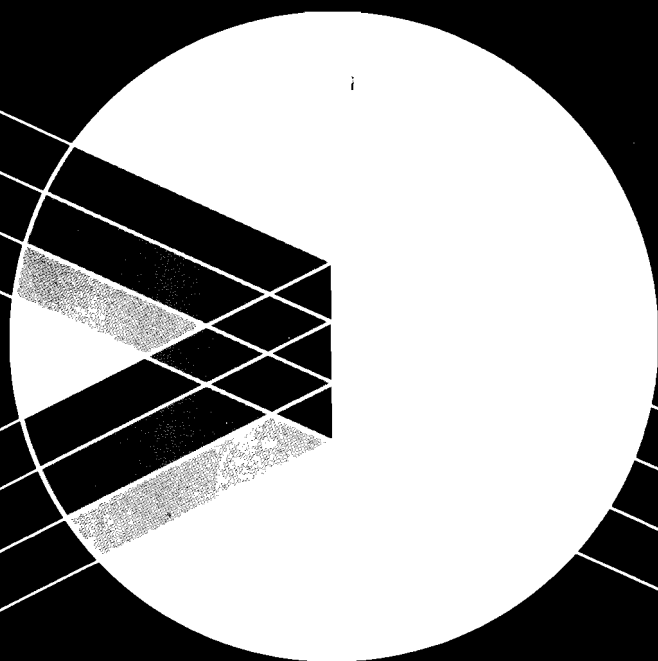


University of Minnesota Bulletin



Continuing
Education and
Extension



Twin Cities
July 1, 1977

Extension
Classes
1977-78

Save your time! Before calling for information, check the **Index** in the back of this **Bulletin**.

general extension information

101 Wesbrook Hall
University of Minnesota
77 Pleasant Street S.E.
Minneapolis, Minnesota 55455

373-3195

counseling and program advising

314 Nolte Center
University of Minnesota
315 Pillsbury Drive S.E.
Minneapolis, Minnesota 55455

373-3905

Extension Classes Information and Registration Offices are generally open Monday through Thursday, 7:45 a.m. to 8 p.m., and Friday from 7:45 a.m. to 4:30 p.m.

(for exceptions, see **registration dates**, pages 12-21)

where to call . . .

Extension phone numbers

CANCELLATION INFORMATION	373-3195
CORRESPONDENCE COURSES (INDEPENDENT STUDY)	373-3256
COUNSELING	373-3905
DEGREES AND CERTIFICATES	373-3905
DIRECTOR	373-3942
EXTENSION BULLETIN REQUEST	376-3000
EXTENSION RECORDS (WILLIAMSON HALL)	376-1680
GENERAL INFORMATION (EXTENSION CLASSES)	373-3195
HEALTH SERVICE	373-3195
INFO NEWSLETTER	376-7500
INSTRUCTORS' TELEPHONE NUMBERS	373-3195
MACPHAIL CENTER	373-1925
MAPS (CAMPUS OR PARKING)	376-7500
REGISTRATION	373-3195
REGISTRATION FORMS	376-3000
SAMPLER LECTURES	373-3039
SPECIAL CLASSES	373-5166
STUDENT BOARD	376-7500
TELEVISION CLASSES	376-4925
VETERANS INFORMATION	373-5777

Bookstores phone numbers

B. DALTON (MAPLEWOOD MALL)	770-3903
B. DALTON (EDEN PRAIRIE CENTER)	941-8126
COFFEY HALL (ST. PAUL)	373-0800
HEALTH SCIENCES	376-4007
MINNESOTA BOOK CENTER (WILLIAMSON HALL, EAST BANK)	373-3688
WEST BANK (SMITH)	373-4450

University phone numbers

ATHLETIC FACILITIES	373-4200
ATHLETIC TICKET OFFICE	373-3181
CONCERTS AND LECTURES	373-2345
DAY SCHOOL BULLETINS	373-2153
LIBRARIES	373-2424
UNIVERSITY INFORMATION	373-2851
UNIVERSITY POLICE	373-3550
UNIVERSITY THEATRE	373-2337

SHARE THIS *BULLETIN* WITH A FRIEND. See symbols used in this *Bulletin* on page 58; abbreviations on page 413. Campus and parking maps begin page 419.

contents

Introduction	
Eleven Ways to Earn University of Minnesota Credits	4
Questions Most Often Asked about Extension Classes	5
Message from the University President	6
Message from the CEE Dean	7
Message from the Extension Director	8
University of Minnesota	9
Board of Regents	9
Administrative Officers	9
Continuing Education and Extension	9
Administrative Officers	9
Extension Classes Staff	9
Counseling Department Staff	9
Administrative Support Services	9
Instructional Systems Departments and Centers; Directors	10
Continuing Education Division; Directors	10
Community Relations and Extension Services Programs; Directors	10
Human Rights	10
When and How to Register	11
Schedule of Terms	11
Fall Quarter	12
Fall Semester	14
Winter Quarter	16
Spring Semester	18
Spring Quarter	20
Register by Mail, by Telephone, or In Person	22
General Registration Instruction	22
Sample Registration Form	22

(continued next page)

The **Extension Classes Bulletin** is published yearly and distributed to persons who have registered for Extension Classes within the last two years, and to others on request (telephone 376-3000). Unfortunately, some students are mailed duplicate copies. If you have a duplicate or unwanted copy, please return it to 101 Westbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis 55455. Or, better yet, pass it on to someone you know who may be thinking of continuing his or her education. Watch for *Bulletin* changes in the **INFO Newsletter** which is issued monthly August through May. Telephone 376-7500 with questions concerning **INFO**.

Nonlimited-Enrollment Classes	23
Limited-Enrollment Classes Registration Dates	23
Mail Registration Instructions	23
Telephone Requests for Limited-Enrollment Classes	24
In-person Registration Instructions	24
Closed Classes	25
Late Registration and Additions	25
Neighborhood Centers Registration	25
Office Hours	29
Bookstores	31
Enrollment Information	35
Enrollment into Extension Classes	36
Counseling and Program Advising	36
Tuition and Fees	37
Financial Aids and Loans	37
Military Information	40
Personnel	40
Veterans	41
Prerequisites	43
Grades	44
Grade Reports and Transcripts	45
Credit and No Credit Registrations	45
Credits	45
Graduate Credit	46
Credits Without Class Attendance	47
Independent Study "Y" Registration	47
Extra Credit "X" Registrations	47
Directed Studies, Directed Research Registration	47
Special Examination	48
College-Level Examination Program (CLEP)	48
University College Independent Study	48
Independent Study through Correspondence	48
Radio Courses	48
Television Courses	48
Auditors	49
Reduced-Tuition Plans (No Credit)	49
Informal Courses (No Credit Only)	50
Sampler Lectures (\$1)	50
Persons 62 and Over	50
Rules, Regulations and Policies	51
Fee Statements	52
Changes in Course Information	52
Attendance in Classes	52
Transferring Classes	52
Transfers within the University	53
Transfers from Other Institutions	53
Records	53
Cancellations	53
Cancellations (How to Drop a Course)	53
Cancellation of, or Change in, Scheduled Classes (Made by Department of Extension Classes)	54

Cancellation of Class Meetings Because of Severe Weather Conditions, Other Emergencies	54
Refunds	55
Tax-Deductible Educational Expenses	56
Grievance Procedures	56
Committee on Student Relations and Academic Standing	56
Course Offerings	57
Semester-basis Classes	58
Symbols	58
Informal Courses	210
Registration	210
Course Listing	211
General Information	339
Faculty	340
Funding of Extension Classes Program	340
Campus Activities, Services and Facilities open to	
Extension Classes Students	340
Art Rentals, University Gallery	340
Athletic Facilities	340
Athletic Tickets	341
Handicapped Facilities	342
Health Service	342
Library	343
Locker Rental Service	343
Lounges and Study Areas	343
Parking Facilities	343
Phones	343
Police Assistance	344
Publications	344
Theatre, Artists Course, and Special Lectures	345
Transportation Between Campuses	345
Student Representation, University of Minnesota Senate	345
Student Board (Extension Classes)	346
Degrees and Certificates	347
Undergraduate Degrees	348
Graduate Degrees	383
Certificates	386
Of Special Interest	367
Numbering, Symbols, Abbreviations and Maps	413
Course Numbering	414
Symbols	414
Abbreviations for Off-Campus Classes	415
Department Abbreviations	416
Campus Building Abbreviations	418
Maps	419
Classes for Neighborhood Centers	429
Index	437
Request Postcards	445
Summer Evening Extension Classes	Inside Back Cover



ways to earn credit at the university of minnesota

There are many ways you can continue your education and receive credit for knowledge and skills gained in the classroom and outside the classroom. The Counseling Department (373-3905) will provide further information on these options.

1. Extension Classes

Register for an Extension class at any of several convenient locations near you! See pages 26, 370 and 429.

2. Extension Independent Study Correspondence Courses

You may earn credits by taking University Extension Independent Study correspondence courses. See page 48.

3. TV, Radio Courses (Extension Independent Study)

U of M credit is available for several radio and television courses. See pages 48 and 379.

4. Continuing Education for Women

Continuing Education for Women offers daytime liberal arts seminars and courses both on and off campus for credit. (Men are welcome in the classes too!) Telephone 373-9743. See page 381.

5. Credit by Examination

Earn credit by examination in fields in which you have gained knowledge outside the classroom. See page 48.

6. CLEP Program

You may earn credits by taking the College Level Examination Program (CLEP) examinations. See page 48.

7. Independent Study

You may register for "independent study"—a Y registration—and earn credits without attending class. See page 47.

8. Extra Credit

You may register for and earn extra credits—an X registration—in Extension courses if you are willing to do extra course work. See page 47.

9. University College

You may earn up to 15 credits for an independent project by registering for University College 3075. See page 48.

10. Cooperative Programs

Receive up to 45 "blanket" credits toward a General College degree for technical courses taken and completed at approved institutions. See page 351.

11. Directed Study, Research Projects

Earn credit by designing directed study and/or research projects around your job activities or involvement in the community. For information call 373-3919. See page 47.

questions & answers

Questions most often asked about Extension Classes:

Most answers to questions about Extension Classes are found in this Bulletin. Check the Index in back of this Bulletin.

1. How do I register? What hours can I register? Where do I register? (See page 11)
2. How can I earn a degree entirely through Extension? Which ones? (See page 347)
3. I have been attending college elsewhere. How can I continue my educational program through Extension? (See page 53)
4. When does registration for classes begin? End? (See page 23)
5. How do I get the credits I've earned in Extension entered on my college transcript? (See page 46)
6. What do I have to do to use my G.I. benefits to take Extension Classes? (See page 41)
7. Are there admission requirements for Extension Classes? (See page 36)
8. Are there ways to get credits without attending class? (See page 47)
9. Can I get any financial assistance to take Extension Classes? (See page 37)
10. What is the difference between certificate and degree credit? (See page 347)
11. Are classes offered at off-campus locations near my home or work? (See pages 370 and 429)
12. What are noncredit "Informal Courses"? (See page 210) "Sampler Lectures"? (See page 50)
13. Can I take classes on weekends? (See page 374)

**More questions?
Call Extension Classes: 373-3195**



I think it is fair to say that we are only beginning to see and appreciate the true potential of continuing, or as I prefer to call it, lifelong education. When I say "we," I make no distinction between educators and students.

For many reasons—economic, demographic, and social—increasing numbers of people are enrolling in these programs. I expect this trend to continue and grow. This is an encouraging development because it is an educationally stimulating one, both for our universities and for our students.

I look forward to the continued vitality of the University of Minnesota's Continuing Education and Extension programs, and wish you luck in your educational endeavors.

C. Peter Magrath
President, University of Minnesota

The times are changing. We used to think of attending school as something we did only when we were young and that going to college was for the young adult. But now that has changed. Lifelong learning is the new theme for education, and the Department of Extension Classes here at the University of Minnesota provides opportunities for adults to take courses to prepare themselves for career changes, to complete unfinished degrees, or to learn something they have always wanted to know. We welcome you to the courses and activities listed in this Bulletin and trust that they will help make lifelong learning a reality for you.

Harold A. Miller

Dean, Continuing Education and Extension





Whether in attending the University of Minnesota you want to revitalize your life, earn a degree, or advance occupationally—or all three—you will probably find the programs you need described in the following pages.

Then again, maybe you won't. If you don't, let us hear from you. The University can't be all things educational to all people, but there is a good deal more of its vast educational resources that Extension can help offer if the demand is sufficient. Write us a letter, or call.

Don't only give us your requests for courses. Get in touch also if you have a question about our programs, if you have a complaint, or if you need some advice.

You'll find us willing, and usually quite able, to help.

Theodore L. Campbell
Director, Extension Classes

university of minnesota

Board of Regents

The Honorable Neil C. Sherburne, Lakeland, Chairman; The Honorable Wenda Moore (Mrs. Cornell), Minneapolis, Vice Chairman; The Honorable Erwin L. Goldfine, Duluth; The Honorable Lauris D. Krenik, Madison Lake; The Honorable Robert Latz, Golden Valley; The Honorable David M. Lebedoff, Minneapolis; The Honorable L. J. Lee, Bagley; The Honorable Charles F. McGuiggan, Marshall; The Honorable Lloyd H. Peterson, Paynesville; The Honorable Mary T. Schertler (Mrs. Paul H.), St. Paul; The Honorable Michael W. Unger, St. Paul; The Honorable David C. Utz, M.D., Rochester.

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Walter H. Bruning, Vice President for Administrative Operations
Lyle A. French, Vice President for the Health Sciences
Stanley B. Kegler, Vice President for Institutional Planning and Relations
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Eleanor S. Fenton, Associate Dean for Continuing Education
Barbara J. Stuhler, Associate Dean for Community Relations and Extension Services
Gerald A. Klement, Administrative Director

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Beverly R. Sinniger, Assistant Director
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Nina F. Samuels, Program Director
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Marie Ward, Editorial Assistant
Shirley Williams, Admissions and
Records Assistant
Vickie Roberts, Office Supervisor
Barb Halvorson, Office Supervisor

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Keith D. Buckley, Associate Director
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Udine C. Drews, Program Adviser
Mari E. Forbush, Program Adviser
Bonnie L. Gray, Counselor
Jacquelyn A. Henning, Program Adviser
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W. Winston Minor, Counselor
F. James Moynihan, Counselor
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Darryl P. Sedio, Counselor
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Stacy Vavoulis, Program Adviser

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Finances, Rebecca Hurst, Accountant

Extension Research, Clara Kanun,
Director

Instructional Systems Departments and Centers; Directors

Conferences, Alan Brown, 131 Nolte Center for Continuing Education
Counseling, Vera M. Schletzer, 314 Nolte Center for Continuing Education
Extension Classes, Theodore L. Campbell, 170 Wesbrook Hall
Independent Study, Roger G. Young, 33 Wesbrook Hall
University Media Resources, Burton Paulu, 540 C Rarig Center
Duluth Continuing Education and Extension Center, Gregory Fox, Acting Director, 403 Administration Building, Duluth Campus
Morris Continuing Education and Extension Center, Roger S. McCannon, 226 Community Services Building, Morris Campus
Rochester Continuing Education and Extension Center, Russell A. May, 1220 South Broadway, Rochester

Continuing Education Division; Directors

Continuing Education in the Arts, Dale D. Huffington, 320 Wesbrook Hall
Continuing Business Education, Richard Grefe, 334 Business Administration
Continuing Education in Education, Reynold Willie, 175 Peik Hall
Continuing Education in Engineering and Science, Morris E. Nicholson, 11 Mines and Metallurgy
Continuing General College Education, Dewain O. Long, 106 Nicholson Hall
Continuing Medical Education, Douglas Fenderson, 143 Owre Hall
Continuing Pharmacy Education, Thomas M. McKennell, 318 Harvard Street
Continuing Education in Social Work, William Hoffman, 338 Nolte Center for Continuing Education

Community Relations and Extension Services Programs; Directors

Audio Visual Library Service, Willard D. Philipson, 3300 University Ave. S.E.
Community Programs, Carol L. Olson, 206 Wesbrook Hall
Community Resource Development Agents
UM Crookston, 209 Selvig Hall
UM Duluth, 215 Main Building
Marshall, Southwest State University
Rochester, 1220 South Broadway
Continuing Education for Women, Edith Mucke, 200 Wesbrook Hall
Continuing Education in Public Policy, William C. Rogers, 306 Wesbrook Hall
Fire-service Information, Research, Education, Frank E. Oberg, 3300 University Ave. S.E.
Minnesota Marine Advisory Service, Dale Baker, 325 Administration Building, Duluth campus
Office of Delinquency Control, Richard J. Clendenen, 219 Temporary North of Mines
Older Adult Program, 201 Wesbrook Hall

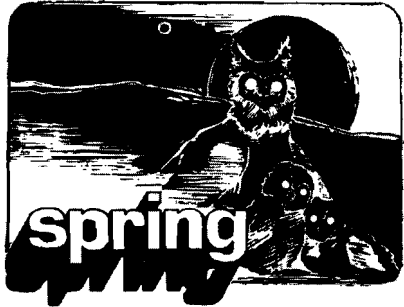
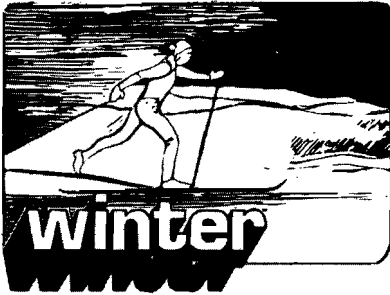
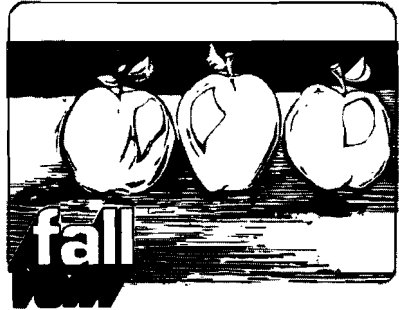
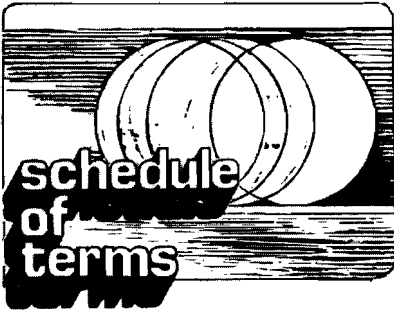
Human Rights

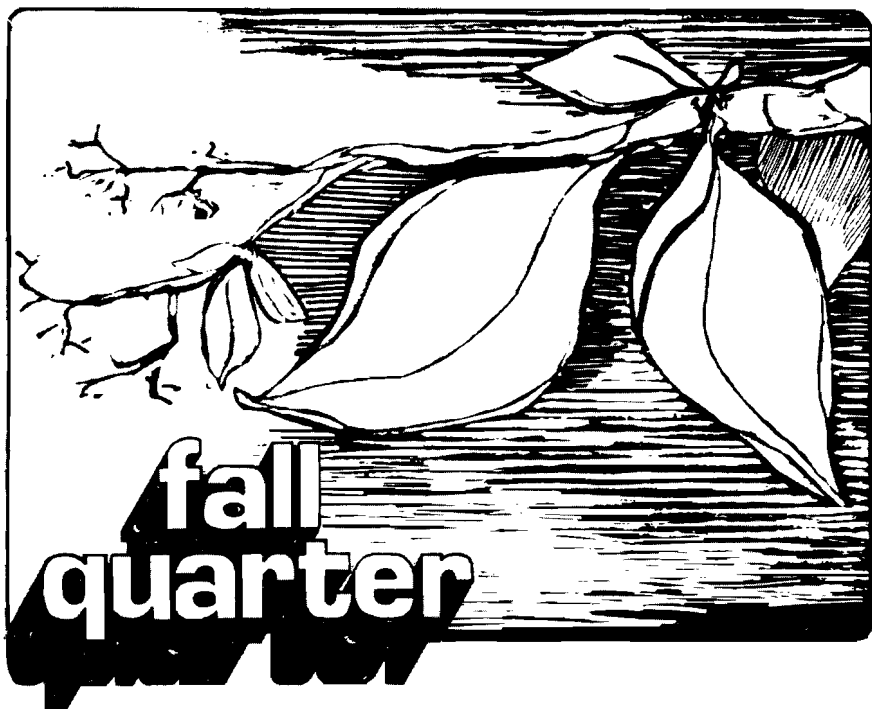
The Board of Regents has committed itself and the University of Minnesota to the policy that there shall be no discrimination on the basis of race, creed, color, sex, or national origin. In adhering to this policy, the University abides by the requirements of Titles VI and VII of the Civil Rights Act of 1964, Revised Order No. 4, Executive Orders 11246 and 11375, Sections 799A and 845 of the Public Health Service Act, and other federal regulations and pertinent acts of Congress.

It is also the policy of the University of Minnesota not to discriminate on the basis of sex in its educational programs, admissions, activities, and employment policies as required by Title IX of the Education Amendments of 1972.

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455, (612) 373-7969, or to the Director of the Office of Civil Rights, Department of Health, Education, and Welfare, Washington, D.C. 20201.

when and how to **register**





August 1977							November 1977						
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30	31					

important dates

September 26, Monday
Fall Quarter classes begin

November 4, Friday
Last day for official cancellation of classes with automatic "W"

November 24-26
Thanksgiving day holidays; all offices closed and all classes dismissed

December 8-14
Final examination period

December 14, Wednesday
Last day of Fall Quarter

**classes meet the week of
september 26
through december 14**



registration dates

mail registration

Campus Office (101 Wesbrook Hall)

August 22-September 15

Registration forms with checks will be accepted for both limited- and nonlimited-enrollment classes.

telephone requests

Campus Office (101 Wesbrook Hall)

August 29-September 7 (ending at noon)

Requests accepted for limited-enrollment class cards to be mailed out to students. Telephone 376-1371. (For general information about Extension classes, telephone 373-3195.)

August 29-September 15

Information on available space in limited-enrollment classes. Telephone 376-1371. (For general information about Extension classes, telephone 373-3195.)

in-person registration

Campus Office (101 Wesbrook Hall)

September 7-8, 12-1512 noon to 8 p.m.

September 912 noon to 4:30 p.m.
(Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

September 7, 1512 noon to 8 p.m.

September 912 noon to 4:30 p.m.

September 8, 12-1412 noon to 6 p.m.
(Closed Saturday)

St. Paul Registration-Information Booth (American National Bank Building, Skyway level, 5th and Minnesota) for all classes.

September 7-159 a.m.-5 p.m.
(Closed Saturday)

Registration accepted at the following locations only for classes taught there: Richfield District Office, Carl Sandburg Junior High School, Roseville District Office, and Minnetonka School District. (see addresses, page 26).

September 7-148:30 a.m. to 4 p.m.

September 158:30 a.m. to 8 p.m.
(Closed Saturday)

SEPTEMBER 15, THURSDAY: The last day for registration and payment of tuition without a late fee.

late registration

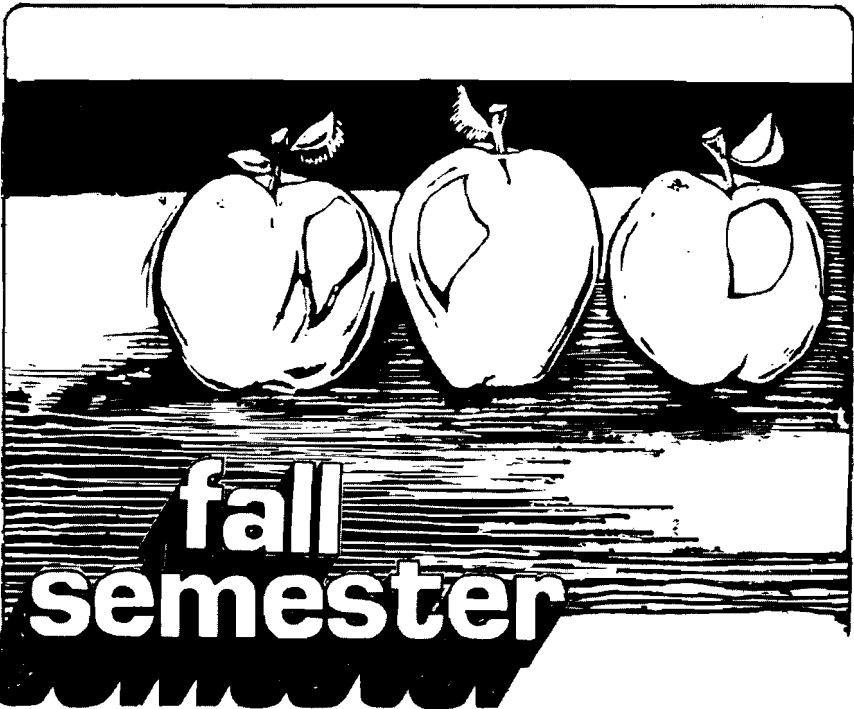
Campus Office (101 Wesbrook Hall)

September 16-19 *All offices closed to process registrations,
late registration accepted by mail only with \$5 late fee.*

September 20-2212 noon to 8 p.m.

September 2312 noon to 4:30 p.m.

Late registration resumes by mail or in person September 20-23 with a \$5 late fee. For information regarding registration and late fees during or after the first week of class, see page 25. For information regarding regular office hours, see page 29.



August 1977							November 1977						
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September 1977							December 1977						
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9	10	11	12	13	14	15	15	16	17	18	19	20	21
16	17	18	19	20	21	22	22	23	24	25	26	27	28
23	24	25	26	27	28	29	29	30	31				
30	31												

**classes meet the week of
september 26
through january 21**

important dates

September 26, Monday

Fall Semester classes begin

November 23, Wednesday

Last day for official cancellation of classes with automatic "W"

November 24-26

Thanksgiving Day holidays; all offices closed and all classes dismissed

December 16, Friday

Christmas recess begins; classes dismissed until January 3

December 23-26

Christmas holidays; all offices closed

December 28-January 2

All offices closed

January 3, Tuesday

Fall Semester classes resume

January 16-21

Final examination period

January 21, Saturday

Last day of Fall Semester

fall semester

registration dates

mail registration

Campus Office (101 Wesbrook Hall)

August 22-September 15

Registration forms with checks will be accepted for both limited- and nonlimited-enrollment classes.

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SEPTEMBER 15, THURSDAY: The last day for registration and payment of tuition without a late fee.

late registration

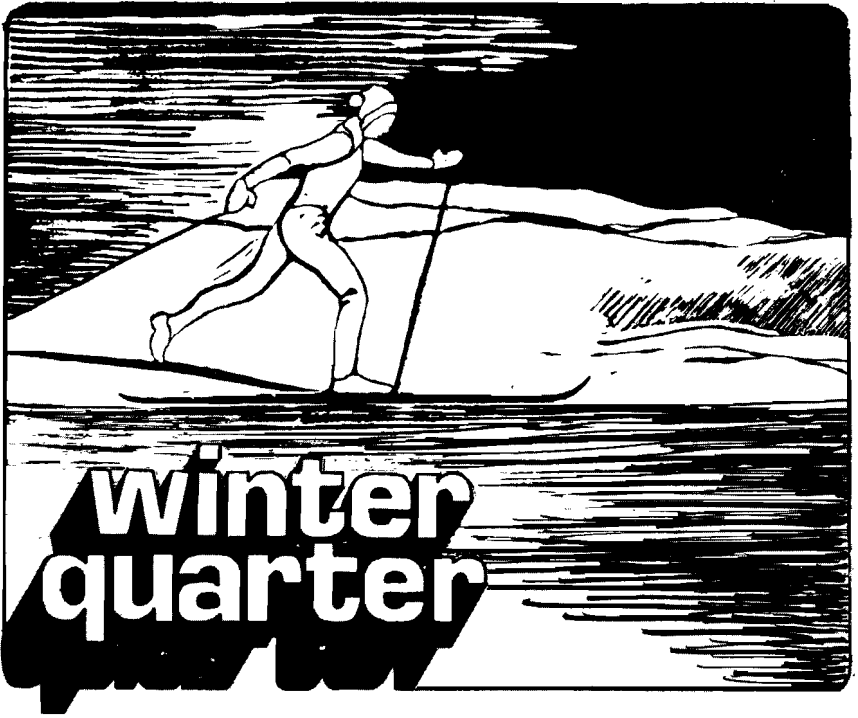
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November 1977							February 1978						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5			1	2	3	4	
6	7	8	9	10	11	12	5	6	7	8	9	10	11
13	14	15	16	17	18	19	12	13	14	15	16	17	18
20	21	22	23	24	25	26	19	20	21	22	23	24	25
27	28	29	30				26	27	28				

December 1977							March 1978						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
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18	19	20	21	22	23	24	19	20	21	22	23	24	25
25	26	27	28	29	30	31	26	27	28	29	30	31	

January 1978						
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				

important dates

December 23-26
Christmas holidays; all offices closed

December 28-January 2
All offices closed

January 3, Tuesday
Winter Quarter classes begin

February 3-6
All offices closed to process Spring Semester registrations

February 10, Friday
Last day for official cancellation of classes with automatic "W"

March 13-18
Final examination period

March 18, Saturday
Last day of Winter Quarter

**classes meet the week of
january 3
through march 18**



registration dates

mail registration

Campus Office (101 Wesbrook Hall)

November 28-December 20

Registration forms with checks will be accepted for both limited- and nonlimited-enrollment classes.

telephone requests

Campus Office (101 Wesbrook Hall)

December 5-9

Requests accepted for limited-enrollment class cards to be mailed out to students. Telephone 376-1371. (For general information about Extension classes, telephone 373-3195.)

December 5-20

Information on available space in limited-enrollment classes. Telephone 376-1371. (For general information about Extension classes, telephone 373-3195.)

in-person registration

Campus Office (101 Wesbrook Hall)

December 12-15, 19-208 a.m. to 8 p.m.

December 168 a.m. to 4:30 p.m.
(Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

December 12, 208:30 a.m. to 8 p.m.

December 13-16, 198:30 a.m. to 4:30 p.m.
(Closed Saturday)

St. Paul Registration-Information Booth (American National Bank Building, Skyway level, 5th and Minnesota) for all classes.

December 12-209 a.m. to 5 p.m.
(Closed Saturday)

Registration accepted at the following locations only for classes taught there: Richfield District Office, Carl Sandburg Junior High School, Roseville District Office, and Minnetonka School District (see addresses, page 26).

December 12-208 a.m. to 4 p.m.

late registration

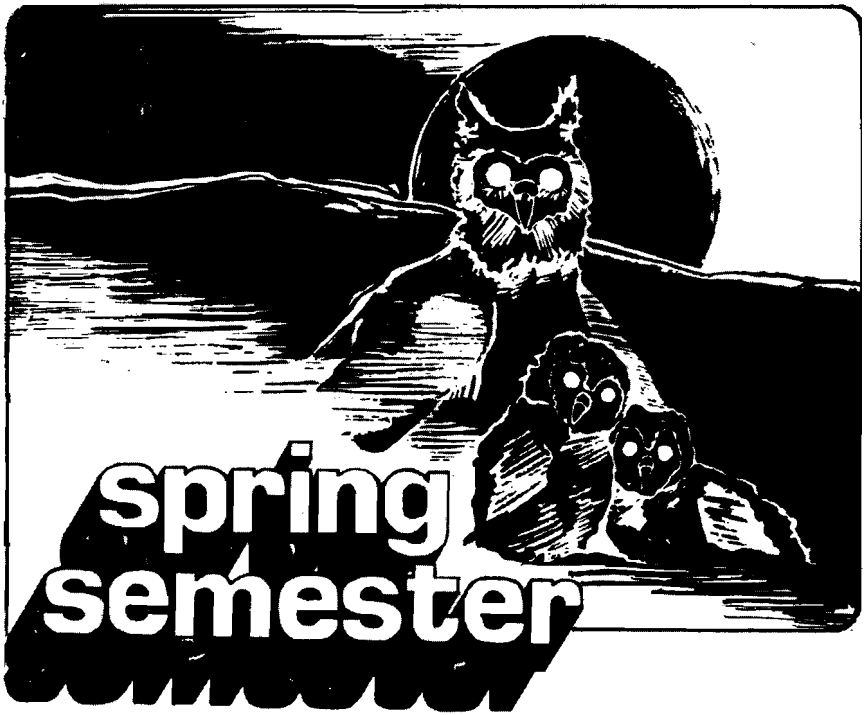
Campus Office (101 Wesbrook Hall) and MacPhail Office (1128 LaSalle Ave.)

December 21-26: All offices closed to process registrations and for holidays. Registration accepted by mail only with \$5 late fee.

December 27-308 a.m. to 4:30 p.m.
Registration accepted by mail or in person with \$5 late fee.

January 2**Holiday; all offices closed**

January 3: Late registration resumes by mail or in-person with \$5 late fee through the first week of classes (see office hours, page 29). For information regarding registration and late fees during or after the second week of classes, see page 25.



January 1978 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 1978 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
February 1978 S M T W T F S 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28	May 1978 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
March 1978 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 1978 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

important dates

- February 13, Monday**
Spring Semester classes begin
- March 18, Saturday**
Spring Semester recess begins; classes dismissed until March 27
- March 17-20**
All offices closed to process Spring Quarter registrations
- March 27, Monday**
Spring Semester classes resume
- April 7, Friday**
Last day for official cancellation of classes with automatic "W"
- May 29, Monday**
Memorial Day, holiday; all offices closed
- June 5-10**
Final examination period
- June 10, Saturday**
Last day of Spring Semester

**classes meet the week of
february 13
through june 10**

spring semester

registration dates

mail registration

Campus Office (101 Wesbrook Hall)

January 9-February 2

Registration forms with checks will be accepted for both limited- and nonlimited-enrollment classes.

telephone requests

Campus Office (101 Wesbrook Hall)

January 16-January 24 (ending at noon)

Requests accepted for limited-enrollment class cards to be mailed out to students. Telephone 376-1371. (For general information about Extension classes, telephone 373-3195)

January 16-February 2

Information on available space in limited-enrollment classes. Telephone 376-1371. (For general information about Extension classes, telephone 373-3195.)

in-person registration

Campus Office (101 Wesbrook Hall)

January 24-26	.....	12 noon to 8 p.m.
January 27	.....	12 noon to 4:30 p.m.
January 30-February 2	.....	12 noon to 8 p.m. (Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

January 24-26	.....	12 noon to 6 p.m.
January 27	.....	12 noon to 4:30 p.m.
January 30-February 1	.....	12 noon to 6 p.m.
February 2	.....	12 noon to 8 p.m. (Closed Saturday)

St. Paul Registration-Information Booth (American National Bank Building, Skyway level, 5th and Minnesota) for all classes.

January 24-February 29 a.m. to 5 p.m. (Closed Saturday)
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Registration accepted at the following locations only for classes taught there: Richfield District Office, Carl Sandburg Junior High School, Roseville District Office, and Minnetonka School District (see addresses, page 26).

January 24-February 28:30 a.m. to 4 p.m.
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FEBRUARY 2, THURSDAY: The last day for registration and payment of tuition without a late fee.

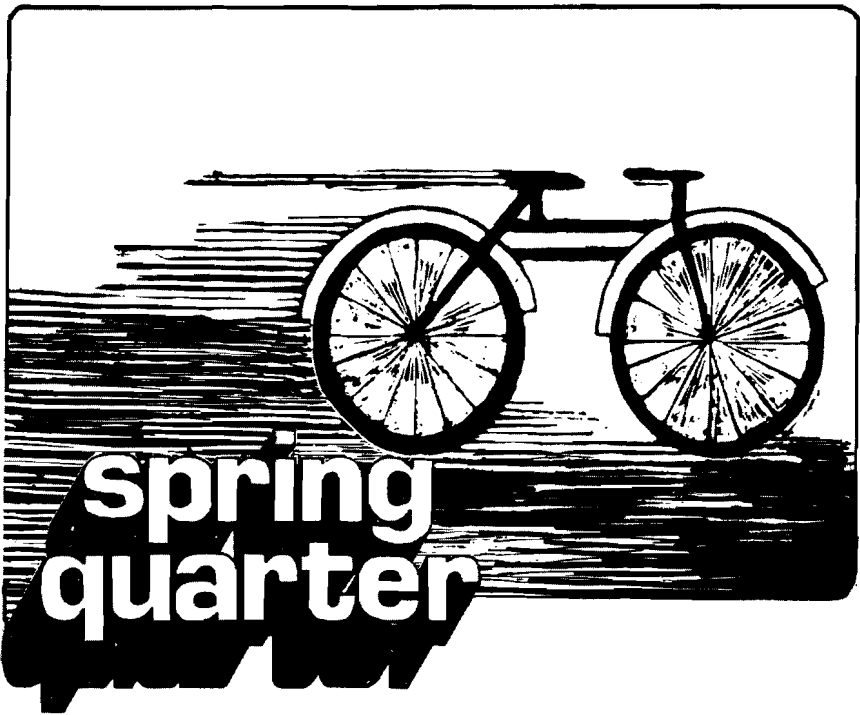
February 3-6 *All offices closed to process registrations*

late registration

Campus Office (101 Wesbrook Hall)

February 3-6: Late registration accepted with \$5 late fee by mail only. (All offices closed to process registration.)

February 7: Late registration resumes by mail or in-person with \$5 late fee through the first week of classes (see office hours, page 29). For information regarding registration and late fees during or after the second week of classes, see page 25.



February 1978							May 1978						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4	1	2	3	4	5	6	
5	6	7	8	9	10	11	7	8	9	10	11	12	13
12	13	14	15	16	17	18	14	15	16	17	18	19	20
19	20	21	22	23	24	25	21	22	23	24	25	26	27
26	27	28					28	29	30	31			

March 1978							June 1978						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4					1	2	3
5	6	7	8	9	10	11	4	5	6	7	8	9	10
12	13	14	15	16	17	18	11	12	13	14	15	16	17
19	20	21	22	23	24	25	18	19	20	21	22	23	24
26	27	28	29	30	31		25	26	27	28	29	30	

April 1978						
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						

important dates

March 27, Monday
Spring Quarter classes begin

May 5, Friday
Last day for official cancellation of classes with automatic "W"

May 29, Monday
Memorial Day, holiday; all offices closed

June 5-10
Final examination period

June 10, Saturday
Last day of Spring Semester

The summer *Bulletin* will be available late March, 1978. Telephone 376-3000.

**classes meet the week of
march 27
through june 10**



registration dates

mail registration

Campus Office (101 Wesbrook Hall)

February 20-March 16

Registration forms with checks will be accepted for both limited- and nonlimited-enrollment classes.

telephone requests

Campus Office (101 Wesbrook Hall)

February 27-March 6

Requests accepted for limited-enrollment class cards to be mailed out to students. Telephone 376-1371. (For general information about Extension classes, telephone 373-3195.)

February 27-March 16

Information on available space in limited-enrollment classes. Telephone 376-1371. (For general information about Extension classes, telephone 373-3195.)

in-person registration

Campus Office (101 Wesbrook Hall)

March 7-9, 13-168 a.m. to 8 p.m.
March 108 a.m. to 4:30 p.m.
(Closed Saturday)

MacPhail Office (1128 LaSalle Ave.)

March 7, 168:30 a.m. to 8 p.m.
March 8-9, 13-158:30 a.m. to 6 p.m.
March 108:30 a.m. to 4:30 p.m.
(Closed Saturday)

St. Paul Registration-Information Booth (American National Bank Building, Skyway level, 5th and Minnesota) for all classes.

March 7-169 a.m. to 5 p.m.
(Closed Saturday)

Registration accepted at the following locations only for classes taught there: Richfield District Office, Carl Sandburg Junior High School, Roseville District Office, and Minnetonka School District (see addresses, page 26).

March 7-168:30 a.m. to 4 p.m.

MARCH 16, THURSDAY: The last day for registration and payment of tuition without a late fee.

March 17-20 *All offices closed to process registrations*

late registration

Campus Office (101 Wesbrook Hall) and MacPhail Office (1128 LaSalle Ave.)

March 17-20: Late registration accepted with \$5 late fee by mail only. (All offices closed to process registration.)

March 21: Late registration resumes by mail or in person with \$5 late fee through first week of classes (see office hours, page 29). For information regarding registration and late fees during or after the second week of classes, see page 25.

register by mail, by telephone, or in person

These are registration procedures.

Be sure to read these procedures before you register! Correct registration is the student's responsibility.

Note: Registration procedures differ for limited-enrollment and for nonlimited-enrollment classes. If you have further questions after reading the information on registration procedures, call 373-3195. (Experience of the Extension Classes' office shows that most of the questions students ask are answered on these pages.)

general registration instructions (follow these steps whether you register by mail, by telephone, or in person)

1. **Obtain official registration forms** at the Minneapolis campus office, 101 Wesbrook Hall, or at the MacPhail office, 1128 LaSalle, downtown Minneapolis, at any time during office hours; or call 376-3000. Be sure to ask for health service, athletic facility, or G.I. forms, if needed.

A sample registration form is shown below. Each course description in this **Bulletin** provides information necessary for completing the registration form displayed here. Courses are listed under departmental or subject heading (alphabetically arranged)—where several classifications are possible, cross references are given.

2. **Complete all information requested on the form.** Please type or use a ball point pen and press hard so all five copies are legible. (If all copies are not clearly legible, fee statement cannot be returned to students.) Be sure to fill in your birth date.
3. **YOU ARE NOT REGISTERED UNTIL YOUR TUITION AND FEES ARE PAID.** (Check: must be for the full amount of the tuition and/or fees and made payable to the University of Minnesota.) Be sure to include special fees, course fees, and late fees, when applicable.

Continuing Education and Extension UNIVERSITY OF MINNESOTA				Department of Extension Classes REGISTRATION FORM			
DEPARTMENT	COURSE NO.	CREDIT	SECTION	GRADE BASE	GRADUATE CREDIT REQUESTED (See Bulletin)	If you have been admitted to Graduate School at the University of Minnesota and are now registering for the first time since admission, check this box <input type="checkbox"/>	
Art 5	5710	4	5	3	<input type="checkbox"/>	<input type="checkbox"/>	
DAY	TUTOR	SOCIETY	ROOM	COURSE TITLE AS APPEARS IN BULLETIN	NON-TRANSCRIPT REGISTRATION PRICE OVER \$2 UNDER \$6 OTHER		
W	69-45	Art B	131	PHOTOGRAPHY	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TUITION	SPECIAL FEES	COURSE FEES	LATE FEE	COURSE TOTAL	ENROLLMENT PERIOD 19 78		
\$74		\$15		\$89	FALL SEM <input type="checkbox"/> 1: FALL SEM <input type="checkbox"/> 2: SPR SEM <input checked="" type="checkbox"/> 3: SPR SEM <input type="checkbox"/> 4: SPR SEM <input type="checkbox"/> 5:		
U OF M STUDENT ID #	NAME LAST			FIRST	MIDDLE	BIRTH DATE (USE NUMERICS) MONTH / DAY / YEAR	
935752	JOYNER			ERIC	STEVEN	6 / 28 / 52	
LOCAL STREET ADDRESS (INCLUDE APT. NO. IF APPROPRIATE)				SOCIAL SECURITY NO.			
367 East 44th STREET				303-04-0101			
CITY		STATE ABBREV.	ZIP CODE	HOME PHONE	SEX	1st SUMMER TERM <input type="checkbox"/> 1st 2nd SUMMER TERM <input type="checkbox"/> 1st 1st	
MINNEAPOLIS		MN	55419	829-0028	M	1st WEEK SUMMER TERM <input type="checkbox"/> 1st	
OCCUPATION				BUSINESS PHONE	EXT	SPECIAL TERM <input type="checkbox"/> 1st	
SOCIAL WORKER				892-7114	34	MONTH DAY YEAR	
PREVIOUS U OF M ATTENDANCE	NONE	CONTINUING EDUCATION and EXTENSION 19 77		DAY SCHOOL COLLEGE & YEAR		START DATE MONTH DAY YEAR	
<input type="checkbox"/>				CLA 19 72		MONTH DAY YEAR	
				END DATE			

when to register for nonlimited-enrollment classes (those which have no limit on number of registrants)

nonlimited	Fall Qtr & Sem	Winter Qtr	Spring Sem	Spring Qtr
mail registration begins	Aug. 22	Nov. 28	Jan. 9	Feb. 20
in-person registration begins	Sept. 7	Dec. 12	Jan. 24	Mar. 7

When to register for limited-enrollment classes (those which have a limit on number of registrants and are printed in red in this *Bulletin*)

limited	Fall Qtr & Sem	Winter Qtr	Spring Sem	Spring Qtr
mail registration begins	Aug. 22	Nov. 28	Jan. 9	Feb. 20
telephone requests begin	Aug. 29	Dec. 5	Jan. 16	Feb. 27
in-person registration begins	Sept. 7	Dec. 12	Jan. 24	Mar. 7

Enrollment is limited in those courses or sections marked with a star (★) and **printed in red** in this *Bulletin*.

Students who complete one course which is part of a two- or three-part sequence are **not** automatically assured of space in the next course in the sequence. Early registration is the best opportunity to obtain space in these courses.

Completing Registration by Mail, Telephone or In Person:

I. BY MAIL STARTING IN ADVANCE OF IN-PERSON REGISTRATION.

- A. Follow the steps outlined above in **General Registration Instructions**.
- B. Make out a **SEPARATE CHECK FOR EACH LIMITED CLASS**. If one check is used for two or more classes and one class is closed, the registration for **all** classes **will not** be honored and will be mailed back to the student. *Nonlimited-enrollment* class registrations may be paid for by writing only one check.
- C. Mail registration forms with a **SEPARATE CHECK FOR EACH LIMITED CLASS** (Made payable to the University of Minnesota) to:

Department of Extension Classes
University of Minnesota
101 Wesbrook Hall
77 Pleasant Street S.E.
Minneapolis, MN 55455

Registrations received in the Extension office will be processed on a daily basis beginning with registration dates specified on this page and continuing through the registration period. Spaces in **limited-enrollment classes will be filled through a daily drawing (random basis)**. Registrations received in the Extension office before the first date of mail registration will be *returned* to the sender.

If the class is closed when the registration is received, the student will be notified by return mail.

A person whose tuition and fees are to be billed to a company, federal, state, foreign agency, institution, scholarship, or the military may register by mail. See section on **Financial Aids and Loans** (check page number in the **Index** in the back of this *Bulletin*).

Students registering with **Regents' Scholarships** should read the section on page 40.

Persons registering with G.I. Bill assistance must include the G.I. Bill Information Sheet with their registration. See the section on "**Veterans**" (check the **Index** in the back of this **Bulletin** for page number) for further information and instructions.

Checks or money orders for late registrations (postmarked after midnight of the last day of official registration) must include the late fee specified under **Late Registration and Additions**. Checks must be for the exact amount of tuition and fees.

II. BY TELEPHONE STARTING IN ADVANCE OF IN-PERSON REGISTRATION (FOR LIMITED-ENROLLMENT CLASSES ONLY):

- A. Limited-enrollment class cards and information about space in limited-enrollment classes will be available **beginning the dates below** from 8 a.m. to 4:30 p.m. If space is available, Extension will mail registration forms and limited-enrollment class cards to the students. **Telephone 376-1371**. When calling, you must be prepared to give (a) course department name, (b) course number, (c) course title and (d) section number. You cannot be helped without ALL this information. Telephones are extremely busy during the initial telephone period.

Fall Quarter and Semester: Aug. 29

Winter Quarter: Dec. 5

Spring Semester: Jan. 16

Spring Quarter: Feb. 27

- B. Limited-enrollment class cards will not be mailed after the following dates because of time delays in mailing:

Fall Quarter and Semester: Sept. 7 (noon)

Winter Quarter: Dec. 9

Spring Semester: Jan. 24 (noon)

Spring Quarter: Mar. 6

- C. Extension Classes will continue to give out information on limited-enrollment class space by telephone, 376-1371. **After the following dates, this telephone will not be answered.**

Fall Quarter and Semester: Sept. 15

Winter Quarter: Dec. 20

Spring Semester: Feb. 2

Spring Quarter; Mar. 16

- D. To complete registration once you have received materials by mail:

1. Follow the steps outlined above in **General Registration Instructions**.

2. Then register by mail (instructions I above) or in person (instructions III below).

III. IN PERSON, DURING REGISTRATION PERIODS ONLY.

at 101 Wesbrook Hall on the Minneapolis campus; at the MacPhail Office, 1128 LaSalle, downtown Minneapolis; or at the downtown St. Paul Registration-Information booth (American National Bank Building, Skyway level, Fifth and Minnesota). The following are in-person registration dates for Extension Classes:

- Fall Quarter and Semester: Sept. 7-15

Winter Quarter: Dec. 12-20

Spring Semester: Jan. 24-Feb. 2

Spring Quarter: Mar. 7-16

Limited-enrollment class cards may be obtained during in-person registration periods for classes which have not been filled during the earlier mail or telephone registration period, at Wesbrook Hall, MacPhail Center, or at the St. Paul Skyway booth.

Follow the **General Registration Instructions** outlined above. However, before paying cashier (step 3), present registration forms to the tally clerk who will make sure they are filled out properly. *Then* pay the Extension cashier for the full amount of tuition and fees.

Students who wait to register in person for limited-enrollment classes may expect to stand in long lines at registration offices, yet have no assurance of being admitted to the classes they desire. Classes may close at any time before or during in-person registration.

Students are urged to register early by mail. See dates on page 23.

closed classes

Limited-enrollment classes for which there is heavy demand will often reach the maximum limit and close. The reasons for establishing limits on enrollment vary. Normally class limits cannot be exceeded.

If students have unusual and compelling reasons to be admitted to a closed class, they may state their case to the instructor of the class. Written permission of the instructor is required for admission to any closed class (no late fee through the first week of the term). Starting the second week of the term late registrations will be assessed the appropriate late fee.

late registration and additions

All registrations, whether initial or added, received either in person or by mail after the close of the official registration period as designated in the **When and How to Register** section of this **Bulletin** will be considered late registrations and will be subject to a late fee:

Through the first week of classes \$ 5 (if accepted)
During or after the second week of classes \$10 (if accepted)

(No registration will be accepted during the second week of the term unless a student has attended one of the first two class meetings. After the second week of the term a student must have written permission of the instructor to register for that class.)

No registration will be accepted during the last two weeks of any term. Any registration accepted thereafter will be subject to a \$20 late fee. The following conditions must be met for a student to register during the second week of classes:

Quarter and Semester Classes—No registration will be accepted unless the student has attended the first class meeting or registers in time so that he or she can attend the second class meeting. If the class meets twice a week, the registration must be made at a date that will permit the student to attend both class sessions during the second week.

Special Term and Special Class—The rule for quarter and semester classes will apply. The decision will be made on the basis of the length of the special term or special class.

No registrations during and after the third class meeting of any term will be accepted unless the student has the written consent of the instructor.

The late fee applies whether a class carries degree credit, certificate credit, or no credit; it applies to special classes and it applies whether the student wants to audit or to take a class for credit. The time of registration by mail will be determined by the postmark.

Those students registering late for Informal Courses (see page 210) must pay a \$5 late fee. No registrations for Informal Courses will be accepted after the end of the second week of classes.

There are **no** late fees for persons registering on the **Plus-62 Plan** or the **Youth Plan** (see page 49).

These late fees are not included in the privilege of registration with authorizations unless specifically authorized, or privilege of Public Law 894, military personnel on Off-Duty Academic Instruction or Tuition Assistance Programs. They must be paid personally by the student.

how to register for courses at neighborhood centers

For registration information about classes being held off campus at neighborhood locations, see the section beginning on page 429.

The offices below are open for registration during registration hours only. See Registration Hours, pages 12-21.

downtown st. paul

A registration-information booth is available during all registration periods (except summer) in downtown St. Paul at the American National Bank Building, skyway level, Fifth and Minnesota. Registrations are accepted for both limited- and nonlimited-enrollment classes. Hours are 9 a.m. to 5 p.m. weekdays. See the **When and How to Register** section of this *Bulletin* for individual registration dates.

richfield district office

Registrations will be taken at the Richfield District Office only for those classes being taught at Richfield Senior High School. Classes meet in the north wing of the high school on the east side of the building across from the athletic field and railroad tracks. Enter the parking lot on the Harriet Avenue side. Entrance doors are by the smokestack.

Richfield District Office, Richfield Senior High School, 7001 Harriet Avenue South, Richfield, Minnesota 55423.

carl sandburg junior high school office

Registrations will be taken at Carl Sandburg Junior High School only for those classes being taught at that location.

Carl Sandburg Junior High School, 2400 Sandburg Lane, Golden Valley, Minnesota 55427.

minnetonka school district

Registration materials may be obtained at the Minnetonka School District Administration Building and mailed to Extension Classes.

Minnetonka School District Administration Building, Community Services Office, 261 School Avenue, Excelsior, Minnesota 55331. Minnetonka High School, 18301 Highway No. 7, Minnetonka, Minnesota 55343.

roseville district office

Registrations will be taken at the Roseville District Office only for those classes being taught at Alexander Ramsey Senior High School.

Roseville District Office, 1251 West County Road B2, Roseville, Minnesota 55113.

Alexander Ramsey Senior High School, 1261 W. Hwy. 36, Roseville, Minnesota 55113.

out-state offices

Duluth office

Gregory Fox, Acting Director, 403 Administration Building, University of Minnesota, Duluth, Minnesota 55812 (218-726-8113). Courses offered in Duluth are listed in a separate bulletin which may be obtained from the Duluth Office.

Morris office

Roger S. McCannon, Director, University of Minnesota, Morris, Minnesota 56267 (589-2482). Courses offered in Morris are listed in a separate bulletin which may be obtained from the Morris Office.

Rochester office

Russell A. May, Director, Continuing Education and Extension, 2120 East Center Street, Building 4, Rochester, Minnesota 55901 (507-288-4584). Courses offered in Rochester are listed in a separate bulletin which may be obtained from the Rochester Office.





office hours

The following are normal daily office hours.
Extended hours and days offices are
closed during registration periods and holidays
are given pages 12-21.

campus office

(minneapolis campus)

101 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E.
Minneapolis, Minnesota 55455 (373-3195).

office hours

Monday through Thursday7:45 a.m.-8 p.m.
Friday7:45 a.m.-4:30 p.m.
SaturdayCLOSED

summer 1977

June 13-July 21: Monday through Thursday, 8 a.m.-6:30 p.m.
Friday, 8 a.m.-4:30 p.m.
July 25-Sept. 6: Weekdays, 8 a.m.-4:30 p.m.

macphail office

(downtown minneapolis)

1128 LaSalle Avenue, Minneapolis, Minnesota 55403 (373-1925)

office hours

Monday through Friday8:30 a.m.-5:15 p.m.
Students may register for Extension Classes Monday through Friday at MacPhail.

counseling department

(minneapolis campus)

314 Nolte Center (373-3905)

office hours

Monday through Friday8 a.m.-12 noon
1-4 p.m.
Eveningsby appointment



bookstores

The evening schedule listed on the next page has been established by University bookstores. **Note that bookstores are not open every night. Some bookstores have special hours during registration periods. See the pages which follow for information.**

A new bookstore, the **Minnesota Book Center**, is located in the new Williamson Hall between Nolte Center and Jones Hall. It replaces the Nicholson Hall Bookstore and the Main Engineering Bookstore in Lind Hall.

Pick Up Books Before Class—Textbooks may be purchased before the first night of class at campus bookstores. Lists of course offerings and required books are in the bookstores.

Special Arrangements for Book Pick-up—If students need a book from the West Bank Bookstore but cannot come to campus until Saturday, they may call the West Bank Bookstore (which does not have Saturday hours), and ask to have the book sent to the Minnesota Book Center in Williamson Hall, where they can pick it up Saturday morning. The same procedure applies to having books sent from the Minnesota Book Center to the West Bank Bookstore, for students who prefer to pick up their books on the West Bank.

Book Refunds—If a course is canceled or if the student drops the class, books may be returned for a full refund through the second week of classes **if the student has a sales receipt for the books and has not written in them. Please note refund exceptions for B. Dalton Bookseller, page 33.**

Resale of Books—Since used textbooks offer a distinct savings to students, the University Bookstores attempt to buy as many as they can possibly use. 60% of the new book price is offered for hard-bound textbooks which are required for the following quarter. This price is offered regardless of the number of times the book has changed hands provided it has remained in good condition. These books are then resold at 75% of new book price. Books not on the required list will be purchased at the current wholesale value for shipment to used book dealers. Books are purchased throughout the school year; however to obtain the best possible price it is advisable to wait until the textbook requirements for the following quarter are available.

See maps in the back of this **Bulletin** for locations of campus bookstore buildings.

minnesota book center (williamson hall, east bank)

The Minnesota Book Center located in Williamson Hall, 231 Pillsbury Drive, handles books previously carried by the Nicholson and Lind Hall Bookstores. These are for courses in the College of Liberal Arts (**except for those CLA departments listed below in the Harold D. Smith Bookstore**), Education, General College, and the Institute of Technology.

Telephone 373-3688

special hours:

8 a.m.-7:30 p.m., Monday through Thursday, the week before each quarter begins.

8 a.m.-7:30 p.m., Monday through Thursday, the first week of each quarter and semester.

8 a.m.-6:30 p.m., Monday through Thursday, the second week of Fall Quarter and Semester.

regular hours:

8 a.m.-4:30 p.m., Monday through Friday.

10 a.m.-2 p.m., the first three Saturdays of each quarter.

harold d. smith bookstore (west bank)

The West Bank Bookstore, located next to Anderson Hall, sells books for courses in the College of Business Administration, as well as for these College of Liberal Arts departments: history, political science, geography, sociology, criminal justice studies, Afro-American studies, American Indian studies, theatre arts, studio art, economics, and family social science.

Telephone: 373-4450.

special hours:

8 a.m.-7:30 p.m., Monday through Thursday, for the first week of each quarter and semester.

8 a.m.-6:30 p.m., Monday through Thursday for the second week of Fall Quarter and semester.

regular hours:

8 a.m.-6:30 p.m., Monday and Thursday, fall through spring.

8 a.m.-4:30 p.m., Tuesday, Wednesday and Friday, fall through spring.

Books from other bookstores can be delivered to the Harold D. Smith Bookstore for pickup in the evening.

coffey hall bookstore (st. paul campus)

Coffey Hall Bookstore sells books for courses taught on the St. Paul campus.

Telephone: 373-0800

special hours:

8 a.m.-6:30 p.m. Monday through Thursday for the first week of fall quarter and fall semester.

8 a.m.-7:30 p.m. Tuesday only during the first week of winter and spring quarters, and spring semester.

regular hours:

8 a.m.-4:30 p.m., Monday through Friday.

health sciences bookstore (2-554 unit a)

The Health Sciences Bookstore sells books for courses in anatomy, dentistry, history of medicine, laboratory medicine, medicine, microbiology, nursing, pharmacognosy, pharmacy, physical medicine and rehabilitation, physiology, and public health.

Telephone: 376-4007

special hours:

8 a.m.-6:30 p.m., Monday through Thursday, for the first week of each quarter.

regular hours:

8 a.m.-4:30 p.m., Monday through Friday, fall through spring.

b. dalton bookseller

(maplewood mall, eden prairie shopping centers)

As a special service to Extension Class students, B. Dalton Bookseller has agreed to carry books at their Maplewood Mall and Eden Prairie stores for courses offered at certain off-campus neighborhood locations. Books required for these courses will also be available at the campus bookstores.

Please note which B. Dalton store is matched with your location before going to purchase books. In all cases, B. Dalton encourages you to call ahead to reserve a copy of the books you will need.

B. Dalton will carry a limited number of books for each of the courses off campus (generally 80% of estimated enrollment). In some cases it may be necessary for students to purchase books on campus because B. Dalton will have sold all their copies or because they were unable to obtain the required texts. Students wishing to avoid an unnecessary trip to either of the Daltons should call the store carrying books for their course to be sure the books are available. If B. Dalton does not have the books, or has sold out, students should call the campus bookstore which normally carries texts for that course.

Books will be available at B. Dalton for a limited time during each registration period.

Fall Quarter and Semester	—September 12 to October 18
Winter Quarter	—December 27 to January 25
Spring Semester	—January 30 to March 3
Spring Quarter	—March 13 to April 19

Refund Policy: Due to the highly specialized nature of many of the books purchased for these classes, books must be returned to B. Dalton for refund, accompanied by a sales slip, during these same dates. Before writing in a book or discarding your sales slip, check with your instructor to be sure you have the correct texts. Books must be returned during the dates specified above. Used books will *not* be bought back by B. Dalton when courses are over.

**b. dalton at maplewood mall will carry books for the following locations:
(Phone ahead to reserve your book: 770-3901, Maplewood Mall)**

Irondale High School, New Brighton
Alexander Ramsey High School, Roseville
Woodbury Junior High School

b. dalton store hours, maplewood mall (694 and white bear ave., maplewood)

Monday-Friday	—10 a.m. to 9:30 p.m.
Saturday	—10 a.m. to 6 p.m.
Sunday	—12 noon to 5 p.m.

b. dalton at eden prairie center will carry books for the following locations:

(Phone ahead to reserve your book: 941-8126, Eden Prairie store)

Minnetonka Senior High School, Excelsior
Richfield Senior High School
Sandburg Junior High School, Golden Valley

b. dalton store hours, eden prairie center (U.S. 169 south of 494, 11401 w. 78th st., eden prairie)

Monday-Friday	—10 a.m. to 9 p.m.
Saturday	—10 a.m. to 6 p.m.
Sunday	—12 noon to 5 p.m.

enrollment information

contents	page
enrollment into extension classes	36
counseling and program advising	36
tuition and fees	37
financial aids and loans	37
military information	40
prerequisites	43
grades	44
grade reports and transcripts	45
credit and no-credit registration	45
graduate credit	46
credits without class attendance	47
auditors	49
reduced-tuition plans	49
informal courses	50
sampler lectures	50
persons 62 and older	50

enrollment into extension classes

Anyone may register for Extension Classes. There are no admission or entrance requirements; registrants need not possess a high school diploma. Students need only have a desire to learn.

Registration in specific programs or classes may require prerequisite courses or experience. (See **Prerequisites**, page 43)

Students wishing to register for graduate credit, refer to page 46.

Day school students who wish to register in Extension Classes are urged to consult first with their day school adviser or college office. **Day school students must pay Extension Classes tuition to attend Extension Classes.**

Students who have been dropped from any unit of the University or who have been placed on probation should clear with their college before registering for Extension Classes; otherwise, there is no assurance that the credits will be accepted by the college from which they wish to earn a degree.

counseling and program advising

The Counseling Department of Continuing Education and Extension (CEE) offers both counseling and program advising services, without fee, to current and prospective Extension students, and to those in other CEE departments such as Continuing Education for Women, Community Programs, and Extension Independent Study (correspondence study). The counseling office is located at 314 Nolte Center; **telephone 373-3905**. Nolte Center is located at 315 Pillsbury Drive S.E. (at 17th Ave. S.E.). Because of crowded parking facilities during the day, students who have appointments with members of the Counseling Department staff should allow an extra half hour to find a parking space. See **Maps** in the back of this **Bulletin**.

Counseling—Professional counseling and testing services are available to Extension students who seek help with personal problems; who want to learn more about their own abilities, interests, and personalities; and who wish help in educational and vocational planning or choosing a major field of study. A fee of \$35 is charged for students and prospective students (\$60 for nonstudents) wishing to take a battery of tests. Appointments must be made in advance.

Advising—Program advising is available to help students select programs of study (see **Degrees and Certificates**). Check the **Index** in the back of this **Bulletin** for page number); determine prerequisites and standing; evaluate transcripts of previous college work; choose the kinds and number of courses to take and the order in which they should be taken; arrange for examinations for credit or advanced standing; and handle other academic matters (see the **Index** in the back of this **Bulletin** for **office hours**).

Veterans' counselor—Vocational and personal counseling, program advising and testing are among the services available to veterans at 314 Nolte Center. The office also helps put veterans in touch with other assistance centers. The Veterans Affairs Counselor for Extension can be reached at 373-3905 during office hours, 9 a.m. to noon and 1 to 4 p.m., Monday through Friday.

During registration periods, advisers will be available without appointment during registration hours in the counseling office, 314 Nolte Center. At other times of the year students may telephone 373-3905 to arrange for day or evening appointments, although advisers are always available on a walk-in basis during regular daytime hours. See **Office Hours** in the **Index** in the back of this **Bulletin**.

Special evening meetings are arranged at the beginning of fall semester and quarter registration for students who may be candidates for degrees in the **College of Business Administration**. All students who have questions about degree programs in the college are urged to attend one of the meetings. Time and place will be announced in August or September issues of the **Info** newsletter.

Program advisers from *General College*, the *College of Education*, the *College of Business Administration*, and the *Institute of Technology* will be available in their offices on the campus during specific evening hours during the fall registration periods. All students wishing to see such an adviser should telephone Counseling at 373-3905, for an appointment.

All *College of Liberal Arts* students should first see advisers in 314 Nolte Center. If necessary, students will be referred to the appropriate college office.

Information by telephone—Information about Continuing Education and Extension is available on tape by telephone through the Digital Information Access Line (DIAL). For a brochure listing the various tapes available, **telephone 373-1857**.

tuition and fees

The 1977-78 tuition for Extension Classes is:

\$16.50 a credit	.....	For 1XXX level courses Certificate courses Entrance credit courses Noncredit courses (does not necessarily apply to reduced-tuition courses)
\$17.50 a credit	.....	For 3XXX level courses
\$18.50 a credit	.....	For 5XXX level courses
\$28.50 a credit	.....	For 8XXX level courses (open only to students admitted to the University of Minnesota Graduate School)

A student who concurrently takes day courses and Extension courses must register on separate forms and pay both day and Extension fees (see day school students, above).

The full amount of the tuition and other fees is payable at the time of registration. Additional fees may be assessed for use of a laboratory, extra materials, or audio-visual equipment. Tuition charges and fees do not cover books. Checks or money orders must be drawn for the exact amount due, and made payable to the University of Minnesota.

A \$2 handling fee is charged for all checks returned by a bank. Students should contact the cashier at 138 Westbrook (376-7243) if they have received notification from their banks that a check has been returned to Extension Classes.

No arrangements for partial payment can be made. Students in need of financial assistance should see **financial aids and loans**, below.

Students who are not residents of the state of Minnesota pay the same fees in Extension Classes as do residents of the state.

Students are not registered until their tuition and fees are paid. After fees are paid, retain pink copy of registration. It serves as official identification as an Extension student and must be presented in order to vote in student elections, obtain books from University libraries, or purchase student athletic and other tickets. (Present the white copy to the course instructor at the first class meeting.)

For information on tax deductions for Extension Classes tuition, see page 56.

financial aids and loans

All students who plan to register under the authority or with the assistance of any federal, state, or foreign agency—military service, institution, company, or scholarship—may register by

mail or in person at 138 Wesbrook Hall, telephone 373-4662, on the Minneapolis campus. If registering by mail, authorizations must include the following:

1. **Proper address:** Department of Extension Classes, University of Minnesota, 138 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis MN 55455
2. **Student's name**
3. **Correct amount of tuition and fees** for specific classes
4. **Term or dates of eligibility**
5. **Authorizing signature** or stamp required
6. **Authorization** reproduced by a copy machine are **not** acceptable
7. **Complete address of agency** to be billed for tuition.

To register, follow the procedures outlined under **When and How to Register**. Include your authorization (**in place of your check**) with your registration forms.

Registration forms and authorizations **must accompany** each other. If your authorization is already on file, you **must** include a note **with your registration** indicating the source of your authorization, or your registration will **be returned**.

All materials should be sent to 138 Wesbrook Hall.

Registration forms must be properly filled out.

Enrollment Verification for Loans—Students who need enrollment verification for bank or business purposes should bring fee statements or a transcript to 138 Wesbrook Hall. Full-time students carry 12 or more credits; three-fourths time, 9 credits; half-time, 6 credits; less than half-time, 5 credits or less.

Verification can be made only for *enrollment* in Extension classes, **not** for attendance or grades. Duplicate fee statements are available in 101 Wesbrook Hall; transcripts at the Certification and Transcript Service, 150 Williamson Hall.

Tuition deferments must be left at or mailed to 138 Wesbrook Hall, 77 Pleasant St. S.E., University of Minnesota, Minneapolis 55455, and they will be returned by mail.

Military personnel should read the listing on pages 40-43.

Students registering under the authority of the Cold War Veterans Bill (Chapter 34, Title 38, U.S. Code), should refer to page 41.

Law Enforcement Education Program (LEEP)—Persons engaged in work in law enforcement may be eligible for financial assistance through LEEP. Contact the office of Student Financial Aid (373-5698).

Business Firms—Many business firms are willing to help subsidize the education of their employees. Before registering, students are urged to talk with a company personnel officer about possible tuition payment that may be available for Extension Classes.

State aid—The Minnesota Legislature passed a bill during the 1977 session making financial aid available to part-time students through the Higher Education Coordinating Board. At the time this Bulletin goes to press, few details are worked out. For information, call 376-4500.

Low-Income Adult Scholarships—Tuition scholarships are available under the CEE Tuition Assistance Program for low-income adults who wish to attend Extension Classes. Tuition assistance covers full tuition for a maximum of two classes a quarter or semester. Eligibility is based on monthly net income, number of dependents and special expenses. Information available at Extension Counseling, 314 Nolte Center (376-4500).

The Remington Scholarship—The Gilford W. and Esther F. Remington Scholarship Fund has been established by Mrs. Remington to provide financial assistance each year to students enrolled through Continuing Education and Extension (CEE) on the Twin Cities campus and through the Duluth Extension Center on the UMD campus. Funds are administered through CEE's Tuition Assistance Program.

Mr. Remington organized and became the first full-time director of Audio-Visual Extension Service. He also served as Director of Evening Classes for the General Extension Division (now CEE) in Duluth, retiring as a full professor in 1970.

Esther Friedman Remington is a valued friend of CEE.

For an application form, write to **Extension Counseling, University of Minnesota, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis MN 55455**. Telephone 373-3905. Preference will be given to students in the fields of history, education, art, and audio-visual education. Applications are considered once each year in August for the academic year.

Handicapped students financial aid—Blind students may call the Extension office (373-4662) concerning tuition exemption for Extension Classes. Counseling regarding other financial assistance is available through the Minnesota State Services for the Blind and the Visually Handicapped, 1745 University Avenue, St. Paul MN 55104 (296-6090). **Veterans with service-connected disabilities** may be eligible for vocational rehabilitation services through the Veterans Administration. Write or call the Veterans Assistance Center, Room 181 Federal Building, Fort Snelling, St. Paul MN 55111 (726-1454 or 725-4182). **Financial aid for other handicapped students** may be available through the Minnesota Division of Vocational Rehabilitation. Information concerning that program may be obtained from the Division of Vocational Rehabilitation Liaison Office, 1821 University Avenue, Room 180, Griggs-Midway Building, St. Paul MN 55104 (612-646-7841) or from the Division of Vocational Rehabilitation office in your area.

Federally Insured Student Loan (FISL)—Under the FISL program, a student registered for at least 8 credits a quarter and admitted to, and in good standing in, a degree or certificate program, may borrow from a participating bank, savings and loan institution, the state of Minnesota, or other lending institution. Students should not apply for a FISL unless they are ineligible for other forms of assistance or unless such other assistance will be inadequate. Borrowers must be U.S. citizens, permanent residents, or refugees from Southeast Asia or the U.S.S.R. **Students must be formally admitted to a program before they begin the FISL application process.** *Simply registering for and attending classes does not necessarily mean that a student has been admitted.* If in doubt, students should check with Extension Counseling, 314 Nolte Center (373-3905). The overall loan maximum for undergraduates is \$7,500. Academic year maximums are \$2,500 for undergraduates. Some lenders and guarantors have lower academic year limits; e.g., the state of Minnesota as a lender may not loan over \$1,500 to those with fewer than 45 credits, nor more than 50% of costs to any other undergraduate. Interest is 7%. For borrowers whose family adjusted gross income is less than \$25,000, the federal government pays this interest until repayment begins (9 to 12 months after becoming less than a half-time student). Processing of the loan application may take a considerable period of time, so students should apply 4 to 5 months before the funds are required. Application materials, except for certain non-Minnesota state affiliated programs (e.g., Wisconsin State Loan Program), are usually available at the Office of Student Financial Aid, 105 Armory (373-4021). Recommendations for Federally Insured Student Loans based on cost of attendance and other funds received will be made by Student Financial Aid. The application is submitted first to the Office of Student Financial Aid for preliminary processing, then brought to a participating lending institution.

For further information, telephone 373-4021 or 376-4500.

Basic Educational Opportunity Grant (BEOG)—The BEOG is a federal aid program designed to provide financial assistance to part-time or full-time undergraduate students with high financial need. The maximum award available to a student under this program is \$1,400, minus the amount the student and his or her family are expected to contribute toward the cost of education. The amount of the grant is based on the family contribution, the amount of funds available for the program, and the cost of education at the institution of attendance, since the grant cannot exceed one half of that cost. Students must be registered for at least 6 credits a quarter. BEOG applicants must be U.S. citizens, permanent residents, or refugees from Southeast Asia or the U.S.S.R. Those who already have a bachelor's degree are not eligible. *Home-study courses are not covered by BEOG funds.* **Recipients must be admitted to a degree or certificate program and be in good academic standing in order to receive funds.** *Simply registering for and attending classes does not necessarily mean that a student has been officially admitted.* If in doubt, students should check with Extension Counseling, 314 Nolte Center (373-3905). Applicants should allow 8 to 12 weeks for the BEOG application process.

(from submitting the application to receiving a check). Applications are available at Student Financial Aid, 105 Army (373-4021), or they may be picked up at most public libraries.

For further information, telephone 373-4021 or 376-4500.

Bank loans—Students should be aware that most banks in the Twin Cities area offer a "line of credit" service to handle small, intermittent loan needs.

Plans vary among banks, but in all cases the borrower must have a checking account with the bank, and a line of credit for a fixed dollar amount. Borrowers can then write checks which would normally overdraw their account. The loan is repaid through automatic deductions from the checking account, with finance charges typically running slightly over 12 percent on an annual percentage rate. Students may contact a bank for further information.

Regents' Scholarships—University staff members working at least 75% time are eligible to apply for Regents' Scholarships through the Human Resources Development Division. Regents' Scholarships cover only tuition for approved classes. All course fees, special fees and late fees must be paid by the student. Further information about eligibility and application procedures can be obtained from Human Resources Development, 200 University Press Bldg., 2037 University Ave. S.E. Telephone 373-4366.

Students registering with Regents' Scholarships for nonlimited-enrollment courses may register beginning with telephone registration dates. The approved authorization must accompany the registration forms. Late fees go into effect at the end of the in-person registration period.

Students wishing to register for limited-enrollment classes with Regents' Scholarships may not do so during the first week of mail registration but may register by mail thereafter. Students may obtain space by telephone or in person. See the **When and How to Register** section for the dates and hours of each term. Be sure to include the approved Regents' Scholarship form, completed registration forms, a check made payable to the University of Minnesota for special, course, or late fees (*if any*), and the limited class card (*only if the class has limited enrollment*), when registering by mail. **No refunds will be given to students wishing to apply Regents' Scholarships toward limited-enrollment classes for which they have already registered and paid fees.**

Other Financial Aids—Extension students who have questions or problems regarding financial aid can call Extension Counseling, 314 Nolte Center (376-4500). For information about day school financial aid, call 373-4021. Students who plan to attend day school and need financial aid should plan well in advance. Priority deadlines are often in February or March preceding the academic year in which aid is required. Students who plan to enroll in day school fall quarter of 1978 should call Student Financial Aid in December, 1977, to request an application.

military information

personnel

All military personnel are urged to familiarize themselves with the Registration Procedures and Information sections of this **Bulletin**. University regulations and procedures apply to all students unless stated to the contrary.

All branches of the Armed Services now provide Off-Duty Academic Instruction or Tuition Assistance Programs for military personnel on active duty. There are no application forms necessary for admission to the Department of Extension Classes. Under these programs, eligible military personnel may be entitled to tuition assistance of 75 percent a quarter credit hour for approved classes. (All classes in the **Extension Classes Bulletin** are quarter credit whether designated quarter or semester length.) The remaining tuition and all fees must be paid by military personnel. Interested members of the Armed Services are urged to contact the educational officer or commanding officer of their command for proper authorization to participate in these programs. *Written authorization designating classes and amount of tuition*

to be paid by Army, Navy, Air Force, or Marine Corps should be presented at time of registration, at which time payment of remainder of tuition must be made. Military personnel who do not have the necessary authorization at the time of registration will be required to pay in full for their registration. When the government authorization is received, a refund for the authorized amount will be made. Registration must be made in person at 101 Westbrook Hall, Minneapolis campus.

veterans

Old War Veterans (Chapter 34, Title 38, U.S. Code)—A G.I. bill providing educational benefits for eligible veterans became effective June 1, 1966. Eligibility is based on active military service on or after February 1, 1955. Maximum period of training is 45 months; but this period is reduced by training under other Veterans Administration programs.

Application for training under this bill may be made by requesting VA Form 22-1990. The application form must be completed and submitted to 138 Westbrook with a photostatic copy of DD 214 (discharge papers) and information sheet when registering for Extension Classes.

Do not submit original documents. In-person registration is encouraged for those veterans registering for the first time under the G.I. Bill.

Registration—Before registering, please read pages 22-25 in regard to new registration procedures.

Tuition and fees—Veterans must pay at the time of registration. They will be reimbursed later or paid a monthly allowance.

Each time a veteran registers for Extension Classes and wishes certification to the Veterans Administration, a G.I. Bill Information Sheet must be completed. This sheet will be mailed when the appropriate box is checked on the request post card in the back of this *Bulletin*. Please complete **only one** information sheet for each registration period. (Fall quarter and semester are considered **one** registration period.) Those who are registering for limited-enrollment classes by mail and one or more of them is closed will have the information sheet returned to them by Extension Classes. Veterans who wish to add classes to their registration should return the information sheet along with the additional registration forms and payment. Those who do not wish to add classes to their registration should return the information sheet to 138 Westbrook Hall along with a note indicating that registration is completed and certification to the Veterans Administration should be made. **In either case, if the veteran does not return the information sheet, no certification will be made to the Veterans Administration.**

With the registration requirement of one check a registration form, it is important to fill out only one G.I. information sheet a term. Veterans should not send an information sheet with each registration, but send all forms, checks and one information sheet together.

Cancellation and transfer—When veterans cancel or transfer classes, they must notify the Extension Veterans Office. This is especially important when it affects the total credit load. Transfers to or from day school must be noted with a form A19a, which is obtained from the unit the veteran is **leaving**. In-person registration is encouraged for those veterans registering for the first time under the G.I. Bill.

Payments—The following table shows how monthly payments are determined by the Veterans Administration:

MINIMUM CREDITS	DEPENDENTS			
	None	One	Two	Each Dependent Over Two
Full Time 12	\$292	\$347	\$396	\$24
¾ Time 9	219	260	297	18
½ Time 6	146	174	198	12

Less than ½ time—Reimbursement of tuition and fees only.

Credits—When registering for both quarter and semester classes, it is important to note that any change in credit load at the conclusion of a term may result in reduction of payments. (For example: a veteran taking 8 fall quarter credits and 4 fall semester credits is carrying only 4 credits at the end of fall quarter. To maintain full-time status he or she must register for 8 winter quarter credits and likewise, 4 spring semester credits and 8 spring quarter credits.)

Advance Pay—Veterans registering for at least ½-time benefits are eligible for advance pay. This can be requested by filling out an *Advance Payment Request Form*, obtained by writing the Veterans Office, 138 Westbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis MN 55455, or by filing in person at this office. Requests cannot be made later than 30 days prior to the start of classes, nor earlier than 120 days before classes begin. Students who are registering for classes during the advance pay period and wish to apply for advance pay must include a separate written request with their registration materials. This schedule shows the last date to apply for advance pay for each term:

Fall Quarter:	August 26, 1977	Spring Semester:	January 13, 1978
Fall Semester:	August 26, 1977	Spring Quarter:	February 27, 1978
Winter Quarter:	December 3, 1977		

A 30-day deferment of tuition will be given only to veterans who apply for advance pay within the time listed above and who do not receive an advance pay check from the Veterans Administration. No other deferment will be given. Veterans who receive a tuition deferment must pay the tuition not later than 30 days after classes begin. Failure to do so will result in the cancellation of registration in classes and cancellation of certification to the V.A. effective the beginning of the term.

No certification can be sent to the V.A. earlier than the beginning of each term, regardless of when a veteran registers. The only exception is the veteran eligible to apply for advance pay.

Satisfactory Academic Progress—In the past, V.A. regulations have changed often and without advance notice. The information in this section was correct when this *Bulletin* went to press, but is subject to change without notice.

The V.A. has established these guidelines to define satisfactory academic progress:

1. Any grade of "N" will be reported to the V.A. The V.A. will adjust benefits retroactive to the beginning date of the term, resulting in an overpayment.
2. A grade of "W" will be reported to the V.A. if the veteran cancels a class within 30 days after the beginning date of that term. The V.A. will adjust benefits back to the beginning date of that term, resulting in an overpayment.

