
761074 —10 McGovern P, 1-4 cr
754674 —11 Olson D, 1-4 cr
956858 —12 Ramachandran G, 1-4 cr
962952 —13 Sexton K, 1-4 cr
554742 —14 Swackhammer D, 1-4 cr
758580 —15 Vesley D, 1-4 cr
872728 —16 Vincent J, 1-4 cr
575588 —17 Wattenberg E, 1-4 cr

R 5255 Hazardous Materials Management (prereq 5253 or equiv, env hlth maj or #)
355312 1600-1900 M, Mayo 1250, Brosseau L, 3 cr

R 5271 Occupational Epidemiology (prereq basic course in epidemiology, biostatistics)
553106 1115-1205 MWF, Mayo 1250, Mandel J, 3 cr

5301 Perspectives: Interrelationships of People and Animals in Society Today (§3301, CVM 3100, CVM 5100)
561206 1600-1740 T, AnScVM 125, Dunlop R, 2-3 cr (StP)

R 5326 Research in Animal/Human Health (prereq VPH or Epi maj or #)
256484 —1 Diesch S, ar cr
160544 —2 Pullen M, ar cr
163587 —3 Quigley J, ar cr
058567 —4 Robinson R, ar cr
261555 —5 ar cr

R 5335 Epidemiology and Control of Infectious Diseases (prereq epi MPH or epi grad stu or #)
457908 1115-1230 TTh, WDH 2110, 2140, Lifson A, 3 cr

R 5341 Epidemiology III: Interpretation of Data from Epidemiologic Research (prereq 5340, 5420, 5454, epi maj or #)
162044 0800-0930 MWF, Mayo A270, Murray D, McGovern P, Schreiner P, 4 cr

R 5379 Epidemiology Master's Project Seminar (prereq epi MPH or epi grad stu) (S-N only)
155319 1430-1625 M, Mayo A270, Jacobs D, Gross M, 2 cr

R 5381 Genetic Epidemiology (prereq 5330, 5414 or equiv, college coursework in genetics, hlth sci grad-level stu or #)
260180 0905-1100 TTh, Mayo D262, Sellers T, Atwood L, 4 cr

R 5391 Introduction to Behavioral Epidemiology (prereq publ hlth, pharm, med, nurs or dent stu; epid, biostat or env hlth grad stu or #)
254086 1415-1530 TTh, Mayo 1250, Jones-Webb R, 3 cr

R 5422 Statistical Computing III: Data Collection and Management (prereq 5420 or 5464, and 5462)
853483 1430-1520 MW, 1325-1520 F, Neaton J, Connett J, 3 cr (CCBR, 221 Univ Ave SE)

R 5450 Biostatistics I (§5414; prereq Math 1111 or Math 1201, hlth sci stu or # for undergrads)
153201 1115-1310 T, MoosT 2520, 1115-1310 Th, OwreH 2230, Jeffries D, 4 cr

R 5454 Biostatistics III (prereq 5452, 5420, or equiv with #)
957427 1010-1100 MTWTh, OwreH 2230, Grambsch P, 4 cr

R 5456 Biostatistics Consulting Seminar (prereq 5462, 5464, biostat stu or #) (S-N only)
456712 1245-1400 TTh, Mayo D262, Goldman A, 3 cr

R 5466 Biostatistical Inference III (§5454; prereq 5465, Stat 5133 or ¶Stat 5133, biostat maj or #) (A-F only)
958299 0800-0850 MTWTh, Mayo 1250, Connett J, 4 cr

R 5470 Topics in Biostatistics (prereq #)
659687 ar cr

R 5606 Health of Infants and Young Children (prereq grad or public hlth stu or #)
957475 1325-1610 M, WDH 2110, Garwick A, 3 cr

R 5614 Field Experience in Maternal and Child Health (prereq MCH grad stu, #) (S-N only)
060092 —1 Garwick A, ar cr
857128 —2 Hellerstedt W, ar cr
256517 —3 Himes J, ar cr
656904 —4 Patterson J, ar cr
662282 —5 Resnick M, ar cr
663707 —6 Story M, ar cr
475597 —7 Wunderlich M, ar cr

R 5631 Program Evaluation in Maternal and Child Health (§5852; prereq 5623 or 5806 or #, MCH or PHA stu or #)
460694 0905-1205 F, Mayo A367, Wunderlich M, 3 cr

R 5647 Independent Study in Maternal and Child Health (prereq #, MCH or grad stu preferred)
755937 —1 Garwick A, ar cr
661343 —2 Hellerstedt W, ar cr
257098 —3 Himes J, ar cr
762788 —4 Patterson J, ar cr
255030 —5 Resnick M, ar cr
061680 —6 Story M, ar cr
275598 —7 Wunderlich M, ar cr

R 5648 Topics in Maternal and Child Health
572674 0830-1700 F, Mayo D325, Blum R, 2 cr (Grantwriting for Public Health) (prereq MCH or PHA stu or #) (Apr 4, 25)

R 5649 Maternal and Child Health Master's Project (prereq MCH grad stu, #) (S-N only)
460713 —1 Garwick A, 3-4 cr
453146 —2 Hellerstedt W, 3-4 cr
161371 —3 Himes J, 3-4 cr
455107 —4 Patterson J, 3-4 cr
160754 —5 Resnick M, 3-4 cr
959677 —6 Story M, 3-4 cr
175599 —7 Wunderlich M, 3-4 cr

5702 Policy Issues in Public Health Administration (prereq student in public health administration or #)
772723 1325-1520 TTh, Mayo A387, Block L, 3 cr

5704 Field Experience: Public Health Administration (prereq student in public health administration or #) (S-N only)
363474 —1 Aroskar M, 1-12 cr
155109 —2 Block L, 1-12 cr
258395 —3 Dornblaser B, 1-12 cr
855847 —4 Johnson G, 1-12 cr
658796 —5 Litman T, 1-12 cr
360087 —6 McBean M, 1-12 cr
162276 —7 Resnick M, 1-12 cr
153142 —8 Veninga R, 1-12 cr
558337 —9 Weckwerth V, 1-12 cr

R 5705 Community Health Assessment (prereq grad-level epid crse, PHA or MCH stu or #)
176364 1430-1730 W, Mayo 1250, McBean M, 3 cr

5707 Independent Study: Public Health Administration (prereq student in public health administration or #) (S-N only)
161394 —1 Aroskar M, 1-12 cr
858263 —2 Block L, 1-12 cr
756361 —3 McBean M, 1-12 cr
862832 —4 Veninga R, 1-12 cr
156955 —5 1-12 cr

R 5711 Public Health Law (prereq student in public health or #)
162133 1840-1925 M, Mayo D325, Feinwachs D, 4 cr

5734 Ethical Dimensions of Public Health (prereq public health or grad stu or #) (S-N only)
257375 1535-1730 T, Mayo D325, Aroskar M, 1 cr (Mar 25, Apr 1, 15, 22, 29)

R 5737 Topics: Multidisciplinary Perspectives on Aging (§5520, AdEd 5440, CPsy 5305, HSU 5009, Nurs 5780, PA 5414, Phar 5009, Soc 5960, SW 5024)
154761 1640-1825 MW, MoosT 2890, 4 cr

5739 Topics: Public Health Administration (prereq student in public health administration or #)
155764 —1 Aroskar M, ar cr
055670 —2 Block L, ar cr
162102 —3 McBean M, ar cr
558385 —4 Veninga R, ar cr
580346 —5 ar cr

R 5745 Advanced Problem Solving Project in Health Services Organizations (prereq 5744) (A-F only)
654862 1535-1730 TF, Mayo C381, Dornblaser B, others, 5 cr (off-campus)

R 5750 Long Term Care Industry (prereq MHA or PHA student or #) (A-F only)
156042 1010-1205 M, 1010-1100 W, Mayo C381, Grant L, 3 cr

5751 Principles of Management in Health Services Organizations (prereq grad level student)
552960 0800-0955 TW, MoosT 5125, Veninga R, 3 cr

R 5754 Marketing Health Services (prereq Hospital Administration or Public Health Administration stu or #) (A-F only)
155120 0800-0930 WF, Mayo C381, Hillestad S, 3 cr

R 5759 Health Care Financial Management: Private Sector Emphasis (prereq 5756, 5757, MHA or PHA student or #) (A-F only)
953796 1325-1520 MW, Mayo D325, Connor R, 4 cr

R 5781 Quantitative Methods Applied to Health Administration Problems (prereq basic statistics, MHA student) (A-F only)
862264 1325-1520 TTh, Mayo C381, Weckwerth V, 3 cr

R 5762 Information Technology in Health Care (prereq MHA or PHA or MCH students or #) (A-F only)
072727 1115-1205 W, 1010-1205 F, Mayo C381, Potthoff S, 3 cr

R 5768 Applied Field Research III (prereq 5767, MHA student or #) (A-F only)
372725 1325-1520 W, Mayo C396, Weckwerth V, Feinwachs D, 2 cr

R 5770 Topics: Hospital and Health Care Administration (prereq hospital administration student or #)
352930 —1 1010-1205 Th, Mayo C381, 2 cr
156929 —2 2 cr
959159 —3 ar cr
356735 —4 Dornblaser B, 3 cr

R 5771 Healthcare Financial Management: Public Sector Emphasis (prereq one prior college level 3 cr accounting course or #)
159046 1010-1205 TTh, EE/CSci 3115, Connor R, 4 cr

R 5796 Legal Considerations in Health Services Organizations (prereq MHA student or #)
460209 1715-2015 Th, Mayo D326, Feinwachs D, 3 cr

R 5813 Managed Care II (prereq 5812) (A-F only)
172685 1535-1730 M, 1535-1625 W, Mayo C381, Christianson J, 3 cr

R 5852 Program Evaluation in Health and Mental Health Settings (§HSU 5026; prereq #)
153702 1325-1520 MW, Mayo A367, Pirie P, 4 cr

R 5862 Cost-Benefit, Cost-Effectiveness and Decision Analysis in Healthcare (prereq 3 cr in interm econ) (A-F only)
454216 1430-1600 MW, PWB 6210, Christianson J, 3 cr

R 5870 Survey Research and Sample Design in Health Services Research (A-F only)
057838 1010-1140 MW, Mayo D330, Moscovice I, 3 cr

R 5901 Seminar: Public Health Nutrition (prereq public hlth nutr maj or #) (S-N only)
356315 Krinke U, 2 cr

R 5908 Field Experience: Public Health Nutrition (prereq public health nutrition maj) (S-N only)
753413 —1 Krinke U, 1-8 cr
154848 —2 Story M, 1-8 cr

R 5909 Topics in Public Health Nutrition (prereq public health nutrition student or #)
355715 —1 Brown J, 1-12 cr
160284 —2 French S, 1-12 cr
354371 —3 Himes J, 1-12 cr
854858 —4 Krinke U, 1-12 cr
558418 —5 Kushi L, 1-12 cr
253116 —6 Neumark-Sztainer D, 1-12 cr
963339 —7 Story M, 1-12 cr

R 5910 Critical Review of Research in Public Health Nutrition (prereq publ hlth nutr or MCH maj or #, one grad level crse in resrch, biostat, epid)
858084 1220-1415 W, Mayo A270, Himes J, 2 cr

R 5914 Community Nutrition Intervention (prereq grad-level stu or #)
354841 1535-1835 M, Mayo A387, Neumark-Sztainer D, 3 cr

R 5933 Nutrition: Health/Disease Relationships (prereq FScN 5622 or MdBc 5201 or equiv, 5330 or equiv, or #)
162688 0945-1100 TTh, Mayo D325, Kushi L, 3 cr

R 8150 Research: Environmental and Occupational Health (prereq #) (S-N only)
255884 1-8 cr

R 8191 Research: Injury Prevention in the Workplace, Community, and Home (prereq #) (S-N only)
258946 Gerberich S, 1-8 cr

R 8194 Occupational Injury Prevention and Safety Research Seminar (prereq 8193, prereq environmental hlth grad maj or #) (S-N only)
562033 Maldonado G, Gerberich S, 1 cr (Mayo 1155)

8330 Research in Epidemiology (prereq epi maj or epi grad stu or #)
158499 —1 Anderson K, 1-8 cr
759549 —2 Arnett D, 1-8 cr
357576 —3 Atwood L, 1-8 cr
155294 —4 Crow R, 1-8 cr
159550 —5 Elmer P, 1-8 cr
157577 —6 Finnegan J, 1-8 cr
055295 —7 Folsom A, 1-8 cr
253584 —8 Gross M, 1-8 cr
162570 —9 Himes J, 1-8 cr
660550 —10 Jacobs D, 1-8 cr
658572 —11 Jeffery R, 1-8 cr
056592 —12 Jones-Webb R, 1-8 cr
855296 —13 Kushi L, 1-8 cr
463580 —14 Lando H, 1-8 cr
856593 —15 Lazovich D, 1-8 cr
263581 —17 Lifson A, 1-8 cr
061548 —18 Lowry P, 1-8 cr
959551 —19 Luepker R, 1-8 cr
057578 —20 Lytle L, 1-8 cr
455298 —21 McGovern P, 1-8 cr
153585 —22 Murray D, 1-8 cr
062571 —23 Perry C, 1-8 cr
460551 —24 Pirie P, 1-8 cr
953586 —25 Robinson L, 1-8 cr
862572 —26 Schreiner P, 1-8 cr
260552 —27 Sellers T, 1-8 cr
458573 —28 Shahar E, 1-8 cr
656594 —29 Shu X O, 1-8 cr
255299 —30 Wagenaar A, 1-8 cr
163582 —31 Wells S, 1-8 cr
861549 —32 Williams, 1-8 cr
759552 —33 Wolfson M, 1-8 cr
175593 —34 Zheng W, 1-8 cr
075594 —35 1-8 cr

8332 Readings in Epidemiology (prereq epi maj or epi grad stu or #)
662945 —1 Anderson K, 1-4 cr
861552 —2 Arnett D, 1-4 cr
059556 —3 Atwood L, 1-4 cr
857582 —4 Crow R, 1-4 cr
755307 —5 Elmer P, 1-4 cr
353589 —6 Finnegan J, 1-4 cr
162576 —7 Folsom A, 1-4 cr
560556 —8 Gross M, 1-4 cr
753590 —9 Himes J, 1-4 cr
962577 —10 Jacobs D, 1-4 cr
360557 —11 Jeffery R, 1-4 cr
758577 —12 Jones-Webb R, 1-4 cr
756599 —13 Kushi L, 1-4 cr
555308 —14 Lando H, 1-4 cr
563585 —15 Lazovich D, 1-4 cr
859557 —17 Lifson A, 1-4 cr
657583 —18 Lowry P, 1-4 cr
461554 —19 Luepker R, 1-4 cr
659558 —20 Lytle L, 1-4 cr
457584 —21 McGovern P, 1-4 cr
355309 —22 Murray D, 1-4 cr
553591 —23 Perry C, 1-4 cr
762578 —24 Pirie P, 1-4 cr
160558 —25 Robison L, 1-4 cr
558578 —26 Schreiner P, 1-4 cr
456600 —27 Sellers T, 1-4 cr
755310 —28 Shahar E, 1-4 cr
358579 —29 Shu X O, 1-4 cr
256601 —30 Wagenaar A, 1-4 cr
555311 —31 Wells S, 1-4 cr
363586 —32 Williams C, 1-4 cr
459559 —33 Wolfson M, 1-4 cr
875595 —34 Zheng W, 1-4 cr
675596 —35 1-4 cr

R 8378 Advanced Seminar in Epidemiology: Health Behavior Seminar in Epidemiology (prereq CHE maj or epi grad stu or #) (S-N only)
472733 0800-0955 T, Mayo A270, Lando H, 2 cr

R 8379 Seminar in Epidemiology: Chronic Disease Epidemiology (prereq publ hlth stu or epi or biostat or env hlth or HSRPA grad stu or #, 5330, 5340) (S-N only)
476457 1010-1205 F, Mayo D262, Lazovich D, Luepker R, 2 cr

R 8422 Modern Non-Parametrics (prereq 5466, Stat 5133, or #, grad or PubH stu)
072730 1415-1530 TTh, Mayo D262, Louis T, 3 cr

R 8433 Analysis of Longitudinal Data (prereq Stat 5131-5133, Stat 8311-8312 or equiv, biostat grad stu or #) (A-F only)
855539 0945-1100 TTh, Mayo A434, Anderson A, 3 cr

Symbols

R The letter R preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 8437 Advanced Bayesian Methods (prereq Stat 5131-5133, 8311-8312, 8431, biostat grad stu, or #)
873118 1115-1230 TTh, Mayo 1250, Carlin B, 3 cr

R 8449 Topics in Biostatistics (prereq 5450, #)
457715 ar cr

R 8450 Research in Biostatistics
762466 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
063512 1-18 cr

8763 External Forces Affecting Health Services Delivery (prereq HSRP/A student or #) (A-F only)
363359 Weckwerth V, 3 cr

R 8770 Seminar: Health and Human Behavior (prereq HSRP/A student or 5790 or Soc 5855 or #)
057306 1115-1310 Th, Mayo A387, Litman T, 3 cr

8777 Thesis Credits: Masters
457763 1-16 cr

8782 Research Practicum (prereq HSRP/A student or #)
160043 —1 Litman T, Weckwerth V, 3 cr
463191 —2 Weckwerth V, Litman T, 3 cr

R 8801 Seminar: Health Services Policy (prereq PhD stu in HSRP/A or MS stu in HSRP, or #) (A-F only)
362325 0800-1045 W, Mayo D330, Kralewski J, Moscovice I, 3 cr

R 8812 Seminar: Research Studies in Health Care (8810-8811-8812†; prereq 8811 or #) (A-F only)
960036 1325-1455 MWF, Mayo D330, Dowd B, 3 cr

R 8813 Measurement of Health Related Social Factors (§SAPh 8840; prereq intro course in stat, understanding of simple correlations or #) (A-F only)
155952 1430-1700 T, Mayo D330, Choi T, 3 cr

R 8821 Health Economics III (prereq 8820 or #) (A-F only)
557110 0905-0955 MWF, Mayo D330, Feldman R, 3 cr

R 8832 Research Project in Health Care (8830-8831-8832†; prereq 8831) (A-F only)
972722 1325-1415 F, Mayo D330, Finch M, Dowd B, 1 cr

R 8861 Topics in Theory and Principles of Health Services Research, Policy, and Administration (prereq hlth serv res, pol, and adm PhD student or #)
055748 —1 0800-0915 MWF, Mayo D262, Manning W, 3 cr (A-F only)
176381 —2 1325-1530 F, SocSci 101, Mortimer J, 3 cr (Mental Health and Adjustment in Early Life Course) (§CPsy 8360, sec 9, Soc 8090, sec 2)

8880 Directed Research (prereq PhD stu in HSRP/A, #) (S-N only)
556832 1-8 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
458119 1-36 cr

RADIOLOGY (Rad)

Medical School

0120 X-Ray Conference (prereq #)
857419 1600-1800 T, Mayo C231, Thompson W, 0 cr (Todd Amph)

0121 Medical Roentgenologic Conference
762774 1130-1300 T, Mayo C231, Thompson W, 0 cr (Todd Amph)

0123 Surgical Roentgenologic Conference
656238 0900-1100 S, Mayo C231, Thompson W, 0 cr (Todd Amph)

0124 Neurosurgical-Roentgenologic Conference
957976 1300-1430 F, Mayo C231, Truwit C, 0 cr (Todd Amph)

0125 Cardiovascular Roentgenologic Conference
057127 1200-1300 Th, Mayo B167, Amplatz K, 0 cr (Rigler Lib)

0126 Roentgenologic Conference on Chest Diseases
254055 1200-1300 M, Mayo B167, Thompson W, 0 cr (Rigler Lib)

0220 Nuclear Medicine: Clinical Conference
060349 1700-1800 T, Mayo C231, Boudreau R, 0 cr (Todd Amph)

5101 Externship: Diagnostic Radiology-University Hospitals (prereq regis med)
963082 Thompson W, ar cr

5102 Externship: Diagnostic Radiology-Veterans Administration Hospital (prereq regis med)
157014 Reinke D, ar cr

5103 Externship: Diagnostic Radiology-Hennepin County General Hospital (prereq regis med)
462963 Anderson Q, ar cr

5104 Externship: Diagnostic Radiology-St. Paul Ramsey Hospital (prereq regis med)
453972 Krueckeberg S, ar cr

5105 Externship: Diagnostic Radiology-St. Luke's Hospital, Duluth (prereq regis med)
559116 Ahrens C, ar cr

5110 Research Problems in Radiology (prereq regis med)
956245 ar cr

5140 Special Problems: Roentgenology (prereq regis med)
157949 Thompson W, ar cr

5172 Radiation Biology (§BPhy 5172, TRad 5172; prereq 5170 or #)
155666 1615-1745 WF, UHosp 1243, Song C, others, 3 cr (Rigler Lib)

5240 Special Problems: Nuclear Medicine (prereq regis med)
855797 Boudreau R, ar cr

5511 Roentgen Technique
753265 1700-1800 M, Mayo C231, Ritenour R, 1 cr (Todd Amph)

5530 Externship in Nuclear Medicine at University Hospital (prereq regis med)
653078 Boudreau R, ar cr

5540 Special Problems: Radiological Physics (prereq regis med)
658040 Ritenour R, ar cr

8100 Gastrointestinal Roentgenology
357853 Trenkner S, ar cr

8101 Urologic Roentgenology
457178 Goldberg M, ar cr

8102 Neurological Roentgenology
455060 Truwit C, ar cr

8103 Cardiovascular Roentgenology
554403 Amplatz K, ar cr

8104 Pediatric Roentgenology
152895 Carpenter B, ar cr

8105 Pulmonary Roentgenology
261104 Thompson W, ar cr

8150 Research: Roentgenology
953328 Thompson W, ar cr

8200 Nuclear Medicine
158793 Boudreau R, ar cr

8210 Fundamentals of Nuclear Medicine (prereq 1st yr resident)
358033 1600-1700 M, Mayo C231, Boudreau R, 1 cr (Todd Amph)

8250 Research; Nuclear Medicine
253777 Boudreau R, ar cr

8450 Research: Radiation Biology
554384 Ritenour R, Song C, ar cr

8550 Research: Radiological Physics
960070 Ritenour R, ar cr

RECREATION, PARK, AND LEISURE STUDIES (Rec)

School of Kinesiology and Leisure Studies

Education and Human Development

R 1520 Orientation to Leisure and Recreation (A-F only)
361112 1325-1520 TTh, CookeH 206, Scholl K, 4 cr

R 1540 Camp Counseling (A-F only)
259112 1325-1520 MW, CookeH 206, Pinch K, 4 cr

R 3550 Park and Recreation Administration (prereq 3530, 3540 or #, recreation maj) (A-F only)
958819 0905-1100 TTh, CookeH 206, Feldman H, 4 cr

R 3700 Senior Internship (prereq sr, recreation maj or minor, #) (S-N only)
460422 Schultz J, Schleien S, others, 1-15 cr

R 3900 Directed Study (max 9 cr; prereq recreation maj or #)
055006 1-3 cr

R 5240 Recreation and Aging (prereq 3540 or 5100 or #) (A-F only)
355357 1400-1600 TTh, CookeH 215, Tabourne C, 4 cr

R 5250 Financing Leisure Services (prereq 3550 or #) (A-F only)
859199 0905-1045 MW, CookeH 206, Feldman H, 3 cr

R 5270 Community Leisure Services and Persons with Disabilities (prereq 1520, rec and park maj or #) (A-F only)
054700 1615-1930 T, CookeH 400, Schleien S, 4 cr

R 5310 Programming Outdoor and Environmental Education (A-F only)
756988 1630-1930 Th, CookeH 206, Paxton T, 4 cr (weekend field trip ar)

R 5455 Recreational Sports (§Kin 5455; prereq Kin or Rec maj or #) (A-F only)
056432 1615-1845 M, CookeH 206, Anderson B, 3 cr