If the veteran cancels the class within 30 days of the beginning of the term, the V.A. will adjust the award effective the first of the month following the change in the credit load.

3. Any grade of "I" will be reported to the V.A. if it is not made up by the end of the next term in which the Veteran is enrolled. The V.A. will adjust benefits back to the beginning date of the term in which the "I" was assigned, resulting in an overpayment.

It is the veteran's responsibility to keep informed regarding current V.A. rules. Students who have questions should call the appropriate number listed below:

Extension Classes G.I. Certification:	373-5777
Day School G.I. Certification:	376-1804
Independent Study G.I. Certification:	373-3256
Program Counseling:	373-3905
<i>(Necessary Coursework—Degree Planning)</i>	
Veterans Representatives:	373-5609
<i>(Payment Problems)</i>	
Unsatisfactory Progress Problems:	376-1670

Tutorial assistance—Veterans enrolled under the G.I. Bill are eligible for tutorial assistance in those courses in which they are showing academic deficiency. The supplementary assistance allowance will be paid at the rate of the monthly cost of tutorial assistance not to exceed \$65 a month.

This is in addition to the regular monthly rate of educational assistance allowance payable while in pursuit of the approved program of education. Tutorial assistance is limited to a maximum of \$780. No charge will be made against the student's basic entitlement to educational assistance for any tutorial assistance received. Eligible students should contact the Veterans Office, 138 Wesbrook (373-5777).

Vocational Rehabilitation—Veterans with service-connected disabilities may be eligible for vocational rehabilitation services through the Veterans Administration. Write or call the Veterans Assistance Center, Federal Building, Fort Snelling, St. Paul, Minnesota 55111 (726-1454).

State of Minnesota—Department of Veterans Affairs—Minnesota law provides that educational assistance will be granted to veterans not to exceed \$250 once, for the payment of tuition of honorably discharged veterans who entered the service from the state of Minnesota. This allowance is made to assist them in completing their educational objective after they have exhausted federal G.I. Bill benefits by actual use. Only Minnesota schools are permitted under this program.

In each instance the veteran must show evidence of acceptable passing grades together with the fact that he or she is pursuing his or her original educational objective or what may be considered normal progression. The claimant's financial status will be evaluated.

War Orphans Educational Assistance—Minnesota law also provides that the Department of Veterans Affairs may offer \$250 a year to qualified war orphans who are attending institutions of higher learning or trade schools beyond high school and who maintain passing grades. Only Minnesota schools are permitted under this program. To qualify, students must have lost their veteran parent through death because of a service-caused condition. The veteran must have been a resident of the state of Minnesota at the time of entry into service, and the child must have resided within the borders of the state for two years prior to commencing his or her educational program. Children of veterans eligible for benefits shall be admitted to state institutions of college grade free of tuition (this does not include the University of Minnesota). The \$250 allowance may be used for tuition (where applicable), fees, board, room, books and supplies, and other legitimate expenses.

In addition, it will be necessary to show that reasonable need exists. The rules and regulations of the department stipulate that no child may have over \$7,500 in liquid assets. Inquiries should be directed to the Veterans Benefits Division, Department of Veterans Affairs, State of Minnesota, Veterans Service Building, St. Paul MN 55155. Telephone 296-2562.

Discharge Review Service—A service is available to veterans with less than honorable discharges which provides legally trained staff to assist them in their application for a review and possible recharacterization of their discharge. The service also provides assistance for veterans in their attempt to obtain eligibility for V.A. benefits. No fee is charged for this service. Those interested should contact the Discharge Review Service, 1633 Eustis Street, St. Paul MN 55108 (376-5085).

prerequisites

A prerequisite indicates competence needed to enter a course. It may be a preliminary course, experience, or approval required before a course may be taken. Students will find a course prerequisite (if any) listed at the end of the course description. Usually there is no prerequisite for beginning courses. However, courses with two or more parts must be taken in sequence unless otherwise specified. Most advanced courses do have prerequisites and should not be attempted unless the student has had the stated previous course or its equivalent. Occasionally, students who have had the equivalent study, training, or experience related to the course desired may be exempted from the prerequisite by the instructor. If instructors decide that a student is not qualified, they should write a note to this effect, and send it to the Extension Classes office. This action will permit the student to transfer to another course without penalty or to cancel with a full refund, provided this action is taken before the end of the sixth week of

classes (see **Refunds in Rules, Regulations and Policies** section). A prerequisite course may not usually be taken for credit after the advanced course has been satisfactorily completed.

Course numbers beginning with the numeral "8" are open only to students **admitted** to the University of Minnesota Graduate School.

grades

A-N Grading System—Four permanent grades, A (highest), B, C, and D (lowest), indicate acceptable completion of a course. The permanent grade of N (no credit) is assigned when the student does not earn a D or higher and is not assigned an incomplete. A student who cancels officially or drops out of class after the midpoint of any semester, quarter, or special term and is not doing passing work at the time, will receive an N.

S-N Grading System—The S-N system represents an alternative to the A-N system. S represents achievement that is satisfactory to the instructor for the class in which the student is registered. (The standards for S may vary from one class to another.) The symbol N, which stands for no credit, is assigned when the student does not earn an S and is not assigned an incomplete (I).

Students wishing to take courses under the S-N grading system should be aware of the limitations placed on the system by the college in which they intend to earn a degree. Each college determines to what extent and under what conditions each system may be available to its students. Any college may specify what course or what proportion of courses taken by its students or by prospective students must be on which grading system. The A-N and S-N grading systems cannot be combined in a single course by a student. Students may receive grades only from the grading system under which they are registered.

Choice of A-N or S-N grading system must be indicated for each course listed on the registration form at the time of registration, **and may not be changed after the second week of a quarter or the third week of a semester** (there is no fee for changing). For 8xxx-level courses only, students may change grading systems at any time with instructor's permission. For all other courses, instructors are **not** authorized to change students' grading systems. Changes can be made in person or by writing the Department of Extension Classes, 101 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis MN 55455 (telephone calls are **not** acceptable). If the student does not indicate the grading system desired on the registration form, the A-N system will apply.

A symbol of I (incomplete) will be assigned when, in the opinion of the instructor, there is a reasonable expectation that the student can complete successfully the work of the course. Student and instructor should arrive at a clear understanding in advance as to whether the student may receive an I and what the conditions will be. An I that is not made up by the end of one year becomes an N. When an I is changed to a permanent grade (within the one-year period), the I is removed from the student's record. Veterans are advised to read information under **Satisfactory Academic Progress**, page 42.

The symbol X (not to be confused with registration for extra credit) may be reported in continuation courses in which a grade cannot be determined until the sequence is completed. Upon completion, a separate grade is substituted for each X.

The symbol W indicates official cancellation without grade. It is assigned in all cases of official cancellation through the ninth week of any semester, or the sixth week of any quarter, or the midpoint of any special term, regardless of the student's standing. After that time, the symbol W is assigned only if the student is doing passing work at the time of cancellation. If he or she is not doing passing work, the instructor will assign the grade of N (no credit). It is advisable, therefore, that any student considering cancellation of a class after the ninth week of any semester, or the sixth week of any quarter, or midpoint of any special term, discuss the matter with the instructor.

The symbol V (visitor) indicates registration as an auditor or visitor (see **Auditors**, page 49).

Grade-Point Average—For purposes of determining grade-point average, grade points are assigned to the permanent grades as follows: for each credit of A, 4 grade points; B, 3 grade points; C, 2 grade points; D, 1 grade point. A student's grade point average is determined by dividing the sum of grade points by the sum of credits attempted, and passed. Credits attempted in classes taken on the S-N grading system are not included in determining grade point average.

grade reports and transcripts

Extension students can obtain **transcripts** showing all credits earned in Extension Classes by visiting or writing to the Office of Admissions and Records, Certification and Transcript Service, 150 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis MN 55455. (Extension grades are not automatically recorded on college [day school] transcripts. Students must request this transfer. See recording Extension credits, page 46.)

Reports of students' grades are sent by the University's Office of Admissions and Records **cannot be furnished by the Extension offices**. Grades are mailed from the Registration and Records Office, 150 Williamson Hall—telephone 376-1680. Students should allow a month's time from the close of a term for Admissions and Records to get grades to them. Students who need a grade sooner may leave a self-addressed postcard with the instructor, who will mail a grade to them after it is determined.

credit and no credit registrations

credits

All credits listed in the class description are **QUARTER credits even though many classes meet on a semester-length schedule. All credits are clearly labeled as to use. Each credit usually requires, on the average, a total of three hours a week of a student's time, counting both in-class and out-of-class time.**

1. **"Degree credit"** means that a course so designated may be used on a degree program. A student who seeks a degree should be aware that all degree credits attempted in Extension Classes must be submitted at time of admission to the college from which the degree is sought.

A few Extension courses carry a number of credits different from the number of credits carried by the same course offered in day classes. If a course carries the same course number as a day course, it will satisfy the same prerequisite, distribution, minor and major requirements met by the day course.

Residence—Credits earned in undergraduate Extension Classes are residence credits; however, until students have been formally admitted to the college from which they expect to obtain a degree, these credits are not considered to meet the residence requirements of individual colleges of the University. See University Degree Programs, page 347.

2. **"Certificate credit"** means that the course so marked may be used in appropriate Extension certificate programs. Certificate credit courses are University-level courses but do not carry degree credit. See University Certificate Programs, page 386.
3. **"Entrance credit"** designates a course which may be used to meet University admission requirements.
4. **"No credit"** means that no credit is given for the course, although grades may be assigned (except for students registered on any reduced, no-credit tuition plan).

Recording Extension Credits—Credits earned in Extension are entered initially on an Extension record. College of Liberal Arts, College of Business Administration, College of Education, Institute of Technology, or General College students wanting to have degree credits earned in Extension Classes put on their degree transcripts, should ask the Student Relations staff in the Registration and Records Office (in Williamson Hall) to transfer the credits (telephone 376-1680). A student planning to have credits earned in Extension transferred to another institution should request the Office of Admissions and Records, to forward a transcript to that institution (requests are accepted by mail or in person, but not by telephone). See **Grade Reports and Transcripts**, page 45.

Use at Other Institutions—The applicability of credits earned in Extension, as in day classes, toward a degree at another institution is determined by that institution.

graduate credit

Only courses numbered with first digits of "5" or "8" may be taken for graduate credit. **In addition, courses so numbered must carry in the course description a statement indicating the availability of graduate credit to qualified students, in order to be usable on a graduate program at the University of Minnesota.**

Course numbers beginning with the numeral "8" are open only to students admitted to the University of Minnesota Graduate School, and must carry such a statement in the course description to be usable on a graduate program at the University of Minnesota.

Students intending to pursue graduate work through Continuing Education and Extension (CEE) should be familiar with the instructions in this *Bulletin* and in the Graduate School Bulletin. Graduate School, 322 Johnston Hall, 101 Pleasant Street S.E., University of Minnesota, Minneapolis MN 55455 (373-5542).

Planning a University of Minnesota Graduate Program—Students intending to use courses taken through CEE toward a graduate degree are responsible for planning a coherent and relevant program. They are expected to review plans with the Director of Graduate Studies or with a qualified faculty adviser in the field of their choice.

Procedures—At the time of registration the student wishing graduate credit must indicate this on the registration form. The instructor is thereby notified and, on the student's completion of the course, the instructor indicates on the grade report whether or not the work was done at the graduate level. The entry is then made on the student's CEE transcript. When and if the student applies for and is admitted to the Graduate School and submits a graduate program, he or she also submits the CEE transcript, which constitutes petition to use the courses selected from that transcript. **The inclusion on a CEE transcript of courses taken at the graduate level does not guarantee either admission to the Graduate School or acceptance of courses on a graduate program.**

Except with respect to the Master of Arts in English, **the Graduate School will accept only up to 12 applicable credits of courses taken through CEE on any advanced degree program once the student is admitted to the Graduate School.** (A department or an adviser may set a maximum below this level for its majors.) Students may take more than 12 credits through CEE, but they will be able to apply no more than 12 credits to the program.

All requirements for the master's degree must be completed in seven years. The seven-year program begins with the oldest work included on the official degree program, once it is accepted by the Graduate School.

Use of Graduate-Level Work Elsewhere—Students intending to use CEE course work at the graduate level for other than a University of Minnesota graduate degree must indicate on their registration forms that they are taking a course for graduate credit. The CEE transcript will show whether or not they took a course for graduate credit. The use of a course so marked is the prerogative of the student and the institution to which he or she then submits a transcript and is not the responsibility of either CEE or the Graduate School of the University of Minnesota.

Fees—A student who concurrently takes day courses and CEE courses must register on separate forms and pay both day and CEE fees.

credits without class attendance

If through personal experience or occupation, students have gained knowledge which they believe should qualify them for University credit, or if they wish to work on their own to earn credit for a project, several alternatives are available. Students may obtain information on these alternatives by calling the Continuing Education and Extension Counseling Department (373-3905). A handbook which describes the alternatives is available from the Extension Counseling office, 314 Nolte Center. Following is a summary of the various options available.

independent study “y” registration

Many degree credit courses have been identified by academic departments as courses in which students may study independently (designated as a “Y” registration) without attending class sessions. In some instances, written instructions are available; in others, direct consultation with the instructor is necessary for planning the student’s work. Regular fees are charged for independent study “Y” registrations.

Independent study can be arranged for any course so identified by an academic department, whether it is offered during day or evening hours. Department and instructor approval is necessary and a special form for that purpose, with the appropriate signatures, must be presented at time of registration. Registration is then completed in the usual manner but with a capital “Y” added after the course number. For the Special Permission Form and for further assistance in making “Y” registration, consult the Counseling Department, 314 Nolte Center (373-3905).

extra credit “x” registration

Students may register in a degree credit course for 1, 2, or 3 extra credits (beyond those a course carries) provided the course instructor approves. Fees are charged on the basis of number of credits for which a student is registered. The student works independently, meeting requirements set by the instructor. Extra credit study allows for more intensive study of a course topic or study in a related topic in which no regular course is offered. Department and instructor approval is necessary and a special form for that purpose with the appropriate signatures must be presented at time of registration. Registration is then completed in the usual manner but with a capital “X” after the course number. For the special permission form and for further assistance in making an “X” registration, consult the Counseling Department, 314 Nolte Center (373-3905).

directed studies, directed research registration

A wide range of opportunities is available to Extension students for earning college credit for individually designed study or research projects. These projects may be organized around their job activities, their involvement in the community or around special interests that students have in a particular topic. A student wishing credit in Directed Studies or Directed Research should contact a faculty member in the particular area in which he or she is interested, determine if the department lists specific course numbers and titles for such registration, and obtain faculty and department approval. A special form for that purpose, with the appropriate signatures, must be presented at time of registration. Registration is then completed in the usual manner with the correct Directed Studies or Directed Research number of the department. For the special permission form and assistance in making Directed Studies or Directed Research registration, consult the Counseling Department, 314 Nolte Center (373-3905).

special examination

Students who, through independent study, experience, or study at a noncollegiate institution, have gained knowledge which is equivalent to that covered by a particular University course, may earn credit for it by passing a special examination on the subject matter covered by the course. They should be University Extension students at the time of the examination and must obtain approval from the department offering the course. There is a \$20 fee. Contact the Counseling Department, 314 Nolte Center (373-3905).

college-level examination program (clep)

The College-Level Examination Program has been established by the College Entrance Examination Board to enable individuals who have acquired their education in nontraditional ways to demonstrate their academic achievement. CLEP examinations in five areas—English, mathematics, natural sciences, social science-history, and humanities—are available for a fee to Extension Classes students who may be considering entering certain degree programs. Students will receive credit upon passing one or more tests, provided they have a satisfactory score and have not yet completed requirements in the appropriate area. Since the various colleges use different criteria in accepting CLEP results, for detailed information and referral, contact the Counseling Department, 314 Nolte Center (373-3905).

university college independent study

University College can grant up to 15 credits to any one student for an independent undergraduate study project done outside the confines of formal course work. Students need not be University College registrants; however, they must have permission from their college office to pursue a program of independent study in University College. They must also have an appropriate faculty member supervise their project. Ordinarily, projects that can be done through departmental readings courses or directed studies projects are not acceptable for UC 3075. Further information may be obtained from the Counseling Department, 314 Nolte Center (373-3905); or from the University College Office, 105 Walter Library (373-4638).

independent study through correspondence

The Department of Extension Independent Study offers a wide variety of courses. Courses marked in this *Bulletin* with (IS) following course titles are also taught through Extension Independent Study. Independent Study courses can be used toward fulfilling distribution requirements in most University undergraduate degree programs; and all Extension certificate programs accept such credits. Credits earned through the Department of Extension Independent Study may be used to satisfy residence requirements. Interested degree students should check with their college offices for confirmation. The **Extension Independent Study Bulletin** is available from the Department of Extension Independent Study, 45 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis MN 55455 (373-3256).

radio courses

Continuing Education and Extension offers courses via University Radio KUOM (770 k.c.) for degree credit. For information contact the Department of Extension Independent Study, 45 Wesbrook Hall (376-4925).

television courses

Television Independent Study brings the University to students. It provides a method of study for independent learners through an integrated teaching system. Two courses are offered each quarter: fall, winter and spring. To request information regarding television independent study, telephone 376-4925.

Noncredit viewers may purchase a study guide from the Department of Independent Study, 27T Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis MN 55455.

All registrations for television courses are through the Extension Independent Study office, 27T Wesbrook Hall. Telephone 376-4925. The Department of Extension Classes does not handle registrations for television classes; therefore, **do not** use the postcards in the back of this *Bulletin* to request registration forms for television classes.

auditors (no credit)

A student who wants to attend classes, but does not wish to do all the required work, may register as an auditor by placing an "X" in the appropriate box on the registration form. An auditor is expected to attend class. Auditor status carries no credit. One may not later take for credit a course which has been audited; exceptions to this rule may be allowed upon consultation with an adviser in the college or school concerned. Auditors pay the same tuition and fees as other students.

Requests for change from credit registration to audit registration are made in person or by writing or calling the Department of Extension Classes, 101 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E. Minneapolis MN 55455 (373-3195). After the sixth week of a quarter class or the ninth week of a semester class, requests for change must be approved by the instructor; approval is granted only if the student is doing passing work at the time of the request. No changes can be made during the last two weeks of any term. No student whose tuition and fees are paid in whole or in part by military, Veterans Administration, company or scholarship funds may register as an auditor. Changes from audit to credit will not be allowed after the second week of the quarter or third week of the semester.

Courses audited are officially recorded on the student's University record and transcript. (See also **Reduced-Tuition Plans**, below.)

reduced-tuition plans (no credit)

Regular Extension credit courses marked with a diamond (◆) symbol in the margin in **Course Offerings**, are open for no-credit registration at reduced tuition.

Registration dates (pages 12-21) and procedures (page 22) for ◆ courses are no different than for any nonlimited-enrollment credit class.

No-credit participants keep up with readings and participate in class discussions, but may not submit work for evaluation or take examinations (no transcript or registration record is maintained).

◆ **Half-price plan**—Any class marked with a ◆ may be taken for no credit at one-half the regular tuition.

Students may not transfer from ½ price to full price or full price to ½ price after the first two weeks of a quarter class or three weeks of a semester class.

◆ **Youth plan**—A young adult, age 12 to 16, may register for \$3 (not refundable) if accompanied by an adult registered for credit or no credit in the same class marked with a diamond (◆). The adult must present a current registration receipt at the time the youth registers, and must assume the responsibility for judging the appropriateness of the class sessions for the young guest. Only unusually mature and genuinely interested young persons who can benefit from college-level lectures and discussions designed for adults should be invited to attend. There are no late fees for students registering on the youth plan.

Plus-62 plan—Individuals age 62 or older may register for any class free. For further information on Plus-62, see page 50. There are no late fees for persons 62 and older.

informal courses (no credit only)

Noncredit **Informal Courses** (see the *alphabetically arranged course descriptions* section of this **Bulletin**) are personal, flexible, and noncompetitive courses designed for persons interested in learning for their personal satisfaction. There are no examinations, no transcripts, and no grades.

Registration procedures, dates and locations, unless otherwise noted in the course description, are the same as for other Extension classes.

sampler lectures, \$1 (no credit)

\$1 University Sampler lectures are scheduled throughout the academic year. These special lectures give students a taste of Extension classes for only \$1 each. University faculty, representing a wide range of fields and interests, present these self-contained lectures as part of their regular evening classes. Topics have included these:

The Politics of Oil
Understanding the Weather Map
Jungian Dream Interpretation

The Curious Case of Sherlock Holmes
Why People Buy: the Hidden Persuaders
Investing in Common Stocks

Registration for Sampler lectures is completed at the door of the lecture room on a first-come, first-served basis. Call 373-3039 or write to University Sampler, 202 Westbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis MN 55455. Ask for a schedule of topics in the "University Sampler."

persons 62 and older

Minnesota state law allows persons 62 and older to register free in any nonlimited-enrollment Extension class for no credit. They may also register free for no credit in limited-enrollment classes on a space-available basis.

Courses may be taken for University credit for only \$2 a degree, certificate or entrance credit hour (*limited-enrollment classes on a space-available basis*).

Persons 62 and over registering for **nonlimited-enrollment courses** may register by mail or in person at 101 Westbrook Hall on the Minneapolis campus; at the MacPhail Center in downtown Minneapolis, 1128 LaSalle Ave.; or at the downtown St. Paul Registration-Information Booth in the American National Bank Building, skyway level, 5th and Minnesota.

Those wishing to register for **limited-enrollment classes** (those printed in red in the course descriptions section of this **Bulletin**) **may not** do so during the first week of mail registration. They may obtain space-available information by telephone, or during the in-person registration periods (see the **When and How to Register** section for dates and hours).

When registering by mail, students should be sure to include the completed registration forms, a check made payable to the University of Minnesota for special or course fees (*if any*), and the limited-class card (*only if the class has limited enrollment*). If registering for credit, be sure to include \$2 a credit. **A SEPARATE CHECK IS REQUIRED FOR EACH LIMITED-ENROLLMENT CLASS A STUDENT WISHES TO TAKE.** Only one check is required to enroll in as many nonlimited-enrollment classes a student chooses.

There are no late fees for persons 62 and older.

For general information, telephone **373-3195**.

For information on the availability of space in limited-enrollment classes, telephone **376-1371** during dates specified on page 23.

rules regulations policies

contents	page
fee statements	52
changes in course information	52
attendance in classes	52
transferring classes	52
transfers within the university	53
transfers from other institutions	53
records	53
cancellations	53
refunds	55
tax-deductible educational expenses	56
grievance procedures	56
committee on student relations and academic standing	56

fee statements

After registration forms are receipted (cashier), the fifth copy (pink) is a student's fee statement. The fourth copy (white) is to be presented to the instructor the first class session.

Students are urged to save and carry their fee statements which are required as identification for a number of University activities and services.

Students must be sure all copies of their registration forms are legible. If the fee statement is not legible, it cannot be returned to students who register by mail.

A duplicate fee statement may be obtained at 101 Wesbrook Hall in the event the first one is lost or illegible.

changes in course information

All changes occurring after the publication of the *Bulletin* are posted in the desk copy bulletin at each of the registration locations. Students registered in the previous two years receive current, updated information in *Info*, a newsletter for Extension Classes students.

attendance in classes

Students (including auditors) are responsible for attending classes in which they are registered. (See also **Credits Without Class Attendance**, page 47.) A student who cannot attend a class session should arrange with the instructor—in advance, if possible—to make up the work.

transferring classes

Students who wish to transfer classes, or between class sections, after being officially registered can do so either in person at 101 Wesbrook Hall, or by mail (call 373-3195 for transfer forms). No transfer by mail will be done for reduced-tuition courses. Students may not transfer between terms (except for fall quarter and fall semester, through the second week of classes).

Students who wish to transfer after an initial registration will be subject to the transfer fees and conditions listed below:

Prior to and during the first week of classes	..... None
During the second week of classes	..... \$ 5 (if accepted)
During or after the third week of classes	..... \$10 (if accepted)

Students who wish to transfer after the first week of classes must meet the following conditions:

Transfer During the Second Week (Quarter, Semester, Special Term, Special Class)—No transfer will be accepted unless the transfer will permit the student to attend class(es) the second week.

Transfer During the Third Week or After (Quarter, Semester, Special Term, Special Class)—No transfer will be approved unless students have attended the second week of the class into which they wish to transfer, and have obtained written permission from the instructor of the class they wish to enter.

There will be no transfer fee if: (1) University requests transfer be made; (2) transfer is required by an unacceptable grade in prerequisite course (see **Grades**, page 44); (3) transfer is required because of University cancellation of course in which previously registered, provided such transfer is made within one week from date of cancellation of class; or (4) between sections of a course with the same course number.

Students may not transfer from ½ price to full price or full price to ½ price after the first two weeks of a quarter class or three weeks of a semester class.

Note: Those wishing to take a University Extension Class for no credit, but who need a transcript and a record of their registration, must register as auditors and pay full tuition.

Students unable to pay full tuition for credit courses may be eligible for tuition assistance (see **Financial Aids and Loans**; check the **Index** in the back of this **Bulletin** for page number).

Students are requested to present fee statements at the time of transfer.

Veterans—Any veteran registered under the G.I. Bill must notify the Extension Veterans Office, 138 Wesbrook (373-5777) when transferring classes. This is essential when it changes the credit load.

transfers within the university

A student may take Extension classes without going through formal transfer procedures. However, if students plan to complete a degree program through the Department of Extension Classes, they should consult the Counseling Department, 314 Nolte Center (373-3905). Please read the sections on **Day School Students, Degree Programs, and Graduate Credit** (check the **Index** for page numbers).

transfers from other institutions

Students who have had university or college work other than at the University of Minnesota, and who intend to work on a degree or certificate program in Extension, should have a transcript with them when they see an Extension adviser. Transcripts may be obtained from the registrar of the institution previously attended. Generally, credits from a nationally accredited two- or four-year college are accepted by the University of Minnesota provided that the courses or their equivalent are applicable to the degree program for which the student is applying.

records

Students have the right to inspect their University records under provisions of the federal Educational Rights and Privacy Act, as amended in late December, 1974. Educational records, such as contained in the Office of Admissions and Records and other campus and college offices, are available. Information and files not available include confidential materials received prior to January 1, 1975, and health, counseling, and police records.

In addition, under Minnesota law, individuals may request to know the content and meaning of information contained in their University student records (except medical, psychiatric, and police and records confidential by statute).

Most student records are kept in the Office of Admissions and Records and in other campus and college offices. Students may request to see their files in any office they believe has a file or record in their name.

If students who have been informed about the contents of their file want to contest the accuracy or completeness of information, they may do so. A written request for corrective action should be submitted to the office where that information is maintained.

cancellations

cancellations (how to drop a course)

Students who wish to cancel a class or classes must do so officially, either in person or by writing to the Department of Extension Classes, 101 Wesbrook Hall, University of Minnesota,

77 Pleasant Street S.E., Minneapolis MN 55455. By so doing, they will, if eligible, receive a refund (see **Refunds**, page 55), and will likewise insure entry of the appropriate symbol on their grade report. If students officially cancel the first two weeks of a term, the course they cancel will not appear on a transcript. If students officially cancel from a class before or during the ninth week of any semester, or the sixth week of any quarter, or mid-point of any special term, they will automatically receive a "W" (withdrawal) on the grade report. This symbol means "official cancellation without grade." If students cancel after the above-stated period, the instructor may give them a "W" if students are doing passing work. It is advisable that students inform their instructor of the reason for canceling.

Do not stop payment on a check. If a stop payment is issued on a check for any reason submitted as payment of tuition:

- 1) It is considered to be a cancellation of the classes registered for.
- 2) A hold will be placed on the student's record until:
 - a) a \$2 check-handling fee is paid, and
 - b) the tuition normally held in accordance with the refund policy is paid.

No student is permitted to cancel during the last two weeks of any term (this includes final examination week). Cancellations must be made in person or by letter (telephone calls not acceptable).

No instructor is authorized to accept cancellation of any registration.

The effective date of cancellation will be the day on which the cancellation is received in an Extension Classes office, regardless of the date of the student's last attendance. (Cancellations by mail are effective the date of postmark.) It is important, therefore, that whenever students stop attending a class, they should officially cancel by filling out the appropriate forms at any Extension Classes office.

Veterans—Any veteran registered under the G.I. Bill must notify the Extension Veterans Office, 138 Wesbrook (373-5777) when canceling a class. This is essential when it changes the credit load.

cancellation of, or change in, scheduled classes (made by department of extension classes)

While the Department sincerely regrets to do so, it is forced to cancel classes with insufficient enrollment. The department reserves the right to cancel, postpone, limit enrollment, split, or combine classes, and to change instructors and/or locations of classes.

cancellation of class meetings because of severe weather conditions, other emergencies

Extension Classes are rarely canceled for any reason, including weather cancellations. However, in the event that Extension Classes are to be canceled, the University of Minnesota radio station, KUOM (770 AM on the dial), will broadcast such an announcement at 4 p.m. on the day in question (8 a.m. for Saturday classes). Other local radio stations will usually carry the announcement about the same time. Listen for the announcement; it is the quickest and easiest method of obtaining the information.

When conditions are no worse than difficult, most instructors will be in their classes. In such weather, Extension does not feel it ought to decide for students whether they should attempt to go to class. If, however, conditions are worse than difficult—*dangerous and/or virtually impossible*—then Extension has an obligation to discourage instructors and students from risking the trip. In those rare cases, all classes will be canceled and the announcement made on radio and television.

Rarely are classes canceled. Winter weather in the metropolitan area, fierce as it sometimes is, is seldom bad enough for Extension Classes to make students' decisions for them. Classes have been canceled only once in the last decade.

refunds

Refunds for classes from which students withdraw will be made in accordance with the following schedule:

1. Full refund of all tuition and special fees will be made:
 - A. When a class is canceled by Extension Classes; when the hour or day of the class is changed by Extension Classes after a student has registered in it; or when, in the opinion of the instructor, the student does not have the necessary prerequisites, or the student has already had the equivalent material in another class. In the last two cases, the student must do the following **before the end of the sixth week of classes**:
 1. Ask the instructor for a note stating the above circumstances.
 2. Present this note, together with the fee statement, in person at 101 Wesbrook Hall, or by mail. It is the student's responsibility to obtain and present this note as above.
 - B. To any student who has been recalled, or who has enlisted, upon presentation of military orders, provided the student would not be entitled to an appropriate grade at such time.
 - C. To students who have been ill or hospitalized and wish consideration for a full refund. They should obtain a doctor's statement (on the doctor's letterhead) indicating that in the opinion of the doctor the student was unable to continue for medical reasons.
2. A \$3 cancellation fee will be charged for cancellation of classes before the first class meeting in any semester, quarter, or special term. The balance of the tuition and special fees will be refunded.
3. Late fees and/or transfer fees are not refundable.
4. Refunds for cancellation of classes after the opening date of each semester, quarter, or special term (except as indicated in item 2 above) will be made as follows (**the following information refers to the number of times the class itself has met, not to the number of times a student has attended**):

	Semester	Quarter	Special Term
a. Refund before second class	75%	75%	75%
b. Refund before third class	75%	50%	50%
c. Refund before fourth class	50%	25%	25%
d. Refund before fifth class	25%	none	none
e. Refund after fifth class	none	none	none

Cancellations by mail are effective the date of postmark.

For convenience, this information is also printed on the student's copy of the registration form (pink fee statement).

Refunds for special term courses are based on above percentages in relation to the length of the term.

See refunds for athletic facilities fees, page 340; health service fees, page 342; Regents' Scholarships, page 40.

Refunds are paid by check only and are mailed to the student. A **minimum** of four weeks is required for processing a refund.

tax-deductible educational expenses

University Extension Classes may be tax deductible if taken: 1) to maintain or improve the skills required in trade or business or required in performing a present job; or 2) to meet the specific requirements of an employer or the requirements of law for maintaining present employment, salary, or status (provided student had previously met the minimum requirements in effect when employed). Students cannot deduct expenses for education if courses are taken: 1) to get a new position; 2) to get a general education; or 3) to meet the minimum requirements to qualify for or to establish a trade or business.

Also, students may obtain a one-way educational transportation deduction for travel expenses incurred while driving from work to campus. This deduction is applicable only in the following situations: 1) education needed to meet the requirements of employer, or requirements of law or regulations for keeping salary, status or employment, if the requirement imposed serves a bona fide business purpose; or 2) education needed to maintain or improve skills required in performing the duties of present employment, or trade or business. For information call the local office of the Internal Revenue Service at 291-1422, or from outside the Twin Cities metropolitan area call toll free 1-800-652-9062.

grievance procedures

An established "grievance procedure" exists in the Department of Extension Classes. If students believe they have a justifiable complaint about a grade or about classroom procedures, they should first confer about the problem with the instructor. Most problems can be worked out in this way. If a solution satisfactory to them is not reached, they should state the complaint in writing to the Director of Extension Classes, 170 Wesbrook Hall, who will confer with the appropriate academic department chairperson. If these procedures do not bring about a solution satisfactory to the students, the CEE or the academic department's grievance committee (a student-faculty-civil service group) can be assembled to hear the complaint. Further appeals proceed to the college-level and University-level appeal committees.

Any student who has a complaint about Extension Classes programs—services, facilities, policies and practices— is encouraged to make it known, preferably in writing, to the Director of Extension Classes.

committee on student relations and academic standing

This is a committee concerned with academic standing in each college and school of the University, including Continuing Education and Extension, made up of the faculty and chaired by an administrative officer. Its purpose is to make, interpret, and enforce regulations, and to make exceptions to those regulations when they may do an educational disservice to the student. For procedure information call the Counseling Department, 373-3905.

COURSE offerings

Courses printed in **red ink** in this *Bulletin* are limited-enrollment classes. Nonlimited-enrollment classes which have limited-enrollment sections have the limited sections printed in red. In order to enroll in limited-enrollment classes or sections, a student **must** secure a limited-enrollment class card before attending the class. See **When and How to Register**, page 23.

See Symbols, page 58.

Courses in this section are listed alphabetically by department. See page 416 for a list of **Departments and Department Abbreviations**, and page 418 for **Buildings** and their abbreviations.

Course Numbering is explained on page 414.

See Index (page 437) for page numbers of individual departments.

Maps begin page 419.

Abbreviations and addresses for off-campus classes appear on page 415.

A ♦ in the margin indicates course may be taken for half price. See page 49 for details.

semester courses

Students taking semester classes may wish to schedule more than one semester course an evening. The following departments offer one or more semester courses:

Accounting	Japanese
Anatomy	Journalism and Mass Communications
Arts, Studio	Marketing
Business, Government, and Society	Mathematics
Business Law	Mechanical Engineering
Chemistry	Music
College of Life Underwriters	Personal Orientation
Design	Physics
Economics	Polish
Entomology, Fisheries, and Wildlife	Political Science
Finnish	Psychology
French	Public Health
General College	Real Estate
Geology and Geophysics	Study Skills
German	Transportation
Horticulture	
Industrial Engineering/ Operations Research	

symbols

The following symbols are used throughout this Bulletin:

- A hyphen between numbers indicates a sequence course, the units of which must be taken in order, unless otherwise indicated.
 - ★ Enrollment space limited. See instructions on registration in limited-enrollment classes and sections, page 23. Limited-enrollment classes or sections are printed in red in this **Bulletin**.
 - † All courses listed before dagger must be completed before credit may be received.
 - § No credit is given if credit has been received for equivalent course listed after section mark.
 - ‡ Means "concurrent registration in" (i.e., course must be taken simultaneously).
 - # Consent of instructor.
 - (IS) Course also available through Department of Extension Independent Study.
 - ◆ Regular credit course open for registration on a reduced, no-credit, tuition plan (see page 49).
 - △ Consent of division, department, or school offering course is required.
- cr** Credit
Qtr Quarter
Sem Semester
Spec Special Term
S/N Satisfactory/No credit grading system. See page 44.
A/N Letter grading system. See page 44.



accounting (Acct)

Your attention is called to the Accounting Certificate Program; page 397; and to General College business studies.

Kenneth Abeln, CPA, Staff Auditor, Laventhol & Horwath
David Beckley, CPA, Manager, Haskins & Sells
Ulysses Skip Bennett, Assistant Division Controlling, General Mills
James Bevacqua, CPA, Auditor, Haskins & Sells
Roger Carolus, CPA, Vice President-Chief Auditor, Banco, Inc.
Arthur H. Cobb, CPA, Touche, Ross and Co.
Lou Davenport, CPA, Auditor, Haskins & Sells
Will Dombrowske, Treasurer, Vice President, Deltak Corp.
William Duma, CPA, President, National Bank of Minnetonka
Joseph E. Edell, CPA, Vice President, Finance, American National Bank of St. Paul
R. Wendell Ellis, Assistant Treasurer, Fingerhut Corp.
James Fischer, Division Controller, General Mills
Quentin Gerber, CPA, Professor, St. Cloud State University
Edmund Gottlieb, CPA, Partner, Breitman, Orenstein & Schweitzer, CPAs
Jack Gray, CPA, Professor of Accounting
Mohamed S. Heakal, Professor and Chairman of Accounting, St. Cloud State University
Herbert Ihle, Director, Control & Finance for Grocery Products, Pillsbury Co.
Fred Jacobs, Assistant Professor of Accounting
Joseph Kalaidis, Senior Systems Analyst, University Hospitals
Thomas Kaliher, CPA, Kaliher, Belanger & Co., CPAs
Robert Katz, CPA, Partner, Alexander Grant & Co.
Roger Katzenmaier, CPA, Vice President, Wilkerson, Guthman & Johnson, CPAs
Fred Kickertz, CPA, Internal Auditor, Onan Corp.
Joseph Kimmel, Director, Financial Planning, Oven Eze Foods, Pillsbury Co.
Charles Ladd, CPA, Manager, General Mills
William Lang, CPA, Accountant, Control Data Corp.
Lynn Odland, CPA, Manager, Haskins & Sells
Michael Olsberg, CPA, Professor, St. Cloud State University
David Palmer, Manager Market Analysis, Litton Microwave Cooking Products
Leon Radde, CPA, Manager of Corporate Audit, Investors Diversified Services
Leonard Rapoport, CPA, Partner, Alexander Grant & Co.
Floyd Romslo, Assistant Professor, School of Public Health
Robert Ronay, Administrative Assistant in Accounting
Barry Rubin, CPA, Partner, Breitman, Orenstein & Schweitzer
Lyle Shaw, CPA, Manager, Arthur Young & Co.
Joe Toone, CPA, Manager, Federal Income Taxes, Bemis Co.
Richard B. Troxel, CPA, CMA, Partner, Peat, Marwick, Mitchell & Co.
Dick Wallen, Minnesota Energy Agency
David O. Wanglie, Budget Manager, Fingerhut Corp.
John Zehnder, International Financial Accountant, 3M Co.
Robert K. Zimmer, Professor and Chairman of Accounting

first year accounting courses

Acct 1050 PRINCIPLES OF ACCOUNTING I. 4 degree credits \$8050, 1024-1025.

Introduction to basic financial accounting concepts and their application to the recording and reporting of business events. **Must be taken A-N.** (No prereq)

Acct 1051 PRINCIPLES OF ACCOUNTING II. 4 degree credits \$8051, 1026.

Accounting analysis and reports for management planning and control. **Must be taken A-N.** (Prereq 1050 or 1024 and 1025)

The first-year accounting courses are designed to meet the needs of three groups of students: (a) those who plan to use accounting information for business management purposes; (b) those who intend to be practicing accountants (and who expect to continue with the second-year and advanced accounting courses); (c) those who wish an introduction to the "language of business" as part of a liberal education. These are not bookkeeping courses.

Persons with prior background or training may receive credit in one or both of these courses by passing an advanced standing examination. Students accepting credit will pay \$20 for each examination. These examinations will be given at the following times:

Acct 1050 Wednesday, Sept. 14, 6:30 p.m., BA 130

Wednesday, Nov. 30, 6:30 p.m., BA 130

Wednesday, Mar. 1, 6:30 p.m., BA 130

Acct 1051 Thursday, Sept. 15, 6:30 p.m., BA 130

Thursday, Dec. 1, 6:30 p.m., BA 130

Thursday, Mar. 2, 6:30 p.m., BA 130

Please call the Accounting Department (373-3599) to register your name and obtain location information at least three days prior to the examination.

The two courses (1050-1051) are scheduled on two plans:

1. Regular semester class schedule for 4 credits each of two semesters for full first-year course.
2. Quarter basis; two 1¾ hour classes each week, 4 credits each quarter.

Acct 1050-1051 PRINCIPLES OF ACCOUNTING. 4 degree credits each term, \$66 plus \$1 special fee. Total \$67 each term.

Methods of recording, reporting, and interpreting business events. Use of accounting as a tool of business management. **Must be taken A-N.** (No prereq for 1050; 1024-1025 or 1050 for 1051).

—Quarter Classes—

MINNEAPOLIS CAMPUS

Fall Qtr	1050★Sec 1	MTh—6-7:45, BlegH 230, 210, 215, 220, 360, 430 (Limit 210 students)
		★Sec 2 MTh—8-9:45, BlegH 230, 210, 215, 220, 360, 430 (Limit 210 students)
	1051★Sec 3	MTh—6-7:45, BlegH 110, 404 (Limit 70 students)
		★Sec 4 MTh—8-9:45, BlegH 110, 404 (Limit 70 students)
Winter Qtr	1050★Sec 5	MTh—6-7:45, BlegH 110, 205, 210 (Limit 105 students)
		★Sec 6 MTh—8-9:45, BlegH 110, 205, 210 (Limit 105 students)
	1051★Sec 7	MTh—6-7:45, ForH 130, 150, 155 (Limit 105 students)
		★Sec 8 MTh—8-9:45, ForH 130, 150, 155 (Limit 105 students)

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Spring Qtr 1050★Sec 9 MTh—6-7:45, BlegH 230, 240, 220 (Limit 70 students)
 ★Sec 10 MTh—8-9:45, BlegH 230, 240 (Limit 70 students)
 1051★Sec 11 MTh—6-7:45, BlegH 145, 135 (Limit 70 students)
 ★Sec 12 MTh—8-9:45, BlegH 145, 135 (Limit 70 students)

(For additional help, a supervised accounting lab will be open M and Th—5-8; T and W—5-7; BA 128)

—Semester Classes—

ST. PAUL CAMPUS

Fall Sem 1050★Sec 13 T—7-9:30, ClaOff B45 (Limit 40 students)
 Spring Sem 1051★Sec 14 T—7-9:30, ClaOff B45 (Limit 35 students)

RICHFIELD SENIOR HIGH SCHOOL

Fall Sem 1050 Sec 15 T—6:45-9:15, room 141
 Spring Sem 1050 Sec 16 T—6:45-9:15, room 141
 1051 Sec 17 T—6:45-9:15, room 142

(For additional help, supervised accounting lab will be open T, 5-6:45, room 141)

ALEXANDER RAMSEY HIGH SCHOOL, ROSEVILLE

Fall Sem 1050 Sec 18 W—6:45-9:15, room 250
 Spring Sem 1050 Sec 19 W—6:45-9:15, room 250
 1051 Sec 20 W—6:45-9:15, room 252

(For additional help, a supervised accounting lab will be open W, 5-6:45, room 250)

SANDBURG JUNIOR HIGH SCHOOL, GOLDEN VALLEY

Fall Sem 1050 Sec 21 Th—6:45-9:15, room 204
 Spring Sem 1050 Sec 22 Th—6:45-9:15, room 204
 1051 Sec 23 Th—6:45-9:15, room 205

(For additional help, a supervised accounting lab will be open Th, 5-6:45, room 204)

MINNEAPOLIS CAMPUS, WEST BANK

Fall Sem 1050 Sec 24 Sa—8:45 a.m.-11:15, BlegH 120
 Spring Sem 1050 Sec 25 Sa—8:45 a.m.-11:15, BlegH 130
 1051 Sec 26 Sa—8:45 a.m.-11:15, BlegH 120

(For additional help, a supervised accounting lab will be open Saturdays, 11:15 a.m.-1:15; instructors will announce locations)

★Acct 3105-3106, 3107 **INTERMEDIATE ACCOUNTING.** 3 degree credits each term, \$3101-3102, \$3160 for 3107. \$52.50 each term.

Second-year accounting for students intending to specialize in accounting or in business finance. 3105: Historical review of search for accounting principles, present value analysis and price level indices, nature and measurement of income and funds

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

flow. **3106:** Accounting for acquisition and subsequent measurement of business assets. **3107:** Accounting for equities, including creditors' equity and owners' equity for corporations, proprietorships, nonprofit organizations and consolidated entities. Analysis and interpretation of financial statements. **Must be taken A-N.** (Prereq 1025 or 1050 and Econ 1001 and 1002 for 3105 [see page 60 for advanced standing examinations]; 3105 and Math 1131 or equiv or # for 3106; 3105 for 3107. Limited to 105 students).

Fall Qtr	3105	Sec 1	T—6-8:30, BlegH 205, 260, 210
		Sec 2	W—6-8:30, BlegH 245, 260, 210
Winter Qtr	3106	Sec 3	T—6-8:30, BlegH 205, 260, 210
		Sec 4	W—6-8:30, BlegH 205, 260, 210
Spring Qtr	3107	Sec 5	T—6-8:30, BlegH 205, 260, 210 (Limit 70 students)
		Sec 6	W—6-8:30, BlegH 205, 260, 210 (Limit 70 students)

★Acct 3160 ANALYSIS OF FINANCIAL STATEMENTS. 4 degree credits, §3107. \$70.

Interpretation and analysis of financial statements for credit, investment, and managerial purposes. **Must be taken A-N.** (Prereq 1026 or 1051 or #. For nonaccounting majors. Limited to 35 students)

Spring Sem	Sec 1	M—6-8:30, BlegH 105
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★Acct 3220-3221 COST ACCOUNTING. 3 degree credits each semester, §3255, §3201.

\$52.50 each semester (plus \$4 course fee for 3221. Total \$56.50 for 3221 only).

Note prerequisites below. **3220:** Practices, principles and procedures of handling production costs for use in inventory valuations and income determination. Job order, process, and standard cost systems. A brief introduction to standard cost as a tool of cost control. **3221:** Use of cost information in managerial decision-making. **Must be taken A-N.** (Prereq 1026 or 1051, Econ 1001 and 1002 and Math 1131 or equiv or # for 3220 [see page 60 for advanced standing examinations]; 3220 MIS 3099, OAM 3055 for 3221. **Prereq will be enforced.** Limited to 35 students)

Fall Sem	3220	Sec 1	M—6-7:45, BlegH 225
		Sec 2	M—8-9:45, BlegH 225
Spring Sem	3221	Sec 3	M—6-7:45, BlegH 225
		Sec 4	M—8-9:45, BlegH 225

★Acct 5125 AUDITING PRINCIPLES AND PROCEDURES. 4 degree credits, §74.

The auditor's role and function. Includes audit standards, ethics, procedures, and legal responsibilities. **Must be taken A-N.** (Prereq 3107 or 3102. Limited to 35 students. May not be taken for graduate credit)

Fall Qtr		Sec 1	TTh—6-7:45, Richfield HS 144 (Limit 30 students)
		Sec 2	T—6-8:45, BlegH 225
Fall Sem		Sec 3	Sa—9 a.m.-11:45, BlegH 225

★Acct 5126 INTERNAL AUDITING. 4 degree credits. §74.

Development of audit programs, performance of computer audits and internal auditor's role in the overall management process. **Must be taken A-N.** (Prereq 3220-3221 or 3201 and #. Limited to 35 students. May not be taken for graduate credit).

Spring Sem	Sec 1	M—6-8:30, BlegH 335
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Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★Acct 5135 INCOME TAX ACCOUNTING. 4 degree credits, §0130C-0131C. \$74. (IS)
Individual, partnership, and corporation taxation; emphasizing tax planning. **Must be taken A-N.** (Prereq 1051 or 1026. Limited to 35 students. May not be taken for graduate credit)

new

Fall Sem Sec 1 **W**—6-8:30, BlegH 110
 Sec 2 **W**—6-8:30, BlegH 440

★Acct 5180 ADVANCED ACCOUNTING. 4 degree credits, \$74.
Consolidated statements, fiduciary accounting, partnerships, and foreign exchange. **Must be taken A-N.** (Prereq 3107 or 3102 or §3107. Limited to 35 students. May not be taken for graduate credit)

Spring Sem Sec 1 **W**—6:20-8:50, BlegH 225
 Sec 2 **W**—6:20-8:50, BlegH 335

★Acct 5270 REPORTING FOR MANAGEMENT CONTROL. 4 degree credits, \$74.
Responsibility accounting; transfer pricing problems; capital budgeting; management control systems. Cases covering both profit and not for profit organizations. **Must be taken A-N.** (Prereq 3220. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 **Th**—8:15-9:55, BlegH 335

★Acct 5310 A series of courses designed for students interested in post-baccalaureate studies in taxation are planned for 1977-78. For information concerning registration and special course fees, call 373-3599.

adult psychiatry (AdPy)

(Your attention is called to the Adult Psychiatry Certificate, page 387)

TRAINING PROGRAM FOR MENTAL HEALTH WORKERS

The first course, **★AdPy 0101C**, will be offered Fall Quarter for 3 certificate credits. Tuition is \$62. The course is designed to provide students with an understanding of human growth and behavior in a continuum that ranges from normal to abnormal, and to survey the latest trends in the mental health movement. Formal presentations will be followed by small-group experience. (Prereq #. Limited to 75 students)

The second course, **★AdPy 0102C**, will be offered Winter Quarter for 3 certificate credits. Tuition is \$62. The course is designed to survey various psychological frameworks that can be utilized in working with groups and families. Formal presentations will be followed by small-group experience. (Prereq 0101C or #. Limited to 75 students)

The third course, **★AdPy 0103C**, will be offered Spring Quarter for 3 certificate credits. Tuition is \$62. The course is designed to provide students with an introduction to a variety of theories of psychotherapy, such as Gestalt theory, transactional analysis, Bioenergetics, etc., and to the ways in which these may be applied to clinical practice. Formal presentations will be followed by small-group experience. (Prereq 0102C or #. Limited to 75 students)

The classes will be held Wednesday afternoons from 4 to 6:30 p.m. at Metropolitan Medical Center.

Registration forms are available **only** through the Department of Continuing Education in Social Work, 338 Nolte Center for Continuing Education, University of Minnesota, 315 Pillsbury Drive S.E., Minneapolis MN 55455. To obtain registration forms, or any further registration information, write to the above address or call Jan Johnson at 373-5831.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

aerospace engineering and mechanics (AEM)

(See also Professional Development Recognition Program in Engineering and Science, page 130)

Stewart E. Almleaf, Ground School Director, Commercial Pilot—Single and Multiengine Land, Single Engine Sea, Instrument Rating, Gold Seal Flight Instructor—Airplanes and Instrument, and Advanced Ground Instructor

Gordon S. Beavers, Professor of Aerospace Engineering and Mechanics

Michael G. Bohn, Chief Flight Instructor

William L. Garrard, Associate Professor of Aerospace Engineering and Mechanics

ground school courses for air pilots— general information

The University Ground School course is designed to provide the ground instruction required by the Federal Aviation Administration prior to taking the Private Pilot written test. It will also assist the student pilot in preparation for the oral examination for private pilot certification.

The Ground School meets all requirements of, and is certified by, the F.A. A. as an Approved Basic and Advanced Ground School, and offers to its students all of the privileges extended by the F.A.A. to such approved schools.

It is to the flight student's advantage to complete the Ground School studies and F.A.A. written examinations as early as possible in his or her flight-training program, as there is a two-year limit, following the completion of an F.A.A. written examination, within which the related flight instruction and flight test must be completed.

***AEM 3009 BASIC GROUND SCHOOL FOR PRIVATE PILOTS.** 5 degree credits. \$87.50
No-credit registration (\$50) may be made at Anoka County Airport for courses held there.

The course covers air navigation, radio aids, meteorology, flight theory, analysis of flight maneuvers, aircraft and engine operation. Federal Aviation regulations, aircraft flight instruments, and other subjects pertaining to safe, efficient, and economical operation of aircraft.

Open to all pilots and prospective pilots, regardless of their educational or flight-experience background. Designed primarily to prepare for the Federal Aviation Agency's written and oral examinations for certification as a Private Pilot.

The Aerospace Engineering and Mechanics Department awards 5 degree credits by petition to students who have satisfactorily completed the course, and who have also received 3 hours of certified dual flight instruction from any certified flight instructor at any airport and at any time. Evidence to substantiate this flight instruction should be submitted to the ground school instructor in the form of a pilot's log book or flight school invoices. (No prereq. Limited to 50 students)

Fall Qtr	Sec 1	TTh —7-9:40, Aero 209, Almleaf
	Sec 2	TTh —6:30-9, University Flight Facilities, Anoka County Airport, 2289 County Rd J; Bohn
Winter Qtr	Sec 3	TTh —7-9:40, Aero 209, Almleaf
	Sec 4	TTh —6:30-9, University Flight Facilities, Anoka County Airport, 2289 County Rd J; Bohn
Spring Qtr	Sec 5	TTh —7-9:40, Aero 209, Almleaf
	Sec 6	TTh —6:30-9, University Flight Facilities, Anoka County Airport, 2289 County Rd J; Bohn

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

AEM 1015 STATICS. 4 degree credits, §1011. \$66.

Force and moment vectors; resultants. Principles of statics. Application to simple trusses, frames and machines. Distributed loads. Hydrostatics. Properties of Areas. Laws of friction. (Prereq Phys 1271, Math 1231)

Fall Qtr Sec 1 **M**—6-9:20, Aero 225, Beavers.

AEM 3036 DYNAMICS. 4 degree credits, \$70.

Review of particle dynamics. Mechanical systems and the rigid-body model. Kinematics and dynamics of plane systems. (Prereq 1011 or 1015, ¶Math 3221)

Spring Qtr Sec 1 **M**—6-9:20, MechE 108, Garrard

afro-american studies (Afro)

(See also Geog 3141, Africa; Anth 5241, Peoples and Cultures of Africa; Hist 1431, 1432, 1433, History of Africa)

Charles A. Pike, Instructor in Afro-American Studies

Anita Tucker, Assistant Professor of Afro-American Studies

John Ward, Professor of Afro-American Studies

Afro 3061, 3062 THE BLACK FAMILY. 4 degree credits, \$70 each quarter. (◆\$35)

3061: Historic overview of the Black family up to the present.

3062: The contemporary Black family. (No prereq)

Fall Qtr 3061 Sec 1 **W**—6:20-8:50, BlegH 350, Tucker

Winter Qtr 3062 Sec 2 **W**—6:20-8:50, BlegH 430, Tucker

Afro 3021 AN INTRODUCTION TO AFRICAN STUDIES. 4 credits, \$70. (◆\$35)

An introduction to the central social, political, economic and cultural issues of contemporary Africa. (No prereq)

Fall Qtr Sec 1 **M**—6:20-8:50, BlegH 105, Pike

Afro 5001 LAW AND SOCIETY, A MINORITY POINT OF VIEW. 5 degree credits, \$92.50. (◆\$46.25)

Afro-American history from the point of view of American constitutional development as it relates to the American Black community. Special emphasis on legal problems related to school desegregation. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—6:20-9:30, BlegH 105, Ward



agriculture, college of

See course listings for:

AGRICULTURAL AND APPLIED ECONOMICS
AGRONOMY AND PLANT GENETICS
ENTOMOLOGY, FISHERIES, AND WILDLIFE
FOOD SCIENCE AND NUTRITION
HORTICULTURAL SCIENCE
SOIL SCIENCE
PLANT PATHOLOGY

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

COLLEGE OF AGRICULTURE PROFESSIONAL EXPERIENCE PROGRAM

Juniors and seniors enrolled in College of Agriculture programs may participate in the Professional Experience Program (PEP). Preliminary planning to enter the program must be completed the quarter prior to entering the program.

PEP is designed so students may experience real life work for 12 weeks during fall, winter, spring, or summer quarter. A maximum of six credits will be awarded to those who satisfactorily complete the program. Generally students will be salaried by cooperating firms and agencies. Registration for the program is through the Department of Extension Classes with a maximum \$130 fee per student.

Additional information about PEP is available from the College of Agriculture office, 227 Coffey Hall on the St. Paul campus (373-0924), or from departmental offices and undergraduate advisers of the college.

agricultural and applied economics (AgEc)

Reynold P. Dahl, Professor of Agricultural and Applied Economics

Vernon R. Eidman, Professor of Agricultural and Applied Economics

Jerome Hammond, Professor of Agricultural and Applied Economics

AgEc 1400 AGRICULTURAL MARKETS AND PRICES. 4 degree credits, \$66. (IS)

Economics of agricultural marketing; factors determining prices and price trends of agricultural commodities, the demand for and supply of agricultural products, and the study of food and fiber market organization. (Prereq 1030 or Econ 1002 or #)

Fall Qtr Sec 1 M—6-8:30, ClaOff B25, StP Campus

★AgEc 3820 FARM MANAGEMENT ECONOMIES. 4 degree credits, \$70.

Use of cost production theory in farm management; nature and process of management. (Prereq 1030 or Econ 1002 or #. Limited to 40 students)

Spring Qtr Sec 1 T—7-9:30, ClaOff B25, StP Campus, Eidman

★AgEc 5480 COMMODITY MARKETS AND FUTURES TRADING. 4 undergraduate degree credits, \$74. (3 graduate degree credits, \$55.50).

Economics of cash and futures trading on organized markets; futures trading theory; hedging and speculation. (Prereq 1400 or #. Limited to 40 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—7-9:30, ClaOff B25, StP Campus, Dahl

agricultural education

(See Vocational and Technical Education)

agronomy and plant genetics (Agro)

Vernon B. Cardwell, Associate Professor of Agronomy and Plant Genetics

Agro 1010 PRINCIPLES OF AGRONOMY. 4 degree credits, \$66.

Principles and practices related to productivity and management of field crops. Emphasis on crop adaptation, selecting a variety, seeds and seeding, tillage, growth

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

and development, weed control, maturation, harvest and storage. Discussions will emphasize corn, soybeans and small grain production with lesser emphasis on forages. Lectures, discussion and references reading. (No prereq)

Fall Qtr Sec 1 M—6-9:20, Agr 202, StP Campus, Cardwell

air pollution

(See Public Health)

american indian studies (Amln)

(See also GC 1221, Minnesota History; Anth 3211, Indians of North America)

Chris Cavender, Assistant Professor of American Indian Studies

Larry Leventhal, Lecturer in American Indian Studies

Ed Wapp, Instructor in American Indian Studies

Amln 1771 INTRODUCTION TO AMERICAN INDIAN STUDIES. 4 degree credits, \$66.
(◆\$33)



Content, methods, and objectives of American Indian studies. Images of the American Indian, persistence of and change in American Indian communities, linguistics and literature, and tribal ethnohistories. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Ojibwe and Dakota [see page 354])

Fall Qtr Sec 1 T—6:20-8:50, BlegH 115

Amln 3111 AMERICAN INDIAN HISTORY: ANTIQUITY TO 1887. 4 degree credits, \$70.
(◆\$35)



Lifestyles of tribal groups and their survival as distinct cultural entities throughout colonization. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Ojibwe and Dakota [see page 354])

Winter Qtr Sec 1 T—6:20-8:50, BlegH 115

Amln 3112 AMERICAN INDIAN HISTORY: 1887 TO PRESENT. 4 degree credits, \$70.
(◆\$35)



Impact of federal Indian policy on American Indian tribes. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Ojibwe and Dakota [see page 354])

Spring Qtr Sec 1 T—6:20-8:50, BlegH 115

american studies (AmSt)

(Courses meet same distribution requirements as College of Liberal Arts, Humanities)

(See also Classics, Humanities, History, General College, and Informal Courses)

William H. Agee, Lecturer in American Studies

James Davidson, Instructor in American Studies

A MAJOR IN AMERICAN STUDIES CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered every two years. Interested students should discuss plans with an Extension counselor (373-3905).

B. A. Major Sequence

Required Preparatory Courses

12 credits from 1101, 1102, 1103, 3111, 3112, 3113

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Major Requirements

The major is offered under interdepartmental major provisions

44 credits in adviser-approved courses, 8 to 12 in each of four fields: American history, American literature, American art and philosophy, social sciences in the United States (courses in participating departments accepted for the degree are listed in the bulletin Program in American Studies and in the annually revised list of approved courses)

3301-3302

12 credits in courses dealing with foreign civilizations chosen in consultation with adviser.

You need not be majoring in American Studies to register for these classes.

AmSt 1101 AMERICAN LIFE. 4 degree credits, \$3111. \$66. (◆\$33)(IS)

Individualism and the American Dream. Readings of varying length from a variety of authors, including Franklin, Tocqueville, Emerson, Thoreau, Whitman, Lewis, Farrell, and Fitzgerald. Industrial and union folk songs. Social obligations and the problem of conformity. (No prereq. Meets concurrently with 3111)

Fall Qtr Sec 1 **T**—7-9:30, Richfield HS 241, Agee

Sec 2 **Th**—6:30-9, LindH 203, Agee

Spring Qtr Sec 3 **W**—6:30-9, LindH 203, Agee

Sec 4 **T**—7-9:30, Ramsey HS 250, Roseville

AmSt 1102 AMERICAN LIFE. 4 degree credits, \$3112. \$66. (◆\$33)(IS)

Religion in an increasingly secular American society, from Puritanism to the present. Readings of varying length from Edwards, Hawthorne, Paine, Jefferson, Melville, William James, Eliot, Niebuhr, Tillich, and others. Studies of American religious utopias; the conflict between science and religion; the social gospel; the "Honest to God" controversies; the "new morality". (No prereq. Meets concurrently with 3112)

Fall Qtr Sec 1 **W**—6:30-9, LindH 203, Agee

Winter Qtr Sec 2 **T**—7-9:30, Richfield HS 241, Agee

Sec 3 **Th**—6:30-9, LindH 203, Agee

AmSt 1103 AMERICAN LIFE. 4 degree credits, \$3113. \$66. (◆\$33)

Two topics are investigated: (a) American attitudes toward the environment (nature, the city, and the machine). Readings from Jefferson, Crèvecoeur, Mark Twain, and Poole. The natural and urban-technological landscapes in painting. The rise of the skyscraper. The architecture of Frank Lloyd Wright. (b) Abraham Lincoln: the man and the national symbol. National crisis of the Civil War. Views of Lincoln and the crisis found in painting, still photography, motion picture, poetry, and prose. (No prereq. Meets concurrently with 3113)

Fall Qtr Sec 1 **Th**—7-9:30, Woodbury JHS

Winter Qtr Sec 2 **W**—6:30-9, LindH 203, Agee

Spring Qtr Sec 3 **T**—7-9:30, Richfield HS 241, Agee

Sec 4 **Th**—6:30-9, LindH 203, Agee

AmSt 3111 INTRODUCTION TO AMERICAN CIVILIZATION. 4 degree credits, \$1101. \$70.

See course description for AmSt 1101. (Additional work required for 3111) (No prereq. Meets concurrently with 1101)

Fall Qtr Sec 1 **T**—7-9:30, Richfield HS 241, Agee

Sec 2 **Th**—6:30-9, LindH 203, Agee

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Spring Qtr Sec 3 **W**—6:30-9, LindH 203, Agee
 Sec 4 **T**—7-9:30, Ramsey HS 250, Roseville

AmSt 3112 INTRODUCTION TO AMERICAN CIVILIZATION. 4 degree credits, \$1102.
 \$70.

See description for AmSt 1102. (Additional work required for 3112.) (No prereq.
 Meets concurrently with 1102)

Fall Qtr Sec 1 **W**—6:30-9, LindH 203, Agee
Winter Qtr Sec 2 **T**—7-9:30, Richfield HS 241, Agee
 Sec 3 **Th**—6:30-9, LindH 203, Agee

AmSt 3113 INTRODUCTION TO AMERICAN CIVILIZATION. 4 degree credits, \$1103.
 \$70.

See course description for AmSt 1103. (Additional work required for 3113). (No
 prereq. Meets concurrently with 1103)

Fall Qtr Sec 1 **Th**—7-9:30, Woodbury JHS
Winter Qtr Sec 2 **W**—6:30-9, LindH 203, Agee
Spring Qtr Sec 3 **T**—7-9:30, Richfield HS 241, Agee
 Sec 4 **Th**—6:30-9, LindH 203, Agee

Topics courses in American Studies may be taken at the 1920 or 3920 level. Students
 registering for 3920 should expect to do additional work. Topics courses may be repeated, but
 no more than 12 credits may be applied toward graduation.

AmSt 1920 or 3920 TOPICS: MOVIES AND THE AMERICAN EXPERIENCE. 4 degree
 credits, \$66 plus \$5 special fee (total \$71) for 1920; \$70 plus \$5 special fee (total
 \$75) for 3920.

Significant American movies as both a developing art form and an index of social and
 cultural change. Lecture and discussion topics include individualism, male and
 female roles, comedy, censorship, and business history. The films tentatively sched-
 uled include Sept 29, *Birth of a Nation*; Oct. 6, *College* (Keaton) and *The Freshman*
 (Lloyd); Oct. 13, *Modern Times*; Oct. 20, *Citizen Kane*; Oct. 27, *The Big Sleep*; Nov.
 3, *Wagonmaster* (Ford); Nov. 10, *Adam's Rib*; Nov. 17, *North by Northwest* (Hitch-
 cock); Nov. 24, Thanksgiving (no film); Dec. 1, *Bonnie and Clyde*. Films are free on a
 space-available basis, and are shown Thursdays, 7:30 p.m., NH Aud. (No prereq)

Fall Qtr Sec 1 **M**—6:20-8:50, NH 122, Davidson

(See other film courses in German, Scandinavian Languages, General College, and Informal
 Courses)

anatomy (Anat)

(See also Biology; Physical Medicine and Rehabilitation; and Physiology)

James F. Pohilla, Associate Professor of Anatomy
Rafi Younoszai, Assistant Professor of Anatomy

★**Anat 0058 ANATOMY OF THE EXTREMITIES.** No credit. \$49.50 plus \$8 course fee. Total
 \$57.50.

A review of the gross anatomy of the joint structures, muscular, peripheral nervous
 and circulatory systems. Lecture and laboratory will include demonstration and

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

review of the dissected human body, **Must be taken S-N.** (Prereq registered physical therapist or occupational therapist. Limited to 30 students)

Fall Qtr Sec 1 **W**—6:20-9, ChRC 208, Pohtilla

Anat 1001 ANATOMY AND HATHA YOGA. 4 degree credits. **To be offered 1978-79.**

★**Anat 1004 ELEMENTARY ANATOMY.** 4 degree credits, \$66.

A general survey of human anatomy, including histology, embryology, gross anatomy, and neuroanatomy, with some clinical and physiological correlations. (Prereq 1 quarter of college biology. Limited to 40 students)

Fall Sem Sec 1 **Th**—6:20-9:40, HSUnitA 2-520, 2-585, Younoszai

anthropology (Anth)

(See also General College courses in social and behavioral sciences, and natural science; WoSt 3910, The Mother-Centered Family—An Anthropological Perspective)

Yolanda A. Raffo de Dewar, Assistant Professor of Anthropology

Christina Harrison, Assistant Professor of Anthropology

William L. Rowe, Professor of Anthropology

Robert F. Spencer, Professor of Anthropology

David Sperry, Associate Professor of Anthropology

MOST COURSES NEEDED FOR A MAJOR IN ANTHROPOLOGY CAN BE COMPLETED IN THE EVENING.

Interested students should discuss plans with an Extension counselor (373-3905).

B.A. Major Sequence for those beginning an Anthropology major

Students who have declared anthropology as a major and have a junior or senior standing should see an Extension counselor.

Required Preparatory Courses

1101, 1102

Major Requirements

Minimum of seven 3xxx-5xxx-level courses to include: Group I: 5 cr in method, theory and technique courses (32xx, 33xx, or 53xx) Group II: 5 cr in archaeology (55xx), 5 cr in ethnography (32xx or 52xx) 20 cr of topics courses from any group. Anth 3211 and 5511 are open to sophomores with grades of C or higher in 1102.

You need not be majoring in Anthropology to register for these classes.

Anth 1101 INTRODUCTION TO PREHISTORY. 5 degree credits, \$82.50. (◆\$41.25)

◆ Introduction to world prehistory as investigated by archaeologists; the basic methods and concepts employed by archaeologists in the study of prehistoric human biological and cultural development. (No prereq)

Fall Qtr Sec 1 **T**—6:20-9:30, ForH 55, Harrison

Anth 1102 INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY. 5 degree credits, \$82.50. (◆\$41.25)

◆ Varieties and range of human behavior as revealed through comparative study of cultures in all parts of the world. (No prereq)

Fall Qtr ★Sec 1 **W**—6:20-9:30, Sandburg JHS 204, Golden Valley;
Rowe (Limit 35 students)

Winter Qtr Sec 2 **M**—6:20-9:30, ForH 160

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Anth 3211 INDIANS OF NORTH AMERICA. 5 degree credits, \$87.50. (◆\$43.75) (IS)

Aboriginal cultures of native North America. Effects of culture contact. Contemporary problems of Indian reservations and communities. (Prereq 1102 or #. May be applied toward the CLA foreign language requirement, Route II for Ojibwe and Dakota [see page 354])

Spring Qtr Sec 1 T—6:20-9:30, ForH 120, Spencer

Anth 5141 CULTURE AND PERSONALITY. 5 degree credits, \$92.50. (◆\$46.25) (IS)

Role of culture in formation of personality. Problems of individual adjustments to demands of culture. Psychological approach to culture. (Prereq 1102 or 3502 or # waived for majors in public health, nursing, psychology, sociology, and social work. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6:20-9:30, ForH 160, Rowe

Anth 5161 LANGUAGE AND CULTURE. 5 degree credits, \$92.50. (◆\$46.25)

Relation of language to behavior; languages as systems of thought, logic, and orientation and their impacts on cultures; analysis of selected linguistic and cultural systems; glottochronology. (Prereq 1102 or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6:20-9:30, ForH 160, Dewar

(See also Linguistics)

Anth 5241 PEOPLES AND CULTURES OF AFRICA. 5 degree credits, \$92.50. (◆\$46.25)

Describes, analyzes, and compares key aspects of society, culture, and ecological adaptation of representative peoples in Africa, south of the Sahara. Social, economic, political, and religious systems, aesthetic expression. Theoretical problems in African anthropology. (Prereq 1102 or #. May be applied toward the CLA foreign language requirement, Rt II for Swahili [see page 354]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 Th—6:20-9:30, ForH 160, Sperry

arabic

(See Near and Middle Eastern Studies, page 251)

archaeology

(See Anthropology and Classics)

architecture (Arch)

(See also Landscape Architecture; Art History; Informal Courses)

Robert E. Dedrich, Lecturer in Architecture and Landscape Architecture

Samuel Heins, Lecturer in Architecture

Craig Rafferty, Assistant Professor of Architecture

Robert Russek, Instructor in Architecture

George Winterowd, Professor of Architecture

Jeri Zuber, Assistant Professor of Architecture

A MAJOR IN ARCHITECTURE CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered every three years. Interested students should discuss plans with an Extension counselor (373-3905).

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

B.A. Major Sequence

Required Preparatory Courses

Phys 1014-1024, 1015-1025 or 1031-1032 or 1121-1122; Math 1211-1221-1231; ArtS 1107, 1108, 1109 or 1101, 1102; Arch 1021-1022-1023.

Major Requirements

Arch 3081-3082-3083, 3091-3092-3093

Three courses chosen from 5051, 5052, 5053, 5054, 5055, 5056

Curriculum Alternatives—The 4-year CLA program, leading to a B.A., is primarily preprofessional training for admission to the Institute of Technology for 2 additional years of work toward the professional degree, bachelor of architecture, or 3 additional years of work for the master of architecture. Students who intend to seek professional degrees should include AEM 3092-3093,** ArtS 3140, and CE 3600-3601.** Also desirable are Arch 3061-3062** and 3064-3065.** Students wishing a degree of specialization in environmental design should take Arch 1001, 1002, 1003.

**These courses do not carry CLA credit.

The Institute of Technology Bulletin lists requirements for the B. Arch. degree; the Graduate School Bulletin lists those for the M.Arch.

You need not be majoring in Architecture to register for these classes.

IC 0141 ART AND ARCHITECTURE OF THE JEWISH PEOPLE. No credit. Chiat.

(See Informal Courses, page 212)

IC 0511 ALTERNATIVE ENERGY RESOURCES (housing). No credit.

(See Informal Courses, page 218)

Arch 1021 HISTORY OF ENVIRONMENTAL DEVELOPMENT: ARCHITECTURE. 4 degree credits, §LA 1021. \$66 plus \$4 course fee. Total \$70. (◆\$33 plus \$4 course fee. Total \$37)

An introduction to architecture, the philosophy and principles of architecture as an art, a survey of architectural history with emphasis upon the development of contemporary architecture from its roots in the 19th century until the present time. (No prereq. 1021 is a prereq for the architectural history sequence, 5051 through 5056. May be used as a refresher course for the State Board Examination)

Fall Qtr Sec 1 **T**—6:20-8:50, Arch 10

Winter Qtr Sec 2 **T**—6:20-8:50, Arch 25

Spring Qtr Sec 3 **Th**—6:20-8:50, Minnetonka HS 119

Arch 1023 HISTORY OF ENVIRONMENTAL DEVELOPMENT: PLANNING. 4 degree credits. **Tentatively scheduled for 1978-79.**

★Arch 1041-1042-1043 ART FOR ARCHITECTURE STUDENTS. 2 degree credits each quarter, \$33 each quarter.

Freehand drawing. Emphasis on development of accurate delineation. Various techniques and media are employed. (No prereq. Limited to 30 students)

Fall Qtr 1041 Sec 1 **W**—6:20-8:50, Arch 10, Russek

Winter Qtr 1042 Sec 2 **W**—6:20-8:50, Arch 10, Russek

Spring Qtr 1043 Sec 3 **W**—6:20-8:50, Arch 10, Russek

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★Arch 3081-3082-3083 **ARCHITECTURAL DESIGN.** 6 degree credits each quarter, \$105 plus \$10 course fee. Total \$115 each quarter.

Basic exercises in composition of line, form, proportion, color, and texture. Elements of architectural design. Architectural drawing; model making; design process. (Prereq second year for I of T and CLA students for 3081; 3081 for 3082; 3082 for 3083. Courses meet concurrently and with 3091, 3092, 3093. Limited to 60 students).

Fall Qtr	3081	Sec 1	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
	3082	Sec 2	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
	3083	Sec 3	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
Winter Qtr	3081	Sec 4	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
	3082	Sec 5	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
	3083	Sec 6	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
Spring Qtr	3082	Sec 7	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
	3083	Sec 8	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10

★Arch 3091-3092-3093 **ARCHITECTURAL DESIGN.** 6 degree credits each quarter, \$105 plus \$10 course fee. Total \$115 each quarter.

Development of structures as an integral part of design; site planning. (Prereq 3083 for 3091; 3091 for 3092; 3092 for 3093. Courses meet concurrently and with 3081, 3082, 3083. Limited to 60 students.)

Fall Qtr	3091	Sec 1	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
	3092	Sec 2	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
	3093	Sec 3	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
Winter Qtr	3091	Sec 4	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
	3092	Sec 5	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
	3093	Sec 6	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
Spring Qtr	3091	Sec 7	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
	3092	Sec 8	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10
	3093	Sec 9	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 10

Arch 5053 **GOTHIC ARCHITECTURE.** 4 degree credits. **To be offered 1978-79.**

Arch 5055 **ENGLISH AND EARLY AMERICAN ARCHITECTURE.** 4 degree credits, \$74 plus \$4 course fee. Total \$78. (◆\$37 plus \$4 course fee. Total \$41)

◆ Pre-Columbian civilizations and development of architecture and urban design in America and England from 1500 until 1800. (Prereq 1021. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-8:50, Arch 25, Winterowd

Arch 5056 **MODERN ARCHITECTURE.** 4 degree credits. **To be offered 1978-79.**

Arch 5127-5128-5129 **LAW FOR ARCHITECTS.** 4 degree credits each quarter, \$74 each quarter.

A systematic study of legal subject matter relevant to the work of architects and design professionals. (Prereq 3093 or # for 5127; 5127 or # for 5128; 5128 or # for 5129. 5127 and 5128, 2 lecture hours a week; 5129, 2 seminar hours a week plus research. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

new

Fall Qtr 5127 Sec 1 **T**—5:15-7, Arch 35, Heins

Winter Qtr 5128 Sec 2 **T**—5:15-7, Arch 35, Heins

Spring Qtr 5129★Sec 3 **T**—5:15-7, Arch 35, Heins (Limit 25 students)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Arch 5970 DIRECTED STUDY. Credits arranged. \$18.50 a credit. Subject matter arranged.

Areas of study useful to individual program objectives not available in regular course offerings. Independent study in Architecture through foreign travel programs may be arranged. Qualified students may register for graduate credit at the University of Minnesota. Contact Prof. George Winterowd, 110c Arch, University of Minnesota, Minneapolis, Minnesota 55455 (373-2198).

art education (ArEd)

(Department of Curriculum and Instruction)

Michael Day, Associate Professor and Program Head in Art Education

George K. Olson, Assistant Professor of Art Education

Anna Smits, Instructor in Art Education

RESTRICTION IN ART EDUCATION CLASSES

A student who does not attend the first class session will, at the instructor's discretion, not be allowed to continue. If it is not possible to attend the first class session, the student should contact the instructor in advance (or the Art Education office at 373-4050) to make necessary arrangements to hold a place in class.

★ArEd 3009 **WEAVING WITHOUT A LOOM.** 4 degree credits, \$70.

Developing fundamental weaving skills employing inexpensive equipment and techniques without use of the floor loom. **May not be taken S-N.** (No prereq. Limited to 24 students. See restriction statement above)

Fall Qtr Sec 1 T—6:20-8:50, WuH 340, Smits

Winter Qtr Sec 2 T—6:20-8:50, WuH 340, Smits

Spring Qtr Sec 3 T—6:20-8:50, WuH 340, Smits

★ArEd 3010 **INTRODUCTION TO WEAVING.** 3 degree credits, \$52.50 plus \$5 course fee. Total \$57.50.

Equipment, design, setting up and operation of floor and table looms. **May not be taken S-N.** (No prereq. Limited to 16 students. See restriction statement above)

Fall Qtr Sec 1 Sa—9-11:30, WuH 340, Smits

Spring Qtr Sec 2 Th—6:20-8:50, WuH 340, Smits

(See also IC 0162, Introduction to Weaving)

★ArEd 3030 **PUPPETRY.** 3 degree credits, \$52.50.

Construction, manipulation, and stage technique for basic puppet types. **May not be taken S-N.** (No prereq. Limited to 30 students. See restriction statement above)

Fall Qtr Sec 1 Th—6:20-8:50, WuH 220, Olson

★ArEd 5001 **ART MEDIA TECHNIQUES.** 3 degree credits this offering (maximum 12 cr) \$55.50, plus \$2 course fee. Total \$57.50 each quarter.

Lectures, demonstrations, discussions, critique sessions, exploring and learning various techniques and processes in creativity; handling specific media with each offering focusing on a single topic. **May not be taken S-N. This offering will focus on art appreciation with emphasis on responding to art and fostering art appreciation in children.** (No prereq. Limited to 30 students. See restriction statement above. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 Th—6:20-8:50, WuH 240, Day

★ArEd 5001 **ART MEDIA TECHNIQUES.** 3 degree credits (maximum 12 cr) \$55.50 plus \$2 course fee each quarter. Total \$57.50 each quarter.

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Lectures, demonstrations, discussions, critique sessions, exploring and learning various techniques and processes in creativity; handling specific media with each offering focusing on a single topic. **May not be taken S-N. This offering will focus on children's artistic development** and is intended for parents and teachers. (No prereq. Limited to 30 students. See restriction statement above. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 2 **Th**—6:20-8:50, WuH 240, Day

workshops in art education

A variety of topics in art education is available to teachers throughout the state. Many of these are offered as two or three-day workshops—ArEd 5001 ART MEDIA TECHNIQUES—focusing on a variety of topics. Topics such as the following will be offered through this course: printmaking, weaving, stitchery, photography, painting, book-binding, jewelry making. The course will be set up for any group on request. For further information call or write Huldah Curl, Continuing Education in Art, 322 Wesbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455; telephone 373-5147.

art history (ArthH)

(See also IC 0141, Art and Architecture of the Jewish People)

Frederick M. Asher, Associate Professor of Art History
Frederick Cooper, Associate Professor of Art History
William D. Coulson, Assistant Professor of Classics
Sheila McNally, Professor of Art History
Marion Nelson, Professor of Art History
Robert Poor, Associate Professor of Art History
Herbert G. Scherer, Assistant Professor and Librarian in Art Library
John Steyaert, Assistant Professor of Art History
M. Alison Stones, Associate Professor of Art History
Michael Stoughton, Assistant Professor of Art History
Donald R. Torbert, Professor of Art History
Melvin Waldfoegel, Professor of Art History

A MAJOR IN ART HISTORY CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are usually offered each year. Interested students should discuss plans with an Extension counselor (373-3905).