R 5510 Women in Sport and Leisure (§Kin 5510) (A-F only)
154350 1245-1400 TTh, CookeH 214, Kane M, 3 cr

R 5630 Practicum: Therapeutic Recreation (prereq recreation M.Ed. or grad) (S-N only)
856366 Tabourne C, Schleien S, 3-9 cr

R 5640 Practicum: Leisure Services (prereq recreation M.Ed. or grad) (S-N only)
463319 Kane M, 3-9 cr

R 5695 Practicum: Sport Management (prereq MEd or grad stu or sport mgmt maj, #) (S-N only)
260440 Anderson B, 3-9 cr

R 5981 Problems (prereq MEd or grad stu or #) (A-F only)
159345 ar cr

R 5983 Readings: Recreation (prereq MEd or grad stu or #) (A-F only)
054759 1-3 cr

R 8370 Seminar: Administrative Problems in Therapeutic Recreation (prereq 5220 or #)
172511 1615-1830 M, CookeH 110, Tabourne C, 3 cr

R 8380 Seminar: Administrative Problems in Recreation and Parks (prereq 3550)
458363 1615-1830 T, CookeH 110, Anderson B, 3 cr

R 8777 Thesis Credits: Masters
154680 1-16 cr

R 8980 Seminar: Research Problems (max 3 cr; prereq 5980 or #) (S-N only)
154560 1535-1625 W, CookeH 206, Schultz J, 1 cr

R 8981 Research Problems (prereq 8980 or #) (S-N only)
161208 ar cr

REHABILITATION SCIENCE (RSc)

Physical Medicine and Rehabilitation
Medical School

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
573663 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
373664 1-36 cr

RELIGIONS IN ANTIQUITY (RelA)
Classical and Near Eastern Studies
Liberal Arts

1001 Introduction to Religious Studies (§RelS 1001) (AH)
771586 1115-1205 MWF, FolH 38, Malandra W, 4 cr

3035 Christian Religious Traditions (§5035, RelS 3035, RelS 5035)
272765 1115-1205 MWF, FolH 50, 4 cr

3203 The Bible: Wisdom, Poetry, and Apocelyptic (§ANE 1003, ANE 3003, RelS 3203)
676179 1115-1230 TTh, NichH 45, 4 cr

5970 Directed Studies (§RelS 5970; prereq #, Δ, CLA approval)
056012 3-5 cr

RELIGIOUS STUDIES (RelS)
Classical and Near Eastern Studies
Liberal Arts

3541 The Holocaust (§JwSt 3521)
775184 1430-1545 MW, AndH 310, Feinstein S, 4 cr

8777 Thesis Credits: Masters
573517 1-16 cr

RHETORIC (Rhet)
Agricultural, Food, and Environmental Sciences

R 1101 Writing to Inform and Persuade (§Comp 1011) (CD) (A-F only)
263371 0815-0930 T, HckrH 302, 0815-0930 Th, McNH 305, Beard D, 4 cr (computer assisted instruction)

R 1104 Library Research Methods (S-N only)
659947 —1 LAB 0905-0955 M, ClaOff B42, Richardson G, 1 cr (computer assisted instruction)
858487 —2 LAB 1430-1520 M, ClaOff B42, Richardson G, 1 cr (computer assisted instruction)
159483 —3 LAB 0905-0955 W, ClaOff B42, Richardson G, 1 cr (computer assisted instruction)
963048 —4 LAB 1430-1520 W, ClaOff B42, Richardson G, 1 cr (computer assisted instruction)
060383 —5 LAB 0905-0955 F, ClaOff B42, Richardson G, 1 cr (computer assisted instruction)
353284 —6 LAB 1430-1520 F, ClaOff B42, Richardson G, 1 cr (computer assisted instruction)

R 1151 Writing in Your Major (prereq 1104, fr comm req, soph) (A-F only)
358856 —1 0800-0850 MWF, HckrH 100, Koerber A, 4 cr
260759 —2 0905-0955 MWF, HckrH 111, Koerber A, 4 cr
557785 —3 0815-0930 T, HckrH 111, 0815-0930 Th, McNH 305, 4 cr (computer assisted instruction)
452966 —4 0945-1100 T, HckrH 111, 0945-1100 Th, McNH 305, 4 cr (computer assisted instruction)
662072 —5 1245-1400 T, HckrH 111, 1245-1400 Th, McNH 305, Claas S, 4 cr (computer assisted instruction)
956911 —6 1415-1530 T, HckrH 111, 1415-1530 Th, McNH 305, Silker C, 4 cr (computer assisted instruction)

R 1222 Public Speaking (prereq completion of freshman communication requirement) (A-F only)
052915 —1 1010-1150 MW, CentLib 6, 4 cr
663187 —2 1220-1400 MW, HckrH 222, Daniels J, 4 cr
156244 —3 0905-1045 TTh, CentLib 6, 4 cr
157913 —4 0905-1045 TTh, HckrH 222, Lett D, 4 cr
560041 —5 1220-1400 TTh, CentLib 6, Sadler T, 4 cr
055815 —6 1220-1400 TTh, HckrH 222, Lett D, 4 cr

R 1303 Humanities: Science, Religion, and the Search for Human Nature (Hist)
160746 0945-1100 TTh, HckrH 312, Segaard M, 4 cr

R 1310 Humanities: The Land in American Experience (AH; CD)
159894 1325-1415 MWF, HckrH 312, Scanlan T, 4 cr

R 1311 Humanities: The Family in American Experience (Lit; CD)
075434 1010-1100 MWF, HckrH 312, Scanlan T, 4 cr

R 1380 Fictional History: Twentieth Century Through the Eyes of Novelists (Lit; IP)
356234 1245-1400 TTh, HckrH 210, Walzer A, 3 cr

R 3101 Functional Photography (prereq DHA 1300 or Rhet 3562)
863009 1430-1610 MW, CentLib 6, Breneman D, 4 cr

R 3257 Scientific and Technical Presentations (§5257; prereq 1222, 3562 or #)
463627 0905-1045 MW, HckrH 302, Schuelke D, 4 cr

R 3266 Communication, Discussion in Small Group Decision Making (prereq 1222 or #) (C/PE)
060240 —1 1325-1430 MWF, HckrH 210, Bennett J M, 4 cr
359585 —2 0905-1045 TTh, HckrH 210, Sadler T, 4 cr

3270 Speech: Special Problems (prereq #, Δ)
758126 Bennett J M, Wharton W, others, 1-5 cr

3374 Special Problems in Humanities (prereq #, Δ)
353043 Scanlan T, Horberg R, 1-2 cr

R 3380 Humanities: The Literature of Social Reflection
063025 1115-1230 T, HckrH 209, Montgomery P, 2 cr

R 3381 Humanities: 20th-Century Culture (AH; IP)
163170 1115-1205 MWF, HckrH 312, Montgomery P, 4 cr

R 3400 Managing Information on the Internet (prereq 1200 or equiv) (A-F only)
061582 0815-0930 TTh, ClaOff 17, Brady P, 3 cr (computer assisted instruction)

R 3441 Reading and Analyzing Scientific and Technical Text (§1441; prereq 1104 or equiv) (A-F only)
275486 1010-1150 MW, HckrH 210, Bennett J M, 4 cr

R 3562 Writing in Your Profession (prereq completion of freshman communication requirement, 1151, jr or sr) (A-F only)
160763 —1 0905-0955 MWF, HckrH 210, Allen L, 4 cr
054292 —2 1010-1100 MWF, HckrH 111, Horberg R, 4 cr
363121 —3 1115-1205 MWF, HckrH 111, Allen L, 4 cr
655865 —4 1325-1415 MWF, HckrH 111, McCarthy C, 4 cr
257845 —5 1430-1520 MWF, HckrH 111, 4 cr (computer assisted instruction)
762094 —6 0815-0930 T, McNH 305, 0815-0930 Th, HckrH 111, Cronje R, 4 cr (computer assisted instruction)
156938 —7 0945-1100 T, McNH 305, 0945-1100 Th, HckrH 111, 4 cr (computer assisted instruction)
461893 —8 1245-1400 T, McNH 305, 1245-1400 Th, HckrH 209, Segaard M, 4 cr (computer assisted instruction)
354547 —9 1415-1530 T, McNH 305, 1415-1530 Th, HckrH 111, Balzhiser-Morton D, 4 cr (computer assisted instruction)

R 3572 Procedures and Policies Manual (§5572; prereq STC or pre-STC maj, fr comm req, 3562 or #)
461599 1535-1805 W, ClaOff 17, Daniels J, 3 cr (computer assisted instruction)

R 3582 Senior Seminar (prereq sr) (A-F only)
359392 1115-1230 TTh, HckrH 302, Wharton W, 3 cr

R 3670 Visual Rhetoric: Theories and Applications (prereq 1200 or equiv, 3562 or equiv, STC or pre-STC maj, or #)
572948 1430-1610 TTh, ClaOff 17, Lay M, 4 cr (computer assisted instruction)

R 3700 Rhetorical Theory: Persuasion and the Literature of Science (prereq completion of freshman communication requirement)
372952 0945-1100 TTh, HckrH 209, Walzer A, 3 cr

5100 Technical Communication: Special Problems (prereq #, Δ)
161136 Duin A, McDowell E, ar cr

R 5170 Managerial Communications (prereq freshman communication req or equiv or grad status) (IP; CD)
357982 1535-1715 MW, HckrH 302, Wharton W, 4 cr

5180 Internship in Scientific and Technical Communication (prereq STC maj or grad stu, #, Δ) (S-N only)
763374 Gurak L, McDowell E, others, 2-6 cr

R 5258 Interviewing: Dynamics of Face-to-Face Communication
159586 0905-1045 MW, HckrH 222, McDowell E, 4 cr

R 5400 Communication Program Planning and Evaluation (prereq jr or sr or grad stu or work exp in comm)
872955 1115-1255 MW, HckrH 209, Schuelke D, 4 cr

5533 Scientific and Technical Communication Course Development: Teaching Seminar (prereq 5532, STC or RSTC grad stu, or #)
261894 Wahlstrom B, 1 cr

R 5540 Topics in Scientific and Technical Communication: The Future of Libraries: Technology and Design (prereq #)
376466 1325-1730 MWF, Arch 125J, Peterssen L, Wahlstrom B, Duin A, Gurak L, 6 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
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Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 5560 Editing for Technical Communication (prereq STC premaj or maj or grad stu) (A-F only)
672956 1325-1550 TTh, CentLib 4, Frost J, 4 cr (Apr 1-May 20)

R 5573 Grant Proposal (prereq STC maj, freshman communication requirement, 3562 or grad stu or #)
357612 1245-1400 TTh, HckrH 302, Mikelonis-Paraskov V, 3 cr

R 5581 Document Design (prereq 3562, STC sr or grad stu) (A-F only)
857405 1325-1505 MW, ClaOff 17, Gurak L, 4 cr (computer assisted instruction)

8170 Design Project (8170-8171†; prereq STC Plan B grad stu) (A-F only)
873670 4 cr

8171 Design Project (8170-8171†; prereq STC Plan B grad stu, 8170) (A-F only)
673671 4 cr

R 8510 Theory and Practice in Designing Messages (prereq STC or RSTC grad maj or #)
076468 1535-1805 Th, ClaOff B26, 4 cr

R 8515 Topics in the Rhetoric of Science and Technology: The Rhetoric of Science (max 16 cr; prereq 5700 or Spch 5611 or equiv) (A-F only)
561934 1535-1805 W, HckrH 209, Gross A, 4 cr

8525 Topics in Culture and Communication (max 12 cr; prereq STC or RSTC grad stu or #) (A-F only)
253617 1535-1805 T, HckrH 209, Mikelonis-Paraskov V, 4 cr

R 8535 Topics in Scientific and Technical Communication Pedagogy (max 12 cr; prereq RSTC/STC grad stu or #) (A-F only)
472957 1325-1555 M, HckrH 209, Duin A, 4 cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
258364 1-18 cr

8777 Thesis Credits: Masters
354192 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
956763 1-36 cr

8990 Special Problems in Rhetoric and Scientific and Technical Communication (max 6 cr; prereq #, Δ) (A-F only)
759602 1-6 cr

RUSSIAN (Russ)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 1103 Beginning Russian (prereq 1102 or equiv)
853256 —1 0905-0955 MTWThF, PeikH 375, Schweikert M, 5 cr
263452 —2 0905-0955 MTWThF, PeikH 165, Jahn G, 5 cr

R 3003 Intermediate Russian (§1106; prereq 3002)
656661 0905-0955 MTWThF, PeikH 335, 5 cr

R 3103 Third-Year Russian (prereq 3102)
259966 1220-1310 MTWTh, PeikH 375, 4 cr

3104 Introduction to Literary Analysis (prereq 3103 or equiv or ¶3101 or ¶3102 or ¶3103)
175702 0800-0850 MWF, FolH 104, Jahn G, 4 cr

R 3113 Fourth-Year Russian (prereq 3112)
256243 1010-1100 MTWTh, PeikH 335, 4 cr

R 3311 Major Project in Russian (prereq Russian lang maj or #)
758160 2 cr

R 3311H Honors Course: Major Project in Russian (prereq honors sr, Russian lang maj or #) (A-F only)
160438 2-4 cr

R 3512 Russian Art and Culture from Peter I to the Present (prereq 3003 for Russ lang/lit maj) (Vis; IP)
561626 1010-1135 TTh, ArtMuseum, Corten I, 4 cr

R 3970 Directed Readings (prereq #)
057077 1-5 cr

R 5021 Russia Study Tour (prereq 3003 or equiv)
555891 6-18 cr

5104 Introduction to Literary Analysis (prereq 3103 or ¶3103)
975703 0800-0850 MWF, FolH 104, Jahn G, 4 cr

R 5970 Directed Readings (prereq #, upper div or grad student)
254542 1-5 cr

RUSSIAN AREA STUDIES (RAS)
Area Studies Programs
Liberal Arts

8061 Scope and Methods of Russian Area Studies (§EAS 8061) (A-F only)
876178 0945-1100 TTh, SocSci 1383, 4 cr

8777 Thesis Credits: Masters
759728 1-16 cr

SANSKRIT (Skt)
Classical and Near Eastern Studies
Liberal Arts

5203 Intermediate Sanskrit (prereq 5202)
471579 1430-1520 MWF, Phys 236A, Malandra W, 5 cr

SCANDINAVIAN (Scan)
German, Scandinavian, and Dutch
Liberal Arts

R 3342 Major Project (prereq Δ) (A-F only)
058679 4 cr

R 3342H Major Project (prereq Δ) (A-F only)
656708 4 cr

R 3601 Great Literary Works of Scandinavia (Lit)
971912 1115-1230 TTh, PeikH 335, Houe P, 4 cr

R 3606 The Expressionist Film in Scandinavia
075420 1115-1205 MW, SmithH 111, 1115-1310 F, FolH 334, Mishler W, 4 cr

3970 Directed Studies (max 15 cr; prereq #, Δ, ⊔)
155059 1-5 cr

R 5501 Scandinavian Mythology
771913 1415-1530 TTh, PeikH 315, Grimstad K, 4 cr

R 5632 20th-Century Scandinavian Novel
571914 1325-1520 MW, NichH 122, Mishler W, 4 cr

R 5704 History of the Scandinavian Languages
371915 1535-1730 T, FolH 426, Liberman A, 4 cr

5970 Directed Studies (prereq #, Δ, CLA approval)
056267 1-5 cr

R 8611 Seminar: Scandinavian Drama: Epic Theater (§Ger 8340, sec 2)
171916 1535-1730 Th, PeikH 155, Stockenstrom G, 4 cr

R 8631 Seminar: Scandinavian Criticism: Feminist Theory in Scandinavia
675422 1640-1825 M, FolH 426, Zagar M, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
660905 1-18 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
953927 1-36 cr

R 8970 Research: Scandinavian Literature and Language
857761 1-6 cr

SCIENCE AND TECHNOLOGY POLICY (ScTP)

8777 Thesis Credits: Master's
773161 1-16 cr

SCIENCE IN AGRICULTURE (ScAg)
Agricultural, Food, and Environmental Sciences

5009 Undergraduate Senior Thesis: Science in Agriculture (not for grad credit; prereq #) (A-F only)
153876 Hunter A, 1-5 cr

SCIENTIFIC COMPUTATION (SciC)

R 8011 Scientific Visualization (prereq undergrad degree in a field that uses scientific computation)
161967 1415-1530 TTh, Phys 210, Barry P, Morin P, 3 cr

R 8101 Supercomputer Research Seminar (may be repeated for up to 4 cr max) (A-F only)
157496 1315-1430 W, Truhlar D, 1 cr (Minnesota Supercomputer Institute, 1200 Washington Ave S, Room E-200)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
462154 1-18 cr

8777 Thesis Credit: Masters
654179 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
856531 1-36 cr

Sign Language, American: See Educational Psychology.

SMALL ANIMAL CLINICAL SCIENCES (SACS)
Veterinary Medicine

5114 Internal Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
055040 4-24 cr

5124 Comparative Ophthalmology/Dermatology (prereq 3rd or 4th yr vet med stu) (S-N only)
860451 4-24 cr

5134 Emergency Rotation (prereq 3rd or 4th yr vet med stu) (S-N only)
160740 4-24 cr

5144 Clinical Nutrition/Internal Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
857033 4-24 cr

5154 Community Practice (prereq 3rd or 4th yr vet med stu) (S-N only)
954821 4-24 cr

5164 Clinical Oncology Rotation (prereq #)
559696 4-24 cr

5170 Small Animal Medicine (prereq #)
658474 0900-0950 MWTh, 0800-0850 T, VetS 145, Hardy R, others, 4 cr

5180 Critical Care Team (prereq reg in prof CVM curr, 2nd or 3rd or 4th yr vet med stu or #) (S-N only)
659298 1700-1900 W, VetS 145, Raffe M, 2 cr

5184 Clinical Small Animal Cardiology (prereq #, 5183)
157725 4-24 cr

5214 Small Animal Surgery (prereq 3rd or 4th yr vet med stu) (S-N only)
963129 4-24 cr

5250 Small Animal Dermatology (prereq regis 3rd or 4th yr vet med or grad or #)
954401 1700-1750 M, VetTchHos A325, McKeever P, 1 cr

5255 Diseases of the Urinary System (prereq regis 3rd or 4th yr vet med or grad or #)
456953 Osborne C, 2 cr

5256 Diseases of the Liver and Pancreas (prereq regis 3rd or 4th yr vet med or grad or #)
554918 1300-1450 M, AnScVM 135, Hardy R, 2 cr

5260 The Problem Oriented Medical System (prereq #) (A-F only)
856075 1100-1150 T, AnScVM 135, Osborne C, 1 cr

5314 Anesthesiology (prereq 3rd or 4th yr vet med stu) (S-N only)
363779 Raffe M, Robinson E, 4-24 cr

5324 Small Animal Critical Care Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
760362 4-24 cr

5360 Small Animal Orthopedics (prereq regis 3rd or 4th yr vet med or grad or #)
253939 1500-1650 M, AnScVM 135, Wallace L, 2-3 cr

5398 Independent Research in Veterinary Anesthesiology (prereq registered in veterinary medicine or grad or #)
056818 Robinson E, 1-6 cr

5414 Radiology (prereq 3rd or 4th yr vet med stu) (S-N only)
153389 4-24 cr

5451 Veterinary Radiology I (prereq #) (A-F only)
557270 1100-1150 Th, VetTchHos A325, VetS 145, Walter P, Rivers W, 1 cr

5504 Clinical Small Animal Theriogenology (prereq vet med stu)
660063 4-24 cr

5572 Reproductive Patterns and Infertility in the Dog and Cat (prereq CAPS 5570, regis vet med 3rd or 4th yr or grad stu or #) (A-F only)
557382 1300-1450 F, VetTchHos A325, Johnston S, 1 cr (1st 5 wks)

R 5802 Residency in Veterinary Dermatology (prereq #) (A-F only)
158267 Johnston S, McKeever P, ar cr

5812 Companion Animal Oncology (prereq DVM or equiv)
853385 Klausner J, others, 2 cr

5904 Zoo, Exotic, Raptor and Companion Birds (prereq regis 4th yr vet med stu or #)
462199 4-12 cr

8180 Advanced Clinical Neurology (prereq #)
257991 Hardy R, ar cr

8190 Comparative Cardiovascular Diseases (prereq grad)
154825 Ogburn P, 3 cr

8191 Advanced Comparative Electrocardiology (prereq grad, #)
961185 Ogburn P, 3 cr

8192 Special Cardiology Clinics (prereq grad, #)
556975 Ogburn P, ar cr

8196 Internal Medicine in Small Companion Animals (prereq grad, #)
161038 Osborne C, others, 2 cr

8197 Advanced Dermatologic Clinics (prereq grad, #) (A-F only)
363765 McKeever P, 4 cr

8198 Problems in Veterinary Comparative Dermatology (prereq grad, #)
955001 McKeever P, ar cr

8200 Directed Studies in Veterinary Comparative Dermatology (prereq grad, #) (A-F only)
359859 McKeever P, 2 cr

8290 Advanced Veterinary Medicine (prereq 5172, CAPS 5162, #)
659723 Osborne C, Polzin D, ar cr

8291 Advanced Diagnosis and Therapeutics of Animal Diseases (prereq 5172, CAPS 5162, #)
358274 Hardy R, Klausner J, others, ar cr

8293 Medical Conference (prereq 5172, CAPS 5162, #)
657468 Osborne C, Polzin D, ar cr

8297 Advanced Clinical Veterinary Ophthalmology (prereq grad or #)
853984 Bistner S, 3 cr

8298 Research in Veterinary Ophthalmology (prereq grad or #)
359344 Bistner S, 3-5 cr

8299 Research in Veterinary Medicine
061131 Osborne C, others, ar cr

8390 Seminar: Veterinary Surgery (prereq 5360, 5365 or equiv, #)
058021 Wallace L, Lipowitz A, others, ar cr

8391 Advanced Small Animal Surgery (prereq CVM 5350 or equiv, #)
762001 —1 1100-1300 M, Wallace L, Lipowitz A, others, ar cr
157840 —2 Wallace L, Lipowitz A, others, ar cr

8394 Surgery of the Gastrointestinal System (prereq CAPS 5160 or #)
962899 Caywood D, Lipowitz A, ar cr

8398 Research in Veterinary Anesthesia (prereq grad of professional veterinary curriculum, 8396, LACS 8397 or equiv, #) (A-F only)
563103 Raffe M, Robinson E, 2-4 cr

8399 Seminar: Veterinary Anesthesia (prereq grad of professional veterinary curriculum, 8396, CAPS 8397 or equiv, #) (A-F only)
458136 Raffe M, Robinson E, 1-4 cr

8410 Surgical Physiology (prereq 8391, #)
661259 Wallace L, Caywood D, 2 cr

8420 Neurosurgery (prereq 8391 or equiv, #) (A-F only)
463479 Wallace L, 3 cr

8430 Thoracic and Cardiovascular Surgery (prereq 8391, #)
460145 Caywood D, Lipowitz A, others, 3 cr

8471 Therapeutic Radiology (max 2 cr; prereq 5452, #)
259451 Feeney D, Johnston G, others, ar cr

8480 Seminar: Veterinary Radiology (prereq 5452, #)
959467 0800-0850 T, VetTchHsp 282, Walter P, Feeney D, others, 1 cr

8490 Advanced Veterinary Radiology (prereq 5450, 5451, 5452 or equiv, #) (A-F only)
152873 Walter P, Feeney D, others, 1-2 cr

8491 Fundamentals of Nuclear Medicine (prereq #) (A-F only)
761432 Johnston G, Feeney D, others, ar cr

8492 Radiation Biology (max 3 cr; prereq grad, #) (A-F only)
563277 Feeney D, Johnston G, others, 1-3 cr

SOCIAL AND ADMINISTRATIVE PHARMACY (SAPh)