B.A. Major Sequence

Required Preparatory Courses

4 cr art practice (consult undergraduate studies director); 5 qtrs or equiv in a foreign language (Route II does not satisfy this requirement)

Major Requirements

3008, 3009, 3011, 3012, 5 additional art history courses, of which no more than 3 can be at the 5xxx-level

You need not be majoring in Art History to register for these classes.

Arth 1001 INTRODUCTION TO THE VISUAL ARTS. 4 degree credits, \$3001. \$66 plus \$3 course fee. Total \$69. (◆\$33 plus \$3 course fee. Total \$36.)

A comprehensive survey of the main problems of meaning, form, and style in the visual arts (architecture, sculpture, painting, and graphic arts, and photography) of the various cultures and periods. The course attempts to enable students to interpret

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

works of art critically by relating them to their geographic, historical, and social origins, and by placing them within the proper phases in the evolution of art. The course touches on the main periods of art history, and is designed to familiarize students with the critical and technical vocabulary used in the literature of art. (No prereq. Meets concurrently with 3001)

Fall Qtr Sec 1 T—6:20-8:50, Arch 25, McNally

Winter Qtr Sec 2 W—6:20-8:50, Arch 25, McNally

Spring Qtr Sec 3 T—6:20-8:50, Arch 25, Torbert

(See also Phil 3502, Introduction to Aesthetics; Architecture; General College)

ArH 1015 ART IN WESTERN CIVILIZATION. 4 degree credits. \$66 plus \$3 course fee. Total \$69. (◆\$33 plus \$3 course fee. Total \$36)(IS)

◆ Selected major themes within the broad context of Western culture. Introduction to arts of the Western world but not an inclusive historical survey. Course includes Sir Kenneth Clark's series of 13 hour-length films entitled **Civilisation**. (No prereq.)

Fall Qtr Sec 1 W—6:20-8:50, Arch 25, Waldfoegel

★**ArH 1016 INTRODUCTION TO ASIAN ART.** 4 degree credits, \$66 plus \$3 course fee. Total \$69. (◆\$33 plus \$3 course fee. Total \$36)

◆ Selected major themes of Indian and Far Eastern art. Introduction, not an inclusive historical survey. (No prereq. Limited to 60 students.)

Winter Qtr Sec 1 Th—6:30-9, Mpls Institute of Arts, room 305, 2400 S 3 Ave, Asher

ArH 3001 INTRODUCTION TO THE VISUAL ARTS. 4 degree credits, \$1001. \$70 plus \$3 course fee. Total \$73.

See course description for ArH 1001. (No prereq. Meets concurrently with 1001)

Fall Qtr Sec 1 T—6:20-8:50, Arch 25, McNally

Winter Qtr Sec 2 W—6:20-8:50, Arch 25, McNally

Spring Qtr Sec 3 T—6:20-8:50, Arch 25, Torbert

ArH 3008 HISTORY OF ANCIENT ART. 4 degree credits, \$1008. \$70 plus \$3 course fee. Total \$73. (◆\$35 plus \$3 course fee. Total \$38.)

◆ The architecture, sculpture, and painting of selected early cultures, with particular stress on those contributing to the development of Western art. (No prereq)

Spring Qtr Sec 1 M—6:20-8:50, Jones 207B, Asher

ArH 3009 HISTORY OF MEDIEVAL ART. 4 degree credits, \$70 plus \$3 course fee. Total \$73. (◆\$35 plus \$3 course fee. Total \$38)

◆ Medieval architecture, painting, and sculpture from Early Christian to Gothic. (No prereq)

Winter Qtr Sec 1 M—6:20-8:50, Jones 207B, Steyaert

★**ArH 3011 HISTORY OF RENAISSANCE AND BAROQUE ART.** 4 degree credits, \$70 plus \$3 course fee. Total \$73. (◆\$35 plus \$3 course fee. Total \$38)

◆ The major monuments in architecture, sculpture, and painting from the early 14th century through the Baroque. The collections and galleries of the institute will be utilized. (No prereq. Limited to 60 students)

Spring Qtr Sec 1 Th—6:30-9, Mpls Institute of Arts, room 211, 2400 S 3 Ave, Stoughton

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

ArtH 3012 HISTORY OF 19TH- AND 20TH-CENTURY ART. 4 degree credits, \$70. (◆\$35)

Major monuments and concepts of the modern period: sculpture, architecture, painting, and prints. (No prereq)

Fall Qtr Sec 1 **Th**—6:20-8:50, Jones 207B, Cooper

ArtH 3303 BAROQUE AND ROCOCO PAINTING IN FRANCE. 4 degree credits, \$70 plus \$3 course fee. Total \$73. (◆\$35 plus \$3 course fee. Total \$38)

French painting of the 17th and first half of the 18th centuries. (No prereq. May be applied toward the CLA foreign language requirement, Rt II for French [see page XXX])

Winter Qtr Sec 1 **T**—6:20-8:50, Jones 207A, Stoughton

ArtH 3465 MASTER PAINTERS OF THE NINETEENTH CENTURY. 4 degree credits, \$70 plus \$3 course fee. Total \$73. (◆\$35 plus \$3 course fee. Total \$38)

European artists, selected for their originality, aesthetic excellence or subsequent influence; about twenty, including such major figures as Goya, Constable, Cezanne and Van Gogh. (No prereq)

Spring Qtr Sec 1 **W**—6:20-8:50, Arch 25, Waldfoegel

ArtH 3469 CONTEMPORARY ARTISTS ON ART. 4 degree credits, \$70. (◆\$35)

Theories, techniques and explications of modern art. Films showing contemporary artists and critics speaking of their work. (No prereq)

Spring Qtr Sec 1 **Th**—6:20-8:50, Jones 207A, Cooper

ArtH 5347 BAROQUE ART IN ENGLAND, FRANCE, AND LOWLANDS. 5 degree credits, \$92.50. (◆\$46.25)

French architecture, painting, and sculpture, Flemish and Dutch painting, and English painting and architecture of the 17th century. Major artists: Rembrandt, Rubens, Poussin, Jones. (Prereq 3011, grad or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6:20-8:50, Jones 207B, Stoughton

ArtH 5521 20TH-CENTURY ART IN THE UNITED STATES. 4 degree credits, \$74 plus \$3 course fee. Total \$77. (◆\$37 plus \$3 course fee. Total \$40)

Contemporary movements in American painting and sculpture beginning in early 20th century with the emergence of "The Eight" and the Armory Show, 1913. (Prereq 4 cr art history. Qualified students may register for graduate credit at the University of Minnesota.)

Winter Qtr Sec 1 **T**—6:20-8:50, Jones 207A, Cooper

artistic expression

(See General College)

art statewide

A variety of credit and non-credit courses and workshops in art are offered throughout the state. Examples are Advanced Painting, Painting for Amateurs, Sculpture in Wax and Clay, 20th Century Art, Survey of Oriental Arts, Weaving with a Backstrap Loom, Macrame, Stage Set Design, Good Design for Inexpensive Publications, and Woodblock Printmaking. Courses and workshops can be set up for an interested group on request. For further information call or write Huldah Curl, Director, Continuing Education in Art, 322 Wesbrook Hall, University of Minnesota, Minneapolis, Minnesota 55455; telephone 373-5147.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

arts, studio (ArtS)

(See also General College courses in artistic expression; and Phil 3502, Introduction to Aesthetics)

Guy Baldwin, Assistant Professor of Art
Karl Bethke, Professor of Art
Ralph Brown, Lecturer in Art
Peter Busa, Professor of Art
Victor Caglioti, Assistant Professor of Art
David L. Feinberg, Assistant Professor of Art
Gary Hallman, Associate Professor of Art
Raymond Hendler, Professor of Art
James Henkel, Assistant Professor of Art
David Husom, Lecturer in Art
Donald Jardine, Lecturer in Art
Henning Jensen, Lecturer in Art
David Johnson, Lecturer in Art
Frederick Klein, Lecturer in Art
Susan Lucey, Assistant Professor of Art
Malcolm Myers, Professor of Art
Wayne Potratz, Assistant Professor of Art
Zigmunds Priede, Professor of Art
Eleanor Quirt, Lecturer in Art
Judith Roode, Lecturer in Art
William Roode, Assistant Professor of Art
Thomas Rose, Assistant Professor of Art
Herman Rowan, Professor of Art
Herman Somberg, Associate Professor of Art
James Smith, Lecturer in Art
Sharon Stockwell, Lecturer in Art
Harry C. Webb, Lecturer in Photography

All Studio Arts classes will meet for the time period scheduled. Each credit demands, on the average, three hours a week of the student's time. Those students who wish to receive degree credits in these courses are required to do work outside of class commensurate with the class work. Unless otherwise indicated, students may register for any unit number of these sequences in any quarter or semester, provided units are satisfactorily completed in the order listed or the instructor's consent is obtained for registration in an advanced unit on the basis of background and ability.

NOTE: Students who find sections closed should examine the possibility of another course which may serve the same purpose. Advanced standing credit will be granted in special cases for work done elsewhere—consult the coordinator of undergraduate advising of the department; telephone 376-3219.

In addition to fees, some classes require additional supplies which students must provide.

A MAJOR IN STUDIO ARTS CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered yearly. Interested students should discuss plans with an Extension counselor (373-3905).

Appointments arranged with ArtS undergraduate adviser (for times other than 10 a.m.-2, M-F), room 204 Studio Art Bldg (376-3219).

Commercial art courses (CLA-approved line courses X2XX) may not apply to studio arts major requirements; may not apply to group distribution requirements; but may apply toward thirty 3XXX credits outside the studio arts major department.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

B.A. Major Sequence

Required Preparatory Courses:

One art history course at the 1xxx level, ArtS 1401, 1101, 1301, or 1302
12 cr from 1102, 1104, 1105, 1301 or 1302, 1510, 1520, 1701, 1801

Major Requirements

At least 28 cr in studio courses at 3xxx-5xxx levels
8 3xxx-5xxx-level art history cr

B.F.A. Major Sequence

This program, leading to a 4-year professional degree, offers high concentration in studio arts work. It is oriented toward professional work or admission to the M.F.A. program.

Admission—Usually limited to students with 3.00 average in studio arts courses. Applicants, either CLA or transfer, apply for admission no earlier than their final sophomore quarters. Applications are to be made on the form available at the Studio Arts or Humanities and Fine Arts offices. Admission will be based on a student's scholastic record, a portfolio or slides of his work, and the recommendations he offers. It is expected that transfer students will present at least 15 credits in beginning studio experience, or the equivalent, at application.

Accepted candidates are subject to review, and candidacy may be terminated if performance is unsatisfactory. In case of termination, a candidate may transfer to a B. A. program.

Required Preparatory Courses:

1401, 1101, 1104, 1105, 1301 or 1302, 1510 or 1520, 1701, 1801.
12 additional 1xxx-level studio arts elective cr
12 art history cr

Major Requirements

28 cr in one studio arts field of specialization.
24 additional 3xxx-5xxx-level studio arts elective cr (especially recommended: 5400)

You need not be majoring in Studio Arts to register for these courses.

RESTRICTIONS IN STUDIO ARTS CLASSES

1. Registration will not be accepted in any Studio Art class after the close of the registration period (as listed in the calendar) unless accompanied by instructor's permission.
2. A student who does not attend the first class session will, at the instructor's discretion, not be allowed to continue. If it is not possible to attend the first class, the student should call the instructor in advance (or Cindy Cribbs at 376-3219) to make necessary arrangements to hold a place in class. A student who does not make these arrangements must obtain a written verification of non-attendance (from the instructor) to be given a 100% tuition refund. Student must turn in this verification at 101 Wesbrook Hall by the end of the third week of the term.

ArtS 1401 INTRODUCTION TO STUDIO ART. See page 82.

★**ArtS 0001C COLOR PHOTOGRAPHY I.** 3 certificate credits, \$49.50 plus \$10 special fee.
Total \$59.50.

A foundation course in the growing field of color photography, designed to provide the student with practical knowledge and experience in basic color work. Course includes: (a) lecture demonstrations of equipment, color processes, and techniques;

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

and (b) supervised camera assignments in the studio and on outdoor field trips. Student must have camera. (No prereq. Limited to 30 students. See **Restrictions**, page 79)

Fall Sem Sec 1 T—6-7:40, AgEng 102, StP Campus, Webb
Sec 2 T—8:15-9:55, AgEng 102, StP Campus, Webb
Spring Sem Sec 3 T—6-7:40, AgEng 102, StP Campus, Webb

★**ArtS 0002C COLOR PHOTOGRAPHY II.** 3 certificate credits. **To be offered 1978-79.**

★**ArtS 0240C COMMERCIAL ILLUSTRATION II.** 4 certificate credits each quarter (maximum 12 cr). \$66 plus \$5 course fee. Total \$71 each quarter.

Further development of illustration skills with encouragement of individual directions, i.e. soft line/hard line illustration, fashion illustration, cartooning, portraiture, story, industrial packaging, etc. (Prereq 3231 or #. Limited to 25 students. See **Restrictions**, page 79)

Winter Qtr Sec 1 Th—6-9:45, ArtB 140, Smith

★**ArtS 0260C ADVERTISING DESIGN III.** 4 certificate credits each quarter (maximum 12 cr). \$66 plus \$5 course fee. Total \$71 each quarter.

Continued development of lay-out skills with emphasis on creative approaches to individual projects and ideas. Exposure to actual working conditions. Advertising psychology, consumer relations and business management. Orientation in agency, studio and corporation procedures. (Prereq 3252 or #. Limited to 25 students. See **Restrictions**, page 79)

Spring Qtr Sec 1 T—6-9:45, ArtB 140, Jensen

★**ArtS 0280C PORTFOLIO AND VISUAL PRESENTATION TECHNIQUES.** 4 certificate credits. **To be offered 1978-79.**

(See also 3-level commercial art courses)

★**ArtS 1101 BASIC DRAWING.** 4 degree credits, \$66 plus \$5 course fee. Total \$71.

An introduction to studio work; exploration of contemporary and traditional methods. Work from nature, various drawing and painting mediums. (No prereq. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 M—6-9:45, ArtB 140, Feinberg
Sec 2 T—6-9:45, Minnetonka HS 125, D. Johnson
Sec 3 T—6-9:45, Ramsey HS 112, Roseville; Stockwell
Sec 4 T—6-9:45, ArtB 140, Caglioti
Sec 5 T—6-9:45, ArtB 160, Roode J.
Sec 6 W—6-9:45, ArtB 140, Priede
Sec 7 Th—6-9:45, ArtB 160, Caglioti
Sec 8 Sa—8:30 a.m.-12:15, ArtB 151, Abbott

Winter Qtr Sec 9 M—6-9:45, ArtB 150, Hendler
Sec 10 T—6-9:45, Sandburg JHS 118, Golden Valley, Feinberg
Sec 11 T—6-9:45, ArtB 140, Caglioti
Sec 12 T—6-9:45, Woodbury JHS, Quirt
Sec 13 W—6-9:45, ArtB 140, Priede
Sec 14 Sa—8:30 a.m.-12:15, ArtB 151, Rowan

Spring Qtr Sec 15 T—6-9:45, Irondale HS 111, New Brighton; Quirt
Sec 16 M—6-9:45, ArtB 150, Somberg
Sec 17 T—6-9:45, ArtB 160, Caglioti

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Sec 18 **W**—6-9:45, ArtB 140, Priede
 Sec 19 **Th**—6-9:45, ArtB 150, Caglioti
 Sec 20 **Sa**—8:30 a.m.-12:15, ArtB 151, Abbott

★**ArtS 1102 DRAWING.** 4 degree credits, \$66 plus \$5 course fee. Total \$71.

Work from life and nature. Introduction to color and pictorial structure. (Prereq 1101. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 **T**—6-9:45, ArtB 151, Rowan
 Sec 2 **W**—6-9:45, ArtB 160, Abbott
Winter Qtr Sec 3 **T**—6-9:45, ArtB 160, Somberg
 Sec 4 **W**—6-9:45, ArtB 150, Somberg
Spring Qtr Sec 5 **T**—6-9:45, ArtB 150, Rowan
 Sec 6 **W**—6-9:45, ArtB 160, Somberg

★**ArtS 1104 COLOR.** 4 degree credits, \$66 plus \$5 course fee. Total \$71.

Introduction to color and pictorial organization. This will provide students with training in basic techniques preparatory to advanced courses in painting and print-making. (Prereq 1101. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 **W**—6-9:45, ArtB 161, Caglioti
 Sec 2 **Th**—6-9:45, ArtB 141, Bethke
Winter Qtr Sec 3 **W**—6-9:45, ArtB 161, Caglioti
 Sec 4 **Th**—6-9:45, ArtB 141, Bethke
Spring Qtr Sec 5 **W**—6-9:45, ArtB 161, Feinberg
 Sec 6 **Th**—6-9:45, ArtB 141, Bethke

★**ArtS 1105 BEGINNING PAINTING.** 4 degree credits, \$66 plus \$5 course fee. Total \$71.

Introductory course to painting medium. Studio work in various media from nature, still life, and other sources. Emphasis on individual expression and development. (Prereq 1104 or #. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 **M**—6-9:45, ArtB 151, Hendler
Spring Qtr Sec 2 **M**—6-9:45, ArtB 151, Hendler

★**ArtS 1201 INTRODUCTION TO COMMERCIAL ART.** 4 degree credits, \$66.

Scope of the field of commercial art, history and contemporary practices. Function of agencies, studios and corporations. Marketing, print and broadcast. Relationship to the business community and the consumer. Materials and terminology. Lectures, audio visual material. Approximately half the course time is spent on field trips. Not applicable to studio arts major requirements. (No prereq. Limited to 30 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 **T**—6-8, Willey 125, Klein
 Sec 2 **W**—6-8, Willey 125, Klein
Winter Qtr Sec 3 **T**—6-8, Willey 125, Klein
 Sec 4 **W**—6-8, Willey 125, Klein
Spring Qtr Sec 5 **W**—6-8, Willey 125, Klein

Your attention is called to the Commercial Art Certificate, page xxx.

★**ArtS 1301 BASIC SCULPTURE.** 4 degree credits, \$66 plus \$25 course fee. Total \$91.

Beginning course. Intensive study of structure with emphasis on form and space. Construction in metal and plaster. (No prereq. Limited to 25 students. See **Restrictions**, page 79)

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

Fall Qtr Sec 1 T—6-9:45, ArtB 65
Winter Qtr Sec 2 T—6-9:45, ArtB 65, Potratz
Spring Qtr Sec 3 T—6-9:45, ArtB 65

★**Arts 1302 BASIC SCULPTURE.** 4 degree credits, \$66 plus \$25 course fee. Total \$91.
Natural form is studied. Imaginative approaches are encouraged. Construction in clay, plaster, wood. Mold-making and casting. (No prereq. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 T—6-9:45, ArtB 50, Baldwin
Winter Qtr Sec 2 W—6-9:45, ArtB 50, Baldwin
Spring Qtr Sec 3 W—6-9:45, ArtB 50, Potratz

◆
Arts 1401 INTRODUCTION TO STUDIO ART. 4 degree credits, \$66. (◆\$33)
Introduces the student to the concerns, media, and environment of the practicing artist, and to the concepts of visual art making in its contemporary and historical context. Lectures, demonstrations, and discussions provide a broad aesthetic foundation for entering beginning Arts courses, and a thorough understanding of the creative process, visual expression, and aesthetic criteria. (No prereq)

Fall Qtr Sec 1 Th—6-8:30, Willey 125, Hendler
Winter Qtr Sec 2 Th—6-8:30, Willey 125, Hendler
Spring Qtr Sec 3 Th—6-8:30, Willey 125, Hendler

★**Arts 1510 INTAGLIO.** 4 degree credits each quarter (maximum 8 credits). \$66 plus \$20 course fee. Total \$86 each quarter.

Introduction to various techniques of etching and engraving employed in working on metal plates, as well as collagraphic techniques in creative context. (No prereq. Meets concurrently with 3510, 5510. Limited to 25 students. See **Restrictions**, page 79)


Fall Qtr Sec 1 T—6-9:45, ArtB 170, Myers
Winter Qtr Sec 2 T—6-9:45, ArtB 170, Myers

★**Arts 1520 LITHOGRAPHY.** 4 degree credits each quarter (maximum 8 cr). \$66 plus \$20 course fee. Total \$86 each quarter.

An introduction to planographic printing from stones and plates. Emphasis is directed to the basic techniques of drawing, processing, printing and presentation of prints. Class periods are devoted to lecture, demonstrations and critiques. Some reading and attending of art exhibitions is expected. (No prereq. Meets concurrently with 3520, 5520. Limited to 20 students. See **Restrictions**, page 79)

Spring Qtr Sec 1 Sa—1:30-4:15, ArtB 176, Priede

◆
★**Arts 1561 THE FINE PRINT: PROCESS AND IMAGE.** 4 degree credits, \$66. (◆\$33)

The course will introduce the student to various print media in a visual manner through the use of slides, accompanied by a lecture, and supplemented by example of the real art object in most cases. Historical trends and development, technical processes, and contemporary aesthetic considerations—specific artists' prints will be dealt with in each of the following categories: silkscreen, lithography, intaglio, relief, and photography—approached from the contemporary practicing artist's standpoint as opposed to the commercial printer or the historian. Course does not entail studio practice. (No prereq. Limited to 50 students)

Fall Qtr Sec 1 W—6:30-9, BlegH 155, Stockwell

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★**ArtS 1701 INTRODUCTION TO PHOTO MEDIUM.** 4 degree credits, \$66 plus \$15 course fee. Total \$81.

A course in black and white photography for beginners with little or no experience. Lectures on contemporary and historical use of photography. The course will cover techniques in the use of the camera, film development and enlargements. Emphasis on the creative process. Student must have camera. (No prereq. Limited to 20 students. See **Restrictions**, page 79)

Fall Qtr	Sec 1	T—6-9:45, ArtB 131, Hallman
	Sec 2	T—6-9:45, MacP Bsmt, Husom
	Sec 3	Th—6-9:45, ArtB 131
	Sec 4	Th—6-9:45, MacP Bsmt, Husom
Winter Qtr	Sec 5	T—6-9:45, ArtB 131, Hallman
	Sec 6	T—6-9:45, MacP Bsmt, Husom
	Sec 7	Th—6-9:45, MacP Bsmt, Husom
Spring Qtr	Sec 8	T—6-9:45, ArtB 131, Hallman
	Sec 9	T—6-9:45, MacP Bsmt, Husom
	Sec 10	Th—6-9:45, ArtB 131

(See also photography courses in physics and journalism)

★**ArtS 1702 PHOTOGRAPHIC NON-SILVER PROCESSES.** 4 degree credits, \$66 plus \$15 course fee. Total \$81.

Will explore photographic non-silver processes. For students with some previous experience with photographic equipment and techniques. Course will include lectures and labs with emphasis on individual projects and instruction. (Prereq 1701 or #. Limited to 20 students. See **Restrictions**, page 79)

Fall Qtr	Sec 1	Sa—8:30 a.m.-12:15, ArtB 131, Husom
Spring Qtr	Sec 2	Sa—8:30 a.m.-12:15, ArtB 131, Husom

★**ArtS 1801 CERAMIC PROCESSES.** 4 degree credits, \$66 plus \$20 course fee. Total \$86.

Clay work by hand and forming on potter's wheel. Ceramics as creative expression. Technical considerations of clays, glazes and kilns. Pottery and sculptural approaches. (No prereq. Limited to 24 students. See **Restrictions**, page 79)

Fall Qtr	Sec 1	M—6-9:45, ArtB 10
	Sec 2	T—6-9:45, ArtB 10
Winter Qtr	Sec 3	M—6-9:45, ArtB 10
	Sec 4	T—6-9:45, ArtB 10
	Sec 5	Th—6-9:45, HolB 137
Spring Qtr	Sec 6	M—6-9:45, ArtB 10
	Sec 7	T—6-9:45, HolB 137

★**ArtS 3110 DRAWING.** 4 degree credits each quarter (maximum 12 cr). \$70 plus \$10 course fee. Total \$80 each quarter.

Portraiture and life drawing from the model, still life, and nature. Principles of anatomy. (Prereq 1102. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr	Sec 1	M—6-9:45, ArtB 160, Busa
	Sec 2	W—6-9:45, ArtB 141, Busa
Winter Qtr	Sec 3	M—6-9:45, ArtB 160, Busa
	Sec 4	W—6-9:45, ArtB 141, Busa
Spring Qtr	Sec 5	W—6-9:45, ArtB 141, Busa

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★**Arts 3120 PAINTING.** 4 degree credits each quarter (maximum 12 cr). \$70 plus \$10 course fee. Total \$80 each quarter.

Introduction to media and problems in painting. Individual projects and instruction. (Prereq 1105 and 8 cr of 3110 or #. Meets concurrently with 3150. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 **W**—6-9:45, ArtB 151, Feinberg

Sec 2 **Th**—6-9:45, ArtB 161, Roode

Winter Qtr Sec 3 **W**—6-9:45, ArtB 151, Feinberg

Spring Qtr Sec 4 **Th**—6-9:45, ArtB 161, Roode

★**Arts 3150 PAINTING.** 4 degree credits each quarter (maximum 12 cr). \$70 plus \$10 course fee. Total \$80 each quarter.

Oil and acrylic painting. (Prereq 1101 or #. Not open to ArtS majors. Meets concurrently with 3120. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 **W**—6-9:45, ArtB 151, Feinberg

Sec 2 **Th**—6-9:45, ArtB 161, Roode

Winter Qtr Sec 3 **W**—6-9:45, ArtB 151, Feinberg

Spring Qtr Sec 4 **Th**—6-9:45, ArtB 161, Roode

★**Arts 3160 WATERCOLOR.** 4 degree credits each quarter (maximum 12 cr). \$70 plus \$5 course fee. Total \$75 each quarter.

Introduction to transparent watercolor, gouache, casein, and tempera. General course introducing the student to a variety of drawing and painting mediums. Figure, still life, landscape, and abstract design. (Prereq 1101, 1104 and #. Meets concurrently with 5160. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 **M**—6-9:45, ArtB 141, Myers

Winter Qtr Sec 2 **M**—6-9:45, ArtB 141, Myers

Sec 3 **Sa**—8:30 a.m.-12:15, ArtB 161, Brown

Spring Qtr Sec 4 **M**—6-9:45, ArtB 141, Myers

Sec 5 **Sa**—8:30 a.m.-12:15, ArtB 161, Brown

★**Arts 3202 COMMERCIAL DRAWING I.** 4 degree credits, \$70 plus \$5 course fee. Total \$75.

Contemporary drawing techniques; emphasis on the study of visual relationships in objects and the figure and their application to studio practice. Two-dimensional drawing media. Not applicable to studio arts major requirements. (Prereq 1104 or #. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 **T**—6-9:45, ArtB 141, Jardine

Spring Qtr Sec 2 **T**—6-9:45, ArtB 141, Jardine

★**Arts 3203 COMMERCIAL DRAWING II.** 4 degree credits, \$70 plus \$5 course fee. Total \$75.

Extensive practice with emphasis on development of visual and technical skills. Transparent and opaque washes; ink line, dry brush, etc. Not applicable to studio arts major requirements. (Prereq 3202 or #. Limited to 25 students. See **Restrictions**, page 79)

Spring Qtr Sec 1 **Th**—6-9:45, ArtB 140, Smith

(Your attention is called to the Commercial Art Certificate, page 389)

★**Arts 3220 COMMERCIAL ART MEDIA AND STUDIO TECHNIQUES.** 4 degree credits each quarter. (maximum 8 cr). \$70 plus \$5 course fee. Total \$75 each quarter.

Art Techniques, color systems and processes, keyline and production communication; elements of typography, lettering and calligraphy. Principles of reproduction

processes and materials in relationship to the visual statement. Material supported by field trips. Not applicable to studio arts major requirements. (Prereq 3202 or #. Limited to 25 students. See **Restrictions**, page 79)

Winter Qtr Sec 1 T—6-9:45, ArtB 141, Jardine

Spring Qtr Sec 2 Th—6-9:45, ArtB 160, Jensen

- ★**ArtS 3231 COMMERCIAL ILLUSTRATION I.** 4 degree credits, \$70 plus \$5 course fee. Total \$75.

Projects in various media involving all advertising subject matter. Advertising and story illustration with emphasis on current trends. Not applicable to studio arts major requirements. (Prereq 3220 and 4 cr of 3110 or #. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 Th—6-9:45, ArtB 140, Smith

- ★**ArtS 3251 ADVERTISING DESIGN I.** 4 degree credits, \$70 plus \$5 course fee. Total \$75.

Lay-out techniques, materials and structure. Application of type style and copy fitting. Not applicable to studio arts major requirements. (Prereq 8 cr of 3220 or #. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 T—6-9:45, ArtB 150, Jensen

- ★**ArtS 3252 ADVERTISING DESIGN II.** 4 degree credits, \$70 plus \$5 course fee. Total \$75.

Continued development of lay-out skills. Basic advertising psychology; typography, photographic techniques, color separation, printing and production techniques. Art directing photography and art. Not applicable to studio arts major requirements. (Prereq 3251 or #. Limited to 25 students. See **Restrictions**, page 79)

Winter Qtr Sec 1 T—6-9:45, ArtB 150, Jensen

- ★**ArtS 3301 SCULPTURE: DIRECT METAL.** 4 degree credits, \$70 plus \$25 course fee. Total \$95.

Welding and brazing. (Prereq 1301, 1302. Meets concurrently with 5310. Limited to 20 students. See **Restrictions**, page 79)

Spring Qtr Sec 1 W—6-9:45, ArtB 65, Baldwin

- ★**ArtS 3302 SCULPTURE: PLASTICS MEDIA.** 4 degree credits, \$70 plus \$25 course fee. Total \$95.

See course description for 1302. (Prereq 1301, 1302. Meets concurrently with 5320. Limited to 20 students. See **Restrictions**, page 79)

Winter Qtr Sec 1 W—6-9:45, ArtB 35, Rose

- ★**ArtS 3303 SCULPTURE: CAST METAL.** 4 degree credits, \$70 plus \$25 course fee. Total \$95.

Lost wax and sand casting in bronze, aluminum, iron. (Prereq 1301, 1302. Meets concurrently with 5330. Limited to 20 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 W—6-9:45, HolB, Potratz

- ★**ArtS 3304 SCULPTURE: WOOD AND STONE.** 4 degree credits, \$70 plus \$25 course fee. Total \$95.

Examination of numerous possibilities of wood and stone with emphasis on construction, assemblage and arrangement. (Prereq 1301, 1302. Meets concurrently with 5340. Limited to 20 students. See **Restrictions**, page 79)

Spring Qtr Sec 1 T—6-9:45, ArtB 80

- ★**ArtS 3510 INTAGLIO.** 4 degree credits each quarter (maximum of 12 cr). \$70 plus \$20 course fee. Total \$90 each quarter.

A print class for students who have had experience in drawing composition. All techniques of fine printing will be taught and color printing will be demonstrated in engraving and etching. (Prereq 4 cr of 1510 or #. Meets concurrently with 1510, 5510. Limited to 25 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 T—6-9:45, ArtB 170, Myers

Winter Qtr Sec 2 T—6-9:45, ArtB 170, Myers

- ★**ArtS 3520 INTERMEDIATE LITHOGRAPHY.** 4 degree credits each quarter (maximum 12 cr). \$70 plus \$20 course fee. Total \$90 each quarter.

Further exploration of fundamental techniques with introduction to color printing. Emphasis is directed to a more independent approach, stressing artistic considerations, in terms of materials and the visual manifestation of a statement. (Prereq 4 cr of 1520 or #. Meets concurrently with 1520, 5520. Limited to 20 students. See **Restrictions**, page 79)

Spring Qtr Sec 1 Sa—1:30-4:15, ArtB 176, Priede

- ★**ArtS 3701 INTRODUCTION TO ART OF FILMMAKING.** 4 degree credits, \$70 plus \$20 course fee. Total \$90.

Lectures and practical aspects of making films. Production limited to descriptive and experimental work. (No prereq. Meets concurrently with 3720. Limited to 24 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 T—6-9:45, ArtB 120

Winter Qtr Sec 2 T—6-9:45, ArtB 120

Spring Qtr Sec 3 T—6-9:45, ArtB 120

- ★**ArtS 3710 INTERMEDIATE PHOTOGRAPHY.** 4 degree credits each quarter (maximum 12 cr). \$70 plus \$15 course fee. Total \$85 each quarter.

Continued work in photographic controls and processes. Introduction to related photosensitive media. Emphasis on creative process with attention to individual interests and requirements. (Prereq 1701 or #. Meets concurrently with 5710. Limited to 20 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 W—6-9:45, ArtB 131, Henkel

Winter Qtr Sec 2 M—6-9:45, ArtB 131

Sec 3 W—6-9:45, ArtB 131, Henkel

Spring Qtr Sec 4 M—6-9:45, ArtB 131

Sec 5 W—6-9:45, ArtB 131, Henkel

- ★**ArtS 3720 FILM WORKSHOP.** 4 degree credits each quarter (maximum 12 cr). \$70 plus \$20 course fee. Total \$90 each quarter.

Practical study of motion picture as an art form. Production limited to descriptive and experimental work. (Prereq #. Meets concurrently with 3701. Limited to 24 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 T—6-9:45, ArtB 120

Winter Qtr Sec 2 T—6-9:45, ArtB 120, G Johnson

Spring Qtr Sec 3 T—6-9:45, ArtB 120

- ★**ArtS 3810 CERAMIC DESIGN.** 4 degree credits each quarter (maximum 12 cr). \$70 plus \$25 course fee. Total \$95 each quarter.

Greater emphasis on wheel throwing. Advanced design problems and introduction to glaze and clay experimentation. Emphasis on development of personal expression

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

in ceramic medium. (Prereq 1801 or #. Limited to 20 students. See **Restrictions**, page 79)

Fall Qtr Sec 1 T—6-9:45, HolB 137

Winter Qtr Sec 2 T—6-9:45, HolB 137

- ★**Arts 5110 ADVANCED DRAWING.** 4 degree credits each quarter (maximum 16 cr). \$74 plus \$10 course fee. Total \$84 each quarter.

Primarily for painting majors. Drawing in all mediums from life and from imagination; history of drawing. (Prereq 12 cr of 3110 or #. Limited to 20 students. See **Restrictions**, page 79. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6-9:45, ArtB 150, Rowan

Spring Qtr Sec 2 W—6-9:45, ArtB 150, Rowan

- ★**Arts 5120 PROBLEMS IN PAINTING.** 4 degree credits each quarter (maximum 16 cr). \$74 plus \$10 course fee. Total \$84 each quarter.

An advanced course in oil and acrylic painting with emphasis on color theories as they apply to current trends in art. (Prereq 12 cr of 3120 or #. Limited to 25 students. See **Restrictions**, page 79. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—6-9:45, ArtB 161, Busa

- ★**Arts 5160 WATERCOLOR.** 4 degree credits each quarter (maximum 16 cr). \$74 plus \$5 course fee. Total \$79 each quarter.

Advanced watercolor techniques, aesthetic directions. Individual concepts and development of sensibilities. (Prereq 12 cr of 3160 or #. Meets concurrently with 3160. Limited to 25 students. See **Restrictions**, page 79. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6-9:45, ArtB 141, Myers

Winter Qtr Sec 2 M—6-9:45, ArtB 141, Myers

Sec 3 Sa—8:30 a.m.-12:15, ArtB 161, Brown

Spring Qtr Sec 4 M—6-9:45, ArtB 151, Myers

Sec 5 Sa—8:30 a.m.-12:15, ArtB 161, Brown

- ★**Arts 5310 SCULPTURE: DIRECT METAL.** 4 degree credits each quarter (maximum 16 cr). \$74 plus \$25 course fee. Total \$99 each quarter.

See course description for 3301. (Prereq 3301 and #. Meets concurrently with 3301. Limited to 20 students. See **Restrictions**, page 79. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6-9:45, ArtB 65, Baldwin

- ★**Arts 5320 SCULPTURE: PLASTICS MEDIA.** 4 degree credits each quarter (maximum 16 cr). \$74 plus \$25 course fee. Total \$99 each quarter.

See course description for 3302. (Prereq 3302. Meets concurrently with 3302. Limited to 20 students. See **Restrictions**, page 79. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—6-9:45, ArtB 35

- ★**Arts 5330 SCULPTURE: CAST METAL.** 4 degree credits each quarter (maximum 16 cr). \$74 plus \$25 course fee each quarter. Total \$99.

See course description for 3303. (Prereq 3303. Meets concurrently with 3303. Limited to 20 students. See **Restrictions**, page 79. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6-9:45, HolB, Potratz

★**ArtS 5340 SCULPTURE: WOOD AND STONE.** 4 degree credits each quarter (maximum 16 cr). \$74 plus \$25 course fee. Total \$99 each quarter.

See course description for 3304. (Prereq 3304. Meets concurrently with 3304. Limited to 20 students. See **Restrictions**, page 79. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—6-9:45, ArtB 80

★**ArtS 5510 ADVANCED INTAGLIO.** 4 degree credits each quarter (maximum 16 cr). \$74 plus \$20 course fee. Total \$94 each quarter.

An advanced course in etching, aquatint, mezzatint, and all related techniques in the execution of intaglio prints. Color printing will be taught in conjunction with the above material. (Prereq 12 cr of 3510 or #. Meets concurrently with 1510, 3510. Limited to 25 students. See **Restrictions**, page 79. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6-9:45, ArtB 170, Myers

Winter Qtr Sec 2 T—6-9:45, ArtB 170, Myers

★**ArtS 5520 ADVANCED LITHOGRAPHY.** 4 degree credits each quarter (maximum 16 cr). \$74 plus \$20 course fee. Total \$94 each quarter.

Strong emphasis in creative and individual approach to lithography. Critiques and discussions are directed to understanding the intrinsic qualities of the lithographic medium. (Prereq 12 cr of 1520 or #. Limited to 20 students. Meets concurrently with 1520, 3520. See **Restrictions**, page 79. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Sa—1:30-4:15, ArtB 176, Priede

★**ArtS 5710 PHOTOGRAPHY.** 4 degree credits each quarter (maximum 16 cr). \$74 plus \$15 course fee. Total \$89 each quarter.

Advanced problems in photography. (Prereq 12 cr of 3710 and #. Meets concurrently with 3710. Limited to 20 students. See **Restrictions**, page 79. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6-9:45, ArtB 131, Henkel

Winter Qtr Sec 2 M—6-9:45, ArtB 131

Sec 3 W—6-9:45, ArtB 131, Henkel

Spring Qtr Sec 4 M—6-9:45, ArtB 131

Sec 5 W—6-9:45, ArtB 131, Henkel

(See also photography courses in General College, physics and journalism)

★**ArtS 5810 CERAMICS.** 4 degree credits each quarter (maximum 16 cr). \$74 plus \$30 course fee. Total \$104 each quarter.

Aesthetic awareness and development; techniques and materials. (Prereq #. Limited to 20 students. See **Restrictions**, page 79. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 Th—6-9:45, HolB 137

Spring Qtr Sec 2 Th—6-9:45, HolB 137

astronomy (Ast)

Astronomy 1011 and 1015 together satisfy the CLA laboratory science requirement. Students may take Ast 1015 at any time during or after they have taken Ast 1011. Students who have taken Ast 1008 and 1009 should not take Ast 1011. Ast 1011 replaces Ast 1008 and 1009.

Ast 1015 and Ast 1008 and Ast 1009 will satisfy the CLA laboratory science requirement, as will Ast 1015 with either 1008 or 1009.

Ast 1011 DESCRIPTIVE ASTRONOMY. 4 degree credits, \$1021 \$1008, 1009. \$66.

The sun, the moon, the planets and their motions; stars and stellar systems, galaxies and cosmology. (No prereq.)

new

Fall Qtr Sec 1 **MW**—7-8:45, Ph 166

Winter Qtr Sec 2 **MW**—7-8:45, Ph 166

Ast 1015 DESCRIPTIVE ASTRONOMY LABORATORY. 1 degree credit, \$1025. \$16.50.

Laboratory offered in conjunction with 1011. Opportunity to observe with telescope. (No prereq.) **Must be taken S-N.**

Fall Qtr Sec 1 **T**—6:30-9:30, Ph 342

Sec 2 **T**—7:30-10:30, Ph 143

Sec 3 **Th**—7:30-10:30, Ph 143

new

Winter Qtr Sec 4 **T**—6:30-9:30, Ph 342

Sec 5 **T**—7:30-10:30, Ph 143

Sec 6 **Th**—7:30-10:30, Ph 143

Spring Qtr Sec 7 **T**—6:30-9:30, Ph 342

Sec 8 **T**—7:30-10:30, Ph 143

Sec 9 **Th**—7:30-10:30, Ph 143



biochemistry (BioC)

(See also Biology)

Finn Wold, Professor of Biochemistry

BioC 5001 BIOCHEMISTRY. 3 degree credits, \$Biol 3021. \$55.50.

Biochemistry and biophysics of cells; emphasis on enzyme catalysis, cellular energetics, biosynthesis of cellular constituents and cellular regulatory mechanisms. (Prereq Biol 1011, 10 cr organic chemistry or #. Meets concurrently with Biol 3021. Qualified students may register for graduate credit at the University of Minnesota)

new

Fall Qtr Sec 1 **M**—6:20-9:30, PalmC 10, StP Campus, Wold

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

biology (Biol)

(See also Anatomy, Biochemistry, Ecology and Behavioral Biology)

Norman Kerr, Professor of Genetics and Cell Biology

William Schmid, Professor of Ecology and Behavioral Biology

Finn Wold, Professor of Biochemistry

Biol 1011 GENERAL BIOLOGY. 5 degree credits, \$82.50 plus \$10 course fee. Total \$92.50 (◆\$30 lecture only) (IS)

An introduction to the principles of biology. The cell, metabolism, heredity, reproduction, ecology and evolution. Lectures will be presented over closed-circuit TV and by film. Students must attend lectures on both Tuesday and Thursday and laboratory sessions on both Tuesday and Thursday. (No prereq. High school algebra, chemistry recommended)

◆ **Fall Qtr** Sec 1 **Lect TTh**—6-7:10, NH 45, Kerr

Lab TTh—7:20-9, KoltH S160, S167, S170, S177, S179, S183

Winter Qtr Sec 2 **Lect TTh**—6-7:10, NH 45, Kerr

Lab TTh—7:20-9, KoltH S160, S167, S170, S177, S179, S183

Spring Qtr Sec 3 **Lect TTh**—6-7:10, NH 45, Kerr

Lab TTh—7:20-9, KoltH S160, S167, S170, S177, S179, S183

Biol 1103 GENERAL BOTANY. 5 degree credits, \$3012. \$82.50 plus \$10 course fee. Total \$92.50.

Levels of organization of plants, plant function, plant growth and development, plant reproduction. (Prereq 1011 or #)

Spring Qtr Sec 1 **Lect TTh**—6:10-7:20, BioSci 12, StP Campus

Lab TTh—7:30-9:30, BioSci 182, StP Campus

(See also Botany)

Biol 1106 GENERAL ZOOLOGY. 5 degree credits, \$82.50 plus \$10 course fee. Total \$92.50.

A general survey of the animal kingdom. Animal diversity is the major theme of the course, with emphasis placed upon animal phylogeny and evolution. Morphological, physiological, behavioral and ecological characteristics of various groups of animals are compared and contrasted in lectures and the laboratory. (Prereq 1011)

Winter Qtr Sec 1 **Lect T**—7-9:30, Z313, Schmid

Lab Th—7-10, KoltH P168

Biol 3021 BIOCHEMISTRY. 4 degree credits, \$BioC 5001. \$70.

new Biochemistry and biophysics of cells; emphasis on enzyme catalysis, cellular energetics, biosynthesis of cellular constituents and cellular regulatory mechanisms. (Prereq 1011, 10 cr organic chemistry. Meets concurrently with BioC 5001)

Fall Qtr Sec 1 **M**—6:20-9:30, PalmC 10, StP Campus, Wold

botany (Bot)

(See also Biol 1103, General Botany; and Plant Pathology)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★**Bot 1009 MINNESOTA PLANT LIFE.** 4 degree credits, \$66 plus \$5.50 special fee. Total \$71.50.

Nontechnical survey of all groups of plants native to Minnesota; identification and distribution. Class will occasionally meet at 6 p.m. and on Saturdays for field trips. (No prereq. Limited to 60 students)

Spring Qtr Sec 1 **MW**—6:20-8:50, Bo 301, BoB6

◆ **Bot 1012 PLANTS USEFUL TO MAN.** 4 degree credits, \$66. (◆\$33)

Survey of the role which plants have played in man's cultural and biological development. A discussion of economic and medicinal plants, including foods, fibers, spices, drugs, oils, proteins, fats and lumber. Lectures and open exhibits. (No prereq)

Winter Qtr Sec 1 **MW**—6:20-8, BoB 6 (demonstration time arr)

business administration

Your attention is called to the Business Administration Certificate programs, page 398. Please see the following alphabetical listings for course offerings:

ACCOUNTING

BUSINESS, GOVERNMENT AND SOCIETY

BUSINESS LAW

FINANCE

INDUSTRIAL RELATIONS

INSURANCE

MANAGEMENT

MANAGEMENT INFORMATION SYSTEMS

MARKETING

OPERATIONS ANALYSIS AND MANAGEMENT

QUANTITATIVE ANALYSIS

REAL ESTATE

SALESMANSHIP

TRANSPORTATION

(See also Economics; Comp 0003C, Review of Business English; Business English Hist 3841, American Business History; and Rhetoric)

For non-credit conferences or seminars in business administration, write or call Continuing Business Education, 334C Business Administration; telephone 373-3835.

Executive (evening) Master of Business Administration (E.M.B.A.)

An evening program intended for and limited to persons who are full-time employees of business and other organizations in the Twin Cities metropolitan area leading to the master of business administration degree is offered under the auspices of the Graduate School of Business Administration and the University of Minnesota Graduate School. For information about this program, write or call:

Director of Graduate Study
 Graduate School of Business Administration
 Business Administration Building
 271 S. 19 Ave.
 University of Minnesota
 Minneapolis, Minnesota 55455 (373-5505)

Symbols, abbreviations, off-campus class locations begin on page 413. Courses and sections in red have limits on enrollment. See page 23.

business, government, and society (BGS)

Robert J. Holloway, Professor of Marketing and Business Law
Albert J. Macek, Northstar Research

★BGS 3002 BUSINESS AND SOCIETY. 4 degree credits, \$70.

Examines the strategic and dynamic relations of business and society in a goal-oriented and problem-solving context. Focuses on the interfaces of business institutions with the physical environment, the social milieu, the political process and economic activity. Gives specific attention to the on-going debate regarding national priorities and the respective roles of the private and public sectors concerning the challenges confronting U.S. society. Includes assessment of the concept, determinants, and indicators of the "quality of life" and the social responsibilities of business. (No prereq. **May not be taken S-N.** Limited to 60 students)

Fall Qtr	Sec 1	M —6-8:45, BlegH 130, Macek
	Sec 2	T —5:30-8:15, BlegH 130
	Sec 3	W —5:30-8:15, BlegH 130
Winter Qtr	Sec 4	M —6-8:45, BlegH 135, Macek
	Sec 5	W —5:30-8:15, BlegH 130
	Sec 6	M —5:30-8:15, BlegH 130, Holloway
Spring Qtr	Sec 7	M —6-8:45, BlegH 120, Macek
	Sec 8	T —5:30-8:15, BlegH 130

★BGS 3003 BUSINESS AND THE NATURAL ENVIRONMENT. 4 degree credits, \$70.

Business and its relationship to the natural environment (air, land, water, plants, animals). The use by industry of renewable and nonrenewable resources. Environmental deterioration caused by business to air, land, and water. Solutions to environmental problems. **May not be taken S-N.** (No prereq. Limited to 60 students)

Fall Qtr	Sec 1	M —5:30-8:15, BlegH 155, Holloway
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★BGS 3004 INTERNATIONAL BUSINESS. 4 degree credits, \$70

World business with emphasis on the global economy, international concepts, global business structures, comparative cultures and environments, global business strategies, multinational corporations and technology, personnel and operations in the host nations. Resource (including energy) questions in their global contexts: quantities, demands, distribution of resources. (No prereq. Limited to 60 students)

Spring Qtr	Sec 1	M —5:30-8:15, BlegH 110, Holloway
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new

business education

(See Vocational and Technical Education)

business finance

(See Finance)

business law (BLaw)

(See also General College Legal Paraprofessions, page 350; and General College legal courses)

Albert O. Andrews, Jr., Lecturer in Business Law
Donald Campbell, Lecturer in Business Law

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Charles Diessner, Lecturer in Business Law
 Richard A. Hassel, Lecturer in Business Law
 Thomas Lovett, Lecturer in Business Law
 Thomas R. Mahler, Lecturer in Business Law
 Thomas A. McEachron, Lecturer in Business Law
 Richard A. Nordbye, Lecturer in Business Law
 James D. Olson, Lecturer in Business Law
 C. Harold Peterson, Lecturer in Business Law
 Richard A. Peterson, Lecturer in Business Law
 Walter Robb, Lecturer in Business Law
 Ross L. Thorfinnson, Lecturer in Business Law
 James Van Valkenburg, Lecturer in Business Law
 Peter Weiss, Lecturer in Business Law
 Dobson West, Lecturer in Business Law
 Wells J. Wright, Lecturer and Coordinator of Business Law
 Robert H. Zalk, Lecturer in Business Law

BLaw 0001C COMMON LEGAL PROBLEMS. 3 certificate credits, \$49.50.

Provides a comprehensive course in everyday legal principles, designed to assist the layman in recognizing his legal rights and more intelligently and efficiently managing his personal affairs. This course considers legal problems such as: purchase, sale, rental, or lease of homes and other real property; making of wills and handling of estates; preparation of income tax returns; rights of persons injured in accidents and liability of persons causing accidents; liability for various other types of tortious conduct; making of contracts; sale of personal property; negotiable instruments; formation and operation of small business as a sole proprietorship, partnership or corporation; workmen's compensation laws; rights and responsibilities within family, including divorce; collection of monies through garnishment, attachment, and mechanic's liens; criminal law. (No prereq)

Fall Sem Sec 1 **Th**—6:20-8, Arch 40

BLaw 0098C BUSINESS LAW—LAW OF REAL PROPERTY. 3 certificate credits, \$49.50.

The study of the nature and classification of real estate; deeds and conveyances; landlord and tenant; recording and abstracting; torrens titles; mortgages; wills; probating of estates, etc. (No prereq)

Fall Sem Sec 1 **W**—6:20-8, BlegH 125, R A Peterson

Spring Sem Sec 2 **Th**—6:20-8, AndH 270, Olson

BLaw 3058-3078, 3088 BUSINESS LAW. 4 degree credits each term, \$70 each term. (15)

Sequence of courses in Business Law in the fundamental principles of law for the business and professional man or woman. **3058:** Study of origin, history and development of law, systems of courts, legal procedure, and extensive study of law of contracts, the basic law affecting business transactions; and the law of the relationship of principal and agent, master and servant, employer and employee. **3078:** Partnerships, corporations, and the law of real property, including nature, creation, and terms of the relations, rights and liabilities of parties involved in business associations; together with study of the basic concepts and principles of real property law. **3088:** Study of the basic concepts of personal property, including rights of possessors, bailees, holders of security interests, etc.; and extensive study of the law of sales of goods contracts, and law of commercial paper under the Uniform Commercial Code, together with a brief study of the law of wills and estates. (No prereq for 3058; 3058 for 3078 and 3088)

Fall Qtr **3058** Sec 1 **T**—6:20-8:50, AndH 230, Campbell

Sec 2 **W**—6:20-8:50, AndH 230, Hassel

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

- Sec 3 **Th**—6:20-8:50, AndH 330, Diessner
 ★Sec 4 **Th**—7-9:30, Ramsey HS 251, Roseville
 Van Valkenburg (Limit 30 students)
3078 Sec 5 **W**—6:20-8:50, BlegH 220, Weiss
3088 Sec 6 **T**—6:20-8:50, BlegH 155, Nordbye
Fall Sem 3058 Sec 7 **M**—8:15-9:55, BlegH 155, Lovett
 Sec 8 **T**—6:20-8, BlegH 255, Robb
Winter Qtr 3058 Sec 9 **M**—6:20-8:50, BlegH 260, Andrews
 Sec 10 **T**—7-9:30, BlegH 105, Hassel
 Sec 11 **W**—6:20-8:50, BlegH 360, Zalk
 ★Sec 12 **T**—7-9:30, Richfield HS 249-250,
 Mahler (Limit 45 students)
3078 Sec 13 **W**—6:20-8:50, BlegH 220, Van Valkenburg
3088 Sec 14 **T**—6:20-8:50, BlegH 220, West
Spring Sem 3058 Sec 15 **M**—6:20-8, BlegH 150, Robb
Spring Qtr 3058★ Sec 16 **T**—7-9:30, Woodbury JHS, Zalk
 (Limit 45 students)
 Sec 17 **Th**—6:20-8:50, BlegH 250, Diessner
3078 Sec 18 **Th**—6:20-8:50, BlegH 110, Lovett
3088 Sec 19 **T**—6:20-8:50, BlegH 225, Nordbye

business studies

(See General College)



chemistry (Chem)

(See also Professional Recognition Program in Engineering and Science, page 130)

Robert Brasted, Professor of Chemistry

Keith Coad, Planning Systems Analyst, 3M Company

Edward Meehan, Professor of Chemistry

Richard Morath, St. Thomas College Professor of Chemistry

A \$20 chemistry deposit card is required for all the courses in chemistry. Information concerning the procurement of this card will be given at the first meeting of each class. An equipment fee of \$3 and charges for laboratory material and breakage will be punched out of the deposit card. The balance, less charges for breakage, will be returned to the student at the end of the semester.

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

★**Chem 1004-1005† GENERAL PRINCIPLES OF CHEMISTRY.** 5 degree credits each semester, \$82.50 plus \$5 special fee and \$6 course fee. Total \$93.50 each semester.

An introduction to chemistry from the standpoint of atomic structure; periodic properties of the elements and compounds derivable from structural considerations; a study of the laws governing the behavior of matter, theories of solutions, acids, bases, and equilibrium; introduction to chemistry of carbon compounds. (Prereq elementary algebra, higher algebra, trigonometry, required. H.S. chemistry, H.S. physics strongly recommended for 1004; 1004 for 1005. Limited to 200 students).

Fall Sem 1004 Sec 1 Lab T—6-9:30, SciCB 375
Lect Th—6:20-8:30, SciCB 375, Brasted
Spring Sem 1005 Sec 2 Lab T—6-9:30, SciCB 375
Lect Th—6:20-8:30, SciCB 375, Brasted

★**Chem 1006 PRINCIPLES OF SOLUTION CHEMISTRY.** 4 degree credits, \$66 plus \$5 special fee and \$6 course fee. Total \$77.

The lecture and laboratory work are concerned primarily with the descriptive chemistry of the elements, especially with the properties (including stereochemistry) of transition metal complex ions, their preparation, absorption spectrometry and some applications to physiological systems. Selected cations and anions are studied in the laboratory with regard to properties in aqueous solution and their detection. Both heterogeneous and homogeneous equilibria in solution are applied to separation techniques. Lecture material also includes oxidation reduction systematics and their use in estimating reaction spontaneity. Atomic, ionic and molecular structure serve as underlying bases for this study of simple and complex ions. (Prereq 1005 or 1032. Students attend twice a week. Limited to 25 students)

Fall Sem Sec 1 Lect T—6:20-8, SmithH 325, Coad
Lab Th—6:20-9:30, SmithH 325

★**Chem 3100 QUANTITATIVE ANALYSIS.** 3 degree credits, \$52.50

A survey of quantitative methods of analysis. Lecture. Not for chemistry majors. (Prereq 1005. Limited to 50 students)

Fall Qtr Sec 1 M—6:30-8:45, SmithH 325, Meehan

★**Chem 3301-3302 ELEMENTARY ORGANIC CHEMISTRY LECTURE.** 3 degree credits each semester, \$52.50 each semester.

Important classes of organic compounds, both aliphatic and aromatic, together with some heterocyclic compounds. (Prereq 1005 or 1032 or equiv for 3301; 3301 or 3305 or ¶3305 for 3302. Limited to 60 students)

Fall Sem 3301 Sec 1 Lect T—6-8:30, SmithH 225, Morath
Spring Sem 3302 Sec 2 Lect T—6-8:30, SmithH 225, Morath

★**Chem 3305-3306 ELEMENTARY ORGANIC CHEMISTRY LABORATORY.** 2 degree credits each semester, \$35, plus \$5 special fee and \$6 lab fee. Total \$46 each semester.

Laboratory work includes the preparation of typical substances treated in 3301-3302. (Prereq 3301 or ¶3301 for 3305, 3302 or ¶3302 for 3306. Limited to 49 students)

Fall Sem 3305 Sec 1 Lab Th—6-9:30, SmithH 349
Spring Sem 3306 Sec 2 Lab Th—6-9:30, SmithH 349

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

chicano studies (Chic)

(See also IC 0342, The New Cuba; Hist 1401, 3401, Survey of Latin American History; Span 1502, Culture, Civilization of Latin America)

Gilberto Lopez y Rivas, Professor of Chicano Studies

Chic 3330 CHICANO HISTORY: TOPICS. 4 degree credits, \$70. (◆\$35)



Mexican-American history, including such areas as migration, labor movements, Chicanos in agriculture, the "pachuco" phenomenon, border conflict, and regional history. (No prereq. A joint Day/Extension class.)

Winter Qtr Sec 1 TTh—6:20-8, ForH 349, Rivas

child psychology (CPsy)

(See also IC 0322, Parenting: A Behavioral Approach; GC 1722, Parent-Child Relationships; and Youth Studies)

Judith Brown, Assistant Director for Special Schools, Special Education Division, Minneapolis Public Schools

Celia Brownell, National Institute of Mental Health Trainee in Child Psychology

W. Andrew Collins, Associate Professor, Institute of Child Development

Jackie Gnepp, National Institute of Mental Health Trainee in Child Psychology

Seymour Gross, Clinical Associate Professor, Department of Health Care Psychology and Director of Mental Health Services, Pilot City Health Center

Nancy Hazen, National Institute of Child Health and Human Development Trainee, Center for Research in Human Learning

Bruce Henderson, Graduate School Fellow, Institute of Child Development

Harold Ireton, Associate Professor, Department of Family Practice and Community Health

Daniel Keating, Assistant Professor, Institute of Child Development

Joshua Klayman, National Institute of Child Health and Human Development Trainee, Center for Research in Human Learning

Michael Kuskowski, National Institute of Mental Health Trainee in Child Psychology

Amy Lederberg, Graduate Assistant, Institute of Child Development

Jeffrey Lockman, National Institute of Child Health and Human Development Trainee, Center for Research in Human Learning

Michael Maratsos, Associate Professor, Institute of Child Development

Donald Mohr, Graduate Assistant, Institute of Child Development

David Morris, Graduate Assistant, Institute of Child Development

Andrew Newcomb, Graduate School Fellow, Institute of Child Development

Murray Reed, Chief Psychologist, Wilder Child Guidance Clinic

Philip Salapatek, Professor, Institute of Child Development

Brian Vaughn, Graduate Assistant, Institute of Child Development

Grace Warfield, Associate Professor of Special Education

A MAJOR IN CHILD PSYCHOLOGY (CLA) CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered yearly. Interested students should discuss plans with an Extension counselor (373-3905).

B.A. Major Sequence

Required Preparatory Courses

Psy 1001 or 5 cr of introductory psychology; Psy 1004-1005; CPsy 1301

Major Requirements

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Minimum of 32 3xxx- or 5xxx-level credits, to include one course from 3302, 3303, 3304 or 5303; Psy 3801 or equivalent; 2 courses from 3331, 3347, 5329, 5331, 5341, 5343, 5345; 2 courses from 3311, 3313, 5311, 5313, 5315, 5319, 5333, 5334, 5335, 5339; and a minimum of 8 additional credits from any two or more 3xxx or 5xxx CPsy courses.

Child Psychology majors may not count Psychology credits toward their 30 3xxx or 5xxx credits outside their major.

You need not be majoring in Child Psychology to register for these classes.

Child Psychology courses not used toward a major may be taken A-N or S-N in CLA.

CPsy 1301 INTRODUCTORY CHILD PSYCHOLOGY. 4 degree credits, \$66. (IS)

Introduction to the science of child behavior; review of theories and research. (Prereq 5 cr introductory psychology)

Fall Qtr Sec 1 **W**—6:20-8:50, CD 216, Salapatek
Sec 2 **T**—7-9:30, Woodbury JHS, Kuskowski

Winter Qtr Sec 3 **T**—6:20-8:50, CD 216, Hazen
★Sec 4 **W**—7-9:30, Irondale HS 310, New Brighton; Lederberg
(Limit 35 students)

Spring Qtr Sec 5 **M**—6:20-8:50, CD 216, Gnepp
★Sec 6 **W**—7-9:30, Richfield HS 242, Henderson
(Limit 30 students)

CPsy 1310 TOPICS IN CHILD PSYCHOLOGY.

See Early Childhood Studies Program, page 115.

CPsy 3302 INFANCY. 4 degree credits, \$70.

Perceptual, motor, emotional, social, and cognitive development during the first two years of life; the developing infant in its social and physical environment. (Prereq 1301)

Spring Qtr Sec 1 **T**—6:20-8:50, CD 216, Salapatek

CPsy 3303 ADOLESCENT PSYCHOLOGY. 4 degree credits, \$5303, \$70.

Physical, cognitive, and social development during adolescence. (Prereq 5 cr introductory psychology. Meets concurrently with 5303)

Fall Qtr Sec 1 **M**—6:20-8:50, Bu 120, Keating

Winter Qtr Sec 2 **W**—7-9:30, Ramsey HS 255, Roseville; Morris, Vaughn
(Limit 30 students)

CPsy 3304 INTRODUCTION TO MATURITY AND AGING. 4 degree credits, \$70.

Empirical and theoretical issues in developmental psychology of maturity and aging; survey of perceptual-motor, cognitive, and social-psychological changes from young adulthood to old age. (Prereq 1301 or equiv)

Winter Qtr Sec 1 **M**—6:20-8:50, CD 216, Keating

(See also related courses in Social Work and Sociology)

CPsy 3311 BEHAVIORAL AND EMOTIONAL PROBLEMS. 4 degree credits, \$5311, \$70.

Description, etiology, development of behavioral and emotional problems of children; treatment where germane. Excluded are problems deriving primarily from sensory or physical handicap, mental retardation, or neurological impairment. (Prereq 1301 or equiv. Meets concurrently with 5311)

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Fall Qtr Sec 1 **M**—6:20-8:50, WuH 230, Reed
Winter Qtr Sec 2 **T**—6:20-8:50, Bu 123, Ireton
Spring Qtr★Sec 3 **T**—7-9:30, Sandburg JHS 204, Golden Valley, Newcomb
(Limit 35 students)

CPsy 3313 PSYCHOLOGY OF ATYPICAL CHILDREN. 4 degree credits, \$5313, \$70.

Problems of research, assessment, and behavior associated with atypicality; evaluation of research in areas of major concern for sensory, language, intellectual, and physical deviation. (Prereq 1301 or equiv. Meets concurrently with 5313)

Winter Qtr Sec 1 **M**—6:20-8:50, CD 105, Brown

CPsy 3331 PROCESSES OF SOCIALIZATION OF CHILDREN. 4 degree credits, \$5331, \$70. (◆\$35)

Processes of social learning: identification, social influence, imitation, reward and punishment, internalization, and object choice. (Prereq 1301 or equiv. Meets concurrently with 5331)

Fall Qtr ★Sec 1 **Th**—7-9:30, Sandburg JHS 211, Golden Valley, Mohr
(Limit 35 students)

Spring Qtr ★Sec 2 **W**—6:20-8:50, CD 216, Collins (Limit 40 students)

◆
★CPsy 3347 CHILDREN'S LEARNING AND INTELLECTUAL SKILLS. 4 degree credits, \$70.

Current research on learning, problem solving, intellectual performance in children; application to practical contexts. (Prereq 1301 or equiv. Limited to 35 students)

Winter Qtr Sec 1 **T**—7-9:30, Minnetonka HS 119, Brownell, Lockmann

CPsy 5303 ADOLESCENT PSYCHOLOGY. 4 degree credits, \$3303. \$74. (IS)

Physical, cognitive, and social development during adolescence. (Prereq 5 cr introductory psychology. Meets concurrently with 3303. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6:20-8:50, Bu 120, Keating

Winter Qtr ★Sec 2 **W**—7-9:30, Ramsey HS 255, Roseville; Morris, Vaughn
(Limit 30 students)

(See also related courses in Social Work)

CPsy 5310 TOPICS IN CHILD PSYCHOLOGY.

See Early Childhood Studies Program, page 115.

CPsy 5311 BEHAVIORAL AND EMOTIONAL PROBLEMS. 4 degree credits, \$3311, \$74.

See 3311 for description. (Prereq CPsy 1301 or equiv. Meets concurrently with 3311. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6:20-8:50, WuH 230, Reed

Winter Qtr Sec 2 **T**—6:20-8:50, Bu 123, Ireton

Spring Qtr★Sec 3 **T**—7-9:30, Sandburg JHS 204, Golden Valley; Newcomb
(Limit 35 students)

CPsy 5313 PSYCHOLOGY OF ATYPICAL CHILDREN. 4 degree credits, \$3313, \$74.

Problems of research, assessment, and behavior associated with atypicality; evaluation of research in areas of major concern for sensory, language, intellectual, and physical deviation. (Prereq 1301 or equiv. Meets concurrently with 3313. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **M**—6:20-8:50, CD 105, Brown

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

★**CPsy 5315 INTRODUCTION TO MENTAL RETARDATION.** 4 degree credits, \$SpEd 5120, \$74.

Psychological and educational problems related to the mentally retarded. (Prereq 1301 or equiv. Meets concurrently with SpEd 5120. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—7-9:30, Richfield HS 242, Warfield

Spring Qtr Sec 2 Th—6:20-8:50, Pt 214, Warfield

★**CPsy 5319 CLINICAL PROCEDURES WITH CHILDREN AND YOUTH.** 4 degree credits, \$74.

Survey of assessment and intervention procedures of child clinical psychology in clinical and community settings; primarily for students not majoring in clinical psychology. (Prereq 12 cr in psychology, child psychology, educational psychology, or sociology. Limited to 55 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:20-8:50, Pt 214, Gross

CPsy 5331 PROCESSES OF SOCIALIZATION OF CHILDREN. 4 degree credits, \$3331. \$74.

Processes of social learning; identification, imitation, reward and punishment, internalization and object choice. (Prereq 1301 or equiv. Meets concurrently with 3331. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr ★ Sec 1 Th—7-9:30, Sandburg JHS 211, Golden Valley, Mohr
(Limit 35 students)

Spring Qtr★ Sec 2 W—6:20-8:50, CD 216, Collins (Limit 40 students)

★**CPsy 5343 COGNITIVE DEVELOPMENT.** 4 degree credits, \$74. (◆\$37)

Development of cognitive processes; discussion of relevant theory, research literature and methodology. (Prereq 1301. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 M—7-9:30, Richfield HS 242, Klayman

★**CPsy 5345 LANGUAGE DEVELOPMENT.** 4 degree credits, \$74. (◆\$37)

Development of structure and function of language; factors influencing development, methodological problems, language scales, theories. (Prereq 1301. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—7-9:30, Ramsey HS 255, Roseville; Maratsos

chinese

(See East Asian Languages)

civil engineering (CE)

(Your attention is called to the Professional Recognition Program in Engineering and Science, page 130)

C. E. Bowers, Professor of Civil and Mineral Engineering
Ladislav Cerny, Associate Professor of Civil and Mineral Engineering
Jerry L. Edwards, Assistant Professor of Civil and Mineral Engineering

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Matthew J. Huber, Associate Professor of Civil and Mineral Engineering
Walter J. Maier, Associate Professor of Civil and Mineral Engineering
Lyle P. Pederson, Assistant Professor of Civil and Mineral Engineering
Charles Song, Associate Professor of Civil and Mineral Engineering
Heinz Stefan, Professor of Civil and Mineral Engineering.

Your attention is called to the Undergraduate Development Certificate in Civil Engineering—90 credits, page 409.

Through registration in Extension Classes, students may earn, over a period of four years, all Civil Engineering credits required for a B.S. in Civil Engineering. See page 359 for course options.

CE 0005 REFRESHER COURSE FOR CIVIL ENGINEERS. No credit, \$66.

This course is for practicing engineers and consists of lectures and problem sessions relating to highways, soils, sanitary, structural and hydraulic engineering. **Must be taken S-N.** (Prereq BCE or equivalent degree or completion of Parts I and II of the State Board Examination)

Winter Qtr Sec 1 T—6-9:30, Ex 193, Pederson, Bowers, Maier, Huber, Cerny

CE 3200 INTRODUCTION TO TRANSPORTATION ENGINEERING. 4 degree credits, \$70.

Application of the physical laws of motion and energy as they relate to calculations of resistances to motion, power, and energy requirements, acceleration-deceleration limits and capacity of various modes of transportation. (Prereq Phys 1271 or equiv)

Fall Qtr Sec 1 W—6-9:20, Ex 193, Huber

CE 3400 FLUID MECHANICS. 4 degree credits, \$AEM 5200. \$70.

Fluid properties, fluid statics for liquids and gases. Kinematics of fluid flow. Viscous effects. *Introduction to incompressible and compressible duct flow, boundary layers, lift and drag, potential flow.* Fluid measurements. (Prereq Math 3221, AEM 1015; [or] 3016)

Fall Qtr Sec 1 Lect T—6-9:20, Ex 193, Stefan

Labs—to be arr.

CE 5200 GEOMETRIC DESIGN OF HIGHWAYS. 4 degree credits, \$74.

Forecast of traffic volume demand; impact of vehicle type on geometric design; vertical and horizontal alignment; intersection design; highway capacity. (Prereq 3200, 3100, or #. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 TTh—5-7, MinMet 116, Huber

CE 5201 HIGHWAY TRAFFIC CHARACTERISTICS AND OPERATIONS. 4 degree credits, \$74.

Characteristics and measurements of volume, speed, density, and travel time; characteristics of vehicles and road users; parking characteristics and design of facilities; implications of signs, signals, and markings in traffic control. (Prereq 3200 or equiv. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 TTh—5-7, Ex 193, Huber

CE 5210 INTRODUCTION TO TRANSPORTATION PLANNING. 4 degree credits, \$74.

new

Outline of the transportation planning process as applied to urban areas; data requirements and travel characteristics; trip generation analysis; models of travel distribution; transit characteristics and usage; selection and evaluation of alternate

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

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transportation proposals; transportation and land use linkages. (Prereq #. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **TTh**—5-7, Ex 177, Edwards

CE 5401 WATER RESOURCES ENGINEERING. 5 degree credits, \$92.50.

Introduction to hydrology including precipitation and flood analysis; hydraulic engineering, including conduit flow, pumps, open channel flow, culvert flow, flow measurement; hydraulic structures; introduction to the systems approach. (Prereq 3400 or AEM 5200 or #. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **MWF**—4-6, Ex 193, Song

CE 5405 HYDROLOGY AND HYDROLOGIC DESIGN. 4 degree credits, \$74.

Hydrologic cycle, precipitation, evaporation infiltration, runoff analysis, flood routing, statistical procedures in hydrology, urban hydrology, introduction to mathematical models of medium and large watersheds. (Prereq 5401 or #. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **MWF**—4-6, Ex 193, Bowers

classical civilization

A MAJOR IN CLASSICAL CIVILIZATION CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered every 4 years. Interested students should discuss your plans with an Extension counselor (373-3905).

Classical Civilization is an interdisciplinary major. This year Extension courses which apply toward the fulfillment of major requirements are offered in classics, art history, philosophy, humanities, English, Latin, anthropology, linguistics, and Spanish. Extension Counseling will send the full description of major requirements and a list of courses offered through Extension Classes in 1977-78 which may apply toward the degree.

classics (Clas)

(See also American Studies, Greek, Latin, Art History, and related courses in History, Humanities and Women's Studies)

Lesley Cafarelli, Assistant Professor of Classics
Steven Derfler, Teaching Associate in Classics
Gerald M. Erickson, Associate Professor of Classics
Steven Oberhelman, Teaching Associate in Classics
George Rochefort, Assistant Professor of Classics
James S. Ruebel, Assistant Professor of Classics
Carol A. Schierenbeck, Instructor in Classics
Robert P. Sonkowsky, Professor of Classics

NOTE—Classics (Clas) courses require no knowledge of Latin or Greek.

You need not be majoring in Classical Civilization to register for these classes.

Clas 1002 INTRODUCTION TO CLASSICAL CIVILIZATION: GREECE. 4 degree credits, \$66. (◆\$33)



Age of Pericles: City-State and Intellectual Maturity—"Golden Age" and the ideal of self-realization in service to the polis. The explosion of creativity in literature,

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

philosophy, art. Ideological struggle between democracy and authoritarianism. Failure of the city-state. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Greek [see page 354])

Winter Qtr Sec 1 T—6-8:30, FolH 303, Cafarelli

Clas 1005 INTRODUCTION TO CLASSICAL CIVILIZATION: ROME. 4 degree credits, \$66. (◆\$33)

World of Augustus—from anarchy to Pax Romana; consequences for Roman world. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Latin [see page 354].)

Fall Qtr Sec 1 T—6-8:30, FolH 202, Rochefort

Clas 1019 MAGIC, WITCHCRAFT, AND THE OCCULT IN GREECE AND ROME. 4 degree credits, \$66. (◆\$33)

Reading, lecture, and discussion on magic and witchcraft in classical literature and mythology; on the practice of magic as observed from papyri, epigraphical and literary evidence; and on beliefs and practices concerning prophecy and the interpretation of dreams. Analysis of the changing role of witchcraft and divine possession from earlier to later antiquity with consideration of the relation of these phenomena to changes in economic and social conditions. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Greek and Latin [see page 354])

Fall Qtr Sec 1 M—6-8:30, FolH 308, Erickson

Clas 1042 GREEK AND ROMAN MYTHOLOGY. 3 degree credits, \$49.50 (◆\$24.75)

Classical myths; stories of gods, demigods, and heroes that are a basic component of European cultural heritage; their artistic, religious, psychological, and anthropological implications. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Greek and Latin [see page 354])

Winter Qtr Sec 1 M—6-8:30, FolH 308, Cafarelli

Clas 1045 BASIC PROGRAM IN TECHNICAL TERMINOLOGY AND WORK STUDY. 2 degree credits, \$3045. \$33.

Presentation through computer assisted instruction of prefixes, suffixes, and high frequency roots from Greek and Latin; principles of word compounding and etymology; methods and techniques of word analysis. This course is prerequisite to 3046, 1047, 3047, 1048, 3048, but may be taken during the same quarter as these courses. (No prereq. "Optional Assistance" labs are available concurrently in all technical terms courses (1045, 1047, 1048, 1141, 3045, 3046, 3047, 3048) for voluntary attendance. "Independent" labs are open times for self-study. The "first meeting" is for group orientation of all technical terms courses)

Spring Qtr Sec 1 Th—6:20-8, FolH 303 (first mtg only) Schierenbeck

Optional assistance labs: M—506; TW—6-7; Th—7-8; Sa—10 a.m.-11. WaLib LRC

Independent labs: MTh—8-10, F—8-5; Sa—9 a.m.-5; Su—1-10. WaLib LRC

Clas 1047 TECHNICAL TERMS FOR AGRICULTURE AND RELATED FIELDS. 2 degree credits, \$3047. \$33.

Computer Assisted Instruction covering technical terms in use in agriculture, forestry, and related fields; emphasis on high frequency roots, principles of word formation, word analysis, and associative techniques for efficient learning. May be taken during the same quarter as 1045, 3045. (Prereq 1045 or ¶1045 or 3045 or ¶3045 [or 1048 or 3048 if taken prior to 1977-78]. "Optional Assistance" labs are available concurrently in all technical terms courses (1045, 1047, 1048, 1141, 3045, 3046, 3047, 3048)

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

for voluntary attendance. "Independent" labs are open times for self-study. The "first meeting" is for group orientation of all technical terms courses)

Spring Qtr Sec 1 **Th**—6:20-8, FolH 303 (first mtg only) Schierenbeck

Optional assistance labs: M—5-6; TW—6-7; Th—7-8; Sa—10 a.m.-11. WaLib LRC

Independent labs: MTh—8-10, F—8-5; Sa—9 a.m.-5; Su—1-10. WaLib LRC

Clas 1048 TECHNICAL TERMS OF THE MEDICAL AND BIOLOGICAL SCIENCES. 2 degree credits, \$3048. \$33.

Presentation in English contexts of roots and terms basic in the medical and biological sciences. (Prereq 1045 or ¶1045 or 3045 or ¶3045 [or 1048 or 3048 if taken prior to 1977-78]. "Optional Assistance" labs are available concurrently in all technical terms courses (1045, 1047, 1048, 1141, 3045, 3046, 3047, 3048) for voluntary attendance. "Independent" labs are open time for self-study. The "first meeting" is for group orientation of all technical terms courses)

new

Spring Qtr Sec 1 **Th**—6:20-8, FolH 303 (first mtg only) Schierenbeck

Optional assistance labs: M—5-6; TW—6-7; Th—7-8; Sa—10 a.m.-11. WaLib LRC

Independent labs: MTh—8-10, F—8-5; Sa—9 a.m.-5; Su—1-10. WaLib LRC

Clas 1049 INTRODUCTION TO BIBLICAL ARCHAEOLOGY. 4 degree credits, \$66. (◆\$33)

Introduction to the Archaeology of Palestine, historical geography of the region and introduction to archaeological methods. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Hebrew [see page 354])

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Fall Qtr Sec 1 **M**—7-9:30, FolH 303, Derfler

Clas 1141 TECHNICAL TERMS FOR PARA-MEDICAL VOCATIONS. 2 degree credits, \$1048, \$3048. \$33.

Presentation through Computer Assisted Instruction of Greek and Latin prefixes, suffixes, and roots basic to the vocabulary of para-medical vocations. (No prereq. "Optional Assistance" labs are available concurrently in all technical terms courses (1045, 1047, 1048, 1141, 3045, 3046, 3047, 3048) for voluntary attendance. "Independent" labs are open time for self-study. The "first meeting" is for group orientation of all technical terms courses)

new

Spring Qtr Sec 1 **Th**—6:20-8, FolH 303 (first mtg only) Schierenbeck

Optional assistance labs: M—5-6; TW—6-7; Th—7-8; Sa—10 a.m.-11. WaLib LRC

Independent labs: MTh—8-10, F—8-5; Sa—9 a.m.-5; Su—1-10. WaLib LRC

Clas 3007 THE WORLD OF GREECE. 4 degree credits, \$70. (◆\$35)

Greek civilization from the world of Homer to the age of Alexander. The Greek view of life as seen in art, history, literature, and philosophy. The Etruscans and the golden age of Rome under Augustus. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Greek [see page 354]. Meets concurrently with 5007)

new

Fall Qtr Sec 1 **Th**—6-8:30, FolH 308, Ruebel

Clas 3008 THE WORLD OF ROME. 4 degree credits, \$5008. **To be offered 1978-79.**

Symbols, abbreviations, off-campus class locations begin on page 413. Courses and sections in red have limits on enrollment. See page 23.

Clas 3045 BASIC PROGRAM IN TECHNICAL TERMINOLOGY AND WORD STUDY. 2 degree credits, \$1045. \$35.

See description for 1045. (No prereq. "Optional Assistance" labs are available concurrently in all technical terms courses (1045, 1047, 1048, 1141, 3045, 3046, 3047, 3048) for voluntary attendance. "Independent" labs are open time for self-study. The "first meeting" is for group orientation of all technical terms courses)

new

Spring Qtr Sec 1 **Th**—6:20-8, FolH 303 (first mtg only) Schierenbeck

Optional assistance labs: M—5-6; TW—6-7; Th—7-8; Sa—10 a.m.-11. WaLib LRC

Independent labs: MTh—8-10, F—8-5; Sa—9 a.m.-5; Su—1-10. WaLib LRC

Clas 3046 ADVANCED ETYMOLOGY: VOCABULARY OF THE SCIENCES AND HUMANITIES. 2 degree credits, \$35.

Computer Assisted Instruction based on Latin and Greek roots which have been productive of English derivatives; also regularities of linguistic change (Grimm's Law), principles of etymology, and lessons on specialized terminology in various fields. May be taken concurrently with 1045, 3045. (Prereq 1045 or ¶1045 or 3045 or ¶3045 [or 1048 or 3048 if taken prior to 1977-78]. "Optional Assistance" labs are available concurrently in all technical terms courses (1045, 1047, 1048, 1141, 3045, 3046, 3047, 3048) for voluntary attendance. "Independent" labs are open time for self-study. The "first meeting" is for group orientation of all technical terms courses)

new

Spring Qtr Sec 1 **Th**—6:20-8, FolH 303 (first mtg only) Schierenbeck

Optional assistance labs: M—5-6; TW—6-7; Th—7-8; Sa—10 a.m.-11. WaLib LRC

Independent labs: MTh—8-10, F—8-5; Sa—9 a.m.-5; Su—1-10. WaLib LRC

Clas 3047 TECHNICAL TERMS FOR AGRICULTURE AND RELATED FIELDS. 2 degree credits, \$1047. \$35.