Social, Administrative, and Hospital Pharmacy
Pharmacy

8100 Seminar
958237 —1 1325-1625 Th, WDH 7193, 1 cr
461036 —2 1430-1625 Th, WDH 7164, 1 cr

8200 Research Problems
857856 ar cr

8290 Clinical Clerkship (prereq 8270)
055975 Cloyd J, 2-5 cr

8301 Clinical Therapeutics
357237 Cloyd J, 3 cr

8400 Special Clinical Problems
455897 ar cr

8502 Pharmacy and Its Environment
660628 Schandelmeyer S, Hadsall R, 3 cr

8612 Research Seminar
370859 Gross C, 2 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
963003 1-18 cr

8703 Hospital Pharmacy Administration II (A-F only)
960537 Abramowitz P, 3 cr

8777 Thesis Credits: Masters
654540 1-16 cr

8840 Social Measurement (§PubH 8813)
574859 Choi T, 3 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
258090 1-36 cr

SOCIAL AND PHILOSOPHICAL FOUNDATIONS OF EDUCATION (SPFE)

Educational Policy and Administration
Education and Human Development

8777 Thesis Credits: Masters
355648 1-16 cr

SOCIAL WORK (SW)

Human Ecology

R 1001 Introduction to Social Welfare and Community Services
975393 1115-1310 TTh, FordH 175, Murray S, 5 cr

R 3202 Interventions in Community and Social Policy (SSci; C/PE)
262317 —1 1010-1205 TTh, FordH 70, Yoakam J, 4 cr
775394 —2 1010-1205 TTh, FordH 160, Russo T, 4 cr

3970 Directed Studies
759227 1-15 cr

3990 Directed Research (prereq #)
658345 ar cr

R 5024 Multidisciplinary Perspectives on Aging (§AdEd 5440, CPsy 5305, HSU 5009, PA 5414, PubH 5737, Soc 5960)
262446 1640-1825 MW, MoosT 2690, Quam J, 4 cr

R 5027 Peace and Justice as Societal Values
456015 1535-1835 M, FordH 175, Pandey R, 3 cr

R 5111 Contemporary Policy and Programs in Social Welfare (prereq grad standing or 12 cr in social sciences)
161735 0905-1205 Th, FordH 130, Carter I, 3-4 cr

R 5431 The Ecologies of Black Child Development (§CPsy 5310)
072324 0905-1205 T, FordH 60, Brookins G, 3 cr

5970 Independent Study in Social Work
255125 ar cr

8010 Field Instruction I (8010†; 4 cr or ar cr by #) (S-N only)
756134 Sullivan M, ar cr

8020 Field Instruction II (8020†; 4 cr or ar cr by #; prereq 8010) (S-N only)
556006 Sullivan M, ar cr

8030 Field Instruction in Social Work III (8030†; prereq 8020) (S-N only)
154646 Sullivan M, ar cr

R 8307 Advanced Training in Human Services Management
453812 0905-1205 T, FordH 40, Long A, 3 cr

R 8402 Social Work Methods III (prereq ¶8010, 8400, 8401)
153898 —1 1325-1625 T, FordH 70, Reinardy J, 3 cr
763794 —2 1325-1625 T, FordH 160, Morrissey M, 3 cr

Symbols

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❑ Approval of the college offering the course is required for registration.
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Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 8406 Supervision and Consultation in Social Work Practice (prereq 8401, #)
861017 1220-1520 T, FordH 40, VanSlyke V, 3 cr

R 8421 Social Work Practice: Psychopathology and Intervention (§5421)
753752 0800-1100 Th, FordH 175, Abramson N, 3 cr

R 8427 Family Centered, Home-Based Services
762368 0800-1100 M, FordH 175, Kalke N, 3 cr

R 8461 Theory and Model Development in Social Work (prereq MSW or #)
653405 1325-1625 T, FordH 170, Edleson J, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
356945 1-18 cr

R 8702 Social Work Teaching Seminar (prereq reg in two qtrs, SW PhD stu or #)
456628 1640-1840 T, FordH 175, Jones L, 1 cr (alt T)

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
360705 1-36 cr

R 8902 Direct Practice Evaluation (prereq 8901 or equiv)
958772 —1 1220-1520 M, FordH 175, Childers P, 3 cr
758174 —2 1220-1520 M, FordH 40, Evans T, 3 cr

R 8903 Program Evaluation (prereq 8901)
256078 1220-1520 M, FordH 60, VanSlyke V, 3 cr

8970 Directed Study (prereq #)
353172 ar cr

8990 Research Projects (max 6 cr)
357450 ar cr

SOCIOLOGY (Soc)
Liberal Arts

R 1001 Introduction to Sociology (SSci; CD)
162996 —1 1325-1415 MWF, BlegH 5, Broadbent J, 4 cr
152928 —2 1415-1530 TTh, BlegH 5, Aronson P, 4 cr

R 1001H Honors Course: Introduction to Sociology
172766 1220-1310 MWF, BlegH 105, Savelsberg J, 4 cr

R 1004 American Race Relations (SSci; CD)
972767 1245-1400 TTh, BlegH 10, Pierce J, 4 cr

R 3101 Introduction to American Criminal Justice (SSci; C/PE)
175108 1115-1230 TTh, AndH 210, Carlson N, 4 cr

R 3102 Introduction to Criminal Behavior and Social Control (prereq 3101)
072761 1415-1530 TTh, AndH 210, Ward D, 4 cr

R 3201 Principles of Social Psychology (prereq 1001)
★LECT 1245-1400 TTh, BlegH 250, Engelen-Eigles D
154588 —1 LAB 0800-0955 W, BlegH 330, 5 cr
063123 —2 LAB 0800-0955 W, BlegH 235, 5 cr
759891 —3 LAB 0800-0955 F, BlegH 330, 5 cr
357500 —4 LAB 0800-0955 F, BlegH 125, 5 cr
157224 —5 LAB 1010-1205 F, BlegH 110, 5 cr

R 3401 Principles of Social Organization (prereq 1001, 3801)
★LECT 1010-1100 MWF, BlegH 10, Nelson J
161587 —1 LAB 0800-0955 M, BlegH 120, 5 cr
659592 —2 LAB 0800-0955 M, BlegH 125, 5 cr
157619 —3 LAB 0800-0955 W, BlegH 130, 5 cr
155370 —4 LAB 0800-0955 W, BlegH 125, 5 cr
953622 —5 LAB 0800-0955 F, BlegH 115, 5 cr

R 3601 Urban Community (prereq 1001 or 1002) (SSci; IP)
075109 1115-1230 TTh, BlegH 235, Galaskiewicz J, 4 cr

R 3802 Sociological Methods II: Statistical Inference (prereq 3801 or equiv, soc maj)
★LECT 0945-1100 TTh, BlegH 10, Bian Y
353088 —1 LAB 0800-0850 MW, AndH 170, 5 cr
157790 —2 LAB 0905-0955 MW, AndH 170, 5 cr
854830 —3 LAB 1010-1100 MW, BlegH 440, 5 cr
353074 —4 LAB 1115-1205 MW, BlegH 440, 5 cr
761012 —5 LAB 1220-1310 MW, BlegH 440, 5 cr

R 3803 Sociological Methods III: Research Methods (prereq 3801, 3802 or equiv or #, soc maj)
★LECT 0945-1100 TTh, BlegH 5, Jungbauer-Gans M
060450 —1 LAB 0800-0850 MW, BlegH 115, 5 cr
853743 —2 LAB 0800-0850 TTh, BlegH 120, 5 cr
059783 —3 LAB 0800-0850 TTh, BlegH 155, 5 cr
554501 —4 LAB 1220-1310 TTh, BlegH 150, 5 cr
756859 —5 LAB 1220-1310 TTh, BlegH 335, 5 cr

R 3803H Honors Course: Sociological Methods III: Research Methods (prereq 3802H or equiv or #, honors soc maj)
★LECT 0945-1100 TTh, BlegH 5, Jungbauer-Gans M
963213 —80 LAB 0800-0850 MW, BlegH 115, 5 cr

R 3960 Topics in Sociology (prereq 1001)
158602 —1 1325-1415 MWF, BlegH 250, Nelson J, 4 cr (Sociology of Consumer Behavior)
572769 —3 1415-1530 TTh, BlegH 155, Galaskiewicz J, 4 cr (Social Networks)

R 5105 Contemporary Corrections (prereq 3101, 3102 or #...5161, 5162 rec)
775105 1115-1230 TTh, BlegH 130, Ward D, 4 cr

R 5125 Policing in American Society (prereq 3101, 3102 or #...5161, 5162 rec)
375110 1545-1700 TTh, BlegH 155, Ward D, 4 cr

R 5149 Killing (prereq sr, grad stu or law stu)
672763 1430-1715 Th, BlegH 130, Malmquist C, 4 cr

R 5162 Criminal Procedure in American Society
161662 0945-1100 TTh, HHHCtr 25, Samaha J, 4 cr

R 5305 Environmental Sociology (prereq 1001 or crse in env subj or #) (A-F only)
972770 1220-1310 MWF, BlegH 125, Broadbent J, 4 cr

R 5555 Population Theory (prereq 3551 or #)
772771 1115-1230 TTh, BlegH 125, Kennedy R, 4 cr

R 5703 Social Theory and Cultural Change (prereq 8 cr in social science or #)
472764 1325-1415 MWF, BlegH 130, Cooperman D, 4 cr

R 5953 Sociology of Education (prereq 1001 or equiv or #)
372773 1535-1855 T, NichH 213, Louis K, Simmons V, 4 cr

R 5956 Sociology of Death (prereq jr or sr, 8 cr in sociology or #)
859591 1325-1415 MWF, BlegH 235, Fulton R, 4 cr

R 5960 Topics in Sociology: Multidisciplinary Perspectives on Aging (§AdEd 5440, CPsy 5305, HSU 5009, PA 5414, Phar 5009, PubH 5737, SW 5024; prereq 1001 or #)
557950 1640-1825 MW, MoosT 2690, 4 cr

R 5966 Advanced Project Seminar (prereq all other required sociology coursework, Comp 3014, Δ) (A-F only)
858134 —1 1010-1125 WF, BlegH 125, Aminzade R, 4 cr
561755 —2 1010-1125 WF, BlegH 130, Cooperman D, 4 cr
361935 —3 1010-1125 WF, BlegH 250, Savelsberg J, 4 cr

R 5979 Proseminar (5977-5978-5979†; prereq 5978) (A-F only)
960649 1115-1230 WF, SocSci 1383, Marini M, 3 cr

R 8090 Topics in Sociology (prereq #)
356279 —1 1220-1400 WF, BlegH 155, Aminzade R, 4 cr (Democracy and Development)
158664 —2 1325-1530 F, SocSci 101, Mortimer J, 3 cr (Mental Health and Adjustment in the Early Life Course) (§CPsy 8360, sec 9)
872776 —3 ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
156011 1-18 cr

R 8701 Seminar: Classical Sociological Theory (prereq 8711, 8725 or #) (A-F only)
163167 1325-1600 W, BlegH 125, Brustein W, 4 cr

8777 Thesis Credits: Masters
363328 1-16 cr

R 8812 Data Analysis I (prereq 3801, 3802, 3803, or 5021 or #) (A-F only)
★LECT 1415-1615 TTh, BlegH 125, Bian Y
054373 —1 LAB 1325-1520 F, BlegH 440, 4 cr

R 8818 Sociological Research Practicum (prereq 8817)
172774 1545-1845 T, BlegH 260, Pierce J, 5 cr

R 8855 Health and Human Behavior (§PubH 8770; prereq 5855 or #)
153621 1115-1310 Th, Mayo A387, Litman T, 3 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
758479 1-36 cr

R 8956 Death, Grief, Bereavement (prereq #)
072775 1535-1800 W, BlegH 260, Fulton R, 3 cr

SOIL SCIENCE (Soil)
Soil, Water, and Climate
Agricultural, Food, and Environmental Sciences

R 1425 Introduction to Meteorology (Phys/L)
★LECT 1220-1310 MWF, GmH 110, Klink K
461246 —1 LAB 0800-0850 TTh, BorH 375, Davis K, 4 cr
661021 —2 LAB 0905-0955 TTh, BorH 375, Johnson A, 4 cr

R 3421 Climatology (§Geog 3421, prereq 1425 or Geog 1425, or #)
454040 1415-1530 TTh, BorH 375, Skaggs R, 4 cr

R 5020 Environmental Impact Assessment (prereq jr or sr, 16 cr of sci, ApEc 3610, Soil 5510, or #)
057239 0945-1100 TTh, Soils S415, Cooper T, 4 cr

R 5110 Practicum Internship in Precision Agriculture (prereq sr or grad stu, #) (S-N only)
854326 Robert P, 2-4 cr

5114 Special Problems in Soils (!; prereq 3125, #, Δ)
961378 1-7 cr

R 5211 Environmental Instrumentation (prereq 5210, 5240, or #) (A-F only)
★REC 1325-1415 M, BorH 375, Reece C
161273 —1 LAB 0905-1205 T, BorH 191, Reece C, 2 cr
059153 —2 LAB 1325-1625 T, BorH 191, Reece C, 2 cr

R 5310 Soil Chemistry (prereq Chem 3100 or #)
060237 1535-1625 MWF, BorH 375, Bloom P, 3 cr

R 5311 Soil Chemistry Laboratory (prereq ¶5310)
761902 1325-1725 Th, Soils S320, Bloom P, 2 cr

R 5510 Field Study of Soils: Morphology (prereq 1020/3125 or #) (course fee)
★LECT 1115-1205 T, Soils S415, Cooper T
275391 —1 LAB 1230-1630 T, 1 cr
175392 —2 LAB 1230-1630 Th, 1 cr

R 5511 Field Study of Soils: Mapping (prereq 5510 or ¶5510)
353690 1230-1630 Th, Soils S415, Cooper T, 1 cr (bgns May 1)

R 5515 Soil Development, Classification and Geography (prereq 3125 or #) (course fee)
163136 1220-1310 MWF, BorH 375, Nater E, 4 cr (3 weekend field trips required)

R 5555 Wetland Soils (prereq 1020 or 3125 and 5510 or ¶5510 or #) (A-F only)
★LECT 1630-1745 TTh, BorH 365, Bell J
263614 —1 REC 1430-1520 M, Soils S415, Bell J, 4 cr
961588 —2 REC 1430-1520 W, Soils S415, Bell J, 4 cr

R 5605 Microbial Ecology (§MicB 5611; prereq MicB 5105 or Biol 5013 or Soil 5610 , or #) (Envt) (A-F only)
156096 0945-1100 TTh, BorH 375, Sadowsky M, 3 cr

R 5710 Forest Soils (prereq 1020 or 3125)
462462 1010-1100 MWF, BorH 375, Grigal D, 3 cr

8111 Colloquia in Soil Science (prereq maj or min or #) (S-N only)
261278 1 cr

8112 Colloquia in Soil Science II (prereq maj or min or #)
656630 1-2 cr

8124 Research Problems in Soils
056320 2-5 cr

8128 Seminar: Soils (S-N only)
261300 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
058925 1-18 cr

8777 Thesis Credits: Masters
162830 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
253004 1-36 cr

SOUTH ASIAN LANGUAGES AND CULTURES (SALC)

Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 5710H Seminar in South Asian Languages and Cultures (§SoAS 5710)
673587 1430-1600 MWF, FolH 214, Junghare I, ar cr

R 5970 Directed Studies (prereq #, Δ)
155425 ar cr

R 8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
157233 1-18 cr

R 8777 Thesis Credits: Masters
260471 1-16 cr

R 8888 Thesis Credits: Doctoral (max 18 cr per qtr)
253505 1-36 cr

SPANISH (Span)

Spanish and Portuguese
Liberal Arts

R 1101 Beginning Spanish
159175 —1 0800-0850 MTWThF, FolH 134, 5 cr
052932 —2 0905-1205 MTWThF, AkerH 225, 5 cr (Intensive Spanish crse) (concurrent registration in 1102, sec 2, 1103, sec 2 is required) (go to FolH 34 for permission)
559567 —3 0905-0955 MTWThF, KoltH S135, 5 cr
663593 —4 1115-1205 MTWThF, KoltH S135, 5 cr
555535 —5 1220-1310 MTWThF, KoltH S133, 5 cr
753699 —6 1325-1415 MTWThF, KoltH S138, 5 cr
462686 —7 1430-1520 MTWThF, FolH 134, 5 cr
355536 —8 1535-1625 MTWThF, KoltH S132, 5 cr

R 1102 Beginning Spanish (prereq 1101)
653212 —1 0800-0850 MTWThF, FolH 340, 5 cr
453745 —2 0905-1205 MTWThF, AkerH 225, 5 cr (Intensive Spanish crse) (concurrent registration in 1101, sec 2, 1103, sec 2 is required) (go to FolH 34 for permission)
260034 —3 0905-0955 MTWThF, FolH 134, 5 cr
354385 —4 1010-1100 MTWThF, KoltH S134, 5 cr
061565 —5 1115-1205 MTWThF, KoltH S136, 5 cr
359568 —6 1220-1310 MTWThF, KoltH S134, 5 cr
157594 —7 1325-1415 MTWThF, PeikH 375, 5 cr
855329 —8 1325-1415 MTWThF, AmundH 124, 5 cr
253603 —9 1430-1520 MTWThF, KoltH S133, 5 cr
262589 —10 1430-1520 MTWThF, KoltH S134, 5 cr
758689 —11 1535-1625 MTWThF, FolH 134, 5 cr

R 1103 Beginning Spanish (prereq 1102)
262298 —1 0800-0850 MTWThF, KoltH S134, 5 cr
155675 —2 0905-1205 MTWThF, AkerH 225, 5 cr (Intensive Spanish crse) (concurrent registration in 1101, sec 2, 1102, sec 2 is required) (go to FolH 34 for permission)
356069 —3 0800-0850 MTWThF, KoltH S135, 5 cr
558371 —4 0905-0955 MTWThF, KoltH S136, 5 cr
560296 —5 1010-1100 MTWThF, FolH 134, 5 cr
260566 —6 1115-1205 MTWThF, FolH 344, 5 cr
458587 —7 1220-1310 MTWThF, KoltH S135, 5 cr
056611 —8 1325-1415 MTWThF, VinH 20, 5 cr
160567 —9 1325-1415 MTWThF, AmundH 116, 5 cr
856612 —10 1430-1520 MTWThF, KoltH S135, 5 cr
155330 —11 1430-1520 MTWThF, KoltH S136, 5 cr
463594 —12 1535-1625 MTWThF, FolH 340, 5 cr
656742 —13 1535-1625 MTWThF, KoltH S133, 5 cr

R 1104 Intermediate Spanish (prereq 1103 or 3 yrs high school Spanish)
253830 —1 0800-0850 MTWThF, KoltH S136, 5 cr
256131 —2 0905-0955 MTWThF, KoltH S137, 5 cr
162092 —3 1010-1100 MTWThF, KoltH S135, 5 cr
859106 —4 1220-1310 MTWThF, FolH 134, 5 cr
462476 —5 1325-1415 MTWThF, FordH 120, 5 cr
162441 —6 1325-1415 MTWThF, AmundH 240, 5 cr
861566 —7 1430-1520 MTWThF, KoltH S137, 5 cr
159569 —8 1430-1520 MTWThF, KoltH S138, 5 cr
972882 —9 1535-1625 MTWThF, KoltH S134, 5 cr
176355 —10 0800-1100 MTWThF, AmundH 240, 5 cr (Intensive Spanish crse) (concurrent registration in 1105, sec 11, 1106, sec 12 is required) (go to FolH 34 for permission)

R 1105 Intermediate Spanish (prereq 1104 or 4 yrs high school Spanish)
163047 —1 0800-0850 MTWThF, KoltH S137, 5 cr
757882 —2 0905-0955 MTWThF, KoltH S138, 5 cr
957945 —3 1010-1100 MTWThF, FolH 340, 5 cr
056785 —4 1115-1205 MTWThF, FolH 134, 5 cr
153960 —5 1220-1310 MTWThF, FolH 340, 5 cr
159975 —6 1220-1310 MTWThF, KoltH S139, 5 cr
055717 —7 1325-1415 MTWThF, FolH 134, 5 cr
057595 —8 1430-1520 MTWThF, FolH 50, 5 cr
055331 —9 1430-1520 MTWThF, FolH 208, 5 cr
772883 —10 1535-1625 MTWThF, KoltH S135, 5 cr
076356 —11 0800-1100 MTWThF, AmundH 240, 5 cr (Intensive Spanish crse) (concurrent registration in 1104, sec 10, 1106, sec 12 is required) (go to FolH 34 for permission)

R 1106 Intermediate Spanish (prereq 1105 or 5 yrs high school Spanish)
959291 —1 0800-0915 MWF, FolH 138, 5 cr
053983 —2 0800-0915 MWF, NichH 213, 5 cr
162214 —3 0905-1020 MWF, PeikH 155, 5 cr
260082 —4 1010-1125 MWF, SmithH 121, 5 cr
553770 —5 1115-1230 MWF, KoltH S137, 5 cr
661472 —6 1220-1335 MWF, AmundH 104, 5 cr
063297 —7 1325-1440 MWF, NichH 209A, 5 cr
357965 —8 1325-1440 MWF, PeikH 335, 5 cr
155126 —9 1325-1440 MWF, PeikH 225, 5 cr
553915 —10 1430-1545 MWF, SmithH 121, 5 cr
860482 —11 1430-1545 MWF, FordH 70, 5 cr
876357 —12 0800-1100 MTWThF, AmundH 240, 5 cr (Intensive Spanish crse) (concurrent registration in 1104, sec 10, 1105, sec 11 is required) (go to FolH 34 for permission)

R 3015 Spanish Composition and Communication (prereq 1106 or equiv and Graduation Proficiency Test)
962644 —1 0800-0915 MWF, Phys 143, 5 cr
760619 —2 1010-1125 MWF, Phys 143, 5 cr
458637 —3 1115-1230 MWF, KoltH S138, 5 cr
456662 —4 1325-1440 MWF, PeikH 315, 5 cr
355438 —5 1430-1545 MWF, FolH 116, 5 cr
476359 —6 0800-1030 MWF, AmundH 116, 5 cr (Intensive Spanish crse) (concurrent registration in 3016, sec 6 is required) (go to FolH 34 for permission)

R 3016 Advanced Spanish Composition and Communication (prereq 3015 or equiv and Graduation Proficiency Test)
763651 —1 0800-0915 MWF, Phys 157, 5 cr
161623 —2 1010-1125 MWF, Phys 157, 5 cr
459626 —3 1115-1230 MWF, NichH 109, 5 cr
563652 —4 1325-1440 MWF, VinH 213, 5 cr
961624 —5 1430-1545 MWF, FordH 160, 5 cr
876360 —6 0800-1030 MWF, AmundH 116, 5 cr (Intensive Spanish crse) (concurrent registration in 3015, sec 6 is required) (go to FolH 34 for permission)

R 3021 Advanced Communication Skills (prereq 3016 or #)
453700 —1 1115-1230 MWF, LindH 216, 5 cr
676361 —2 1325-1440 MWF, RarigC 610, 5 cr (FLIP program) (go to SocSci 214 to register)

R 3104 The Art of Reading Literary Texts (prereq 3016)
056169 —1 0945-1100 TTh, FolH 116, Cerna J, 4 cr
157023 —2 1115-1230 TTh, FolH 116, Jara R, 4 cr

R 3105 Introduction to the Study of Hispanic Cultures (prereq 3016 or #)
861342 —1 1325-1415 MWF, FolH 116, Ramos-Garcia L, 4 cr
153604 —2 0815-0930 TTh, FolH 116, 4 cr

R 3107 Introduction to the Study of Hispanic Linguistics (prereq 3016 or #)
759356 1220-1310 MWF, FolH 116, 4 cr

R 3251 Spanish-American Literature: Aspects of Prose and Fiction (prereq 3104)
572884 1245-1400 TTh, FolH 116, Jara R, 4 cr

R 3251H Honors Course: Spanish-American Literature: Aspects of Prose and Fiction (prereq 3104, honors student or #)
372885 1245-1400 TTh, FolH 116, Jara R, 4 cr

R 3502 Spanish Civilization: Modern Spain (prereq 3105 or #)
554465 0905-0955 MWF, NichH 122, Sullivan C, 5 cr

R 3510 Topics in Hispanic Cultures (prereq 3104 or 3105 or 3107)
559570 1325-1415 MWF, NichH 211, Vidal H, 4 cr

Symbols

R The letter **R** preceding the course number indicates limited enrollment.
H Honors course (follows the course number).
! Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
# Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

R 3721 Origins and History of Spanish and Portuguese (prereq 3107 or Port 3003)
476362 1010-1100 MWF, AmundH 120, 4 cr

R 3910 Topics in Spanish Peninsular Literature (max 12 cr; prereq 3104 or #)
072887 0945-1100 TTh, NichH 122, 4 cr

R 3910H Topics in Spanish Peninsular Literature (max 12 cr; prereq 3104 or #)
872888 0945-1100 TTh, NichH 122, 4 cr

R 3920 Topics in Spanish American Literature (max 12 cr; prereq 3104 or #)
560699 1115-1205 MWF, FordH 170, Ramos-Garcia L, 4 cr

R 3920H Topics in Spanish American Literature (max 12 cr; prereq 3104 or #)
058715 1115-1205 MWF, FordH 170, Ramos-Garcia L, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
954785 1-5 cr

R 3972 Graduation Seminar (prereq 30 cr Span 3xxx or Span-Port 3xxx courses, Δ) (A-F only)
953605 —1 0905-1020 T, LindH 320, Arenas F, 4 cr
072890 —2 1220-1335 W, FordH 60, Zahareas A, 4 cr

R 3972H Honors Graduation Seminar (prereq 30 cr Span 3xxx or SpPt 3xxx crses, honors stu, Δ) (A-F only)
662721 —80 0905-1020 T, LindH 320, Arenas F, 4 cr
872891 —81 1220-1335 W, FordH 60, Zahareas A, 4 cr

5221 Spanish Literature of the 17th Century: The Drama (prereq three 3xxx or 5xxx Spanish or Portuguese literature courses or Δ)
672892 1430-1730 F, FolH 334, Zahareas A, 4 cr

5533 Latin American Cultural Discourse (prereq three 3xxx or 5xxx level lit courses in Span or Port or Δ) (A-F only)
272894 1430-1600 MW, LindH 217, Vidal H, 4 cr

R 5701 History of Ibero-Romance (prereq 3701 or 3702 or #)
172881 1115-1230 TTh, KoltH S137, Ocampo F, 4 cr

5970 Directed Readings (max 15 cr; prereq #, Δ, CLA approval)
161993 1-5 cr

5990 Directed Research (prereq #, Δ, CLA approval)
757039 1-5 cr

5991 The Acquisition of Spanish as a First and Second Language (prereq 3702 or #)
174525 1245-1400 TTh, CivE 214, Klee C, 4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
361479 1-18 cr

8777 Thesis Credits: Masters
661469 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
063333 1-36 cr

R 8900 Spanish Seminar: Issues in Contemporary Spanish Culture (§SpPt 5930)
972896 1640-1820 MW, FolH 344, Mora M, 2 cr (Apr 30-June 4)

8970 Directed Readings in Romance Languages (prereq Δ)
256100 ar cr

SPANISH-PORTUGUESE (SpPt)
Spanish and Portuguese
Liberal Arts

3980 Directed Instruction (max 8 cr; prereq #, Δ, ❑) (S-N only)
953460 1-4 cr

5930 Selected Topics in the Hispanic Cultural Discourses: Issues in Contemporary Spanish Culture (prereq reading knowledge of Spanish and Portuguese)
573579 1640-1820 MW, FolH 344, Mora M, 2 cr (Apr 30-June 4)

SPEECH-COMMUNICATION (Spch)
Liberal Arts

R 1101 Introduction to Public Speaking
361868 —1 0800-0955 MW, FolH 318, 4 cr
561898 —2 1010-1205 MW, FolH 318, 4 cr
661388 —3 1010-1205 MW, FolH 419, 4 cr
057984 —4 1010-1205 MW, FolH 312, 4 cr
553283 —5 1325-1520 MW, FolH 419, 4 cr
157904 —6 1325-1520 MW, FolH 312, 4 cr
554160 —7 1535-1730 MW, FolH 312, 4 cr
356878 —8 0800-0955 TTh, FolH 318, 4 cr
158091 —9 1010-1205 TTh, FolH 312, 4 cr
156493 —10 1010-1205 TTh, FolH 334, 4 cr
363152 —11 1220-1415 TTh, FolH 312, 4 cr
658684 —12 1430-1625 TTh, FolH 312, 4 cr
962689 —13 1430-1625 TTh, FolH 318, 4 cr
475583 —14 1800-2100 M, FolH 312, 4 cr
275584 —15 1800-2100 Th, FolH 318, 4 cr

R 1313 Analysis of Oral Argument (C/PE)
756456 —1 0800-0955 MW, FolH 419, 4 cr
555986 —2 1325-1520 MW, NichH 209, 4 cr
154056 —3 1325-1520 MW, VinH 364, 4 cr
661374 —4 0800-0955 TTh, FolH 419, 4 cr
258798 —5 1010-1205 TTh, FolH 318, 4 cr
362826 —6 1220-1415 TTh, FolH 318, 4 cr

R 3110 Current Topics in Speech-Communication (may be repeated for cr with #; prereq 3211, 3401, 3601, whichever is relevant to the topic)
672732 1010-1205 TTh, FolH 419, 4 cr

3193H Honors Course: Tutorial Seminar in Speech (prereq honors candidate in speech-communication, #, Δ)
059105 4 cr

R 3201 Introduction to Electronic Media Production
456385 —1 1010-1205 MW, RarigC 610, 4 cr
959257 —2 0800-0955 TTh, RarigC 610, 4 cr
353981 —3 1010-1205 TTh, RarigC 610, 4 cr

R 3401 Introduction to Communication Theory (SSci)
972736 1010-1205 TTh, Arch 35, Hewes D, 4 cr

R 3411 Small Group Communication Processes (prereq 1101 or #) (C/PE)
355830 —1 0800-0955 MW, FolH 312, 4 cr
654425 —2 1010-1205 MW, NichH 209A, 4 cr
063350 —3 0800-0955 TTh, FordH 70, 4 cr
961980 —4 1010-1205 TTh, NichH 209A, 4 cr
360218 —5 1220-1415 TTh, FolH 419, 4 cr

R 3431 The Role of Persuasion in the Modern World (soph standing rec) (C/PE)
659835 1010-1205 MW, FolH 334, Kinney T, 4 cr

R 3441 Communicating in Organizations (prereq 1101 or equiv)
553963 —1 1430-1625 TTh, FolH 419, 4 cr
175585 —2 1800-2100 Th, FolH 312, 4 cr

R 3451 Intercultural Communication: Theory and Practice (prereq planning an intercultural experience)
463014 1325-1520 MW, FordH 170, 4 cr

R 3452 Communication and the Intercultural Reentry (prereq return from an intercultural experience)
055149 1430-1625 TTh, FolH 344, 4 cr

R 3501 Introduction to Communication Research Methods
054891 1535-1730 MW, NichH 213, Kinney T, 4 cr

R 3601 Introduction to Rhetorical Theory (prereq 1101) (Hist; C/PE)
659043 1010-1205 MW, SmithH 231, 4 cr

R 3605 Persuasive Speaking (prereq 1101)
558886 —1 1325-1520 MW, FolH 318, Wilson K, 4 cr
858909 —2 0800-0955 TTh, FolH 312, 4 cr

R 3625 Ethical Standards in Modern Communication (prereq 1101 or 1101H or #) (C/PE)
572741 1220-1415 TTh, NichH 109, Rarick D, 4 cr

3970 Directed Studies (no major program cr for spch-comm maj; prereq at least one spch-comm course, #, Δ, ❑)
754772 ar cr

3980 Directed Instruction (max 8 cr; no major program cr for speech-communication maj; prereq #, Δ, ❑) (S-N only)
353141 1-4 cr

R 5211 Contemporary Problems in U.S. Electronic Media (prereq 3211, sr status) (CD)
259000 1220-1415 TTh, Arch 25, 4 cr

R 5233 Electronic Media and National Development (IP)
172743 1010-1205 MW, NichH 122, Browne D, 4 cr

R 5404 Language, Culture, and Education (prereq 3401 or #) (CD)
553722 1325-1520 MW, VinH 313, Sheldon A, 4 cr

R 5411 Small Group Communication Theory (prereq 3411 or #)
672746 1430-1620 TTh, FolH 214, Hewes D, 4 cr

R 5422 Interviewing and Communication (prereq 1101, 6 cr in social science or #)
176467 1800-2100 T, FolH 246, Rarick D, 4 cr

R 5452 Intercultural Interaction: Theory and Application (prereq #) (CD; practicum)
963101 1600-1800 TTh, FolH 138, Albert R, 4 cr

5970 Directed Readings (prereq nine upper div speech cr, #, Δ, CLA approval) (S-N only)
657759 ar cr

R 8110 Seminar: Advanced Speech Problems (prereq undergrad degree in spch-comm or equiv)
662444 1325-1625 M, FolH 426, Omdahl B, 3 cr

8451 Seminar: Face-to-Face Intercultural Communication (prereq if US citizen, Anth 5102 or similar course in cultural anthropology or #...5451 rec)
472750 1535-1835 W, FolH 426, Albert R, 3 cr

8613 Seminar in Rhetoric (prereq 5611 or #)
172752 1325-1625 F, FolH 426, Scott R, 3 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
956374 1-18 cr

8777 Thesis Credits: Masters
255982 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
360316 1-36 cr

8990 Research (prereq #, Δ) (S-N only)
756005 ar cr

STATISTICS (Stat)
Liberal Arts

R 1001 Introduction to Ideas of Statistics (prereq high school algebra) (Math)
★LECT 0905-0955 MWF, ClaOff B25, Grund B, (StP)
854763 —1 LAB 0800-0850 T, ClaOff B30, 4 cr (StP)
759101 —2 LAB 0905-0955 T, ClaOff B30, 4 cr (StP)
★LECT 1010-1100 MWF, Phys 166, Kuhn J
353060 —3 LAB 1010-1100 T, Phys 157, 4 cr
357979 —4 LAB 1010-1100 Th, Phys 236A, 4 cr
★LECT 1115-1205 MWF, EE/CSci 3111, Pruitt R
357920 —5 LAB 1115-1205 T, Phys 143, 4 cr
975295 —6 LAB 1115-1205 Th, VinH 209, 4 cr

R 3011 Statistical Analysis (prereq college algebra) (Math)
★LECT 1010-1100 MWF, Phys 170, Geyer C
159930 —1 LAB 1010-1100 T, Phys 236A, 4 cr
753315 —2 LAB 1010-1100 T, Phys 143, 4 cr
163792 —3 LAB 1010-1100 Th, Phys 157, 4 cr
★LECT 1325-1415 MWF, ClaOff B25, (StP)
761950 —4 LAB 1010-1100 T, ClaOff B30, 4 cr (StP)
857503 —5 LAB 1115-1205 T, ClaOff B30, 4 cr (StP)

R 3012 Statistical Analysis (prereq 3011)
★LECT 1430-1520 MWF, Phys 210, Posse C
561061 —1 LAB 1430-1520 T, VinH 20, 4 cr
162299 —2 LAB 1430-1520 Th, Phys 133, 4 cr

R 3091 Introduction to Probability and Statistics (§5121, 5131; prereq differential, integral calculus)
★LECT 0800-0850 MWF, VinH 16, Kuhn J
758403 —1 LAB 0800-0850 T, VinH 6, 4 cr
161332 —2 LAB 0800-0850 Th, VinH 6, 4 cr
★LECT 0905-0955 MWF, EE/CSci 3230
754450 —3 LAB 0905-0955 T, VinH 209, 4 cr
859011 —4 LAB 0905-0955 Th, EE/CSci 3111, 4 cr
★LECT 1325-1415 MWF, EE/CSci 3115, Tierney L
958481 —5 LAB 1325-1415 T, Phys 170, 4 cr
560993 —6 LAB 1325-1415 Th, Phys 236A, 4 cr

R 5021 Statistical Analysis (§3012; prereq college algebra)
★LECT 1010-1100 MWF, ClaOff B25, Bingham C, (StP)
960960 —1 LAB 0905-1005 Th, ClaOff B26, 5 cr (StP)
558242 —2 LAB 1010-1110 Th, ClaOff B30, 5 cr (StP)

R 5122 Theory of Statistics (prereq 5121)
★LECT 1010-1110 MWF, EE/CSci 3115, Dickey J
359294 —1 REC 1010-1110 T, VinH 206, 5 cr
162951 —2 REC 1010-1110 Th, VinH 206, 5 cr

R 5133 Theory of Statistics (prereq 5132)
858117 —1 1115-1205 MWF, VinH 209, Eaton M, 4 cr
961977 —2 1430-1520 MWF, Phys 170, Lindgren B, 4 cr

R 5153 Theory of Statistics (prereq 5152, grad stat stu)
463806 1325-1425 MWF, VinH 2, Pruitt R, 4 cr

R 5163 Applied Statistical Methods (prereq 5162, stat grad stu or #) (A-F only)
175697 0800-0955 MWF, ClaOff B22, Weisberg S, 4 cr

R 5201 Sampling Methodology in Finite Populations (prereq 3091 or 5021 or 5121 or #)
956407 1430-1630 MW, ClaOff B30, Martin F, 4 cr (StP)

R 5301 Designing Experiments (§5163; prereq 3012 or 5021 or 5133 or 5153 or #)
★LECT 1430-1530 MWF, ClaOff B25, Grund B, (StP)
261877 —1 LAB 1220-1320 Th, ClaOff 135, 5 cr (StP)
053398 —2 LAB 1325-1425 Th, ClaOff 135, 5 cr (StP)

R 5302 Applied Regression Analysis (§5161; prereq 3012 or 5021 or 5133 or #)
★LECT 1325-1425 MWF, ClaOff B35, Hawkins D, (StP)
861387 —1 LAB 0800-0900 Th, ClaOff 135, 5 cr (StP).
858375 —2 LAB 0905-1005 Th, ClaOff 135, 5 cr (StP)

5890 Senior Paper (prereq sr in statistics) (A-F only)
158320 2 cr

5900 Tutorial Course (prereq #)
255822 ar cr

8153 Mathematical Statistics (prereq 8152)
054566 1115-1215 MWF, VinH 364, Geyer C, 4 cr

8162 Computational Statistical Methods (prereq 8312, programming experience)
453759 1430-1630 MW, ClaOff B22, Oehlert G, 4 cr (StP)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
553235 1-18 cr

8777 Thesis Credits: Masters
357383 1-16 cr

8801 Statistical Consulting (max 3 cr; prereq grad stat maj or #) (S-N only)
260230 1430-1630 F, ClaOff B30, Hawkins D, 1 cr (StP)

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
762791 1-36 cr

8900 Student Seminar (prereq statistics maj or #) (S-N only)
355696 1 cr

8901 Directed Readings and Research (prereq #)
257117 1-3 cr

8931 Advanced Topics in Statistics: Coherent Assessment (prereq #)
661679 Dickey J, 3 cr

8932 Advanced Topics in Statistics: Programming Paradigms and Dynamic Graphics (prereq #)
955032 Tierney L, 3 cr

8933 Advanced Topics in Statistics: Predictive Inference (prereq #)
775296 1400-1515 TTh, ClaOff B42, Geisser S, 3 cr (StP)

STUDIES OF SCIENCE AND TECHNOLOGY (SST)

8000 Colloquium (may be repeated for credit) (S-N only)
562209 1535-1735 F, Phys 210, 1 cr

Study Skills: See Learning and Academic Skills.

SURGERY (Surg)
Medical School

5500 Externship: Surgery at the University and Affiliated Hospitals (prereq regis med)
362776 Dunn D L, ar cr

5502 Externship in the Surgical Intensive Care Unit (prereq regis med)
454815 Dunn D L, 6-9 cr

5503 Research Problems in Surgery (prereq regis med) (S-N only)
861793 Dunn D L, 1-18 cr

5504 Hospital Base Nutrition (prereq medical stu year 3 and 4)
763469 Dunn D L, 4.5-9 cr

5510 Advanced Surgery Externship: Subinternship (prereq 3rd or 4th yr medical student, 5500)
155644 Dunn D L, 4.5-9 cr

5522 Plastic and Reconstructive Surgery (prereq 5500)
155456 Dunn D L, ar cr

5523 Externship in Colon and Rectal Surgery: Veterans Administration Hospital (prereq regis med)
158186 Rothenberger D, ar cr

5526 Clinical Nutrition Seminar (prereq acceptance to master's prog in nutr support dietetics or Kellogg MD fellowship prog) (S-N only)
560024 Shronts E, 1 cr

5527 Hospital Nutrition Support (prereq acceptance to the master's program in nutrition support dietetics) (S-N only)
255609 Shronts E, 9 cr

8200 Clinical Surgical Problems in Management
458802 Dunn D L, 5 cr

8201 Surgical-Roentgenological Conference
258378 0900-1300 S, Mayo C231, Dunn D L, 1 cr (Todd Amph)

8202 Surgical Research
159314 Dunn D L, 5 cr

8203 Surgery Complications and Research Conference
956150 1600-1800 T, PWB 11157, Dunn D L, 1 cr

8207 Transplantation, Bone Marrow Conference
861714 1630-1730 W, PWB 11157, Dunn D L, 1 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
756084 1-18 cr

8777 Thesis Credits: Masters
154632 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
556099 1-36 cr

SUSTAINABLE AGRICULTURAL SYSTEMS (SAgr)
Agronomy and Plant Genetics
Agricultural, Food, and Environmental Sciences

8020 Field Experience in Sustainable Agriculture (prereq SAgr grad minor, #) (A-F only)
159622 2-4 cr

SWEDISH (Swed)
German, Scandinavian, and Dutch
Liberal Arts

R 1103 Beginning Swedish (prereq 1102)
962840 0905-0955 MTWThF, PeikH 215, 5 cr

R 1106 Intermediate Swedish (prereq 1105 or equiv)
862314 1115-1240 MWF, PeikH 335, Edberg-Caldwell, 5 cr

R 3670 Advanced Swedish (max 28 cr; prereq 1106 or equiv)
660161 1245-1400 TTh, PeikH 335, Grimstad K, 4 cr

TEACHING ENGLISH AS A SECOND LANGUAGE (TESL)
Linguistics and Asian and Slavic Languages and Literatures
Liberal Arts

R 5722 English as a Second Language: Practicum (§ESL 5722; prereq ESL maj or min, 5721, #) (S-N only)
662637 1535-1700 TTh, LindH 325, Bosher S, 4 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- **†** 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 credit has been received for the course listed after this symbol.
- **¶** Concurrent registration is required (or allowed) in the course listed after this symbol.
- **#** Approval of the instructor is required for registration.
- **Δ** Approval of the department offering the course is required for registration.
- **❑** Approval of the college offering the course is required for registration.
- **★** This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

THEATRE ARTS (Th)
Liberal Arts

R 1101 Introduction to the Theatre (Vis; CD)
357187 —1 0905-0955 MWF, RarigC 185, Norwood J, 4 cr
776349 —2 1220-1310 MWF, RarigC 190, Norwood J, 4 cr

R 1301 Beginning Acting for Non-Theatre Majors (prereq 1101 or ¶1101)
857145 —1 0800-0955 MW, RarigC 90, Dooley S, 4 cr
854231 —2 1010-1205 MW, RarigC 90, Mechem R, 4 cr
660970 —3 1010-1205 TTh, RarigC 90, Roberts J, 4 cr
162620 —4 1325-1520 TTh, RarigC 90, Sharp T, 4 cf

R 1321 Beginning Acting (prereq 1101, 1504)
661861 —1 1010-1205 MW, RarigC 210, Farias J, 4 cr
659477 —2 1325-1520 TTh, RarigC 185, Overman S, 4 cr

R 1331 Beginning Movement for Actors (§1326; prereq 1321)
159001 —1 0800-0955 TTh, RarigC 10, Esping L, 2 cr
672696 —2 1535-1730 TTh, RarigC 10, Walters R, 2 cr

R 1341 Beginning Voice Production (§3311; prereq 1321)
656160 —1 0800-0955 MW, RarigC 20, Bonazzoli L, 2 cr
872695 —2 1325-1520 TTh, RarigC 20, Eaton C, 2 cr

1405H Honors Course: Introduction to the Theatre (prereq 1101, #)
459786 1325-1520 MW, SocSci 1383, 2 cr

R 1504 Elements of Technical Theatre (prereq 1101 or ¶1101)
563408 1115-1205 TTh, RarigC 190, LeFebvre M, 4 cr (lab ar)

R 3173 History of the Theatre: Naturalism to the Present (prereq 1101, theatre arts maj)
758000 1010-1205 TTh, BlegH 150, Gadberry G, 4 cr

R 3322 Intermediate Acting (prereq 3321)
962207 1535-1730 MW, RarigC 90, Freeman D, 4 cr

R 3323 Advanced Acting (prereq 3321-3322, # by audition)
458945 1535-1730 TTh, RarigC 185, Reid B, 4 cr

3412H Honors Course: Tutorial Seminar in Theatre Arts (prereq candidate for honors in theatre arts, Δ)
463420 3-6 cr

R 3515 Technical Theatre Production II (prereq 1504)
453132 1115-1205 MW, RarigC 190, 1010-1205 F, RarigC 190, 275, Montgomery J, LeFebvre M, 5 cr

R 3711 Introduction to Directing (§3701; prereq 1101, 1301 or 1321, 1504, maj or min, #) (A-F only)
154470 1010-1205 MW, RarigC 185, Martin M, 4 cr

R 3803 Platform Performance (prereq Management maj)
362048 —1 1010-1205 MW, RarigC 616, Childs R, 4 cr
562128 —2 1325-1520 TTh, RarigC 616, Childs R, 4 cr

R 3901 Theatre Arts/Dance Senior Seminar (prereq sr, theatre or dance maj) (A-F only)
054129 1115-1245 TTh, NorrisH 201, 4 cr

3950 Topics in Theatre (max 12 cr)
354791 1-5 cr

R 5100 Theatre Practicum (prereq written permission, #, Δ) (A-F only)
259398 —1 1-6 cr
154994 —2 1-6 cr

R 5110 Theatre Performance (max 9 cr; prereq written permission after casting and/or assignment to a production) (S-N only)
960926 Montgomery J, 1 cr

5510 Drawing and Rendering for Theatre Designers (prereq 3513 or 3515 or grad student, #)
660600 0905-1100 TTh, RarigC 275, Brockman L, Waszut-Barrett W, 2 cr

R 5540 Lighting Design (max 12 cr; prereq 3515 or #)
959758 1325-1520 MW, RarigC 275, 1325-1720 F, RarigC 275, 90, Montgomery J, 4 cr

5560 Theatre Crafts Practicum (max 6 cr for undergrads; prereq 3513 and/or 3515, Δ, #)
163436 —1 1-4 cr
955743 —2 1-4 cr

R 5562 Scene Painting Techniques (prereq 3513 or #)
662198 0905-1205 MW, RarigC 130, Brockman C, 4 cr

R 5563 Costume/Properties Crafts (prereq 3513 or grad stu)
755601 0800-1200 F, RarigC 230, 30, Gwinup M, 4 cr

R 5711 Advanced Stage Direction (§5712 prior to fall 94; prereq 3713 or grad stu or #)
859476 1325-1520 MW, RarigC 185, 4 cr

R 5720 Plays in Production and Performance (max 6 cr for undergrads; prereq 5712, #, Δ)
759924 2-4 cr

R 5760 Advanced Stage Management (max 6 cr for undergrads; prereq 5716 or ¶, #, written permission)
757011 Montgomery J, 1-3 cr

R 5920 Topics in Theatre (max 12 cr; prereq MFA actor or director or #)
472697 1535-1730 MW, RarigC 20, Kanee S, 4 cr