See description for 1047. (Prereq 1045 or ¶1045 or 3045 or ¶3045 [or 1048 or 3048 if taken prior to 1977-78]. "Optional Assistance" labs are available concurrently in all technical terms courses (1045, 1047, 1048, 1141, 3045, 3046, 3047, 3048) for voluntary attendance. "Independent" labs are open time for self-study. The "first meeting" is for group orientation of all technical terms courses)

new

Spring Qtr Sec 1 **Th**—6:20-8, FolH 303 (first mtg only) Schierenbeck

Optional assistance labs: M—5-6; TW—6-7; Th—7-8; Sa—10 a.m.-11. WaLib LRC

Independent labs: MTh—8-10, F—8-5; Sa—9 a.m.-5; Su—1-10. WaLib LRC

Clas 3048 TECHNICAL TERMS OF THE MEDICAL AND BIOLOGICAL SCIENCES. 2 degree credits, \$1048. \$35.

See description for 1048. (Prereq 1045 or ¶1045 or 3045 or ¶3045 [or 1048 or 3048 if taken prior to 1977-78]. "Optional Assistance" labs are available concurrently in all technical terms courses (1045, 1047, 1048, 1141, 3045, 3046, 3047, 3048) for voluntary attendance. "Independent" labs are open time for self-study. The "first meeting" is for group orientation of all technical terms courses)

new

Spring Qtr Sec 1 **Th**—6:20-8, FolH 303 (first mtg only) Schierenbeck

Optional assistance labs: M—5-6; TW—6-7; Th—7-8; Sa—10 a.m.-11. WaLib LRC

Independent labs: MTh—8-10, F—8-5; Sa—9 a.m.-5; Su—1-10. WaLib LRC

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Clas 5005 MADNESS AND DEVIANT BEHAVIOR IN ANCIENT GREECE AND ROME. 4 degree credits, \$75. (◆\$37) (IS)

Definitions of madness in Greece and Rome, theories of its etiology; assessment of predisposing factors in Greece and Rome; madness in mythology, legend, and history; cross-cultural comparison with contemporary United States. (Prereq 2 credits in classics. May be applied toward the CLA foreign language requirement, Route II for Greek or Latin [see page 354]. Qualified students may register for graduate credit at the University of Minnesota.)

Winter Qtr Sec 1 **Th**—6 8:30, FolH 308, Erickson

Clas 5007 THE WORLD OF GREECE. 4 degree credits, \$75. (◆\$37)

See course description for 3007. (No prereq. Meets concurrently with 3007 but requires additional work. May be applied toward the CLA foreign language requirement, Route II for Greek [see page 354]. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Qtr Sec 1 **Th**—6-8:30, FolH 308, Ruebel

Clas 5008 THE WORLD OF ROME. 4 degree credits. **To be offered 1978-79**

Clas 5017 WOMEN IN THE GREEK WORLD. 4 degree credits, \$75. (◆\$37)

The role of women in the classical world, in literature, and in the social structure. Women's legal and economic position. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Greek [see page 354]. Qualified students may register for graduate credit at the University of Minnesota.)

Spring Qtr Sec 1 **T**—6-8:30, FolH 303, Cafarelli

(See also Women's Studies)

communication and composition

(See Communication and Composition courses in English; General College; Speech; Study Skills; and Rhetoric)

computer science (CSci)

Your attention is called to the Undergraduate Development Certificate in Computer Science, 45 and 90 credits, page 405; Management Information Systems, page 237; and Computer Science degree, page 360.

Krzysztof Frankowski, Associate Professor of Computer Science
William Franta, Associate Professor of Computer Science
Wolfgang Giloi, Professor of Computer Science
Oscar Ibarra, Associate Professor of Computer Science
Jay A. Leavitt, Associate Professor of Computer Science
Kurt Maly, Assistant Professor of Computer Science
William D. Munro, Professor of Computer Science
Sartaj Sahni, Assistant Professor of Computer Science
G. Michael Schneider, Assistant Professor of Computer Science
Marvin L. Stein, Professor of Computer Science

A MAJOR IN COMPUTER SCIENCE IN THE INSTITUTE OF TECHNOLOGY CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered every two years. Interested students should discuss plans with an Extension counselor (373-3905).

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

B.S. Major Sequence

Required Preparatory Courses

Math 1311-1321-1331, 3211, 3221; Stat 3091 or 5121 for students intending to take additional work in statistics; at least one additional 3xxx- or 5xxx-level mathematics or statistics course (recommended: Math 5701)

Major Requirements

3001, 3104, 3105, 3106, 3107, 5102, 5104, 5121, 5201, 5301, 5400, 5501

Elective courses which form a coherent program in CSci and application areas; for example, health sciences, transportation systems, environmental engineering, machine design, software systems, mathematics of computation, theory of computation, etc. These courses are to be selected from additional 5xxx-level CSci courses and adviser-approved courses from other departments.

You need not be majoring in CSci to register for these classes.

computer science prerequisites in the institute of technology

The entrance requirement for the Institute of Technology and the prerequisite for Math 1311 is 4 years of high school mathematics including solid geometry and trigonometry. Any student who meets this requirement is eligible to register for Math 1311. However, if it has been two years or more since last taking a mathematics course, the student is strongly advised to register for Math 1201 or possibly Math 0009. A student who has completed Math 0009 or its equivalent (higher algebra) in high school or college (not a trade school) within the last 2 years may register for Math 1201. Math 0009 and Math 1201 take the place of the junior and senior mathematics courses in high school.

CSci 1100 INTRODUCTION TO FORTRAN PROGRAMMING I. 2 degree credits, \$33.

Introduction to computer programming using FORTRAN; elementary-intermediate level applications. A choice of problems is provided to allow for students from different academic disciplines. (Prereq Math 1211 or 1311 or 1611 or #. Informal lab)

Fall Qtr Sec 1 T—6-7:40, LindH 203

CSci 1101 INTRODUCTION TO FORTRAN PROGRAMMING II. 2 degree credits, \$33.

Continuation of 1100. Extended applications including some numerical methods. Not open for credit to CSci majors. (Prereq 1100. Informal lab)

Winter Qtr Sec 1 T—6-7:40, LindH 203

CSci 3001 PERSPECTIVES ON COMPUTERS AND SOCIETY. 4 degree credits, \$NSci 3201.

\$70 plus \$4 special fee. Total \$74 (◆\$35 plus \$4 special fee. Total \$39)

The impact of computers on society. Partnership or confrontation. History of development. Potential for use. Computer utility. Privacy in a computer society. The future of computers. The ultimate machine. Computers in business, industry, art, music, the home. Meets concurrently with NSci 3201. (Prereq sophomore or #)

Spring Qtr Sec 1 W—6-8:30, Arch 55, Schneider

CSci 3101 A FORTRAN INTRODUCTION TO COMPUTER PROGRAMMING. 4 degree credits, \$70 plus \$4 special fee. Total \$74.

Basic FORTRAN computer language with extensions. Programming applications and techniques. The binary number system and elements of computer organization and

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

machine language. Integral laboratory. (Prereq Math 1211 or 1311 or 1611 or #. Some informal laboratory time is required and will be determined as the class progresses.)

Winter Qtr Sec 1 W—6-8:30, MechE 18, Ibarra

Spring Qtr Sec 2 W—6-8:30, MechE 18, Leavitt

CSci 3104 INTRODUCTION TO PROGRAMMING AND PROBLEM SOLVING. 4 degree credits, \$70 plus \$4 special fee. Total \$74.

new

Problem-solving techniques, stepwise refinement, modularization. Algorithms, introduction to evaluation criteria, representation of algorithms, flow charts, meta languages. The PASCAL language. Elements of programming style, program checking. Design of test data. Documentation. Comparison of PASCAL/FORTRAN. (No prereq)

Fall Qtr Sec 1 M—6-8:30, MinMet 116, Frankowski

CSci 3105 FUNDAMENTALS OF ALGORITHMS AND LANGUAGES I. 4 degree credits, \$70 plus \$4 special fee. Total \$74.

Informal and formal approaches to algorithms, their properties, analysis, and synthesis (formulation) as well as the correspondence between programming language and the types of problems to be solved. Numerical algorithms will be discussed together with their implementation in a programming language (FORTRAN). (Prereq competence in a high-level language such as FORTRAN at a minimum level of 1100 [although sophistication at the level of 1101 or 3101 is desirable] or #, Math 1231 or 1331 or 1621 or #; informal lab)

Winter Qtr Sec 1 M—6-8:30, MechE 202, Maly

CSci 3107 INTRODUCTION TO THE STRUCTURE AND PROGRAMMING OF COMPUTER SYSTEMS. 4 degree credits, \$5101. \$70 plus \$4 special fee. Total \$74.

Organization and logical structure of computer systems. Representation of programs and data. Topics: number systems, primitive computer systems, programming in machine language. Extensions to more sophisticated systems, assembly language, sequencing, decision making, arithmetic, logical operations, character manipulation, iteration, sub-routines, data description, introduction to assembler software. (Prereq 1101 or 3101 or equivalent or #. Intended for CSci majors; nonmajors should take 5101. Informal lab.)

Winter Qtr Sec 1 Th—6-8:30, LindH 217, Stein

CSci 5101 STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS I. 4 degree credits, \$3107. \$74 plus \$4 special fee. Total \$78.

This course serves as an introduction to assembly language programming. The topics covered are essentially the same as those listed for 3107, however, the emphasis and projects will be geared to non-majors. Topics include number bases and representation. Analysis of computer machine language instructions, addressing, indexing. Floating point arithmetic, looping, character manipulation, logical operations, subroutine linkage and transfer. Students write assembly language programs. (Prereq 1101 or 3105 or 3101 or #, informal lab. Intended for nonmajors; CSci majors should take 3107. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 Th—6-8:30, MechE 202, Schneider

CSci 5102 STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS II. 4 degree credits, \$74 plus \$4 special fee. Total \$78.

Subroutine coding conventions, argument transfer, interrupts and traps; macros, I/O equipment and operations; buffers, conditional assembly and program segmenta-

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

tion. (Prereq 5101 or #, informal lab. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **M**—6-8:30, MechE 202, Franta

CSci 5121 INTRODUCTION TO DATA STRUCTURES. 4 degree credits, \$74 plus \$4 special fee. Total \$78.

Basic concepts of data and its representation. Linear lists and strings. Array structures and allocation. List-processing languages. Data definition. (Prereq 3106 or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **T**—6-8:30, MechE 202, Sahni

CSci 5122 ADVANCED DATA STRUCTURES. 4 degree credits, \$74 plus \$4 special fee. Total \$78.

Data structure formalisms. Storage structures and organization. Data structures in programming languages. List processing languages. Data definition languages. Data base management systems and design. Problems in information system design. Applications to large data base problems. (Prereq 5121 or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—6-8:30, MechE 202, Sahni

CSci 5201 FUNDAMENTALS OF LOGIC SYSTEM DESIGN. 4 degree credits, \$74 plus \$4 special fee. Total \$78.

Mathematical fundamentals. Sets, set operations, relations, algebraic structure and Boolean algebra, switching functions. Matrix notation and operations for the synthesis of combinational networks and iterative or sequential systems. State reduction and minimization. Design of synchronous flip-flop networks and microprograms for computer networks. (Prereq 3105 or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6-8:30, MechE 202, Giloi

counseling, chemical dependency

(See Chemical Dependency Counseling Certificate, page 396; Public Health, Psychological Foundations; and Industrial Relations courses)

counseling and student personnel psychology (CSPP)

(Department of Psychoeducational Studies)

Gayle K. Lumry, Associate Professor of Clinical Psychology

Warren F. Shaffer, Associate Professor of Educational Psychology

W. Wesley Tennyson, Professor of Educational Psychology

S-N registration not permitted in CSPP unless specifically indicated in course description.

★CSPP 5110 COUNSELING PROCEDURES. 3 degree credits, \$55.50.

For persons whose professional work includes counseling and interviewing; not for certification as school counselor. Emphasis on counseling relationship and principles of interviewing; case studies, role playing and demonstration. **May not be taken S-N.** (No prereq. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Fall Qtr Sec 1 T—7-9:30, Bu 125, Shaffer
Winter Qtr Sec 2 M—7-9:30, Bu 125, Shaffer
Spring Qtr Sec 3 M—7-9:30, Richfield HS 241, Shaffer (Limit 30 students)

CSPP 5130 INTRODUCTION TO GUIDANCE. 3 degree credits, \$55.50.

Philosophy, principles, and practices in development and operation of pupil personnel services; role of counselor, teacher, principal, and specialized personnel; guidance techniques and case studies. **May not be taken S-N.** (Prereq 9 cr in education. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6-8:30, Bu 120, Tennyson

CSPP 5300 WORKSHOP: PSYCHOLOGICAL ASSESSMENT will be offered as a 3-quarter sequence at the VA Hospital in 1978-79.

criminal justice studies (CJS)

(See also IC 0382, American Crime; Sociology; GC 1235, The Law in Society; and GC 3236, Minnesota Corrections: Penal Alternatives)

Frederick C. Brown, Attorney

John M. Callaway, Instructor in Criminal Justice Studies

CJS 5101 CRIMINAL LAW. 4 degree credits, \$74.

An examination of the general part of the criminal law with special attention to its philosophical underpinnings. Particular coverage will be given of the substantive law of homicide, theft, conspiracy, and attempt and the defenses of insanity, self defense, and mistake of fact or law. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 M—6:20-8:50, AndH 310, Brown

CJS 5102 CRIMINAL PROCEDURE. 4 degree credits, \$74.

Processes by which persons are convicted. Discretion to arrest, constitutional law of arrest, search and seizure, role of prosecutor, plea bargaining, sentencing, postconviction relief. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6:20-8:50, AndH 310, Brown

★CJS 5106 LAW AND SOCIAL ISSUES. 4 degree credits, \$74.

An examination of how far the law can go in serving pressing social issues which also impinge on individual liberties such as sexual relations, drug use, abortion, family relations, etc. (No prereq. Limited to 45 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 TTh—7-8:40, RarigC 616, Callaway

cross disciplinary studies

See course listings for:

RELIGIOUS STUDIES
URBAN STUDIES
WOMEN'S STUDIES

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.



danish

(See Scandinavian Languages)

dentistry

For information on noncredit conferences or workshops in dentistry, please contact Dr. H. D. Foglesong, Director, Continuing Dental Education, Room 6-406 Health Sciences Unit "A," 515 Delaware Street S.E., University of Minnesota, Minneapolis 55455; telephone 373-7960.

design (Dsgn)

Your attention is called to the Interior Design Certificate, page 394.

Only courses which have 5 as the second digit may ordinarily be used in a degree program. Courses which have 4 as the second digit may be used as electives on degree programs or, where subject content is evaluated the same, they may meet degree requirements.

Richard Abell, Associate Professor of Interior Design

Mari Lynn Ampe, Lecturer in Design

Sheila Anderson, Lecturer in Interior Design

Andrea Blum, Lecturer in Interior Design

Harris Birkeland, Lecturer in Interior Design

Charlene Burningham, Instructor in Design

Alexander Dekker, Architect

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Gertrude Esteros, Professor and Head of Design

Evelyn Franklin, Instructor in Design

Benjamin Gingold, Lecturer in Interior Design

Alice I. Goacher, Director and Associate Professor of Interior Design Certificate Program

Maria Hanft, Lecturer in Interior Design

Michael J. Hopkins, Design Consultant

Lynn Klein, Lecturer in Design

Mary Litsheim, Lecturer in Design

Virginia Nagle, Associate Professor of Design

Gary Nelson, Lecturer in Interior Design

Marlys Skelton, Lecturer in Interior Design

Phyllis Waggoner, Lecturer in Design

Dsgn 0400C HOME DESIGN AND PLANNING. 3 certificate credits, \$49.50 plus \$1 special fee. Total \$50.50.

Basic principles and elements of lifespace design and planning. Design criteria, values, and methods. Basic techniques of space programming and plan drawing.

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Discussion of site and interior design concepts of family living, building materials and methods, climate control, building restrictions, financing, and the relationship of these factors to lifespace planning. Relationship of the professions of architecture, building contracting, and real estate to the functional, aesthetic, and technological components of lifespace planning. Basic drafting equipment used. Actual projects assigned. (No prereq)

Fall Sem Sec 1 T—6:20-8, Arch 40

★Dsgn 0437C **CRAFTS MATERIALS.** 3 certificate credits, \$49.50.

Orientation to craft materials and techniques in non-textile crafts such as glass, metals, wood, plastic, others. Studio problems. Emphasis this term: stained glass. (No prereq. Limited to 24 students)

Fall Sem Sec 1 M—6:20-8, Jones 1, Blum

★Dsgn 1426 **CALLIGRAPHY.** 3 degree credits, \$49.50.

Calligraphy concepts, layout and page design, Italic and Gothic hands, and development of personal style, production of plates. Penwork concepts and the production of historic and contemporary leggerforms, forms of historic importance including those from great penmen such as Cersci, Vespiano and Albrecht Durer. (No prereq. Limited to 25 students)

Fall Qtr Sec 1 W—6:20-8:50, VH 203, Skelton

Winter Qtr Sec 2 W—6:20-8:50, VH 203, Skelton

★Dsgn 1428 **INTERIOR DESIGN LAYOUT.** 4 degree credits. **To be offered 1978-79 and alternate years.**

★Dsgn 1450 **DRAFTING—BASIC DRAFTING TECHNIQUES.** 4 degree credits, \$66 plus \$1 special fee. Total \$67.

Architectural drafting instruction in the use of drafting instruments. Emphasis on plans, elevations, details, and architectural symbols and vocabulary as related to Interior Design. (No prereq. Limited to 24 students)

Fall Sem Sec 1 M—6:20-8:50, McNH 305, StP Campus, A Dekker

Sec 2 Th—6:20-8:50, McNH 305, StP Campus, A Dekker

Spring Sem Sec 3 W—6:20-8:50, McNH 305, StP Campus, A Dekker

Sec 4 Th—6:20-8:50, McNH 305, StP Campus, A Dekker

Dsgn 1455 **INTERIOR DESIGN I** (replaces 1555). 4 degree credits, \$66 plus \$3 special fee. Total \$69.

Introduction to the basic elements and principles of design and their use in the floor plans and elevations of residential interiors. Lectures include drafting, lettering, layout, furniture, selections, lighting and color. (No prereq)

Fall Sem ★Sec 1 M—6:20-8, Jones 11, Anderson (Limit 50 students)

Sec 2 T—6:20-8, McNH 305, StP Campus, Anderson

Sec 3 W—6:20-8, Jones 11

Spring Sem ★Sec 4 M—6:20-8, Jones 11, Anderson (Limit 50 students)

Dsgn 1456 **INTERIOR DESIGN II** (replaces 1556). 4 degree credits, \$66 plus \$5 special fee. Total \$71.

An extension of the basic skills developed in Dsgn 1455; also, a study of fabrics, their design fiber content, historic background and current trends; window treatments, their design, proportions and yardage; effective accessorization; further discussion on using colors creatively. Several sessions devoted to the demonstration and execution of watercolor rendering of elevations. One field trip. One talk by a professional designer. (Prereq 1455 or old 1555 and 3451.)

Spring Sem Sec 1 T—6:20-8, Jones 10, Anderson

★**Dsgn 1521 COLOR AND DESIGN I.** (replaces 1420). 4 degree credits, \$66 plus \$4 course fee. Total \$70.

Study of color concepts and their applications to design. (No prereq. Limited to 24 students)

Fall Sem Sec 1 **T**—6-9:45, McNH 262, StP Campus, Waggoner

Sec 2 **W**—6-9:45, McNH 262, StP Campus, Klein

Spring Sem Sec 3 **T**—6-9:45, McNH 262, StP Campus, Waggoner

(See also IC 0161, Color and Design Workshop)

★**Dsgn 1523 DRAWING AND DESIGN I.** 4 degree credits, \$66.

Development of basic skills in drawing for the designer. (No prereq. Limited to 24 students)

Fall Qtr Sec 1 **MW**—6:20-8:50, McNH 258, StP Campus, Ampe

★**Dsgn 1525 TWO DIMENSIONAL DESIGN I.** 3 degree credits, \$49.50. (IS)

Experiments with principles of two-dimensional design. (No prereq. Limited to 24 students)

Fall Sem Sec 1 **T**—6-9:45, McNH 258, StP Campus, Klein

★**Dsgn 1531 SURFACE-FABRIC DESIGN.** 4 degree credits, \$66 plus \$14 course fee. Total \$80.

Exploration of surface pattern and composition with varied media and materials: dyeing, resist, batik, stencil, block printing and other. (No prereq. Limited to 18 students)

Spring Qtr Sec 1 **W**—6-10 and arr., McNH B9, StP Campus, Abell

★**Dsgn 1532 STRUCTURE FABRIC DESIGN I.** 4 degree credits, \$66 plus \$14 course fee. Total \$80.

Individual designing with loomed and non-loomed structural techniques; weaving, macrame, plaiting, stitchery and others. (No prereq. Limited to 20 students)

Fall Sem Sec 1 **W**—6-9:45, McNH 16, StP Campus, Burningham

★**Dsgn 1533 METALSMITHING: INTRODUCTION TO TECHNIQUES.** 4 degree credits, \$66 plus \$14 course fees. Total \$80.

Introduction to techniques used in contemporary metalsmithing and jewelry-making. (Prereq 1525. Meets concurrently with 3533. Limited to 16 students)

Fall Qtr Sec 1 **Th**—6-10 and arr., McNH 10, StP Campus, Litsheim

Dsgn 3412 HISTORY OF TRADITIONAL FURNITURE (replaces 3512). 4 degree credits, \$70 plus \$8 course fee. Total \$78.

Furniture from its earliest forms in Egypt through Art Nouveau in Europe with emphasis on the 17th through the 19th centuries in France, England, and the United States. Individual pieces of furniture as well as entire interiors placed within their historical settings showing their significance to the societies who developed and used them. Includes study of the Shaker, American Southwest, Spanish, Italian, Orient, antiquity, Middle Ages, Renaissance, and the Germanic nations. Availability of forms and use in contemporary interiors discussed. (No prereq)

Spring Sem Sec 1 **Th**—6:20-8, Jones 10, Hanft

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★Dsgn 3415 **20TH-CENTURY INTERIORS AND FURNISHINGS.** 3 degree credits, \$52.50.

In-depth study of 20th century design for interiors and furnishings from Victorian to the present time. (No prereq. Limited to 35 students)

Spring Qtr Sec 1 T—6-9, McNH 216, StP Campus, Nagle

★Dsgn 3450 **PERSPECTIVE AND PRESENTATION SKETCHES** [replaces ArtS 1121]. 4 degree credits, \$70.

Instruction in the various methods of perspective, pencil techniques, shades and shadows, in plan and in perspective. Free-hand sketches of furnishings and details. Finished renderings in perspective for final presentation as related to interior design. (No prereq. Limited to 24 students)

Fall Sem Sec 1 W—6:20-8:50, McNH 316, StP Campus, A Dekker

Spring Sem Sec 2 M—6:20-8:50, McNH 316, StP Campus, H Dekker

Sec 3 T—6:20-8:50, McNH 316, StP Campus, A Dekker

★Dsgn 3451 **INTERIOR DESIGN RENDERING.** 3 degree credits, \$52.50.

An approach to perspective rendering, use of colors as applied to rendering, the use of different media as well as developing a personal style of presentation. (No prereq. Limited to 35 students)

Fall Sem Sec 1 W—6:20-8, McNH 216, StP Campus, Birkeland

Spring Sem Sec 2 Th—6:20-8, McNH 216, StP Campus, Birkeland

★Dsgn 3455 **SEMINAR IN INTERIOR DESIGN.** (replaces 3555). 4 degree credits, \$70 plus \$5 special fee. Total \$75.

Advanced study of the elements and principles of spatial design and their direct functional and aesthetic relationships to color, lighting, fabric coordination, and kitchen planning. Class content will include lectures, discussion, visual aids, and one field trip. (Prereq 1456. Limited to 25 students. No auditors)

Fall Sem Sec 1 T—8:15-9:55, McNH 305, StP Campus, A Dekker

★Dsgn 3456 **SEMINAR IN INTERIOR DESIGN.** (replaces 3556). 4 degree credits, \$70 plus \$5 special fee. Total \$75.

An intensive application, for advanced Interior Design projects, of the information and skills acquired in Dsgn 3455. Class time will be used to study architectural symbols and their usage in Interior Design construction and professional project presentation; discussion in class with professional Interior Designers of experience; field trips to studios. The student will also have the opportunity to participate in an out-of-town trip to the Merchandise Mart in Chicago (not a course requirement). (Prereq 3455. Limited to 25 students. No auditors)

Spring Sem Sec 1 T—8:15-9:55, McNH 212, StP Campus, A Dekker

★Dsgn 3459 **INTERIOR DESIGN BUSINESS.** 3 degree credits, \$52.50.

Study of the operations that make up a small design business. These include physical plant, leasing, insurance, staff structure, fees and compensation, delivery of service, client-designer relationship, trade sources. (No prereq. Limited to 35 students)

Fall Sem Sec 1 Th—6:20-8, McNH 216, StP Campus, Nelson

Dsgn 3460-3461 **INTERIOR DESIGN CLINIC** (replaces 3560-3561). 4, 5 or 6 degree credits each semester. \$70, \$87.50 or \$105 each semester.

Individual and collaborative effort involving the advanced interior design students directly with the community and with other disciplines related to all areas of residential and contract design through University sponsored seminar/clinic projects.

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Special emphasis on the designer's responsibility to this environment and ability to communicate within this framework. Experimental internship program on an individual basis with design studios; or individual problems related to individual student's needs in design. Contact instructor, Michael Hopkins at 331-9178. **Offered alternate years.** (Prereq # for 3460; 3460 or # for 3461)

Fall Sem 3460 Sec 1 **Time arr.**, Hopkins

Spring Sem 3461 Sec 2 **Time arr.**, Hopkins

Dsgn 3463 INTERIOR DESIGN: HOUSING AND THE URBAN ENVIRONMENT. [replaces ArtS 3136]. 4 degree credits. \$70.

Housing and its relationship to human interaction, both individual and group, will be studied. Topics in perception of the environment, interior and exterior planning and design, socio-economic patterns (income, poverty, racial distribution, etc.) community organization and community values and how all this relates to housing will be studied. **Offered alternate years.** (No prereq)

Spring Sem Sec 1 **M**—6:20-8, Arch 35

Dsgn 3467 INTERIOR DESIGN: HOUSING, DYNAMICS AND POLICY [replaces ArtS 3135]. **To be offered 1978-79 and alternate years.**

★**Dsgn 3477 CONTRACT DESIGN SEMINAR**(replaces 3577-3578). 4 degree credits, \$70.

Problems in designing of contract and institutional interiors, planning the arrangements, materials, furniture, and colors. The study of planning requirements and an analysis of approach to this type of design. (Prereq 1456 and 1428 or old 1556 and old 1528 or #. Limited to 25 students)

Fall Sem Sec 1 **M**—6:15-8, WuH 240, Hopkins

★**Dsgn 3533 METALSMITHING: FABRICATION.** 4 degree credits, \$70 plus \$14 course fee. Total \$84.

Techniques of raising and forging and other non-casting techniques to create useful objects. (Prereq 1533. Limited to 16 students. Meets concurrently with 1533)

Fall Qtr Sec 1 **Th**—6-10 and arr., McNH 10, StP Campus, Litsheim

★**Dsgn 3536 METALSMITHING: ENAMELING.** 4 degree credits, **To be offered 1978-79 and alternate years.**

★**Dsgn 5561 HOUSING MANAGEMENT.** 5 degree credits, \$92.50.

Focus on new career demands for professionalism in housing management. Emphasis on increasing interpersonal skills. Includes historical perspectives, current status of housing, management approaches, psychosocial impact of housing and community design, specific residential populations. (Prereq #. A joint Day/Extension course limited to 12 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—4-6, McNH 212, StP Campus, Franklin

★**Dsgn 5565 HOMES OF THE WORLD.** 3 or 4 degree credits, \$55.50 or \$74.

Study of home design in selected regions of the world. (Prereq 1551 or 1553 or 3563 or equiv. A joint Day/Extension class limited to 15 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **TTh**—4-5:15, McNH 216, StP Campus, Esteros

distributive education

(See Vocational Education)

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Fall Qtr Sec 1 T—7-9:30, Bu 125, Shaffer
Winter Qtr Sec 2 M—7-9:30, Bu 125, Shaffer
Spring Qtr Sec 3 M—7-9:30, Richfield HS 241, Shaffer (Limit 30 students)

CSPP 5130 INTRODUCTION TO GUIDANCE. 3 degree credits, \$55.50.

Philosophy, principles, and practices in development and operation of pupil personnel services; role of counselor, teacher, principal, and specialized personnel; guidance techniques and case studies. **May not be taken S-N.** (Prereq 9 cr in education. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6-8:30, Bu 120, Tennyson

CSPP 5300 WORKSHOP: PSYCHOLOGICAL ASSESSMENT will be offered as a 3-quarter sequence at the VA Hospital in 1978-79.

criminal justice studies (CJS)

(See also IC 0382, American Crime; Sociology; GC 1235, The Law in Society; and GC 3236, Minnesota Corrections: Penal Alternatives)

Frederick C. Brown, Attorney

John M. Callaway, Instructor in Criminal Justice Studies

CJS 5101 CRIMINAL LAW. 4 degree credits, \$74.

An examination of the general part of the criminal law with special attention to its philosophical underpinnings. Particular coverage will be given of the substantive law of homicide, theft, conspiracy, and attempt and the defenses of insanity, self defense, and mistake of fact or law. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 M—6:20-8:50, AndH 310, Brown

CJS 5102 CRIMINAL PROCEDURE. 4 degree credits, \$74.

Processes by which persons are convicted. Discretion to arrest, constitutional law of arrest, search and seizure, role of prosecutor, plea bargaining, sentencing, postconviction relief. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6:20-8:50, AndH 310, Brown

★CJS 5106 LAW AND SOCIAL ISSUES. 4 degree credits, \$74.

An examination of how far the law can go in serving pressing social issues which also impinge on individual liberties such as sexual relations, drug use, abortion, family relations, etc. (No prereq. Limited to 45 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 TTh—7-8:40, RarigC 616, Callaway

cross disciplinary studies

See course listings for:

RELIGIOUS STUDIES

URBAN STUDIES

WOMEN'S STUDIES

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.



danish

(See Scandinavian Languages)

dentistry

For information on noncredit conferences or workshops in dentistry, please contact Dr. H. D. Foglesong, Director, Continuing Dental Education, Room 6-406 Health Sciences Unit "A," 515 Delaware Street S.E., University of Minnesota, Minneapolis 55455; telephone 373-7960.

design (Dsgn)

Your attention is called to the Interior Design Certificate, page 394.

Only courses which have 5 as the second digit may ordinarily be used in a degree program. Courses which have 4 as the second digit may be used as electives on degree programs or, where subject content is evaluated the same, they may meet degree requirements.

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Alice I. Goacher, Director and Associate Professor of Interior Design Certificate Program

Maria Hanft, Lecturer in Interior Design

Michael J. Hopkins, Design Consultant

Lynn Klein, Lecturer in Design

Mary Litsheim, Lecturer in Design

Virginia Nagle, Associate Professor of Design

Gary Nelson, Lecturer in Interior Design

Marlys Skelton, Lecturer in Interior Design

Phyllis Waggoner, Lecturer in Design

Dsgn 0400C HOME DESIGN AND PLANNING. 3 certificate credits, \$49.50 plus \$1 special fee. Total \$50.50.

Basic principles and elements of lifespace design and planning. Design criteria, values, and methods. Basic techniques of space programming and plan drawing.

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Discussion of site and interior design concepts of family living, building materials and methods, climate control, building restrictions, financing, and the relationship of these factors to lifespace planning. Relationship of the professions of architecture, building contracting, and real estate to the functional, aesthetic, and technological components of lifespace planning. Basic drafting equipment used. Actual projects assigned. (No prereq)

Fall Sem Sec 1 T—6:20-8, Arch 40

★**Dsgn 0437C CRAFTS MATERIALS.** 3 certificate credits, \$49.50.

Orientation to craft materials and techniques in non-textile crafts such as glass, metals, wood, plastic, others. Studio problems. Emphasis this term: stained glass. (No prereq. Limited to 24 students)

Fall Sem Sec 1 M—6:20-8, Jones 1, Blum

★**Dsgn 1426 CALLIGRAPHY.** 3 degree credits, \$49.50.

Calligraphy concepts, layout and page design, Italic and Gothic hands, and development of personal style, production of plates. Penwork concepts and the production of historic and contemporary leggerforms, forms of historic importance including those from great penmen such as Cersci, Vespiano and Albrecht Durer. (No prereq. Limited to 25 students)

Fall Qtr Sec 1 W—6:20-8:50, VH 203, Skelton

Winter Qtr Sec 2 W—6:20-8:50, VH 203, Skelton

★**Dsgn 1428 INTERIOR DESIGN LAYOUT.** 4 degree credits. **To be offered 1978-79 and alternate years.**

★**Dsgn 1450 DRAFTING—BASIC DRAFTING TECHNIQUES.** 4 degree credits, \$66 plus \$1 special fee. Total \$67.

Architectural drafting instruction in the use of drafting instruments. Emphasis on plans, elevations, details, and architectural symbols and vocabulary as related to Interior Design. (No prereq. Limited to 24 students)

Fall Sem Sec 1 M—6:20-8:50, McNH 305, StP Campus, A Dekker

Sec 2 Th—6:20-8:50, McNH 305, StP Campus, A Dekker

Spring Sem Sec 3 W—6:20-8:50, McNH 305, StP Campus, A Dekker

Sec 4 Th—6:20-8:50, McNH 305, StP Campus, A Dekker

Dsgn 1455 INTERIOR DESIGN I (replaces 1555). 4 degree credits, \$66 plus \$3 special fee. Total \$69.

Introduction to the basic elements and principles of design and their use in the floor plans and elevations of residential interiors. Lectures include drafting, lettering, layout, furniture, selections, lighting and color. (No prereq)

Fall Sem ★Sec 1 M—6:20-8, Jones 11, Anderson (Limit 50 students)

Sec 2 T—6:20-8, McNH 305, StP Campus, Anderson

Sec 3 W—6:20-8, Jones 11

Spring Sem ★Sec 4 M—6:20-8, Jones 11, Anderson (Limit 50 students)

Dsgn 1456 INTERIOR DESIGN II (replaces 1556). 4 degree credits, \$66 plus \$5 special fee. Total \$71.

An extension of the basic skills developed in Dsgn 1455; also, a study of fabrics, their design fiber content, historic background and current trends; window treatments, their design, proportions and yardage; effective accessorization; further discussion on using colors creatively. Several sessions devoted to the demonstration and execution of watercolor rendering of elevations. One field trip. One talk by a professional designer. (Prereq 1455 or old 1555 and 3451.)

Spring Sem Sec 1 T—6:20-8, Jones 10, Anderson

★**Dsgn 1521 COLOR AND DESIGN I.** (replaces 1420). 4 degree credits, \$66 plus \$4 course fee. Total \$70.

Study of color concepts and their applications to design. (No prereq. Limited to 24 students)

Fall Sem Sec 1 **T**—6-9:45, McNH 262, StP Campus, Waggoner

Sec 2 **W**—6-9:45, McNH 262, StP Campus, Klein

Spring Sem Sec 3 **T**—6-9:45, McNH 262, StP Campus, Waggoner

(See also IC 0161, Color and Design Workshop)

★**Dsgn 1523 DRAWING AND DESIGN I.** 4 degree credits, \$66.

Development of basic skills in drawing for the designer. (No prereq. Limited to 24 students)

Fall Qtr Sec 1 **MW**—6:20-8:50, McNH 258, StP Campus, Ampe

★**Dsgn 1525 TWO DIMENSIONAL DESIGN I.** 3 degree credits, \$49.50. (IS)

Experiments with principles of two-dimensional design. (No prereq. Limited to 24 students)

Fall Sem Sec 1 **T**—6-9:45, McNH 258, StP Campus, Klein

★**Dsgn 1531 SURFACE-FABRIC DESIGN.** 4 degree credits, \$66 plus \$14 course fee. Total \$80.

Exploration of surface pattern and composition with varied media and materials: dyeing, resist, batik, stencil, block printing and other. (No prereq. Limited to 18 students)

Spring Qtr Sec 1 **W**—6-10 and arr., McNH B9, StP Campus, Abell

★**Dsgn 1532 STRUCTURE FABRIC DESIGN I.** 4 degree credits, \$66 plus \$14 course fee. Total \$80.

Individual designing with loomed and non-loomed structural techniques; weaving, macrame, plaiting, stitchery and others. (No prereq. Limited to 20 students)

Fall Sem Sec 1 **W**—6-9:45, McNH 16, StP Campus, Burningham

★**Dsgn 1533 METALSMITHING: INTRODUCTION TO TECHNIQUES.** 4 degree credits, \$66 plus \$14 course fees. Total \$80.

Introduction to techniques used in contemporary metalsmithing and jewelry-making. (Prereq 1525. Meets concurrently with 3533. Limited to 16 students)

Fall Qtr Sec 1 **Th**—6-10 and arr., McNH 10, StP Campus, Litsheim

Dsgn 3412 HISTORY OF TRADITIONAL FURNITURE (replaces 3512). 4 degree credits, \$70 plus \$8 course fee. Total \$78.

Furniture from its earliest forms in Egypt through Art Nouveau in Europe with emphasis on the 17th through the 19th centuries in France, England, and the United States. Individual pieces of furniture as well as entire interiors placed within their historical settings showing their significance to the societies who developed and used them. Includes study of the Shaker, American Southwest, Spanish, Italian, Orient, antiquity, Middle Ages, Renaissance, and the Germanic nations. Availability of forms and use in contemporary interiors discussed. (No prereq)

Spring Sem Sec 1 **Th**—6:20-8, Jones 10, Hanft

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★Dsgn 3415 **20TH-CENTURY INTERIORS AND FURNISHINGS.** 3 degree credits, \$52.50.

In-depth study of 20th century design for interiors and furnishings from Victorian to the present time. (No prereq. Limited to 35 students)

Spring Qtr Sec 1 T—6-9, McNH 216, StP Campus, Nagle

★Dsgn 3450 **PERSPECTIVE AND PRESENTATION SKETCHES** [replaces ArtS 1121]. 4 degree credits, \$70.

Instruction in the various methods of perspective, pencil techniques, shades and shadows, in plan and in perspective. Free-hand sketches of furnishings and details. Finished renderings in perspective for final presentation as related to interior design. (No prereq. Limited to 24 students)

Fall Sem Sec 1 W—6:20-8:50, McNH 316, StP Campus, A Dekker

Spring Sem Sec 2 M—6:20-8:50, McNH 316, StP Campus, H Dekker

Sec 3 T—6:20-8:50, McNH 316, StP Campus, A Dekker

★Dsgn 3451 **INTERIOR DESIGN RENDERING.** 3 degree credits, \$52.50.

An approach to perspective rendering, use of colors as applied to rendering, the use of different media as well as developing a personal style of presentation. (No prereq. Limited to 35 students)

Fall Sem Sec 1 W—6:20-8, McNH 216, StP Campus, Birkeland

Spring Sem Sec 2 Th—6:20-8, McNH 216, StP Campus, Birkeland

★Dsgn 3455 **SEMINAR IN INTERIOR DESIGN.** (replaces 3555). 4 degree credits, \$70 plus \$5 special fee. Total \$75.

Advanced study of the elements and principles of spatial design and their direct functional and aesthetic relationships to color, lighting, fabric coordination, and kitchen planning. Class content will include lectures, discussion, visual aids, and one field trip. (Prereq 1456. Limited to 25 students. No auditors)

Fall Sem Sec 1 T—8:15-9:55, McNH 305, StP Campus, A Dekker

★Dsgn 3456 **SEMINAR IN INTERIOR DESIGN.** (replaces 3556). 4 degree credits, \$70 plus \$5 special fee. Total \$75.

An intensive application, for advanced Interior Design projects, of the information and skills acquired in Dsgn 3455. Class time will be used to study architectural symbols and their usage in Interior Design construction and professional project presentation; discussion in class with professional Interior Designers of experience; field trips to studios. The student will also have the opportunity to participate in an out-of-town trip to the Merchandise Mart in Chicago (not a course requirement). (Prereq 3455. Limited to 25 students. No auditors)

Spring Sem Sec 1 T—8:15-9:55, McNH 212, StP Campus, A Dekker

★Dsgn 3459 **INTERIOR DESIGN BUSINESS.** 3 degree credits, \$52.50.

Study of the operations that make up a small design business. These include physical plant, leasing, insurance, staff structure, fees and compensation, delivery of service, client-designer relationship, trade sources. (No prereq. Limited to 35 students)

Fall Sem Sec 1 Th—6:20-8, McNH 216, StP Campus, Nelson

Dsgn 3460-3461 **INTERIOR DESIGN CLINIC** (replaces 3560-3561). 4, 5 or 6 degree credits each semester. \$70, \$87.50 or \$105 each semester.

Individual and collaborative effort involving the advanced interior design students directly with the community and with other disciplines related to all areas of residential and contract design through University sponsored seminar/clinic projects.

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Special emphasis on the designer's responsibility to this environment and ability to communicate within this framework. Experimental internship program on an individual basis with design studios; or individual problems related to individual student's needs in design. Contact instructor, Michael Hopkins at 331-9178. **Offered alternate years.** (Prereq # for 3460; 3460 or # for 3461)

Fall Sem 3460 Sec 1 **Time arr.**, Hopkins

Spring Sem 3461 Sec 2 **Time arr.**, Hopkins

Dsgn 3463 INTERIOR DESIGN: HOUSING AND THE URBAN ENVIRONMENT. [replaces ArtS 3136]. 4 degree credits. \$70.

Housing and its relationship to human interaction, both individual and group, will be studied. Topics in perception of the environment, interior and exterior planning and design, socio-economic patterns (income, poverty, racial distribution, etc.) community organization and community values and how all this relates to housing will be studied. **Offered alternate years.** (No prereq)

Spring Sem Sec 1 **M—6:20-8**, Arch 35

Dsgn 3467 INTERIOR DESIGN: HOUSING, DYNAMICS AND POLICY [replaces ArtS 3135]. **To be offered 1978-79 and alternate years.**

★Dsgn 3477 CONTRACT DESIGN SEMINAR(replaces 3577-3578). 4 degree credits, \$70.

Problems in designing of contract and institutional interiors, planning the arrangements, materials, furniture, and colors. The study of planning requirements and an analysis of approach to this type of design. (Prereq 1456 and 1428 or old 1556 and old 1528 or #. Limited to 25 students)

Fall Sem Sec 1 **M—6:15-8**, WuH 240, Hopkins

★Dsgn 3533 METALSMITHING: FABRICATION. 4 degree credits, \$70 plus \$14 course fee. Total \$84.

Techniques of raising and forging and other non-casting techniques to create useful objects. (Prereq 1533. Limited to 16 students. Meets concurrently with 1533)

Fall Qtr Sec 1 **Th—6-10 and arr.**, McNH 10, StP Campus, Litsheim

★Dsgn 3536 METALSMITHING: ENAMELING. 4 degree credits, **To be offered 1978-79 and alternate years.**

★Dsgn 5561 HOUSING MANAGEMENT. 5 degree credits, \$92.50.

Focus on new career demands for professionalism in housing management. Emphasis on increasing interpersonal skills. Includes historical perspectives, current status of housing, management approaches, psychosocial impact of housing and community design, specific residential populations. (Prereq #. A joint Day/Extension course limited to 12 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W—4-6**, McNH 212, StP Campus, Franklin

★Dsgn 5565 HOMES OF THE WORLD. 3 or 4 degree credits, \$55.50 or \$74.

Study of home design in selected regions of the world. (Prereq 1551 or 1553 or 3563 or equiv. A joint Day/Extension class limited to 15 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **TTh—4-5:15**, McNH 216, StP Campus, Esteros

distributive education

(See Vocational Education)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

drug abuse

(See Public Health; Industrial Relations; Psychological Foundations)

early childhood studies program

Mary Lou Gilstad, Coordinator

Ann Carlson, Instructor in Early Childhood Studies

Sue Harrington, Instructor in Early Childhood Studies

Diane McLinn, Instructor in Early Childhood Studies

Sue Stoner, Instructor, Institute of Child Development

A program within the Department of Community Programs, Continuing Education and Extension, which offers continuing education courses for child care workers, family day-care providers, nursery school and Latch Key teachers. Courses are offered in the evening, both on and off campus, and may be applied to a variety of certificate and degree programs. Requests for information should be directed to Community Programs, 206 Wesbrook Hall; or call 376-7401. **Students may preregister for a course by calling 376-7401. Formal registration takes place only at the first session of each course.**

— Fall Quarter —

CPsy 1310 TOPICS IN CHILD PSYCHOLOGY. 3 degree credits, \$49.50.

Readings and experiences, proposed by the student, related to cognitive, personality, perceptual, language, and social development in children. The effects of birth experience and prenatal conditions on infant development; social and emotional development with discussion of attachment; self-esteem; sex-role development; cognitive language, perceptual, and motor development. All topics presented by integrating research findings with practical application. Observation techniques emphasized. (Prereq #) Meets Monday evenings at Nicollet Junior High, Burnsville. Carlson. **See registration information above.**

Elem 5101 WORKSHOP: PROGRAMS AND PROCEDURES OF CURRICULUM DEVELOPMENT. 3 degree credits, \$55.50.

Leadership in procedures; operational processes; major considerations in planning and organizing; interpersonal relationships, and evaluation of improvement programs. The changing status of children, how this has affected social policy, and the effects of this policy on the families of young children and the services provided to them. Will familiarize students with the process of lawmaking and methods of effective lobbying. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota) Meets Wednesday evenings on campus. Stoner, Harrington. **See registration information above.**

new

— Winter Quarter —

Educ 1100 DEVELOPMENT OF PARAPROFESSIONAL SKILLS IN INSTRUCTION. 3 degree credits (maximum 9 cr), \$49.50.

Basic background information for paraprofessionals; training in assisting with instruction. Learning how to use free playtime more effectively in their centers and homes. Emphasis on planning activities that promote creativity, curiosity, intellectual development, and integrating such subjects as social studies, science, and math into free play activities. (Prereq in-service paraprofessional) Meets Monday evenings at New Brighton United Church of Christ. Carlson. **See registration information above.**

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Educ 1100 DEVELOPMENT OF PARAPROFESSIONAL SKILLS IN INSTRUCTION. 3 degree credits, (maximum 9 cr), \$49.50.

Basic background information for the paraprofessional; training in assisting with instruction. Gives preschool teachers and day-care workers ideas on how to handle common discipline problems. Suggestions on ways to cope with physical aggression, destruction of materials, and verbal aggression. Topics include setting up the daily schedule, the environment, and routine situations in such a way that cooperation is promoted and problems minimized. Students will analyze and practice solving actual discipline problems. (Prereq in-service paraprofessional) Meets Thursday evenings at Hennepin Avenue Methodist Church, McLinn. **See registration information above.**

— Spring Quarter —

CPsy 5310 TOPICS IN CHILD PSYCHOLOGY. 3 degree credits, \$55.50.

Selected topics in the general content area. How various aspects of the environment affect a child's behavior and development. These issues will be discussed: family position; kinds of infant stimulation experiences; quality and kind of educational experiences in the home; design of the child's space and play materials; the child's internal environment—his or her thoughts, feelings and opinions. (Prereq upper division and graduate students. Qualified students may register for graduate credit at the University of Minnesota) Meets Wednesday evenings at Woodbury Junior High School, Carlson. **See registration information above.**

CPsy 1310 TOPICS IN CHILD PSYCHOLOGY. 3 degree credits, \$49.50.

Readings and experiences, proposed by the student, related to cognitive, personality, perceptual, language, and social development in children. Topics designed for parents, family day-care providers, child care workers who deal with children from newborn to three years old. Topics include: fostering social and intellectual development; learning what is appropriate behavior for a certain age; structuring the daily schedule to allow for least strain on child and adult; learning how to make inexpensive playthings for infants and toddlers. (Prereq #) Meets Thursday evenings at Park Center High School, Brooklyn Park, McLinn. **See registration information above.**



east asian languages

(See also Art History; History; and Pol 5454, Chinese Government and Politics)

Edward M. Copeland, Professor of East Asian Languages
Un Chol Shin, Instructor in East Asian Languages

Language laboratory fees are charged for courses in which use of the lab is required or recommended. Cassette tapes are available to extension classes students on a take home basis. Students can pick up tapes at the Learning Resources Center on the second floor of

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

chinese (Chn)

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 354); EAL 1032; Pol 5454, Chinese Government and Politics.

Chn 1005-1006 BEGINNING SPOKEN MANDARIN. 3 degree credits each semester. **Not offered 1977-78.**

japanese (Jpn)

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 354); EAL 1032.

Jpn 1005-1006 BEGINNING SPOKEN JAPANESE. 3 degree credits each semester, \$49.50 plus \$5 course fee. Total \$54.50 each semester.

An introduction to modern spoken Japanese intended to provide the basic sentence patterns and vocabulary in Romanization necessary for development of conversational ability. (No prereq for 1005; 1005 or # for 1006)

Fall Sem 1005 Sec 1 M—6:20-8, FolH 304, Copeland

Spring Sem 1006 Sec 2 M—6:20-8, FolH 304, Copeland

east asian languages (EAL)

EAL 1032 RELIGIONS OF EAST ASIA. 4 degree credits, \$EAS 1032, \$ReIS 1032. \$66. (◆\$33)

Religious aspects of Confucianism, Taoism, Buddhism, and Shintoism as practiced in East Asia; Christian missions in east Asia. (No prereq. Meets concurrently with ReIS 1032)

Fall Qtr Sec 1 T—6:20-8:50, FolH 201

ecology and behavioral biology (EBB)

(See also Natural Science; Biology and IC 0511, Alternative Energy Resources)

EBB 3001 INTRODUCTION TO ECOLOGY. 4 degree credits, \$Biol 1104, \$70. (IS)

Basic concepts in ecology dealing with organization, development, and functioning of ecosystems; population growth and regulation. Human impact on such systems. (No prereq. Open to juniors and above, or completion of 90 credits. **Not open to biology majors**)

Winter Qtr Sec 1 M—6:20-9:50, SciCB 175

economics (Econ)

Edward Coen, Professor of Economics

Dale Dahl, Professor of Agricultural and Applied Economics

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

John D. Helmberger, Professor of Agricultural and Applied Economics
Marcel K. Richter, Professor of Economics
Norman J. Simler, Professor of Economics
Harlan M. Smith, Professor of Economics
John G. Turnbull, Professor of Economics
 Additional staff to be assigned

★**Econ 1001, 1002 PRINCIPLES OF ECONOMICS.** 4 degree credits each semester, if no credit received for any other beginning economics course. \$66 each semester. (IS)

Principles underlying economic activity and the way these principles work out through our economic institutions. **1001:** Macro-economics: national income, money and banking, economic growth. **1002:** Micro-economics: demand and supply, competition and monopoly, distribution of income, international trade, and current economic problems. (No prereq. Econ 1001 and 1002 may be taken in either order, or may be taken the same evening or the same term in order for the student to progress more rapidly to other courses. **Each section limited to 35 students unless otherwise indicated**)

CAMPUS

Fall Sem	1001	Sec 1	M —6-7:40, VH 113	
		Sec 2	M —6-7:40, MurH 308	
		Sec 3	M —7:55-9:35, VH 113	
		Sec 4	M —7:55-9:35, MurH 308	
		Sec 5	T —6-7:40, ClaOff B35, StP Campus, Helmberger (Limit 80 students)	
		Sec 6	T —7:55-9:35, BlegH 215	
		Sec 7	T —7:55-9:35, BlegH 235	
		Sec 8	W —6-7:40, BlegH 235	
		Sec 9	W —6-7:40, BlegH 135	
		Sec 10	Th —6-7:40, BlegH 235	
		Sec 11	Th —6-7:40, BlegH 130	
		Sec 12	Th —7:55-9:35, BlegH 235	
	1002	Sec 13	M —7:55-9:35, VH 6	
		Sec 14	T —6-7:40, BlegH 215	
		Sec 15	T —6-7:40, BlegH 430	
		Sec 16	T —7:55-9:35, BlegH 430	
		Sec 17	W —7:55-9:35, BlegH 105	
		Sec 18	Th —7:55-9:35, BlegH 255	
Spring Sem	1001	Sec 19	M —6-7:40, BlegH 115	
		Sec 20	T —6-7:40, RarigC 610	
		Sec 21	T —6-7:40, BlegH 255	
		Sec 22	Th —6-7:40, BlegH 115	
		Sec 23	Th —7:55-9:35, BlegH 115	
		1002	Sec 24	M —7:55-9:35, BlegH 115
			Sec 25	T —6-7:40, ClaOff B35, StP Campus, Helmberger (Limit 80 students)
			Sec 26	T —7:55-9:35, RarigC 610
			Sec 27	W —6-7:40, BlegH 105
			Sec 28	Th —6-7:40, BlegH 125
			Sec 29	Th —7:55-9:35, BlegH 125

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

ALEXANDER RAMSEY HIGH SCHOOL, ROSEVILLE

- Fall Sem 1001** Sec 30 **T**—6-7:40, room 250 (Limit 30 students)
1002 Sec 31 **T**—8-9:40, room 250 (Limit 30 students)
Spring Sem 1002 Sec 32 **T**—6-7:40, room 250 (Limit 30 students)
1001 Sec 33 **T**—8-9:40, room 250 (Limit 30 students)

RICHFIELD SENIOR HIGH SCHOOL

- Fall Sem 1001** Sec 34 **W**—6:20-8, room 149 (Limit 30 students)
Spring Sem 1002 Sec 35 **W**—6:20-8, room 149 (Limit 30 students)

SANDBURG JUNIOR HIGH SCHOOL, GOLDEN VALLEY

- Fall Sem 1001** Sec 36 **W**—6:20-8, room 212
1002 Sec 37 **W**—8:15-9:55, room 212
Spring Sem 1002 Sec 38 **W**—6:20-8, room 212
1001 Sec 39 **W**—8:15-9:55, room 212

IRONDALE HIGH SCHOOL, NEW BRIGHTON

- Fall Sem 1001** Sec 40 **T**—7-8:40, room 310
Spring Sem 1002 Sec 41 **T**—7-8:40, room 310

MINNETONKA HIGH SCHOOL

- Fall Sem 1001** Sec 42 **Th**—7-8:40, room 226
Spring Sem 1002 Sec 43 **Th**—7-8:40, room 226

economics majors and nonmajors

Students should note that Extension Classes will now offer in each field of economics both a course designed for the student who is not an economics major and courses designed for economics majors. Enough of the latter will be offered to enable majors to fulfill the economics requirements for a Bachelor of Arts degree. Most economics courses will be offered on a rotating basis rather than all being offered in any one year. The table below shows the comparable courses for economics majors and for others by fields. In addition to those listed, the following courses are **open to economics majors and non-majors** alike (only prerequisite is Principles of Economics, Econ 1001-1002):

- Econ 3021 SURVEY OF ECONOMIC IDEAS**
Econ 5021 ECONOMICS, ETHICS AND ECONOMIC PHILOSOPHY
Econ 5032 CURRENT ECONOMIC ISSUES
Econ 5611 ECONOMICS OF ENVIRONMENTAL CONTROL
Econ 5621 ECONOMICS OF URBAN PROBLEMS

Courses open to

	Econ Majors (Pre-requisites usually 3101, 3102)	Non-Majors (Pre-requisites Principles of Economics 1001, 1002)
Economic Development	5331	5301
Comparative Economic Systems	5337	5307
International Economics	5431	5401
Labor Economics	3551	3501
Industrial Organization	3651	3601
Money and Banking	5721	3701-5701
Public Finance	3851	3801

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

general economics

Econ 3021 SURVEY OF ECONOMIC IDEAS. 3-5 degree credits, \$17.50 each credit.

A historical and analytical treatment of the development of some of the most important ideas and viewpoints in economics, and their relationship to changing economic conditions and politics. (Prereq 1001 and 1002 or #. Student may register for 3, 4 or 5 credits; assignments and examinations will vary accordingly. Term paper required only for 5 credits)

Fall Sem Sec 1 **Th**—7:55-9:35, BlegH 105, Smith

Econ 5021 ECONOMICS, ETHICS, AND ECONOMIC PHILOSOPHY. 3-5 degree credits.
To be offered 1978-79.

Literature and issues it raises; relation of ethics to economic organization, practice, and policy. Different economic philosophies; elements involved in formulation of economic philosophy. (Prereq 1001, 1002 or equivalent. Student may register for 3, 4 or 5 credits; assignments and examinations will vary accordingly. Term paper required only for 5 credits. Qualified students may register for graduate credit at the University of Minnesota)

Econ 5032 CURRENT ECONOMIC ISSUES. 3-5 degree credits. **To be offered 1978-79.**

Current controversies over economic policies and problems that underlie the controversies. Selected topics, with some opportunity for selection by the students of topics which especially interest them. (Prereq 3001-3002 or #. With consent, course may be taken more than once since topics covered change each time the course is offered. Student may register for 3, 4 or 5 credits; assignments and examinations will vary accordingly. Term paper required only for 5 credits. Qualified students may register for graduate credit at the University of Minnesota)

economic theory

★**Econ 3101 MICROECONOMIC THEORY.** 4 degree credits, \$3104. \$70.

Behavior of households, firms and industries under competitive and monopolistic conditions. Factors influencing production, price and advertising decisions. (Prereq 1002 or #. Limited to 35 students)

Fall Sem Sec 1 **M**—6-7:40, BlegH 120
Sec 2 **T**—6-7:40, BlegH 335
Sec 3 **T**—7:55-9:35, BlegH 335, Simler
Sec 4 **W**—6-7:40, BlegH 225, Richter
Sec 5 **W**—7:55-9:35, BlegH 225, Richter
Spring Sem Sec 6 **T**—6-7:40, BlegH 425, Simler
Sec 7 **W**—6-7:40, BlegH 425, Richter
Sec 8 **W**—7:55-9:35, BlegH 425, Richter

★**Econ 3102 MACROECONOMIC THEORY.** 4 degree credits, \$3105. \$70. (IS)

Factors determining consumption, investment, national income, employment, and the price level. (Prereq 3101 or #. Limited to 35 students)

Fall Sem Sec 1 **T**—6-7:40, BlegH 340, Simler
Spring Sem Sec 2 **M**—6-7:40, BlegH 420, Simler

Econ 3131 WELFARE ECONOMICS. 4 degree credits. \$70.

Introduction to welfare economics. Economic efficiency and the conditions necessary to sustain it. Conflicts between the efficiency and income distribution goals.

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

How market structure and public policies increase or decrease efficiency. (Prereq 3101 or #)

Spring Sem Sec 1 **M**—6-7:40, BlegH 255

development and area studies

Econ 5301 and 5331 ECONOMIC DEVELOPMENT. 4 degree credits, \$74.

The role of simple economic principles and of non-economic factors in raising a nation's standard of living. Lessons from the historical development of modern industrial economies. Problems of economic development of the underdeveloped nations today. Development planning. Issues in U.S. policy toward underdeveloped nations. (Prereq 1001 and 1002 for 5301 (not open to economics majors); 3102 or # for 5331. The courses meet concurrently, but only one may be taken for credit. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 **Th**—6-7:40, BlegH 260, Smith

Econ 5307 and 5337 COMPARATIVE ECONOMIC SYSTEMS. 4 degree credits, \$72.

Different economic systems today, including various socialist, communist, and capitalist economies. Economic ideologies and systems; alternative ways to perform basic economic functions; performance and problems of different economic systems; economic planning and the economic roles of government and the market in different countries; relations between different economic systems. (Prereq 1001 and 1002 for 5307 [not open to economics majors]; 3102 or # for 5337. The courses meet concurrently, but only one can be taken for credit. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 **Th**—6-7:40, BlegH, Smith

international economics

Econ 5401 and 5431 INTERNATIONAL ECONOMICS. 4 degree credits, **To be offered 1978-79.**

Principal issues involved in international economic relations. Significance of foreign trade and investment, foreign exchange and international payments, the International Monetary Fund and Bank, the old gold standard and the new "paper gold." Arguments over foreign aid policies and tariffs. (Prereq 1001 and 1002 for 5401 [not open to economics majors]; 3102 or # for 5431. The courses meet concurrently, but only one can be taken for credit. Qualified students may register for graduate credit at the University of Minnesota)

labor economics

Exon 3501 and 5531 (old 3551) LABOR ECONOMICS. 4 degree credits, \$70 for 3501. (◆\$35) \$74 for 5531.

An introductory course dealing with the role of labor in the economy; labor as a factor of production; population and the labor force; economics of labor markets; labor market institutions; theories of wages and employment; unions and collective bargaining; current wage and employment practices; public policy. (Prereq 1001 and 1002 or # for 3501 [not open to economics majors]; 3102 for 5531. The courses meet concurrently, but only one can be taken for credit. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Sem Sec 1 **W**—6-7:40, BlegH 420, Turnbull

(See also IR 3002, Modern Labor Relations)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Econ 5534 ECONOMIC SECURITY. 4 degree credits, \$74. (IS)

Public and private approaches to problems of economic insecurity. Details of, and economic and social implications of private and public programs. Emphasis on economics of income and employment maintenance and stabilization rather than upon legal or administrative aspects of policy. (Prereq 3501 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 W—6-7:40, BlegH 420, Turnbull

Econ 5537 LABOR MARKET BEHAVIOR AND REGULATION. 4 degree credits. To be offered 1978-79. (IS)

Public and private policies directed at regulation of employer-employee-union relations and labor market behavior. Settlement of disputes. Control of employer and union self-help techniques. Emphasis on economic rather than upon legal or administrative aspect. (Prereq 3551 or equiv or #. Qualified students may register for graduate credit at the University of Minnesota)

Econ 5541 CONTEMPORARY LABOR ISSUES. 4 degree credits. Not offered in 1977-78.

The emphasis this semester is on problems and policies in the field of collective bargaining. (Prereq 3501 or equiv or #. Qualified students may register for graduate credit at the University of Minnesota)

industrial organization

Econ 3601 and 5631 (old 3651) INDUSTRIAL ORGANIZATION AND ANTI-TRUST POLICY. 4 degree credits, \$70. (◆\$35) \$74 for 5631

Economic aspects of anti-trust and related policies. Relations between market structure and economic efficiency and welfare. Economic origins of monopoly and other restraints on competition. Purposes and effects of anti-trust and related legislation. (Prereq 1001 and 1002 or # for 3601 [not open to economics majors]; 3101 or # for 3651. The courses meet concurrently, but only one can be taken for credit. Qualified students may register for graduate credit for 5631 at the University of Minnesota)

Spring Sem Sec 1 M—6-7:40, ClaOff B45, StP Campus, Dahl

◆ **★Econ 5611 ECONOMICS OF ENVIRONMENTAL CONTROL.** 4 degree credits. \$74.

Pollution as an external diseconomy; use of taxes and subsidies to reduce pollution. Replenishable resources; maximum sustainable yield; role of the discount rate; taxation to protect yields and minimize harvesting costs. Non-replenishable resources; controlling rates of depletion. (Prereq 1001, 1002 or equiv. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 M—6-7:40, BlegH 125, Coen

★Econ 5621 ECONOMICS OF URBAN PROBLEMS. 4 degree credits. Not offered 1977-78.

Unemployment and central city decay. Minimum guaranteed income proposals. Low income housing policies. Public policies towards health care. Financing public education. Fiscal problems of cities. Mass transit issues. (Prereq 1001, 1002 or equiv. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

money and banking

Econ 5721 (old 3751) MONEY AND BANKING. 4 degree credits. **To be offered 1978-79.**

Historical development, present pattern, and economic role of financial institutions, with main emphasis on commercial banks, the money supply, and the Federal Reserve System. (Prereq 3102 or #. Qualified students may register for graduate credit at the University of Minnesota)

Econ 3701 and 5701 MONEY, BANKING, AND MONETARY POLICY. 4 degree credits. \$70 (3701) and \$74 (5701).

Money creation; determinants and control of the money supply. Effects of various monetary transactions; elementary monetary theory. Economic role of banks, bank regulation. Tight and easy money; Federal Reserve policy. (Prereq 1001, 1002. **Not open to Econ majors**, who should take 3751, which is also offered alternate years. The courses meet concurrently but only one may be taken for credit. Qualified students may register for graduate credit for 5701 at the University of Minnesota)

Spring Sem Sec 1 Th—7:55-9:30, BlegH 260, Smith

public finance

Econ 3801 and 5821 (old 3851) ELEMENTS OF PUBLIC FINANCE. 4 degree credits. **To be offered 1978-79.**

Survey of taxation and government expenditures, budgeting, fiscal policy and debt, in terms of fiscal institutions, impact on business and the economy, and policy issues. (Prereq 1001 and 1002 or # for 3801 [not open to economics majors]; 3102 or # for 5821. The courses meet concurrently but only one can be taken for credit. Qualified students may register for graduate credit for 5821 at the University of Minnesota)

education

Persons interested in pre-education advising should discuss plans with an Extension counselor (373-3905). Students close to or ready to apply to the College of Education may be referred to the College of Education Career Development Office, 1425 University Ave. S. E., Minneapolis 55455 (373-2257), for further information, or directly to the Admissions Office (373-2155), for application. Most professional education courses must be taken in day school, when schools are in session for observation. However, all programs in the College of Education emphasize the preparation of the teacher in liberal education and in the teaching subjects. Many evening offerings listed in this bulletin may be taken by prospective teachers for later use toward degree programs in the College of Education.

Teachers-in-Service: Many courses in academic fields are available for teachers through evening Extension Classes registration. In addition to the professional education courses available through evening Extension Classes there are extensive offerings in the late afternoon and Saturday morning hours as part of the day school program of the College of Education. For the **Late Afternoon, Saturday Morning, and Extension Bulletin**, contact the College of Education Career Development office, 1425 University Ave. S. E., University of Minnesota, Minneapolis, Minnesota 55455 (373-2257).

Renewal of Teaching Certificates: Former teachers wishing to renew certificates should check with the State Department of Education (296-4440) concerning their individual requirements. (See also PsyF 5305 WORKSHOP IN HUMAN RELATIONS)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Please see the following departmental listings for all College of Education course offerings:

dept. of child psychology (page 96)

Introductory Child Psychology, CPsy 1301
Infancy, CPsy 3302
Adolescent Psychology, CPsy 3303
Introduction to Maturity and Aging, CPsy 3304
Behavioral and Emotional Problems, CPsy 3311
Psychology of Atypical Children, CPsy 3313
Processes of Socialization of Children, CPsy 3331
Children's Learning and Intellectual Skills, CPsy 3347
Adolescent Psychology, CPsy 5303
Behavioral and Emotional Problems, CPsy 5311
Psychology of Atypical Children, CPsy 5313
Introduction to Mental Retardation, CPsy 5315
Clinical Procedures with Children and Youth, CPsy 5319
Processes of Socialization of Children, CPsy 5331
Cognitive Development, CPsy 5343
Language Development, CPsy 5345

dept. of psychoeducational studies

COUNSELING AND STUDENT PERSONNEL PSYCHOLOGY PROGRAM (page 108)

Counseling Procedures, CSPP 5110
Introduction to Guidance, CSPP 5130

PSYCHOLOGY IN THE SCHOOLS TRAINING PROGRAMS (page 307)

School Psychological Services, SchP 5100
Seminar: Psychological Education, SchP 5550

SPECIAL EDUCATION PROGRAMS (page 324)

Education of Exceptional Children, SpEd 5101
Implementing Court Decisions on Education of the Handicapped, SpEd 5105
Education of Learning-Disabled Children, SpEd 5112
Introduction to Mental Retardation, SpEd 5120
Psychoeducational Interventions: Psychotic Children, SpEd 5155
Workshop: Special Education, SpEd 5302
Behavioral Procedures with Mildly and Moderately Handicapped Students, SpEd 5303

dept. of curriculum and instruction

ART EDUCATION PROGRAM (page 74)

Weaving Without a Loom, ArEd 3009
Introduction to Weaving, ArEd 3010
Puppetry, ArEd 3030
Art Media Techniques: Children's Artistic Development, ArEd 5001
Art Media Techniques: Art Appreciation, ArEd 5001

ELEMENTARY EDUCATION PROGRAM, (page 130)

Workshop: Curriculum Implementation in Elementary School Science, Elem 5347

EDUCATION: ADULT, HIGHER, AND TEACHER (page 126)

Adult Education Workshop: Community Education, Educ 5103

MUSIC EDUCATION PROGRAM (page 257)

Workshop: Music for Early Childhood, MuEd 5750

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

SECONDARY EDUCATION PROGRAM (page 307)

Improvisational Drama Techniques in the Classroom, SeEd 5325

educational administration (page 126)

Workshop: Educational Administration, EdAd 5128

Formal Organizations in Education, EdAd 8201

Seminar: The Social Organization of Schools, EdAd 8218

school of physical education, recreation and school health education

DIVISION OF PHYSICAL EDUCATION (page 266)

Modern Dance, PE 1024

Karate, PE 1035

Paddleball-Raquetball, PE 1036

Nordic (Cross-Country) Skiing, PE 1056

Volleyball, PE 1074

Modern Dance, PE 1124

Karate, PE 1135

Modern Dance, PE 1224

Prevention and Care of Injuries, PE 3114

Psychological Application to Sports, PE 3115

Organization and Management of Sport, PE 3143

Dance Therapy, PE 3181

Workshop: Dynamics of Therapeutic Dance/Movement, PE 5181

Practicum: Prevention and Care of Athletic Injuries, PE 5620

Workshop: Dance in Education, PE 5700

Workshop: Physical Education for the Elementary School Child; PE 5710

Swimming for Children, PE 0001

Springboard Diving for Boys and Girls, PE 0100

Golf, PE 0150

Swimming for Men and Women, PE 0250

Scuba for Men and Women, PE 0255

RECREATION, PARK AND LEISURE STUDIES (page 301)

Foundations of Outdoor Education, Rec 5300

Workshop: Contemporary Issues in Leisure Services, Rec 5900

DIVISION OF SCHOOL HEALTH EDUCATION (page 306)

Driver Education I, Hlth 5100

Driver Education II, Hlth 5101

Safety Education, Hlth 5130

The Driver Simulator, Hlth 5602

dept. of social, psychological and philosophic foundations of education

PSYCHOLOGICAL FOUNDATIONS (page 277)

Introductory Statistical Methods, PsyF 5110

Educational Measurement in the Classroom, PsyF 5120

Psychology and Pedagogy of Reading, PsyF 5148

Introduction to the Psychology of Instruction, PsyF 5153

Personality and Social Development, PsyF 5162

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Social Psychology of Education, PsyF 5170
Psychology of Drug Abuse, PsyF 5176
Learning and Educational Practice: The Child and Adolescent, PsyF 5182
Adult Learning and Educational Practice, PsyF 5183
Workshop in Human Relations, PsyF 5305
Directed Study, PsyF 5900

vocational and technical education (page 334)

AGRICULTURE EDUCATION PROGRAM
BUSINESS EDUCATION PROGRAM
DISTRIBUTIVE EDUCATION PROGRAM
HOME ECONOMICS EDUCATION PROGRAM
INDUSTRIAL EDUCATION PROGRAM
VOCATIONAL EDUCATION PROGRAM

(See also **ForP 5403**, WOOD AND WOOD PRODUCTS; **ForP 5405**, PAPER IN TODAY'S WORLD; **FR 5402**, INTERPRETATION AND MANAGEMENT OF FOREST ENVIRONMENTS; **FR 5403**, FUNDAMENTALS OF NATURAL RESOURCE EDUCATION; **Geo 5051**, PHYSICAL GEOLOGY FOR TEACHERS; **Geo 5052**, HISTORICAL GEOLOGY FOR TEACHERS; **Hort 5020**, HORTICULTURE TECHNIQUES FOR EDUCATION MAJORS; **Phil 5324**, ETHICS AND EDUCATION; **Soil 5022**, BASIC SOIL SCIENCE FOR TEACHERS)

education (Educ)

Educ 1100 DEVELOPMENT OF PARAPROFESSIONAL SKILLS IN INSTRUCTION DISCIPLINE AND CLASSROOM MANAGEMENT

Educ 1100 DEVELOPMENT OF PARAPROFESSIONAL SKILLS IN INSTRUCTION: USING FREE PLAY AS A TEACHING TOOL.

See Early Childhood Studies Program, page 115.

★**Educ 5103 ADULT EDUCATION WORKSHOP: COMMUNITY EDUCATION.** 3 degree credits (maximum 12 cr). \$55.50.

Study of topics appropriate to the activities and interests of the participants. An examination of the community education movement—origins, definitions, philosophy; alternative structures; program emphases; methods of financing; advisory councils; establishing a community education program; inter-agency cooperation. (Prereq practicing adult educator and #. A joint Day/Extension class limited to 10 extension students. Qualified students may register for graduate credit at the University of Minnesota)

new

**Fall Qtr Sec 1 Th—9 a.m.-12, Southdale-Hennepin Area Library,
7001 York Ave. So., Edina; Copeland, Cramer**

educational administration (EdAd)

Richard P. Bailey, Dean of General College, Lecturer in Educational Administration
Samuel H. Popper, Professor of Educational Administration

★**EdAd 5128 WORKSHOP: EDUCATIONAL ADMINISTRATION.** 3 degree credits (maximum 6 cr). \$55.50.

Laboratory approach provides opportunities for experienced administrators to concentrate study on common administrative and supervisory problems. Focus this

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

offering; educational writing for publication. (Prereq practicing educational administration or #. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:30-9, ClaOff B30, StP Campus, Bailey

EdAd 8201 FORMAL ORGANIZATIONS IN EDUCATION. 3 degree credits, \$85.50.

Focus on schools; organizations as social systems; individual behavior in organization roles; technical or production processes and management control systems. (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 **T**—6:20-8:50, ClaOff 27, StP Campus, Popper

EdAd 8218 SEMINAR: THE SOCIAL ORGANIZATION OF SCHOOLS. 3 degree credits, \$85.50.

Structural components of school organization examined within the framework of social system theory; classifications of system properties and observation in operational contexts investigated by means of empirical models. (Prereq educational administration major or #. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 **T**—6:20-8:50, ClaOff 27, StP Campus, Popper

electrical engineering (EE)

Your attention is called to the Professional Development Recognition Program in Engineering and Science, page 130.

Gale R. Allen, Control Data Corp.

Paul A. Cartwright, Professor of Electrical Engineering

Robert Cavins, Control Data Corp.

S.J. Lee, Control Data Corp.

Dave Lo, Staff Physicist, Univac

Robert Oswald, Principal Engineer, Univac

Dennis Prestholdt, Manager, Circuits Development, Control Data Corp.

Charles Tolman, Manager, Production Engineering, Univac

A MAJOR IN ELECTRICAL ENGINEERING CAN BE COMPLETED IN THE EVENING.

Through registration in Extension Classes students may earn a bachelor's degree in Electrical Engineering. This degree is granted by the Institute of Technology. Degree candidates must be admitted to the Institute—preferably at the beginning of the third-year sequences.

The Department of Electrical Engineering does not distinguish between its students in day class and evening class sections. All students in a given course take the same examinations and are assigned course grades from a common curve. Grade reports are signed by department administrators and copies are sent to the Office of the I.T. Assistant Dean. The same academic standards apply—graduation with honors, dean's list, probation actions, and so forth.

Students interested in the degree should see page 361.

Your attention is called to the Undergraduate Development Certificate in Electrical Engineering—90 credits and 135 credits, page 407.

Students registering for any EE course who have not previously taken any work in the University of Minnesota system should bring transcripts of college work taken elsewhere to the first meeting of the class. These will be filed to provide background for any future advising and counseling.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

EE 0001 REFRESHER COURSE FOR ELECTRICAL ENGINEERS. No credit, \$66.

Review of electrical engineering fundamentals and applications. (Prereq Bachelor's degree in Engineering, Physics, or Mathematics)

Winter Qtr Sec 1 **W**—6-8:50, MechE 108

EE 1510 ELEMENTS OF ELECTRICAL ENGINEERING. 5 degree credits, \$82.50.

Physical principles underlying the modeling of circuit elements. Two- and three-terminal resistive elements. Kirchhoff's laws. Simple resistive circuits. Linearity in circuits. Storage elements. First order circuits. (Prereq Phys 1291 or #Phys 1291, Math 3221)

Spring Qtr Sec 1 **Lect MW**—6-8:15, MechE 221

Lab M or W—8:15-10:15, EE labs

EE 3010 CIRCUITS, SIGNALS AND SYSTEMS I. 4 degree credits, \$70.

Modeling of lumped parameter networks. Second order circuits. Sinusoidal steady-state analysis. Two port networks. (Prereq 1510)

Fall Qtr Sec 1 **Lect T**—6-8:30, Arch 60. Rec arr.

EE 3011 CIRCUITS, SIGNALS AND SYSTEMS II. 4 degree credits, \$70.

Fourier methods of analysis. Laplace transforms and applications. Frequency and time domain responses. (Prereq 3010)

Winter Qtr Sec 1 **Lect T**—6-8:30, MechE 212. Rec arr.

EE 3012 CIRCUITS, SIGNALS AND SYSTEMS III. 4 degree credits, \$70.

Continuous, discrete-time systems. Feedback: stability, applications. (Prereq 3011)

Spring Qtr Sec 1 **Lect T**—6-8:30, MechE 221. Rec arr.

EE 3050-3051 ELECTRONICS I-II. 4 degree credits each quarter, \$70 each quarter.

3050: Diode circuits and applications. Semiconductor properties. P-N junctions. Junction diodes; JFET characteristics; MOSFET characteristics. FET amplifiers; biasing. **3051:** BJT characteristics. Biasing of BJTs. Low-frequency amplifiers; BJTs and FETs. Vacuum tubes. High-frequency amplifiers. Miller approximation; BJTs and FETs. (Prereq 3010-3011 or #3010-3011)

Fall Qtr **3050** Sec 1 **Lect M**—6-10, LindH 217. Rec arr.

Winter Qtr **3051** Sec 2 **Lect M**—6-10, MechE 221. Rec arr.

EE 3100-3101 ELECTROMAGNETIC FIELDS I-II. 4 degree credits each quarter, \$70 each quarter.

Electrostatic, magnetostatic, and electromagnetic field theory based on fundamental experimental laws, including properties of dielectric and magnetic materials. (Prereq Phys 1291, Math 3231 or #Math 3231 with # for 3100; 3100 for 3101)

Fall Qtr **3100** Sec 1 **W**—Lect, Rec 6-10, MechE 202. Other rec arr.

Winter Qtr **3101** Sec 2 **W**—Lect, Rec 6-10, MechE 202. Other rec arr.

EE 3400-3401 JUNIOR ELECTRICAL ENGINEERING LABORATORY. 3 degree credits, \$52.50 plus \$10 special fee. Total \$62.50.

Experiments in circuits, electronics and electromagnetic fields. (Prereq 3050-3051 or # for 3400; 3400 for 3401)

Fall Qtr **3400** Sec 1 **Th**—6-9:45, ElectE labs

Winter Qtr **3401** Sec 2 **Th**—6-9:45, ElectE labs

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

EE 3402 JUNIOR ELECTRICAL ENGINEERING LABORATORY. 2 degree credits, \$35 plus \$10 special fee. Total \$45.

Experiments in circuits, electronics and electromagnetic fields. (Prereq ¶5050)

Spring Qtr Sec 1 **Th**—6-9:45, ElectE labs

EE 5002 METHODS OF NETWORK AND SYSTEM ANALYSIS. 4 degree credits, \$74.

Topological and matrix methods. State-space methods. Discrete-time systems. Computer meth ods. (Prereq 3012. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Lect T**—6:8:30, ElectE 115

Lect, Rec Th—6-8:30, ElectE 115

EE 5050 NONLINEAR ELECTRONIC CIRCUITS. 4 degree credits, \$74.

Linear wave-shaping circuits. Piece-wise linear circuit analysis. Switching models of diodes and transistors. Transistor logic circuits. Bistable multivibrators. Astable multivibrators. Nearly sinusoidal oscillators. (Prereq 3051, 3012 or ¶3012. May not be taken for graduate credit)

Spring Qtr Sec 1 **Lect M**—6-10, MechE 212. Rec arr.

EE 5100 ELECTROMAGNETIC FIELDS III. 4 degree credits, \$74.

Plane-wave propagation, transmission lines, antennas, and other topics. (Prereq 3101. May not be taken for graduate credit)

Spring Qtr Sec 1 **W**—Lect and Rec 6-10, MechE 202. Other rec arr.

EE 5101 ELECTROMAGNETIC FIELDS LABORATORY. 1 degree credit, \$18.50.