R 5930 Topics in Theatre (max 12 cr)
272698 1010-1205 MW, RarigC 20, Houfek N, 2 cr

R 5940 Topics in Theatre (max 12 cr)
172699 1010-1205 MW, RarigC 20, Nash E, 2 cr

R 5950 Topics in Theatre (max 12 cr)
558189 1535-1730 TTh, RarigC 10, Sealy Z, 2 cr

5970 Directed Readings (prereq 9 cr in theatre, #, Δ, CLA approval)
753086 —1 1-6 cr
054695 —2 1-6 cr

8100 Theatre Practicum (prereq #, Δ)
456869 —1 1-6 cr
162911 —2 1-6 cr

8113 History/Theory of Western Theatre: Renaissance
072694 1010-1205 MW, SocSci 101, Gadberry G, 4 cr

R 8326 MFA Acting II (prereq MFA acting student or # by audition) (A-F only)
554174 1535-1730 MW, 1325-1520 F, RarigC 210, Houfek N, 3 cr

R 8330 Alexander Technique for MFA Actors (prereq MFA acting student or #) (A-F only)
254315 0930-1100 TTh, RarigC 45, Lightner B, 1 cr

8560 Theatre Crafts Practicum (prereq #, Δ)
161483 —1 LAB 1-4 cr
159362 —2 LAB 1-4 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
757445 1-18 cr

R 8711 Seminar: Stage Direction (prereq 5712 or equiv)
954608 0905-1205 F, RarigC 75, Kanee S, 4 cr

8730 One-Act Limited Workshop Production (prereq MFA-Directing Program) (A-F only)
953958 2 cr

8740 Supported Workshop Production (prereq MFA-Directing Program) (A-F only)
663769 4 cr

8750 Mainstage Production (prereq MFA-Directing Program) (A-F only)
157121 6 cr

8777 Thesis Credits: Masters
662749 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
358307 1-36 cr

8980 Directed Instruction (prereq Δ)
557253 1-3 cr

8990 Research (prereq #, Δ)
461022 ar cr

THERAPEUTIC RADIOLOGY (TRad)
Medical School

5172 Radiation Biology (§Rad 5172, BPhy 5172; prereq 5170 or #)
960148 1615-1745 WF, Song C, 3 cr

5174 Physics of Diagnostic Radiology (§Rad 5174, BPhy 5174; prereq 5170 or #)
461294 1600-1700 M, Khan F, others, 3 cr

5340 Special Problems in Radiation Therapy
456211 ar cr

5505 Externship in Radiation Therapy (prereq regis med)
055054 Levitt S, others, ar cr

5512 Dosimetry of Internal and External Radiation Emitters
358341 1200-1300 M, UHosp 1243, Khan F, others, 1 cr

5800 Radiation Oncology-Pathology
162965 ar cr

8300 Radiation Therapy
955094 ar cr

8310 Fundamentals of Radiation Therapy
063235 1600-1730 M, UHosp 1243, 1 cr (except 1st M of month, 1700-1800)

8315 Radiation Therapy Pathology
961087 1 cr

8320 Radiation Therapy Treatment Planning Problems
554238 1 cr

8325 Radiation Therapy Pediatrics Oncology
362793 1 cr

8350 Research in Radiation Therapy
856819 ar cr

8450 Research in Radiation Biology
257943 Song C, others, ar cr

8550 Research of Radiation Physics
159158 Khan F, others, ar cr

THERIOGENOLOGY (Tgen)
Veterinary Medicine

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
461781 1-18 cr

8777 Thesis Credits: Masters
356475 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
157961 1-36 cr

TOXICOLOGY (Txcl)

5165 Veterinary Toxicology (§VDM 5165; prereq VB 5401 or #)
958075 1100-1150 MTh, AnScVM 135, 1100-1150 W, VetS 145, Murphy M, 2 cr

5214 Principles of Toxicology (prereq Chem 5336, 5337, Phsl 5927, 5928 or BioC 5751, 5752, Phsl 5440, 5441, #) (A-F only)
458315 1000-1200 MWF, MoosT 1752, Wallace K, 4 cr (Mpls) (1st 7 weeks)

8103 Toxicology Seminar (8101-8102-8103†; prereq #) (S-N only)
259370 1535-1705 Th, MoosT 1752, Wallace K, 1 cr (Mpls) (alt Th) (1st 7 weeks)

8572 Investigative Toxicology (prereq 5214-5216) (A-F only)
975118 1430-1630 T, MoosT 1752, Shier W, 2 cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
554028 Shier W, 1-18 cr

8777 Thesis Credits: Masters
262835 Shier W, 1-16 cr

8800 Directed Research (S-N only)
158969 Shier W, ar cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
754724 Shier W, 1-36 cr

UNIVERSITY COLLEGE (UC)

3075 Directed Study (prereq Δ)
563487 ar cr

3075H Honors Course: Directed Study (prereq Δ)
354242 ar cr

URBAN STUDIES (UrbS)
Liberal Arts

R 3103 Urban Studies Colloquia (prereq Δ) (A-F only)
661746 1325-1520 Th, SocSci 1383, Bjelland M, 2 cr

R 3104 Introduction to Urban Studies (SSci)
653288 1115-1230 TTh, BlegH 135, Martin J, 4 cr

R 3301 American Cities: Settings for Cultural Pluralism (CD) (A-F only)
552974 1245-1400 TTh, BlegH 155, Byers J, 4 cr

R 3500 Workshops (prereq jr or sr, #)
556328 1730-2030 Th, BlegH 350, Arens D, 4 cr

R 3900 Internship (prereq jr or sr, #) (A-F only)
357884 1900-2100 W, BlegH 350, Pentel P, 3 cr

R 3970 Directed Studies (prereq #, Δ, ❑)
254301 Martin J, 2-6 cr

UROLOGIC SURGERY (Urol)
Medical School

5200 Surgical Specialty: Urology (prereq regis med)
956312 ar cr

8250 Urological Surgery
562064 0800-1200 MWF, Hulbert J, 4 cr (Mayo OR Room H)

8251 Cystoscopy and Urological Diagnosis
957041 0800-1200 MTWThF, Hulbert J, 4 cr (Cysto Suite)

8252 Urological Conference
060447 0800-0900 S, Hulbert J, 4 cr (Sta 57 Conf Room)

8253 Research in Urology
555048 Hulbert J, 4 cr

8254 Urological Seminar
160861 1300-1400 MWF, Mayo A503, Hulbert J, 3 cr

8255 Urological Radiological Conference
960781 1300-1400 MTWThF, Mayo A503, Hulbert J, 3 cr

8256 Urological Pathological Conference
054440 1600-1700 W, Mayo A503, 3 cr

8257 Selected Topics on the Genitourinary System (prereq MD or PhD degree, PhD with #)
356363 0900-1000 S, Mayo A503, Hulbert J, 2 cr

VETERINARY DIAGNOSTIC MEDICINE (VDM)
Veterinary Medicine

5014 Veterinary Hospital Necropsy (prereq 3rd or 4th yr vet med stu) (S-N only)
055443 Hayden D, O'Brien T, others, 2-12 cr

5114 Diagnostic Medicine (prereq 3rd or 4th yr vet med stu) (S-N only)
957895 2-12 cr

5124 Directed Studies (prereq #) (S-N only)
971991 1-12 cr

5165 Veterinary Toxicology (prereq 5164, VPB 5401) (A-F only)
163842 1100-1150 MTh, AnScVM 135, 1100-1150 W, VetS 145, Murphy M, 3 cr

5503 Diagnostic Pathology (prereq VPB 5502 or #) (A-F only)
660824 1000-1050 MTTh, AnScVM 135, O'Leary T P, others, 3 cr

5524 Problems in Diagnostic Pathology (prereq #) (A-F only)
162805 1-4 cr

5622 Problems in Diagnostic Virology (prereq #) (A-F only)
352877 Goyal S, 1-4 cr

8503 Advanced Diagnostic Pathology (prereq VPB 8501 or Path 5101, #)
459156 1000-1050 MTTh, AnScVM 135, O'Leary T P, others, 4 cr

VETERINARY MEDICINE (CVM)
Veterinary Medicine

3100 Perspectives: Interrelationship of People and Animals in Society Today
055698 1600-1740 T, AnScVM 125, Dunlop, 2 cr

5094 Precepteeship (prereq 3rd or 4th yr vet med stu) (S-N only)
963437 Trent A, 4-24 cr

5304 Professional Career Development (prereq #) (S-N only)
059007 Trent A, 4-24 cr

5604 Rotations at Other Institutions (prereq regis 4th yr vet med stu) (S-N only)
053269 Trent A, 4-24 cr

5800 Problems in Veterinary Research (prereq #) (A-F only)
263189 5 cr

5801 Veterinary Research Survey Seminar (prereq #) (A-F only)
855802 1 cr

VETERINARY MEDICINE, GRADUATE (VMed)
Veterinary Medicine

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
155028 1-18 cr

8777 Thesis Credits: Masters
354418 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
056897 1-36 cr

VETERINARY PATHOBIOLOGY (VPB)
Veterinary Medicine

R 3103 General Microbiology (not open to vet med students; prereq 10 cr chem, 4 cr bio-sciences) (Biol/NL or Biol/L)
★LECT 0830-0945 MW, ABLMS 125, Maheswaran S
459481 —1 LAB 0950-1215 MW, VetS 325, 5 cr
362227 —2 LECT 0830-0945 MW, ABLMS 125, Maheswaran S, 3 cr

5024 Clinical Hematology and Cytology (prereq 3rd or 4th yr vet med stu) (S-N only)
558290 Aird E, 2-12 cr

5034 Clinical Microbiology (prereq 3rd or 4th yr vet med stu) (S-N only)
062229 Bey R, 2-12 cr

5110 Cytogenetic Evaluation of Animal Diseases (prereq 3rd or 4th yr vet med or grad stu or #) (A-F only)
753623 1500-1650 M, AnScVM 343, Weber A, Mickelson J, 1 cr (1st 5 wks)

5126 Veterinary Anatomy II (prereq 5100 or #) (A-F only)
★LECT 1300-1350 TW, VetS 145, Cox V, Benson R, 5 cr
555373 —1 LAB 1400-1650 TWTh, AnScVM 40

5149 Topics in Organology (prereq 5104 or equiv, #) (A-F only)
058603 1-5 cr

5308 Animal Physiology (prereq vet med stu or #) (A-F only)
★LECT 0800-0850 MWF, AnScVM 125, O'Grady S, Duke G, others, 4 cr
662606 —1 REC 1300-1450 W, AnScVM 125

5402 Veterinary Pharmacology and Therapeutics III (prereq 5401 or #) (A-F only)
560587 0900-1050 T, 1300-1350 Th, VetS 145, Kannan M, 3 cr

5444 Muscle Contraction (§MdBc 5444, NSc 5444, Phsl 5444; prereq undergrad biochem or physiol, #) (A-F only)
456631 1515-1645 TTh, MoosT 2571, 2585, Thomas D, Mickelson J, others, 3 cr

5501 Basic Veterinary Pathology (prereq #)
★LECT 1100-1150 M, 1300-1350 TTh, AnScVM 125, Hayden D, Johnson K H, others, 5 cr
257781 —1 LAB 1400-1650 TTh, VetS 215, 225, 229, Hayden D, Johnson K H, others

5533 Directed Studies in Veterinary Pathobiology (prereq regis vet med, 4th yr, #)
653260 Johnson K H, Hayden D, others, ar cr

5701 Veterinary Immunology (prereq 3103, 1st year vet med, #)
160849 0900-0950 MWF, AnScVM 125, Sharma J, Rutherford M, others, 3 cr

5724 Poultry Health Rotations (prereq 3rd or 4th yr vet med stu) (S-N only)
457505 Halvorson D, Shaw D, others, 4-24 cr

5748 Problems in Veterinary Microbiology and Public Health (prereq 5703 or equiv, #) (A-F only)
753993 ar cr

5780 Applied Immunology (prereq regis vet med or grad or #) (A-F only)
154039 0900-0950 T, AnScVM 135, Maheswaran S, Rutherford M, 1 cr

5920 Independent Research in Veterinary Biology (A-F only)
355374 ar cr

5950 Directed Studies (A-F only)
163615 1-5 cr

8111 Histologic and Ultrahistologic Techniques (prereq 5106, #)
353625 3 cr

8112 Research Propositions in Morphology (prereq #)
262608 2 cr

8113 Research Propositions in Morphology (prereq #)
360588 2 cr

8114 Research Propositions in Morphology (prereq #)
658605 2 cr

Symbols

- **R** The letter **R** preceding the course number indicates limited enrollment.
- **H** Honors course (follows the course number).
- **!** Work for this course will extend past the end of the term. A K grade will be assigned to indicate that the course is still in progress.
- † 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 credit has been received for the course listed after this symbol.
- ¶ Concurrent registration is required (or allowed) in the course listed after this symbol.
- # Approval of the instructor is required for registration.
- Δ Approval of the department offering the course is required for registration.
- ❑ Approval of the college offering the course is required for registration.
- ★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

8134 Comparative Veterinary Neurology (prereq 5100, #)
956634 4 cr

8135 Cmparative Veterinary Neurology (prereq 5100, #)
455379 4 cr

8136 Experimental Comparative Veterinary Neurology (§NSc 8136; prereq 8135, #)
763617 3 cr

8150 Research Problems in Veterinary Anatomy (prereq 8149, #)
961591 1-5 cr

8349 Research in Physiology (prereq #)
159595 ar cr

8448 Problems in Veterinary Pharmacology (prereq 5401, #)
563618 ar cr

8450 Drug-Receptor Interactions (prereq 5400, 5401 or equiv, calc thru diff equa, Chem 5520, Chem 5521 or equiv) (A-F only)
761592 2 cr

8500 Seminar: Veterinary Pathology (prereq 5503, #)
755372 O'Leary T, 1-3 cr

8501 Advanced Veterinary Basic Pathology (prereq #)
★LECT 1100-1150 M, 1300-1350 TTh, AnScVM 125, Hayden D, Johnson K H, others
662041 —1 LAB 1400-1650 TTh, VetS 215, 225, 229, Hayden D, Johnson K H, others, 4-6 cr

8504 Seminar: Advanced Veterinary Histopathology (prereq 5502, 5503, #)
057418 1530-1700 M, VetS 215, Hayden D, 1 cr

8531 Hospital Pathology (prereq 5501, 5502, 5503, #)
659009 O'Leary T, Hayden D, others, 1-2 cr

8533 Problems: Pathology (prereq #)
563280 Johnson K H, Hayden D, others, ar cr

8534 Problems: Clinical Pathology (prereq #)
058746 Weiss D, ar cr

8550 Seminar: Veterinary Biology (prereq #)
959596 1 cr

8648 Problems in Veterinary Parasitology (prereq 5602, #)
759809 Stromberg B, ar cr

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims
156526 1-18 cr

8700 Seminar: Veterinary Pathobiology (prereq #)
663254 Rutherford M, 1 cr

8720 Advanced Veterinary Microbiology (prereq #)
156459 ar cr

8777 Thesis Credits: Masters
457441 1-16 cr

8888 Thesis Credit: Doctoral (max 18 cr per qtr)
058293 1-36 cr

VETERINARY SURGERY, RADIOLOGY, AND ANESTHESIOLOGY (VSRA)
Veterinary Medicine

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
453096 1-18 cr

8777 Thesis Credits: Masters
760359 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
253844 1-36 cr

Vocational Education: See Work, Community, and Family Education.

WATER RESOURCES SCIENCE (WRS)
Natural Resources

5101 Water Resources: Individuals and Institutions (A-F only)
076177 1430-1630 MWF, PeikH 165, Brezonik P, Brown D, 4 cr (March 31-May 16)

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
673010 1-18 cr

8777 Thesis Credits: Masters
473011 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
273012 1-36 cr

WOMEN'S STUDIES (WoSt)
Liberal Arts

R 3002 Women and U.S. Multicultural Studies (SSci; CD)
★LECT 1245-1400 TTh, AmundH B75, Kaminsky A, 4 cr
673525 —1 REC 1010-1100 W, FordH 60
473526 —2 REC 1115-1205 W, LindH 315
273527 —3 REC 1220-1310 W, FordH 350, (Chic/Lat quarter stu only)
173528 —4 REC 1220-1310 W, FordH 150, (Chic/Lat quarter stu only)
973529 —5 REC 1430-1520 W, AmundH 240

R 3100 Topics in Feminist Thought, Theory, and Method: "Real" Women (max 12 cr; §WoSt 5100; prereq 8 cr WoSt or grad stu or #)
273530 1820-2050 Th, LindH 215, Scheman N, 4 cr

R 3102 Feminist Thought and Theory (Phil; C/PE)
375379 1820-2050 M, FordH 150, Binder J, 4 cr

R 3104 Feminist Expository Writing (§Comp 3051; prereq fulfillment of writing prac requirement, jr, WoSt maj or min or Δ)
856710 0905-0955 MWF, Arch 45, 4 cr

R 3202 Biology of Women (Biol/NL)
373437 1820-2050 W, SciCB 325, Zita J, 4 cr

R 3204 Sexuality and Self Imsge (prereq 1001, 1002 or #)
775380 0930-1200 M, Loeb B, 4 cr (MacPhail Ctr)

R 3205 Women: A Sense of Identity (§5205)
575381 1810-2110 T, Armory 202, Sundell S, 4 cr

R 3206 Women and Madness in History and Literature (§5206; prereq 4 cr WoSt or #)
375382 1820-2050 W, FordH 150, Brooks K, 4 cr

R 3300 Topics in Women's Studies (max 12 cr)
072520 —1 1220-1310 MWF, FolH 50, Zipes J, 4 cr (Feminist Fairy Tales) (§Ger 3610)
175383 —2 1820-2050 W, LindH 215, Bos P, 4 cr (Literature of Destruction: Women's Narratives of the Holocaust)

R 3400 Topics in Women's Studies: Women and Disability (max 12 cr)
075384 1820-2050 M, LindH 215, Wolford L, 4 cr

R 3600 Topics in Women's Studies: Women and Work: Feminist and Multicultural Perspectives (max 12 cr)
556734 1325-1555 W, FordH 150, Faunce P, 4 cr

R 3607 Community, Service, and Self (3605-3605-3607†; §ID 3207; prereq 3606, #)
573534 1220-1350 W, FolH 306, Rubright D, 2 cr

R 3902H Senior Seminar: Writing the Senior Project (prereq 3901, jr or sr WoSt maj, Δ; priority given to graduating seniors)
457309 1010-1240 W, FordH 350, Albrecht L, 4 cr

R 3960 Field Learning in Women's Studies (max 8 cr; prereq #)
472523 1325-1555 Th, FordH 160, Faunce P, 4 cr

3970 Directed Studies (prereq #, Δ, ❑)
961414 1-15 cr

R 5100 Topics in Feminist Thought, Theory, and Method: "Real" Women (max 12 cr)
173531 1820-2050 Th, LindH 215, Scheman N, 4 cr

R 5103 Feminist Pedagogies (prereq 8 cr in women's studies or #)
272524 1115-1230 TTh, LindH 302, McNaron T, 4 cr

R 5200 Topics in Women's Studies: Developmental Career Counseling of Women (§EPsy 5433; max 12 cr) (A-F only)
172525 1640-1910 T, BuH 125, Hanson L S, 4 cr

R 5402 Women and Contemporary American Spirituality (prereq 8 cr WoSt or grad stu or #)
875385 1820-2050 Th, FordH 150, Hawthorne T, 4 cr

R 5500 Topics in Women's Studies: Women, Reproductive Health, and Public Policy (§PA 5496; max 12 cr; prereq grad stu)
772527 1415-1530 TTh, HHHCtr 25, Myntti C, 4 cr

5970 Directed Studies (max 12 cr; prereq #, Δ, CLA approval)
161080 1-5 cr

R 5990 Legislative Internship (prereq excellent academic standing, #)
475390 0905-0955 W, FordH 175, Kenny S, Zita J, 2 cr

R 8101 Intellectual History of Feminism (prereq #)
572528 1220-1450 T, ChDev 105, Joeres R E, 4 cr

R 8610 Topics in Feminist Studies (prereq 8 cr grad level WoSt or substantial work in topic area or #) (A-F only)
653808 —1 1535-1730 T, BlegH 350, Disch L, 3 cr (Feminist Political Theory) (§CSDS 8910, sec 3, Pol 8260)
160673 —2 1430-1700 W, AmundH 116, Dillard A, 4 cr (Conservative Women, Gender, and the New Right) (prereq #)
675386 —3 1535-1650 MW, KoltH S136, Ferlito S, 4 cr (Italian Feminisms: Theories and Practices)

8970 Directed Study (prereq completion of courses approved by faculty supervisor and director of grad studies)
163041 1-8 cr

WORK, COMMUNITY, AND FAMILY EDUCATION (WCFE)
Education and Human Development

R 3010 Technology and Public Ethics (§5010, VoEd 5010) (A-F only)
375172 1600-1830 W, VoTech R250, Lewis T, 3 cr

R 5010 Technology and Public Ethics (§3010, VoEd 5010) (C/PE) (A-F only)
372806 1600-1830 W, VoTech R250, Lewis T, 3 cr

R 5021 Education Through Extension Methods (§AgEd 5021; prereq grad stu or #) (A-F only)
572622 1600-1830 W, VoTech 220, Norenberg C, 3 cr

R 5025 Extension Program Development (§AgEd 5025) (A-F only)
772821 1535-1805 Th, VoTech R375, Byrnes R, 3 cr

5027 Practicum: Extension Experiences (§AgEd 5027; max 9 cr)
372823 2-9 cr

R 5101 Special Topics in Curriculum (§VoEd 5101; max 9 cr)
976365 1600-1830 T, VoTech 230, Rohde N, 1 cr

5102 Special Topics in Administration (§VoEd 5102; max 9 cr)
872809 —1 1535-1805 M, NichH 109, Mestenhauser J, Al-Kobaisi, 3 cr (Mar 31, Apr 7, 14, 21) (Higher Education and Its Role in the Development of the Arab Middle East) (§EdPA 5128, sec 2) (Mpls)
175173 —2 1535-1805 W, WulH 140, Wahlstrom K, 1 cr (Contemporary Developments in Education in the Central and Eastern Countries of the Former Soviet Union) (Apr 30, May 7, 14, 21) (§EdPA 5128, sec 3) (Mpls)
075174 —3 1600-1830 T, VoTech R390, 3 cr (Evaluation of Service Programs II) (prereq #)

R 5300 Philosophy and Practice of Vocational Education (§VoEd 5300) (A-F only)
172810 1845-2115 M, VoTech R385, Brown J, 3 cr

R 5400 Education for Work (§VoEd 5400; prereq 5300 or #) (A-F only)
072811 1600-1830 T, VoTech R250, Copa G, 3 cr

R 5450 Critical Pedagogy (§AdEd 5450, FE 5450, VoEd 5450) (S-N only)
872812 1600-1830 Th, VoTech R380, McClelland J, 3 cr

5604 Teaching Internship (prereq WCFE init lic grad prog or undergrad lic spec)
172824 —1 Peterson R, 6-12 cr (AgEd or FE stu only)
072825 —2 6-12 cr (BIE stu only)

R 5800 Educating Persons with Special Learning Needs (§VoEd 5800) (A-F only)
672813 1600-1830 W, VoTech R390, Brown J, 3 cr

5920 Independent Study (§VoEd 5920; prereq Δ)
472814 1-6 cr

8100 Colloquium (§VoEd 8100)
272815 —1 1535-1805 M, ChDev 105, Cogan J, Kubow, 1-18 cr (Apr 28, May 5, 12, 19) (Mpls)
875175 —2 1115-1345 T, BuH 240, Mestenhauser J, Williams, 1 cr (Apr 1, 8, 15, 22, 29) (Mpls)

R 8130 Critical Issues in Vocational Education (§VoEd 8130; PhD and EDD students in VoEd must reg A-F; prereq 8110, 8120 or #)
172816 1600-1830 W, VoTech R280, Stone J, 3 cr

8666 Doctoral Pre-Thesis Credits (§VoEd 8666; max 18 cr per qtr; prereq EdD stu who has not passed oral prelims)
972817 1-18 cr

8810 Internship (§VoEd 8810; prereqΔ) (S-N only)
772818 1-15 cr

8888 Thesis Credits: Doctoral (§VoEd 8888; max 18 cr per qtr)
572819 1-36 cr

R 8920 Interpretive and Critical Science Research (§VoEd 8920)
972820 1600-1830 T, VoTech R280, McClelland J, 3 cr

R 8990 Research Seminar (max 9 cr; only 2 cr will apply to doct prog res core req; prereq 8910 or 8920 or Δ) (S-N only)
672827 —1 1900-2100 M, VoTech 220, Plihal J, 1 cr (alt M)
872826 —2 1220-1410 W, VoTech 220, Rossmann M, 1 cr (alt W)

Writing: See Composition and Communication; Creative and Professional Writing; English; General College; and Rhetoric.