(Prereq 3401, 5100 or ¶5100. May not be taken for graduate credit)

Spring Qtr Sec 1 **T**—6-9, ElectE labs

Sec 2 **Th**—6-9, ElectE labs

EE 5300 ELECTROMECHANICS. 4 degree credits, \$74.

Lumped-parameter models of magnetic- and electric-field systems; energy methods, quasi-static electromagnetics and circuit characterization. Induction and synchronous rotating machines; incremental-motion transducers. Associated laboratory using a generalized rotating machine to illustrate the basic characteristics of typical electromagnetic energy-conversion machines. (Prereq 3101, 3011, or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Lect T**—6-8:30, ElectE 115

Lect, Rec Th—6-8:30, ElectE 115

EE 5310 ELECTRIC POWER SYSTEMS. 4 degree credits, \$74.

Introduction to power-system engineering. Modeling of power-system components: transformers, synchronous generators, transmission lines, cables, and circuit breakers. Describing equations for power networks. Solution techniques for load-flow and fault studies. Power-system relaying. (Prereq 5300, 5002 or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Lect T**—6-8:30, ElectE 115

Lect, Lab Th—6-9, ElectE 115, ElectE labs

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

elementary education (Elem)

★Elem 5347 WORKSHOP: CURRICULUM IMPLEMENTATION IN ELEMENTARY SCHOOL SCIENCE. 3 degree credits (maximum 6 cr) \$55.50.

new

Offered with a single program for each offering: treating concept foundations, goals and teaching and evaluation procedures. This offering concentrates on curriculum materials for teaching in an outdoor setting (i.e., Environmental Science Center units, Winston Press Examining Your Environment Series, etc.) with an emphasis on outdoor activities for a winter setting. (Time will be taken for lunch and dinner.) (Prereq elementary teaching experience. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Spec Term Sec 1 Sat. Jan. 28, 8:30 a.m.-4:30,

Sun. Jan. 29, 9 a.m.-3:30,

Fri. Feb. 10, 6-9,

Sat. Feb. 11, 8 a.m.-9,

Sun. Feb. 12, 8 a.m.-2,

Mon. Feb. 27, 6-9.

Woodlake Nature Center, Richfield (66th and Lakeshore Drive)

Jan. 28, 29, Feb 27

Long Lake Conservation Center (Aiken) Feb. 10, 11, 12.

R. Johnson

Elem 5101 WORKSHOP: PROGRAMS AND PROCEDURES OF CURRICULUM DEVELOPMENT: DECISION MAKING FOR YOUNG CHILDREN.

See Early Childhood Studies Program, page 115.

A variety of courses and workshops in elementary education is available to local school districts which wish to jointly design continuing education experiences to meet local staff needs. Such offerings are limited only by the personnel resources of the College.

For further information about planning individually designed courses or workshops contact:

Director of Continuing Professional Education, Department of Curriculum and Instruction, 150 Peik Hall, University of Minnesota, Minneapolis, Minnesota 55455, Telephone: 373-3300.

engineering

PROFESSIONAL DEVELOPMENT RECOGNITION PROGRAM IN ENGINEERING AND SCIENCE (POST-BACCALAUREATE LEVEL)

This is a specialized program to meet the educational needs of the practicing engineer or scientist. The applicant identifies his professional development educational objectives for a two-year period. With a Professional Development advisor, he establishes a coherent program of study to meet his objectives. Upon completion, he is presented a citation documenting his work. Engineers and scientists may undertake several of these programs throughout their professional life times.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

ENGINEERING

Extension Classes and the Institute of Technology offer regular IT classes in several areas of engineering. These are listed under Civil Engineering, I of T, Electrical Engineering and Mechanical Engineering. See also related science offerings in Chemistry, Computer Science, Mathematics and Physics.

ENGINEERING REFRESHERS AND SPECIAL CLASSES.

In addition to regular IT classes, Extension Classes and the Institute of Technology offer a number of refresher and noncredit special classes in engineering and science to meet the needs of the practicing engineer.

CONTINUING EDUCATION PROGRAMS IN ENGINEERING AND SCIENCE

For students wishing to pursue extended coherent programs in engineering and science, several have been developed. Your attention is called to the Undergraduate Development Certificate series in Engineering and Science page 404, and the Professional Development Recognition Program in Engineering and Science.

Further details may be obtained by contacting the Director, Continuing Education in Engineering and Science, 11 Mines and Metallurgy, University of Minnesota, Minneapolis, Minnesota 55455; (612) 373-3132.

Please see the following departmental listings for course offerings:

AEROSPACE ENGINEERING AND MECHANICS

CHEMISTRY

CIVIL ENGINEERING

COMPUTER SCIENCE

ENGINEERING ENGLISH (English)

ENGINEERING GRAPHICS

GEO-ENGINEERING

INDUSTRIAL ENGINEERING/OPERATIONS RESEARCH

INSTITUTE OF TECHNOLOGY

MATHEMATICS

MECHANICAL ENGINEERING

METALLURGY-MATERIALS SCIENCE

PHYSICS

(See also Comp 3031, Technical Writing for Engineering Students)

engineering graphics (EG)

(See also Professional Development Recognition Program in Engineering and Science, above)

EG 1025 ENGINEERING GRAPHICS. 4 degree credits. **To be offered 1978-79.**

english (Engl)

Your attention is called to the Master of Arts in English, page 383.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Chester Anderson, *Professor of English*
 Kent Bales, *Associate Professor of English*
 Robert L. Brown, Jr., *Assistant Professor of English*
 Michael Dennis Browne, *Associate Professor of English*
 Julie Carson, *Assistant Professor of English*
 Thomas S. Clayton, *Professor of English*
 Genevieve Escure, *Assistant Professor of English*
 Philip G. Furia, *Associate Professor of English*
 Madelon Gohlke, *Associate Professor of English*
 Edward M. Griffin, *Associate Professor of English*
 David Haley, *Associate Professor of English*
 Michael Hancher, *Associate Professor of English*
 Gordon Hirsch, *Associate Professor of English*
 J. Dennis Hurrell, *Professor of English*
 Onwuchekwa Iemie, *Associate Professor of English*
 Calvin Kendall, *Associate Professor of English*
 Archibald I. Leyasmeyer, *Associate Professor of English*
 John W. Lippert, *Lecturer in English*
 David Luke, *Assistant Professor of English*
 Andrew MacLeish, *Professor of English*
 Raymond McClure, *Assistant Professor of English*
 John McNally, *Associate Professor of English*
 J. Lawrence Mitchell, *Associate Professor of English*
 Thomas A. Nelson, Jr., *Assistant Professor of English*
 Charles Norman, *Lecturer in English*
 Gordon W. O'Brien, *Professor of English*
 Justin O'Connell, *Lecturer in English*
 Peter J. Reed, *Associate Professor of English*
 William Rosendahl, *Professor of English*
 Donald Ross, Jr., *Associate Professor of English*
 Robert Solotaroff, *Associate Professor of English*
 Martin Steinmann, Jr., *Professor of English*
 Charles J. Sugnet, *Assistant Professor of English*

A MAJOR IN ENGLISH CAN BE COMPLETED IN THE EVENING.

All courses required in the major are offered yearly. Interested students should discuss plans with an Extension counselor (373-3905). (See page 383 for information on a Master's degree in English).

B.A. Major Sequence

Required Preparatory Course

One course selected from 1011-1030, introductory courses in British and American literature

Major Requirements

Twelve courses in English or composition, 11 of which must be at the 3xxx and 5xxx levels; either 3241 or 3242, Shakespeare (A-N only); and six other courses—one in each of the following categories:

1) a course in the study of a literary genre; 2) a course in the intensive study of one or two writers; 3) a course in literary criticism or a course in language; 4) a course in the literature of the Middle Ages or Renaissance; 5) a course in American or English literature of the 17th or 18th centuries; 6) a course in American or English literature since 1800.

A list of courses identifying the requirements that each fulfills may be obtained from the Director of Undergraduate Studies, 204 Lind Hall (376-4653).

Each student electing to major in English will draw up a course of study in consultation with advisers when entering the program. Three courses within the major may be taken S-N. Students are encouraged to concentrate the remaining 5 electives within one area of study: for example, in a literature period, a genre (such as poetry, drama, novel), criticism, language, American literature, expository or creative writing. Students should confer with their advisers about what concentrations are likely to be useful preparation for their intended careers.

You need not be majoring in English to register for these classes.

composition (Comp) and communication (Comm)

Introductory Composition 1001 and Communication 1001 are being offered without prerequisite during the 1977-78 school year. Students who feel the need for a refresher course before enrolling in Composition 1001 or Communication 1001 are encouraged to take Composition 0001, Preparatory Composition, or Comp 0002C, Composition Grammar Review, if they feel their background in structure or grammar is insufficient, or American Studies 1101, 1102, 1103, American Life, if they feel their reading background has been neglected. Rhetoric 1147, Efficient Reading, and PO 1001, Personal Orientation, How to Study, will also be useful. Students with transfer credits in freshman English of less than 6 quarter or 3 semester credits (including credits from other colleges with the University of Minnesota) should contact the Continuing Education and Extension Counseling Office, 314 Nolte Center, 373-3905, for information as to their proper choice of courses.

Students with exceptionally high skills in English may earn exemption from the freshman English requirement by earning a very high score in the English placement test. Students interested in this alternative should contact the Counseling Office, 314 Nolte Center, 373-3905. A student who receives a grade of A in Comm 1001 should check with the communications department concerning possible exemption from 1002.

For other courses fulfilling freshman English requirement, see General College writing laboratory courses. See also Rhetoric.

Comp 0001 PREPARATORY COMPOSITION. No credit, \$66. (IS)

Intensive drill on grammatical forms, structure, and theme writing. Recommended for those whose primary need is organization and development of themes. On instructor's recommendation, students may receive 4 credits in Introductory Composition. Inquiries should be directed to Extension Counseling. (No prereq)

Fall Qtr Sec 1 **Th**—6:20-8:50, LindH 325

★Comp 1001-1002 INTRODUCTORY COMPOSITION. 4 degree credits each quarter, \$66 each quarter. (IS)

A two-quarter sequence offering extensive guided practice in the structural and stylistic features of exposition and argumentation. Not an introduction to literary studies or to humanities. Satisfies the freshman English requirement for most degree programs. (No prereq for 1001; 1001 for 1002. Limited to 26 students)

MINNEAPOLIS CAMPUS

Fall Qtr **1001** Sec 1 **M**—6:20-8:50, MechE 212
 Sec 2 **M**—6:20-8:50, MurH 302
 Sec 3 **M**—6:20-8:50, MurH 420
 Sec 4 **T**—6:20-8:50, MechE 212
 Sec 5 **T**—6:20-8:50, MurH 302
 Sec 6 **T**—6:20-8:50, LindH 4

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413. Courses and sections in red have limits on enrollment. See page 23.

- Sec 7 **W**—6:20-8:50, LindH 4
 Sec 8 **W**—6:20-8:50, LindH 315
 Sec 9 **Th**—6:20-8:50, LindH 4
 Sec 10 **Th**—6:20-8:50, LindH 315
1002 Sec 11 **M**—6:20-8:50, LindH 340
 Sec 12 **T**—6:20-8:50, LindH 340
 Sec 13 **W**—6:20-8:50, LindH 340
 Sec 14 **Th**—6:20-8:50, LindH 340
Winter Qtr 1001 Sec 15 **M**—6:20-8:50, LindH 4
 Sec 16 **M**—6:20-8:50, LindH 315
 Sec 17 **T**—6:20-8:50, LindH 4
 Sec 18 **W**—6:20-8:50, LindH 4
 Sec 19 **W**—6:20-8:50, LindH 315
 Sec 20 **Th**—6:20-8:50, LindH 4
1002 Sec 21 **M**—6:20-8:50, MurH 302
 Sec 22 **M**—6:20-8:50, VH 203
 Sec 23 **T**—6:20-8:50, MurH 302
 Sec 24 **W**—6:20-8:50, MurH 420
 Sec 25 **Th**—6:20-8:50, MurH 302
 Sec 26 **Th**—6:20-8:50, VH 203
Spring Qtr 1001 Sec 27 **M**—6:20-8:50, LindH 340
 Sec 28 **T**—6:20-8:50, LindH 340
 Sec 29 **T**—6:20-8:50, VH 213
 Sec 30 **W**—6:20-8:50, LindH 340
 Sec 31 **Th**—6:20-8:50, LindH 340
1002 Sec 32 **M**—6:20-8:50, VH 213
 Sec 33 **M**—6:20-8:50, LindH 4
 Sec 34 **T**—6:20-8:50, LindH 4
 Sec 35 **W**—6:20-8:50, VH 213
 Sec 36 **Th**—6:20-8:50, VH 213

RICHFIELD HIGH SCHOOL

- Fall Qtr 1001** Sec 37 **T**—6:20-8:50, room 242
 Sec 38 **W**—6:20-8:50, room 241
Winter Qtr 1002 Sec 39 **Th**—6:20-8:50, room 241

SANDBURG JUNIOR HIGH SCHOOL, GOLDEN VALLEY

- Winter Qtr 1001** Sec 40 **T**—6:20-8:50, room 204
 Sec 41 **W**—6:20-8:50, room 204
Spring Qtr 1002 Sec 42 **Th**—6:20-8:50, room 212

MINNETONKA HIGH SCHOOL

- Winter Qtr 1001** Sec 43 **T**—6:20-8:50, room 120
Spring Qtr 1002 Sec 44 **T**—6:20-8:50, room 120

IRONDALE HIGH SCHOOL, NEW BRIGHTON

- Fall Qtr 1001** Sec 45 **W**—6:20-8:50, room 313
Winter Qtr 1002 Sec 46 **W**—6:20-8:50, room 313

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

Comp 0002C GRAMMAR REVIEW. 3 certificate credits, \$49.50. (IS)

An intensive step-by-step review of grammar (parts of speech, inflections, syntax) punctuation, and spelling for those who want a "refresher" before going into other English courses or who feel the need of a basic course in the fundamentals of English usage; designed to develop the ability to compose correct and effective sentences. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, LindH 229, O'Connell

Winter Qtr Sec 2 T—6:20-8:50, LindH 305, O'Connell

Spring Qtr Sec 3 T—6:20-8:50, LindH 305, O'Connell

Comp 0003C REVIEW OF BUSINESS ENGLISH. 3 certificate credits, \$49.50.

For those who have been out of school for a while or had poor preparation for business English while in school. Modern, streamlined sentence structure, paragraphing, punctuation and spelling. Brief introduction to letter form and organization. Emphasis on brevity, accuracy, meaning and vividness. (No prereq)

Fall Qtr Sec 1 W—6:20-8:50, LindH 215, Lippert

Winter Qtr Sec 2 M—6:20-8:50, LindH 215, Lippert

Spring Qtr Sec 3 T—6:20-8:50, Woodbury JHS 104, Lippert

(See also IC 0431, Expository Writing)

Comp 0004C BUSINESS CORRESPONDENCE. 3 certificate credits, \$49.50.

A practical class for people recognizing the value of effective expression in business letters. The principal types of letters will be analyzed and the written assignments will emphasize the development of a letter style capable of producing economical, clear, action-getting letters. (No prereq)

Fall Qtr Sec 1 M—6:20-8:50, LindH 215, Lippert

Winter Qtr Sec 2 W—6:20-8:50, LindH 215, Lippert

★Comp 1027 INTERMEDIATE COMPOSITION. 4 degree credits, \$66. (IS).

Offers training in the fundamentals of expository writing, through lectures and the criticism of manuscripts. Expository writing—articles, essays, criticism, etc. (Prereq 1001, 1002 or exemption. Limited to 26 students.)

Fall Qtr Sec 1 M—6:20-8:50, LindH 315

Sec 2 T—6:20-8:50, LindH 315

Sec 3 W—6:20-8:50, LindH 320

Winter Qtr Sec 4 Th—6:20-8:50, LindH 315

Sec 5 M—6:20-8:50, LindH 320

Sec 6 T—6:20-8:50, LindH 315

Spring Qtr Sec 7 W—6:20-8:50, LindH 315

Sec 8 Th—6:20-8:50, LindH 315

Sec 9 M—6:20-8:50, LindH 315

★Comp 1111 CREATIVE WRITING—POETRY. 4 degree credits, \$66.

A course for those with some (not much) experience in writing poetry. Students' poems will be discussed. There will be numerous handouts and assignments, also a short reading list. (No prereq. Limited to 15 students)

Winter Qtr Sec 1 T—6:20-8:50, LindH 303, Dennis Browne

Spring Qtr Sec 2 T—6:20-8:50, LindH 303

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★Comp 1113, 1114, 1115 AN INTRODUCTION TO CREATIVE WRITING. 4 degree credits each quarter, \$66 each quarter.

An approach to creative writing for students who have not done a great deal of writing. Concentration on development of techniques. Course will proceed by definite assignments. **1113, 1114:** Short Story I and II. **1115:** Prose Pieces I. (No prereq. Limited to 20 students)

Fall Qtr 1113 Sec 1 **M**—6:20-8:50, VH 213

Sec 2 **T**—6:20-8:50, VH 213

Sec 3 **W**—6:20-8:50, VH 213

Winter Qtr 1113 Sec 4 **Th**—6:20-8:50, VH 213

Sec 5 **M**—6:20-8:50, VH 213

1114 Sec 6 **M**—6:20-8:50, LindH 217

Sec 7 **T**—6:20-8:50, VH 213

Sec 8 **W**—6:20-8:50, VH 213

Spring Qtr 1114 Sec 9 **Th**—6:20-8:50, LindH 320

Sec 10 **M**—6:20-8:50, LindH 320

1115 Sec 11 **T**—6:20-8:50, LindH 320

Sec 12 **W**—6:20-8:50, LindH 320

(See related courses in Informal Courses in writing; EdAd 5128, Educational Writing for Publication; Th 3115, Introduction to Playwriting; GC 3531, Writing for Business and the Professions; Spch 5204, Writing Radio and Television Drama)

Engl 0006C BASIC TECHNICAL WRITING I, II. 3 certificate credits each semester, \$49.50 each semester.

Review of basic English and introduction to technical writing. Designed for people in the technical industries. Includes sentence design, spelling and punctuation. Covers basic techniques of definition, description, process, procedure, and analysis writing. Organization and correlation into text of tables, diagrams, illustrations. Emphasis on accuracy, brevity, simplicity, and layout. Prepares students to write simple reports, specifications, procedures, material for manuals, supervisory materials, and basic letters of a technical nature. (No prereq. Need not be taken in sequence)

Fall Qtr I Sec 1 **T**—6:20-8:50, LindH 215, Lippert

Winter Qtr II Sec 2 **T**—6:20-8:50, LindH 215, Lippert

★Comp 3030 IMAGINATIVE WRITING. 3 degree credits each quarter, (maximum 12 cr—no topic may be repeated for cr) \$52.50 each quarter.

An examination of the essential elements in creative writing. Discussion of the creative process in writing poetry, fiction, and drama and intensive practice in all three genres. Readings, discussion, and practice will include such topics as diction, structure, plotting, and dialogue. No examinations, but weekly assignments and a final portfolio. (No prereq. Limited to 25 students)

Fall Qtr Sec 1 **T**—6:20-8:50, LindH 320

Spring Qtr Sec 2 **T**—6:20-8:50, LindH 215

Comp 3031 TECHNICAL WRITING FOR ENGINEERING STUDENTS. 4 degree credits, \$3085, \$70.

Focus on the form and style of Engineering writing in reports, documentation, and correspondence. Exercises and frequent practical examples, tied as much as possible to students' major fields. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:50, LindH 325

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Comp 3101 INTERMEDIATE FICTION WRITING. 4 degree credits, \$70.

Course for those with some experience in fiction writing. Discussion of students' works and set texts; assignments and experiments. (No prereq)

Spring Qtr Sec 1 **M**—6:20-8:50, LindH 303

Comp 3104 INTERMEDIATE POETRY WRITING. 4 degree credits, \$70.

Course for those with some experience in poetry writing. Discussion of students' works and set texts; assignments and experiments. (No prereq)

Spring Qtr Sec 1 **T**—6:20-8:50, LindH 229

Comm 1001-1002, 1003 COMMUNICATION. 4 degree credits each quarter \$66 each quarter.

Emphasizes both theory and practice, intended to prepare the student to meet more effectively the various communicative demands in contemporary settings, to improve his capabilities in reading, writing, speaking and listening. **1001:** The process of communication; study of language and non-verbal means of communicating; clarity and appropriateness in expository discourse. **1002:** Deliberation, reasoning, non-logical appeals and ethical concerns in problem-solving and persuasive discourse. **1003:** Study of communicator, message, media, and social implications in mass communications. (Prereq 1001 for 1002, 1003. Comm 1001 and 1002 or 1001 and 1003 meet all requirements which are satisfied by Comp 1001-1002, Freshman Composition)

Fall Qtr **1001** Sec 49 **T**—6:20-9:50, ForH 150

Sec 50 **W**—6:20-9:50, AH 150

Sec 51 **Th**—6:20-9:50, Ramsey HS 131-133, Roseville

Winter Qtr **1001** Sec 52 **M**—6:20-9:50, Ph 131

1002 Sec 53 **T**—6:20-9:50, Arch 10

Sec 54 **Th**—6:20-9:50, Ramsey HS 251, Roseville

Spring Qtr **1001** Sec 55 **T**—6:20-9:50, Arch 10

1002 Sec 56 **M**—6:20-9:50, Arch 5

1003 Sec 57 **T**—6:20-9:50, NH 213

literature

(See other literature courses in American Studies, Classics, General College, German, Humanities, Scandinavian Languages, Slavic Languages, South Asian Studies, Spanish, Women's Studies)

Engl 1012 INTRODUCTION TO THE LITERATURE OF THE RENAISSANCE: 1485-1660. 4 degree credits, \$66. (◆\$33)

◆ Typical authors: More, Sidney, Spenser, Shakespeare, Donne, Milton. (No prereq)

Spring Qtr Sec 1 **Th**—6:20-8:50, LindH 229, Haley

Engl 1017 INTRODUCTION TO MODERN LITERATURE: POETRY. 4 degree credits. \$66 (◆\$33) (IS)

◆ Modern literature: poetry. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:50, LindH 217, Brown

Engl 1018 INTRODUCTION TO MODERN LITERATURE: PROSE FICTION. 4 degree credits, \$66. (◆\$33)

◆ Selected texts; critical discussion and writing.

Winter Qtr Sec 1 **Th**—6:20-8:50, LindH 215, MacLeish

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Engl 1241 INTRODUCTION TO SHAKESPEARE. 4 degree credits, \$66. (◆\$33)

An introductory survey of Shakespeare's major plays. Designed for the student who has not yet studied Shakespeare closely and wants to acquire a working familiarity with his dramas, his characters, and his language. Reading: 8-10 plays. Assignment: short exams and quizzes; final exam or optional term paper. (No prereq)

Spring Qtr Sec 1 **T**—6:20-8:50, LindH 315, Clayton

Engl 3111, 3112, 3113 SURVEY OF ENGLISH LITERATURE. 4 degree credits each quarter, \$70 each quarter. (◆\$35 each quarter)

An historical survey of the major figures, movements, and trends in English literature. **3111:** From Chaucer to Marvell, including such figures as Spenser, Shakespeare, and Donne. **3112:** From Milton to Johnson, including such figures as Dryden, Swift and Pope. **3113:** From Blake to Yeats, including such authors as Wordsworth, Coleridge, Keats, Tennyson, and Browning. (No prereq)

Fall Qtr 3111 Sec 1 **Th**—6:20-8:50, LindH 302, Rosendahl

Winter Qtr 3112 Sec 2 **Th**—6:20-8:50, LindH 302, Haley

Spring Qtr 3113 Sec 3 **Th**—6:20-8:50, LindH 302, Rosendahl

Engl 3241, 3242 SHAKESPEARE. 4 degree credits each quarter, \$70 each quarter. (◆\$35 each quarter) (IS)

3241: Reading from Shakespeare's early and middle periods—**A Midsummer Night's Dream, Hamlet**, a history play, and three or four other plays. **3242:** Plays from the middle and later periods—all sections will read **King Lear, Macbeth, The Tempest**, three of four other plays. (No prereq)

Fall Qtr 3241 Sec 1 **Th**—6:20-8:50, LindH 229, Steinmann

Winter Qtr 3242 Sec 2 **T**—6:20-8:50, LindH 229, Gohlke

Engl 3251 THE KING JAMES BIBLE AS LITERATURE. 4 degree credits, \$70. (◆\$35)

The Old Testament and literary tradition. Readings in the historical narratives, prophets, psalms and wisdom literature. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:50, LindH 302, O'Brien

Engl 3411, 3412, 3413 AMERICAN LITERATURE. 4 degree credits each quarter, \$70 each quarter. (◆\$35) (IS)

Historical survey of important authors, intellectual currents, movements, conventions, genres, and themes. Lecture course with emphasis on wide reading. **3411:** Beginnings through Hawthorne. **3412:** Thoreau and Melville through James. **3413:** Crane through the 1930's. (No prereq)

Fall Qtr 3411 Sec 1 **W**—6:20-8:50, LindH 325, Griffin

Winter Qtr 3412 Sec 2 **W**—6:20-8:50, LindH 340, Ross

Spring Qtr 3413 Sec 3 **W**—6:20-8:50, LindH 325, Griffin

Engl 3455 AMERICAN SHORT STORY. 4 degree credits, \$70. (◆\$35)

Historical examination of the American short story from the 18th century to the present. (No prereq)

Spring Qtr Sec 1 **W**—6:20-8:50, LindH 229, Steinmann

Engl 3631 SATIRE. 4 degree credits, \$70. (◆\$35)

The satiric tradition in English and American literature; the motives for and uses, techniques, varieties, and results of satire. (No prereq)

Spring Qtr Sec 1 **W**—6:20-8:50, LindH 215, Leyasmeyer

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Engl 3851 THE ENGLISH LANGUAGE. 4 degree credits, \$70. (◆\$35)

An informal, nontechnical examination of the English language in order to explore such basic questions as how you learned English, how your knowledge of it can be described, and what it has in common with other languages. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, LindH 217, Escure

Spring Qtr Sec 2 **M**—6:20-8:50, LindH 325, R. Brown

Engl 5151 18TH-CENTURY ENGLISH NOVEL. 4 degree credits, \$74. (◆\$37)

Selected novels by such authors as Defoe, Richardson, Fielding, Smollett, Sterne, and Jane Austen. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6:20-8:50, LindH 229, McClure

Engl 5152 19TH-CENTURY ENGLISH NOVEL. 4 degree credits, \$74. (◆\$37)

Selected novels from the Romantic and Victorian periods by such authors as Scott, Dickens, the Brontes, Thackeray, Eliot, and Hardy. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **M**—6:20-8:50, LindH 203, Luke

Engl 5153 20TH-CENTURY ENGLISH NOVEL. 4 degree credits, \$74. (◆\$37) (IS)

Selected novels by such modern authors as Conrad, Ford, Joyce, Woolf, Lawrence, Forster, Sillitoe, Murdoch, Cary, and Waugh. Course will discuss major novelists and representative novels, and trends, themes, technical innovations, social influences and traditions evident in the British novel roughly from the turn of the century to about 1960. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **M**—6:20-8:50, LindH 203, Reed

Engl 5221 CHAUCER. 4 degree credits. \$74. (◆\$37) (IS)

A reading of the **Canterbury Tales** and an introduction to Chaucer's language. This course is prerequisite to all other courses in Middle English Literature (5215-5222). (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **M**—6:20-8:50, LindH 302, McClure

Engl 5261 MILTON. 4 degree credits, \$74. (◆\$37) (IS)

Paradise Lost, **Samson Agonistes**, minor poems, **Areopagitica**, and often, although not always, **Paradise Regained**. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—6:20-8:50, LindH 302, O'Brien

Engl 5414 CONTEMPORARY AMERICAN LITERATURE. 4 degree credits, \$74. (◆\$37)

The characteristic quality of contemporary (or "Post-Modernist") literature; significant ways in which it differs from earlier (largely "Modernist") American literature. Particular attention to: the sense of contemporary reality of some of our best novelists (Ellison, O'Connor, Pynchon, Bellow) and the ways that they try to capture that reality in **Invisible Man**, **Wise Blood**, **The crying of Lot 49**, and **Herzog**, respectively; the two leading "schools" of contemporary American poetry—the "Confessional" represented by Lowell and Plath, and the "Projectivist" represented by Olson and Creeley; and to a poet who bridges both schools—Alan Ginsburg—and a work which tries to bridge fiction and non-fiction: Norman Mailer's **The Armies of the Night**. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-8:50, LindH 303, Solotaroff

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Engl 5451, 5452 AMERICAN NOVEL. 4 degree credits each quarter, \$74 each quarter. (◆\$37)

◆ **5451:** through the 19th century. Typical authors: Cooper, Stowe, James, Hawthorne, Melville, Twain. **5452:** late 19th and 20th centuries. Typical authors: Dreiser, Cather, James, Hemingway, Fitzgerald, Faulkner. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr 5451 Sec 1 T—6:20-8:50, LindH 217, Bales

Spring Qtr 5452 Sec 2 T—6:20-8:50, LindH 302, Ross

Engl 5610 TWENTIETH-CENTURY WRITERS. 4 degree credits, \$74 each quarter. (◆\$37)

◆ The novels of John Fowles (**The Magus, The Collector, The Ebony Tower**). The plays of Harold Pinter and Tom Stoppard, and (perhaps) the criticism of Susan Sontag and George Steiner. The craft of writing and the relationship between imagination and "Reality." May be repeated for credit. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:20-8:50, LindH 303, Hurrell

Engl 5711 CLASSICS OF LITERARY CRITICISM. 4 degree credits, \$74. (◆\$37)

◆ Major works in the classic critical tradition. Aristotle and Coleridge and such authors as Plato, Horace, Longinus, Sidney, Dryden, Johnson, Hume, and Eliot. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:20-8:50, LindH 305, Clayton

Engl 5815 HISTORY OF ENGLISH LANGUAGE. 4 degree credits, \$74. (◆\$37)

◆ The development of the English language from Old to Early Modern English: phonology, morphology, and syntax. (Prereq Engl 5851 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6:20-8:50, LindH 305, Mitchell

(See also Linguistics)

Engl 5843 AMERICAN SOCIAL DIALECTS. 4 degree credits, \$74. (◆\$37)

◆ **new** Methods for and results of investigating social and class variation in American English; urban dialects. (Prereq 5851 or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 Th—6:20-8:50, LindH 305, Escure

Engl 5851 STRUCTURE OF MODERN ENGLISH. 4 degree credits, \$74. (◆\$37)

◆ Survey of modern English grammar dealing with English phonology, syntax, and semantics; variations and change in English. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-8:50, LindH 320, Escure

Engl 5871 THE LANGUAGE OF LITERATURE. 4 degree credits, \$74. (◆\$37)

◆ **new** The place of linguistic analysis in a theory of literary criticism; stylistic analysis in Europe and American since 1920; theories of linguistic description relevant to critical analysis; applications to texts in prose and poetry. (Prereq 5851 or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 Th—6:20-8:50, LindH 215, MacLeish

Engl 5910 PLAYS OF THE GUTHRIE SEASON. 4 degree credits, \$74. (◆\$37)

◆ This course will study the plays offered by the Guthrie Theatre in the 1977-78 season in both the main and the second theaters. It will examine the plays as literature, the

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

process of staging, and the final productions. Attending the performances is a course requirement. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-8:50, LindH 229, Leyasmeyer

Engl 5940 KURT VONNEGUT. 4 degree credits, \$74. (◆\$37)

The core of the course will be Vonnegut's seven novels, from *Player Piano* to *Breakfast of Champions*. In discussing these novels considerable attention will be paid to their social commentary and to the social contexts in which they were written, as well as to relevant biography, technique, theme and form. Short stories, drama and nonfiction will receive secondary emphasis in class, but may provide opportunities for individual student projects. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6:20-8:50, LindH 203, Reed

Engl 5940 HEMINGWAY AND FITZGERALD. 4 degree credits, \$74. (◆\$37)

(No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 2 **Th**—6:20-8:50, LindH 215, Furia

Engl 8310 BLAKE. 4 degree credits, \$114.

(No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 **T**—6:20-8:50, LindH 217, Sugnet

Engl 8610 WILLA CATHER. 4 degree credits, \$114.

(No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 **M**—6:20-8:50, LindH 302, Bales

entomology, fisheries, and wildlife (Ent)

(See also IC 0221, Wild Animals of the North Woods; and IC 0222, Identifying Birds: An Introduction to Ornithology)

Basil Furgula, Professor of Entomology, Fisheries, and Wildlife

★**Ent 3020 PRINCIPLES OF BEEKEEPING.** 4 degree credits, \$70. (◆\$35)

Lecture and laboratory demonstrations. History of beekeeping; life history and behavior of honey bees; colony and apiary management; pollination and hive products; honey bee diseases and their control. (Prereq Biol 1101 or #. Limited to 50 students.)

Spring Sem Sec 1 **M**—6:20-8:50 (2 Sat labs arr.) HodsonH 495,
StP Campus, Furgula



family planning administration (FPAd)

Harry Foreman, M.D., Director of Population Studies

FPAd 5243 TOPICS IN FAMILY PLANNING. 2-5 degree credits, \$18.50 per credit.

Independent study relating to various aspects of family planning programs. (Prereq #. [HSci Unit A 12-176, U of M, 373-9695]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Arr.** Foreman

Winter Qtr Sec 2 **Arr.** Foreman

Spring Qtr Sec 3 **Arr.** Foreman

family social science (FSoS)

(See also College of Home Economics; General College home life courses. IC 0411, Family Communications: What Are Your Rules; SW 0515C, Interviewing Individual and Family; Soc 3501, The Family System)

Alan Briskin, Lecturer in Family Social Science

Linda Budd, Assistant Professor of Family Social Science

Patrick Doyle, Instructor in Family Social Science

Cynthia Englund, Instructor in Family Social Science

Geraldine Gage, Professor of Family Social Science

Richard Hey, Professor of Family Social Science

Anne Nevaldine, Instructor in Family Social Science

Joyce Portner, Instructor in Family Social Science

Kay Zuengler, Instructor in Family Social Science

FSoS 1001 DYNAMICS OF DATING, COURTSHIP, AND MARRIAGE. 3 degree credits, \$3001. \$49.50 plus \$1 special fee. Total \$50.50. (◆\$24.75 plus \$1 special fee. Total \$25.75) (IS)

This course is designed to assist individuals seeking self-understanding, mutually satisfying interpersonal relations, happy marriage, and successful parenthood. These personal goals are worked toward through discussion and study about: personal growth and maturity; desirable mate qualities and selecting a marriage partner; purposes and problems of dating, courtship and engagement; family philosophy, religion, values and planning; early marriage adjustments, child training and discipline, sex education, income management, problem solving, and decision making. Integral parts of the course are: case studies, movies, and student discussion. Students are invited for discussion and personal or family counseling with the instructor. (No prereq.)

Fall Qtr Sec 1 **W**—6:20-8:50, BlegH 120, Zuengler

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

FSOs 1002 DYNAMICS OF MARRIAGE AND PARENTHOOD. 3 degree credits, \$1001. \$49.50 plus \$1 special fee. Total \$50.50. (◆\$24.75 plus \$1 special fee. Total \$25.75)

This course is designed to help individuals and couples achieve understanding of self and others, happiness in marriage, and success as parents. It focuses upon husband-wife and parent-child relations, with individual development and family unity as specific goals. These are worked toward through discussion and study of such important and practical issues as: self-analysis, developmental tasks, team decision-making and problem solving, family philosophy, religion, values, and planning; child training and discipline, sex education, communication, income management, marriage adjustments regarding money, sex, in-laws, and children, etc., and general dynamics of family interaction. Integral parts of the course are: case studies, movies, and student discussion. Students are invited for discussion and personal or family counseling with the instructor. (Prereq engaged or married students)

Winter Qtr Sec 1 T—6:20-8:50, BlegH 120, Englund

FSOs 1025 PARENTHOOD. 3 degree credits, \$49.50. (◆\$24.75)

Examination of differing concepts of family roles—father, mother, son, daughter, brother, sister; their implications for parent-child and sibling interaction. Effects of parenthood on husband-wife relations. (No prereq)

Spring Qtr Sec 1 T—6:20-8:50, BlegH 120

FSOs 3015 LIFE-STYLES OF EDUCATED AMERICAN WOMEN. 4 degree credits, \$70.

The roles and statuses of American women compared and contrasted with those of men. Women's education: types, influences, uses. Possibilities and needs for change in terms of future objectives. (Prereq #)

Winter Qtr Sec 1 Th—6:20-8:50, Bu 123, Portner

(See also Women's Studies)

★FSOs 5001 HUMAN SEXUAL BEHAVIOR. 4 degree credits, \$74. (IS)

The nature of sexual functioning, sexual development, ethics, and attitudes, research problems. (Prereq 15 credits in psychology or sociology. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—6:20-8:50, BlegH 120, Nevaldine

Spring Qtr Sec 2 W—6:20-8:50, BlegH 120, Nevaldine

FSOs 5200 FAMILY RELATIONSHIP. 5 degree credits, \$Soc 5501. \$92.50.

Analysis of the family as an institution and system of relationships. Survey of current developments in the study of the family. Analysis of changes in American society and their influences on family life. (Prereq Psy 1001 or equiv, Soc 1001 or equiv. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6:20-8:50, ClaOff B25, StP Campus, Budd

FSOs 5219 PROBLEMS IN FAMILY FINANCIAL MANAGEMENT. 3-4 degree credits, \$55.50-\$74.

The analysis of financial management processes, and modification of management behavior by application of behavioral techniques. (Prereq 3260, or 5260, 3001 or #. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 TTh—4:15-6, BioSci 58, StP Campus, Gage

(See also IC 0571, Individual and Family Budget Planning)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★**FSoS 5240 SPECIAL TOPIC: DEVELOPMENTAL STAGE THEORY.** 3 degree credits, \$55.50.

Theoretical and conceptual models of psychological stage theory developed by Piaget, Kohlberg, Dabrowski, Piechowski, Rodgers, and Briskin as they apply to individual and family development. The main focus will be on the conceptual models and clinical applications of stage theory to children, adolescents, older adults, and cross-age groups. (Prereq grad, professional, or undergrad standing; 9 cr in psychology or equiv. A joint Day/Extension class limited to 20 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 M—4:30-6:45, NorH 317, StP Campus, Briskin

FSoS 5240 SPECIAL TOPICS IN FAMILY SOCIAL SCIENCE: FAMILY LIFE EDUCATION. (3 degree credits (maximum 16 cr). \$55.50

new

Sources and types of materials available; techniques of family life education, preparation and evaluation of instructional materials. **May not be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 2 M—6:20-8:50, Bu 123, Hey

See TV course, FSoS 5240, Understanding Divorce, page 379.

For information on non-credit conferences or workshops in Family Social Science, please contact the Department of Conferences and Institutes, 131 Nolte Center for Continuing Education (373-3151).

For information on off-campus credit courses in Home Economics areas, please call or write College of Home Economics, University of Minnesota, St. Paul, Minnesota 55108 (373-0935).

finance (BFin)

Your attention is called to the Credit and Financial Management Certificate program, page 400.

Mary L. Bochnak, Lecturer in Finance

James Bowditch, Lecturer in Finance

E. Norman Eck, North Central Credit & Finance Management Assoc.

James M. Gahlon, Lecturer in Finance

Printice L. Gary, Jr., Lecturer in Finance

Larry Gru, Lecturer in Finance

Paul F. Jessup, Professor of Finance and Insurance

John R. Kujawa, Credit Manager, Agri Products Division, Pillsbury Co.

George A. Mairs, III, Vice President, Treasurer, Director, Mairs & Power, Inc.

John Matyi, Lecturer in Finance

Peter Rosko, Associate Professor of Finance and Insurance

Roger R. Schaeffer, Lecturer in Finance

John Schreiner, Associate Professor of Finance

Dennis L. Senneseth, Lecturer in Finance

Stanley Shavers, Financial Analyst, 3M Company

Thomas W. von Kuster, Jr., Lecturer in Finance

★**BFin 0001C INTRODUCTION TO INVESTMENTS.** 3 certificate credits. \$49.50.

A fundamental course for adult investors who wish a general background of information on the investment field. Course covers nature of various kinds of securities;

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

statistical and investment analysis of securities; vocabulary and practices of the securities business; investment practices of investor groups. (No prereq. Limited to 45 students)

Fall Qtr Sec 1 **T**—6:20-8:50, NH 209, Mairs

Spring Qtr Sec 2 **W**—6:20-8:50, BlegH 125, Matyi

BFin 0002C CREDIT AND FINANCIAL MANAGEMENT PROBLEMS. 3 certificate credits, \$49.50.

Analyzing and solving specific case problems using advanced Credit and Financial Management Techniques. Emphasis is placed on the proposal and support of realistic decisions and courses of action. (Prereq Acct 3160, Mktg 0087C or #)

Winter Qtr Sec 1 **W**—6:20-8:50, BlegH 255, Kujawa

(See also IC 0571, Individual and Family Budget Planning)

★BFin 3000 FINANCE FUNDAMENTALS. 4 degree credits. \$70.

Provides students with a comprehensive, analytical introduction to the principal concepts in Finance. After considering the general business environment, the course examines valuation theory. Then financial management decisions concerning uses and sources of funds are presented, thus introducing students to capital budgeting. The course concludes by surveying the nation's financial markets. (Prereq Acct 1051 or 1026. **May not be taken S-N.** Limited to 40 students)

Fall Qtr Sec 1 **M**—6-9, BlegH 145, Gahlon

Sec 2 **M**—6:30-9:30, Irondale HS 310, New Brighton; Bowditch
(Limit 35 students)

Sec 3 **T**—6-9, BlegH 125, Gru

Sec 4 **W**—6-9, BlegH 360, Matyi

Sec 5 **W**—6-9, RarigC 616, Bochnak

Sec 6 **Th**—6-9, BlegH 205, Rosko

Winter Qtr Sec 7 **M**—6:30-9:30, Minnetonka HS 119, Gary

Sec 8 **T**—6-9, BlegH 110, Schaeffer

Sec 9 **W**—6-9, BlegH 340

Sec 10 **Th**—6:30-9:30, Sandburg JHS 213, Golden Valley; Schreiner

Spring Qtr Sec 11 **M**—6-9, BlegH 125, Bochnak

Sec 12 **M**—6:30-9:30, Ramsey HS 121-123, Roseville; Bowditch

Sec 13 **T**—6-9, BlegH 125, Gru

Sec 14 **W**—6-9, RarigC 610, Senneseth

Sec 15 **Th**—6-9, BlegH 105, von Kuster

★BFin 3300 INVESTMENT MANAGEMENT AND FINANCIAL MARKETS. 4 degree credits, \$0001C. \$70.

Introduces decision procedures in a variety of financial markets. The banking system and other financial intermediaries, risk-return relationships of various marketable securities, analytical techniques of portfolio management in the context of the nation's changing financial markets. (Prereq 3000. Limited to 40 students)

Fall Qtr Sec 1 **W**—5:30-8, BlegH 255, Senneseth

Winter Qtr Sec 2 **Th**—5:30-8, BlegH 340, Jessup

Spring Qtr Sec 3 **Th**—5:30-8, BlegH 340, Jessup

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

finnish

(See Scandinavian Languages)

food science and nutrition (FScN)

(See also Home Economics; Microbiology; IC 0231, Current Issues in Nutrition: Fallacies and Fact; and Phcg 1800, Nature's Remedies)

Paul B. Addis, Professor of Food Science and Technology
Elaine Asp, Instructor in Consumer Food Science
William M Breene, Associate Professor of Food Science and Technology
James K. Bumpas, Lecturer in Food Service Management
Alexander Dekker, Lecturer in Hospitality Management
Margaret D. Doyle, Professor of Nutrition
Joan Gordon, Professor of Food Chemistry
P.V.J. Hegarty, Professor of Nutrition
Alfred T. May, Lecturer in Food Science
Howard A. Morris, Professor of Dairy and Food Technology
Lura M. Morse, Professor of Nutrition
Eugene H. Sander, Associate Professor of Food Process Engineering
O.P. Snyder, Jr., Associate Professor of Food Service Management
Dorothy G. Verstraete, Associate Professor of Nutrition
Edmund A. Zottola, Professor of Food Microbiology

FScN 1012 FOOD FOR THOUGHT—FOR FOOD. 4 degree credits, \$1010, \$66 plus \$4 course fee. Total \$70. (◆\$33 plus \$4 course fee. Total \$37)



Nutritional requirements of man, basis of a balanced diet, effect of processing and storage on food quality and nutritional value, chemical additives and food safety, FDA, food fads, dieting, future world food production problems and answers. Individual 1-week dietary survey to be conducted. (No prereq)

Fall Qtr Sec 1 **Th**—6:15-9, FScN 15, StP Campus, Addis

FScN 1102 TECHNOLOGY OF FOOD PROCESSING. 4 degree credits, \$66 plus \$4 course fee. Total \$70.



Introduction to the technology of processing and distribution of foods with special reference to the prevention of biological, physical, and chemical deterioration. Changes in food composition, microbiological safety, food laws and regulations, technologies of the major food processes such as canning, freezing, drying, cereal and oilseed processing. (Prereq high school chemistry and biology)

Fall Qtr Sec 1 **T**—6:15-9:30, ACBLMS 125, StP Campus, Zottola

★**FScN 3400 FOOD DEMONSTRATION TECHNIQUES.** 2 degree credits, \$35 plus \$10 course fee. Total \$45.



Purposes and techniques of demonstrations for the general public and in business. Production techniques and performance for television and motion picture demonstrations. (Prereq 1213 or 3403. Limited to 25 students.)

Spring Qtr Sec 1 **Th**—6:15-9, McNH 146, 126, StP Campus, Asp

FScN 3622 FOOD AND NUTRITION IN THE LIFE CYCLE. 4 degree credits, \$70 plus \$4 course fee. Total \$74.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Application of the principles of nutrition to meet the special requirements of growth, development, adult maintenance, and aging. The delivery of nutrients from foods as influenced by various life styles and stages. (Prereq 1602 and 3472 and physiology or human biology or #)

Winter Qtr Sec 1 **M**—6:15-9:30, FScN 15, StP Campus, Doyle/Asp

FScN 3742 HOSPITALITY FACILITY PLANNING AND DESIGN. 5 degree credits, \$87.50 plus \$5 course fee. Total \$92.50.

new

Hospitality managerial planning and design of space, mechanical, electrical and structural requirements in hospitality facilities. (Prereq 1700 or #)

Fall Qtr Sec 1 **TTh**—3-5:45, DinC 152, StP Campus, Dekker

FScN 3790 FOOD SERVICE MARKETING, ADVERTISING AND PROMOTION. 4 degree credits, \$70.

new

An exploration of the theories and practices of market analysis, product planning and consumer motivation as they relate to enterprises which provide hospitality to people away from home. Special attention given to determining the needs and interests of the consuming public and how these needs and interests can be satisfied in public eating places, clubs, hospitals, in-plant cafeterias, schools and other institutions. (Prereq 1700, AgEc 1030 or Econ 1002, or #)

Spring Qtr Sec 1 **M**—6:15-9:30, ClaOff B30, StP Campus, Bumpas

FScN 5111 INDEPENDENT STUDY IN FOOD SCIENCE AND NUTRITION. 1-5 degree credits, \$18.50 per credit.

Individual laboratory or library research in some area related to food chemistry, food processing, nutrition, food service, or hospitality management. (Prereq Δ . Call 373-1079 for more information. May be repeated for credit. Qualified students may register for graduate credit at the University of Minnesota.

Fall Qtr Sec 1 **Time arr.** Staff

Winter Qtr Sec 2 **Time arr.** Staff

Spring Qtr Sec 3 **Time arr.** Staff

★FScN 5135 FOOD PROCESS ENGINEERING I. 3 degree credits, \$55.50 plus \$10 course fee. Total \$65.50.

Discussion and demonstration of fluid flow, heat transfer, sanitation design, refrigeration, mass transfer, process control, and waste treatment as used by the food processing industry. (Prereq 1102, Math 1142, Phys 1031-1032, #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25 students)

Fall Qtr Sec 1 **T**—6:15-9:30, FScN 15, 150, StP Campus, Sander

★FScN 5136 FOOD PROCESS ENGINEERING II. 3 degree credits, \$55.50 plus \$10 course fee. Total \$65.50.

new

Continuation of 5135. (Prereq 5135, #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25 students)

Winter Qtr Sec 1 **TTh**—6:15-9, FScN 15, 150, StP Campus, Sander

★FScN 5350 FOOD FORMULATION, PRODUCT DEVELOPMENT. 4 degree credits, \$74 plus \$10 course fee. Total \$84.

Application of concepts and techniques of experimental design to the solution of food science problems. Case studies, computer programming and use emphasized. (Prereq course in statistics; lab hrs ar. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25 students)

Spring Qtr Sec 1 **TTh**—5-6:15, FScN 15, StP Campus, May

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

★FScN 5360 SENSORY EVALUATION OF FOOD QUALITY. 4 degree credits, \$74 plus \$10 course fee. Total \$84.

Fundamentals of sensory perception. Test designs and methods used in studying the sensory qualities of foods. (Prereq Stat 3081 or 5021 or equiv. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25 students)

Fall Qtr Sec 1 **W**—6-10, McNH 146, 132-34, StP Campus, Gordon

★FScN 5523 TECHNOLOGY OF FERMENTED DAIRY PRODUCTS. 4 degree credits, \$74 plus \$10 course fee. Total \$84.

Chemical, microbiological, and physical principles involved in the processing of cheeses, buttermilk, yogurt, and sour cream. (Prereq 3110, 5123. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25 students)

Winter Qtr Sec 1 **W**—6-10, FScN 15, 150, StP Campus, Morris

FScN 5530 INDUSTRIAL PROCESSING OF FRUITS AND VEGETABLES. 4 degree credits, \$74 plus \$4 course fee. Total \$78.

Relationship of chemical, physical, and microbiological principles to commercial processing of fruits and vegetables from procurement of raw products through preparation, preservation, packaging, storage, transportation, and merchandising. Emphasis on preservation methods involving heat, sterilization, and freezing. (Prereq 3110, 5120, and 5135 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:15-9:30, FScN 15, StP Campus, Breene

FScN 5622 HUMAN NUTRITION. 5 degree credits, \$92.50.

Physiological function and metabolic role of nutrients and factors influencing the utilization of nutrients in the human body. (Prereq 1602, Biol 3021, Phsl 3051 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—6:30-10, FScN 15, StP Campus, Hegarty, Morse

FScN 5662 CLINICAL NUTRITION. 3 degree credits, \$55.50.

Application of principles of normal nutrition to clinical problems with description of altered nutrient requirements under conditions of human disease. Diet therapy as an applied aspect of clinical nutrition. (Prereq 5622, BioC 5002 or Biol 3021 or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **T**—6:30-8:45, FScN 23, StP Campus, Morse

FScN 5663 CLINICAL NUTRITION LABORATORY. 2 degree credits, \$37.

Application of the principles of normal and clinical nutrition to diet therapy. Techniques of therapeutic diet writing, patient interviewing and patient instruction in dietary management. (Prereq 5662 or concurrent regis of #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:30-8, FScN 23, StP Campus, Morse

FScN 5664 FIELD EXPERIENCE IN CLINICAL NUTRITION. 3 degree credits, \$55.50.

Application of principles of nutrition to problems in health and disease involving assigned readings, discussions and experience in a clinical facility. (Prereq a course in human nutrition and #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Time arr.** Verstraete

Winter Qtr Sec 2 **Time arr.** Verstraete

Spring Qtr Sec 3 **Time arr.** Verstraete

new

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

FScN 5740 DESIGN AND LAYOUT OF FOOD SERVICES. 4 degree credits, \$74.

Problems related to the design and layout of remodeled and new food services. (Prereq 3740. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **W**—6:15-9:30, ClaOff B30, StP Campus, Snyder

FScN 5752 FOOD AND HOSPITALITY OPERATIONS: CORPORATE APPLICATION OF COMPUTER SYSTEMS. 4 degree credits, \$74 plus \$10 course fee. Total \$84.**new**

Use of the computer in planning, operating, and controlling production and services, personnel, logistics and finances, quality assurance and quality control in a multiunit corporate food and/or hospitality operation. (Prereq 3752, Acct 3255 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:15-9:30, ClaOff B30, StP Campus, Snyder

foreign study (FoSt)

(See also SPAN—Student Project for Amity Among Nations)

FoSt 3001-3002-3003 LANGUAGE, CULTURE AND SOCIETY. 5 degree credits each quarter, \$Serb 1101-1102-1103. \$87.50 each quarter.**new**

A concentrated study of the fundamentals—reading, writing and conversation—of Serbo-Croatian. The emphasis will be on the language as a key to understanding Yugoslav culture and society. The course is offered for SPANners going to Yugoslavia, but it is open to others. (No prereq for 3001; 3001 for 3002; 3002 for 3003)

Fall Qtr 3001 Sec 1 **Sa**—9 a.m.-1, FoIH 108

Winter Qtr 3002 Sec 2 **Sa**—9 a.m.-1, FoIH 108

Spring Qtr 3003 Sec 3 **Sa**—9 a.m.-1, FoIH 108

forest products (ForP)

J. L. Bowyer, Assistant Professor of Forest Products

R. W. Erickson, Associate Professor of Forest Products

R. O. Gertjens, Associate Professor of Forest Products

See TV course ForP 5401, Wood: The Material for Today and Tomorrow, page 379.

★ForP 5403 WOOD AND WOOD PRODUCTS. 3 degree credits, \$55.50 plus \$5 course fee. Total \$60.50.

Intended for, but not restricted to elementary and secondary teachers. Lectures, laboratory exercises, demonstrations, films, plant tour, nature and availability of wood as a raw material, properties of wood and wood products, manufacture of wood products. Not open to forest products majors. (No prereq. Limited to 24 students. Qualified students may register for graduate credit at the University of Minnesota except in the major field)

Spec Term Sec 1 **Fri., Apr 7, 6-9**

Sat., Apr 8, 9 a.m.-5:30

Sun., Apr 9, 9 a.m.-4:30

Mon., May 15, 6-9

Kaufl. 125, StP Campus, Gertjens, Erickson, Bowyer

(See Spring quarter registration dates, page 21. No late fee through March 30)

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Spec Term Sec 2 **Fri., Apr 14, 6-9**
Sat., Apr 15, 9 a.m.-5:30
Sun., Apr 16, 9 a.m.-4:30
Mon., May 15, 6-9

KaufL 125, StP Campus, Gertjejansen, Erickson, Bowyer
(See Spring quarter registration dates, page 21. No late fee through April 6)

★ForP 5405 PAPER IN TODAY'S WORLD. 3 degree credits, \$55.50 plus \$5 course fee.
Total \$60.50.

Intended primarily for elementary and secondary school teachers although other interested students may enroll. Each teacher will be required to prepare a teaching unit on pulp and paper for subsequent use in a junior or senior high school science class; others will write a report. The course consists of lectures and laboratories on pulp and paper manufacture, properties and characteristics of paper, recycling of paper, and paper for packaging. The Kaufert Laboratory is completely equipped with pulp and paper equipment including a pilot plant paper machine. Additional work required for graduate credit. Not open to forest products majors. (No prereq. Limited to 24 students. Qualified students may register for graduate credit at the University of Minnesota except in the major field)

Spec Term Sec 1 **Fri., Feb. 24, 6-9,**
Sat., Feb. 25, 9 a.m.-5
Sun., Feb. 26, 9 a.m.-4:30
Mon., Apr. 10, 6-9

KaufL 125, StP Campus, Gertjejansen, Erickson
(See Spring semester registration dates page 19. No late fee through Feb. 16.)

Spec Term Sec 2 **Fri, Mar. 3, 6-9**
Sat, Mar. 4, 9 a.m.-5
Sun, Mar. 5, 9 a.m.-4:30
Mon, Apr. 10, 6-9

KaufL 125, StP Campus, Gertjejansen, Erickson
(See Spring semester registration dates page 19. No late fee through Feb. 23)

forest resources (FR)

Roger T. Johnson, Associate Professor of Elementary Education
William R. Miles, Professor of Forest Resources

★FR 5402 INTERPRETATION AND MANAGEMENT OF FOREST ENVIRONMENTS. 3 degree credits, \$55.50.

Biological foundations, biology of forest management, wildlife, hydrology, social and economic aspects, timber management and regulation, and recreation and amenity values. Intended for secondary school teachers and other interested students. (No prereq. Limited to 50 students. Includes one Saturday field trip. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—6:30-9:30, Richfield HS 249-250

★FR 5403 FUNDAMENTALS OF NATURAL RESOURCE EDUCATION. 3 degree credits, \$55.50 plus \$5 course fee. Total \$60.50.

Intended for elementary teachers. Study of soil, water, forest and wildlife resources of Minnesota and the biological principles and ecological implications of management. Environmental issues developed through interactions of natural resource manipula-

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

tion will be discussed; outdoor teaching skills in environmental education will be experienced in a metropolitan center. (No prereq. Limited to 36 students. Qualified students may register for graduate credit at the University of Minnesota)

Spec Term Sec 1 **Fri, Oct 14**, 6-9:30
Sat, Oct 15, 8:30 a.m.-3:30,
Sun, Oct 16, 9:30 a.m.-3:30,
Tues, Nov 15, 6-9

Wood Lake Nature Center, Richfield (66th and Lakeshore Drive) Johnson, Miles
(See Fall registration dates, page 13. No late fee through Oct. 7)

Spec Term Sec 2 **Fri, Apr 7**, 6-9:30
Sat, Apr 8, 8:30 a.m.-3:30
Sun, Apr 9, 9:30 a.m.-3:30
Tues, May 16, 6-9

Wood Lake Nature Center, Richfield (66th and Lakeshore Drive) Johnson
(See Spring quarter registration dates, page 21. No late fee through March 31)

french (Fren)

(See also History; ArH 3303, Baroque and Rococo Painting in France)

F.R.P. Akehurst, Associate Professor of French

Tom Conley, Associate Professor of French

Peter Lock, Professor of French

BEGINNING FRENCH, Fren 1101-1102-1103 and INTERMEDIATE FRENCH, 1104-1105, stress pronunciation, aural comprehension, basic grammatical forms, patterns of French and the ability to recombine them in new situations. Reading and writing skills will be developed as a complement to the acquisition of the spoken objectives. Each meeting will consist of language laboratory work as well as class recitation.

Language laboratory fees are charged for courses in which use of the lab is required or recommended. Cassette tapes are available to Extension Classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours are being planned.

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 354) ArH 3303, Hist 5211, 5212.

Fren 1101 BEGINNING FRENCH. 5 degree credits, \$82.50 plus \$5 course fee. Total \$87.50. (IS). (No prereq)

Fall Qtr Sec 1 **MTh**—6:20-8:25, FolH 104
 Sec 2 **T**—6-10:05, FolH 104

Fren 1102 BEGINNING FRENCH. 5 degree credits, \$82.50 plus \$5 course fee. Total \$87.50. (IS). (Prereq 1101 or #)

Winter Qtr Sec 1 **MTh**—6:20-8:25, FolH 104
 Sec 2 **T**—6-10:05, FolH 104

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

Fren 1103 BEGINNING FRENCH. 5 degree credits, \$82.50 plus \$5 course fee. Total \$87.50. (IS). (Prereq 1102 or #)

Spring Qtr Sec 1 **MTh**—6:20-8:25, FolH 104
Sec 2 **T**—6-10:05, FolH 104

Fren 1104 INTERMEDIATE FRENCH. 5 degree credits, \$82.50.

Consolidation of basic structure and development of oral fluency through readings and discussion. (Prereq 1103 or #)

Fall Sem Sec 1 **M**—6:20-9:15, FolH 203

Fren 1105 INTERMEDIATE FRENCH. 5 degree credits, \$82.50.

Readings in contemporary culture. Development of vocabulary and improvement of ability to read, write and speak the language. (Prereq 1104 or #)

Spring Sem Sec 1 **M**—6:20-9:15, FolH 107

reading french

Fren 0001 is specifically designed for individuals who desire only a reading knowledge of the language. The French language requirements for a graduate degree may also be satisfied by successfully passing an examination given at the end of the course. Graduate students should check with their advisers for specific language requirements in their field of study.

Fren 0001 READING FRENCH. No credit, \$49.50. (IS)

This course is designed solely to impart a basic reading knowledge of the French language; full time is devoted to intensive reading and translation of a variety of texts. Since this approach deals only with the reading aspect of the language, there are no sessions for oral-aural drills and composition, and great skill can be acquired in a short time. At the end of one quarter the student is given the graduate Reading Examination in French. The department will certify to the Graduate School a reading knowledge of French upon successful completion of this examination. (No prereq. **Must be taken S-N**)

Fall Qtr Sec 1 **M**—6:20-8:50, FolH 108

Winter Qtr Sec 2 **M**—6:20-8:50, FolH 108

Spring Qtr Sec 3 **M**—6:20-8:50, FolH 108

Fren 0001 is also offered as a Summer Extension Class.



general college (GC)

Fred M. Amram, Professor and Director, Consolidated Help Center
J. Michael Arrington, Assistant Professor

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Sarabeth Barnes, Assistant Professor
 F. T. Benson, Professor
 Henry Borow, Professor
 Thomas Brothen, Instructor in Psychology and Family Studies
 Thomas Buckley, Assistant Professor
 Alecia Buonocore, Instructor
 Dennis Buratti, Lecturer
 Richard Byrne, Instructor
 Terence Collins, Assistant Professor
 Douglas Dearden, Professor
 Dan Detzner, Instructor
 Barbara DiBernard, Assistant Professor
 Robert L. Fjerstad, Lecturer
 David Foat, Instructor
 Jerome Gates, Professor
 David Giese, Professor
 William Glew, Lecturer
 Leroy Goodnough, Lecturer
 Paul Hagen, Associate Professor
 Dennis Hammond, Assistant Professor
 Evelyn Hansen, Associate Professor
 Forrest Harris, Professor
 Merle Harris, Professor Emeritus
 William Hathaway, Associate Professor
 Gary Hoch, Lecturer
 Dennis Hower, Associate Professor
 Perry Jacobson, Lecturer
 Niles Jefferson, Associate Professor
 Allen Johnson, Assistant Professor
 Fred Johnson, Associate Professor
 David Jones, Assistant Professor
 Peter Kahn, Lecturer
 Susan Knoblauch, Instructor
 Gail Koch, Instructor
 Patrick Kroll, Assistant Professor
 Alex Kurak, Professor
 Vernelle Kurak, Instructor
 Roger Larson, Professor
 Sander Latts, Associate Professor
 Valerie Liston, Instructor
 Mark Ludlow, Instructor
 Margaret MacInnes, Associate Professor
 Phillip Marron, Lecturer
 Jeff Millikan, Instructor
 Norman Moen, Professor
 Robert Oliphant, Lecturer
 Ivan M. Policoff, Associate Professor
 Thomas Ressler, Instructor
 Douglas Robertson, Instructor
 John Romano, Assistant Professor
 Robert Schommer, Instructor
 Fredric Steinhauer, Professor
 William Stockdale, Professor
 Sherwood Ann Wilson, Instructor
 Mary Wyvell, Professor
 Robert Yahnke, Assistant Professor
 Candido Zanoni, Associate Professor

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

As nearly as possible, General College Courses are planned to be complete in themselves. Emphasis is on relationships within and among fields of knowledge rather than intensive study of isolated segments. Most courses do not have prerequisites.

The Associate in Arts degree from the General College can be completed in extension classes (see page 348). New baccalaureate degree programs are explained in General College Baccalaureate Programs, page 349. See also General College Occupational Programs, available all or in part through Extension, which may be applied toward the General College degree program, page 350.

With the exception of certain requirements in the occupational education programs and the new baccalaureate degree program, the General College prescribes no specific course of study for its students. Any student may earn the 90 credits necessary for the Associate in Arts degree without following a set pattern of classes. Taking courses in this general education program should give a student some knowledge of the natural world; of human behavior and social organization; of intellectual achievements in the arts, literature, and philosophy; of the means of human communication; and of attempts to synthesize and organize knowledge and experience.

- 1053** Selling Approaches and Techniques, page 158
- 1081** Personnel Selection for Non-Professionals, page 159
- 1111** Science in Context: Weather and Climate, page 168
- 1112** Science in Context: Man and His Environment, page 168
- 1113** Science in Context: Natural Resources, Their Utilization and Management, page 168.
- 1132** Biological Science: The Human Body, page 169
- 1133** Nature Study, page 169
- 1161** Physical Science: Astronomy—Solar System, page 169
- 1162** Physical Science: Stellar Astronomy, page 169
- 1167** Astronomy Lab, page 169
- 1173** The National Parks and Their Resources, page 169
- 1178** Geology in Minnesota's State Parks, page 170
- 1211** An Introduction to Social Science, page 171
- 1212** Urban Problems, page 171
- 1221** Minnesota History, page 171
- 1234** Growing Old Together: Social History of Aging, page 171
- 1235** The Law in Society, page 172
- 1236** United States: Crime and Delinquency, page 172
- 1243** Historical Biography: World War II and Cold War Personalities, page 172
- 1282** Fields of Applied Psychology, page 172
- 1283** Social Science: Psychology of Human Development, page 172
- 1285** Social Science: Cultural Anthropology, page 173
- 1286** Introduction to the Disabled, page 173
- 1311** General Arts, page 156
- 1357** Man's Religious Beliefs, page 157
- 1363** Literature for Children, page 157
- 1374** Literature: Contemporary Books and Periodicals, page 157
- 1401** Vocabulary Building: How to Expand Your Word Power, page 164
- 1402** Communication Skills: Vocabulary Development, page 164
- 1405** Fundamentals of Usage and Style, page 165
- 1409** Communication Skills: Individual Study, page 165
- 1421** Writing Laboratory: Personal Writing, page 165
- 1422** Writing Laboratory: Communicating in Society, page 165
- 1429** Writing: Individual Study, page 165
- 1431-1432-1433** Fundamental College Mathematics Program, page 167
- 1445** Mathematics: Intermediate Algebra, page 168
- 1454** Statistics, page 168
- 1461** Oral Communication: Basic Principles, page 166

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

- 1471** Creativity: Creative Problem Solving, page 166
1485 Photography I, page 157
1502 Vocational Planning, page 173
1511 Introduction to Modern Business, page 159
1513 Principles of Small Business Operations, page 159
1531 Business Correspondence, page 166
1533 Financial Mathematics: Procedures and Applications, page 159
1534 Practical Law, page 159
1535 Introduction to Data Processing, page 160
1536 Commercial Art for Non-Professionals, page 157
1540 Accounting Fundamentals, page 160
1542 Accounting Fundamentals, page 160
1551 Marketing: Retailing and Sales, page 163
1552 Marketing: Sales Promotion, page 164
1553 Marketing: Principles of Management, page 164
1557 Marketing: Supervised Work Experience, page 164
1580 An Orientation to Paralegal Careers, page 161
1721 Home Life: Marriage and Family Living, page 173
1722 Home Life: Parent-Child Relationships, page 173
1731 Home Life: Consumer Problems, page 160
1893 Planning Your Continuing Formal Education, page 156
1894 Planning a General College Baccalaureate Program, page 156
3114 Personal Environmental Health, page 170
3115 Evolution and the Modern Species, page 170
3132 Human Body: Cardiovascular Anatomy and Physiology, page 170
3134 Nature and Its Impact on the Mind of Man, page 170
3135 The Care and Knowledge of House Plants, page 170
3236 Minnesota Corrections: Penal Alternatives, page 174
3251 The Great Cities of Europe, page 174
3285 Anthropology of the City, page 174
3292 Social Science: Urban Problems—Geographic Perspectives, page 174
3335 Music of the 20th Century, page 157
3354 Philosophy, Science, and Religion, page 158
3374 Film and Society, page 158
3464 Communication in Organizations, page 166
3465 Communication for Health Workers, page 166
3468 Speaking Well—Thought, Action, Art, page 166
3531 Writing for Business and the Professions, page 167
3560 Personnel Administration, page 160
3571 Computer Approach to Problem Solving, page 161
3581 Legal Studies: Business Organization, page 161
3582 Legal Studies: Real Estate, page 161
3583 Legal Studies: Estate Planning and Administration, page 161
3584 Legal Studies: Litigation and Trial Practice, page 162
3585 Legal Studies: Income Taxation, page 162
3586 Legal Studies: Legal Research, page 162
3588 Legal Studies: Criminal Law, page 162
3588 Legal Studies: Domestic Relations, page 163
3602 Applied Supervision, page 163
3605 Interviewing, page 174
3612 Mental Health: Principles and Practices, page 174
3614 Psychological Intervention Techniques, page 175
3615 The Rehabilitation Process, page 175
3616 Crafts for Special Groups, page 158

(continued next page)

- 3621** Counseling and Work Regarding Community Resources, page 175
3624 Human Services Worker—Change Agent I: Introduction, page 175
3625 Human Resources Worker—Change Agent II: Effecting Change, page 175
3841 Minnesota Resources, page 171
3846 Minnesota Arts and Letters, page 158
3895 Preparing the Senior Report, page 156

alternatives in education

GC 1893 PLANNING YOUR CONTINUING FORMAL EDUCATION. 2 degree credits, \$33.

Education beyond the collegiate sophomore year—what are the possible alternatives? What if none of them fits me? GC baccalaureate programs is one of the alternatives considered in the course. Other programs include traditional majors, University Without Walls, Metropolitan State University and public/private vocational-technical institutes. Class sessions will be lecture, discussion, and small group activity. Students will be expected to develop an individualized educational plan. (No prereq)

new

- Spec Term** Sec 1 **Sept. 27-Nov. 1 T**—6:20-8:50, FolH 308
 Sec 2 **Jan. 4-Feb. 8 W**—5-7:30, WuH 230
 Sec 3 **Mar. 30-May 4 Th**—5-7:30, WuH 230

GC 1894 PLANNING A GENERAL COLLEGE BACCALAUREATE PROGRAM. 2 degree credits, \$33.

Study of GC baccalaureate programs guidelines. Students will be assisted in preparing a personal statement and assembling prior course work and learning experiences. Independent study, internships, and field experience will be discussed. Finally, students will look ahead toward degree requirements and necessary documentation of learning. (No prereq)

new

- Spec Term** Sec 1 **Nov. 8-Dec. 13, T**—6:20-8:50, FolH 308
 Sec 2 **Feb 15-Mar. 15, W**—5-7:30, WuH 230
 Sec 3 **May 10-June 7, Th**—5-7:30, WuH 230

GC 3895 PREPARING THE SENIOR REPORT. 4 degree credits, \$70.

Defining relevant topic of appropriate scope; assembling material; organization-documentation-writing of a paper. (No prereq)

new

- Winter Qtr** Sec 1 **Th**—5-7:30, FolH 201
Spring Qtr Sec 2 **M**—6:20-8:50, FolH 204

artistic expression

(See also Art Education; Art History; and Arts, Studio; Informal Courses; Phil 3502, Introduction to Aesthetics)

★GC 1311 GENERAL ARTS. 4 degree credits, \$66.

Students are given the opportunity to evaluate their attitudes and ideas relating to the arts through an examination of the basic similarities which underlie all art forms and through an investigation of the development of these art forms in terms of human needs. The arts concentrated on are painting, sculpture, music, architecture, and literature. (No prereq. Limited to 45 students)

- Winter Qtr** Sec 1 **M**—6:20-8:50, NH 111, Byrne

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

GC 1357 WORLD RELIGIOUS BELIEFS. 4 degree credits, \$66. (◆\$33)

The student investigates the religious beliefs most influential in the world today, compares selections from the writings representing different religious beliefs, and develops an understanding of world religions. (No prereq)

Winter Qtr Sec 1 T—6:20-8:50, NH 107, A. Kurak

(See related courses in History, Philosophy, Psychology, Religious Studies, Sociology)

GC 1363 LITERATURE FOR CHILDREN. 4 degree credits, \$66. (◆\$33)

Survey of children's literature. For parents, prospective parents, or child-care workers who wish to become acquainted with children's literature and to guide children in selecting and reading books, or for other students who may not have had an opportunity to read books—including classics—when they were children. (No prereq)

Winter Qtr Sec 1 W—6:20-8:50, NH 107, Collins

GC 1374 LITERATURE: THEATRE—FILM AND DRAMA. 4 degree credits, \$66 plus \$4 special fee. Total \$70. (◆\$33 plus \$4 special fee. Total \$37) (IS)

Student studies stage plays and films, both as art forms and as media of communication; local film showings, theatre performances, television dramas; critical reports. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, NH 213, Hagen

★GC 1485 PHOTOGRAPHY I. 4 degree credits, \$66 plus \$15 course fee. Total \$81

Student receives instruction in use of cameras, primary studies in optics, film and paper emulsions, and similar topics. Darkroom work acquaints student with ordinary darkroom techniques, film developing, and paper printing. (No prereq. Limited to 23 students)

Fall Qtr Sec 1 W—6-10, MacP, Millikan

Sec 2 Sa—8 a.m.-12, MacP

Winter Qtr Sec 3 W—6-10, MacP, Millikan

Sec 4 Sa—8 a.m.-12, MacP

Spring Qtr Sec 5 W—6-10, MacP, Millikan

Sec 6 Sa—8 a.m.-12, MacP

★GC 1536 COMMERCIAL ART FOR NON-PROFESSIONALS (replaces 1051). 4 degree credits, \$66.

A course for anyone whose job or other activities requires some knowledge of and competence in the basic commercial art techniques. Course projects include design and preparation of newsletters, mailers, flyers, posters, and small ads. Techniques include layout and keylining, hand lettering, and use of cold type. Type and lettering styles, as well as printing processes, will be dealt with; also display problems, including bulletin boards, transparencies, other promotional materials. Stress will be on basic design and reproduction processes rather than on drawing skills. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 Th—6:20-8:50, NH 102, MacInnes

GC 3335 MUSIC OF THE 20TH CENTURY. 4 degree credits, \$70. (◆\$35)

How music today differs from what it was at start of century, for understanding by lay listener. Main lines of development of 20th-century music explored through study of selected representative compositions by its most influential composers. Additional experiences to enhance understanding of current experiments and trends in avant-garde movements. (Prereq 45 cr or #)

Fall Qtr Sec 1 M—6:20-8:50, NH 111, Byrne

GC 3354 PHILOSOPHY, SCIENCE, AND RELIGION. 4 degree credits, \$70. (◆\$35)

Philosophical inquiry into conflict between modern science and religion. Provides a layman's orientation to historical and philosophical development of conflict, to status of conflict today, and to scientific and religious attitudes and emotions. By analysis of logical and psychological consequences of religious and scientific world views and through discussion of areas of possible reconciliation, students gain objective understanding of various dimensions of the conflict. Students need not have had any previous course in science. (Prereq 45 cr or #)

Winter Qtr Sec 1 **M**—6:20-8:50, FolH 102, Zanoni

GC 3374 FILM AND SOCIETY. 4 degree credits, \$70 plus \$4 course fee. Total \$74 (◆\$35 plus \$4 course fee. Total \$39)

Ways in which film and society affect each other, social issues raised in film, public attitudes toward film, effect of film upon attitudes and behaviors, and film medium itself—how that medium (photography, editing, acting, composition, color, sound, etc.) provides illumination and insight into social problems it analyzes. Students view films and read about them and study specified social problems. Social issues examined vary from quarter to quarter, typically covering such areas as urban living, minority stereotyping, ethical decisions, marriage and family, politics, and sexual mores. (Prereq 45 cr or #; 1374 recommended)

Winter Qtr Sec 1 **Th**—6:20-8:50, NH 213, Yahнке

(See other film courses in German, Scandinavian Languages, Informal Courses, American Studies)

★GC 3616 CREATIVITY: CRAFTS. 4 degree credits, \$70.

For students who will use craftwork as a therapeutic device in their professions. To acquaint students with broad families of craft materials and develop basic techniques for working them. Fosters development of creative and artistic attitudes toward materials, techniques, and products and promotes development of flexible approaches to problems of equipment, facilities, and budget. An important concern is to make students aware of themselves in the process of creating craftwork. (Prereq 45 cr or #. Limited to 30 students)

Spring Qtr Sec 1 **M**—6:20-8:50, NH 102, Gates

(See also Art Education and Design)

GC 3846 MINNESOTA ARTS AND LETTERS. 4 degree credits, \$70. (◆\$35)

Art, architecture, landscape design, music, literature, and higher education discussed. In each category, emphasis upon developments in state: Minnesota contributions to national trends, characteristics peculiar to this region, and manifestations of its history and traditions. Class work supplemented by off-campus study. Independent projects encouraged. (No prereq)

Spring Qtr Sec 1 **M**—5-7:30, FolH 303, Moen

business studies

(See also Hist 3841, American Business History)

★GC 1053 SELLING APPROACHES AND TECHNIQUES. 3 degree credits, \$49.50.

Course designed to build a foundation for a more successful sales or business career. A study of principles that influence people; presentation of the product or service; key words; motivation; praise and appreciation; power closing techniques. Devel-

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

ops confidence, a creative mind, and earning potential through a positive plan of action, using the creative approach to sales. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 **M**—6:20-8:50, RarigC 610, Jacobson

Winter Qtr Sec 2 **W**—6:20-8:50, RarigC 610, Jacobson

Spring Qtr Sec 3 **M**—6:20-8:50, RarigC 610, Jacobson

GC 1081 PERSONNEL SELECTION FOR NON-PROFESSIONALS. 4 degree credits. \$66.

Intended for supervisors and administrators not employed in the personnel field who need a basic knowledge in employment interviewing, testing, and other selection techniques. The course also deals with equal opportunity laws and affirmative action programs as they affect the employment process. Focus on the practical. (No prereq)

Winter Qtr Sec 1 **Th**—6:20-8:50, FolH 105, Fjerstad

(See also Industrial Relations and Psy 5701, Personnel and Industrial Psychology)

★GC 1511 INTRODUCTION TO MODERN BUSINESS. 4 degree credits, \$66. (IS)

This course provides an overview of the economic environment in which business operates. The major functions of a business organization are surveyed including production, finance, personnel and marketing. A useful introductory course for students planning to do more work in business; also is recommended for those who want to survey the field without study in detail. (No prereq. Limited to 40 students)

Winter Qtr Sec 1 **M**—6:20-8:50, FolH 201

★GC 1513 PRINCIPLES OF SMALL BUSINESS OPERATIONS. 4 degree credits, \$66. (IS)

Designed specifically for those who plan to own or operate some form of small business, this course deals with the following topics: environment and management of the small business; problems of initiating the business; financial and administrative control; marketing program and policies; and legal and governmental relationship. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 **T**—6:20-8:50, FolH 105, Hammond

Winter Qtr Sec 2 **W**—5-7:30, FolH 209, Ludlow

Spring Qtr Sec 3 **Th**—6:20-8:50, FolH 105, Hammond

★GC 1533 FINANCIAL MATHEMATICS: PROCEDURES AND APPLICATIONS. 4 degree credits, \$66.

Using only basic mathematical skills, students solve problems with percentages, simple interest and discount, compound interest, annuities, corporate securities, and depreciation. Through study of practical business situations, students develop calculation skills to assist them in dealing with various financial problems. (No prereq. Limited to 45 students)

Fall Qtr Sec 1 **T**—6:20-8:50, NH 216, Larson

★GC 1534 PRACTICAL LAW. 4 degree credits, \$66.

Practical topics in field of law. Formation and discharge of contracts, torts (personal injury and property damage suits), criminal law, bailments, nature and classification of real and personal property, and joint ownership and tenancy. (No prereq. Limited to 40 students)

Fall Qtr Sec 1 **M**—6:20-8:50, Irondale HS 313, New Brighton, Kahn
(Limit 35 students)

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Winter Qtr Sec 2 **W**—5-7:30, NH 207, Hower
Spring Qtr Sec 3 **T**—6:20-8:50, NH 207, Kahn

(See also Business Law)

★GC 1535 INTRODUCTION TO DATA PROCESSING. 4 degree credits, \$66. (IS)

Designed to provide an introduction to data processing for students wishing to acquaint themselves with basic aspects of this important and rapidly evolving technology. Useful as well to those considering the possibility of entering a course of training for work in the world of tabulation equipment, programming computers, and related areas. The course defines data processing and explores its history, summarizes some of its basic applications, and assesses its social and economic effects. Students study terminology; basic steps in the processing of data and kinds of machines used to accomplish these steps, such as keypunches, sorters, interpreters, reproducers, collators, accounting machines, calculators, and computers, with an elementary introduction about their operation. Career opportunities are explained and suggestions for further study are outlined. (No prereq. Limited to 35 students)

Fall Qtr Sec 1 **W**—6:20-8:50, CD 218, Ressler
Winter Qtr Sec 2 **W**—5-7:30, CD 216, Ressler

★GC 1540 ACCOUNTING FUNDAMENTALS. 4 degree credits, \$66.