YOUTH DEVELOPMENT AND RESEARCH (YoSt)
Human Ecology

R 1000 Introduction to Youth Studies: The Everyday Lives of Adolescents and Youth
763665 1535-1835 M, McNH 198, Baizerman M, 3 cr

R 5120 Independent Study in Youth Studies (max 12 cr; prereq #)
061419 Baizerman M, Beker J, others, ar cr

ZOOLOGY (Zool)
Biological Sciences

8666 Doctoral Pre-Thesis Credits (max 18 cr per qtr; prereq PhD stu who has not passed oral prelims)
155739 1-18 cr

8777 Thesis Credits: Masters
457407 1-16 cr

8888 Thesis Credits: Doctoral (max 18 cr per qtr)
359439 1-36 cr

8970 Seminar
459366 0 cr

8980 Special Research
155781 ar cr

8990 Research
956097 ar cr

Symbols

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† 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 credit has been received for the course listed after this symbol.
¶ Concurrent registration is required (or allowed) in the course listed after this symbol.

Approval of the instructor is required for registration.
Δ Approval of the department offering the course is required for registration.
❑ Approval of the college offering the course is required for registration.
★ This symbol designates a part of a course (e.g., lecture) for which you are 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. You must select and register for one of each of the parts of the course.

Web Access—Courses can be viewed on the World Wide Web at http://www.umn.edu/tc/courses/schedule/

COURSES OPEN TO EXTENSION STUDENTS

General Information—The following two lists indicate those day school courses which are open to Extension students. You should use these lists with the course listings which start on page 62.

- Currently enrolled day school students may not register through Extension for day school courses.
- Extension students must meet the same prerequisites as day school students.
- No 8000-level courses are available under this program.
- Occasionally, courses not on these lists are also open to Extension students with written permission from the instructor and the department offering the course.

Registration—If you wish to enroll in these courses through Extension Classes, you must follow the steps outlined in the brochure "A Guide for Registering Through Extension for Day School Classes" or the section on registration procedures in the 1996-97 *Extension Classes Bulletin.* Call 624-2388 for a bulletin, registration forms, and permission slips. The general Extension Classes information number is 625-3333. Information on counseling and program advising is available at 625-2500.

A few spaces are available without written permission in any of the courses listed below which are limited. (Limited-enrollment courses have R before the course number in Section 4 of this *Class Schedule.*) After those spaces are taken, written permission from the instructor is required. Courses which are not limited require written permission only after the first week. Call 625-3333 if you have any questions about permission requirements.

Adult Education: All courses *except* 5205
Aerospace Engineering and Mechanics: All courses
Aerospace Studies: All courses
Afro-American Studies: All courses
Agricultural Education: All courses *except* 3029, 3041, 5090, 5095
Agronomy and Plant Genetics: All courses
Akkadian: All courses
American Indian Studies: All courses
American Studies: 1003, 3111, 3112, 3113
Ancient Near Eastern: All courses
Animal and Plant Systems: All courses
Animal Science: All courses
Anthropology: All courses
Arabic: All courses
Aramaic: All courses
Art History: All courses
Biochemistry: All courses *except* 5025
Biology: 1009, 1101, 1201 (See other list also.)
Business and Industry Education: All courses *except* 3900, 5500, 5510, 5900
Central Asian Studies: All courses
Chicano Studies: All courses
Child Psychology: All courses
Chinese: All courses
Classical Civilization: All courses
Classics: All courses
Comparative Literature: All courses
Comparative Studies in Discourse and Society: All courses
Coptic: All courses
Croatian and Serbian: All courses
Cultural Studies and Comparative Literature: All courses
Danish: All courses
Dutch: All courses
East Asian Languages and Literatures: All courses
Economics: All courses *except* 3101, 3102, 3105, 3501, 3701, 5301, 5331, 5401, 5429, 5531, 5701, 5721
Educational Policy and Administration: All courses
English: Creative & Professional Writing: 1103, 3103
English Language & Literature: All courses *except* 3960
Entomology: All courses
Family Education: All courses *except* 5600, 5900
Family Social Science: All courses
Finnish: All courses
Fisheries and Wildlife: All courses
Food Science and Nutrition: All courses
Forest Resources: All courses *except* courses offered at Cloquet or Itasca
French: All courses
French and Italian: All courses
Geography: All courses
German: All courses
Greek: All courses
Hebrew: All courses
Hindi: All courses
History: All courses
History of Science and Technology: All courses
Human Resource Development: All courses *except* 5750, 5760
Humanities: All courses
Industrial Engineering/Operations Research: All 1000- and 3000-level courses (See other list for 5000-level courses.)
Insurance: 5100, 5200
Interdisciplinary Archeological Studies: All courses
International Relations: 3900
Italian: All courses
Japanese: All courses
Jewish Studies: All courses
Language, Teaching, and Technology: All courses
Latin: All courses
Learning and Academic Skills: All courses
Linguistics: All courses
Marathi: All courses
Mathematics: All courses
Mechanical Engineering: All 1000- and 3000-level courses (See other list for 5000-level courses.)
Middle Eastern Languages and Cultures: All courses
Military Science: All courses
Modern Greek: All courses
Natural Resources and Environmental Studies: All courses
Naval Science: All courses
Norwegian: All courses
Persian: All courses
Philosophy: All courses
Plant Pathology: All courses
Polish: All courses
Political Science: All courses *except* 3085
Portuguese: All courses
Religions in Antiquity: All courses
Russian: All courses
Sanskrit: All courses
Scandinavian: All courses
Slavic: All courses
South Asian Languages and Cultures: All courses
Spanish: All courses
Spanish-Portuguese: All courses
Statistics: All courses
Swedish: All courses
Theatre Arts: All courses *except* 5100
Turkish: All courses
Urban Studies: All courses
Urdu: All courses
Women's Studies: All courses
Work, Community, and Family Education: All courses *except* 5920
Youth Studies: All courses

A Joint Day/Extension Special Permission slip, signed by the instructor and department office, is required in any of the courses listed below which are limited. (Limited-enrollment courses have R before the course number in Section 4 of this *Class Schedule.*) *Courses which are not limited require written permission only after the first week.* Call 625-3333 if you have any questions about permission requirements.

Applied Economics: All courses
Architecture: All courses
Area Studies: All courses
Art: 1510, 1520, 1540, 1550, 3304, 3305, 3520, 3550, 3810, 5340, 5350, 5520, 5550, 5810
Astronomy: All courses
Biology: All courses *except* 1009, 1101, 1201, 3950H, 3960 (See other list for 1009, 1101, 1201.)
Civil Engineering: All courses
Clinical Laboratory Science: All courses
Communication Disorders: All courses
Composition: All courses
Computer Science: All courses
Dance: All courses
Design, Housing, and Apparel: All courses
East Asian Studies: All courses
Ecology, Evolution, and Behavior: All courses
General College: All courses *except* TRIO-only or CE-only courses, or courses requiring concurrent registration
Genetics and Cell Biology: All courses *except* 3008
Geology: All courses
History of Medicine: All courses
Horticultural Science: All courses
Industrial Engineering/Operations Research: All 5000-level courses (See other list for 1000- and 3000-level courses.)
Industrial Relations: 3002 thru 5006
Interdepartmental Study: All courses *except* 3170, 3180, 3190
Journalism and Mass Communication: 1001, 3741, 3745, 5501, 5825
Landscape Architecture: 3413
Latin American Studies: All courses
Mechanical Engineering: All 5000-level courses (See other list for 1000- and 3000-level courses.)
Microbiology: All courses
Mineral Engineering: All courses
Music: All courses (Does not include Applied Music courses.)
Music Education: All courses
Plant Biology: All courses
Psychology: All courses
Public Affairs: All courses *except* 5002, 5012, 5903
Public Health: All courses *except* 5154, 5159, 5250, 5614, 5649, 5700, 5701, 5703-5770, 5772-5799
Rhetoric: All courses
Russian Area Studies: All courses
Social Work: All courses
Sociology: All courses except 3803
Speech-Communication: All courses

section 7 exams & grades

FINAL EXAMINATION SCHEDULES

To find when the final exam for each of your courses is scheduled, do the following:

1. Determine the **college through which each of your courses is offered.** (To determine the college, see the last line under the department heading in the course offerings.) Remember: It is the college offering the course that is important, not your college of enrollment. Schedule A, on this page, is for all courses offered through Education, Liberal Arts, Health Sciences, Dentistry, and Public Affairs. All other courses use Schedule B, on the next page.
2. Determine the **beginning time** for each of your courses using the following guidelines:
   - Use the lecture beginning time for your course rather than the lab or recitation times.
   - Each range of beginning times (0800-0859, 0900-0959, etc.) is subdivided into MWF and TTh exam times. Use MWF if your course meets for more than three days per week or if it meets on unusual days. For example, courses that meet MWThF or TWTh or TF would all follow the MWF exam time.
   - If your course meets at different times on different days, use the day earliest in the week. A course meeting 0905-1100 T, 0800-0850 Th, for example, would follow the 0900-0959 TTh exam time.
3. Read across to find the time and day for your final examination using the beginning time for the course and the correct schedule (A or B).
4. Check the list of common exams on the next page to see if any of your courses are listed there. Common examination times *always* take precedence over schedules A and B.
5. Ask your instructor for confirmation of your exam time. Instructors may schedule 3-hour examinations for courses meeting four or more days a week. Instructors may also, with college approval in a very limited number of circumstances, request a change in exam time. See Examination Conflicts, on the next page, for information on conflicts in your final exam schedule.

NOTE: These final examination schedules do not apply to courses offered primarily to students registered in the colleges of Dentistry, Pharmacy, and Veterinary Medicine, Law School, and Medical School, or to 8000-level courses that have no regularly scheduled classrooms.

SPRING QUARTER EXAMS

SCHEDULE A: Spring 1997
Courses offered in Colleges of Education and Human Development; Liberal Arts; *Health Sciences; *Dentistry; Public Affairs

CLASS BEGINS:	EXAM TIME:	CLASS BEGINS:	EXAM TIME:
0800-0859 MWF	1030-1230 Friday, June 13	1200-1259 TTh	1330-1530 Tuesday, June 10
0800-0859 TTh	0800-1000 Friday, June 13	1300-1359 MWF	1330-1530 Friday, June 13
0900-0959 MWF	0800-1000 Tuesday, June 10	1300-1359 TTh	0800-1000 Wednesday, June 11
0900-0959 TTh	1600-1800 Thursday, June 12	1400-1459 MWF	0800-1000 Saturday, June 14
1000-1059 MWF	1330-1530 Wednesday, June 11	1400-1459 TTh	1030-1230 Saturday, June 14
1000-1059 TTh	1030-1230 Wednesday, June 11	1500-1559 MWF	1330-1530 Saturday, June 14
1100-1159 MWF	0800-1000 Thursday, June 12	1500-1559 TTh	1600-1800 Saturday, June 14
1100-1159 TTh	1330-1530 Thursday, June 12	0800-0859 S	0800-1000 Saturday, June 14
1200-1259 MWF	1600-1800 Tuesday, June 10	1000-1059 S	1030-1230 Saturday, June 14

*Courses offered primarily to students other than medical or dental students.

Courses which begin anytime from 1730 to 1800 will start at 1815 during exam week.

SCHEDULE B: Spring 1997
Courses offered in Colleges of Agricultural, Food, and Environmental Sciences; Architecture and Landscape Architecture; Biological Sciences; Human Ecology; Natural Resources; General College; Management; Institute of Technology

CLASS BEGINS:	EXAM TIME:	CLASS BEGINS:	EXAM TIME:
0800-0859 MWF	1030-1230 Friday, June 13	1200-1259 TTh	1330-1530 Tuesday, June 10
0800-0859 TTh	0800-1000 Friday, June 13	1300-1359 MWF	1600-1800 Friday, June 13
0900-0959 MWF	1030-1230 Tuesday, June 10	1300-1359 TTh	0800-1000 Wednesday, June 11
0900-0959 TTh	1600-1800 Thursday, June 12	1400-1459 MWF	0800-1000 Saturday, June 14
1000-1059 MWF	1600-1800 Wednesday, June 11	1400-1459 TTh	1030-1230 Saturday, June 14
1000-1059 TTh	1030-1230 Wednesday, June 11	1500-1559 MWF	1330-1530 Saturday, June 14
1100-1159 MWF	1030-1230 Thursday, June 12	1500-1559 TTh	1600-1800 Saturday, June 14
1100-1159 TTh	1330-1530 Thursday, June 12	0800-0859 S	0800-1000 Saturday, June 14
1200-1259 MWF	1600-1800 Tuesday, June 10	1000-1059 S	1030-1230 Saturday, June 14

Courses which begin anytime from 1730 to 1800 will start at 1815 during exam week.

Spring Common Examinations—All sections of the following courses are examined together at the time indicated.

Monday, June 9
Acct 1050—1030-1230
BA 1550—0800-1000
BFin 3000—1030-1230
Biol 1009, 1009H, 1101—1030-1230
BLaw 3058—0800-1000
GC 0611, 0616, 0621, 0623, 0625, 0631, 0643—1030-1230
IDSc 3030—0800-1000
Math 1001, 1031, 1038, 1051, 1058, 1131, 1142, 1151, 1251, 1252, 1261, 1353, 1553H, 3251, 3252, 3261, 3262, 3356, 3551H—1330-1630
Psy 1001—1900-2100
PubH 3001—1830-2130

Tuesday, June 10
Econ 1102, 1102H—1830-2130
Ger 1101, 1102, 1103, 1104, 1105, 1106—1830-2030
Span 1101, 1102, 1103, 1104, 1105, 1106—1830-2030

Wednesday, June 11
Econ 1101, 1101H—1830-2130
Phys 1253—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: See Regulations Regarding Examinations, below.

Examination Scheduling Conflicts—You 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, an F, 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 16 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 in the *Minnesota Daily.*

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 problem, departments are encouraged to limit final examinations to 2 hours. Courses meeting four or more days a week may give 3-hour examinations, however, *provided the instructor notifies the Scheduling Office* of her or his intention to do so on an A123 form. For this quarter, three hour examinations will be scheduled on the respective day the examinations would be given: June 10 (0830-1130, 1330-1630); June 11 (0830-1130, 1330-1630); June 12 (1330-1630); June 13 (0830-1130, 1330-1630); June 14 (0830-1130, 1330-1630).

   Departments are also encouraged to request alternate seating only when it is necessary for proper administration of the exam. Requests for rooms for alternate seating must be submitted by the department office on an A123 form.

   Exam times and rooms for courses which begin from 0700-0759 or anytime after 1600 will not be scheduled unless they are requested on an A123 form.

   All A123 forms must be received in the Scheduling Office (150 Williamson Hall for Minneapolis rooms, 130 Coffey Hall for St. Paul rooms) on or before May 2. Notification of room assignments for all A123 forms received by May 2 will be sent to departments on or before May 28.

7. University Senate policy decrees that no extracurricular events which *require* the participation of students may be scheduled from the beginning of study day to the end of finals week. Exceptions to this policy may be granted by the Senate Committee on Educational Policy. The Senate advises all faculty members that students who are unable to complete course requirements during finals week shall be provided an alternative and timely opportunity to do so.

SPRING QUARTER GRADES

Academic Staff—Grades are due in the Office of the Registrar, 150 Williamson Hall (130 Coffey Hall for St. Paul units), within 72 hours after the examination. Grades for this quarter are due beginning Thursday, June 12; the grades for the last examinations are due by 9:30 a.m. on Wednesday, June 18. Messenger service can be requested by calling 625-5069 for Minneapolis service or 624-3731 for St. Paul service when grades are ready. *Do not send grades by mail.*

Students—Grades are available on both the Gopher Student Line and the Student Access System. You can call the Gopher Student Line, 624-5200, from any touch tone phone. Press 1 for grade information. Grades for the last 3 terms are available. Or see page 4 for information on connecting to the Student Access System. Once on the system, use the University Day Coursework and Grades screen to access your grades.

GRADUATION

Undergraduates and students in professional programs (e.g., MEd.) must submit Application for Degree forms to the Service Center, 150 Williamson Hall (130 Coffey Hall for St. Paul students). Most applications for degree do not require payment of a graduation fee but other applicable fees may apply. Students in colleges that select larger diplomas or other enhancements may also be required to pay for those enhancements.

If you fail to apply by the dates listed below, you will not be able to graduate until the following quarter. For information on Graduate School graduation application and commencement deadlines, see page 10.

NOTE: Students in the colleges of Agricultural, Food and Environmental Sciences, and Human Ecology must meet deadlines earlier than those listed below.

DEGREE APPLICATION DEADLINES

QUARTER OF GRADUATION	APPLICATION DEADLINE
Spring 1997	April 11, 1997
Term I, Summer 1997	June 23, 1997
Term II, Summer 1997	July 30, 1997
Fall 1997	October 1, 1997
Winter 1998	January 9, 1998

GRADING POLICIES AND PRACTICES

Compete grading policies and practices can be found on the World Wide Web at http://www.umn.edu/tc/students/grades/grading_systems.html.

ACCESS TO STUDENT EDUCATIONAL RECORDS

In accordance with regents' policy on access to student records and in accordance with federal law, information about you generally may not be released to a third party without your permission. (Exceptions under the law include state and federal educational and financial aid institutions.) The regents' policy also permits you to review your educational records and to challenge the contents of those records. You also have the right to file a complaint with the U.S. Department of Education.

Some student information—name, address, electronic (e-mail) address, telephone number, dates of enrollment and enrollment status (full-time, part-time, not enrolled, withdrawn

and date of withdrawal), major, adviser, college and class, academic awards and honors received, and in the event of your graduation the degree received—are matters of public record or directory information. University officials and departments may provide this information in answer to inquiries without requiring authorization from you. You may prevent release of public information outside the University. The records office on your campus can provide you with information on the procedures necessary to do so.

Students are advised that disciplinary action will be taken if academic records are forged or altered.

The regents' policy, including a directory of student records, is available for review in 150 Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Registrar, 150 Williamson Hall (612/625-5333).

E-MAIL ADDRESSES

To promote communication and facilitate research at the University, all students are assigned electronic mail (e-mail) addresses. E-mail is simply a method of communication that uses computers linked together by a network. Along with e-mail, you also have access to a worldwide computer network called the Internet.

Before you can use your e-mail account or the Internet, you'll need to activate your e-mail account. You can accomplish this via the campus network from either a computer facility on campus, a Microcomputer Help Line, or any site with access to the World Wide Web. After your account is activated, you can access your e-mail and the Internet in any of the computer facilities around campus or from home. Software for using the Internet is available from Academic and Distributed Computing Services in 152 Shepherd Labs, 93a Blegen Hall, or 50 Coffey Hall. In addition, you are encouraged to attend an e-mail orientation. The E-Mail/Internet Help Line, 626-7676, can provide information on orientation times and locations as well as general assistance in activating and using e-mail and other Internet software. Hours for the help line are 8 a.m. to 5 p.m., Monday through Friday. You can also obtain assistance by sending e-mail to help@tc.umn.edu. For up to date information about the Internet Kits, orientation, or other e-mail and Internet related questions, you can also brouse the Academic and Distributed Computing Services web site at http://www.micro.umn.edu.

Rules for Using E-mail—E-mail addresses are assigned to individuals and are not to be shared. You are encouraged to select an obscure password and change it frequently.

Access to and use of e-mail is a privilege and should be treated as such by all users. Computing services, including e-mail, may not be used for illegal or unauthorized purposes including: harassment; destruction of or damage to equipment, software, or data belonging to others; or the disruption or unauthorized monitoring of electronic communications. Using e-mail to participate in illegal acts is itself illegal and may be subject to prosecution by state and federal authorities. Use of e-mail for private business purposes unrelated to the University is not allowed.

You are responsible for using system resources wisely. If you use the system in ways that are judged excessive or wasteful, your access to the system may be taken away, and you may be subject to University disciplinary procedures.

STUDENT RIGHT-TO-KNOW ACT

Students may receive, on request, information about campus security, and graduation and retention rates at the Twin Cities campus. This information is available from the Office of the Registrar, 150 Williamson Hall and 130 Coffey Hall.

section 8 codes, maps, forms

TWIN CITIES COURSE DESIGNATORS

A

Acct	Accounting
AdEd	Adult Education
AdPy	Adult Psychiatry
AEM	Aerospace Engineering and Mechanics
Afro	Afro-American Studies
AgEd	Agricultural Education
AgET	Agricultural Engineering Technology
Agri	Agriculture
Agro	Agronomy and Plant Genetics
AIM	Agricultural Industries and Marketing
Air	Aerospace Studies
Akka	Akkadian
AmIn	American Indian Studies
AmSt	American Studies
ANE	Ancient Near Eastern
Anes	Anesthesiology
AnPh	Animal Physiology
AnPl	Animal and Plant Systems
AnSc	Animal Science
Anth	Anthropology
ApEc	Applied Economics
Arab	Arabic
Arch	Architecture
Area	Area Studies
Arm	Aramaic
ArtH	Art History
ArtS	Art
Ast	Astronomy

B

BA	Business Administration
BAE	Biosystems and Agricultural Engineering
Ben	Bengali
BFin	Finance
BGS	Business, Government, and Society
BIE	Business and Industry Education
BioC	Biochemistry (College of Biological Sciences)
Biol	Biology
BLaw	Business Law
Bldg	Building Sciences
BMEn	Biomedical Engineering
BMSc	Biomedical Science
BPhy	Biophysical Sciences

C

CAPS	Clinical and Population Sciences
CAPy	Child and Adolescent Psychiatry
CAS	Central Asian Studies
CBio	Conservation Biology
CBN	Cell Biology and Neuroanatomy
CDis	Communication Disorders
CE	Civil Engineering
CgSc	Cognitive Science
Chem	Chemistry
ChEn	Chemical Engineering
Chic	Chicano Studies
Chn	Chinese
ChPh	Chemical Physics
CI	Curriculum and Instruction
CIE	Interfacial Engineering, Center for
Clas	Classics
ClCv	Classical Civilization
CLit	Comparative Literature
CLS	Clinical Laboratory Science
CmpE	Computer Engineering
Comp	Composition and Communication
Copt	Coptic
CPsy	Child Psychology
CSci	Computer Science
CSCL	Cultural Studies and Comparative Literature
CSDS	Comparative Studies in Discourse and Society
CSDy	Control Science and Dynamical Systems
CVM	Veterinary Medicine

D

Dan	Danish
Dent	Dentistry
Derm	Dermatology
DH	Dental Hygiene
DHA	Design, Housing, and Apparel
Dnce	Dance
DSSC	Development Studies and Social Change
Dtch	Dutch

E

EALL	East Asian Languages and Literatures
EAS	East Asian Studies
Econ	Economics
EdAd	Educational Administration
EdPA	Educational Policy and Administration
Educ	Education
EE	Electrical Engineering
EEB	Ecology, Evolution, and Behavior
EEur	East European Studies
EmMd	Emergency Medicine
Endo	Endodontics
Engl	English Language and Literature
EngW	English: Creative and Professional Writing
Ent	Entomology
Entr	Entrepreneurship
EPsy	Educational Psychology
ES	Environmental Science
ESL	English as a Second Language

F

FE	Family Education
Fin	Finnish
FlMe	Fluid Mechanics
ForP	Forest Products
Fors	Forestry
FoSt	Foreign Study
FPCH	Family Practice and Community Health
FR	Forest Resources
Fren	French
FrIt	French and Italian
FScN	Food Science and Nutrition
FSMg	Foreign Studies Management
FSoS	Family Social Science
FSSP	Foreign Study—SPAN
FW	Fisheries and Wildlife

G

GC	General College
GCB	Genetics and Cell Biology
Geo	Geology and Geophysics
GeoE	Geological Engineering
Geog	Geography
Ger	German
Gero	Gerontology
GPhl	Germanic Philology
Grad	Graduate School
Grk	Greek

H

HCol	Honors Colloquia
HE	Human Ecology
Hebr	Hebrew
HInf	Health Informatics
Hist	History
HMed	History of Medicine
Hndi	Hindi
Hort	Horticultural Science
HRD	Human Resource Development
HSci	History of Science and Technology
HSem	Honors Seminar
HSU	Health Science Units
Hum	Humanities
HumF	Human Factors

I

ID	Interdepartmental Study
IDSc	Information and Decision Science
IEOR	Industrial Engineering/Operations Research
InAr	Interdisciplinary Archeological Studies
InMd	Interdisciplinary Medicine
Ins	Insurance
IntR	International Relations
IofT	Institute of Technology
IR	Industrial Relations

IRel	Interpersonal Relationships Research
Ital	Italian

J

Jour	Journalism and Mass Communication
Jpn	Japanese
JwSt	Jewish Studies

K

Kin	Kinesiology

L

LA	Landscape Architecture
LaMP	Laboratory Medicine and Pathology
LAS	Latin American Studies
LASk	Learning and Academic Skills
Lat	Latin
Law	Law School
LgTT	Language, Teaching, and Technology
Ling	Linguistics
LM	Logistics Management

M

Mar	Marathi
Math	Mathematics
MatS	Materials Science
MBA	Master of Business Administration
MChm	Medicinal Chemistry, Undergraduate
MdBc	Biochemistry (Medical School)
MdGk	Modern Greek
MCDG	Molecular, Cellular, Developmental Biology and Genetics
ME	Mechanical Engineering
Med	Medicine
MedC	Medicinal Chemistry
MedT	Medical Technology
MELC	Middle Eastern Languages and Cultures
MeSt	Medieval Studies
MetE	Metallurgical Engineering
Mgmt	Management
MicB	Microbiology
MicE	Microbial Engineering
Mil	Military Science
MIMP	Microbiology, Immunology, and Molecular Pathobiology
MinE	Mineral Engineering
Mktg	Marketing
Mort	Mortuary Science
MOT	Management of Technology
MSt	Museum Studies
MthE	Mathematics Education
MuEd	Music Education
Mus	Music
MusA	Music Applied

N

Nav	Naval Science
Neur	Neurology
Nor	Norwegian
NRES	Natural Resources and Environmental Studies
NSc	Neuroscience
NSu	Neurosurgery
Nurs	School of Nursing
Nutr	Nutrition

O

OBio	Oral Biology
Obst	Obstetrics and Gynecology
OCS	Off-Campus Study
OMS	Operations and Management Science
OPat	Oral Pathology
Oph	Ophthalmology
ORad	Oral Radiology
OrSu	Orthopaedic Surgery
OSur	Oral and Maxillofacial Surgery
OT	Occupational Therapy
Otho	Orthodontics
Otol	Otolaryngolgy

P

PA	Public Affairs
Path	Pathobiology
PBio	Plant Biology
PE	Physical Education
Ped	Pediatrics
Pedo	Pediatric Dentistry
Per	Persian
Pero	Periodontics
Phar	Pharmacy Practice
Phcl	Pharmacology
Phcy	Pharmacy Interdepartmental
Phil	Philosophy
Phm	Pharmaceutics
Phmc	Pharmaceutics, Undergraduate
Phsl	Physiology
Phys	Physics
PlBr	Plant Breeding
PlPa	Plant Pathology
Plsh	Polish
PMed	Physical Medicine and Rehabilitation
PNI	Psychoneuroimmunology
Pol	Political Science
Port	Portuguese
Pros	Prosthodontics
Psy	Psychology
PT	Physical Therapy
PubH	Public Health

R

Rad	Radiology
RAS	Russian Area Studies
Rec	Recreation, Park, and Leisure Studies
RelA	Religions in Antiquity
RelS	Religious Studies
Rhet	Rhetoric
RSc	Rehabilitation Science
Russ	Russian

S

SACS	Small Animal Clinical Sciences
SAgr	Sustainable Agriculture Systems
SALC	South Asian Languages and Cultures
SALL	South Asian Languages and Literature
SAPh	Social and Administrative Pharmacy
ScAg	Science in Agriculture
Scan	Scandinavian
SciC	Scientific Computation
ScTP	Science and Technology Policy
Skt	Sanskrit
Slav	Slavic
Soc	Sociology
Soil	Soil Science
Span	Spanish
Spch	Speech-Communication
SPFE	Social and Philosophical Foundations of Education
SpPt	Spanish-Portuguese
SpSt	Sport Studies
SST	Studies of Science and Technology
Stat	Statistics
Sum	Sumerian
Surg	Surgery
SW	Social Work
Swed	Swedish

T

TESL	Teaching English as a Second Language
Tgen	Theriogenology
Th	Theatre Arts
TRad	Therapeutic Radiology
Turk	Turkish
Txcl	Toxicology

U

UC	University College
UrbS	Urban Studies
Urdu	Urdu
Urol	Urologic Surgery

V

VDM	Veterinary Diagnostic Medicine
VMed	Veterinary Medicine, Graduate
VPB	Veterinary Pathobiology
VSRA	Veterinary Surgery, Radiology, and Anesthesiology

W

WCFE	Work, Community, and Family Education
WRS	Water Resources Science
WoSt	Women's Studies

Y

YoSt	Youth Development and Research

Z

Zool	Zoology

DIRECTORY FOR DEPARTMENT OFFICES

A

Accounting ..... Mgmt/Econ 645 (624-6506)
Adult Education ..... VoTech 325 (624-1221)
Aerospace Engineering and Mechanics .. AkerH 107 (625-8000)
Aerospace Studies ..... Armory 3 (624-2884)
Afro-American Studies ..... SocSci 808 (624-9847)
Applied Economics ..... ClaOff 231 (625-1222)
Agricultural Education ..... VoTech 325 (624-3010)
Agronomy ..... BorH 411 (625-7773)
American Indian Studies ..... ScottH 102 (624-1338)
American Studies ..... ScottH 104 (624-4190)
Anesthesiology ..... Mayo B515 (624-9990)
Animal Science ..... PetH 120 (624-2722)
Anthropology ..... FordH 215 (625-3400)
Architecture ..... Arch 110 (624-7866)
Art History ..... JonesH 107 (624-4500)
Astronomy ..... Phys 356 (624-0211)

B

Biochemistry (BioC) ..... GortL 140 (624-7755)
Biochemistry (Med) ..... MlrdH 4-225 (625-6100)
Biological Sciences ..... SnH 123 (624-9717)
Biology ..... KoltH P180 (625-6636)
Biosystems and Agricultural Engineering . AgEng 213 (625-7733)
Business and Industry Education ..... VoTech 425 (624-3004)
Business, Government, and Society . Mgmt/Econ 835 (624-5232)
Business Law ..... Mgmt/Econ 645 (624-6506)

C

Cell Biology and Neuroanatomy ..... JacH 4-135 (624-1123)
Chemical Engineering and Materials Science ..... AmundH 151 (625-1313)
Chemistry ..... SmithH 115 (624-0026)
Chicano Studies ..... ScottH 102 (624-6309)
Child Psychology ..... ChDev 104 (624-1891)
Civil Engineering ..... CivE 122 (625-5522)
Classical and Near Eastern Studies ..... FolH 330 (625-5353)
Clinical and Population Sciences .... VetTchHos 225 (625-7755)
Communication Disorders ..... ShevH 115 (624-3322)
Cultural Studies & Comparative Literature . FolH 350 (624-8099)
Composition and Communication ..... LindH 306B (625-2888)
Computer Science ..... EE/CSci 4-192 (625-4002)
Curriculum and Instruction ..... PeikH 125 (625-6372)

D

Dance ..... NorrisH 106 (624-5060)
Dental Hygiene ..... MoosT 9-436 (625-9121)
Dentistry ..... MoosT 15-209 (625-9982)
Dermatology ..... PWB 4-240 (625-8625)
Design, Housing, and Apparel ..... McNH 240 (624-9700)

E

East Asian Languages and Literatures .... KlaCt 192 (624-3331)
East Asian Studies ..... 232 SocSci (624-8543)
Ecology, Evolution, and Behavior ..... Ecology 100 (625-5700)
Economics ..... Mgmt/Econ 1035 (625-6353)
Educational Administration ..... WullH 330 (624-1006)
Educational Policy and Administration .... WullH 330 (624-1006)
Educational Psychology ..... BuH 206 (624-6083)
Electrical Engineering ..... EE/CSci 4-178 (625-3300)
English ..... LindH 207 (625-3363)
English: Creative and Professional Writing LindH 209 (625-6366)
Entomology ..... HodsonH 219 (624-3636)

F

Family Education ..... VoTech 325 (624-3010)
Family Practice, Community Health ..... PWB 6-240 (624-2622)
Family Social Science ..... McNH 290 (625-1900)
Finance ..... Mgmt/Econ 735 (624-2888)
Fisheries and Wildlife ..... HodsonH 200 (624-3600)
Food Science and Nutrition ..... FScN 225 (624-1290)
Forest Products ..... KaufL 203 (624-9219)
Forest Resources ..... GrnH 115 (624-3400)
French and Italian ..... FolH 260 (624-4308)

G

General College ..... ApH 140 (625-6663)
Genetics and Cell Biology ..... BioSci 250 (624-3003)
Geography ..... SocSci 414 (625-6080)
Geology and Geophysics ..... PillsH 106 (624-1333)
German, Scandinavian, & Dutch ..... FolH 205 (625-2080)

H

History ..... SocSci 614 (624-2800)
History of Medicine ..... DiehlH 510 (624-4416)
History of Science & Technology ..... Phys 342E (624-7069)
Home Economics ..... McNH 32 (624-1717)
Horticultural Science ..... AlderH 305 (624-5300)
Human Resource Development ..... VoTech 425 (624-3004)

I

Industrial Relations ..... Mgmt/Econ 537 (624-2500)
Information and Decision Science ..... HHHCtr 395 (624-8030)
Insurance ..... Mgmt/Econ 537 (624-2500)
Interdepartmental Study (CLA) ..... JohH 220 (624-7577)
International Relations ..... SocSci 214 (624-9007)

J

Journalism, Mass Communication ..... MurH 15 (625-0120)

K

Kinesiology ..... CookeH 220 (625-5300)

L

Laboratory Medicine ..... Mayo D242 (625-9171)
Landscape Architecture ..... Arch 125 (625-6860)
Latin American Studies ..... SocSci 232 (624-8543)
Law School ..... Law 285 (625-1000)
Linguistics ..... KlaCt 192 (624-3331)

M

Marketing ..... Mgmt/Econ 1235 (624-5055)
Mathematics ..... VinH 4 (625-4848)
Mathematics Education ..... PeikH 125 (625-6372)
MBA Program, Carlson School ..... HHH 295 (624-0006)
Mechanical Engineering ..... MechE 125 (625-0705)
Medical Technology ..... PWB 15-170 (625-9490)
Medicine ..... PWB 14-110 (625-3220)
Microbiology ..... Mayo 1460 (624-5947)
Middle Eastern Languages and Cultures ... KlaCt 192 (624-3331)
Middle Eastern Studies ..... 232 SocSci (624-8543)
Military Science ..... Armory 108 (624-7300)
Mineral Engineering ..... CivE 122 (625-5522)
Mortuary Science ..... Mayo A275 (624-6464)
Music ..... FergH 100 (624-5740)
Music Education ..... FergH 100 (624-0071)

N

Naval Science ..... Armory 203 (625-6677)
Neurology ..... PWB 12-100 (625-9900)
Nursing ..... WDH 5-140 (624-9600)

O

Obstetrics and Gynecology ..... MoosT 12-211 (626-3111)
Operations and Management Science Mgmt/Econ 332 (624-7010)
Ophthalmology ..... PWB 9th floor (625-4400)
Otolaryngology ..... PWB 8-240 (625-3200)

P

Pediatrics ..... PWB 13-107 (624-4477)
Pharmacology ..... MlrdH 3-260 (625-9997)
Pharmacy ..... WDH 5-110 (624-9490)
Philosophy ..... FordH 355 (625-6563)
Physical Education ..... CookeH 220 (625-5300)
Physical Medicine and Rehabilitation ..... Mayo 860 (626-5303)
Physics ..... Phys 148 (624-7375)
Physiology ..... MlrdH 6-255 (625-5902)
Plant Biology ..... BioSci 220 (625-1234)
Plant Pathology ..... StakH 304 (625-8299)
Plant Physiology ..... BioSci 220 (625-4222)
Political Science ..... SocSci 1414 (624-4144)
Psychiatry ..... Mayo A605 (626-5400)
Psychology ..... EltH N218 (625-4042)
Public Affairs ..... HHHCtr 225 (625-9505)
Public Health ..... Mayo D305 (626-3500)

R

Radiology ..... Mayo B238 (626-5529)
Recreation, Park, and Leisure Studies .. CookeH 220 (625-5300)
Rhetoric ..... HckrH 202 (624-3445)
Russian Area Studies ..... 232 SocSci (624-8543)
Russian ..... KlaCt 192 (624-3331)

S

Scandinavian ..... FolH 205 (625-2080)
Small Animal Clinical Sciences .... VetTchHos C339 (625-7744)
Social Work ..... FordH 400 (624-5888)
Sociology ..... SocSci 909 (624-4300)
Soil Science ..... BorH 439 (625-1244)
South Asian Languages and Literature .... KlaCt 192 (624-3331)
South Asian Studies ..... 232 SocSci (624-8543)
Spanish and Portuguese ..... FolH 34 (625-5858)
Speech-Communication ..... FolH 460 (624-5800)
Sports Studies ..... CookeH 220 (625-5300)
Statistics ..... VinH 270 (625-8046)
Studio Arts ..... ArtB 208 (625-8096)
Surgery ..... PWB 11-100 (625-1400)

T

Theatre Arts ..... MdbH 204 (625-6699)

U

University College
Intercollege Program (ICP) ..... Armory 107 (624-2004)
Program for Individualized Learning .. Armory 107 (624-4020)

V

Veterinary Biology ..... AnScVM 295K (624-2700)
Veterinary Pathobiology ..... VetS 205g (625-5255)

W

Women's Studies ..... FordH 492 (624-6006)
Work, Community, and Family
Education ..... VoTech 350 (624-1221)

Y

Youth Development and Research ..... McNH 386 (624-3700)

UNDERGRADUATE ADVISING OFFICES

Agricultural, Food, and Environmental Sciences,
College of ..... CofH 277 (624-3009)

Architecture and Landscape Architecture,
College of ..... Arch 110 (626-1000)

Biological Sciences, College of .... SnH 223 (624-9717)
(Please call ahead for an appointment.)

Education and Human Development,
College of ..... 110 Wulling Hall (625-6501)

General College ..... ApH 40 (626-8703)

Human Ecology, College of ..... McNH 32 (624-1717)

Liberal Arts, College of
Premajor Offices:
CLA major& preprofessional . JohH B18 (624-9585)
Pre-health sciences ..... JohH 30 (624-9006)
Upper Division College Offices:
East bank departments, adult special,
interdepartmental ..... JohH 114 (624-4545)
West bank departments ... SocSci 122 (624-5848)
Honors Program ..... JohH 115 ((624-5522)
Martin Luther King Program ..... JohH 19 (625-2300)

Management, Carlson
School of ..... HHHCtr 290 (624-3313)

Natural Resources,
College of ..... NatResAd 135 (624-6768)

Nursing, School of ..... WDH 5-160 (624-4454)

Pharmacy, College of ..... WDH 5-110 (624-9490)

Technology, Institute of
Student Affairs Office ..... LindH 105 (624-8504)
Project Technology Power ..... WaLib 339 (625-0219)

University College
Individualized Learning,
Program for (PIL) ..... Armory 107 (624-4020)
Intercollege Program
(ICP) ..... Armory 107 (624-2004)

BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

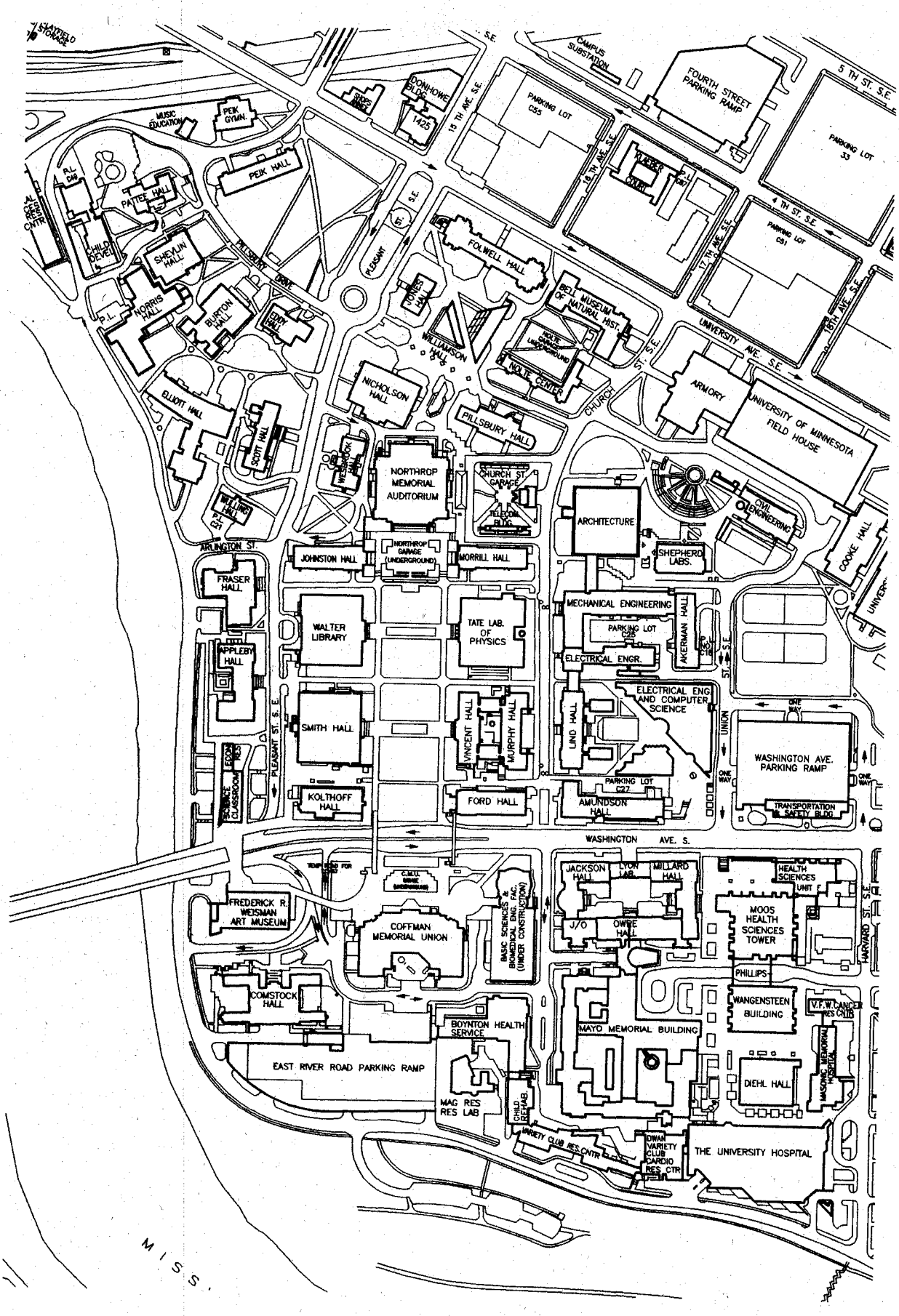
- ○ ABLMS, Andrew Boss Laboratory-Meat Science (SP) *
- ○ AgGhCl, Agronomy Greenhouse Classroom (SP)
- ❑ AgrPGGh, Agronomy/Plant Genetics Greenhouse (SP)
- ❑ AkerH, Akerman Hall (EB)
- ○ AlderH, Alderman Hall (SP) *
- ○ AmundH, Amundson Hall (EB) * R
- ○ AnAren, Animal Arena (SP)
- ❑ AndH, Anderson Hall (WB) * R
- ○ AnScVM, Animal Science, Veterinary Medicine (SP) *
- ○ ApH, Appleby Hall (EB) * R
- ❑ Arch, Architecture (EB) *
- ❑ Armory (EB)
- ❑ ArtB, Art Building (WB)
- ○ BCB, Beef Cattle Barn (SP)
- ○ BellMus, Museum of Natural History (EB) * R
- ❑ Berry, Berry House (SP)
- ○ BFAB, Bierman Field Athletic Building (EB) * R
- ○ BioAgEng, Biosystems and Agricultural Engineering (SP) * R
- ○ BioSci, Biological Sciences Center (SP) * R
- ○ BlegH, Blegen Hall (WB) * R
- ○ BorH, Borlaug Hall (SP) * R
- ○ BoynHS, Boynton Health Service (EB) * R
- ○ BuH, Burton Hall (EB) * R
- ○ CenH, Centennial Hall (EB) * R
- ○ CentLib, St. Paul Campus Central Library (SP) * R
- ❑ ChDev, Child Development (EB) *
- ○ ChRC, Children's Rehabilitation Center (EB) * R
- ○ CivE, Civil Engineering (EB) * R
- ○ ClaOff, Classroom Office Building (SP) * R
- ○ CMU, Coffman Memorial Union (EB) * R
- ○ CofH, Coffey Hall (SP) * R
- ○ ComH, Comstock Hall (EB) *
- ○ CookeH, Cooke Hall (EB) * R
- ○ DiehlH, Diehl Hall (EB) *
- ○ DinC, Dining Center (SP) *
- ○ DVCCRC, Dwan Variety Club Cardiovascular Research Center (EB) * R
- ○ EBCEC, Earl Brown Continuing Education Center (SP) * R
- ○ Ecology, Ecology Building (SP) * R
- ○ EddyH, Eddy Hall (EB) * R
- ○ EdHAn, Eddy Hall Annex (EB)
- ○ EE/CSci, Electical Engineering/ Computer Science Building (EB) * R
- ❑ ElectE, Electical Engineering (EB) * R
- ○ EltH, Elliot Hall (EB) * R
- ○ EngFishL, Engineering and Fisheries Laboratory (SP)
- ○ FBComp, Football Complex, 600 15th Ave. SE (EB) * R
- ○ FergH, Ferguson Hall (WB) * R
- ❑ FieldHse, University Field House (EB)
- ○ FolH, Folwell Hall (EB) * R
- ○ FordH, Ford Hall (EB) * R
- ❑ FraserH, Fraser Hall (EB) R *
- ◆ FronH, Frontier Hall (EB) *
- ○ FScN, Food Science and Nutrition (SP) *
- ○ GorL, Gortner Laboratory of Biochemisty (SP) *
- ○ GrnH, Green Hall (SP) * R
- ○ Gym, Gymnasium (SP) * R
- ◆ HayesH, Hayes Hall (SP)
- ❑ HckrH, Haecker Hall (SP)
- ○ HHHCtr, Humphrey Center (WB) * R
- ○ HodsonH, Hodson Hall (SP) * R
- ❑ HrG, Horticulture Greenhouse (SP)
- ○ JacH, Jackson Hall (EB) *
- ○ JOAd, Jackson-Owre Addition (EB) *
- ❑ JohH, Johnston Hall (EB) * R
- ◆ JonesH, Jones Hall (EB)
- ○ KaufL, Kaufert Laboratory (SP) * R
- ❑ KlaCt, Klaber Court (EB)
- ❑ KolthH, Kolthoff Hall (EB) * R
- ○ Law, Law Building (WB) * R
- ○ LindH, Lind Hall (EB) * R
- ○ LyonL, Lyon Laboratories (EB)
- ○ MannConc, Ted Mann Concert Hall (WB) * R
- ○ Mayo, Mayo Memorial (EB) * R
- ○ McNH, McNeal Hall (SP) * R
- ○ MdbH, Middlebrook Hall (WB) * R
- ❑ MechE, Mechanical Engineering (EB) * R
- ○ Mgmt/Econ, Management/Economics Building (WB) * R
- ○ MlrdH, Millard Hall (EB) *
- ❑ MMA, Mayo, Memorial Auditorium (EB)
- ○ MoosT, Moos Health Sciences Tower (EB) * R
- ❑ MorH, Morrill Hall (EB) * R
- ○ MurH, Murphy Hall (EB) * R
- ◆ MusEd, Music Education (EB)
- ○ NatResAd, Natural Resources Administration Building (SP) * R
- ○ NichH, Nicholson Hall (EB) * R
- ○ NMA, Northrop Memorial Auditorium (EB) * R
- ○ NorrisH, Norris Hall (EB) * R
- ○ OMWL, O Meredith Wilson Library (WB) * R
- ○ OwreH, Owre Hall (EB) * R
- ❑ PeikG, Peik Gym (EB)
- ○ PeikH, Peik Hall (EB) * R
- ❑ PetH, Peters Hall (SP)
- ○ Phys, Tate Laboratory of Physics (EB) *
- ◆ PiH, Pioneer Hall (EB)
- ◆ PillsH, Pillsbury Hall (EB)
- ◆ PlSci, Plant Sciences (SP)
- ○ PtH, Pattee (EB) * R
- ○ PWB, Phillips Wangensteen Building (EB) * R
- ○ RarigC, Rarig Center (WB) * R
- ❑ SaH, Sanford Hall (EB) *
- ❑ SciCB, Science Classroom Building (EB) * R
- ◆ ScottH, Scott Hall (EB)
- ○ ShepLab, Shepherd Laboratories (EB) *
- ○ ShevH, Shevlin Hall (EB) * R
- ○ SmithH, Smith Hall (EB) * R
- ○ SnH, Snyder Hall (SP) * R
- ○ SocSci, Social Sciences Building (WB) * R
- ○ Soils (SP)
- ❑ Stad, Stadium (EB) R
- ○ StakH, Stakman Hall of Plant Pathology (SP) *
- ○ StCen, Student Center (SP) * R
- ◆ TerH, Territorial Hall (EB)
- ○ UAqCtr, University Aquatic Center (EB) * R
- ○ UHosp, University Hospital (EB) * R
- ◆ VetA, Veterinary Anatomy (SP)
- ○ VetDL, Veterinary Diagnostic Laboratories (SP) * R
- ❑ VetS, Veterinary Science (SP) *
- ○ VetTchHos, Veterinary Teaching Hospitals (SP) * R
- ○ VinH, Vincent Hall (EB) * R
- ○ VoTech, Vocational-Technical Education (SP) * R
- ○ WaLib, Walter Library (EB) * R
- ○ WBOB, West Bank Office Building, 1300 S. Second Street (WB) * R
- ○ WBU, West Bank Union (WB) R
- ○ WDH, Weaver-Densford Hall (formerly Health Sciences Unit F) (EB) * R
- ◆ Weigley, Weigley House (SP)
- ○ WeismanArt, Frederich R. Weisman Art Museum (EB) * R
- ○ WesH, Wesbrook Hall (EB) * R
- ○ WilleyH, Willey Hall (WB) * R
- ○ WmsA, Williams Arena (EB) * R
- ○ WmsonH, Williamson Hall (EB) * R
- ○ WuH, Wulling Hall (EB) * R