Basic accounting cycle, including balance sheet and income statement methodology, and end-of-period adjustments. Students are taken through accounting cycle for both service and merchandising businesses. Other topics include special journals and accounting procedures for inventories, payables, and receivables. (No prereq. Limited to 40 students)

Fall Qtr Sec 1 **Th**—5-7:30, NH 207, Larson
Winter Qtr Sec 2 **T**—6:20-8:50, NH 207
Spring Qtr Sec 3 **W**—6:20-8:50, NH 207

★GC 1542 ACCOUNTING FUNDAMENTALS. 4 degree credits. \$66.

Continues first-year accounting sequence. Topics include handling of dividends, retained earnings and treasury stock, debt, investments, financial reporting, and sources and uses of working capital. Attention is given to examination of financial statements. Introduction to accounting for manufacturing operation and cost analysis problems. (Prereq 1540. Limited to 40 students)

Spring Qtr Sec 1 **M**—6:20-8:50, NH 207

GC 1731 HOME LIFE: CONSUMER PROBLEMS. 4 degree credits, \$66. (◆\$33) (IS)

Develops understanding of economic system from viewpoint of the family as consumer unit. Emphasizes fundamentals of financial planning and personal economic decision making and application of these concepts to such specific areas as food, clothing, shelter, buying insurance protection, saving and investing, using credit facilities, and obtaining and evaluating consumer information. (No prereq)

Spring Qtr Sec 1 **M**—6:20-8:50, FolH 105

(See also IC 0571, Individual and Family Budget Planning)

★GC 3560 PERSONNEL ADMINISTRATION. 4 degree credits, \$70.

An overview of the personnel related activities in business and other organizations. Using the personnel department setting, some areas of study will be recruiting, employee reward systems, employee training, and organized labor. (Prereq 45 cr or #. Limited to 40 students)

Winter Qtr Sec 1 **Th**—5-7:30, NH 216, Kroll

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

GC 3571 COMPUTER APPROACH TO PROBLEM SOLVING. 4 degree credits, \$70.

Designed to give students a background in computer programming using the computer language, BASIC. Students will write and run programs and will become familiar with routines which are available in the University Computer Center Library. Computers helping to solve problems in business, management, science, etc. Excellent background for learning other programming languages such as FORTRAN and COBOL. (Prereq high school algebra)

Spring Qtr Sec 1 **T**—5-7:30, FolH 102

new**legal studies**

Legal studies courses are highly specialized courses taught by practicing lawyers. The courses are intended for persons who assist lawyers in some capacity and who wish to increase their knowledge and skills in particular areas of law. Persons registering for these courses must have completed the prerequisites or their equivalents.

★GC 1580 AN ORIENTATION TO PARALEGAL CAREERS. 1 degree credit, \$16.50.

Course will familiarize students with the paralegal career field before they enroll in the specialty courses. Emphasis on legal specialty areas where paralegals are most frequently employed, including a study of the duties generally performed and the skills and understanding needed. Taught by individuals in legal professions who employ paralegals and who are involved in their training. (Prereq #. A joint Day/Extension class limited to 60 Extension students)

Winter Qtr Sec 1 **M**—4:15-5:30, FolH 201

new**★GC 3581 LEGAL STUDIES: BUSINESS ORGANIZATION.** 4 degree credits, \$70.

The study of the legal organization of business entities is the primary focus of this course. Emphasis is on the role of the lawyer and the legal assistant in the formation of various business organizations. This includes a survey of the fundamental principles of law applicable to each type of business organization and preparation of the related documents. (Prereq 1540 or Acct 1050 or old Acct 1024; GC 1235 and 1534 or BLaw 3058-3078, 3088 or #. Limited to 25 students)

Winter Qtr Sec 1 **W**—6:20-8:50, NH 209

★GC 3582 LEGAL STUDIES: REAL ESTATE. 4 degree credits, \$70.

The laws relating to real property and the common types of real estate transactions and conveyances are the primary topics treated in this course. Various instruments such as deeds, contracts, leases, deeds of trust, etc., are studied with emphasis on how these instruments are drafted. Study activities include research projects relating to the subject matter and practice in retrieving and recording information. (Prereq 1540 or Acct 1050 or old Acct 1024; GC 1235 and 1534 or BLaw 3058-3078, 3088 or #. Limited to 25 students)

Winter Qtr Sec 1 **T**—6:20-8:50, NH 209, Buratti

Spring Qtr Sec 2 **M**—5-7:30, NH 209, Buratti

(See also Real Estate)

★GC 3583 LEGAL STUDIES: ESTATE PLANNING AND ADMINISTRATION. 4 degree credits, \$70.

This course introduces the student to problems associated with planning for efficient use of financial resources during working life, retirement and after the death of the principal income producer. Included are techniques for fact gathering, income and death tax principles, use of trusts, will drafting and probate procedures. Emphasis is on the standard procedures used by legal assistants to assist attorneys in these matters.

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

(Prereq 1540 or Acct 1050 or old Acct 1024; GC 1235 and 1534 or BLaw 3058-3078, 3088 or #. Limited to 25 students)

Spring Qtr Sec 1 **Th**—6:20-8:50, NH 209

★GC 3584 LEGAL STUDIES: LITIGATION AND TRIAL PRACTICE. 4 degree credits, \$70.

This course of study will include an analysis and discussion of the following: common types of litigation, premises of litigation, sources of law, the court systems, attorneys, types of lawsuits, usual defenses, Minnesota civil procedures, discovery procedures, court procedures, trial, post-trial motion procedures, appeal, enforcement of judgment, various types of litigation, and good investigation of facts basic to adequate preparation for litigation. Particular attention is given to the role of the legal assistants in assisting the attorneys in these matters. (Prereq 1540 or Acct 1050 or old Acct 1024; GC 1235 and 1534 or BLaw 3058-3078, 3088 or #. Limited to 25 students)

Fall Qtr Sec 1 **W**—6:20-8:50, NH 209

★GC 3585 LEGAL STUDIES: INCOME TAXATION. 4 degree credits, \$70.

This course will provide a detailed study of the law of income taxation—state, federal and local— including preparation of income tax returns and related materials and a survey of the various administrative and judicial tribunals, and their jurisdiction, involved in the determination of income tax controversies. (Prereq 1540 or Acct 1050 or old Acct 1024; GC 1235 and 1534 or BLaw 3058-3078, 3088 or #. Limited to 25 students)

Fall Qtr Sec 1 **M**—5-7:30, NH 209

Spring Qtr Sec 2 **W**—6:20-8:50, NH 209

(See related courses in Accounting)

★GC 3586 LEGAL STUDIES: LEGAL RESEARCH. 4 degree credits, \$70.

The course will examine in depth the law library, survey and various reference sources available to lawyers in determining applicable law, and study the processes of legal research and writing of memoranda presenting results of that legal research. The course will include numerous practice problems requiring legal research and memoranda writing, utilizing the statutes, case reports, encyclopedias, treatises, and other legal research sources. (Prereq 1540 or Acct 1050 or old Acct 1024; GC 1235 and 1534 or BLaw 3058-3078, 3088 or #. Limited to 25 students)

Fall Qtr Sec 1 **Th**—6:20-8:50, NH 209

Winter Qtr Sec 2 **Th**—5-7:30, NH 209

GC 3588 LEGAL STUDIES: CRIMINAL LAW. 4 degree credits, \$70.

Acquaints paralegals with the criminal justice system, provides a basic understanding of criminal law, and offers opportunities to handle live criminal cases under close supervision. Paralegals will work in the Hennepin County Criminal Court system along with law students from the University of Minnesota Law School and lawyers from the Hennepin County Public Defender for Misdemeanors office; will interview several persons accused of crimes and prepare them for arraignment; will fully prepare one live case for trial. Classroom work includes preparation of search warrants, complaints, motions, informations, and indictments. Fundamentals of interviewing and investigation of crimes is discussed. An internship is available the following term, and it counts toward the required internship credits needed for the program. (Prereq 1540 or Acct 1050, Acct 1024, GC 1235 and 1534 or BLaw 3058-3078, 3088 or #)

Fall Qtr Sec 1 **T**—6:20-8:50, NH 122, Oliphant

Spring Qtr Sec 2 **T**—6:20-8:50, NH 209, Oliphant

(See also IC 0382, Crime In America: Jesse James to Watergate)

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

GC 3588 LEGAL STUDIES: DOMESTIC RELATIONS. 4 degree credits, \$70.

Acquaints paralegals with legal problems involved in domestic relations. Covers the legal problems involved in separation, divorce, child custody, adoption, and non-support. Students draft pleadings in domestic relations cases and studies the law in the particular area they are working; interview clients and draft actual pleadings under supervision of instructor and senior law students. Work is closely supervised. An internship is available the following term and counts toward the required internship credits needed for the program. (Prereq 1540 or Acct 1050, or Acct 1024, GC 1235 and 1534 or BLaw 3058-3078, 3088 or #)

Winter Qtr Sec 3 **M**—6:20-8:50, NH 209, Marron

new**★GC 3602 APPLIED SUPERVISION.** 4 degree credits, \$70.

Practical approaches to supervision principles and problems in the small- and medium-size business. Through case problems, role playing in simulated business situations, and decision exercises, students learn to understand the relationship between authority and responsibility as well as the delegation process; to select and apply manager or group decision-making methods; to understand some techniques of the communication process between management and employees; to have some practical knowledge of the concept of job enrichment; and to identify some of the characteristics of a high productivity manager. (Prereq 45 cr or #. Limited to 40 students)

Fall Qtr Sec 1 **T**—6:20-8:50, NH 207, Kroll

Spring Qtr Sec 2 **M**—6:20-8:50, NH 211, Kroll

(See also Industrial Relations)

marketing sequence

(See also Marketing; Journalism; and GC 1053, Selling Approaches and Techniques)

GC 1551, 1552, and 1553 are specifically designed for the individual interested in mid-management positions in retailing and sales. These courses are aimed at developing knowledge and skills relating to positions in retail departmental management, sales, wholesale distribution, credit management, and buying.

The content for the courses has been developed with the aid of an advisory committee of Minneapolis and St. Paul businessmen. Topics selected are: introduction to marketing, wholesaling salesmanship, credit, customer services, advertising, retail display, buying and merchandising, training and supervision of personnel, organizational management, and government relations.

These topics have been put in context as they apply to the mid-manager's job. The courses may be taken individually and need not be taken in sequence. Upon successful completion of all three courses, 3 credits of GC 1557 and GC 1537, Salesmanship (offered through the Department of Independent Study), a certificate in Marketing is granted the students by the General College of the University. Students interested in obtaining the certificate in marketing should notify Prof. Patrick Kroll, 373-5240.

★GC 1551 MARKETING: RETAILING AND SALES. 4 degree credits, \$66.

This course introduces the student to mid-management marketing. After an exploration into the career opportunities in mid-management and a study of the field of distribution, wholesale and retail marketing are explored from customer related activities. Topics: salesmanship, credit, and customer services. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 **T**—6:20-8:50, Jones 2

Sec 2 **Th**—5-7:30, NH 122

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★GC 1552 MARKETING: SALES PROMOTION. 4 degree credits, \$66.

Topics of study include: the psychology of advertising, advertising media selection, store interior layout and display, and public relations. The emphasis is on learning to develop coordinated promotional plans for marketing operations. (No prereq. Limited to 30 students)

Winter Qtr Sec 1 **W**—6:20-8:50, Jones 2
Sec 2 **W**—5-7:30, NH 122

★GC 1553 MARKETING: PRINCIPLES OF MANAGEMENT. 4 degree credits, \$66.

Basic supervision from the marketing organization viewpoint. Primarily a course in supervision dealing with the following: 1. Supervisor as influencer of people—leading, communicating, motivating, establishing goals, decision-making, problem solving, and evaluating employees. 2. Supervisor as doer of key functions—planning, organizing, staffing, controlling, etc. 3. Supervisor as handler of supervisor-subordinate problems. (No prereq. Limited to 30 students)

Spring Qtr Sec 1 **T**—6:20-8:50, Jones 2
Sec 2 **Th**—5-7:30, NH 122

GC 1557 MARKETING: SUPERVISED WORK EXPERIENCE. 1-3 degree credits, \$16.50, \$33, or \$49.50.

Students will prepare reports about their work activities, duties, and responsibilities for evaluation by their job supervisor and/or the program instructor. Usual registration is for 1 credit per quarter taken concurrently with GC 1551, 1552, 1553. Other credit arrangements should be made with the instructor. (Prereq concurrent or previous registration in GC 1551, 1552, 1553)

Fall Qtr Sec 1 **T**—Arr.
Sec 2 **Th**—Arr.

Winter Qtr Sec 3 **T**—Arr.
Sec 4 **Th**—Arr.

Spring Qtr Sec 5 **T**—Arr.
Sec 6 **Th**—Arr.

communication skills

(See also English; Rhetoric; Speech; Study Skills; Informal Courses; and other study helps, page 377)

★GC 1401 VOCABULARY BUILDING: HOW TO EXPAND YOUR WORD POWER. 3 degree credits, \$49.50. (IS)

Designed to extend the range and increase the quality of vocabulary. Mastery of 150 word elements which furnish a basis for the analysis and formation of thousands of English words. Dictionary study, programmed learning sequences, readings in context and tape recordings. Materials arranged to accommodate persons at any vocabulary level. Student progresses at his own rate. (No prereq. Limited to 45 students)

Fall Qtr Sec 1 **T**—6:20-8:50, FolH 102, A Kurak
Winter Qtr Sec 2 **Th**—6:20-8:50, FolH 102, Stockdale
Spring Qtr Sec 3 **T**—6:20-8:50, Richfield HS 249-250, Koch

★GC 1402 COMMUNICATION SKILLS: VOCABULARY DEVELOPMENT. 3 degree credits, \$49.50.

In-class discussion, small-group work, and individual projects. Students develop substantial and workable vocabulary through study of dictionary, word parts, and meanings in context in programmed textbooks, current college textbooks, and

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

individually compiled contextual passages. Both written and oral classwork. (No prereq. Limited to 50 students)

Fall Qtr Sec 1 **M**—6:20-8:50, NH 207, Arrington

GC 1405 FUNDAMENTALS OF USAGE AND STYLE. 3 degree credits, \$49.50.

Students will study English grammar and determine its pertinence to their own writing on an individual study basis. They will arrange a programmed-learning sequence, write two short papers, and consult with a staff member of the Reading and Writing Skills Center, NH 109, at frequent intervals. Students enrolled in the course can come to the Center to study and consult with a staff member any day between 5:00-8:00 p.m. The Center is open Monday through Thursday. (No prereq)

Fall Qtr Sec 1 **Arr.** NH 109, Center staff

Winter Qtr Sec 2 **Arr.** NH 109, Center staff

Spring Qtr Sec 3 **Arr.** NH 109, Center staff

GC 1409 COMMUNICATION SKILLS: INDIVIDUAL STUDY. 2 degree credits, \$33.

This independent study course is designed to assist students on an individual basis with projects or papers relating directly to work students are doing in other courses being taken concurrently. The project will be determined by the student and a staff member of the General College Reading and Writing Skills Center, 109 NH. Students may consult with a staff member any day between 5:00-8:00 p.m. The Center is open Monday through Thursday. (No prereq)

Fall Qtr Sec 1 **Arr.** NH 109, Center staff

Winter Qtr Sec 2 **Arr.** NH 109, Center staff

Spring Qtr Sec 3 **Arr.** NH 109, Center staff

★GC 1421 WRITING LABORATORY: PERSONAL WRITING. 4 degree credits, \$1412, 1413. \$66.

Students read and write descriptive narratives, characterizations, and autobiographical sketches. In laboratory they are given personal help with individual writing problems. Emphasis is on clear and effective written expression. Satisfies the first quarter of the freshman English requirement for some degree programs. For additional information call Extension Counseling, 373-3905. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 **Th**—6:20-8:50, Jones 2, Wyvell

Winter Qtr Sec 2 **T**—6:20-8:50, Jones 2

★GC 1422 WRITING LABORATORY: COMMUNICATING IN SOCIETY. 4 degree credits, \$1415, 1423. \$66.

Primarily through writing, but also through reading and discussion, student analyzes how people communicate in society: how they perceive events, how they think about them, and how they write and talk about them. Student examines assumptions, inferences, and distortions involved in thinking; habits and processes of observations; factual and slanted reporting; persuasive devices; and cultural and cross-cultural communication. Satisfies the second quarter of the freshman English requirement for some degree programs. For additional information, call Extension Counseling, 373-3905. (Prereq 1421 or #. Limited to 30 students)

Spring Qtr Sec 1 **M**—6:20-8:50, NH 122, DiBernard

GC 1429 WRITING: INDIVIDUAL STUDY. 2 degree credits, \$33.

An independent study course for students wishing to undertake special writing projects. The project will be determined by the student and a staff member of the General College Reading and Writing Skills Center, 109 NH. Students may consult

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

with a staff member any day between 5:00-8:00 p.m. The Center is open Monday through Thursday. (No prereq)

Fall Qtr Sec 1 **Arr.** NH 109, Center staff

Winter Qtr Sec 2 **Arr.** NH 109, Center staff

Spring Qtr Sec 3 **Arr.** NH 109, Center staff

★GC 1461 ORAL COMMUNICATION: BASIC PRINCIPLES. 4 degree credits, \$66.

In conversations, discussions and prepared speeches, student shares his ideas, attitudes, and experiences with others. He examines pervasiveness and function of communication in modern life, and he inquires into how language functions as means of communication. He identifies various uses to which people put speech and basic biological, psychological, and social needs these uses are intended to satisfy. Given this framework, he listens and responds to communication of others and comments on what he sees, hears, and feels. (No prereq. Limited to 45 students)

Spring Qtr Sec 1 **W**—6:20-8:50, FolH 104

★GC 1471 CREATIVITY: CREATIVE PROBLEM SOLVING. 4 degree credits, \$66.

To develop creative potential, student explores creative processes and tries to solve individual problems—personal, academic, or vocational—in imaginative ways. Working with others in an atmosphere of trust, involvement, and understanding, student becomes aware that individuals approach problems differently, even uniquely; and by shedding rigidity, student begins to solve problems more flexibly and productively. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 **W**—6:20-8:50, NH 122, Amram

Spring Qtr Sec 2 **Th**—6:20-8:50, NH 209A, Benson

GC 1531 BUSINESS CORRESPONDENCE. 4 degree credits, \$66.

Using accepted business letter form, students write letters of application, order, sales, claims, adjustments, credit, collection, and reference. Practice in other business forms such as memos, interoffice correspondence, suggestions for office improvement, etc. Typed final drafts required. (Prereq 1421; 1422 recommended)

Winter Qtr Sec 1 **W**—6:20-8:50, NH 209A

★GC 3464 COMMUNICATION IN ORGANIZATIONS. 4 degree credits, \$70.

For managers, supervisors, and others who directly control quality of life of persons in organizations; course is focused upon processes and problems involved in working and communicating with people in organizational settings and upon knowledge, attitudes, and skills which underlie effective behavior in organizational relationships. (Prereq 45 cr or #. Limited to 40 students)

Fall Qtr Sec 1 **Th**—5-7:30, Jones 4, Hansen

★GC 3465 COMMUNICATION FOR HEALTH WORKERS. 4 degree credits, \$70.

Special needs of communication which arise from stressful conditions often associated with health care. How to talk and relate to people in pain or discomfort; to those facing certainty or uncertainty of prolonged and serious illness; to the crippled aged, dying; and to patients' relatives. (Prereq 45 cr or #, 1465 recommended. Limited to 30 students)

Winter Qtr Sec 1 **T**—5-7:30, NH 122, Hansen

GC 3468 SPEAKING WELL—THOUGHT, ACTION, ART. 4 degree credits, \$70. (◆\$35)

Focused on learning and practicing the art of speaking well—clearly, honestly, directly, confidently. Through formal and informal speaking in class, and study of

new

new

model speeches, students concentrate on how to develop an individual style that is effective, personally satisfying, and professionally appropriate to their needs. (Prereq 45 credits. 1465 or 3464 recommended)

Spring Qtr Sec 1 **T**—5-7:30, NH 122, Hansen

★GC 3531 WRITING FOR BUSINESS AND THE PROFESSIONS. 4 degree credits, \$1531.
\$70.

Students write letters, informal and formal reports, recommendations, proposals, summaries, memos—in short, the forms of writing used in business; in health, education, and welfare; and in legal professions. Effort is made each quarter to adapt content to vocational needs of students enrolled. Form, clarity, economy of expression, and suitable tone are stressed. Typed final drafts are required. (Prereq 45 cr or #. Limited to 30 students)

Spring Qtr Sec 1 **Th**—6:20-8:50, NH 107

(See also technical writing courses in English and Informal Courses)

mathematics

★GC 1431 FUNDAMENTAL COLLEGE MATHEMATICS I. 2 degree credits, \$33.

Must be taken with 1432 for a total of 3 credits. Individualized program of study of basic mathematics skills in arithmetic, algebra, geometry, and applications of mathematics. Opportunities for self-paced, test-out, and flexibility in amount of credit earned. Students may, during the quarter, register for additional credits in 1433. Students who have passed the equivalent of intermediate algebra (GC 1445, Math 0009) or a more advanced course should not register for this sequence. The Planning Test which determines the study placement for each student will be given at the first class meeting (Prereq ¶1432 or #. Meets concurrently with 1432, 1433. Limited to 30 students)

Fall Qtr Sec 1 **TTh**—6:30-8:35, FolH 109, Knoblauch

Winter Qtr Sec 2 **TTh**—6:30-8:35, FolH 109, Knoblauch

Spring Qtr Sec 3 **TTh**—6:30-8:35, FolH 109, Knoblauch

★GC 1432 FUNDAMENTAL COLLEGE MATHEMATICS II. 1 degree credit, \$16.50.

Must be taken with 1431 for a total of 3 credits. See description for 1431. (Prereq 1431 or ¶1431 or #. Meets concurrently with 1431, 1433. Limited to 30 students)

new

Fall Qtr Sec 1 **TTh**—6:30-8:35, FolH 109, Knoblauch

Winter Qtr Sec 2 **TTh**—6:30-8:35, FolH 109, Knoblauch

Spring Qtr Sec 3 **TTh**—6:30-8:35, FolH 109, Knoblauch

★GC 1433 FUNDAMENTAL COLLEGE MATHEMATICS III. 1-3 degree credits, \$16.50,
\$33 or \$49.50.

See description for 1431 (Prereq 1431, 1432 or ¶1431, ¶1432 or #. Meets concurrently with 1431, 1432. Limited to 30 students)

new

Fall Qtr Sec 1 **TTh**—6:30-8:35, FolH 109, Knoblauch

Winter Qtr Sec 2 **TTh**—6:30-8:35, FolH 109, Knoblauch

Spring Qtr Sec 3 **TTh**—6:30-8:35, FolH 109, Knoblauch

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★GC 1445 **MATHEMATICS: INTERMEDIATE ALGEBRA.** 5 degree credits, \$82.50. (IS)

Concepts and manipulative skills of algebra necessary for students to compete in a college algebra course. Topics include discussion of real number system, special products and factoring, exponents and radicals, linear equations in one and two variables, quadratic equations in one variable, progressions, inequalities, variation, and logarithms. Prospective student may have to give evidence of adequate preparation. (Prereq 1 yr high school algebra. Limited to 40 students)

Fall Qtr Sec 1 MW—6:30-8:35, FolH 105, Barnes

Winter Qtr Sec 2 MW—6:30-8:35, FolH 105, Robertson

Spring Qtr Sec 3 MW—6:30-8:35, FolH 102, Barnes

★GC 1454 **STATISTICS.** 4 degree credits, \$66.

Introduction to modern statistics, emphasizing problem solving through statistical decision making. Topics include organization and presentation of data, summary statistics, sampling, probability, distributions, simple estimation, and tests of hypotheses. Data presented acquaint students with wide applicability of statistics. Attention is drawn to limitations of methods of presentation. Requires only a working knowledge of arithmetical skills. (No prereq. Limited to 40 students)

Fall Qtr Sec 1 M—6:20-8:50, NH 216, Giese

Winter Qtr Sec 2 Sa—9:30 a.m.-12, NH 216, Giese

Spring Qtr Sec 3 W—5-7:30, NH 216, Giese

natural science

★GC 1111 **SCIENCE IN CONTEXT: WEATHER AND CLIMATE.** 4 degree credits, \$66. (◆\$33)

Day-to-day and long-range weather patterns in terms of interactions among atmosphere, oceans, land surfaces, and motions of the earth. Fair weather, storms, seasonal changes, air pollution, and water resource problems. Basic principles of science are applied to problems of analyzing and forecasting day-to-day weather, interpreting climates and climatic change, and realizing the great extent to which man is changing his atmospheric environment. (No prereq. Limited to 35 students)

Winter Qtr Sec 1 Th—6:20-8:50, Irondale HS 313, New Brighton; A Johnson

GC 1112 **SCIENCE IN CONTEXT: HUMAN USES OF ENVIRONMENT.** 4 degree credits, \$66. (◆\$33)

Biological principles and interrelationships between man and his environment; study of ecology as applied to aspects of man's past, present, and future existence, principles of ecology as seen in structure and function of the ecosystem; pollution of soil, air, and water; population explosion; biosocial demands of environmental planning and maintenance; and relationship of people, nutrition, and disease to survival. Examination of certain aspects of radiation sources and environment, marine ecology, and man's future ecological needs. (No prereq)

Fall Qtr Sec 1 W—6:20-8:50, SciCB 325, Liston

Spring Qtr Sec 2 T—6:20-8:50, SciCB 125, Liston

GC 1113 **SCIENCE IN CONTEXT: NATURAL RESOURCES, THEIR UTILIZATION AND MANAGEMENT** 5 degree credits, \$82.50. (◆\$41.25)

Intelligent use of natural resources. Characteristics and management of land, water, soil, minerals, grasslands, forests, and wildlife in the U.S. (No prereq)

Winter Qtr Sec 1 M—6:20-8:50, NH 213, Steinhauer

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

GC 1132 BIOLOGICAL SCIENCE: THE HUMAN BODY. 4 degree credits, \$66. (◆ \$33)

Problems of physical, mental, and social health are related to anatomy, physiology, and needs of the human organism. In studying the heart, for example, instructor shows what it is, how it works, its importance to overall functioning of the body, what can go wrong with it, and what is known about keeping it on the job. Films, televised dissections, and demonstrations supplement lectures. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, SciCB 125, Dearden
Spring Qtr Sec 2 **Th**—6:20-8:50, SciCB 125, Jefferson

(See also Anatomy; Physiology; and Biology)

★GC 1133 NATURE STUDY. 4 degree credits, \$66.

Greater appreciation and enjoyment of wild plants and animals in their natural environment. Techniques of giving field instruction to groups of children and adults interested in nature. Identification, behavior, and relationships of living things. Individual projects may be assigned, such as writing nature poetry; drawing, sketching, or painting plants and animals; studying life histories of plants and animals; cultivating house plants; and collecting insects or leaves. Lectures, laboratories, and field trips. (No prereq. Limited to 30 students)

Spring Qtr Sec 1 **Sa**—8 a.m.-10:30, FolH 102, Buonocore

GC 1161 PHYSICAL SCIENCE: ASTRONOMY—SOLAR SYSTEM. 5 degree credits, \$82.50. (◆\$41.25)

Introductory survey of solar system including earth, sun, planets, satellites, asteroids, comets, and meteorites. Proofs of earth's rotation and revolution, celestial sphere, time intervals, motion and physical attributes of various members of solar system, and instruments used by astronomer. Visit to planetarium; observation of sky through university telescope. (No prereq)

Fall Sem Sec 1 **M**—6:20-8, Ph 170, Policoff

(See also IC 0271, Pulsars, Quasars and Black Holes: Topics in Astronomy)

GC 1162 PHYSICAL SCIENCE: STELLAR ASTRONOMY. 5 degree credits, \$82.50. (◆\$41.25)

Introductory study of certain aspects of large-scale structure of universe beginning with definition and measurement of certain properties of stars—magnitude, distance, temperature, size. Spectral classification of stars, nebulae, galaxies, neutron stars, quasars, expansion of universe, instruments used by astronomer. Visit to planetarium; observation of sky through university telescope. (No prereq)

Spring Sem Sec 1 **M**—6:20-8, Ph 170, Policoff

GC 1167 ASTRONOMY LAB. 2 degree credits, \$33. (◆\$16.50)

Students will gain a certain proficiency in doing amateur astronomy work by performing a series of experiments and by systematically observing the night sky. Students will have the opportunity to associate with amateur astronomers. (Prereq one course in astronomy or concurrent registration in an astronomy course or equivalent. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—7-11, Ph 131, Policoff

GC 1173 THE NATIONAL PARKS AND THEIR RESOURCES. 4 degree credits, \$66. (◆\$33)

Regional geologic patterns and interrelationships of American "pleasuring grounds" and attitudes of people who visit them. Lectures provide regional setting and park descriptions and explore human aspects of tourism and park use. Intended for

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

travelers interested in their surroundings and for those who are planning park and recreation careers. (Prereq course in geology)

Fall Qtr Sec 1 **W**—5-7:30, SciCB 175, M Harris

GC 1178 GEOLOGY IN MINNESOTA'S STATE PARKS. 4 degree credits, \$66 plus \$4 fee. Total \$70. (◆\$33 plus \$4 fee. Total \$37)

◆ Since many of Minnesota's state parks were chosen primarily for their interesting geologic features, they make up a good synopsis of the geology of the state. As many as possible of these will be studied along with the geologic principles required to explain them. A few field trips to parks near the Twin Cities may be possible. (No prereq)

Spring Qtr Sec 1 **W**—5-7:30, SciCB 125, M Harris

GC 3114 PERSONAL ENVIRONMENTAL HEALTH. 4 degree credits, \$70. (◆\$35)

◆ Health as a product of harmony between man and environment: biological, physical, social, and ideological. Content selected from following topics: personal health—interaction of mind and body, progress in medicine; environmental health—impact of new pollutions, environment and personality, occupational health and industrial medicine, community health organizations and consumer costs, health in college community. (Prereq 45 cr or #)

Winter Qtr Sec 1 **W**—6:20-8:50, SciCB 125, Dearden

GC 3115 EVOLUTION AND THE MODERN SPECIES. 4 degree credits, \$70. (◆\$35)

◆ Descriptive course concerning principles and topics of evolution as well as practical application of scientific information to specific problems of adaptation to environmental change. Evolution of modern man described, from emergence of primate forms to appearance of ancestral forms from which humans may have evolved in response to certain environmental stimuli and conditions. (Prereq 1131)

Winter Qtr Sec 1 **T**—5-7:30, SciCB 175, Liston

GC 3132 HUMAN BODY: CARDIOVASCULAR ANATOMY AND PHYSIOLOGY. 4 degree credits, \$70. (◆\$35)

◆ An in-depth study of the anatomy and physiology of the cardiovascular system. Abnormalities in and malfunctioning of the system. Influence of drugs, hormones stress, injury, etc., along with measures to control these influences. (Prereq 1132 or equivalent)

Spring Qtr Sec 1 **W**—6:20-8:50, SciCB 175, Dearden

★**GC 3134 NATURE AND ITS IMPACT ON THE MIND.** 4 degree credits, \$70.

Begins with field trips to some exciting natural areas in University vicinity. Aspects of nature ranging from leaf patterns to bird songs to smells of different types of forest and prairies, which may be common to arts of various societies, studied and appreciated in their natural settings. Students try their skills at interpreting what they have sensed in visual and literary arts. Some attempt simple scientific experiments. Includes reading and discussing treatment of nature in selected literature and analysis of nature art in local galleries and slide collections. (Prereq 45 cr or #. Limited to 30 students)

Fall Qtr Sec 1 **T**—6:20-8:50, FolH 108, Jefferson

GC 3135 THE CARE AND KNOWLEDGE OF HOUSE PLANTS. 4 degree credits, \$70. (◆\$35)

◆ Course would give the student not only an understanding of how to care for houseplants, but an opportunity to learn the botanical aspects of the plants being raised.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

The students will attempt to learn the anatomy and physiology of house plants as well as how to keep them alive and healthy. (No prereq)

Fall Qtr Sec 1 **W**—5-7:30, FolH 102, Buonocore

GC 3841 MINNESOTA RESOURCES. 4 degree credits, \$70. (◆\$35)

Quality of life in Minnesota observed in context of the American Dream and the Good Life. Minnesota's resources—it's people, physical environment, and economic activities—provide materials necessary for gaining knowledge and understanding of state. Films, slides, and audiotapes provide on-the-spot acquaintance with present-day Minnesota. (No prereq)

Fall Qtr Sec 1 **M**—5:30-8, NH 213, Steinhauser

social and behavioral sciences

(See also noncredit Informal Courses)

GC 1211 DEVELOPMENT OF HUMAN SOCIETY. 4 degree credits, \$66. (◆ \$33)

An interdisciplinary framework is employed to study society—its major components, origin, development and present structure, and the impact of these on population groups and individuals. Some emphasis on scientific method and theories of social stratification and urbanization. (No prereq)

Spring Qtr Sec 1 **W**—6:20-8:50, NH 122, Hathaway

GC 1212 URBAN PROBLEMS. 4 degree credits, \$66. (◆ \$33)

A problem-solving interdisciplinary approach to examine some major urban problems such as social class and poverty, social change, crime, and education. Emphasis on field-work and/or community activities. (No prereq)

Winter Qtr Sec 1 **M**—6:20-8:50, NH 211, F Johnson

GC 1221 MINNESOTA HISTORY. 4 degree credits, \$66. (◆ \$33) (IS)

The land, people and institutions of Minnesota and the Upper Midwest are studied in the light of a history extending from the primitive and colorful life led by Indians, voyageurs and explorers to the complexities and opportunities of today. The double purpose of the course is to see how Minnesota came to be what it is, and to trace the growth of governmental functions and the course of political struggles from pioneer times to the present. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:50, Richfield HS 249-250

Winter Qtr Sec 2 **T**—5-7:30, NH 213, Moen

GC 1234 GROWING OLD TOGETHER: SOCIAL HISTORY OF AGING. 5 degree credits, \$82.50. (◆\$41.25)

The aging process and the aged have been historically devalued in youth-centered American society. This contributes to a loss of roles, status, and place by elders and a fear of growing older by others. Since 1930 an increasing number of older persons have challenged their diminished social position causing government, business and higher education to respond in contrasting ways. The history of older people's



Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

interactions with these institutions and cultural values will be explored. Students are encouraged to examine their own aging process. (No prereq)

Spring Qtr Sec 1 **Th**—6:20-8:30, NH 211, Detzner

★GC 1235 THE LAW IN SOCIETY. 4 degree credits, \$66.

For students to appreciate the role of law in our changing society, legal aspects of current topics will be discussed. Students select topics for study from the following: courts and court systems, corrections, police-community relations, environmental problems, drug problems, welfare and domestic problems, wills and probate, insurance, and consumer rights. When possible on an individual or group basis, students visit conciliation, municipal, or district courts, prisons, workhouses, jails, juvenile detention centers, or similar institutions. (No prereq. Limited to 40 students)

Fall Qtr Sec 1 **W**—6:20-8:50, Jones 10, Hower

Winter Qtr Sec 2 **T**—5-7:30, NH 216, Kahn

Spring Qtr Sec 3 **Th**—6:20-8:50, Sandburg JHS 213, Golden Valley; Hower

(See also Business Law; Criminal Justice Studies; and Sociology)

GC 1236 UNITED STATES: CRIME AND DELINQUENCY. 4 degree credits, \$3236. \$66. (◆\$33)

Views crime and delinquency within setting of community. Various types of criminality and processes through which individuals become involved in delinquent behavior. Various methods of crime control and treatment. Students, especially those seeking careers in social services, build theoretic framework that guides functioning of correctional institutions. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, NH 107, F Harris

GC 1243 HISTORICAL BIOGRAPHY: WORLD WAR II AND COLD WAR PERSONALITIES. 4 degree credits, \$66. (◆\$33)

To acquire understanding of America's present world position, students study such important figures of mid-20th century as Roosevelt, Stalin, Hitler, Eisenhower, MacArthur, and Truman. Through such personalities, course looks into development and consequences of World War II and Cold War. (No prereq)

Spring Qtr Sec 1 **T**—5:30-8, FolH 105, Buckley

GC 1282 FIELDS OF APPLIED PSYCHOLOGY. 4 degree credits, \$66. (◆\$33)

Survey of use of psychological principles in study of human affairs. Examines contributions of psychological research as made in fields such as teaching and learning; mental retardation; personnel selection and training in industry; measurement and improvement of worker efficiency and morale; law, crime, and aggression; consumer research and advertising; and attitude and opinion formation and measurement. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:50, NH 107

Winter Qtr Sec 2 **T**—6:20-8:50, Ramsey HS 253, Roseville

GC 1283 SOCIAL SCIENCE: PSYCHOLOGY OF HUMAN DEVELOPMENT. 5 degree credits, \$82.50. (◆\$41.25)

Growth and development of individual from conception through adolescence. Aspects of development—physical, motor, social, emotional, psychological. Integration of facets of development made in order to understand human being as a complex organism functioning in a complex environment. The family as the main environmental factor in early development. Cognitive development, moral development,

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

effects of the school on the child's development. Examination of development during young adulthood, middle age, and the aged years. (No prereq)

Spring Qtr Sec 1 **T**—6:20-8:50, NH 216

GC 1285 SOCIAL SCIENCE: CULTURAL ANTHROPOLOGY. 4 degree credits, \$66. (◆\$33)

Human culture viewed as integrated system of behavior patterns learned and shared that serves to guide behavior of all members in a given society. Course aims at developing generalizations about influence of culture on human behavior by analyzing and comparing ways of life in particular cultures. Any and all cultures deemed worthy of such study. Power of culture to shape personality and power of persons to alter cultures. (No prereq)

Fall Qtr Sec 1 **W**—5-7:30, NH 216, F Johnson

GC 1286 INTRODUCTION TO THE DISABLED. 4 degree credits, \$66. (◆\$33)

Characteristics of the mentally, emotionally and physically disabled. Etiology of the disabilities and effects of the disability on the person's ability to function adequately. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:30, NH 209A

★GC 1502 VOCATIONAL PLANNING. 3 degree credits, \$49.50 plus \$2 special course fee. Total \$51.50.

Deals with factors in appropriate occupational choice and adjustment, relationships between educational and vocational planning, and the methods of studying occupations. Group discussion, personal counseling, outside interviews, and laboratory study. Written projects applying techniques of vocational planning. (No prereq. Limited to 30 students)

Spring Qtr Sec 1 **Th**—6:20-8:50, NH 111, Romano

GC 1721 HOME LIFE: MARRIAGE AND FAMILY LIVING. 4 degree credits, \$66. (◆\$33)

To emphasize particular values of family life for individual and for society, course considers biological, psychological, and sociological foundations of the family. Some time devoted to study of adjustment and human relationships in student's present and future home life. Preparation for marriage, factors associated with success or failure in marriage, and problems of parenthood are considered. Specific topics include socialization, sexuality, mate selection, marriage, marital adjustment, contraception, reproduction, and parenthood. (No prereq)

Winter Qtr Sec 1 **M**—6:20-8:50, NH 207

★GC 1722 HOME LIFE: PARENT-CHILD RELATIONSHIPS. 4 degree credits, \$66. (◆\$33) (IS)

Interdisciplinary course aimed at helping students to develop their own philosophy of childrearing—attitudes, principles, and perspectives that will guide them in their relations to their children and in performance of their parental responsibilities. Focus on helpful information related to crises of parenthood. Relevant research is used to emphasize principles of parent-child relations and to prepare students for tasks of parenthood. (No prereq. Limited to 60 students)

Fall Qtr Sec 1 **Th**—6:20-8:50, NH 213

(See also Family Social Science)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

GC 3236 MINNESOTA CORRECTIONS: PENAL ALTERNATIVES. 4 degree credits, \$70. (◆\$35)

◆ Penal system in Minnesota at adult level: St. Cloud, Stillwater, and Shakopee. Alternatives: diversion, probation, parole, half-way house, and other community-based programs. (Prereq 45 cr or #)

Spring Qtr Sec 1 **W**—6:20-8:50, NH 211, F Harris

GC 3251 THE GREAT CITIES OF EUROPE. 5 degree credits, \$87.50. (◆\$43.75)

◆ **new** Six modern European cities: Renaissance Florence, Rome of the Catholic Reformation, Paris of Louis XIV, London of the early Industrial Revolution, Berlin in the bursting forth of Twentieth Century science, and Moscow as the most powerful current European city. (No prereq)

Winter Qtr Sec 1 **Th**—6:20-8:50, NH 207, Jones

★GC 3285 ANTHROPOLOGY OF THE CITY. 4 degree credits, \$70. (◆\$35)

◆ Anthropologists' way of looking at urbanization as a process, and the city as a community made up of a variety of cultures. Ecological perspective as it relates to the whole of interaction between various cultures. Field study allows students to apply theories introduced at beginning to personal examination of one of the many cultures which make up the city in the 1970s. (Prereq 45 cr or #. Limited to 50 students)

Winter Qtr Sec 1 **W**—6:20-8:50, NH 216, F Johnson

GC 3292 SOCIAL SCIENCE: URBAN PROBLEMS—GEOGRAPHIC PERSPECTIVES. 4 degree credits \$70. (◆\$35)

◆ Focus on Twin Cities metropolitan area, particularly the two central cities and selected suburban communities. Urbanization, cultural pluralism, environmental control, and shifting values among problems studied. Student committees examine a number of Twin Cities communities and present findings to class. Several other large American and foreign cities also studied. (Prereq 45 cr or #)

Spring Qtr Sec 1 **M**—6:20-8:50, NH 213, Steinhauser

★GC 3605 INTERVIEWING. 4 degree credits, \$70.

Recognition of interactive process of interview and roles of participants in dyad, exploration of a variety of communication patterns in interview context, and understanding how interviewer affects others (and how others affect him) in goal-directed dyadic interaction. Students develop skills in general interviewing principles through actual and simulated situations. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 **M**—5:30-8, NH 107

Spring Qtr Sec 2 **M**—6:20-8:50, NH 107, Wilson

GC 3612 MENTAL HEALTH: PRINCIPLES AND PRACTICES. 4 degree credits, \$70. (◆\$35)

◆ Mental health as a social problem; changing needs and concepts of mental health; classification of mental and emotional disorders of constructs of psychodynamics; childrearing climates related to mental health and onset of personality problems; research finding on relative effectiveness of punitive and positive reinforcement techniques in inducing behavior change; rationales and principles of treatment practices in somatotherapy, sociotherapy, and psychotherapy; and emerging para-professional practices in handling problem clients. (Prereq 45 cr or #)

Fall Qtr Sec 1 **T**—6:20-8:50, Owre 12, Borow

Winter Qtr Sec 2 **M**—6:20-8:50, Owre 12, Wilson

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

GC 3614 PSYCHOLOGICAL INTERVENTION TECHNIQUES. 4 degree credits, \$70.**new**

Prepares students as service-givers in crisis situations. Lecture materials include definition of crisis, examples of crises which occur throughout the life cycle, and less frequent emergencies such as suicide. Laboratory assignments include video-taped role-played interviews of individuals in crisis. Logs of personal experiences of students and the crises they have gone through are kept. (No prereq)

Fall Qtr Sec 1 **Th**—5-7:30, NH 216, Wilson

GC 3615 THE REHABILITATION PROCESS. 4 degree credits, \$70.

For students interested in working in helping professions, particularly with handicapped people. General problems of the disabled and resources available to help those with special problems; mental health principles and their application in working with the disabled; mental, physical, and emotional factors which create barriers to individual's potential to become productive in social, educational, or work experience. Special emphasis on exploring mental retardation as problem for worker in helping professions and on progress made in educating and training the retarded. Aged and physically and emotionally handicapped persons also considered in terms of defining disabilities, potential for rehabilitation, and current methods and approaches used to help these individuals. To help student understand his own perceptions and attitudes relative to disability and rehabilitation, and to work toward better ways of using himself in rehabilitation processes. (Prereq 45 cr or #)

Winter Qtr Sec 1 **T**—6:20-8:50, Owre 12, Latts

GC 3621 COUNSELING AND WORK REGARDING COMMUNITY RESOURCES. 4 degree credits, \$70.

Intended primarily for persons interested or involved in human services work. Designed to develop student's skill in counseling clients regarding community resources: help develop understanding of human services available in Twin City area, and how services may interrelate; help in gaining insight of Human Services Generalist concept. Activities include small group interaction, video tape practice, interviewing, and assembly of agency resource book. (Prereq 45 cr or #)

Fall Qtr Sec 1 **W**—6:20-8:50, NH 207, Foat

GC 3624 HUMAN SERVICES WORKER—CHANGE AGENT I: INTRODUCTION. 4 degree credits, \$70.**new**

The key change agent functional roles—advocate, broker, outreach worker, community organizer. (No prereq)

Winter Qtr Sec 1 **Th**—6:20-8:50, Jones 11, Foat

GC 3625 HUMAN SERVICES WORKER—CHANGE AGENT II: EFFECTING CHANGE. 4 degree credits, \$70.

Organizational development and how to effect change. (No prereq)

Spring Qtr Sec 1 **W**—5-7:30, Jones 10, Foat

genetics and cell biology (GCB)**GCB 3002 HUMAN GENETICS, SOCIAL AFFAIRS.** 3 degree credits, \$3022, Biol 1101, 3032. \$52.50; 4 degree credits with term paper, \$70.

For students in programs not directly related to biological sciences. Human genetics; study of individuals, families, populations, and races with respect to differences in intelligence, behavior, disease, and other matters of social concern. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, HSUnitA 2-580

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

geo-engineering (GeoE)

(See Civil Engineering, page 99)

geography (Geog)

(See also General College natural science courses)

John S. Adams, Professor of Geography
Russell B. Adams, Associate Professor of Geography
Bonnie Barton, Assistant Professor of Geography
Dwight A. Brown, Associate Professor of Geography
Philip J. Gersmehl, Assistant Professor of Geography
John Fraser Hart, Professor of Geography
Anthony C. Lea, Assistant Professor of Geography
Fred E. Lukermann, Professor of Geography
Cotton Mather, Professor of Geography
Philip W. Porter, Professor of Geography
John C. Rice, Associate Professor of Geography
Joseph E. Schwartzberg, Professor of Geography
Earl P. Scott, Assistant Professor of Geography
Eric S. Sheppard, Assistant Professor of Geography
Roderick H. Squires, Associate Professor of Geography
Yi-Fu Tuan, Professor of Geography
John W. Webb, Professor of Geography

Geog 1301 HUMAN GEOGRAPHY. 4 degree credits, \$1302. \$66. (◆\$33)

Geography of population and principal ways of life; capacity of the earth for future population. (No prereq)

Fall Qtr Sec 1 **Th**—6-9:20, AndH 230, Rice

Geog 1401 PHYSICAL GEOGRAPHY. 5 degree credits, \$82.50. (◆\$41.25)

Major features of distribution patterns of climate, relief, vegetation and soils; regional differences in problems of physical development. (No prereq)

Spring Qtr Sec 1 **M**—6-9:20, AndH 230, Gersmehl, Squires

Geog 3001 INTRODUCTION TO GEOGRAPHIC INQUIRY. 4 degree credits, \$70 (◆\$35).

Concepts of distance, direction, scale, location, hierarchy, flow, metrics, and space: analyses that these entail. (No prereq. A joint Day/Extension class)

Winter Qtr Sec 1 **T**—6-8:50, BlegH 350, Barton, Porter

Geog 3101 GEOGRAPHY OF THE UNITED STATES AND CANADA. 4 degree credits, \$70. (◆\$35) (IS)

Interaction of the aspirations and abilities of different groups of people with the complexities of the natural environment to produce the regional differentiation of the United States and Canada. (No prereq)

Winter Qtr Sec 1 **M**—6-8:50, AndH 230, Hart

Geog 3181 SOVIET UNION. 4 degree credits, \$70 (◆\$35) (IS)

Systematic appraisal by regions of physical resources, population, and economic geography; problems and planning in U.S.S.R. compared with the U.S. (No prereq. A

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

joint Day/Extension class. May be applied toward the CLA foreign language requirement, Route II [see page 354]]

Fall Qtr Sec 1 **T**—6-8:50, BlegH 435, R. Adams

Geog 3345 ENERGY AND MINERALS. 4 degree credits, \$70 (◆\$35).

Sources, production, circulation, and consumption of power, metals, and nonmetallic minerals. Problems of exhaustion, substitution, pollution, costs, trade, and policy. National and local case studies. (No prereq. A joint Day/Extension class)

Fall Qtr Sec 1 **M**—6-8:50, BlegH 415, R. Adams

Geog 3371 URBAN GEOGRAPHY. 4 degree credits, \$70 (◆\$35).

Character, distribution, and development of cities in present-day world. Internal and external locational relationships. (No prereq. A joint Day/Extension class)

Spring Qtr Sec 1 **T**—6-8:50, BlegH 415, Sheppard

★**Geog 3511 INTRODUCTION TO CARTOGRAPHY.** 4 degree credits, \$70.

Principles of map design, compilation, specification, and drafting. Map symbols. History of cartography. Projections—analysis of construction, properties, and uses. (Pre: req 5 cr in geography or #. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr Sec 1 **Lect T**—6-8, AndH 350, Brown; **Lab T** 2:15-4, BlegH 455

Sec 2 **Lect T**—6-8, BlegH 435, Brown; **Lab Th** 2:15-4, BlegH 455

Sec 3 **Lect T**—6-8, BlegH 440, Brown; **Lab Th** 6-8, BlegH 455

(Limit 15 students)

Geog 5102 HISTORICAL GEOGRAPHY OF NORTH AMERICA. 4 degree credits, \$74 (◆\$37).

Sequential analysis of settlement and economy in changing environment and resource pattern of North America in the period of sectional industrialization, rural to urban change, and national metropolitan dominance. (No prereq. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—6-8:50, BlegH 415, Lukermann

Geog 5181 U.S.S.R. REGIONS AND PLANNING. 4 degree credits, \$74 (◆\$37).

Regionalization, production specialization, and interchange within U.S.S.R.; effects of policies of centralization and regional autonomy; present trends, prognosis, and comparisons with United States. (Prereq 3181 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6-8:50, BlegH 440, R. Adams

Geog 5382 APPLIED LOCATIONAL MODELS. 4 degree credits, \$74 (◆\$37).

Practical problems of optimal location in geographic space. Solution of applied facility location problems in private and public sectors. Application of various locationally oriented programming techniques; packaged programs. (Prereq 3331 or #. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **W**—6-8:50, BlegH 415, Lea, Sheppard

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Geog 8010 SEMINAR: THEORETICAL GEOGRAPHY. 3 degree credits, \$85.50.

(Prereq #. A joint Day/Extension class. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 T—7-9, SocSci 860, Barton

Geog 8140 SEMINAR: AFRICA. 3 degree credits, \$85.50.

(Prereq #. A joint Day/Extension class. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 T—7-9, SocSci 307, Porter/Scott

Geog 8350 SEMINAR: SETTLEMENT AND POPULATION GEOGRAPHY. 3 degree credits, \$85.50.

(Prereq #. A joint Day/Extension class. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 W—7-9, SocSci 307, Webb

Geog 8400 SEMINAR: PHYSICAL GEOGRAPHY. 3 degree credits, \$85.50.

(Prereq #. A joint Day/Extension class. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 M—6:30-8:30, SocSci 307, Gersmehl, Squires

Winter Qtr Sec 2 M—6:30-8:30, SocSci 307, Brown

Spring Qtr Sec 3 M—6:30-8:30, SocSci 307, Brown

Geog 8800 SEMINAR: DEVELOPMENT OF GEOGRAPHIC THOUGHT. 3 degree credits, \$85.50.

(Prereq #. A joint Day/Extension class. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr Sec 1 T—7-9, SocSci 307, Lukermann

The following are day school classes in Geography for which Extension students may register. Registration for these is the same as for Extension classes. For course descriptions, see the current College of Liberal Arts Bulletin available from the Bulletin & Service Bureau (373-2153) room 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, 55455.

These courses are subject to frequent changes in time. Rooms are not listed. Check for day, time, and room in a day school class schedule or call the Geography Department (373-2661) or Extension Classes (373-3949).

—Fall Quarter—

Geog 1301 HUMAN GEOGRAPHY. 5 degree credits, \$1302. \$82.50. (No prereq)

Students are advised that discussion sections or laboratory sections are required with this course. Consult a day school class schedule or call the Geography Department (373-2661) or Extension Classes (373-3949).

Fall Qtr Sec 2 MWF—9:15 a.m.-10

Sec 3 TTh—9:45 a.m.-11

Geog 1401 PHYSICAL GEOGRAPHY. 5 degree credits, \$1301. \$82.50. (No prereq)

Students are advised that discussion sections or laboratory sections are required with this course. Consult a day school class schedule or call the Geography Department (373-2661) or Extension Classes (373-3949).

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.



Fall Qtr Sec 2 MWF—9:15 a.m.-10
 Sec 3 MWF—10:15 a.m.-11

Geog 1973 GEOGRAPHY OF THE TWIN CITIES. 5 degree credits, \$3973. \$82.50. (No prereq. Meets concurrently with 3973)

Fall Qtr Sec 1 MWF—12:15-1

Geog 3101 GEOGRAPHY OF THE UNITED STATES AND CANADA. 4 degree credits, \$70. (No prereq)

Fall Qtr Sec 2 MWF—11:15 a.m.-12

Geog 3141 AFRICA. 4 degree credits, \$70. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Swahili [see page 354])

Fall Qtr Sec 1 MWF—10:15 a.m.-11

Geog 3212 SOUTH ASIA. 4 degree credits, \$5212. \$70. (No prereq. Meets concurrently with 5212. May be applied toward the CLA foreign language requirement, Rt II for South Asian languages [see page 354])

Fall Qtr Sec 1 MWF—11.15 a.m.-12

Geog 3221 AUSTRALIA-NEW ZEALAND-OCEANIA. 4 degree credits, \$70. (No prereq)

Fall Qtr Sec 1 MWF—12:15-1

Geog 3311 MAPS AND MAP INTERPRETATION. 4 degree credits, \$70. (Prereq soph, 5 cr in geography or #)

Fall Qtr Sec 1 TTh—9:45 a.m.-11

Geog 3331 ECONOMIC GEOGRAPHY. 4 degree credits, \$70. (No prereq)

Fall Qtr Sec 1 MWF—10:15 a.m.-11

Geog 3361 ENVIRONMENTAL EVALUATION AND ADAPTATION. 4 degree credits, \$70. (No prereq)

Fall Qtr Sec 1 MWF—2:15-3

Geog 3371 URBAN GEOGRAPHY. 4 degree credits, \$70. (No prereq)

Fall Qtr Sec 2 TTh—8:15 a.m.-10

Geog 3431 PLANT AND ANIMAL GEOGRAPHY. 4 degree credits, \$70. (No prereq)

Fall Qtr Sec 1 MWF—12:15-1

Geog 3441 LANDFORM GEOGRAPHY. 4 degree credits, \$70. (No prereq)

Fall Qtr Sec 1 TTh—11:15 a.m.-12:30

Geog 3531 QUANTITATIVE METHODS. 4 degree credits, \$70. (No prereq)

Fall Qtr Sec 1 MWF—10:15 a.m.-11

Geog 3950 UNDERGRADUATE SEMINAR. 4 degree credits each quarter, \$70 each quarter. (Prereq 10 cr in geography and #)

Fall Qtr Sec 1 T—2:15-4

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

Geog 3970 DIRECTED STUDIES. 4 degree credits each quarter, \$70 each quarter. (No prereq)

Fall Qtr Sec 1 arr.

Geog 3973 GEOGRAPHY OF THE TWIN CITIES. 4 degree credits, \$1973. \$70. (No prereq. Meets concurrently with 1973)

Fall Qtr Sec 1 MWF—12:15-1

Geog 5112 WESTERN UNITED STATES. 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 TTh—9:45 a.m.-11

Geog 5191 AGRICULTURAL MARKETING IN AFRICA. 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 TTh—11:15 a.m.-12:30

Geog 5212 SOUTH ASIA. 4 degree credits, \$3212. \$74. (No prereq. Meets concurrently with 3212. Qualified students may register for graduate credit at the University of Minnesota. May be applied toward the CLA foreign language requirement, Rt II for South Asian languages [see page 354])

Fall Qtr Sec 1 MWF—11:15 a.m.-12

Geog 5375 AMERICAN CITIES—LOCATION AND GEOGRAPHIC DESIGN. 4 degree credits, \$74. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 TTh—11:15 a.m.-12:30

Geog 5381 SERVICES AND LOCATION THEORY. 4 degree credits, \$74. (Prereq 4 cr in economic geography or economics or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 TTh—2:15-3:30

Geog 5391 RURAL GEOGRAPHY. 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 TTh—12:45-2

Geog 8020 SEMINAR: ECONOMIC GEOGRAPHY. 3 degree credits, \$85.50. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 T—2:15-4

Geog 8120 SEMINAR: HISTORICAL GEOGRAPHY OF MIDDLE AMERICA. 3 degree credits, \$85.50. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 W—2:15-4

Geog 8330 SEMINAR: AGRICULTURAL GEOGRAPHY. 3 degree credits, \$85.50. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 T—3-5

Symbols, abbreviations, off-campus class locations begin on page 413. Courses and sections in red have limits on enrollment. See page 23.

Geog 8970 DIRECTED READINGS. 1-5 degree credits, \$28.50 per credit. (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 arr.

Geog 8980 TOPICS IN GEOGRAPHY. 3 degree credits, \$85.50. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 Th—2-4

Geog 8990 RESEARCH PROBLEMS IN GEOGRAPHY. Cr arr. \$28.50 per credit. (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 arr.

— Winter Quarter —

Geog 1301 HUMAN GEOGRAPHY. 5 degree credits, \$1302. \$82.50. (No prereq)

Students are advised that discussion sections or laboratory sections are required with this course. Consult a day school class schedule or call the Geography Department (373-2661) or Extension Classes (373-3949)

Winter Qtr Sec 4 MWF—10:15 a.m.-11

Sec 5 MWF—11:15 a.m.-12

Geog 1401 PHYSICAL GEOGRAPHY. 5 degree credits, \$1301. \$82.50. (No prereq)

Students are advised that discussion sections or laboratory sections are required with this course. Consult a day school class schedule or call the Geography Department (373-2661) or Extension Classes (373-3949).

Winter Qtr Sec 4 MWF—10:15 a.m.-11

Geog 3111 GEOGRAPHY OF MINNESOTA. 4 degree credits, \$70. (No prereq)

Winter Qtr Sec 1 TTh—9:45 a.m.-11

Geog 3131 MIDDLE AMERICA. 4 degree credits, \$70. (No prereq)

Winter Qtr Sec 1 MWF—12:15-1

Geog 3213 SOUTHEAST ASIA. 4 degree credits, \$70. (No prereq)

Winter Qtr Sec 1 MWF—9:15 a.m.-10

Geog 3343 LAND USE ECOLOGY. 4 degree credits, \$70. (No prereq)

Winter Qtr Sec 1 MWF—12:15-1

Geog 3351 GEOGRAPHY OF FOOD PRODUCTION. 4 degree credits, \$70. (No prereq)

Winter Qtr Sec 1 MWF—9:15 a.m.-10

Geog 3511 INTRODUCTION TO CARTOGRAPHY. 4 degree credits, \$70. (Prereq 5 cr in geography or #)

Students are advised that discussion sections or laboratory sections are required with this course. Consult a day school class schedule or call the Geography Department (373-2661) or Extension Classes (373-3949).

Winter Qtr Sec 4 TTh—9:15 a.m.-10

- Geog 3531 QUANTITATIVE METHODS.** 4 degree credits, \$70. (No prereq)
Winter Qtr Sec 2 TTh—9:45 a.m.-11
- Geog 3970 DIRECTED STUDIES.** 1-15 degree credits each quarter, \$17.50 per credit. (No prereq)
Winter Qtr Sec 2 arr.
- Geog 5001 GEOGRAPHICAL ANALYSIS I.** 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 TTh—12:45-2
- Geog 5101 HISTORICAL GEOGRAPHY OF NORTH AMERICA.** 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 MWF—8:15 a.m.-9
- Geog 5142 GEOGRAPHY OF EAST AFRICA.** 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 MWF—10:15 a.m.-11
- Geog 5372 METROPOLITAN ANALYSIS I.** 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 TTh—8:15 a.m.-10
- Geog 5376 AMERICAN CITIES— LOCATION AND GEOGRAPHIC DESIGN.** 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 TTh—11:15 a.m.-12:30
- Geog 5383 TRANSPORTATION GEOGRAPHY.** 4 degree credits, \$74. (Prereq 3331 or #. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 TTh—2:15-3:30
- Geog 5445 QUATERNARY PALEOGEOGRAPHY.** 4 degree credits, \$74. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 TTh—2:15-3:30
- Geog 5531 QUANTITATIVE RESEARCH DESIGN.** 4 degree credits, \$74. (Prereq 3531, Soc 3801 or #. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 TTh—9:45 a.m.-11
- Geog 5811 ENVIRONMENTALISM, ENVIRONMENT, AND THE QUALITY OF LIFE.** 4 degree credits, \$74. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 MWF—1:15-2
- Geog 5849 SPACE AND PLACE: A GEOGRAPHY OF EXPERIENCE.** 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 MWF—11:15 a.m.-12

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

Geog 8140 SEMINAR: AFRICA. 3 degree credits, \$85.50. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr Sec 2 **F**—1:15-3

Geog 8210 SEMINAR: SOUTH ASIA. 3 degree credits, \$85.50. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr Sec 1 **arr.**

Geog 8300 GEOGRAPHICAL WRITING. 3 degree credits, \$85.50. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr Sec 1 **M**—1:15-3

Geog 8340 SEMINAR: LAND USE PLANNING. 3 degree credits, \$85.50. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr Sec 1 **T**—7-9

Geog 8440 PLEISTOCENE BIOGEOGRAPHY. 1-3 degree credits, \$28.50 per credit. (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr Sec 1 **Th**—2:15-4

Geog 8970 DIRECTED READINGS. 1-5 degree credits, \$28.50 per credit. (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr Sec 2 **arr.**

Geog 8990 RESEARCH PROBLEMS IN GEOGRAPHY. Cr arr, \$28.50 per credit. (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr Sec 2 **arr.**

— Spring Quarter—

Geog 1301 HUMAN GEOGRAPHY. 5 degree credits, \$1302. \$82.50. (No prereq)

Students are advised that discussion sections or laboratory sections are required with this course. Consult a day school class schedule or call the Geography Department (373-2661) or Extension Classes (373-3949).

Spring Qtr Sec 6 **MWF**—9:15 a.m.-10

Sec 7 **MWF**—11:15 a.m.-12

Geog 1401 PHYSICAL GEOGRAPHY. 5 degree credits, \$1301. \$82.50. (No prereq)

Students are advised that discussion sections or laboratory sections are required with this course. Consult a day school class schedule or call the Geography Department (373-2661) or Extension Classes (373-3949).

Spring Qtr Sec 5 **MWF**—9:15 a.m.-10

Geog 1425 INTRODUCTION TO METEOROLOGY. 4 degree credits, \$Soils 1262. \$66. (No prereq)

Students are advised that discussion sections or laboratory sections are required with this course. Consult a day school class schedule or call the Geography Department (373-2661) or Extension Classes (373-3949).

Spring Qtr Sec 1 **MWF**—7:55 a.m.-8:40

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Geog 3101 GEOGRAPHY OF UNITED STATES AND CANADA. 4 degree credits, \$70. (No prereq)

Spring Qtr Sec 3 **MWF**—11:15 a.m.-12

Geog 3161 EUROPE. 4 degree credits, \$70. (No prereq)

Spring Qtr Sec 1 **TTh**—9:45 a.m.-11

Geog 3321 POLITICAL GEOGRAPHY. 4 degree credits, \$70. (No prereq)

Spring Qtr Sec 1 **MWF**—9:15 a.m.-10

Geog 3331 ECONOMIC GEOGRAPHY. 4 degree credits, \$70. (No prereq)

Spring Qtr Sec 2 **TTh**—8:15 a.m.-9:30

Geog 3341 INDUSTRIALIZATION AND WORLD TRADE. 4 degree credits, \$70. (No prereq)

Spring Qtr Sec 1 **TTh**—11:15 a.m.-12:30

Geog 3344 THE LAND ETHIC IN THE UNITED STATES. 4 degree credits, \$70. (No prereq)

Spring Qtr Sec 1 **MWF**—12:15-1

Geog 3421 CLIMATOLOGY. 4 degree credits, \$70. (Prereq 1401 or #)

Spring Qtr Sec 1 **MWF**—10:15 a.m.-11

Geog 3451 GEOGRAPHY OF SOILS. 4 degree credits \$70 \$Soils 5512. (No prereq)

Spring Qtr Sec 1 **MWF**—11:15 a.m.-12

Geog 3511 INTRODUCTION TO CARTOGRAPHY. 4 degree credits, \$70. (Prereq 5 cr in geography or #)

Students are advised that discussion sections or laboratory sections are required with this course. Consult a day school class schedule or call the Geography Department (373-2661) or Extension Classes (373-3949).

Spring Qtr Sec 5 **TTh**—9:15 a.m.-10

Geog 3801 DEVELOPMENT OF GEOGRAPHIC THOUGHT. 4 degree credits \$70 \$5801. (Prereq 15 cr in geography)

Spring Qtr Sec 1 **MWF**—8:15 a.m.-9

Geog 3970 DIRECTED STUDIES. 1-15 cr each quarter, \$17.50 per credit. (No prereq)

Spring Qtr Sec 3 **Arr.**

Geog 5002 GEOGRAPHICAL ANALYSIS II. 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **TTh**—12:45-2

Geog 5011 ELEMENTS OF GEOGRAPHIC EXPLANATION. 4 degree credits, \$74. (Prereq 15 cr in geography or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **TTh**—9:45 a.m.-11

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Geog 5113 CANADA AND ALASKA. 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **TTh**—8:15 a.m.-9:30

Geog 5131 COLONIAL MEXICO AND THE CARIBBEAN. 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **MWF**—12:15-1

Geog 5132 SOUTH AMERICA. 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **TTh**—11:15 a.m.-12:30

Geog 5143 GEOGRAPHY OF WEST AFRICA. 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **MWF**—10:15 a.m.-11

Geog 5173 NORDEN. 4 degree credits, \$74. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Finnish, Danish, Norwegian, Swedish [see page 354]. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **TTh**—12:45-2

Geog 5373 METROPOLITAN ANALYSIS II. 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **TTh**—8:15 a.m.-10

Geog 5377 AMERICAN CITIES— LOCATION AND GEOGRAPHIC DESIGN. 4 degree credits, \$74. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **TTh**—11:15 a.m.-12:30

Geog 5444 GEOGRAPHY OF WATER RESOURCES. 4 degree credits, \$74. (Prereq two courses in physical geography or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **MWF**—1:15-2

Geog 5511 CARTOGRAPHIC ANALYSIS. 4 degree credits, \$74. (Prereq 3511, 3531 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **TTh**—1:15-2:30

Geog 8210 SEMINAR: SOUTH ASIA. 3 degree credits, \$85.50. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 2 **Arr.**

Geog 8340 LAND USE PLANNING. 3 degree credits, \$85.50. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 2 **T**—7-9

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

Geog 8440 PLEISTOCENE BIOGEOGRAPHY. 1, 2 or 3 degree credits, \$28.50, \$57 or \$85.50. (No prereq.)

Spring Qtr Sec 2 **Th**—2:15-4

Geog 8530 SEMINAR: QUANTITATIVE GEOGRAPHY. 3 degree credits, \$85.50. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 **Th**—7-9

Geog 8850 ATTITUDES TO ENVIRONMENT. 3 degree credits, \$85.50. (Prereq #. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 **T**—1:15-3

Geog 8970 DIRECTED READINGS. 1-5 degree credits, \$28.50 per credit. (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 3 **Arr.**

Geog 8990 RESEARCH PROBLEMS IN GEOGRAPHY. Cr arr, \$28.50 per credit. (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 3 **Arr.**

geology and geophysics (Geo)

(See also GC 1173, The National Parks and Their Resources; GC 1178, Geology in Minnesota's State Parks)

E. Calvin Alexander, Assistant Professor of Geology and Geophysics

Robert E. Sloan, Professor of Geology and Geophysics

James Stout, Associate Professor of Geology and Geophysics

Paul W. Weiblen, Associate Professor of Geology and Geophysics

IC 0261 AN OVERVIEW OF MODERN GEOLOGY. No credit. Alexander, Sloan, Stout
See Informal Courses, page 214.

Geo 1001 PHYSICAL GEOLOGY. 4 degree credits, \$66 plus \$3 course fee. Total \$69. (IS)

A first course in geology for science majors and an introduction to scientific methods and the nature of the earth for others. Survey of the main features of the physical world and of the processes that have evoked them. (No prereq. Fall Semester meets concurrently with 5051)

Fall Sem Sec 1 **Lect T**—6:20-8, PillsH 110, Weiblen

Lab T—8:10-9:30, ForH 180

Spring Sem Sec 2 **Lect M**—6:20-8, PillsH 110, Alexander

Lab M—8:10-9:30, ForH 180

Geo 1002 HISTORICAL GEOLOGY. 4 degree credits, \$66 plus \$3 course fee. Total \$69.

Evolution of the earth from its origin to the present, with special attention to the succession of physical and biological events of the past 600 million years. (Prereq 1001. Meets concurrently with 5052)

Spring Sem Sec 1 **Lect T**—6:20-8, PillsH 110, Sloan

Lab T—8:10-9:30, ForH 85

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Geo 1008 GEOLOGY AND MAN. 4 degree credits, \$1001. \$66.

An introductory course concerned with man in his physical environment; geological hazards (e. g. earthquakes); the nature and use of natural resources; geological aspects of pollution, recreation and land uses; the effect of the composition of rocks and soils on nutrition and disease. An introduction to the broad nature of earth science. Lectures, labs, and field trips. (No prereq)

Fall Sem Sec 1 **Lect M**—6:20-8, PillsH 110

Lab M—8:10-9:30, ForH 180

Geo 5051 PHYSICAL GEOLOGY FOR TEACHERS. 4 degree credits, \$1001, 1003, 1111. \$74 plus \$3 course fee. Total \$77.

An introduction to the scientific methods and the nature of the earth. Survey of the main features of the physical world and of the processes that have evoked them. (Prereq 1 term college chemistry or physics; only for students holding degrees in education. Meets concurrently with 1001 fall semester course. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 **Lect T**—6:20-8, PillsH 110, Weiblen

Lab T—8:10-9:30, ForH 180

(See also Education)

Geo 5052 HISTORICAL GEOLOGY FOR TEACHERS. 4 degree credits, \$1002, 1004, 1112. \$74 plus \$3 course fee. Total \$77.

An introduction to the origin of the earth, the physical evolution of its crust through geological time and the biological changes that occurred during its history. (Prereq 1001 or 1111 or 5051 or #; only for students holding degrees in education. Meets concurrently with 1002. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 **Lect T**—6:20-8, PillsH 110, Sloan

Lab T—8:10-9:30, ForH 85

Geo 5151 INTRODUCTION TO PALEONTOLOGY. 5 degree credits. **To be offered 1978-79.** (IS)**german (Ger)**

(See also Hist 3623, The Reformation in Germany)

Leonard L. Duroche, Associate Professor of German

Frank D. Hirschbach, Professor of German

Anatoly Liberman, Associate Professor of German

Thomas Plummer, Associate Professor of German

Wolfgang Taraba, Professor of German

Ray Wakefield, Assistant Professor of German

Gerhard H. Weiss, Professor of German

Language laboratory fees are charged for courses in which use of the lab is required or recommended. Cassette tapes are available to Extension Classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 354); Ger 3541, 3603, 3604, 3610.

BEGINNING GERMAN. 1101-1102-1103

5 degree credits per course. Provides basic experience in speaking, reading, and understanding the German language and its structure through the acquisition of basic patterns of speech and later through the reading and analysis of texts. The course will be reinforced with programmed materials which will be available to students in the language laboratory. The continuation course is Ger 1301, which is a prerequisite for 3xxx-level German courses.

Ger 1101-1102-1103 BEGINNING GERMAN. 5 degree credits each semester, \$1001-1002-1003 or \$1110. \$82.50 plus \$5 course fee. Total \$87.50 each semester. (IS)

Structure, pronunciation, reading, and oral comprehension by learning the patterns of basic German (see note above). (No prereq for 1101; 1101 or 1 year high school German or 5 cr 1110 for 1102; 1102 or 2 years high school German or 10 cr 1110 for 1103)

Fall Qtr 1101 Sec 1 **MTh**—6:20-8:30, FolH 209 (A joint Day/Extension class)

Fall Sem 1101 Sec 2 **M**—6:20-9:20, FolH 204, Weiss

1103 Sec 3 **M**—6:20-9:20, FolH 205, Taraba

Winter Qtr 1102 Sec 4 **MTh**—6:20-8:30, FolH 207 (A joint Day/Extension class)

Spring Sem 1102 Sec 5 **M**—6:20-9:20, FolH 205, Weiss

Spring Qtr 1103 Sec 6 **MTh**—6:20-8:30, FolH 207 (A joint Day/Extension class)

★Ger 1110 INDIVIDUALIZED BASIC GERMAN. 3-15 degree credits, \$16.50 per credit plus \$5 course fee.

Individualized instruction covering material of Ger 1001-1002-1003 or 1101-1102-1103. Students work at own speed with instructor guidance completing one unit at a time. Testing for all units is available at any time. Credits are awarded at the end of the quarter upon completion of appropriate number of units. (Prereq #. Limited to 50 students)

Fall Qtr Sec 1 **W**—6:20-8:50, WaLib LRC, Wakefield

Winter Qtr Sec 2 **W**—6:20-8:50, WaLib LRC, Wakefield

Spring Qtr Sec 3 **W**—6:20-8:50, WaLib LRC, Wakefield

Ger 1301 INTERMEDIATE GERMAN. 5 degree credits, \$82.50. (◆\$41.25) (IS)

Selected reading from literature, elementary composition. (Prereq 1003, 1103 or 15 cr 1110 or 3 yrs high school German)

Spring Sem Sec 1 **M**—6:20-9:20, FolH 103, Taraba

Ger 3541 FOLKLORE. 4 degree credits, \$70. (◆\$35)

Basic notions of folklore. Early German Folklore: charms, incantations. Fairy-tales (the Grimms' collection), their structure, message and artistic value. German folklore in its relation to the beliefs and superstitions of other Germanic nations (English and Scandinavian) May be applied toward the CLA foreign language requirement, Route II [see page 354]. (No prereq)

Winter Qtr Sec 1 **T**—6:20-9, FolH 204, Liberman

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Ger 3603 GERMAN LITERATURE IN TRANSLATION: MODERN PERIOD. 4 degree credits, \$70. (◆\$35)

Representative works from the modern period, related to other literatures. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 354].)

Spring Qtr Sec 1 **W**—6:20-9, FolH 202, Hirschbach

Ger 3604 GERMAN LITERATURE IN TRANSLATION AND THE FILM. 4 degree credits, \$70. (◆\$35)

Examination of literary works and films as separate but related art forms. The course will include films ranging from accounts of the first Dracula to the talkies of Peter Lorre and Marlene Dietrich; from Nazi documentaries to recent avant-garde cinema. It will consider the writing of such authors as Thomas Mann, Franz Kafka, Günter Grass, and Peter Weiss. The premise that a history of a people is reflected in its art underlies the broad aims of the course; the analysis of the irrational in modern German culture, attitudes toward authority and violence, expressions of guilt, and the plight of the artist. Requires no knowledge of German. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 354].)

Winter Qtr Sec 1 **M**—6:20-9:40, HSUnitA 2-620, Plummer

(See other film courses in American Studies, Scandinavian Languages, General College, and Informal Courses)

Ger 3610 MODERN GERMAN AUTHORS IN TRANSLATION: FRANZ KAFKA. 4 degree credits, \$70. (◆\$35)

A study in depth of selected works of Franz Kafka, including "Letter to His Father," "The Metamorphosis," "The Penal Colony," **The Trial**, **The Castle**. Kafka's works viewed both as aesthetic documents and as reflections of the German and European ethos of the 20th century. Not open for credit toward a German major. Requires no knowledge of German. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 354].)

Fall Qtr Sec 1 **W**—6:20-9, FolH 201, Duroche

reading german

Ger 0221 and 0222 are specifically designed for individuals who desire only a reading knowledge of the language. The German language requirement for an advanced degree may also be satisfied by a program of study based on Ger 0221 and 0222. Ger 0221 or equivalent (two quarters of beginning German or two years of high school German) is a prerequisite for Ger 0222. Students may take a final examination at the conclusion of Ger 0222. If the student achieves a grade of "B" or better in this examination, the German Department will certify to the Graduate School a reading knowledge of German only if taken on A-N grading system. Graduate students should check with their advisers for specific language requirements in their field of study.

Ger 0221 READING GERMAN. No credit, \$49.50. (IS)

This course is designed to help students acquire a reading knowledge of basic German as rapidly as possible. (The course itself is not intended to prepare a student for the Graduate German Reading Examination; it is merely the first step toward that objective.) Ger 0221 assumes no knowledge of German on the part of the student. Grammar is reduced to an essential minimum. The course progresses from intensive reading of simple, graded material to selections of moderate difficulty. Vocabulary building and analysis of compound words are emphasized. (No prereq.)

Fall Sem Sec 1 **M**—6:20-8, FolH 202, Hirschbach

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Ger 0222 READING GERMAN. No credit, \$66. (IS)

This course is designed to give students experience in intensive reading of German literary texts. This experience should enable graduate students to satisfy departmental requirements for an advanced degree. The German Department will certify to the Graduate School a reading knowledge of German of those taking the final examination and achieving a grade of "B" or better. (Prereq 0221 or 2 quarters of beginning German or 2 years of high school German)

Spring Sem Sec 1 T—6:20-8:35, FolH 209, Plummer

German 0221 and 0222 are also offered as Summer Extension Classes.



health

(See School Health Education; Public Health)

health, environmental

(See Public Health)

hebrew

(See Near and Middle Eastern Studies)

history (Hist)

(See also General College social and behavioral science courses; and non-credit Informal Courses)

Josef L. Altholz, Professor of History

Rudolph E. Anders, Instructor in History

Raymond O. Arsenault, Instructor in History

Bernard S. Bachrach, Professor of History

Paul W. Bamford, Professor of History

Hyman Berman, Professor of History

Kinley J. Brauer, Professor of History

Sara M. Evans, Assistant Professor of History

Edward L. Farmer, Associate Professor of History

George Green, Associate Professor of History

Allen F. Isaacman, Associate Professor of History

Thomas Kelly, Associate Professor of History

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

David Kopf, Professor of History
 Stanford E. Lehmborg, Professor of History
 Byron K. Marshall, Associate Professor of History
 Robert E. McCaa, Instructor in History
 Paul L. Murphy, Professor of History
 David W. Noble, Professor of History
 Kathryn L. Reyerson, Assistant Professor of History
 Richard Rudolph, Associate Professor of History
 Stuart B. Schwartz, Professor of History
 Theofanis G. Stavrou, Professor of History
 Romeyn Taylor, Professor of History
 James D. Tracy, Associate Professor of History
 William E. Wright, Professor of History

A MAJOR IN HISTORY CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered every two years. Interested students should discuss plans with an Extension counselor (373-3905).

B.A. Major Sequence.

Required Preparatory Courses

Four introductory (1xxx-level) history courses (completed in first 2 years when possible). Juniors and seniors may substitute 3xxx-5xxx-level equivalent courses.

Language Requirement (for students admitted to majors after winter 1973) Route I; or Route II plus a year of a second foreign language (or validation at that level); or Route II plus three courses from Soc 3801, 3802, 3803, PsyF 5120, 5122, 5510, all statistics courses, all mathematics courses above 1141, all CSci courses above 3101.

Major Requirements

Minimum of seven 3xxx-5xxx-level history courses (four of them in area of concentration).

3961 (major paper)

Distribution of the 12 Required Courses

Two or more from "modern" and "premodern" categories; at least one from each of three geographical areas.

Prospective history majors should obtain from the department office, the Description of the Undergraduate History Major, which lists "modern" and "premodern" courses and suggests areas of concentration. It also gives information about alternatives to some of the requirements.

Students who plan advanced work should acquire a reading knowledge of French, German, or other appropriate language in early undergraduate years.

You need not be majoring in History to register for these classes.

Hist 1001, 1002, 1003 INTRODUCTION TO MODERN EUROPEAN HISTORY. 4 degree credits each quarter, §3001, 3002, 3003. \$66 each quarter. (◆\$33 each quarter) (IS)

1001: Western European civilization to 1715. **1002:** Revolution, liberalism, and nationalism to 1870. **1003:** 1870 to recent times. (No prereq. Meet concurrently with 3001, 3002, 3003)

Fall Qtr 1001 Sec 1 **W**—6:20-8:50, AndH 210, Wright

Winter Qtr 1002 Sec 2 **W**—6:20-8:50, BlegH 245, Wright

Spring Qtr 1003 Sec 3 **W**—6:20-8:50, BlegH 240, Wright

Hist 1051, 1052, 1053 ANCIENT CIVILIZATION. 3 degree credits each quarter, §3051, 3052, 3053. \$49.50 each quarter. (◆\$24.75) (IS)

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

1051: Near East to 500 B.C. **1052:** Greek Civilization, 750 to 323 B.C. **Note**—1052 may be applied toward the CLA foreign language requirement, Route II for Greek (see page 354). **1053:** Roman Civilization to 305 A.D. **Note**—1053 may be applied toward the CLA foreign language requirement, Route II for Latin (see page 354). (No prereq, but recommended that 1053 be preceded by 1052 and 1052 by 1051 in order that the student may acquire a background for following course. Meet concurrently with 3051, 3052, 3053)

Fall Qtr 1051 Sec 1 T—6:20-8:50, BlegH 10, Kelly

Winter Qtr 1052 Sec 2 T—6:20-8:50, BlegH 10, Kelly

Spring Qtr 1053 Sec 3 T—6:20-8:50, BlegH 10, Kelly

(See also Classics; and Near and Middle Eastern Studies)

Hist 1151, 1152 ENGLISH HISTORY. 4 degree credits each quarter, \$3151, 3152. \$66 each quarter. (◆\$33) (IS)

1151: To the crisis of the 17th century. **1152:** From the 17th century to the present. (No prereq. Meets concurrently with 3151, 3152.)

Fall Qtr 1151 Sec 1 T—6:20-8:50, AndH 330, Lehmborg

Winter Qtr 1152 Sec 2 T—6:20-8:50, AndH 330, Lehmborg

Hist 1301, 1302 AMERICAN HISTORY. 4 degree credits each quarter. \$66 each quarter. (◆\$33) (IS)

Survey of political, economic, and social history of the United States with emphasis on forces that resulted in the emergence of Modern America. **1301:** Colonial, early national period through the sectional crisis. **1302:** Modern America. (No prereq)

Fall Qtr 1301 Sec 1 Th—6:20-8:50, AndH 250, Berman

Winter Qtr 1302 Sec 2 Th—6:20-8:50, BlegH 215, Berman

Spring Qtr 1302 Sec 3 M—6:20-8:50, BlegH 440, Green

Hist 1401, 1402, 1403 SURVEY OF LATIN AMERICAN HISTORY. 4 degree credits each quarter. \$3401, 3402, 3403. \$66 each quarter. (◆\$33)

1401: Colonial period to 1800. **1402:** Independence and the growth of nations in the 19th century to 1896. **1403:** Contemporary period. (No prereq. 1401 and 1402 may be applied toward the CLA foreign language requirement, Rt II for Spanish and Portuguese [see page 354]. Meets concurrently with 3401, 3402, 3403.)

Fall Qtr 1401 Sec 1 M—6:20-8:50, BlegH 10, Schwartz

Winter Qtr 1402 Sec 2 M—6:20-8:50, BlegH 10, Schwartz

Spring Qtr 1403 Sec 3 M—6:20-8:50, BlegH 10, Schwartz

Hist 1431, 1432, 1433 HISTORY OF AFRICA. 4 degree credits each quarter. \$3431, 3432, 3433. \$66 each quarter. (◆\$33)

1431: To 1500. Internal dynamics and genius of early African society. **1432:** 1500-1800. Impact of Europeans, the slave trade, African resistance, the process of underdevelopment. **1433:** 1880 to the present. Abuses of colonialism, nature of African opposition, and liberation struggles. (No prereq. May be applied toward the CLA foreign language requirement, Rt II for Swahili [see page 354]. Meets concurrently with 3431, 3432, 3433.)

Fall Qtr 1431 Sec 1 T—6:20-8:50, BlegH 135, Isaacman

Winter Qtr 1432 Sec 2 T—6:20-8:50, BlegH 135, Isaacman

Spring Qtr 1433 Sec 3 T—6:20-8:50, BlegH 135, Isaacman

Symbols, abbreviations, off-campus class locations begin on page 413. Courses and sections in red have limits on enrollment. See page 23.

Hist 1451, 1452, 1453 ASIAN CIVILIZATIONS. 4 degree credits each quarter. \$3451, 3452, 3453. \$66 each quarter. (◆\$33) (IS)

1451: Birth of civilization through ancient empires in East, South, and West Asia. **1452:** The great religions, the Mongol conquest, early modern empires. **1453:** Decline of empires, European domination, cultural renaissance and nationalism. (No prereq. Meets concurrently with 3451, 3452, 3453.)

Fall Qtr 1451 Sec 1 **Th**—6:20-8:50, BlegH 135, Taylor

Winter Qtr 1452 Sec 2 **Th**—6:20-8:50, BlegH 135, Kopf

Spring Qtr 1453 Sec 3 **Th**—6:20-8:50, BlegH 120, Marshall

Hist 3001, 3002, 3003 INTRODUCTION TO MODERN EUROPEAN HISTORY. 4 degree credits each quarter, \$1001, 1002, 1003. \$70 each quarter.

See course description for Hist 1001, 1002, 1003. (No prereq. Meet concurrently with 1001, 1002, 1003)

Fall Qtr 3001 Sec 1 **W**—6:20-8:50, AndH 210, Wright

Winter Qtr 3002 Sec 2 **W**—6:20-8:50, BlegH 245, Wright

Spring Qtr 3003 Sec 3 **W**—6:20-8:50, BlegH 240, Wright

Hist 3051, 3052, 3053 ANCIENT CIVILIZATION. 3 degree credits each quarter, \$1051, 1052, 1053. \$52.50 each quarter.

See course description for Hist 1051, 1052, 1053. **NOTE**—3052 and 3053 may be applied toward CLA foreign language requirement, Route II for Greek and Latin (see page 354). (No prereq. Meets concurrently with 1051, 1052, 1053)

Fall Qtr 3051 Sec 1 **T**—6:20-8:50, BlegH 10, Kelly

Winter Qtr 3052 Sec 2 **T**—6:20-8:50, BlegH 10, Kelly

Spring Qtr 3053 Sec 3 **T**—6:20-8:50, BlegH 10, Kelly

Hist 3151, 3152 ENGLISH HISTORY. 4 degree credits each quarter. \$1151, 1152. \$70 each quarter. (IS)

See course description for Hist 1151, 1152. (No prereq. Meets concurrently with 1151, 1152.)

Fall Qtr 3151 Sec 1 **T**—6:20-8:50, AndH 330, Lehmborg

Winter Qtr 3152 Sec 2 **T**—6:20-8:50, AndH 330, Lehmborg

Hist 3222, 3223 EUROPEAN SOCIAL HISTORY THROUGH LITERATURE. 4 degree credits each quarter, \$70 each quarter. (◆\$35)

Use of novels, short stories as main sources in examining social movements; social change; patterns of class; family and sex roles. (No prereq)

Fall Qtr 3222 Sec 1 **W**—6:20-8:50, BlegH 115, Rudolph

Winter Qtr 3223 Sec 2 **W**—6:20-8:50, BlegH 115, Rudolph

Hist 3224, 3225, 3226 WORLD WAR II. 4 degree credits each quarter, \$5224, 5225, 5226. \$70 each quarter. (◆\$35)

3224: Origins and backgrounds; the principal powers and their relationships; the rise of totalitarian ideologies and systems; international relations of the 1930's, how the war came; the period of Axis preponderance. The campaign in Poland: the "phony war"; German-Soviet agreements. **3225:** The winter war; the German invasion of Scandinavia; the war in the West; Hitler's "New Order"; breakdown of German-Soviet relations and the campaign of 1941 in the East; Hitler's occupation policies in Russia; the war in Africa; the United States and the war to Pearl Harbor. **3226:** Period of 1942-1945. (No prereq)

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Fall Qtr 3224 Sec 1 **M**—6:20-8:50, AndH 230, Anders
Winter Qtr 3225 Sec 2 **M**—6:20-8:50, AndH 330, Anders
Spring Qtr 3226 Sec 3 **M**—6:20-8:50, AndH 330, Anders

Hist 3401, 3402, 3403 SURVEY OF LATIN AMERICAN HISTORY. 4 degree credits each quarter, \$1401, 1402, 1403. \$70 each quarter.

See description for 1401, 1402, 1403. Meets concurrently with 1401, 1402, 1403. (No prereq. 3401 and 3402 may be applied toward the CLA foreign language requirement, Rt II for Spanish and Portuguese [see page 354])

Fall Qtr 3401 Sec 1 **M**—6:20-8:50, BlegH 10, Schwartz
Winter Qtr 3402 Sec 2 **M**—6:20-8:50, BlegH 10, Schwartz
Spring Qtr 3403 Sec 3 **M**—6:20-8:50, BlegH 10, Schwartz

Hist 3431, 3432, 3433 HISTORY OF AFRICA. 4 degree credits each quarter, \$1431, 1432, 1433. \$70 each quarter.

See description for 1431, 1432, 1433. Meets concurrently with 1431, 1432, 1 (No prereq)

Fall Qtr 3431 Sec 1 **T**—6:20-8:50, BlegH 135, Isaacman
Winter Qtr 3432 Sec 2 **T**—6:20-8:50, BlegH 135, Isaacman
Spring Qtr 3433 Sec 3 **T**—6:20-8:50, BlegH 135, Isaacman

Hist 3451, 3452, 3453 ASIAN CIVILIZATIONS. 4 degree credits each quarter, \$1451, 1452, 1453. \$70 each quarter. (IS)

See descriptions for 1451, 1452, 1453. Meets concurrently with 1451, 1452, 1453. (No prereq. May be applied toward the CLA foreign language requirement, Rt II for Swahili [see page 354])

Fall Qtr 3451 Sec 1 **Th**—6:20-8:50, BlegH 135, Taylor
Winter Qtr 3452 Sec 2 **Th**—6:20-8:50, BlegH 135, Kopf
Spring Qtr 3453 Sec 3 **Th**—6:20-8:50, BlegH 120, Marshall

Hist 3611, 3612 JEWISH-CHRISTIAN RELATIONS IN MEDIEVAL EUROPE. 4 degree credits each quarter, \$70 each quarter. (◆\$35)

History of the Jewish minority in medieval Western Europe; relations between Christians; Constantine to Luther, 300-1500 A. D. (No prereq)

Fall Qtr 3611 Sec 1 **W**—6:20-8:50, BlegH 404, Bachrach
Winter Qtr 3612 Sec 2 **W**—6:20-8:50, BlegH 404, Bachrach

Hist 3623 THE REFORMATION IN GERMANY. 4 degree credits each quarter, \$70 each quarter. (◆\$35)

The Lutheran movement and the beginnings of the Catholic Reformation. (No prereq)

Fall Qtr Sec 1 **Th**—6:20-8:50, BlegH 225, Tracy

Hist 3821, 3822, 3823 THE UNITED STATES IN THE TWENTIETH CENTURY. 4 degree credits each quarter, \$70 each quarter. (◆\$35)

Major political, economic, intellectual and social trends; the development of a corporate society; American imperialism and the rise to globalism; reform movements from Populism to the New Left. **3821:** 1890 to 1920. **3822:** 1920 to 1945. **3823:** 1945 to present. (No prereq)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Fall Qtr 3821 Sec 1 **Th**—6:20-8:50, BlegH 150, Noble
Winter Qtr 3822 Sec 2 **Th**—6:20-8:50, BlegH 150, Noble
Spring Qtr 3823 Sec 3 **Th**—6:20-8:50, BlegH 150, Noble

Hist 3837 TOPICS IN MINNESOTA HISTORY. 4 degree credits, \$70. (◆\$35)

Examination of pertinent topics in political and social history of Minnesota and its region in 19th and 20th centuries. (No prereq)

Winter Qtr Sec 1 **W**—6:20-8:50, BlegH 330, O'Brien

Hist 3841 AMERICAN BUSINESS HISTORY. 5 degree credits, \$87.50. (◆\$43.75)

A study of the creative role of business leaders and of the development of business institutions in American history; interaction of business with economic development, social values, and government economic policies. (No prereq)

Fall Sem Sec 1 **Th**—6:20-8:50, BlegH 350, Green

Hist 3892 HISTORY OF THE SOUTH. 4 degree credits, \$70. (◆\$35)

Reconstruction of southern society, 1861 to the present. (No prereq)

Spring Qtr Sec 1 **M**—6:20-8:50, SocSci 860, Arsenault

Hist 3961 MAJOR PAPER. 5 degree credits, \$87.50.

Required of all history majors, usually taken in the senior year. Students prepare a research paper on the topic they choose, working largely with original materials (printed documents, memoirs, literature, etc.). (Prereq Δ . A joint Day/Extension class)

Spring Qtr Sec 1 **Th**—6:20-8:50, BlegH 350, Evans

See TV course, **Hist 3970, The Age of Uncertainty: A History of Economic Thought**, page 379.

Hist 5211 FRANCE IN THE OLD REGIME. 4 degree credits, \$74. (◆\$37)

From the origins of France to the Revolution of 1789. (No prereq. May be applied toward the CLA foreign language requirement, Rt II [see page 354]. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Qtr Sec 1 **M**—6:20-8:50, SocSci 1383, Bamford

Hist 5212 FRENCH REVOLUTION AND NAPOLEON. 4 degree credits, \$74. (◆\$37)

France and the Revolution, 1789-1799. (No prereq. May be applied toward the CLA foreign language requirement, Rt II [see page 354]. Qualified students may register for graduate credit at the University of Minnesota.)

Winter Qtr Sec 1 **M**—6:20-8:50, AndH 270, Bamford

Hist 5264 MODERN RUSSIA: 18TH CENTURY BACKGROUND. 4 degree credits, \$74. (◆\$37)

Foundation of the Russian Empire, modernization and expansion under Peter the Great and Catherine the Great. Russia's Europeanization. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 354]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6:20-8:50, BlegH 350, Stavrou

(See also Russ 3503, Russian Civilization and Culture)

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

Hist 5265 MODERN RUSSIA: 19TH CENTURY. 4 degree credits, \$74. (◆\$37)

Political, social and cultural developments from Alexander I to the 1905 Revolution. Revolutionary movement and the consequences of the emancipation of the serfs, and Russian industrialization. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 354]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 M—6:20-8:50, BlegH 430, Stavrou

Hist 5266 MODERN RUSSIA: THE 20TH CENTURY. 4 degree credits, \$74. (◆\$37)

Fall of the Russian monarchy, revolutions, and Soviet regime. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page xx]. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 M—6:20-8:50, BlegH 430, Stavrou

Hist 5279 RELIGIOUS HISTORY OF MODERN EUROPE. 4 degree credits, \$74. (◆\$37)

Churches and religious movements in Europe from 1648 to the early 20th century; issues of church and society and the impact of secular thought upon religion. (No prereq. Qualified students may register for graduate credit at the University of Minnesota.)

Spring Qtr Sec 1 Th—6:20-8:50, BlegH 430, Altholz

Hist 5345 HISTORY OF AMERICAN LABOR. 4 degree credits, \$74. (◆\$37)

Labor in the mature industrial society. (No prereq. Qualified students may register for graduate credit at the University of Minnesota.)

Spring Qtr Sec 1 T—6:20-8:50, BlegH 110, Berman

Hist 5389 RUSSIAN-AMERICAN RELATIONS, 1917 TO PRESENT. 4 degree credits, \$74. (◆\$37)

Russian-American relations since the Russian Revolution; political, diplomatic, economic, and military problems and American foreign policy. (No prereq. Qualified students register for graduate credit at the University of Minnesota.)

Spring Qtr Sec 1 T—6:20-8:50, BlegH 145, Brauer

Hist 5473 SOCIAL HISTORY OF MODERN JAPAN. 4 degree credits, \$74. (◆\$37)

Family, school, and work in the nineteenth and twentieth centuries. (No prereq. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Qtr Sec 1 M—6:20-8:50, BA 136, Marshall

Proseminars 55XX-59XX. Qualified students may register through Extension Classes for proseminars scheduled by the History Department. Written consent of instructor is required, preferably in advance of first class meeting. Enrollment is limited.

Students are reminded that satisfactory completion of one or more History proseminars does not imply that they will gain admission to the Graduate Program in History.

The following are late day and evening proseminars in which Extension students may register. Courses are subject to frequent changes in time. Rooms are not listed. For locations and a complete list of daytime History proseminars, consult a day school class schedule or contact Extension Classes, 101 Wesbrook Hall (373-3949).

Qualified students may register for graduate credit at the University of Minnesota for the following 5XXX-level courses:

Hist 5517, 5518 20TH-CENTURY CHINESE HISTORY. 3-5 degree credits each quarter, \$18.50 per credit.

Topics, issues and research strategies. (Prereq #)

Winter Qtr 5517 Sec 1 T—3:15-5, Farmer

Spring Qtr 5518 Sec 2 T—3:15-5, Farmer

Hist 5611, 5612 MEDIEVAL HISTORY. 3 degree credits each quarter, \$55.50 each quarter.
(Prereq 1 yr medieval history or equiv, reading knowledge of French or German, #)

Winter Qtr 5611 Sec 1 W—3:15-5, Bachrach, Reyerson

Spring Qtr 5612 Sec 2 W—3:15-5, Bachrach, Reyerson

Hist 5721, 5722 EUROPE IN THE 20TH CENTURY. 4 degree credits each quarter, \$74 each quarter.

5721: Impact of World War I and the Depression. **5722:** World War II to present.
(Prereq #)

Fall Qtr 5721 Sec 1 W—3:15-5, Munholland

Winter Qtr 5722 Sec 2 W—3:15-5, Munholland

Hist 5817, 5818 19TH-CENTURY U.S. POLITICAL HISTORY. 4 degree credits each quarter, \$74 each quarter.

(Prereq #)

Winter Qtr 5817 Sec 1 Th—1:15-4, Arsenault

Spring Qtr 5818 Sec 2 Th—3:15-5, Arsenault

Hist 5831, 5832 AMERICAN POLITICAL AND CONSTITUTIONAL HISTORY. 4 degree credits each quarter, \$74 each quarter.

(Prereq #)

Fall Qtr 5831 Sec 1 W—3:15-5, Murphy

Winter Qtr 5832 Sec 2 W—3:15-5, Murphy

Hist 5901 LATIN AMERICAN HISTORY. 5 degree credits, \$92.50.

(Prereq reading knowledge of Spanish, #)

Winter Qtr Sec 1 Th—2:15-4, McCaa, Schwartz

Hist 5XXX ORAL HISTORY.

Spring Qtr Sec 1 T—2:15-5

history of medicine (HMed)

John Eyler, Assistant Professor of History of Medicine

HMed 5026 MEDICINE IN THE 19TH AND 20TH CENTURIES: EMPHASIS ON MEDICINE IN AMERICA. 4 degree credits, \$74. (◆\$37)

European medicine and American medical education; orthodox medicine and the treatment of patients; homeopathy and sectarian medicine; professional conflict and the A.M.A.; medical practice and the relation of doctors and patients; cholera and the public health movement; development of biological laboratory in Europe; the advent of modern surgery; acceptance of the germ theory of disease and the conquest of the old scourges; A.M.A., the remaking of the profession, and the formation of health policy; establishment of socialized medicine in Europe; health insurance in America. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—6:20-8:50, DiehlH 555, Eyler

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

history of science and technology (HSci)

Roger Stuewer, Professor

HSci 3825 PHYSICS AND SOCIETY IN 20TH CENTURY AMERICA. 4 degree credits, \$70.
(◆\$35)



Nineteenth-century heritage; 20th-century discoveries and physical theories; growth of physics in America after World War I; the intellectual migration of the 1930's; nuclear physics; the Manhattan project, and the atomic bomb; McCarthyism and Oppenheimer; current and past contributions of Minnesota physicists. Meets concurrently with 5825. (No prereq)

Fall Qtr Sec 1 **M**—6:20-8:50, Ph 210, Stuewer

HSci 5825 PHYSICS AND SOCIETY IN 20TH-CENTURY AMERICA. 4 degree credits, \$74.



See course description for 3825. Meets concurrently with 3825. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6:20-8:50, Ph 210, Stuewer

college of home economics

See the following alphabetical departmental listings for course offerings in:

design

Home Design and Planning, Dsgn 0400C
Crafts Materials, Dsgn 0437C
Calligraphy, Dsgn 1426
Drafting: Basic Drafting Techniques, Dsgn 1450
Interior Design I, Dsgn 1455
Interior Design II, Dsgn 1456
Color and Design I, Dsgn 1521
Drawing and Design, Dsgn 1523
Two-Dimensional Design I, Dsgn 1525
Surface-Fabric Design, Dsgn 1531
Structure Fabric Design I, Dsgn 1532
Metalsmithing: Introduction to Techniques, Dsgn 1533
History of Traditional Furniture, Dsgn 3412
20th-Century Interiors and Furnishings, Dsgn 3415
Perspective and Presentation Sketches, Dsgn 3450
Interior Design Rendering, Dsgn 3451
Seminar in Interior Design, Dsgn 3455
Interior Design Business, Dsgn 3459
Interior Design Clinic, Dsgn 3460-3461
Interior Design: Housing and the Urban Environment, Dsgn 3463
Contract Design Seminar, Dsgn 3477
Metalsmithing: Fabrication, Dsgn 3533
Housing Management, Dsgn 5561
Homes of the World, Dsgn 5565

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

family social science

Dynamics of Dating, Courtship and Marriage, FSoS 1001
 Dynamics of Marriage and Parenthood, FSoS 1002
 Parenthood, FSoS 1025
 Lifestyles of Educated American Women, FSoS 3015
 Human Sexual Behavior, FSoS 5001
 Family Relationship, FSoS 5200
 Problems in Family Financial Management, FSoS 5219
 Special Topic: Developmental Stage Theory, FSoS 5240
 Special Topics: Family Life Education, FSoS 5240

food science and nutrition

Food For Thought—For Food, FScN 1012
 Technology of Food Processing, FScN 1102
 Food Demonstration Techniques, FScN 3400
 Food and Nutrition in the Life Cycle, FScN 3622
 Hospitality Facility Planning and Design, FScN 3742
 Food Service Marketing, Advertising and Promotion, FScN 3790
 Independent Study in Food Science and Nutrition, FScN 5111
 Food Process Engineering I, FScN 5135
 Food Process Engineering II, FScN 5136
 Food Formulation, Product Development, FScN 5350
 Sensory Evaluation of Food Quality, FScN 5360
 Technology of Fermented Dairy Products, FScN 5523
 Industrial Processing of Fruits and Vegetables, FScN 5530
 Human Nutrition, FScN 5622
 Clinical Nutrition, FScN 5662
 Clinical Nutrition Laboratory, FScN 5663
 Field Experience in Clinical Nutrition, FScN 5664
 Design and Layout of Food Services, FScN 5740
 Food and Hospitality Operations: Corporate Application of Computer Systems, FScN 5752

textiles and clothing

Issues, Trends in Textile Consumer Problems, TexC 5622

For information about credit courses given in suburban or out-state locations please write or call College of Home Economics, University of Minnesota, St. Paul, Minnesota 55108, telephone 373-0935.

horticultural science (Hort)

(See also Landscape Architecture; Botany; IC 0241, Fall Gardening Indoors and Out; IC 0242, Spring Garden Planning and Planting)

Francis De Vos, Professor of Horticultural Science
C.C. Hard, Professor of Horticultural Science
Leonard Hertz, Associate Professor of Horticultural Science
P.E. Read, Associate Professor of Horticultural Science
Kenneth E. Simons, Instructor in Horticultural Science
Cecil Stushnoff, Professor of Horticultural Science and Landscape Architecture
O.C. Turnquist, Professor of Horticultural Science
D. B. White, Professor of Horticultural Science
Harold F. Wilkins, Professor of Horticultural Science

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

Hort 1001 FUNDAMENTALS OF HORTICULTURE. 4 degree credits, \$66 plus \$2 course fee. Total \$68.

Fruit, vegetable, and ornamental plants, including factors which influence their culture, value, and importance. Useful to both the home gardener and to the person considering a career in horticulture. (No prereq)

Fall Qtr Sec 1 **T**—7-9:30, Research and Education Bldg, Minnesota Landscape Arboretum (west of Rt 41 on Hwy 5) Chaska (◆\$30 plus \$2 course fee. Total \$32. Books available at Arboretum Gift Shop)

Spring Qtr ★Sec 2 **M**—6-9:20, AlderH 415, StP Campus, Turnquist (Limit 60 students*)

Hort 1010 HOME LANDSCAPE GARDENING AND DESIGN. 3 degree credits, \$49.50 plus \$2 course fee. Total \$51.50. (IS)

Designed for the student who does not plan to major in landscape horticulture. Gives working knowledge of propagation and culture of common house plants and landscape materials: turf, flowers, trees, and shrubs. Principles of home landscape design are discussed. Lectures, lab. (No prereq)

Fall Qtr Sec 1 **Th**—6:20-8:50, HrG 172, StP Campus, Read

See TV course, Hort 1010, Green Grows the Garden, page 379.

The following courses are intended for those students who wish to pursue their study of garden culture, plant materials and landscape design beyond the basic levels. The instructional level is established for students interested in professional improvement in horticulture and landscape architecture as well as for the advanced amateur.

★**Hort 1011 HORTICULTURAL CROPEVALUATION.** 4 degree credits, \$66 plus \$2 course fee. Total \$68.

Evaluation and grading of fruit, vegetables and flowers. Emphasis placed on market standards and conformation of horticultural produce in commercial channels and horticultural exhibits. Organization and staging of commercial and non-commercial exhibits. Lectures, laboratory, and reference reading. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 **M**—6-9:20, HrG 172, StP Campus, Turnquist

★**Hort 1021 PLANT MATERIALS I.** 4 degree credits, \$66.

Taxonomy, ecology, and landscape uses of trees, vines, evergreens and native deciduous shrubs. Lectures and laboratories. (No prereq. Limited to 50 students)

Spring Qtr Sec 1 **T**—6-9:20, Research and Education Bldg, Minnesota Landscape Arboretum (west of Rt 41 on Hwy 5) Chaska. Books available at Arboretum Gift Shop. De Vos

Hort 1021 will be offered as a summer Extension Class on the St. Paul campus.

◆ ★**Hort 1022 PLANT MATERIALS II.** 4 degree credits. \$66. (◆\$33)

Taxonomy, ecology, and landscape uses of perennial and annual flowers, tender and hardy bulbs, ground covers, and selected deciduous shrubs. Lectures, laboratory. (No prereq. Limited to 50 students)

Spring Qtr Sec 1 **Th**—6-9:20, AlderH 415, StP Campus

Symbols, abbreviations, off-campus class locations begin on page 413. Courses and sections in red have limits on enrollment. See page 23.

★**Hort 1036 PLANT PROPAGATION.** 4 degree credits. \$66 plus \$2 course fee. Total \$68.

Principles and techniques of propagating plants by seeds, cuttings, grafts, buds, layers, and division. Lectures deal with principles while laboratories give student opportunity to practice various propagating techniques. Field trips. (Prereq 1001, Biol 1103 or #. Limited to 50 students)

Winter Qtr Sec 1 Th—6-9:20, HrG 172, StP Campus, Read

★**Hort 3026 RESIDENTIAL LANDSCAPE DESIGN.** 4 degree credits, \$70 plus \$2 course fee. Total \$72. (IS)

Principles of landscape design with special reference to their practical application in planning of residential landscapes. Relationships of landscape design, architectural design, and interior design. Landscape plans, landscape drafting techniques and methods of presentation. Lectures, drawings, and practical problems. (Prereq 1021, LA 1024, or professional design experience. Limited to 25 students)

Winter Qtr Sec 1 W—6-9:20, AlderH 415, StP Campus, Hard

Hort 3031 FRUIT SCIENCE. 3 degree credits, \$52.50. (◆\$26.25)

Principles of fruit production. Fruits of the world with emphasis on temperate climate crops. Topics include site selection, cultural and management practices, physiological and environmental control of plant development, dwarfing, growth regulating compounds, insecticides, herbicides and wine making. Lectures and reference readings. (Prereq Hort 1001 and Soil 1122)

Winter Qtr Sec 1 M—6:20-8:50, AlderH 415, StP Campus, Stushnoff, Hertz

◆ ★**Hort 3072 TURF MANAGEMENT.** 4 degree credits, \$70 plus \$4 course fee. Total \$74.

Intended for beginning students in turf management and students in landscape horticulture, agronomy, soil science, and agricultural education who are interested in general landscape maintenance and turf culture. Students with objectives of working in areas of industrial grounds maintenance, park and recreation area maintenance, and general lawn care may elect this course. Students interested in advanced turfgrass science and fine turf management will also elect Hort 5042 after completing this course. (Prereq 1001 and Soil 1122 or †Soil 1122 or Agro 1010 or Biol 1103 or #. Limited to 30 students)

Spring Sem Sec 1 M—6-8:30, HrG 174

new

◆ ★**Hort 3076 ARBORICULTURE.** 3 degree credits, \$52.50 plus \$2 course fee. Total \$54.50.

Survey of environmental and design functions of shade trees. Application of specific cultural principles and techniques pertaining to the installation, maintenance, and preservation of shade and ornamental trees. Equipment selection and adaptability. Fundamental concepts used in the organization and administration of community shade tree programs. Lectures, demonstrations, and field trips. (Prereq 1021, Soil 1122, or For 1100 or #. Limited to 30 students)

Winter Qtr Sec 1 TTh—3:30-5, AlderH 415, StP Campus, Simons

◆ ★**Hort 3077 FLORAL DESIGN.** 3 degree credits, \$52.50 plus \$20 course fee. Total \$72.50.

Fundamental principles in floral arrangement. Analysis of basic principles used in floral design. The decorative use of flowers, foliage and accessories. (No prereq. Limited to 25 students)

Fall Qtr Sec 1 M—6-9, AlderH 423, StP Campus, Wilkins

◆ ★**Hort 5020 HORTICULTURAL TECHNIQUES FOR EDUCATION MAJORS.** 3 degree credits, \$55.50 plus \$2 course fee. Total \$57.50.

Study of Horticultural and Botanical concepts and their impact on the use of horticultural plants in the classroom. Development of specific single concept classroom

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

demonstration and pupil-oriented activities relating to horticultural plants. (Prereq teachers, education major or #. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6:20-8:50, HrG 172, StP Campus, Read

hospital administration

For information on noncredit conferences or workshops in hospital administration, please contact Vernon Weckwerth, 1260 Mayo; telephone 373-8052, or Beth Voss, 376-1544.

humanities (Hum)

(See also General College, Classics, Informal Courses, and American Studies)

Paul D'Andrea, Chairman and Associate Professor of Humanities

Jackson Hershbell, Associate Professor of Classics

George Kliger, Assistant Professor of Humanities

Richard Leppert, Assistant Professor of Humanities

Gary Thomas, Assistant Professor of Humanities

A MAJOR IN HUMANITIES CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered every two years. Interested students should discuss plans with an Extension counselor (373-3905).

B.A. Major Sequence

Major Requirements

25 humanities cr, at least 5 in European Heritage courses and 15 in European Heritage or Modern World (no more than 10 at the 1xxx level), and 5 in any 3xxx- or 5xxx-level humanities course except the proseminars. 9 cr in humanities proseminars.

45 3xxx-5xxx-level cr, distributed thus: 18 to 21 cr from anthropology, geography, history, linguistics, philosophy, political science, psychology, sociology; 24 to 27 cr in literature (any language, ancient or modern), history of art, history of music, history of theatre, studio arts, studio music, theatre or oral interpretation.

You need not be majoring in Humanities to register for these classes.

Hum 1001 HUMANITIES IN THE MODERN WORLD I. 5 degree credits, §3001, Rhet 1301. \$82.50. (◆\$41.25) (IS)

An introduction to the study of the humanities in the modern world, including the old regime, the revolution, neoclassicism and romanticism, from about 1740 to 1820. Materials used are history, prose, criticism, poetry, and art. Authors: Pope, Voltaire, Rousseau, Burke, Goethe, Tolstoy. (No prereq)

Fall Qtr Sec 1 M—6:20-9:40, ForH 285, Leppert

Hum 1002 HUMANITIES IN THE MODERN WORLD II. 5 degree credits, §3002, Rhet 1302. \$82.50. (◆\$41.25) (IS)

The Industrial Revolution, liberalism, socialism, the psychology of individualism. Period covered is from 1776 to 1890. Authors: Carlyle, Mill, Marx, Smith, Malthus, Ibsen, Dostoevski. (No prereq)

Winter Qtr Sec 1 M—6:20-9:40, ForH 60, Hershbell

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Hum 1003 HUMANITIES IN THE MODERN WORLD III. 5 degree credits, \$3003, Rhet 1303. \$82.50. (◆\$41.25)

The impact of science and evolution; religion and morals in a changing world, from about 1840 to 1914. Authors: the evolutionists, Kierkegaard, Nietzsche, Chekhov, Thomas Mann. (No prereq)

Spring Qtr Sec 1 T—6:20-9:40, ForH 150, Kliger

Hum 1004 HUMANITIES IN THE MODERN WORLD IV. 5 degree credits, \$3004, Rhet 3381. \$82.50. (◆\$41.25)

Civilization between two wars: the impact of psychoanalysis, communism, 20th-century liberalism, new problems of human value and authority. Authors: Freud, Lenin, T.S. Eliot, Kafka, and others. (No prereq)

Fall Qtr Sec 1 T—6:20-9:40, Richfield HS 149, Kliger

Spring Qtr Sec 2 W—6:20-9:40, Ramsey HS 238, Roseville

Hum 1101 THE LIFE OF THE MIND. 5 degree credits, \$82.50. (◆\$41.25) (IS)

Exploration of some of the available ways of "reading" poetry, sculpture, history, philosophy, painting, rhetoric, music and film by studying works by a variety of creative persons such as Stevens, Einstein, Henry Moore, Bach, Lincoln, Plato, Genet, Euclid and Fellini. (No prereq)

Fall Qtr Sec 1 Th—6:20-9:40, ForH 150, Thomas

Spring Qtr Sec 2 W—6:20-9:40, ForH 120, Thomas

Hum 3006 CREATIVE IMAGINATION IN THE 20TH CENTURY. 5 degree credits, \$87.50. (◆\$43.75)

Creativity in the 20th century as seen in painters, sculptors, musicians, and writers such as Marcel Duchamp, Pablo Picasso, John Cage, and Andre Gide. (No prereq)

Fall Qtr Sec 1 W—6:20-9:40, ForH 150

Hum 3301 A TIME TO LAUGH. 5 degree credits, \$87.50. (◆\$43.75)

An interdisciplinary survey of the phenomenon of comedy as it occurs down through time and across world cultures in literature, drama, folk ritual and tale, social convention, language, sport, and film. (No prereq)

Winter Qtr Sec 1 T—6:20-9:40, Arch 50, D'Andrea

Hum 3910 DON JUAN AND FAUST: TWO MYTHS OF "WESTERN MAN." 4 degree credits, \$70. (◆\$35)

An exploration of some of the psychological, sociological, and aesthetic meanings of these myths as embodied in Mozart's *Don Giovanni* and Goethe's *Faust*. Other manifestations of the myths in literature, music, and the visual arts will be considered. (No prereq)

Winter Qtr Sec 1 W—6:20-8:50, ForH 170, Thomas

Hum 5030 HUMANITIES PROSEMINAR. 3 degree credits each quarter, \$55.50 each quarter.

Integrated review of humanities materials: arts, sciences and civilization. May be repeated for credit. (Prereq sr. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 M—6:30-8:10, ForH 349, D'Andrea

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

human relations

(See PsyF 5305)

industrial education

(See Vocational Education)

industrial engineering/operations research (IEOR)

Your attention is called to the Undergraduate Development Certificate in Industrial Engineering 90 credits, page 411; Professional Development Recognition Program in Engineering and Science, page 130; and IofT 0001, Fundamentals of Engineering Review, page 223.

Sant R. Arora, Associate Professor of Mechanical Engineering

Robert B. Gunderson, Manager, Staff Manufacturing, 3M Co.

James L. Reynolds, Instructor in Mechanical Engineering

Robert Thompson, Supervisor, Process Industrial Engineering, 3M Co.

John S. White, Professor of Mechanical Engineering

IEOR 0100C INDUSTRIAL ENGINEERING AND MANAGEMENT. 5 certificate credits, \$82.50.

A study of the problems and techniques of developing a highly efficient management team for a modern manufacturing concern. Includes discussions on business organization and financing, research and product development, standardization, plant layout and materials handling, production and inventory control, quality control, cost control, labor relations. (No prereq)

Fall Sem Sec 1 **M**—6-9, MechE 302

IEOR 0210C MOTION AND TIME STUDY. 5 certificate credits, \$82.50 plus \$1 special fee. **Total \$83.50. (IS)**

Principles and techniques for effective work methods and analysis. Process charts, flow diagrams, paper work systems, work distribution tables, micromotion study. The role of the worker in the work environment. Fundamentals of work measurement; time study, work sampling, predetermined time systems, and standard data. Discussion of performance rating, number of cycles to study, allowances, and other factors necessary to develop an effective standard. (No prereq)

Spring Sem Sec 1 **M**—6-9, MechE 302

★IEOR 0220C PRODUCTION AND INVENTORY CONTROL. 5 certificate credits, \$82.50.

Principles and techniques of the formal production and inventory control system. Objectives, demand forecasting, inventory management, materials control, master production schedule, material requirements planning, capacity planning and control, shop floor control, production planning and control management game. (Prereq IEOR 0100C or equiv or #. Limited to 25 students)

Fall Sem Sec 1 **W**—6-9, MechE 180

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

IEOR 0330C MANUFACTURING COST ANALYSIS. 3 certificate credits. **To be offered 1978-79.**

IEOR 0408C CORPORATE STANDARD DATA (C.S.D.) I. 5 certificate credits. **To be offered 1978-79.**

IEOR 0409C CORPORATE STANDARD DATA (C.S.D.) II. 5 certificate credits. **To be offered Fall Sem 1978.**

IEOR 0610C STATISTICS AND PROCESS IMPROVEMENT. 5 certificate credits. **To be offered Spring Sem 1979.**

IEOR 5000 INTRODUCTION TO INDUSTRIAL ENGINEERING ANALYSIS. 4 degree credits, \$74.

Scientific management, mathematical models, methods engineering, work measurement, worker satisfaction and participation, wage payment plans, breakeven analysis, incremental costs, the time value of money and the present value concept; cost quality and inventory control; production scheduling, plant locations, and layout; linear programming, PERT, and the systems approach to management problems. (Prereq Math 1231, ME 3900 or equiv or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 W—6-8:15, MechE 302



industrial relations (IR)

Your attention is called to the Industrial Relations Certificate program, page 401. (See also GC 3602, Applied Supervision; GC 3464, Communication in Organizations; GC 3560, Personnel Administration; IC 0421, Towards a Healthy Organization; Psy 5701, Personnel and Industrial Psychology; Rhet 5170, Managerial Communications; Spch 5441, Communication in Human Organizations)

Ross E. Azevedo, Assistant Professor of Industrial Relations

David Balkin, Instructor in Industrial Relations

George R. Bloom, President, Industrial Relations Associates, Inc.

Mario F. Bognanno, Professor of Industrial Relations

Frederick Champlin, Instructor in Industrial Relations

Robert L. Fjerstad, Director, Employee Relations, Northern States Power Co.

Herbert G. Heneman, Jr., Professor of Industrial Relations

Gregory Hundley, Instructor in Industrial Relations

Paul Hurt, Instructor in Industrial Relations

Lawrence Kollath, Instructor in Industrial Relations

Leslie J. Krause, Vice President, Labor Relations, Industrial Relations Associates, Inc.

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

George O'Connell, Assistant Professor in Industrial Relations
 Duane (Pete) L. Peterson, Director of Personnel, International Graphics, Inc.
 Joseph S. Pettit, Instructor in Industrial Relations
 Patrick R. Pinto, Associate Professor of Industrial Relations
 David Roberts, Instructor in Industrial Relations
 Vida Scarpello, Instructor in Industrial Relations
 LeRoy H. Schramm, Legislative Analyst, Minnesota House of Representatives
 George Seltzer, Professor of Industrial Relations
 Cyrus F. Smythe, Associate Professor of Industrial Relations
 James T. Stodd, Instructor in Industrial Relations
 Herman Theeke, Instructor in Industrial Relations
 Hoyt N. Wheeler, Associate Professor of Industrial Relations
 James T. Wrich, Executive Director, State of Minnesota, Drug and Alcohol Authority
 Jeffrey J. Zibley, Instructor in Industrial Relations

IR 0001C SUPERVISION I: ELEMENTS OF SUPERVISION. 3 certificate credits, \$49.50 plus \$2 special fee. Total \$51.50. (IS)

A general discussion of basic principles of supervision in the office and factory. Survey of principles for the handling of day-to-day problems of supervisors, with emphasis upon human relations aspects of such problems. Deals with problems such as selection, induction and training of new employees, employee appraisal, giving orders, handling grievances, discipline, and employee morale. Extensive use of class discussion of practical problems drawn from office and plant situations. (No prereq)

Fall Qtr Sec 1 **M**—6:20-8:50, BlegH 150
 Sec 2 **T**—7-9:30, Woodbury JHS 104
 Sec 3 **W**—6:20-8:50, BlegH 150

Winter Qtr Sec 4 **M**—6:20-8:50, BlegH 215
 ★Sec 5 **W**—6-8:30, Richfield HS 241, (Limit 30 students)

Spring Qtr Sec 6 **T**—6:20-8:50, BlegH 215

IR 0002C SUPERVISION II: ADVANCED TECHNIQUES OF SUPERVISION. 3 certificate credits, \$49.50 plus \$2 course fee. Total \$51.50.

Emphasizes specialized supervisory techniques based upon principles outlined in Supervision I. Includes discussion of research in supervisory methods and practices and their relative success in application in the office and plant. Methods of supervisory training, morale measurement, job analysis and job evaluation, safety programs, wage and salary administration, principles of organization and communications are among the topics discussed. Extensive use is made of discussion method and case studies. (Prereq 0001C or #)

Fall Qtr Sec 1 **Th**—6:20-8:50, BlegH 120

IR 0007C THE MINNESOTA OCCUPATIONAL SAFETY AND HEALTH ACT. 3 certificate credits. To be offered 1978-79.

★**IR 3000 GOVERNMENTAL MANPOWER POLICIES AND PROGRAMS.** 4 degree credits, \$70.

The Comprehensive Employment and Training Act (1974) provides the frame of reference. Attention will be given to planning mechanisms, service delivery systems, and program evaluation. Also, consideration will be directed to relationships of federal, state, and local governments and roles of public and private sector organizations. (No prereq. Meets concurrently with 8000 sec 1. Limited to 30 students)

Fall Qtr Sec 1 **Th**—7-9:30, BlegH 340, Seltzer

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

★IR 3000 COLLECTIVE BARGAINING: THE PUBLIC SECTOR. 4 degree credits, \$70.

Examines the development and diffusion of collective bargaining regarding governmental employment. The primary focus is on state/local units. Items to be considered include, for example: patterns of employer/union relationships, key issue in negotiations and public policy, the impact of governmental operations (e.g., civil service systems/fiscal aspects/etc.). (No prereq. Meets concurrently with 8000 sec 2. Limited to 30 students.)

Fall Qtr Sec 2 **T**—6:20-8:50, BlegH 404, Schramm

★IR 3000 LABOR ARBITRATION. 4 degree credits, \$70.

Presents a comprehensive view of arbitration as a dispute settlement technique as used in the field of labor-management relations. Following a general introduction into background of arbitration, laws governing this field for inter and intra state commerce industries, and for the mushrooming public sector, will be studied. Special emphasis will be given to techniques used in analyzing grievances processed through the grievance procedure. The course continues to the preparation of material used in the hearing and to the hearing itself. (No prereq. Meets concurrently with 8000 sec 3. Limited to 30 students)

Spring Qtr Sec 3 **W**—6:20-8:50, BlegH 115, Wheeler

★IR 3000 POLICY AND PRACTICE IN LABOR LAW. 4 degree credits, \$70.

This course of study will include an analysis and discussion of employees' rights to organize and restraints on certain union activity. It will deal in depth with the responsibility and role of the National Labor Relations Board; its organization, how representation (union elections) matters are processed, discussion of unfair labor practice charges and injunctions. It will also examine the role of state labor relations agencies and their function in protecting employee rights. The course will also examine the arbitrator's role in these matters and will review the government agencies role in collective bargaining; i.e., FMCS, BMS, WERC. (No prereq. Meets concurrently with 8000 sec 4 and 5. Limited to 30 students)

Fall Qtr Sec 4 **M**—6-8:30, BlegH 115, Bloom

Spring Qtr Sec 5 **M**—6:20-8:50, BlegH 210, Schramm

★IR 3000 INDUSTRIAL CONTROL SYSTEMS FOR CHEMICALLY DEPENDENT EMPLOYEES. 4 degree credits, \$70.

Designed to provide information and data on the impact of chemically dependent employees and other troubled employees and to develop skills necessary to design, implement and maintain systems to control human and productivity loss. Available to representatives of management, labor and graduate students in industrial relations. (No prereq. Meets concurrently with 8000 sec 6. Limited to 36 students)

Fall Qtr Sec 6 **M**—6:20-8:50, BlegH 340, Wrich

IR 3000 ORGANIZED LABOR AND THE POLITICAL PROCESS: 1976. 4 degree credits. **To be offered 1978-79**

★IR 3000 JOB: ANALYSIS, DESCRIPTION AND PAY. 4 degree credits, \$70.

This class will give the student working in the area or interested in the area of personnel an opportunity to learn and apply the techniques of job analysis, job description writing and job evaluation. The student will also be given an opportunity to learn the principles of compensation theory and various types and methods of compensation. (No prereq. Limited to 35 students)

Fall Qtr Sec 7 **W**—6:20-8:50, BlegH 330, Fjerstad

★IR 3000 SELECTION PROCEDURES, TECHNIQUES AND REGULATIONS. 4 degree credits, \$70.

Course designed for personnel practitioner or one preparing to enter the field. Subject deals with employment regulations and rules, interviewing, testing, and other selection techniques. (No prereq. Limited to 35 students)

Fall Qtr Sec 8 **Th**—6:20-8:50, BlegH 260, Fjerstad

Spring Qtr Sec 9 **Th**—6:20-8:50, BlegH 335, Fjerstad

IR 3002 INDUSTRIAL RELATIONS SYSTEMS: LABOR MARKETS AND THE MANAGEMENT OF HUMAN RESOURCES. 4 degree credits, \$8002. \$70. (IS)

The study of labor markets, manpower management, Federal-State employment policy, and the resolution of industrial conflict. Process followed in valuing, employing, developing, motivating, and maintaining human resources in an industrial society. (Prereq Econ 1001, Econ 1002, Psy 1001)

Fall Qtr Sec 1 **T**—6:20-8:50, BlegH 110

★Sec 2 **W**—6:30-9, Irondale HS 310, New Brighton (Limit 35 students)

Sec 3 **Sa**—9 a.m.-11, BlegH 110

Winter Qtr Sec 4 **T**—6:20-8:50, BlegH 125

Sec 5 **W**—6:30-9, Minnetonka HS 119

Spring Qtr Sec 6 **M**—6:20-8:50, BlegH 215

★Sec 7 **Th**—6-8:30, Richfield HS 241 (Limit 30 students)

IR 3007 COLLECTIVE BARGAINING NEGOTIATIONS AND MODERN LABOR RELATIONS. 4 degree credits, \$70.

Analysis of collective bargaining negotiations between employers and/or employer associations and unions. Relevant policies of employers, unions, and the public; background of the labor movement; current practices in labor relations; and significant trends. (No prereq)

Fall Qtr Sec 1 **M**—6:20-8:50, BlegH 260

Sec 2 **Th**—6:30-9, BlegH 10

Winter Qtr ★Sec 3 **Th**—6-8:30, Sandburg JHS 212, Golden Valley (Limit 35 students)

Spring Qtr Sec 4 **T**—6:30-9, BlegH 220

IR 3010 HUMAN RELATIONS AND APPLIED ORGANIZATION THEORY. 4 degree credits, \$70.

The problems of human relations arising in modern organizations and approaches to their solution. Philosophies and theories of human relations and their translation into policy. Discussions, cases, role-playing, and skill building sessions. **Note:** Not intended for use in meeting State Department of Education Human Relations Certification requirement. See PsyF 5305, page 279. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:50, BlegH 120

Sec 2 **W**—6:30-9, Minnetonka HS 119

Winter Qtr Sec 3 **T**—6:20-8:50, BlegH 145

Sec 4 **Th**—6-8:30, Ramsey HS 250, Roseville

Spring Qtr Sec 5 **T**—6:20-8, BlegH 230

Sec 6 **M**—6:30-9, BlegH 245

Sec 7 **W**—7-9:30, Woodbury JHS 104

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★IR 8000 GOVERNMENTAL MANPOWER POLICIES AND PROGRAMS. 4 degree credits, \$114.

See description for 3000. (No prereq. Meets concurrently with 3000 sec 1. Limited to 30 students. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 **Th**—7-9:30, BlegH 340, Seltzer

★IR 8000 COLLECTIVE BARGAINING: THE PUBLIC SECTOR. 4 degree credits, \$114.

See description for 3000. (No prereq. Meets concurrently with 3000 sec 2. Limited to 30 students. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 2 **T**—6:20-8:50, BlegH 404, Schramm

★IR 8000 LABOR ARBITRATION. 4 degree credits, \$114.

See description for 3000. (No prereq. Meets concurrently with 3000 sec 3. Limited to 30 students. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 3 **W**—6:20-8:50, BlegH 115, Wheeler

★IR 8000 POLICY AND PRACTICE IN LABOR LAW. 4 degree credits, \$114.

See description for 3000. (No prereq. Meets concurrently with 3000 sec 4 and 5. Limited to 30 students. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 4 **M**—6-8:30, BlegH 115, Bloom

Spring Qtr Sec 5 **M**—6:20-8:50, BlegH 210, Schramm

★IR 8000 INDUSTRIAL CONTROL SYSTEMS FOR CHEMICALLY DEPENDENT EMPLOYEES. 4 degree credits, \$114.

See description for 3000. (No prereq. Meets concurrently with 3000 sec 6. Limited to 36 students. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 6 **M**—6:20-8:50, BlegH 340, Wrich

IR 8002 INDUSTRIAL RELATIONS SYSTEMS: LABOR MARKETS AND THE MANAGEMENT OF HUMAN RESOURCES. 5 degree credits, \$3002. \$142.50.

See course description for IR 3002. (Prereq Econ 1001, Econ 1002, Psy 1001. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 **T**—6:20-8:50, BlegH 360

Spring Qtr Sec 2 **Th**—6:20-8:50, BlegH 360

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

informal courses (IC)

College courses don't have to be the rigidly organized scramble for grades and credit that many students have come to expect. They can be refreshingly informal, noncompetitive, and flexible. And that's exactly what the Informal Courses are.

Curriculum requirements are nonexistent: there are no grades, examinations, transcripts, or credits. Students can learn in a personalized atmosphere, in many cases sharing experiences and knowledge with other students and instructors. And there are no entrance requirements—a high school diploma isn't necessary, but a college degree or two won't hold you back.

Informal courses are, in a sense, like having your cake and eating it too. They are interesting, provocative, and practical. And all the student must bring is an eagerness to learn and a willingness to participate.

tuition

See the course descriptions below for tuition charges for each course.

Senior citizens 62 and over may register for any Informal Course at no cost. Young persons 12-16 may register for \$3 if they are genuinely interested, unusually mature and are accompanied by an adult registered in the same class.

Senior citizen and youth reduced-tuition fees for *limited-enrollment* classes are available only on a space-available basis after full-tuition students have registered and paid fees. Students may enroll in *nonlimited-enrollment* classes during regular registration dates.

financial aids

Some financial aids are available to Informal Courses registrants. See **Financial Aids and Loans**, p. 37, or contact Extension Counseling, University of Minnesota, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis MN 55455. Telephone 376-4500.

registration

Unless otherwise noted, registration procedures, dates and locations are the same as for credit class registrations. See the "When and How to Register" section.

Late registrations must be accompanied by a late fee of \$5. No registrations will be accepted after the end of the second week of classes. See page 25.

books

In some cases, students will be expected to make a modest amount of outside preparation for class. When the purchase of books is advised, those books will be available at the Minnesota Book Center (Williamson Hall) on the East Bank campus of the University for courses held on the Minneapolis campus; in Coffey Hall Bookstore for courses held on the St. Paul campus; or at the B. Dalton Bookseller serving the off-campus course locations (see **Bookstores**, page 31).

other options

If you don't see here exactly what you want, be sure to browse through the rest of this Bulletin to find hundreds of courses of interest which you may audit for no credit and have recorded on

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

a University transcript. Courses preceded by a ♦ in the margin may be taken for no credit, no record at one-half tuition, or for the \$3 youth plan described above. See page 49 for information on reduced-tuition plans.

arts and humanities

- 0111 Movie Criticism as if Audiences Mattered
- 0121 Fantasy and Imagination: Scandinavian Literature in Translation
- 0141 Art and Architecture of the Jewish People
- 0152 Period Architecture of the Twin Cities
- 0161 Color and Design Workshop
- 0162 Introduction to Weaving

the natural world

- 0221 Wild Animals of the North Woods
- 0222 Identifying Birds: An Introduction to Ornithology
- 0231 Current Issues in Nutrition: Fallacies and Facts
- 0241 Fall Gardening Indoors and Out
- 0242 Spring Garden Planning and Planting
- 0261 Overview of Modern Geology
- 0271 Pulsars, Quasars and Black Holes: Topics in Astronomy

society, behavior and culture

- 0311 Masculinity: Myths and Realities
- 0322 Parenting: A Behavioral Approach
- 0342 The New Cuba
- 0344 Modern China
- 0361 Researching Family History
- 0371 Minnesota History: Politics and Personalities From the Depression to the Seventies
- 0372 Minnesota Pioneers
- 0381 Sports in America
- 0382 American Crime: Jesse James to Watergate

communications

- 0411 Family Communications: What Are Your Rules?
- 0421 Towards a Healthy Organization
- 0431 Expository Writing Workshop—Or How to Write When You Have to or Want to But Can't Get Started
- 0441 Newsletter Workshop
- 0451 Women and Language Workshop

personal growth and survival skills

- 0511 Alternative Energy Resources
- 0535 Creating Choices: Balancing Work and Personal Life
- 0536 Women and Power
- 0537 Personal Growth For Professional Women
- 0552 Altered States of Consciousness
- 0553 Reincarnation: Fact or Fantasy?
- 0554 The Mind Apart: Survival of Death, Apparitions and Hauntings, Out-of-Body Experiences
- 0561 Metrically Speaking
Math Anxiety Program
- 0571 Individual and Family Budget Planning
- 0572 Basic Income Taxation
- 0573 Wills and Estates: Informal Approaches to Peace of Mind

Symbols, abbreviations, off-campus class locations begin on page 413.
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arts and humanities

IC 0111 MOVIE CRITICISM AS IF AUDIENCES MATTERED. No credit, \$24.

new

At the price of a movie ticket these days, everyone has to be his/her own critic as well. We'll outline critical approaches and consider elements of a film—e.g., scripting, directing, cinematography, acting, advertising—that are important to the consumer and to the critic. We'll talk about production and distribution facts of life in the movie industry. Finally, we'll exercise our own critical faculties on individual films currently showing in local theaters. Plan to spend about \$10.00 during the six weeks to see several movies mutually decided upon by the class.

Winter Spec Term Sec 1 W—7-9, Jan. 4-Feb. 8

(6 meetings) FolH 201, Aufderheide.

(Pat Aufderheide is a film critic for the Minnesota Daily and an Assistant Professor of History.)

IC 0121 FANTASY AND IMAGINATION: SCANDINAVIAN LITERATURE IN TRANSLATION. No credit, \$24.

new

Nature's long nights have strange effects. Much of Scandinavian folklore and literature centers around the mystical, darker side of human life, with devils and spooks being prominent figures. We'll read short stories, novels and poems for an illustration of how Scandinavian people think and feel, focusing on the themes of mysticism and of relationships between people. Authors studied will include Ibsen, Dinesen and Lagerlöf.

Fall Spec Term Sec 1 T—7-9, Sept. 27-Nov. 1

(6 meetings) FolH 406, Lundquist

(Anne Lundquist is a former lecturer in the Department of Scandinavian Languages.)

IC 0141 ART AND ARCHITECTURE OF THE JEWISH PEOPLE. No credit, \$32.

This course will illustrate important artistic and architectural monuments left by Jews throughout their known history. It will also explore the historical and cultural context within which Jewish artistic monuments were created, the lively artistic exchanges between Gentile and Jewish cultures, and Jewish attitudes toward art in different historical periods. Jewish art, architecture, manuscripts and artists will be discussed, within a history extending from the times of Saul and the Temple of Solomon, through the periods of residence in Babylonia and, after the Diaspora, throughout the Mediterranean world, to the age of emancipation in Europe and the modern state of Israel. Offered in cooperation with Continuing Education for Women.

Fall Spec Term Sec 1 T—1-3, Sept. 27-Nov. 15 (8 meetings), MacP, Chiat

(Marilyn Chiat, instructor in the Art History Department, is completing a doctoral dissertation in the early art and architecture of the Jewish people.)

★ IC 0152 PERIOD ARCHITECTURE OF THE TWIN CITIES. No credit, \$36.

An in-depth study of historically important Twin Cities' Architectural Periods, including the appropriate interiors and decorative arts. The seminar will continue throughout the year and cover: Greek Revival, Gothic Revival, Italianate, Second Empire, Queen Anne, Romanesque, Catalogue, Frank Lloyd Wright and Contemporary Architecture. Burbank-Livingston Griggs House, Alexander Ramsey House and private homes will be used as resources. Winter and spring quarter schedules will be arranged. Offered by Continuing Education for Women in cooperation with the Minnesota Historical Society and Extension Classes. To register, contact Continuing Education for Women, University of Minnesota, phone 373-9743, or write to Continuing Education for Women, 200 Westbrook Hall, 77 Pleasant St. S.E., University of Minnesota, Minneapolis, Minnesota 55455. Enrollment is limited. Classes meet Monday mornings or Monday evenings (Sept. 26-Nov. 21—8 meetings) Burbank Livingston Griggs House, 432 Summit Avenue, St. Paul.

IC 0161 COLOR AND DESIGN WORKSHOP. No credit, \$30 plus \$2 course fee. Total \$32.

Using color and design—an introduction to design concepts for the beginner, with specific and practical applications for more advanced students of design. Participants will increase their understanding of the use of color as a personal statement, in art, interiors, advertising, etc. We will explore: the uses and theories of color, how color influences our moods, visual illusions and more. Some materials provided. Registrants will be expected to supply materials worth approximately \$5.00, many of which are easily available at home.

new

Fall Spec Term Sec 1 **M**—7-9:30, Sept. 26-Oct. 31
(6 meetings) McNH 316, StP Campus; Klein

(Lynn Klein is a local artist and instructor in the Design Department. Her art medium is fiber.)

★IC 0162 INTRODUCTION TO WEAVING. No credit, \$35 plus \$4 course fee. Total \$39.

In this introduction to the gentle art of weaving, we'll explore basic weaving techniques and patterns while becoming familiar with table and floor looms and with different fibers. Expect to weave several samples. *Attendance at the first meeting is mandatory.* (Limited to 20 students)

new

Winter Spec Term Sec 1 **Sa**—9a.m.-12, Jan. 7-Feb. 11
(6 meetings) WuH 130, Smits

(Anna Smits is an instructor of Art Education.)

the natural world

(See also IC 0511, Alternative Energy Resources)

IC 0221 WILD ANIMALS OF THE NORTH WOODS. No credit, \$32.

Timber wolves, moose, grouse and mice, beaver, deer, eagles, bears, and caribou. These and other wild animals are not so far from the Twin Cities. Learn about the natural history of the Minnesota north woods and of the mammals and birds that live there. Examine the effect human civilization—forestry, mining, etc.—has had on the area and its inhabitants. The animals will be presented in an ecological framework, with emphasis on their interactions with each other and with their surroundings. The format will be illustrated lectures shared by experts on particular species. An optional weekend field trip to northeastern Minnesota will be conducted for a limited number (cost extra) to look at northern habitats in winter.

Winter Spec Term Sec 1 **M**—7-9, Jan. 9-Feb. 27
(8 meetings), AnSc 135, StP Campus, Jordan

(Peter A. Jordan is an Associate Professor in the Entomology, Fisheries and Wildlife Department.)

★IC 0222 IDENTIFYING BIRDS: AN INTRODUCTION TO ORNITHOLOGY. No credit, \$30.

Combining classroom time with four Saturday morning field trips, this course provides an opportunity for lab study and observation of birds in their natural habitat. The course is designed to help those who love birds learn to recognize and identify about 150 different species of Minnesota birds and to learn the general principles of

new

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Courses and sections in red have limits on enrollment. See page 23.

field identification. Bird behavior and ecology will also be discussed. (Limited to 20 students)

Spring Spec Term Sec 1 **W**—7-8:40, April 12-May 17
(6 meetings plus 4 Saturday morning field trips)
311 MNH (No late fee through Apr. 4) Askins

(Bob Askins is an advanced graduate student in the Ecology Department, where he teaches courses in ecology and animal behavior.)

★IC 0231 CURRENT ISSUES IN NUTRITION: FALLACIES AND FACTS. No credit, \$30.

The aim of this course is to give class members tools to cut through some of the confusion and sensationalism surrounding current issues in nutrition. Topics will include: cholesterol and coronary heart disease; saturated and unsaturated fats; diets and obesity; processed vs. natural foods; and the effectiveness of regulatory agencies and of nutrition research methods in protecting the consumer. Ample time will be allowed for questions and discussion relating to these topics and others as suggested by class members. (Limited to 60 students)

Fall Spec Term Sec 1 **Th**—7-9:30, Sept. 29-Nov. 3
(6 meetings), Richfield HS 249-250; Hegarty

(P.V.J. Hegarty is a Professor in Food Science and Nutrition.)

★IC 0241 FALL GARDENING INDOORS AND OUT. No credit, \$24 plus \$3 course fee, Total \$27.

In the fall outdoor gardens must be buttoned up for winter. Much of the outdoor garden, however, can be brought indoors, enjoyed throughout the winter and preserved for the new year. In this course we'll look at and try fall gardening practices such as preserving and forcing bulbs, propagating plants indoors, and preparing the garden bed for the winter. Materials will be provided. (Limited to 30 students)

Fall Spec Term Sec 1 **M**—7-9, Sept. 26-Oct. 31
(6 meetings) AlderH 310, StP Campus; Garton, Walcker

(Stephen Garton and Scott Walcker are advanced graduate students in the Department of Horticulture.)

★IC 0242 SPRING GARDEN PLANNING AND PLANTING. No credit, \$24 plus \$3 course fee. Total \$27.

Spring is the season when garden planning shifts into high gear. This course is for the home gardener interested in planting vegetables, fruits and bedding plants. We'll practice planting and transplanting seedlings and discuss soil preparation, the use of organic and conventional fertilizers and pest controls, staking, mulching and other preparations for a fruitful summer. Materials will be provided. (Limited to 30 students)

Spring Spec Term Sec 1 **T**—7-9, Mar. 28-May 2 (6 meetings)
HrG, StP Campus; Preece

(John Preece is an advanced graduate student in the Department of Horticulture.)

IC 0261 OVERVIEW OF MODERN GEOLOGY. No credit, \$30.

A new series of six special lectures will explain recent and traditional geological theories in such subjects as space geology, continental drift and plate tectonics, geologic time, evolution, and geology indoors and out. None of the lectures are repeated from last year's series. An all-day Saturday field trip going north along the Mississippi River Valley to explore Minnesota's prehistory will be arranged.

Fall Spec Term Sec 1 **Th**—7-8:40, Sept. 29-Nov. 3 (6 meetings plus a
Saturday field trip) PillsH 110, Alexander, Sloan, Stout

(Professors Calvin Alexander, Robert Sloan and James Stout are faculty members in the Department of Geology.)

IC 0271 PULSARS, QUASARS AND BLACK HOLES: TOPICS IN ASTRONOMY. No credit, \$27.

Is there life on Mars? Do black holes exist? Here is an inquisitive astronomer's view of the universe, the galaxies, and the solar system. Discoveries about Mars and Jupiter from recent space flights will be discussed and theories of the origin and nature of the stars and planets will be presented. Topics include the constellations, pulsars and neutron stars, quasars, black holes, the birth and death of stars, and exploding stars.

Winter Spec Term Sec 1 T—7-8:40, Jan. 3-Feb. 21 (8 meetings) Ph 210, Young

(Judy Young is an advanced graduate student and astronomy instructor.)

society, behavior and culture

(See also IC 0535, Creating Choices: Balancing Work and Personal Life and IC 0451, Women and Language Workshop)

★IC 0311 MASCULINITY: MYTHS AND REALITIES. No credit, \$32.

An examination of the myths and realities of growing up as a male in our culture. The Women's Movement has created an awareness of the socialization of females into a culture which denies them many opportunities. Boys and men are subjected to another set of expectations which denies them the right to certain behaviors, feelings, and attitudes not part of the male myth. The course emphasizes the psychological factors of growing up male, and examines the rigid sex-role stereotypes which repress freedom and choice for almost all individuals in society. (Limited to 30 students)

Fall Spec Term Sec 1 T—7-9, Sept. 27-Nov. 15

(8 meetings) FolH 305, Hendel, Moynihan

(Darwin Hendel is a psychologist in the University's Measurement Services Center, and Jim Moynihan is a counselor in Continuing Education and Extension Counseling.)

IC 0322 PARENTING: A BEHAVIORAL APPROACH. No credit, \$24.

An introduction to the basic assumptions of behavioral psychology, for parents and others who spend time with children. Registrants will learn methods and strategies for analyzing family interactions and influencing children's behavior. Common problems in child development and family living will be raised for group discussion, with emphasis on behavioral solutions.

Fall Spec Term Sec 1 W—7-9, Sept. 28-Nov. 2 (6 meetings) Pt 215, Deno

(Stan and Dina Deno are parents who use behavioral techniques with their children. Stan is an Associate Professor of Educational Psychology specializing in behavioral psychology.)

IC 0342 THE NEW CUBA. No credit, \$24.

Revolutionary Cuba is now an established fact, and a fascinating social and political experiment. In this introduction to post-1959 Cuba, we'll talk with people who've visited Cuba, read background materials, and glimpse revolutionary culture through Cuban poster and film art.

Winter Spec Term Sec 1 Th—7-9, Jan. 5-Feb. 9

(6 meetings) BlegH 220, Aufderheide

(Pat Aufderheide is an Assistant Professor of History specializing in Latin American history and film.)

IC 0344 MODERN CHINA.

People, culture, politics and social system of modern China. Planned for fall quarter in cooperation with Midwest China Study Resource Center. Call for information: 376-4815.

IC 0361 RESEARCHING FAMILY HISTORY. No credit, \$30.

new

Fascination with our family roots seems to be a universal trait. Family history encompasses traditional genealogical research and places our personal history into the context of our society's history. In this course, students will research their own family histories. Skills in using a variety of sources including oral history, written documents, artifacts and photographs will be taught.

Winter Spec Term Sec 1 **Th**—7-9, Jan. 5-Feb. 9 (6 meetings plus 2
Saturday morning field trips) LindH 320, Huyck

(Heather Huyck is a Ph.D. candidate in American History who has done her own family history.)

IC 0371 MINNESOTA HISTORY: POLITICS AND PERSONALITIES FROM THE DEPRESSION TO THE SEVENTIES. No credit, \$28.

This course places Minnesota politics and personalities into a provocative historical perspective. Well received last year, the course is being offered again with an update on recent political events. Refresh your memory, share your experiences, and broaden your perspective. Topics include: Governor Floyd B. Olson ("Call me a radical") and the Great Truck Driver's Strike of 1934; the founding and development of the DFL; Harold Stassen and the Stassen-Eisenhower rivalry; Luther Youngdahl and "the role of the practicing Christian in politics"; and tales of other well-known governors and senators.

Fall Spec Term Sec 1 **M**—7-9, Sept. 26-Nov. 7 (7 meetings) Jones 4, Moen

(Professor Norman W. Moen of the General College has developed a sequence of courses in Minnesota Studies, including Minnesota Arts and Letters, Indians, Biography, Resources and History.)

IC 0372 MINNESOTA PIONEERS. No credit, \$24.

new

This course will probe into the lives of some of our great grandparents and great-great grandparents—the pioneers who settled in the Minnesota region in the decade preceding statehood. Who were these pioneers? What brought them here? How did they live and how did they feel about living here? Through the use of lectures, films, slides and recordings, we will become acquainted with the pioneer men and women, their occupations, roles, institutions, social and cultural life and politics.

Spring Spec Term Sec 1 **T**—7-9, Mar. 28-May 2
(6 meetings) Ramsey HS 255, Roseville; Moen

(Professor Norman W. Moen of the General College has developed a sequence of courses in Minnesota Studies, including Minnesota Arts and Letters, Indians, Biography, Resources and History.)

IC 0381 SPORTS IN AMERICA. No credit, \$20.

new

We'll review the history of sports as both a mythic symbol of American values and a transmitter of those values. Topics include: the rise of organized sports; the idolization of Vince Lombardi; the business leader as "gamesman"; the athlete as cultural hero; "little leagues."

Winter Spec Term Sec 1 **T**—7-8:40, Jan. 3-Feb. 7 (6 meetings) Jones 4, Mayer

(John Mayer is a doctoral candidate in American social history.)

IC 0382 AMERICAN CRIME: JESSE JAMES TO WATERGATE. No credit, \$20.

The ambivalent relationship between a society and its criminals at any given time says a lot about that society's cultural values and myths. The emergence of law and order—and of the gunman as hero—in the American west is an apt illustration.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

new

Beginning with the wild west, we'll look at crime, its uses, and the myths surrounding it in different periods of American history. Topics include: vice and prostitution, corporate crime, organized crime, the invention of criminals, and the Watergate era.

Spring Spec Term Sec 1 **Th**—7-8:40, Mar. 30-May 4
(6 meetings) LindH 305, Mayer

(John Mayer is completing a doctoral dissertation in American social history.)

communications

★IC 0411 FAMILY COMMUNICATIONS: WHAT ARE YOUR RULES? No credit, \$24.

Are you—or another member of your family—a people pleaser? blamer? avoider? How has the way your parents treated you influenced your self-image, expectations, and the type of parent you are now or might become? A family is a rule-governed system whose impact on its members is felt all their lives. This course will describe how family systems function: the rules that are followed, how families raise or lower self-esteem, communication styles, and roles that family members play. The course will provide a better intellectual understanding of family systems; it is not a therapy group. (Limited to 40 students)

Spring Spec Term Sec 1 **T**—7-9:00, Mar. 28-May 2
(6 meetings), Arch 15, Willmore

(Doloris Willmore is a counselor in the General College, with an interest in family systems.)

IC 0421 TOWARDS A HEALTHY ORGANIZATION. No credit, \$24.

This course will explore ways to create a healthy organizational climate—one which fosters personal growth, self-fulfillment and creativity within a work setting. Organizational Development will be our tool for understanding and improving the formal and informal systems that make up a total organization. We will examine how people communicate within an organization structure and will work on intergroup relationships and goal-setting processes. The Organizational Development approach is most useful with involvement of the entire work unit as a team—but individuals will find the analysis, interpersonal skills and decision-making techniques useful.

Fall Spec Term Sec 1 **W**—7-9, Sept. 28-Nov. 2
(6 meetings), LindH 302, Panger

(Marie Panger teaches creativity, communication and organizational development courses and is a consultant and trainer with local business and industry.)

★IC 0431 EXPOSITORY WRITING WORKSHOP—OR HOW TO WRITE WHEN YOU HAVE TO OR WANT TO BUT CAN'T GET STARTED. No credit, \$30.

This is a refresher course for people whose work involves preparation of reports, memoranda, articles, papers, letters, etc. but who lack writing skills and confidence. Students will receive individual help in defining the writing problem; organizing and developing ideas; writing clearly and concisely with audience in mind; and reviewing writing critically. Course content will depend upon the needs of students. (Bring something about your current writing problem or project—or a sample of the type of writing you need to learn—to the first class.) (Limited to 16 students)

Fall Spec Term Sec 1 **T**—7-9:30, Sept. 27-Nov. 1 (6 meetings) Arch 30, Kell

(William Kell has taught writing, literature, and American culture courses, including an Informal Course on the American work ethic. Writing public information materials is part of his present University assignment in the Graduate School Research Development Center.)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★IC 0441 NEWSLETTER WORKSHOP. No credit, \$24.

Does your association, business, club, or organization issue a newsletter? Gain or improve your newsletter production skills by taking this workshop. Topics to be covered: the basics of journalistic writing; publication formats and processes; copy editing symbols and practices; writing various styles of headlines; handling of illustrations; and principles of page makeup and publication layout. This course is not a lecture series, but rather six laboratory sessions of instruction and supervised practice. (Limited to 24 students)

Winter Spec Term Sec 1 **W**—7-9, Jan. 4-Feb. 8 (6 meetings), MurH 302

IC 0451 WOMEN AND LANGUAGE WORKSHOP. No credit, \$24.

An examination of ways in which our language both reflects and shapes the roles, status and power of women and men. Class members will look at "masculine" and "feminine" speech patterns, value-laden connotations of gender terms, word derivations and changes occurring in current usage. Format will be a combination of lecture, discussion, observation and practice in the use of assertive speech patterns.

Spring Spec Term Sec 1 **W**—7-9, Mar. 29-May 3

(6 meetings), FolH 209, George-Geisser

(Mary Lee George-Geisser, whose academic field is linguistics, is active in Twin Cities women's social change organizations and has published articles on language and on other aspects of feminism.)

personal growth and survival skills

(See also IC 0241, Fall Gardening Indoors and Out; and IC 0242, Spring Garden Planning and Planting)

IC 0511 ALTERNATIVE ENERGY RESOURCES.

Three courses on alternative energy resources for people who want to make a difference in the energy crisis and need to know what is possible. University and community resources will share information on major and minor changes we can make in our homes, our future homes, our life styles and our communities. (Offered cooperatively by Extension Classes, Continuing Education for Women and Continuing Education in the Arts.)

Sec 1. Energy Efficient Housing—Improving Our Living Spaces. No credit, \$25.

A practical course on how to make our homes more energy efficient. Working examples of ways to improve existing structures will be given. We'll discuss cost effectiveness and demonstrate procedures for installing energy efficient insulation, heating and ventilating systems, water/waste systems and solar collectors. For people who want to improve the efficiency of their homes, these means are within our grasp.

new

Sec 2. Energy Alternatives for New Homes. No credit, \$35.

Ecologically sound technologies and models for people involved in or thinking about new construction. We'll look at the state of the art, share what is possible and examine options: solar collection; efficient furnaces, water heaters and insulation; wood heat; wind electricity; underground building; domes and more. Lectures, demonstrations, and possible field trips.

Sec 3. Creating an Energy Efficient Community. No credit, \$30.

The personal, social and political implications of an increasingly energy-deficient world are immense. What are the issues? The possibilities? How do we become involved? How are our lives affected? These are the questions we'll consider as we look at stumbling blocks and effective ways for individuals, communities and societies to respond to the energy crisis.

Fall Spec Term Sec 1 **M**—7-9:30, Sept. 26-Oct. 31

(6 meetings) Arch 25, Thayer, Wilson and Staff

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

- Winter Spec Term** Sec 2 **M**—7-9:30, Jan. 9-Feb. 27
(8 meetings) Arch 25, Thayer, Wilson and Staff
- Spring Spec Term** Sec 3 **M**—7-9:30, Mar. 27-May 8
(7 meetings) Arch 25, Thayer, Wilson and Staff

(Darryl Thayer and Karen Wilson, affiliated with Alternative Sources of Energy and the Center for Local Self Reliance, are coordinators. Lecturers include University and community resources.)

IC 0535 CREATING CHOICES: BALANCING WORK AND PERSONAL LIFE. No credit, \$30 per person/\$55 per couple.

Exploration of decisions involved in balancing work and personal life. Clarifying personal identity as a working person and making decisions about mobility, promotions, and work environments. Learning how to create personal living space and a support system for the living style you choose. Class will involve self awareness exercises, speakers and small group discussions. The aim of this class is to create dialog between women and men as both sexes adjust to a changing work world. Attending with either a significant other or a business colleague is encouraged. (Offered in cooperation with Continuing Education for Women.)

- Fall Spec Term** Sec 1 **W**—6:30-9:30, Sept. 28-Nov. 2
(6 meetings) FolH 209, Gray, Colby

(Bonnie Gray is a counselor in Continuing Education and Extension Counseling, and Lee Colby is director of training at Colby, Sands and Associates, Inc.)

★IC 0536 WOMEN AND POWER. No credit, \$25.

The workshop will enable women to experience how they choose to use the power they have and will provide an opportunity to deal with feelings about power. In addition the workshop will challenge each woman to re-examine her beliefs and values regarding power, to recognize the power she has, and to become more comfortable and effective in power situations. (Offered in cooperation with Continuing Education for Women. Limited to 12 Extension students)

- Fall Spec Term** Sec 1 **W**—6:30-9, Oct. 19-Nov. 2 (3 meetings)
FolH 406, Johnson (No late fee through Oct. 11)
- Winter Spec Term** Sec 2 **T**—6:30-9, Jan. 24-Feb. 7 (3 meetings)
FolH 406, Johnson (No late fee through Jan. 16)

(Diane Johnson is a local counselor and instructor in Continuing Education for Women.)

IC 0537 PERSONAL GROWTH FOR PROFESSIONAL WOMEN. No credit, \$35.

Dealing with the concerns of professional women in developing a career. Images of women in the world of work, socialization of women, uses of power and risk taking, making transitions, time management goal selection and behavior change. (Offered in cooperation with Continuing Education for Women.)

- Spring Spec Term** Sec 1 **M**—6:30-9:30, April 3-24 (4 meetings) FolH 406, Hunt

(Christine Hunt is an advanced graduate student in Counseling and Student Personnel Psychology, instructor in Continuing Education for Women and former instructor in University College.)

The following three courses are intended to provide, on an elementary level, a reasoned examination of various aspects and issues of parapsychology. There are no prerequisites; you may register for any one or for all three. (Instructor Eleanor McGill has taught psychical phenomena courses in the University School of Cross-Disciplinary Studies and is a past president of the Minn. Society for Parapsychological Research.)

IC 0552 ALTERED STATES OF CONSCIOUSNESS. No credit, \$24.

Consider the expanded states of being of which many believe human consciousness is capable. Class members will look at a variety of altered states including theories of transcendental meditation, yoga, and biofeedback. Representatives of at least one of these approaches will visit the class to share knowledge and experiences and answer questions.

Fall Spec Term Sec 1 **W**—7-9, Sept. 28-Nov. 2
(6 meetings), Woodbury JHS 101, McGill

IC 0553 REINCARNATION: FACT OR FANTASY? No credit, \$16.

A critical survey of reported case studies and personal experiences of reincarnation. We will examine the philosophy underlying belief in reincarnation from both the western and eastern perspectives.

Winter Spec Term Sec 1 **W**—7-9, Jan. 4-25 (4 meetings) FolH 107 McGill

IC 0554 THE MIND APART: SURVIVAL OF DEATH, APPARITIONS AND HAUNTINGS, OUT-OF-BODY EXPERIENCES. No credit, \$16.

The above phenomena cannot be proven scientifically in controlled laboratory settings, but there certainly are many accounts of hair-raising occurrences. Lectures will briefly describe the phenomena, possible explanations, and a philosopher's approach to the problematic relationship of mind and body.

Spring Spec Term Sec 1 **W**—7-9, Mar. 29-Apr. 19
(4 meetings), FolH 107, McGill

IC 0561 METRICALLY SPEAKING. No credit, \$20.

Metritification: the United States has begun a transition that will result in the metric system replacing our customary system as the predominant measurement language. We will soon be communicating in metres, kilograms, and litres instead of yards, pounds, and quarts. Being familiar with this system is now an asset and will before long be a necessity in the office, at home, in the factory, stores and in traveling. The history of measurement and the U.S. adoption of the metric system will be examined, but the major focus of this course will be on learning and practicing the system. Student needs will help determine topics covered.

Winter Spec Term Sec 1 **Th**—7-9, Jan. 5-Feb. 2
(5 meetings) LindH 303, Wenberg

(Lawrence S. Wenberg is the assistant director of the Minnesota Metric Center in the University's Institute of Technology.)

The Math Anxiety Program is designed especially for people who encounter blocks in mathematics. Through a combination of coursework and supportive services students can overcome their fear of mathematics and master the level of mathematics they need or want. The program helps students deal with their attitudes and feelings about math at the same time they are working on their math skills.

The program is offered through Continuing Education for Women in cooperation with Extension Classes and the General College. Men and women are welcome. For further

information about exact times, dates and locations and for registration call 373-9743 or write 200 Westbrook Hall, 77 Pleasant St. S.E., University of Minnesota, Minneapolis, Minnesota 55455.