KEY:

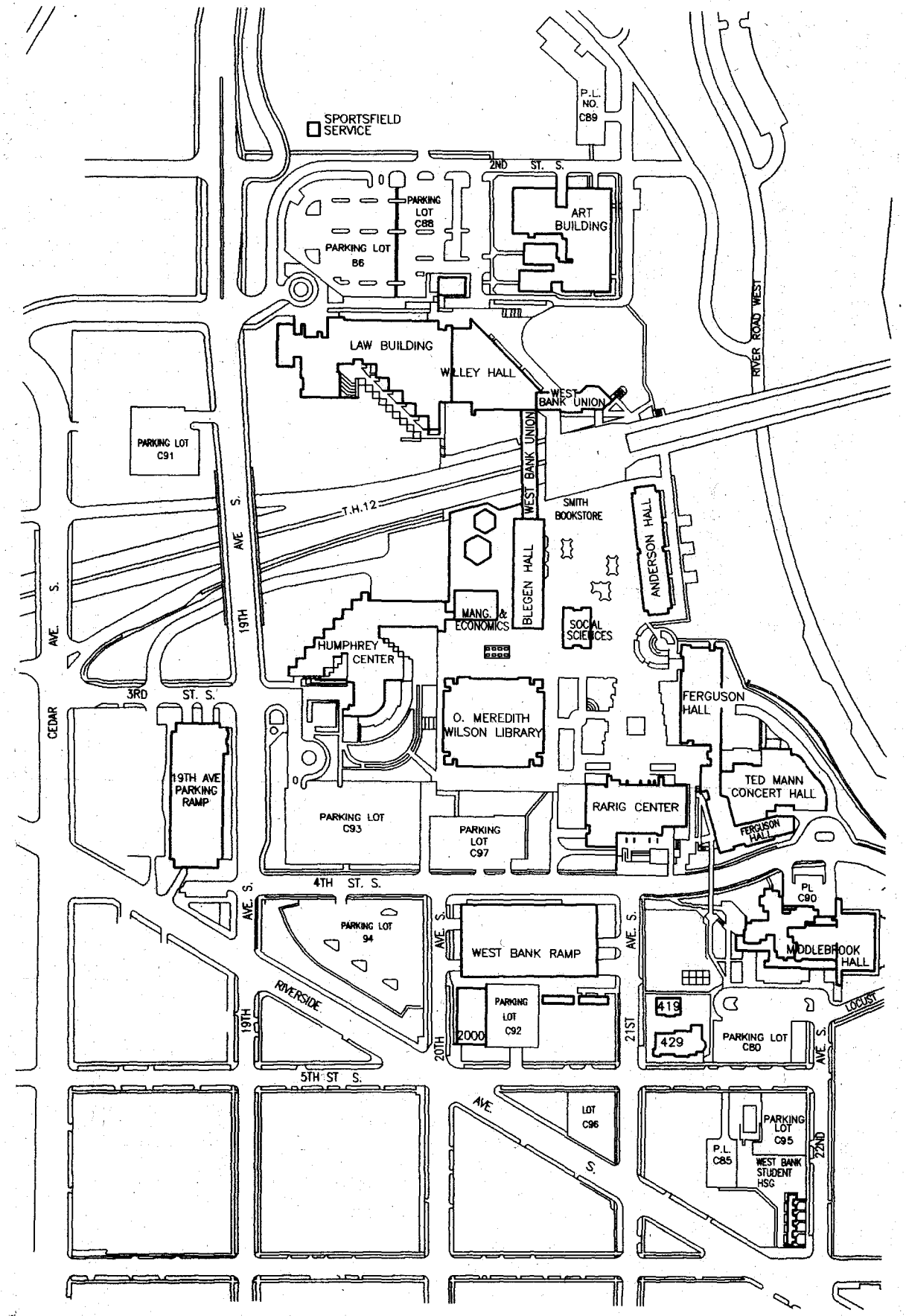
○ = accessible building
❑ = partially accessible
◆ = inaccessible building
* = elevator

R = adapted restroom
(EB) = East Bank, Minneapolis
(WB) = West Bank, Minneapolis
(SP) = St. Paul

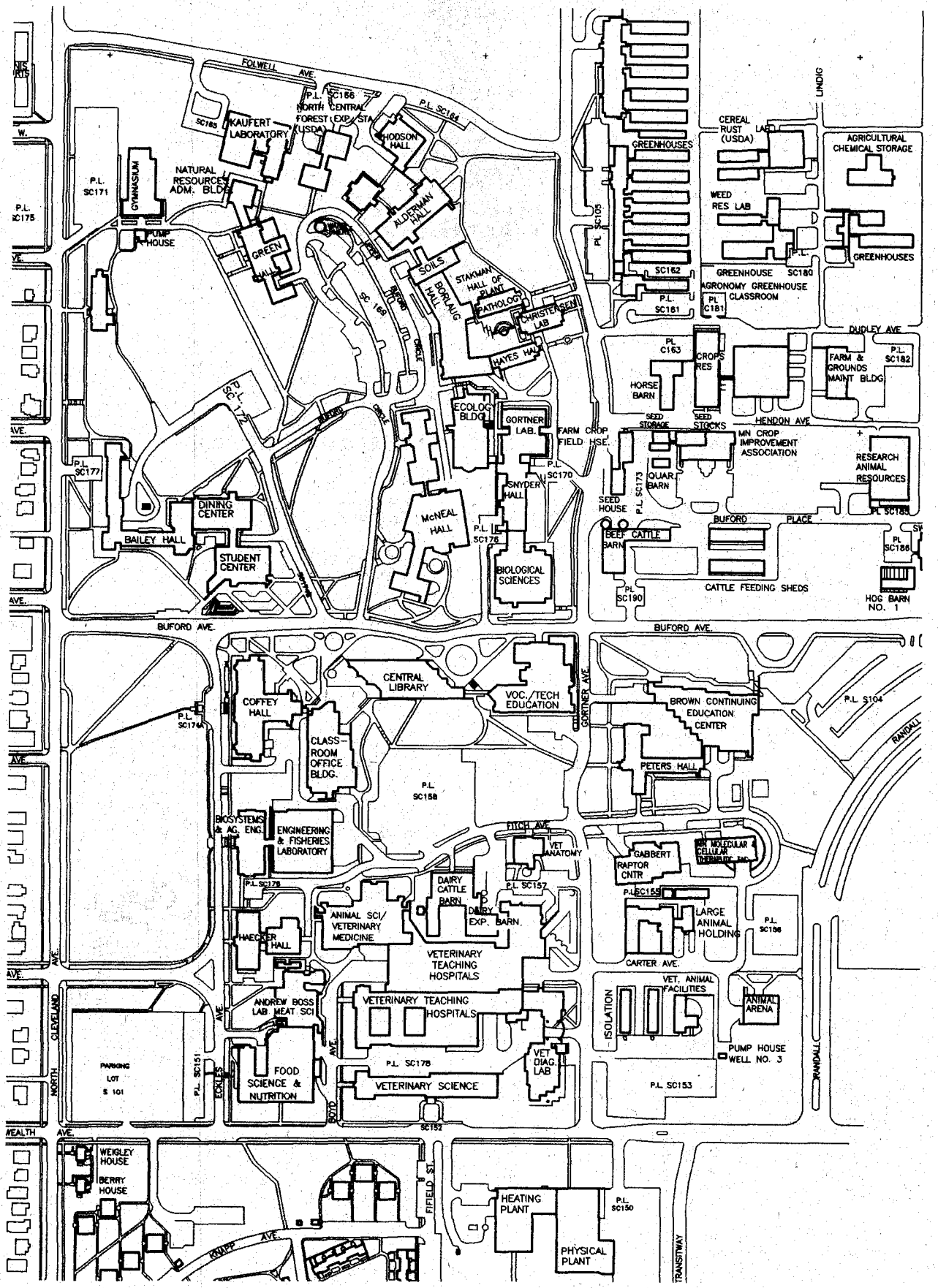
For maps *(Campus Access Guides)* and further information, contact Disability Services at 624-4037 (Voice and TTY).



EAST BANK, MINNEAPOLIS



WEST BANK, MINNEAPOLIS


FOLWELL AVE.
P.L. SC166
NORTH CENTRAL FOREST EXP. STA (USDA)
P.L. SC164
SC165
KAUFERT LABORATORY
HODSON HALL
P.L. SC171
GYMNASIUM
NATURAL RESOURCES ADM. BLDG.
ALDERMAN HALL
PUMP HOUSE
GREEN HALL
SOILS
BORLAUG HALL
STAKMAN HALL OF PLANT PATHOLOGY
CHRISTENSEN LAB
HAYES HALL
SC 168
BERRY LTD CIRCLE
P.L. SC172
ECOLOGY BLDG.
GORTNER LAB.
FARM CROP FIELD HSE.
P.L. SC177
DINING CENTER
BAILEY HALL
STUDENT CENTER
McNEAL HALL
P.L. SC176
SNYDER HALL
P.L. SC170
BIOLOGICAL SCIENCES
BUFORD AVE.
GREENHOUSES
P.L. SC105
SC162
P.L. SC181
CEREAL RUST LAB (USDA)
WEED RES LAB
GREENHOUSE SC180
AGRONOMY GREENHOUSE CLASSROOM
P.L. C181
AGRICULTURAL CHEMICAL STORAGE
GREENHOUSES
LINDIG
DUDLEY AVE
P.L. C163
CROPS RES
HORSE BARN
FARM & GROUNDS MAINT BLDG.
P.L. SC182
SEED STORAGE
SEED STOCKS
HENDON AVE
MN CROP IMPROVEMENT ASSOCIATION
RESEARCH ANIMAL RESOURCES
P.L. SC185
SEED HOUSE
P.L. SC173
QUAR. BARN
BEEF CATTLE BARN
BUFORD PLACE
P.L. SC186
CATTLE FEEDING SHEDS
P.L. SC190
HOG BARN NO. 1
CENTRAL LIBRARY
VOC./TECH EDUCATION
GORTNER AVE.
COFFEY HALL
P.L. SC174
CLASS-ROOM OFFICE BLDG.
BROWN CONTINUING EDUCATION CENTER
PETERS HALL
P.L. SC104
RANDALL
P.L. SC158
BIOSYSTEMS & AG. ENG.
ENGINEERING & FISHERIES LABORATORY
P.L. SC178
PITCH AVE.
VET ANATOMY
GABBERT RAPTOR CNTR
MN MOLECULAR & CELLULAR THERMATIC ENG.
P.L. SC155
DAIRY CATTLE BARN
DAIRY EXP. BARN
P.L. SC157
ANIMAL SCI/ VETERINARY MEDICINE
HAECKER HALL
VETERINARY TEACHING HOSPITALS
LARGE ANIMAL HOLDING
P.L. SC156
CARTER AVE.
VET. ANIMAL FACILITIES
ISOLATION
ANIMAL ARENA
ANDREW BOSS LAB MEAT SCI
VETERINARY TEACHING HOSPITALS
PUMP HOUSE WELL NO. 3
PARKING LOT S 101
P.L. SC151
ECKLES
FOOD SCIENCE & NUTRITION
P.L. SC176
VETERINARY SCIENCE
VET DIAG. LAB
BOYD
SC152
P.L. SC153
CLEVELAND
NORTH
WEIGLEY HOUSE
BERRY HOUSE
KNAPP AVE.
FIFIELD ST.
HEATING PLANT
PHYSICAL PLANT
P.L. SC150
TRANSITWAY

ST. PAUL

COMPLETING YOUR COURSE REQUEST FORM

UNIVERSITY OF MINNESOTA

COURSE REQUEST

① **Term and year:** ☐ Fall ☐ Winter ☒ Spring ☐ Summer session I ☐ Summer session II 19 97

② Name of student (last, first, middle): Student, Chris H. | ID number or SSN: 1234567 | ③ College and major: CLA-Anthropology

④ Mailing address (street, city, state, Zip Code): 4312 Main Street St. Paul, MN 55111 | Phone number: 373-4343

ORIGINAL REGISTRATION or additions

⑤ (A)	(B)	(C)	(D)	(E)
938472			Anth 5118	
625557		2	Engl 5970	
129970			Wbst 5300	

⑥ SECOND CHOICES

429364	S-U		Wbst 3400 sec 2	
137763			Anth 5131	

CHANGES grade base or credits

⑦				⑧ Adviser approval

CANCELS

⑨		
		If you are completely canceling **DAY** classes, simply check here: ☐

⑩ **Minnesota Public Interest Research Group (MPIRG).** MPIRG is described in the *Class Schedule*. The MPIRG fee is assessed to those who pay the student services fee. Payment is refundable through MPIRG. If you choose **NOT** to pay, initial here: ☐

⑪ **University of Minnesota Coalition for Higher Education (UMCHE).** UMCHE is described in the *Class Schedule*. The UMCHE fee is assessed to those who pay the student services fee. Payment is refundable through UMCHE. If you choose **NOT** to pay, initial here: ☐

OTR22 9/95

① Indicate the term (fall, winter, spring, summer I, or summer II) and year for which you are registering.

② Print your name and student ID number (or Social Security Number).

③ Print your major and the college in which you are enrolled.

④ Print your complete address and phone number.

⑤ 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-F and S-N.* See example above and read the paragraph on Grading Option on page 60 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.
- (E) Print the magic number for each course for which approval is required.

⑥ This section is for your second choice course requests. **Plan alternatives for all parts of the course (e.g., lecture, lab, recitation) in case your first choice requests are closed or otherwise unavailable.**

⑦ This section is for courses where you are *changing* your grade base or number of credits.

⑧ Required approvals, if needed.

⑨ Provide the call number, designator, course, and section numbers for any courses you are cancelling.

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 $2.50. A statewide advocacy group, MPIRG gives the 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.

⑪ UMCHE—see instructions on form. University of Minnesota Coalition for Higher Education (UMCHE) lobbies to express student views on University quality, affordability, and accessibility. The UMCHE fee is $1.81 per quarter.

UNIVERSITY OF MINNESOTA

COURSE REQUEST

Term and year: ☐ Fall ☐ Winter ☐ Spring ☐ Summer session I ☐ Summer session II 19____

Name of student (last, first, middle)	ID number or SSN	College and major
Mailing address (street, city, state, Zip Code)		Phone number

ORIGINAL REGISTRATION or additions

Course number	Grade base	Credits	Department name and section	Major code

SECOND CHOICES

CHANGES grade base or credits

Course number	Grade base	Credits	Department name and section	Adviser approval

CANCELS

Course number	Department name and section

If you are completely canceling **DAY** classes, simply check here: ☐

Minnesota Public Interest Research Group (MPIRG). MPIRG is described in the *Class Schedule*. The MPIRG fee is assessed to those who pay the student services fee. Payment is refundable through MPIRG. If you choose **NOT** to pay, initial here: ____

University of Minnesota Coalition for Higher Education (UMCHE). UMCHE is described in the *Class Schedule*. The UMCHE fee is assessed to those who pay the student services fee. Payment is refundable through UMCHE. If you choose **NOT** to pay, initial here: ____

OTR22 9/95

UNIVERSITY OF MINNESOTA

STUDENT HOSPITALIZATION INSURANCE

Student name (last, first, middle initial)	Student ID number or SSN

☐ Fall quarter ☐ Winter quarter ☐ Spring quarter
☐ Fall semester ☐ Spring semester

If you are taking 6 or more day school credits, you will automatically be charged for University-sponsored hospitalization insurance unless you check the first box below, fill in the name of your insurance company and policy number, and sign the bottom of this form. If you do not provide complete information, you will be charged for insurance when you register. You may receive a full refund by returning to the Registration Center with complete insurance information **by the end of the first week of classes.** (NOTE: If you are taking 6 or more credits and do not have hospitalization insurance, you do not have to fill out this card.)

☐ **I am adequately covered by the hospitalization insurance indicated below.**

Name of insurance company or HMO	Policy or identification number

☐ **I have applied for and am enrolled in the Graduate Assistant Health-Care Plan.**

Student signature	Date

OTR290 8/93

PROGRAM WORK SHEET

EXAMPLE

Course: AmIn 3242
Room/Building: WullH 130

TIME/DAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
0800-0830 (8-8:30 a.m.)					
0830-0900 (8:30-9 a.m.)					
0900-0930 (9-9:30 a.m.)					
0930-1000 (9:30-10 a.m.)					
1000-1030 (10-10:30 a.m.)					
1030-1100 (10:30-11 a.m.)					
1100-1130 (11-11:30 a.m.)					
1130-1200 (11:30-12 noon)					
1200-1230 (12-12:30 p.m.)					
1230-1300 (12:30-1 p.m.)					
1300-1330 (1-1:30 p.m.)					
1330-1400 (1:30-2 p.m.)					
1400-1430 (2-2:30 p.m.)					
1430-1500 (2:30-3 p.m.)					
1500-1530 (3-3:30 p.m.)					
1530-1600 (3:30-4 p.m.)					
1600-1630 (4-4:30 p.m.)					
1630-1700 (4:30-5 p.m.)					
1700-1730 (5-5:30 p.m.)					
1730-1800 (5:30-6 p.m.)					
1800-1830 (6-6:30 p.m.)					
1830-1900 (6:30-7 p.m.)					

registration options

DAY CLASSES

REGISTRATION . . . . . .

Self-registration

In-person Registration

Locations:

202 Fraser, Minneapolis campus
130 Coffey Hall, St. Paul campus

Dual Registration (for admitted students only)

202 Fraser Hall
130 Coffey Hall
101 Wesbrook

See *Class Schedule* or *Summer Session Bulletin* for dates and times of registration.

Note: Certain students need to register in their program office (e.g., MBA, Medical School, Law School, Dentistry, Veterinary Medicine).

PAYMENT . . . . . .

All tuition and fees are billed through Student Accounts Receivable.

EXTENSION CLASSES

REGISTRATION . . . . . .

Mail Registration

Fax Registration

In-person Registration

Locations:

Wesbrook Hall, Minneapolis campus
MacPhail, downtown Minneapolis
St. Paul Skyway, downtown St. Paul

Dual Registration (for admitted students only)

101 Wesbrook
202 Fraser Hall
130 Coffey Hall

See *Extension Classes Bulletin* for dates and times of registration.

Note: Certain students need to register in their program office (e.g., MBT, Neighborhood Programs, ESL, PSEOA).

PAYMENT . . . . . .

Due at time of registration*

Cash

Check/money order

Credit card (Visa, MasterCard, Discover)

**Exceptions:* Students eligible for financial aid, students whose tuition and fees are being billed to an agency, and students using dual registration will have their tuition billed through Student Accounts Receivable.

PROGRAM WORK SHEET

EXAMPLE

Course: AmIn 3242
Room/Building: WullH 130

TIME/DAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
0800-0830 (8-8:30 a.m.)					
0830-0900 (8:30-9 a.m.)					
0900-0930 (9-9:30 a.m.)					
0930-1000 (9:30-10 a.m.)					
1000-1030 (10-10:30 a.m.)					
1030-1100 (10:30-11 a.m.)					
1100-1130 (11-11:30 a.m.)					
1130-1200 (11:30-12 noon)					
1200-1230 (12-12:30 p.m.)					
1230-1300 (12:30-1 p.m.)					
1300-1330 (1-1:30 p.m.)					
1330-1400 (1:30-2 p.m.)					
1400-1430 (2-2:30 p.m.)					
1430-1500 (2:30-3 p.m.)					
1500-1530 (3-3:30 p.m.)					
1530-1600 (3:30-4 p.m.)					
1600-1630 (4-4:30 p.m.)					
1630-1700 (4:30-5 p.m.)					
1700-1730 (5-5:30 p.m.)					
1730-1800 (5:30-6 p.m.)					
1800-1830 (6-6:30 p.m.)					
1830-1900 (6:30-7 p.m.)					

Discover Cyberspace

Visit the Twin Cities Campus HomePage



Check out *Current students*—where you can get great course information and register, set up your Personal On-Line Organizer, and manage your academic program and your finances.

http://www.umn.edu/tc

University Archives (3)
10 Walter