The *Math Anxiety Diagnostic Clinic* is the first step of the program. Tests and questionnaires are used to help students assess math skills and level of math anxiety. The Clinic will explore math anxiety, how it develops and how it affects math performance. Students will be advised of test results by mail. The Math Anxiety Diagnostic Clinic will be held on Wednesday, September 7th, 6-9 p.m. on the Minneapolis Campus. The fee is \$10.

The *Math Anxiety Support Group* will work with participants in examining their blocks in math, attitudinal change, test anxiety and mechanisms to deal with math anxiety. Participants must have participated in the Math Anxiety Diagnostic Clinic and are encouraged to register for a math class at the same time. The support group will meet six sessions, 1½ hours per session. The fee is \$15.

Arithmetic and Elementary Algebra, a noncredit class, will be offered in conjunction with the program. The class will provide individualized instruction in basic arithmetic processes, fractions, decimals, exponents, percentages, setting up word problems into algebraic form. Each student proceeds at own rate. Upon completion of course, student may receive credit through testing for GC 1431 Fundamentals of College Mathematics. Fee is \$45 plus an additional fee of \$20 required for credit. The class will be held Wednesday evenings, 6:30-9, fall semester on the Minneapolis campus.

IC 0571 INDIVIDUAL AND FAMILY BUDGET PLANNING. No credit, \$18. (second member of household \$9)

Learn to develop and manage your personal or family budget. You will acquire—on a basic level—the specific skills and abilities to use credit wisely, discriminate between your needs and wants in spending, set financial goals and develop contingency savings funds. Emphasis is on experiential learning. The budgeting experiences in which you participate in and out of the classroom are designed to become part of your lifestyle immediately. **Confidentiality will be maintained throughout the course.** Materials will be provided at the first class meeting; no other textbook purchase is necessary. Class sessions vary in length from 1 to 2½ hours. The first session will be one hour in length.

Fall Spec Term Sec 1 **Th**—7-9:30, Oct. 13, 20, 27; Dec. 1; Ramsey HS 251, Roseville; Olson (No late fee through Oct. 7)

Spring Spec Term Sec 2 **Th**—6:20-8:50, Apr. 13, 20, 27; June 1; FolH 201, Malmberg (No late fee through Apr. 5)

(John Malmberg is the associate director of the Department of Extension Classes, Continuing Education and Extension. Carol Olson is the director of the Department of Community Programs, Continuing Education and Extension.)

IC 0572 BASIC INCOME TAXATION. No credit, \$24.

This course will provide a guide through the morass of federal and state income tax law, for persons with no formal training in tax law. We'll outline the laws and translate the terminology into understandable terms. Basic concepts of computing taxable income will be covered, as will tax aspects of small investments and elements of planning to minimize taxes in common transactions. Course does not cover estate, gift or inheritance taxation.

Winter Spec Term Sec 1 **T**—7-9, Jan. 3-Feb. 7 (6 meetings) FolH 107, Johnson

(Daniel B. Johnson is a practicing attorney.)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

IC 0573 WILLS AND ESTATES: INFORMAL APPROACHES TO PEACE OF MIND. No credit, \$12.

Are you thinking about writing a will? Concerned that your estate be administered according to your wishes? This course will attempt to cut through the confusion which surrounds wills and probate and to clarify some of the issues and procedures involved. We will discuss the inheritance of property after death, the reasons for and legal requirements of wills, and the procedures involved in administering a decedent's estate.

Spring Spec Term Sec 1 **Sa**—10 a.m.-12, April 1-15
(3 meetings), NH 207, Hower

(Dennis R. Hower is an associate professor and coordinator of the Business Studies Division of the General College.)

★BFin 0001C INTRODUCTION TO INVESTMENTS. 3 certificate credits. \$49.50

A fundamental course for adult investors who wish a general background of information on the investment field. Course covers nature of various kinds of securities; statistical and investment analysis of securities; vocabulary and practices of the securities business; investment practices of investor groups. (No prereq. Limited to 45 students)

Fall Qtr Sec 1 **T**—6:20-8:50, NH 209, Mairs

Spring Qtr Sec 2 **W**—6:20-8:50, BlegH 125, Matyi

institute of technology (loft)

Your attention is called to the Professional Development Recognition Program in engineering and Science, page 130.

Morris E. Nicholson, Professor of Materials Science, and Director of Continuing Education in Engineering and Science

Wayne Schmaedeke, Director of Operations Planning at Minneapolis Gas Company

★loft 0001 FUNDAMENTALS OF ENGINEERING REVIEW. No credit, \$49.50

Particularly designed as a refresher course to help graduates of engineering colleges prepare for the Engineer-in-Training Examination, the first of two written examinations required for registration as a Professional Engineer. Covers a review of mathematics, chemistry, materials, statics, dynamics, strength of materials, thermodynamics, electric circuits, fluid mechanics, and engineering economics. (Prereq bachelor's degree in engineering. Limited to 50 students.) **Must be taken S-N.**

Winter Qtr Sec 1 **W**—6-8:30, MechE 102, Nicholson

loft 5011, 5012, 5013 MATHEMATICS FOR TECHNICAL MANAGEMENT. 3 degree credits each quarter. **Tentatively scheduled 1978-79**

islamic

(See Near and Middle Eastern Studies, page 251)

insurance (Ins)

Andrew F. Whitman, Professor of Insurance

C. Arthur Williams, Professor and Dean of Business Administration

Ins 3100 RISK MANAGEMENT AND INSURANCE. 4 degree credits, \$8100. \$70. (IS)

Recognition, measurement, and evaluation of insurable property, liability, and personnel risks of firms and families. Tools of risk management; retention, loss prevention, transfer, and others with emphasis on insurance. Design and implementation of the optimum risk management program. Selection of insurers, insurance pricing methods, and preparation for loss adjustments. Public policy and risk management, particularly government regulation of insurance, social insurance, and automobile insurance problems. Meets concurrently with 8100. (No prereq. **May not be taken S-N**)

Fall Qtr ★Sec 1 **T**—5:15-7:45, Sandburg JHS 212, Golden Valley; Whitman (Limit 35 students)

Sec 2 **M**—5-7:30, AndH 250, Whitman

Winter Qtr ★Sec 3 **M**—7-9:30, Ramsey HS 254, Roseville (Limit 30 students) Williams

Sec 4 **T**—6:20-8:50, AndH 230, Williams

Spring Qtr Sec 5 **M**—5-7:30, AndH 250

Ins 3200 LIFE AND HEALTH INSURANCE. 4 degree credits, \$8200. \$70.

Types of individual life and health insurance contracts, their uses, and their major provisions. Insurance and pension components of employee benefit plans—their

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

characteristics and regulation. Programming and estate planning. Business uses of individual life and health insurance. Selection of a life and health insurer. Meets concurrently with 8200. (Prereq 3100 or equivalent)

Spring Qtr Sec 1 **M**—7-9:30, AndH 350, Whitman

Ins 3220 PROPERTY AND LIABILITY INSURANCE. 4 degree credits, \$8220. \$70.

Types of property losses and their measurement. Legal doctrines and statutes creating liability risks for business firms, families, and other units. Analysis of major property and liability insurance contracts. How property and liability insurance is priced and marketed. Selection of an insurer. Social issues such as availability of insurance and no-fault automobile insurance. Meets concurrently with 8220. (Prereq 3100 or equiv.)

Spring Qtr Sec 1 **M**—4:30-7, AndH 270, Whitman

Ins 8100 RISK MANAGEMENT AND INSURANCE. 4 degree credits, \$3100. \$114.

See description for 3100. Meets concurrently with 3100. **May not be taken S-N.** (No prereq. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr ★Sec 1 **T**—5:15-7:45, Sandburg JHS 212, Golden Valley;
Whitman (Limit 35 students)

Sec 2 **M**—5-7:30, AndH 250, Whitman

Winter Qtr ★Sec 3 **M**—7-9:30, Ramsey HS 254, Roseville;
Williams (Limit 30 students)

Sec 4 **T**—6:20-8:50, AndH 230, Williams

Spring Qtr Sec 5 **M**—5-7:30, AndH 250, Williams

Ins 8200 LIFE AND HEALTH INSURANCE. 4 degree credits, \$3200. \$114.

See description for 3200. Meets concurrently with 3200. (Prereq 3100 or equivalent. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 **M**—7-9:30, AndH 350, Whitman

Ins 8220 PROPERTY AND LIABILITY INSURANCE. 4 degree credits, \$3220. \$114.

See description for 3220. Meets concurrently with 3220. (Prereq 3100 or equivalent. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 **M**—4:30-7, AndH 270, Whitman

IIA Ins 0021C GENERAL PRINCIPLES OF INSURANCE. 3 certificate credits, \$49.50.

The University of Minnesota cooperates with the Insurance Institute of America by offering 0021C needed by those who wish to take the examination of the Institute. The course surveys general principles of risk management and insurance and their specific applications in property and liability fields. It serves as a foundation for further study in the Insurance Institute of America, CPCU, CIC or other academic and professional programs of Insurance education. The course covers principles of risk management; economic and social influences of insurance; types of risk and kinds of insurance; principles of loss adjustment, rate making; types of insurers; underwriting and reinsurance; analysis of insurance contracts and insurance regulation. The contents of additional IIA courses in property and casualty insurance (0022 and 0023) are included in Ins 3220 noted above.

Fall Qtr Sec 1 **M**—7:30-9:25, AndH 250, Whitman

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

college of life underwriters (CLU)

David N. Barker, General Manager and Regional Comptroller, Prudential Insurance Co.
Larry G. Brown, Assistant Vice President and Associate Counsel, North American Life and Casualty Co.

William Crolley, Registered Representative, Craig-Hallum, Inc.

Michael D. Engel, Associate Counsel, North American Life and Casualty Co.

Michael F. Flannigan, Legal Counsel, Ministers Life and Casualty

Henry W. Hoffinger, Supervisor, The Great-West Life Assurance Co.

Al Larkin, Brokerage, Foster Guardian Insurance Agency

Orem Robbins, Chairman of Board/President, Security Life Insurance Co. of America

George E. Wanstall, Regional Group and Pension Manager, Lincoln National Life

Registration for all Minneapolis CLU classes must be completed with the Minneapolis CLU Chapter. No registrations will be taken by the University of Minnesota offices. Application blanks for enrollment may be obtained by calling 831-3730 or writing to State Office of Life Underwriters, Suite 161, 4620 West 77th Street, Edina, Minnesota 55435, or from the chairman, David H. Porter, Strommen and Associates, 2469 University Ave., St. Paul, MN 55114 (646-2501).

Enrollment must be completed in the fall for two courses covering both Fall and Spring semester.

Registration is made for consecutive courses (CLU 0301C, 0302C, 0303C, 0304C, 0305C, 0306C, 0307C, 0308C, 0309C, 0310C). The American College will not allow a candidate to sit for the examination for course CLU 0310C unless he has completed the other nine examinations.

Many of the regularly listed courses elsewhere in this bulletin may be of assistance to those who are preparing for examination on other parts of the curriculum. Full information on the American College of Life Underwriters study program may be obtained from the annual announcement of CLU which is available at Extension offices or through the Minneapolis or St. Paul chapters of the Chartered Life Underwriters.

CLU 0301C ECONOMIC SECURITY AND INDIVIDUAL LIFE INSURANCE. 3 certificate credits, \$49.50.

Designed as preparation for the January CLU examination in course 0301C. The subject matter will cover economic security needs, human behavior, professionalism and ethics in life and health insurance. Individual life, health and annuity contracts. Life insurance programming. Types of insurers, investments, financial statements, risk selection, taxation and regulation of companies. (No prereq)

Fall Sem Sec 1 **M**—4:40-6:40, 1750 Henn Ave So, Larkin
Sec 2 **T**—4:30-6:30, 3701 Wayzata Blvd, Hoffinger

CLU 0302C LIFE INSURANCE LAW AND MATHEMATICS. 3 certificate credits, \$49.50.

Designed for preparation for the June CLU examination in course 0302C. The subject matter will cover legal aspects of contract formation, policy provisions, assignments, ownership rights, creditor rights, beneficiary designations, and disposition of life insurance proceeds. Also covered is the mathematics of life insurance as related to premiums, reserves, nonforfeiture values, surplus and dividends. (No prereq)

Spring Sem Sec 1 **M**—4:40-6:40, 1750 Henn Ave So, Larkin
Sec 2 **T**—4:30-6:30, 1750 Henn Ave So, Engel

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

CLU 0303C GROUP INSURANCE AND SOCIAL INSURANCE. 3 certificate credits, \$49.50.

Designed for preparation for the January CLU examination in course 0303C. The subject matter will cover analysis of group life and health insurance, including products, marketing, underwriting, reinsurance, premiums, and reserves. Also, various governmental programs related to the economic problems of death, old age, unemployment, and disability. (No prereq)

Fall Sem Sec 1 **M**—4:30-6:30, 1750 Henn Ave So, Brown

CLU 0304C ECONOMICS. 3 certificate credits, \$49.50.

Designed for preparation for the June CLU examination in course 0304C. The subject matter will cover economic principles, the governmental and banking institutions which have an effect on the national economy, national income, theory and application of price determination, business cycles, money and banking, monetary and fiscal policy, and international trade and finance. (No prereq)

Spring Sem Sec 1 **M**—4:30-6:30, 3701 Wayzata Blvd, Barker

CLU 0305C ACCOUNTING AND FINANCE. 3 certificate credits, \$49.50.

Designed for preparation for the January CLU examination in course 0305C. The subject matter will cover basic accounting principles including data accumulation systems, income measurement, valuation of assets and liabilities, and financial statement analysis. The accounting process from the recording of a business transaction in the books of account to the final preparation of financial statements. Various sources of short-term, intermediate-term, and long-term funds available to business enterprise. (No prereq)

Fall Sem Sec 1 **M**—4:30-6:30, 3701 Wayzata Blvd, Barker

CLU 0306C INVESTMENTS AND FAMILY FINANCIAL MANAGEMENT. 3 certificate credits, \$49.50.

Designed for preparation for the June CLU examination in course 0306C. The subject matter will cover various aspects of investment principles and their application to family finance. Yields, limited income securities, investment markets, and valuation of common stock. Also family budgeting, property and liability insurance, mutual funds, variable annuities, and aspects of other investment media. (No prereq)

Spring Sem Sec 1 **W**—4:30-6:30, 3701 Wayzata Blvd, Crolley

CLU 0307C INCOME TAXATION. 3 certificate credits, \$49.50.

Designed for preparation for the January CLU examination in course 0307C. The subject matter will cover the federal income tax system with particular reference to the taxation of life insurance and annuities. The income taxation of individuals, sole proprietorships, partnerships, corporations, trusts, and estates. (No prereq)

Fall Sem Sec 1 **W**—4:30-6:30, 3701 Wayzata Blvd, Flannigan

CLU 0308C PENSION PLANNING. 3 certificate credits, \$49.50.

Designed for preparation for the June CLU examination in course 0308C. The subject matter will cover basic features of pension plans. Cost factors, funding instruments, and tax considerations involved in private pensions, profit-sharing plans, and tax-deferred annuities. Also, thrift and savings plans and plans for the self-employed. Effect of Employees Retirement Income Security Act of 1974 on covered areas. (No prereq)

Spring Sem Sec 1 **T**—4:30-6:30, 3701 Wayzata Blvd., Wanstall

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

CLU 0309C BUSINESS INSURANCE. 3 certificate credits, \$49.50.

Designed for preparation for the January CLU examination in course 0309C. The subject matter will cover business uses of life and health insurance, including proprietorship, partnership and corporation continuation problems and their solutions through the use of buy-sell agreements properly funded to preserve and distribute business values. Other business uses of life and health insurance, such as key man insurance, non-qualified deferred compensation plans and split-dollar plans. Also covered are corporate recapitalizations, professional corporations and business uses of property and liability insurance. (No prereq)

Fall Sem Sec 1 **M**—4-6, 1200 So 2 Ave, Robbins

CLU 0310C ESTATE PLANNING AND TAXATION. 3 certificate credits, \$49.50.

Designed for preparation for the June CLU examination in course 0310C. The subject matter will cover estate and tax planning, emphasizing the nature, valuation, disposition administration, and taxation of property. The use of revocable and irrevocable trusts, testamentary trusts, life insurance, powers of appointment, wills, lifetime gifts, and the marital deduction. Also, the role of life insurance in minimizing the financial problems of the estate owner. (Prereq 0309C)

Spring Sem Sec 1 **M**—4-6, 1200 So 2 Ave, Robbins

italian (Ital)

Josephine Mangano, Lecturer in French and Italian
Arshi Pipa, Professor of French and Italian

Cassette tapes are available to Extension Classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a. m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

Ital 1101-1102-1103 BEGINNING ITALIAN. 5 degree credits each quarter, \$82.50 plus \$5 course fee each quarter. Total \$87.50 each quarter.

Speaking, reading, and cultural objectives based on audiolingual approach. Students learn to understand and express fundamental ideas, to write anything they can say, and to master fundamental structures of the language. Includes audiovisual aids. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr 1101 Sec 1 **Th**—6:20-9:15, FolH 307

Winter Qtr 1102 Sec 2 **Th**—6:20-9:15, FolH 307

Spring Qtr 1103 Sec 3 **Th**—6:20-9:15, FolH 307

reading italian

Ital 0001 is specifically designed for individuals who desire only a reading knowledge of the language. The Italian language requirements for a graduate degree may also be satisfied by successfully passing an examination given at the end of the course. Graduate students should check with their advisers for specific language requirements in their field of study.

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Ital 0001 READING ITALIAN. No credit, \$49.50.

This course is designed solely to impart a basic reading knowledge of the Italian language. At the end of one quarter the student may take the graduate Reading Examination in Italian. The department will certify to the Graduate School a reading knowledge of Italian upon successful completion of the examination. (No prereq. **Must be taken S-N**)

Spring Qtr Sec 1 **W**—6:20-8:50, FolH 307



japanese

(See East Asian Languages)

jewish studies

(See Near and Middle Eastern Studies, page 251)

journalism and mass communication (Jour)

(See also Communications; Marketing; and Salesmanship)

Beverly Bethune, Lecturer in Journalism

Walter H. Brovald, Associate Professor of Journalism

James Brown, Assistant Professor of Journalism

Roy E. Carter, Professor of Journalism

David Freund, Lecturer in Journalism

Donald Gillmor, Professor of Journalism

Virginia Harris, Associate Professor of Journalism

Robert L. Jones, Professor of Journalism

Lester L. Metz, Lecturer in Journalism

John C. Sim, Professor of Journalism

Willard L. Thompson, Professor of Journalism

Harold W. Wilson, Professor of Journalism

A MAJOR IN JOURNALISM (ADVERTISING) CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered every 3 years. Interested students should discuss plans with an Extension counselor (373-3905).

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

B. A. Major Sequence—Advertising

All courses for the major except those marked below with a double asterisk (**) must be taken A-N. No B.A. program may include more than 48 journalism credits.

Required Preparatory Courses

1001, 1005, Econ 1001-1002** or 1014-1015** or 3001-3002.**

Pol 1001,** Hist 1301-1302** or 3822-3823.**

Advertising Sequence—1201, Comp 1027,** Psy 1001.**

Major Requirements

Advertising Sequence—3231, 3241, 5251, 5501, 5261, 5274; Mktg 3000; advertising management emphasis: 5263 and 4 additional 3xxx- or 5xxx-level cr; creative emphasis: 5272 and 4 additional 3xxx- or 5xxx-level cr (5221, 5233, 5252 recommended).

You need not be majoring in Journalism to register for these classes.

Candidates for a journalism degree must meet all sequence and course requirements; they must consult with the Central Advisor in the School of Journalism and Mass Communication before enrolling in any 3xxx- or 5xxx-level journalism course. They are also advised that, effective August 1, 1976, a formal application for admission to the School of Journalism and Mass Communication is required; specific information about application procedures and requirements should be obtained from the School Central Advisor as early as possible.

Students who are not planning to seek a journalism degree who have professional experience or coursework equivalent to prerequisites may have requirements waived by the course instructor.

IC 0441 NEWSLETTER WORKSHOP. No credit.

(See Informal Courses, page 218.)

Jour 1001 INTRODUCTION TO MASS COMMUNICATIONS. 2 degree credits, \$33. (◆\$16.50) (IS)

The nature, functions, and responsibilities of newspapers, magazines, radio and television, examined from the point of view of the professional journalist. News, opinion, entertainment, and persuasion functions; specialized communications, aspects of advertising. (Freshman English requirement recommended)

Fall Qtr Sec 1 **M**—6:20-8, MurH 311, Brovald

Spring Qtr Sec 2 **M**—6:20-8, MurH 311, Brovald

Jour 1005 VISUAL COMMUNICATION. 3 degree credits, \$49.50. (◆\$24.75)

Introduction to functions of visual communication in news and advertising in print and electronic media. Evaluation and criticism of visuals in such areas as creative typography, photography. (No prereq)

Winter Qtr Sec 1 **W**—6:20-9, ForH 115, Brown

The following courses require passing the typing test for 25 WPM and a passing score in the MET test: Jour 1101, Jour 3231, Jour 3241, and Jour 5261. The typing test may be taken at 9 am, 2:30 pm, and the first night of class in the Journalism office, 111 MuH. The MET test can be taken at the Student Counseling Bureau which is located in 101 Eddy Hall, 373-4193. Students need a referral from CEE Counseling before going to take the test. They may begin calling for referrals August 23.

★Jour 1101 REPORTING. 5 degree credits. \$82.50. (IS)

Study and practice in fact-gathering and journalistic writing. Problems in news judgment and handling of news and news features. (Prereq C or better in 1001 and

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

1005 or grad status or Δ ; type approx. 25 wpm. See note above on MET. Limited to 24 students)

Fall Sem Sec 1 T—6:20-9, MurH 212

Jour 1201 PRINCIPLES OF ADVERTISING. 4 degree credits, \$66. (◆\$33) (IS)

Theory, principles and functions of advertising, its role in social, economic and marketing structure. Newspapers, magazines, radio, and television as advertising media. (Prereq 1001 or #)

Fall Qtr Sec 1 T—6-8:30, MurH 308, Freund

Jour 3021 MASS COMMUNICATION AND THE NEWS. 4 degree credits, \$70. (◆\$35)

The mass media in contemporary society; structure, organization, professional norms, and audience compositions. Press and broadcasting; role of media in news dissemination. (No prereq)

Fall Qtr Sec 1 T—6:20-9, MurH 311, Sim

★Jour 3173 MAGAZINE WRITING AND EDITING. 4 degree credits, \$70.

Writing feature articles for general, class, and trade publications, marketing articles. (Prereq #—call Prof. George Hage, 373-3163. Limited to 20 students)

Spring Qtr Sec 1 Th—6:20-9, MurH 311, Bethune

★Jour 3231 ADVERTISING GRAPHICS. 4 degree credits, \$70 plus \$5 course fee. Total \$75.

Principles of design and layout. Use of photography, cold-type pasteup techniques. Appropriate use of typefaces. Color in layout and makeup. Hand composition. Individual projects. (Prereq for degree candidates, 2.50 avg in 1001, 1005, 1201; Comp 1027 where required by sequence; type 25 wpm; #. See note above on MET. Limited to 20 students)

Fall Qtr Sec 1 M—6:20-8:50, MurH 315, Wilson

★Jour 3241 ADVERTISING COPYWRITING. 4 degree credits, \$70.

Advertising appeals and strategy; advertising for print and broadcast. Individual and group projects. (Prereq 2.50 average in 1001, 1005, 1201; Comp 1027; type 25 wpm, or #. See note above on MET. Limited to 20 students)

Spring Qtr Sec 1 M—6:20-8:50, MurH 212, Harris

Jour 3776 MASS COMMUNICATIONS LAW. 4 degree credits, \$70. (◆\$35)

Brief historical background, First Amendment rights, basic law of defamation, free press and fair trial, access to news, access to the press, privacy, contempt, obscenity, the regulation of broadcasting and advertising, anti-trust controls, legal and ethical rules affecting journalistic practice. (Prereq 1101 or #)

Winter Qtr Sec 1 W—6:20-9, MurH 308, Gillmor

★Jour 5221 PUBLICATION GRAPHICS (replaces 3221). 4 degree credits, \$74 plus \$5 course fee. Total \$79.

Evaluation of processes in graphic communication. Technique and production of illustration. Significant graphic arts development. Survey of printing processes and methods by lecture, field trip and film. Students are introduced to economic organization and technology changes in fields of printing and publishing. (No prereq. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—6:20-8:50, MurH 311, Metz

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

★Jour 5233 GRAPHIC DESIGN ANALYSIS. 4 degree credits, \$74.

Publication formats for design and efficiency; historical and current trends in typography and graphics; creative problems. (Prereq 3155 or 3231, 5221, or #. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:20-8:50, MurH 311, Metz

Jour 5251 PSYCHOLOGY OF ADVERTISING. 4 degree credits, \$Psy 5751. \$74. (◆\$37)

Psychological analysis of the basic principles underlying advertising and selling. Consumer research is stressed. Research techniques for investigating advertising problems and the analysis of consumer wants are considered in detail. (Prereq Psy 1001. Meets concurrently with Psy 5751. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:20-8:50, WuH 230, Jones

Jour 5261 ADVERTISING: MEDIA ANALYSIS. 4 degree credits, \$74. (◆\$37)

Print and electronic media, their role in advertising; selection and scheduling; rate structures and policies; evaluation and use of media and market measurements and data. (Prereq 2.50 average in 1001, 1005 and 1201; Comp 1027; Mktg 3000; type 25 wpm. See note above on MET. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—5:30-8, MurH 311, Freund

Jour 5263 ADVERTISING CAMPAIGN AND MEDIA STRATEGY. 4 degree credits, \$74. (◆\$37)

Relation of campaign strategy to media measurement, evaluation and planning. Coordination of advertising campaigns; media scheduling and purchasing. (Prereq 3241, 5261 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—6:20-8:50, MurH 311, Freund

★Jour 5272 ADVERTISING COPY-GRAPHICS. 4 degree credits. **To be offered 1978-79.**

★Jour 5274 CURRENT ADVERTISING DEVELOPMENTS AND PROBLEMS. 4 degree credits. **To be offered 1978-79.**

Creative, management, research, media, and technical developments in advertising. Specific problems, case studies in advertising-marketing process. (Prereq for degree candidates, sr advertising major, 5251, 5261, and either 5263 or 5272; others #. Limited to 20 students). Qualified students may register for graduate credit at the University of Minnesota)

Jour 5501 COMMUNICATION AND PUBLIC OPINION. 4 degree credits, \$74. (◆\$37) (IS)

Theories of communication processes and of persuasion and attitude change. Functions of interpersonal and mediated communication in diffusion of information and in opinion formation. (Prereq 15 credits in social sciences. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-8:50, MurH 308, Carter

Jour 5549 PUBLIC RELATIONS. 4 degree credits, \$74. (◆\$37)

Public relations practice and principles. Process and applications in institutional settings. Critiques of public relations efforts in contemporary society. (Prereq 15 cr in social science or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:20-8:50, MurH 308, Thompson



labor education

For information on noncredit conferences or workshops in labor education, please contact Labor Education Service, 447 Business Administration, University of Minnesota, Minneapolis, Minnesota 55455. Or inquiries may be directed to Martin W. Duffy (373-5306); John J. Flagler (373-3662); or George E. O'Connell (373-5380).

laboratory medicine (LMed)

(See also Public Health)

Seymour Handler, Assistant Professor of Laboratory Medicine and Pathology

★LMed 5110 HOSPITAL INFECTIONS CONTROL. 2 degree credits, \$37.

Nosocomial infections, transmission of hospital infections, surveillance and general methods of infection control. Course is aimed at all levels of personnel on the Hospital Infections Control Committees (HICC)—pathologist, clinician, microbiologist, nurse-epidemiologist, etc. (Prereq # or current employment in the hospital environment. A joint Day/Extension class limited to 20 Extension students plus day school registrants. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 TTh—4:15-5, HSUnitA 2-690, Handler

landscape architecture (LA)

(See also Agriculture, Architecture and Horticultural Science)

C. Gustaf Hard, Professor of Horticultural Science

LA 0001 LANDSCAPE ARCHITECTURE/REVIEW. No credit, \$66.

Review of the activities and responsibilities of the contemporary landscape architect. The course is designed for those Landscape Architects who are preparing for the Uniform National Exam administered by the Minnesota State Registration Board. The UNE will be given in mid-June. Time and place to be announced. It is a review of activities and responsibilities considered pertinent to the practice of landscape architecture. Included in the review will be: history, professional practice, design, design implementation, other topics as appropriate. (Prereq qualified to take the UNE)

Spring Qtr Sec 1 Th—6:30-8:30, Arch 20

LA 1024 THEORY OF LANDSCAPE DESIGN. 4 degree credits, \$66. (◆\$33)

◆ Analysis of design elements and forms involving line, direction, shape, proportion, and color, with emphasis on their function in design; a study of perception and man's

relationship to his environment, and the social effects and psychological basis for design. Lectures and reference reading. Students will apply the theories studied to their own particular interest areas such as community development, issues in environmental quality, and residential landscape design. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, AlderH 415, StP Campus, Hard

latin (Lat)

Robert P. Sonkowsky, Professor in Classics

Language laboratory fees are charged for courses in which use of the lab is required or recommended. Cassette tapes are available to extension classes students on a take home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

NOTE—Lat 1101-1102-1103 require no previous knowledge of Latin. The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 354): Clas 1019, 1042, 1005, 5005; Hist 1053, 3053; Phil 3001, 3002.

Lat 1101-1102-1103 LATIN. 5 degree credits each quarter, \$82.50 plus \$5 course fee. Total \$87.50 each quarter. (IS)

Fifteen college credits of Latin for all ages: junior high, senior high and college students, pre- and post-college adults, families—the learning community. Programmed texts and tapes for home study permit self-pacing. Knowledge is broken up into isolated bits, which students master bit by bit, returning to previous bits as necessary. 90% success rate. Weekly one-hour discussions motivate learning, provide community, and explore humanistic educational dimensions of Classical Latin traditions. Courses meet concurrently each term. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr	1101	Sec 1	W—6:30-7:30, FolH 304, 305, Sonkowsky
	1102	Sec 2	W—6:30-7:30, FolH 304, 305, Sonkowsky
	1103	Sec 3	W—6:30-7:30, FolH 304, 305, Sonkowsky
Winter Qtr	1101	Sec 4	W—6:30-7:30, FolH 304, 305, Sonkowsky
	1102	Sec 5	W—6:30-7:30, FolH 304, 305, Sonkowsky
	1103	Sec 6	W—6:30-7:30, FolH 304, 305, Sonkowsky
Spring Qtr	1101	Sec 7	W—6:30-7:30, FolH 304, 305, Sonkowsky
	1102	Sec 8	W—6:30-7:30, FolH 304, 305, Sonkowsky
	1103	Sec 9	W—6:30-7:30, FolH 304, 305, Sonkowsky

library science (Lib)

Joan Leigh, Assistant Professor of Library Science

Harris McClaskey, Associate Professor of Library Science

Lowell Olson, Associate Professor of Library Science

Students who are interested in programs offered by the Library School should obtain information on admission and application procedures from the Library School, 419 Walter Library, Minneapolis Campus; telephone 373-3100.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

- ★**Lib 5101 INTRODUCTION TO LIBRARIES AND LIBRARIANSHIP.** 5 degree credits, \$92.50 plus \$4 course fee. Total \$96.50.

Librarianship as a profession; development of libraries as social agencies; principles of library administration and management. Required of students admitted to the graduate program. (No prereq. A joint Day/Extension class limited to 10 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **TTh**—4:30-6:30, AH 150, McClaskey
Lab F—12:15-5

- ★**Lib 5221 RECORDS OF KNOWLEDGE.** 4 degree credits, \$74 plus \$4 course fee. Total \$78.

History and development of the records of knowledge in relation to the communication needs of society; principles of selection and collection building for libraries; services to meet clientele information needs. Required of students admitted to the graduate program. (No prereq. A joint Day/Extension class limited to 10 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Lect MW** 4:30-6:30, **Lab F** 12:15-5, WaLib 339, Leigh

- ★**Lib 5401 ORGANIZATION OF INFORMATION I.** 4 degree credits, \$74 plus \$4 course fee. Total \$78.

Introduction to methods and problems involved in the description, subject organization, and retrieval of records of knowledge and information in bibliographies, library catalogs, and machine-based systems. Required of students admitted to the graduate program. (No prereq. A joint Day/Extension class limited to 10 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **MW**—4:30-6:30, Ph 143

- Lib 8701 RESEARCH METHODS IN LIBRARIANSHIP.** 3 degree credits, \$85.50.

Purposes and principles of research, with emphasis upon the distinctive characteristics of library science problems; critical examination of research studies, preparation of tentative research proposals. (Prereq Lib 5101, 5221, 5401 or #. A joint Day/Extension class. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 **TTh**—4:30-5:45, WaLib 339, Olson

new

linguistics (Ling)

(See also IC 0451, Women and Language Workshop; Anth 5161, Language and Culture; CPsy 5345, Language Development; Engl 5851, The Structure of Modern English; Engl 3851, The English Language)

Larry G. Hutchinson, Associate Professor of Linguistics

Rocky V. Miranda, Associate Professor of Linguistics

- Ling 1001 THE NATURE OF HUMAN LANGUAGE.** 4 degree credits, \$66. (◆\$33)

Facts and theories concerning human language and their relevance to the study of human behavior. (No prereq. May not be used as prereq for advanced courses in linguistics)

Fall Qtr Sec 1 **T**—6:20-8:50, Ph 131

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Ling 3001 INTRODUCTION TO LINGUISTICS. 5 degree credits, \$3005, 5001. \$87.50.
(◆\$43.75)

A systematic survey of the field of linguistics; syntax, semantics, phonology; language learning and psychology of language; universals of language; language in society; language change; educational applications; history of linguistics. (No prereq. Meets concurrently with 5001)

Winter Qtr Sec 1 **W**—6:20-8:50 (plus 1 hour/week to be arr), Ph 131, Hutchinson

Ling 3601 INTRODUCTION TO HISTORICAL LINGUISTICS. 4 degree credits, \$5601.
\$70. (◆\$35)

Processes of language change in phonology, syntax, and semantics; linguistic reconstruction; origin of language; language families; development of writing. (Prereq 3001 or #. Meets concurrently with 5601)

Spring Qtr Sec 1 **Th**—6:20-8:50, Ph 131, Miranda

Ling 5001 INTRODUCTION TO LINGUISTICS. 5 degree credits, \$3001, 3005. \$92.50.

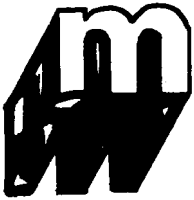
See course description for 3001. (No prereq. Meets concurrently with 3001. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **W**—6:20-8:50 (plus 1 hour/week to be arr), Ph 131, Hutchinson

Ling 5601 INTRODUCTION TO HISTORICAL LINGUISTICS. 4 degree credits, \$3601.
\$74.

See description for 3601. Meets concurrently with 3601. (Prereq 3001 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—6:20-8:50, Ph 131, Miranda



management (Mgmt)

Paul V. Grambsch, Professor of Management

Karen Hawley, Instructor in Management

Frank C. Seidel, Instructor in Management

Precha Thavikulwat, Instructor in Management

Raymond E. Willis, Associate Professor of Management Science

★**Mgmt 3001 FUNDAMENTALS OF MANAGEMENT.** 4 degree credits, \$70.

An evolving study of concepts, theory, research, and operational problems. Includes the principal functional areas of management. Examines provisions of necessary factors and relationships to achieve organizational objectives: establishment of goals, policies, procedures; the planning process; control systems; organizational

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

structure and behavior; leadership. (No prereq. Credits may be applied toward the Information Systems Analysis and Design certificate [see page 402]. **May not be taken S-N.** Limited to 40 students)

- Fall Qtr** Sec 1 **M**—5:30-8:15, BlegH 335
Sec 2 **T**—5:30-8:15, Sandburg JHS 213, Golden Valley
Sec 3 **W**—5:30-8:15, BlegH 335
Sec 4 **Th**—5:30-8:15, BlegH 250
- Winter Qtr** Sec 5 **M**—5:30-8:15, BlegH 220
Sec 6 **M**—5:30-8:15, BlegH 230
Sec 7 **T**—5:30-8:15, BlegH 230
Sec 8 **W**—5:30-8:15, Irondale HS 105, New Brighton
(Limit 30 students)
- Spring Qtr** Sec 9 **M**—5:30-8:15, BlegH 404, Grambsch
Sec 10 **W**—5:30-8:15, BlegH 110

★**Mgmt 3002 PSYCHOLOGY IN MANAGEMENT.** 4 degree credits, \$70.

Centers on development and application of behavior principles, methods, and skills which underlie managerial competence in preventing and solving problems within and between individuals and groups and aid in effective utilization of human resources. Various laboratory procedures are used to highlight concepts, methods and skills and furnish practice in applying them to management problems. (No prereq. **May not be taken S-N.** Limited to 36 students)

- Fall Qtr** Sec 1 **W**—5:30-8:15, BlegH 215, Thavikulwat
Winter Qtr Sec 2 **W**—5:30-8:15, BlegH 215, Thavikulwat
Spring Qtr Sec 3 **W**—5:30-8:15, BlegH 215, Thavikulwat

★**Mgmt 3004 BUSINESS POLICY: STRATEGY FORMULATION AND IMPLEMENTATION.** 5 degree credits, \$87.50.

Undergraduate level integrating course designed to develop skill in the management functions of identifying and analyzing problems, establishing corporate or divisional goals; and designing realistic programs of action. Class time is devoted to case analysis and discussion. Students meet in small groups at other times to prepare cases and occasionally presentations to be made to the entire class. Students utilize data supplied in the case as well as concepts, tools, and theories (previously presented in other courses) as they bear on the solution of goal selection and strategy implementation problems. Usually the viewpoint of the general line manager (department, division, or executive level) is taken. (Prereq senior and completion of business core or final core course. **May not be taken S-N.** Limited to 35 students)

- Fall Qtr** Sec 1 **W**—5:30-8:15, BlegH 145, Seidel

★**Mgmt 5175 BUSINESS FORECASTING.** 4 degree credits, \$74.

Methods of economic, social, and technological forecasting and applications to problems of managerial decision making and planning. (Prereq QA 1050 or 8191, Mgmt 3001 or 8001, or #. Limited to 40 students. **May not be taken S-N.** Qualified students may register for graduate credit at the University of Minnesota)

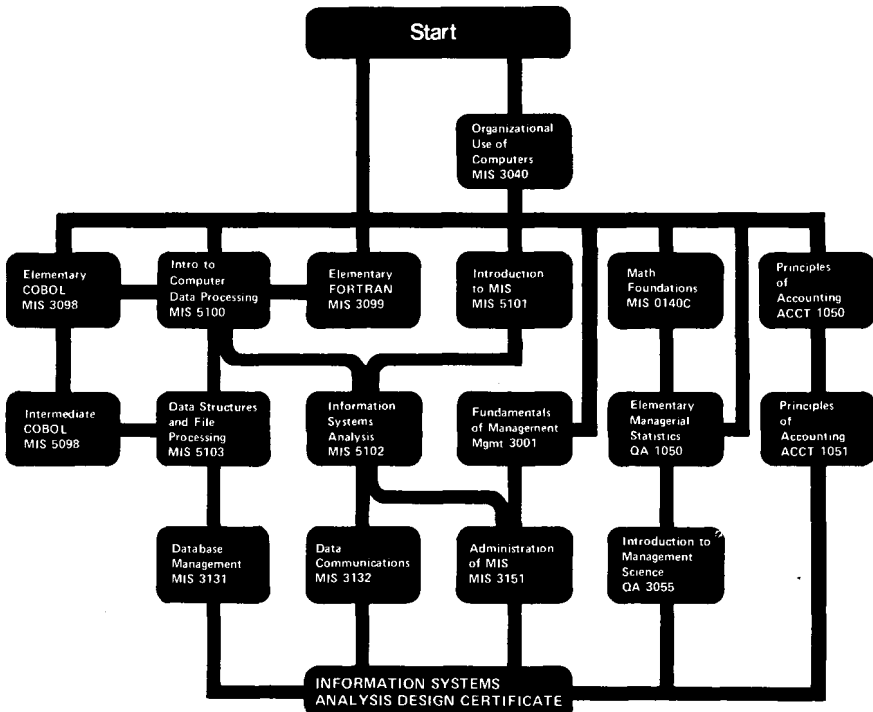
- Fall Qtr** Sec 1 **W**—5:30-8:15, BlegH 340, Willis
Spring Qtr Sec 2 **W**—5:30-8:15, BlegH 340, Willis

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

management information systems (MIS)

(See also Computer Control Sciences)

Carl R. Adams, Associate Professor of Management Information Systems
 Robert J. Ahlstrom, Director, Information Systems, Super Valu Stores
 John Anderson, Assistant Professor of Management Information Systems
 Robert P. Bostrom, Instructor in Management Information Systems
 Norman L. Chervany, Professor of Management Information Systems
 John C. Cosgrove, Programmer, University Computer Center
 Gordon B. Davis, Professor of Management Information Systems
 Gary W. Dickson, Professor of Management Information Systems
 Gordon C. Everest, Associate Professor of Management Information Systems
 Jeremiah E. Fruin, Research Associate, Agricultural and Applied Economics
 Jay R. Hamann, Assistant Professor of Management Information Systems
 J. Scott Hamilton, Instructor in Management Information Systems
 Thomas H. Hoffmann, Professor of Management Information Systems
 Blake Ives, Instructor in Management Information Systems
 John B. Knauff, Director, Planning, Systems and Material, Rosemount, Inc.
 Ernest L. Larson, Senior Staff Consultant, Control Data Corp.
 J. David Naumann, Assistant Professor of Management Information Systems
 Margarethe H. Olson, Instructor in Management Information Systems
 Roger Schroeder, Associate Professor of Management Information Systems
 Dennis G. Severance, Associate Professor of Management Information Systems
 Thomas P. Teresi, Vice President, Integrated Data Processing, Inc.
 Ronald D. Visness, Assistant Director, Minnesota Energy Agency



schedule for programming courses

MIS 3098, 3099 and 5098 are scheduled to meet concurrently. Students must register for a particular section, but after the first meeting of their section, may attend any of the sections. **5098 is offered winter and spring quarters only.**

Fall Qtr	Sec 1	M —6-9:30, BlegH 5, Davis
	Sec 2	T —6-9:30, BlegH 5
	Sec 3	W —6-9:30, BlegH 5
	Sec 4	Th —6-9:30, BlegH 5
Winter Qtr	Sec 5	M —6-9:30, BlegH 5, Hoffmann
	Sec 6	T —6-9:30, BlegH 5
	Sec 7	W —6-9:30, BlegH 5
	Sec 8	Th —6-9:30, BlegH 5
Spring Qtr	Sec 9	M —6-9:30, BlegH, Naumann
	Sec 10	T —6-9:30, BlegH 5
	Sec 11	W —6-9:30, BlegH 5
	Sec 12	Th —6-9:30, BlegH 5

Students with programming experience or other data processing experience may complete an equivalency examination for MIS 3098, 3099 or 5100. Students who believe they are qualified should contact Extension Counseling (373-3905).

COMPUTER PROGRAMMING COURSES

Students in the MIS programming modules learn to program by writing programs. No lectures are presented; the appropriate text, plus course materials which are handed out at the first class meeting, provide the student complete course material. Students **must attend their section at 6 p.m. during the first week of class** to obtain procedural instructions, due dates, and course assignments. After that, the student needs to attend only 1) to take a quiz, or 2) for assistance with a programming problem. After the first class meeting students may come to the programming laboratory at any time M, T, W, or Th, 5-9:30 p.m. BlegH 5

MIS 3098 ELEMENTARY COBOL. 1 degree credit \$17.50 plus \$10 special fee. Total \$27.50.

An introduction to programming in the COBOL language. COBOL is the most widely used business data processing language. In the self-paced structure, the student will complete a structured set of COBOL programs and several short quizzes on or before scheduled dates. Consultants provide student assistance and administer quizzes. (No prereq) See schedule above.

MIS 3099 ELEMENTARY FORTRAN. 1 degree credit \$17.50 plus \$10 special fee. Total \$27.50.

An introduction to programming in the FORTRAN language. FORTRAN is used primarily for programming analytical problems. In the business environment it is used where much computation is required; for example, forecasting, optimization, and statistical analyses. In the self-paced structure, the student will complete a structured set of FORTRAN programs and several short quizzes on or before scheduled due dates. Consultants provide student assistance and administer quizzes. (No prereq) See schedule above.

MIS 5098 INTERMEDIATE COBOL. 2 degree credits. \$37 plus \$10 special fee. Total \$47.

Intermediate features of the COBOL programming language. In the self-paced structure, the student will complete a structured set of COBOL programs and several short quizzes on or before scheduled dates. Consultants provide students assistance and

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

administer quizzes. (Prereq MIS 3098. Qualified students may register for graduate credit at the University of Minnesota.) See schedule above. **Offered winter and spring quarters only.**

MIS 0140C MATHEMATICAL FOUNDATIONS OF SYSTEMS ANALYSIS. 3 certificate credits, \$49.50.

The basic mathematical tools necessary for the development of quantitative skills. Boolean algebra, set theory, logic, sequences and series, iteration, linear algebra, and matrix manipulation. For those students with weak mathematical backgrounds or those who must refresh their skills. For those in the certificate program, MIS 0140C provides prerequisite skills for QA 1050, Elementary Managerial Statistics. (No prereq)

Fall Qtr Sec 1 **M**—6-8:30, BlegH 255, Fruin

Winter Qtr Sec 2 **M**—6-8:30, BlegH 235, Fruin

Spring Qtr Sec 3 **M**—6-8:30, BlegH 235, Fruin

MIS 3040 ORGANIZATIONAL USE OF COMPUTERS. 4 degree credits, \$70. (◆\$35)

A non-technical description of computers and computer systems in government and business. Introduces the kinds of people who work with computers and describes their activities in organizations. Presents current issues such as privacy, data banks, point-of-sale systems and future issues such as communications networks, mini and micro computer applications, electronic funds transfer. Discusses the history, status, and future of computer industry. (No prereq, intended for non-MIS students or students with no previous computer knowledge.)

Fall Qtr Sec 1 **T**—6-9:20, AndH 210, Hamann

Winter Qtr Sec 2 **T**—6-9:20, AndH 210, Hamann

Spring Qtr Sec 3 **T**—6-9:20, AndH 210, Hamann

★MIS 5100 INTRODUCTION TO COMPUTERS AND COMPUTER DATA PROCESSING. 4 degree credits, \$74.

Elements of computer hardware and their functions. Computer software. Tools and methods for development of computer applications. Preparing computer programs. Acquisition, organization and management of computer resources. The computer industry. Future developments. (Prereq 3098 or 3099 or 13098 or 13099 or #. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6-9:20, BlegH 250, Teresi

Sec 2 **T**—6-9:20, BlegH 250

Sec 3 **W**—6-9:20, BlegH 250, Visness

Winter Qtr Sec 4 **M**—6-9:20, BlegH 250, Teresi

Sec 5 **T**—6-9:20, BlegH 250

Sec 6 **W**—6-9:20, BlegH 250, Visness

Spring Qtr Sec 7 **M**—6-9:20, BlegH 250

Sec 8 **W**—6-9:20, BlegH 250, Visness

★MIS 5101 INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS. 4 degree credits, \$74.

An overview of MIS. Conceptual foundations of MIS including: concepts of information, humans as information processors, system concepts and information systems, management and organizational concepts relevant to MIS, decision making concepts and the value of information for decision making. The structure of an MIS and its development, organization, management and evaluation. Emphasis is placed on the

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

user/system interface. (No prereq, but recommended prior course in MIS or equivalent experience. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

- Fall Qtr** Sec 1 **M**—6-9:20, BlegH 235, Olson
Sec 2 **W**—6-9:20, BlegH 415, Everest
Sec 3 **Th**—6-9:20, BlegH 155
Winter Qtr Sec 4 **M**—6-9:20, BlegH 350
Sec 5 **Th**—6-9:20, BlegH 250
Spring Qtr Sec 6 **M**—6-9:20, BlegH 260
Sec 7 **Th**—6-9:20, BlegH 425

★MIS 5102 INTRODUCTION TO INFORMATION SYSTEMS ANALYSIS. 4 degree credits, \$74.

The phases within the systems life cycle for development of an information system application. Emphasis on the standards, tools and techniques required in the analysis of information requirements and in logical design. Processing alternatives and alternative approaches to systems design. (Prereq 5100, 5101. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota)

- Fall Qtr** Sec 1 **T**—6-9:20, BlegH 230, Naumann
Winter Qtr Sec 2 **T**—6-9:20, BlegH 240, Knauff
Spring Qtr Sec 3 **T**—6-9:20, BlegH 340, Knauff

★MIS 5103 DATA STRUCTURES AND FILE PROCESSING. 4 degree credits, \$74 plus \$4 special fee. Total \$78.

Principles and techniques of data organization, physical representation of data in a computer system, and file processing strategy to meet user information requirements and system performance objectives. Topics include: theory of files, data storage devices, record design, sequential and random processing, linked structures, indexing, hashing, balanced search trees, multi-attribute search, inverted and multilist file organizations, hierarchic, network, and relational structure, sorting, data compression, and data integrity. Students establish and manipulate data structures on the University computer facility. (Prereq 5098, 5100 or 15098, 5100. Limited to 50 students. Qualified students may register for graduate credit at the University of Minnesota.)

- Fall Qtr** Sec 1 **Th**—6-9:20, BlegH 435, Severance
Winter Qtr Sec 2 **Th**—6-9:20, BlegH 225
Spring Qtr Sec 3 **Th**—6-9:20, BlegH 440, Everest

★MIS 5104 DESIGN AND IMPLEMENTATION OF INFORMATION SYSTEMS. 4 degree credits, \$74.

Integration of information analysis and system design skills. Case problems in information systems analysis, system and file design, and systems implementation. Emphasis is placed upon the application of techniques, tools and skills covered in prior courses. (Prereq 5102, 5103. A joint Day/Extension class limited to 25 students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

- Winter** Sec 1 **TTh**—5:30-7, BlegH 440, Naumann

★MIS 3131 DATABASE MANAGEMENT SYSTEMS (replaces 0131C). 4 degree credits, \$70 plus \$10 special fee. Total \$80.

Concepts and methods in the definition, creation, and management of data-bases for management information systems. Topics include: objectives of data-base management, design and evaluation of database management systems, theory of files, data

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

structures, storage structures, interrogation, responsibilities of the database administrator, database integrity, security, and privacy. (Prereq 5103. Limited to 50 students)

Winter Qtr Sec 1 **W**—6-9:20, BlegH 155, Cosgrove

Spring Qtr Sec 2 **W**—6-9:20, BlegH 130, Cosgrove

★**MIS 3132 DATA COMMUNICATIONS SYSTEMS (replaces 0132C).** 4 degree credits, \$70.

Characteristics of transmission facilities and networks, concentrators and multiplexors, terminals, modems and front end processors. Control hardware and software systems. The role of data communications in management information systems. (Prereq 5102. Limited to 50 students)

Winter Qtr Sec 1 **Th**—6-9:20, BlegH 120, Larson

Spring Qtr Sec 2 **Th**—6-9:20, BlegH 130, Larson

★**MIS 3151 ADMINISTRATION AND CONTROL OF MANAGEMENT INFORMATION SYSTEMS (replaces 0151C).** 4 degree credits, \$70.

Technical tools and management concepts required in the administration of the information systems function. Topics include the structure and management of computer operations, measurement of operating performance, budgeting and planning, project management techniques for systems and programming, personnel selection, training, and compensation, and the role of the information processing manager. (Prereq 5102 and Mgmt 3001. Limited to 50 students)

Fall Qtr Sec 1 **Th**—6-9:20, BlegH 145, Ahlstrom

Spring Qtr Sec 2 **Th**—6-9:20, BlegH 225, Ahlstrom

marketing (Mktg)

Your attention is called to the Credit and Financial Management Certificate program, page 400; Journalism; and the General College marketing sequence.

David G. Bassitt, Assistant to Executive Vice-President, Advance Machine Co.

Eric N. Berkowitz, Assistant Professor of Marketing

Stanley S. Cowle, Vice President, Piper, Jaffray & Hopwood, Inc.

Samuel D. Druy, Vice President and General Merchandise Manager, Daytons (retired)

Michael Dwyer, Director of Corporate Market Research, Peavey Company

Robert M. Ferris, Marketing Officer, First Bank Systems, Inc.

Joyce L. Grahn, Instructor in Marketing

Richard L. Peterson, Marketing Consultant, Golle and Holmes Corp.

Dennis Rosen, Marketing Research, General Mills

Ivan Ross, Professor of Marketing

Bertram W. Russick, President, Mid-Continent Surveys, Inc.

Richard Sauter, Marketing Research and Planning, Medtronic, Inc.

Linda Swayne, Instructor of Marketing

Orville Walker, Professor of Marketing

John R. Walton, Assistant Professor of Marketing

★**Mktg 3000 PRINCIPLES OF MARKETING.** 4 degree credits, \$70.

Study of the basic policy and strategy issues in marketing and the environmental factors that affect these issues. Legal, behavioral, ethical, competitive, economic, and technological factors are examined as they affect product, pricing, promotion, and marketing channel decisions. (Prereq Econ 1002 or #. **May not be taken S-N.** Limited to 50 students.)

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

- Fall Qtr** Sec 1 **M**—6-8:30, Richfield HS 249-250, Dwyer
 Sec 2 **T**—6-8:30, BlegH 145, Rosen
 Sec 3 **W**—6-8:30, BlegH 10, Sauter
 Sec 4 **Th**—6-8:30, BlegH 440, Berkowitz
- Winter Qtr** Sec 5 **W**—6-8:30, BlegH 145, Ferris
 Sec 6 **Sa**—9 a.m.-11, BlegH 425, Bassitt
 Sec 7 **Th**—6-8:30, BlegH 425, Sauter
- Spring Sem** Sec 8 **M**—8-9:40, BlegH 415, Swayne
- Spring Qtr** Sec 9 **M**—6-8:30, BlegH 425, Ferris
 Sec 10 **M**—6-8:30, Ramsey HS 133-137, Roseville; Dwyer
 Sec 11 **M**—6-8:30, Sandburg JHS 213, Golden Valley; Ross
 (Limit 45 students)
 Sec 12 **T**—6-8:30, BlegH 420, Grahn
 Sec 13 **W**—6-8:30, BlegH 145, Berkowitz
 Sec 14 **Th**—6-8:30, BlegH 420, Rosen

★Mktg 3060 MARKETING SYSTEMS. 4 degree credits, \$70.

The systems approach to marketing institutions and their interrelationships. Institutional, functional, and social aspects of distribution channels are examined. Particular emphasis is given to problems of channel selection and management, such as conflict, power, and control. Social issues and deviant systems are also examined. (Prereq Mktg 3000 or #. Limited to 50 students)

Spring Qtr Sec 1 **Th**—5:30-8, BlegH 435, O Walker

★Mktg 3065 RETAIL MANAGEMENT. 4 degree credits, \$70.

Study of retailing principles, problems, and trends as they relate to various types of retailing institutions. Assignment of trade journals and supplementary readings for in-store study (buying and pricing) with a local retailer. (Prereq 3000. Limited to 50 students)

Fall Qtr Sec 1 **T**—6-8:30, BlegH 220, Druy

Spring Qtr Sec 2 **T**—6-8:30, BlegH 240, Druy

★Mktg 3075 SALES MANAGEMENT. 4 degree credits, \$70. (IS)

Management of the personal selling function including sales organization; selection, training, compensation, motivation, supervision, and control of the field sales force; sales forecasting; sales budgets; sales and cost analysis. Case materials used extensively. (Prereq 3000. Limited to 50 students)

Fall Sem Sec 1 **M**—6:20-8, BlegH 240, Peterson

★Mktg 3077 ADVERTISING AND SALES PROMOTION. 4 degree credits, \$70.

The promotion function in marketing: Media, audience, message. Establishing objectives for advertising and sales promotion, budget and media allocation decisions, sales promotion, mix components, advertiser—agency structure and relationships, measuring advertising and sales promotion effectiveness, and socioeconomic considerations. (Prereq 3000. Limited to 45 students)

Fall Qtr Sec 1 **M**—5:30-8, BlegH 330, Ross

★Mktg 3080 INDUSTRIAL AND GOVERNMENTAL PROCUREMENT. 4 degree credits, \$70.

Procurement of supplies, equipment and complete systems of industrial firms and governmental agencies. Study of quantity and quality decisions, forward buying,

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

pricing decisions, and vendor selection decisions common to both industrial and governmental purchases. Study of the unique problems of acquisition of technological systems by government agencies; national and regional impact of these procurements. (Prereq 3000. Limited to 50 students)

Spring Sem Sec 1 **M**—6:20-8, RarigC 616, Cowle

★**Mktg 3095 MARKETING RESEARCH.** 4 degree credits, \$70.

Survey, observational, and experimental techniques used in marketing research. Application of these techniques to selected marketing problems. Class project involves utilizing one or more of these techniques to study an actual marketing problem. (Prereq 3000, OAM 3055 or #. Limited to 50 students. **May not be taken S-N**)

Fall Qtr Sec 1 **Th**—6-8:30, BlegH 125, Russick

★**Mktg 3098 INTRODUCTION TO CONSUMER BEHAVIOR.** 4 degree credits, \$70. (IS)

Applications of the behavioral sciences to understanding human behavior in the marketplace. Topics include perception, learning, attitude theory and measurement, persuasion, motivation, personality, social and cultural influences, family decision-making, the social influence process, consumer decision-making strategies, managerial implications of consumer research and "consumerism." (Prereq 3000. Limited to 50 students)

Spring Qtr Sec 1 **W**—6-8:30, BlegH 135, Walton

mathematics (Math)

Your attention is called to the Mathematics and Science Certificate Program, page 395, and the Undergraduate Development Certificates in Engineering and Science—45 credits, page 407. (See also mathematics courses in General College; IC 0561, Metrically Speaking; and Math Anxiety Program, page 220)

Lawrence R. Harper, Assistant Professor of Mathematics

Walter James, Information Systems Manager, State of Minnesota, Lecturer in Mathematics

Howard Jenkins, Associate Professor of Mathematics

Harvey B. Keynes, Associate Professor of Mathematics

Chester L. Miracle, Associate Professor of Mathematics

Wayne W. Schmaedeke, Director of Operations Planning, Minnesota Gas Co., Lecturer in Mathematics

Gaylord P. Schwartz, Assistant Professor of Mathematics, St. Thomas College, Lecturer in Mathematics

George Sell, Professor of Mathematics

William Serbyn, Assistant Professor of Mathematics, St. Thomas College, Lecturer in Mathematics

James G. Swenson, Instructor, Anoka Senior High, Lecturer in Mathematics

James E. Thompson, Associate Professor of Mathematics

V. Varadachari, Assistant Professor of Mathematics, Lakewood Community College, Lecturer in Mathematics

John L. Vitelli, Manager, Field Operating Systems, Commercial Division, Honeywell, Lecturer in Mathematics

mathematics prerequisites

Any student who has completed four years of high school mathematics, including solid geometry and trigonometry within the last two years with above average grades may register in Math 1211. However, if it has been more than two years since last mathematics course in

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

high school was completed, the student should register in Math 1201, or possibly Math 0009 (intermediate algebra). The following rule usually applies: a student who has been out of high school five years or more, or who did not have higher algebra in high school, should register in Math 0009. A student who knows very little algebra should register for Math 0006 (introductory algebra).

The entrance requirement for the Institute of Technology is four years of high school mathematics, including solid geometry and trigonometry or Math 1201.

mathematics for nonmajors and prebusiness students

Math 1111, 1131, and Math 1142 are offered for the benefit of prebusiness students and are designed in cooperation with the College of Business Administration. The first course for business and accounting students is usually either 1111 or 1131. This is followed by Math 1142. These courses are also taken by non-mathematics majors who do not need a full four-quarter calculus course. Instead of starting with Math 1111 or 1131 some students should start with Math 0009. If it has been more than three years since students have completed their last mathematics course, then they should register for Math 0009.

calculus refresher course

Math 5090 provides students who have been out of school for several years with the necessary background to enter more advanced courses on an equal footing with students who have just finished calculus.

Math 0005 ARITHMETIC FOR ADULTS. No credit, \$49.50.

A practical course for anyone needing an elementary background in mathematics. It includes a study of the arithmetic of whole numbers, fractions, and decimal fractions with aids to quick and easy computation; measurement of length, area, and volume; introduction to elementary algebra. This course is intended for those who have a poor background in arithmetic and introductory algebra or those who dropped out of high school and now need to know arithmetic. It is a good refresher for those who have forgotten such things as arithmetic of fractions or how to work with decimals. Some exercises will be done in class. Students who do not wish to take any tests or have a grade should audit the course. Students may register S-N or A-N. (No prereq)

Fall Sem Sec 1 **Th**—6-8:30, Arch 35

Math 0006 ELEMENTARY ALGEBRA. Entrance credit, \$82.50.

This course begins at the absolute beginning of algebra and includes all the elements of algebra to quadratic equations. It is equivalent to one year of ninth grade algebra with plenty of time given to each idea. (Prereq arithmetic. Entrance requirement for most colleges including the College of Liberal Arts and the Institute of Technology)

Fall Sem Sec 1 **MW**—6:20-7:45, Arch 5

Sec 2 **TTh**—6-7:25, Arch 5

Spring Sem Sec 3 **MW**—6:20-7:45, VH 207

Math 0007 PLANE GEOMETRY. Entrance credit, \$99.

Elements of plane geometry, equivalent to 1 year of high school plane geometry with adequate time given to each idea. (Prereq arithmetic. Entrance requirement for College of Liberal Arts and Institute of Technology).

Fall Sem Sec 1 **MW**—6-7:40, Aero 215

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Math 0008 SOLID GEOMETRY. Entrance credit, \$49.50.

Lines, planes, dihedral and polyhedral angles, polyhedrons, surfaces, prisms, cylinders, cones, prisms, and spheres. Three-dimensional visualization and sketching. Numerical exercises in areas, volumes, weights. (Prereq plane geometry. Entrance requirement for Institute of Technology and College of Education. All calculus courses require solid geometry.)

Spring Sem Sec 1 **W**—6-7:40, Aero 215

Math 0009 INTERMEDIATE ALGEBRA. Entrance credit, \$82.50.

Fundamental operators, factoring, fractions, functions and graphs, linear equations, exponents and radicals, quadratic equations, ratio and variation, progressions, binomial theorem, logarithms. This course covers most of the material of the high school elementary and higher algebra courses, with emphasis on the latter. (Prereq 0006 or equivalent. Entrance requirement for Institute of Technology and is a prereq to all IT and Arts College Mathematics courses.)

Fall Qtr Sec 1 **MW**—5:15-7:20, Arch 55

Sec 2 **TTh**—6-8:05, Arch 55

★Sec 3 **TTh**—6:30-8:35, Sandburg JHS 214 (Limit 30 students)

Fall Sem Sec 4 **MW**—6:20-7:45, VH 1

Sec 5 **TTh**—6-7:25, VH 1

Winter Qtr Sec 6 **MW**—6-8:05, Arch 55

Sec 7 **TTh**—6-8:05, Arch 55

Spring Sem Sec 8 **MW**—6-7:25, VH 1

Sec 9 **TTh**—6:20-7:45, VH 1

Spring Qtr ★Sec 10 **MW**—6:30-8:35, Richfield HS 343 (Limit 30 students)

Math 1005 FOUNDATIONS OF ARITHMETIC. 3 degree credits, \$49.50.

Includes logical and axiomatic basis of rules for arithmetical operations with integers, rational numbers, and real irrational numbers; real number line and inequalities as necessary background for teaching arithmetic in elementary school, topics from geometry and congruences; with some attention to history of subject and its role in our culture and civilization. Not available for Arts College credit. (Prereq 1 year elementary algebra and 1 year high school geometry or #.)

Winter Qtr Sec 1 **W**—6:30-9, Arch 35

Math 1006 FOUNDATIONS OF ARITHMETIC. 3 degree credits, \$49.50.

Includes topics from the following: definitions of rational and irrational numbers, definitions of addition, subtraction, multiplication and division of fractions; methods of operations on rational and real numbers; the real number line and inequalities, topics from geometry and congruences. (Prereq 1005)

Spring Qtr Sec 1 **W**—6:30-9, Arch 35

Math 1008 TRIGONOMETRY. 3 degree credits, \$1201. \$49.50.

Analytic trigonometry emphasizing identities, equations, and properties of the functions; right and oblique triangles without logarithmic computation. (Prereq plane geometry; Math 0009 or high school higher algebra or #.)

Fall Sem Sec 1 **M**—5:30-7:10, VH 2

Sec 2 **T**—8:15-9:55, VH 20

Sec 3 **W**—6:20-8, VH 2

Spring Sem Sec 4 **T**—6:20-8, KoltH S133

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Math 1111 COLLEGE ALGEBRA AND ANALYTIC GEOMETRY. 5 degree credits, \$1201. \$82.50. (IS)

Functions and graphs, quadratic equations, progressions, inequalities, complex numbers, theory of equations, permutations and combinations, probability, systems of equations, determinants, graphing of linear and quadratic equations, conics in standard position, logarithms. (For students in social sciences, behavioral sciences, prebusiness administration, and others who require only some analytic geometry and college algebra without trigonometry. Students who plan to take several quarters of mathematics should not take this course. Prereq high school higher algebra in the last two years or 0009).

Fall Sem Sec 1 **MW**—6-7:25, VH 209
Sec 2 **TTh**—6:20-7:45, VH 209
Sec 3 **Sa**—9 a.m.-11:50, VH 16
Spring Sem Sec 4 **MW**—6:20-7:45, VH 209
Sec 5 **TTh**—6-7:25, VH 209

Math 1131 FINITE MATHEMATICS. 5 degree credits, \$82.50.

(For students in the social sciences, behavioral sciences, and prebusiness administration) Elementary computer programming, logical analysis, probability and stochastic models, Markov chains, linear systems and programming, matrix operations and applications. (Prereq high school higher algebra and mathematics placement score or Math 0009).

Fall Sem Sec 1 **TTh**—6-7:25, VH 16

Math 1142 INTRODUCTION TO CALCULUS OF ONE AND SEVERAL VARIABLES. 5 degree credits, \$1211. \$82.50. (IS)

(A second course of a 2-semester sequence for students in prebusiness administration curriculum and for other students requiring college algebra and a minimal amount of calculus. Students who plan to take several quarters of calculus should not register for this course.) Limits, derivatives, and integrals, some calculus of several variables and differential equations, rates of change, maxima and minima, several applications to a variety of disciplines. (Prereq 1111 or 1131).

Fall Sem Sec 1 **MW**—6:20-7:45, VH 16
Spring Sem Sec 2 **MW**—6-7:25, KoltH S134
Sec 3 **TTh**—6:20-7:45, VH 20
★Sec 4 **Sa**—9 a.m.-11:50, VH 211 (Limit 35 students)

Math 1201 PRE-CALCULUS. 5 degree credits, \$1111, 1141. \$82.50.

Inequalities, analytical geometry, complex numbers, binomial theorem, mathematical induction, functions and graphs, and trigonometric, exponential and logarithmic functions. (Prereq 0009 or high school higher algebra, 1008 or high school trigonometry. For students in both IT and CLA who intend to take a calculus sequence.)

Fall Qtr Sec 1 **MW**—6-8:05, Arch 50
Sec 2 **TTh**—6:30-8:35, Ramsey HS 252, Roseville
★Sec 3 **TTh**—6:30-8:35, Richfield HS 345 (Limit 30 students)
Winter Qtr ★Sec 4 **TTh**—7-9:05, Sandburg JHS 211, Golden Valley
(Limit 35 students)
Sec 5 **MW**—6-8:05, Arch 50
Spring Qtr Sec 6 **MW**—6-8:05, VH 16
Sec 7 **TTh**—6-8:05, VH 16

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Math 1211 ANALYSIS I. 5 degree credits, §1142, 1311. \$82.50. (IS)

Analytic geometry and calculus of functions of one variable, applications, infinite series and sequences. (Prereq 1201 with grade of C or better, or 0009 and 1008 with grade of B or better, or 4 years of high school mathematics including trigonometry within the last two years. See note page 243)

Fall Qtr ★Sec 1 **TTh**—6:30-8:35, Richfield HS 344 (Limit 30 students)

Fall Sem Sec 2 **MW**—6:20-7:45, VH 20

Sec 3 **TTh**—6-7:25, VH 20

Winter Qtr Sec 4 **MW**—6-8:05, ForH 55

Sec 5 **TTh**—6:30-8:35, Ramsey HS 252, Roseville

★Sec 6 **TTh**—6:30-8:35, Richfield HS 345 (Limit 30 students)

Spring Qtr ★Sec 7 **TTh**—7-9:05, Sandburg JHS 211, Golden Valley
(Limit 35 students)

Math 1221 ANALYSIS II. 5 degree credits, §1321, 1421. \$82.50. (IS)

A continuation of the course described under 1211. (Prereq grade of C or better in 1211 or equiv)

Fall Qtr Sec 1 **MW**—6-8:05, Arch 35

★Sec 2 **TTh**—6:30-8:35, Sandburg JHS 205, Golden Valley
(Limit 35 students)

Winter Qtr ★Sec 3 **TTh**—6:30-8:35, Richfield HS 344 (Limit 30 students)

Spring Sem Sec 4 **MW**—6:20-7:45, VH 20

Spring Qtr Sec 5 **MW**—6-8:05, Arch 50

Sec 6 **TTh**—6:30-8:35, VH 207

★Sec 7 **TTh**—6:30-8:35, Richfield HS 345 (Limit 30 students)

Math 1231 ANALYSIS III. 5 degree credits, §1331. \$82.50. (IS)

A continuation of the course described under 1211. (Prereq grade of C or better in 1221 or equiv)

Fall Qtr Sec 1 **MW**—6-8:05, VH 311

Sec 2 **TTh**—6-8:05, VH 311

Winter Qtr Sec 3 **MW**—6-8:05, VH 311

Spring Qtr ★Sec 4 **TTh**—6:30-8:35, Richfield HS 344 (Limit 30 students)

Math 3091 ELEMENTARY PROBABILITY AND STATISTICS WITH APPLICATIONS. 4 degree credits, \$70.

Elementary probability and probability distributions, sampling and elements of statistical inference. More mathematical treatment than Stat 1051. (Prereq differential and integral calculus).

Fall Sem Sec 1 **Th**—6-8:15, VH 207

Math 3211 ANALYSIS IV. 5 degree credits, §3411, 3521, 3611. \$87.50. (IS)

Partial differentiation, chain rule, implicit functions, applications. Multiple integrals in two and three dimensions. (Prereq grade of C or better in 1231 or equiv)

Winter Qtr Sec 1 **MW**—6-8:05, VH 314

Spring Qtr Sec 2 **TTh**—6-8:05, VH 211

Math 3221 INTRODUCTION TO LINEAR ALGEBRA AND LINEAR DIFFERENTIAL EQUATIONS. 5 degree credits, §3142, 3511. \$87.50. (IS)

Vectors, systems of linear equations, matrices, determinants, bases, eigenvalues, linear differential equations and systems with constant coefficients, initial value

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

problem and general solutions, variation of parameters for inhomogeneous equations. (Prereq grade of C or better in 1231 or equiv)

Fall Qtr Sec 1 **TTh**—6-8:05, VH 211

Winter Qtr Sec 2 **MW**—6-8:05, VH 211

Spring Qtr Sec 3 **MW**—6-8:05, VH 211

Math 3231 VECTOR ANALYSIS. 4 degree credits, \$1260, 5601/5602. \$70.

Scalar and vector products, derivatives, geometry of space curves, del operator, line and surface integrals, divergence and Stokes' theorem, transformation of coordinates, dyadics, applications. Mostly a technique course, intended mainly for students whose interests are not theoretical, but who wish to learn the relevant mathematical facts and methods. (Prereq grade of C or better in 3211 or equivalent).

Fall Sem Sec 1 **M**—6-8:15, VH 301

Math 5090 CALCULUS REFRESHER. 5 degree credits, \$92.50.

A one-semester course designed for students who have already had calculus, but who have been away from it for a while and need a review; especially for engineers wishing to take engineering refresher courses or engineering exams, for high school mathematics teachers, and anyone who wishes to take some advanced math courses. This course will cover the topics of a standard calculus course: differentiation of elementary functions, differentials, the definite integral, techniques of integrations, applications of integration, polar coordinates, infinite series, approximation, partial differentiation, and multiple integrals. (Prereq 1 year calculus. May be taken S-N. Qualified students may register for graduate credit at the University of Minnesota, except for mathematics majors.)

Fall Sem Sec 1 **MW**—6:20-7:45, Arch 40

Spring Sem Sec 2 **TTh**—6-7:25, Arch 5

mechanical engineering (ME)

Your attention is called to the Undergraduate Development Certificate in Mechanical Engineering—90 credits, see page 412 and Professional Development Recognition Program in Engineering and Science, page 130.

Students interested in a degree in Mechanical Engineering, see page 364.

Arthur G. Erdman, Associate Professor of Mechanical Engineering

Darrell A. Frohrib, Professor of Mechanical Engineering

William A. Kleinhenz, Associate Professor of Mechanical Engineering

Thomas E. Murphy, Professor of Mechanical Engineering

Katsuhiko Ogata, Professor of Mechanical Engineering

Charles J. Scott, Associate Professor of Mechanical Engineering

Ephraim M. Sparrow, Professor of Mechanical Engineering

Through registration in Extension Classes, students may earn all but approximately 12-16 credits towards a Bachelor's degree in mechanical engineering. The degree may then be completed after a limited amount of day school attendance or through University-Industry Television for Education (UNITE) (See chart on page 364).

ME 0024C-0025C MACHINE DESIGN I-II. 5 certificate credits each semester, \$82.50 each semester.

Fundamental principles of design of machine elements. Elementary stress-strain analysis along with size and material specification. Application of design concepts to standard engineering components and systems such as power drives, shafting,

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

brakes, screws, bolted connection, etc. Kinematic and design approach for cams, linkages and gears; friction, lubrication and bearing concepts. The course consists of lecture and problems to be solved in class. (Prereq Math 0009 or # for 0024C; 0024C for 0025C)

Fall Sem 0024 C Sec 1 T—6-9, MechE 302

Spring Sem 0025 C Sec 2 T—6-9, MechE 302

ME 3201 MECHANICAL ENGINEERING SYSTEMS ANALYSIS. 4 degree credits, SAEM 3401. \$70.

Determination of response of engineering systems utilizing transfer function representation. Analogies between engineering systems based upon transfer function equivalence. (Prereq Math 3221 or #)

Fall Qtr Sec 1 Th—6-9:20, MechE 321

ME 3203 ANALYSIS OF MECHANISM SYSTEMS. 4 degree credits, \$70.

Diagnostics of the performance of mechanism systems involving linkage, hydraulic, pneumatic, and electro-mechanical components. Energy balance techniques used to describe energy flow through machine systems. Preparation should include basic dynamics. (Prereq AEM 3036 or #)

Winter Qtr Sec 1 Th—6-9:20, LindH 229

ME 3205 ENGINEERING SYSTEMS DESIGN. 4 degree credits, \$70. **Offered this year and alternate years thereafter.**

Application of fundamental concepts to the design of typical mechanical components. Engineering approach to the analysis and synthesis of machines and systems. Specification of materials in engineering design. Optimum design criteria. (Prereq 3201, 3203 and AEM 3016)

Spring Qtr Sec 1 Th—6-9:20, MechE 321

ME 3301 THERMODYNAMICS. 4 degree credits, \$70.

Properties, equations of state, processes and cycles for various thermodynamic systems. Development of first and second laws of thermodynamics, correlating heat, work and mass transfer. Equilibrium, irreversibility and mixtures. Necessary preparation, introductory thermodynamics and basic calculus. (Prereq Chem 1014 or equiv or Phys 1281 and Math 3221 or #)

Fall Sem Sec 1 T—6-8:30, MechE 221

ME 3303 APPLIED THERMODYNAMICS. 4 degree credits, \$70. **Offered this year and alternate years thereafter.**

Application of laws of thermodynamics to chemically reacting systems and engineering systems. Analysis of vapor cycles, gas engine cycles, propulsion systems, refrigeration and air-water vapor mixtures. Basic thermodynamics background necessary. (Prereq 3301 or #)

Spring Sem Sec 1 T—6-8:30, MechE 102 (2 additional sessions arr.)

ME 3701-3702 BASIC MEASUREMENTS LABORATORY I AND II. 2 degree credits each quarter, \$35 each quarter.

Treatment of experimental data, analysis and study of experimental systems via the computer. Static and dynamic characteristics of measurement systems. Fundamental principles of measurement and calibration. Measurement of temperature, pressure, vacuum, humidity, density, viscosity, heating values, speed, power, force, stress-

strain, and radioactivity. Courses meet concurrently. (Prereq 3301, or 3301 for 3701; 3701 for 3702. 1 lect and 3 lab hrs per wk)

Fall Qtr 3701 Sec 1 W—6-9, MechE 370
3702 Sec 2 W—6-9, MechE 370

ME 3900 INTRODUCTION TO ENGINEERING STATISTICS. 4 degree credits, \$70.

Elements of probability, descriptive statistics, binomial and Poisson distributions; normal distribution, estimation, hypothesis testing, regression analysis and analysis of variance. (Prereq Math 1231 or equiv)

Fall Sem Sec 1 T—6-8:30, VH 2

ME 5342 HEAT TRANSFER. 4 degree credits, \$74.

Steady and unsteady conduction of heat. Convection heat transfer in boundary layer and duct flows; forced and free convection; condensation and boiling; heat exchangers. Heat transfer by thermal radiation; radiative properties of black bodies and real surfaces. (Prereq 3301 or #. Qualified students interested in graduate credit should inquire at time of registration)

Winter Qtr Sec 1 M—6-9:20, MechE 321

ME 5344 THERMODYNAMICS OF FLUID FLOW. 4 degree credits. **To be offered 1978-79.**

medicine

For information on noncredit conferences or workshops in medicine, please contact Office of Continuing Medical Education, 143 Owre Hall (Box 293 Mayo); telephone 373-8012.

(See also History of Medicine)

metallurgy and materials science (MatS)

Your attention is called to the Professional Development Recognition Program in Engineering and Science, page 130; Fundamentals of Engineering Review, I of T 0001, page 223.

Louis E. Toth, Professor of Materials Science and Chemical Engineering

MatS 0001C PHYSICAL METALLURGY. 3 certificate credits, \$49.50.

The structure and properties of metals and alloys. Heat treatment of steels. Important non-ferrous alloys. Corrosion resistance; failures at low temperatures and under repeated stresses. (No prereq but high school chemistry and high school physics are strongly desirable)

Fall Qtr Sec 1 W—6:20-8:50, MinMet 124, Toth

MatS 0002C PHYSICAL METALLURGY. 3 certificate credits. **To be offered 1978-79 and alternate years thereafter.**

microbiology (MicB)

Russell Bey, Instructor of Microbiology

MicB 3103 GENERAL MICROBIOLOGY. 5 degree credits, \$87.50 plus \$14 course fee. Total \$101.50.

Morphology, physiology, taxonomy, and ecology of bacteria and other microorganisms. General biology of microorganisms and practical applications of fundamental

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

principles to industry, agriculture and health. (Prereq sophomore with C avg in prereq courses to major sequence or junior with 10 cr in chemistry and 5 cr in biological sciences or #. Microscope required. [Inquire at first class meeting about rental.]

Winter Qtr Sec 1 Lect MW—6:15-7:45, HSUnitA 2-690

Lab MW—7:45-10, HSUnitA 2-522, Bey

near and middle eastern studies

(See also History; and Religious Studies)

Cassette tapes are available to extension classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

middle eastern and islamic studies (MidE) arabic (Arab)

Anwar Chejne, Professor of Arabic Studies

George Koury, Associate Professor of Arabic Studies

The following non-language courses may be applied toward the CLA foreign language requirement, Route II for Arabic [see page 354]: MidE 1036

Arab 1101-1102 BEGINNING ARABIC. 5 degree credits each semester. **Tentatively scheduled for 1978-79.**

MidE 1036 THE RELIGION OF ISLAM. 4 degree credits, \$RelS 1036. \$66. (◆\$33)

The rise of Islam in historical context; the role of Muhammad, Koran, traditions; fundamentals and observances of the faith; sectarian movements; the spread of Islam into Asia and Africa; Baha'i and Black Muslim components; reformist movements and change. (No prereq. Meets concurrently with RelS 1036)

Fall Qtr Sec 1 M—6:20-8:50, FolH 201, Chejne

MidE 3005 ISLAM AND THE WEST. 4 degree credits, \$70 (◆\$35)

Sources of Islamic civilization; the spread of Islam and its encounter and interaction with medieval Europe; the Islamic legacy; development and transmission of classical thought. (No prereq)

Spring Qtr Sec 1 T—6:20-8:50, FolH 201, Koury

ancient near eastern and jewish studies (ANEJ) jewish studies (JwSt)

(See also Hist 3611, 3612, Jewish-Christian Relations in Medieval Europe)

Jonathan Paradise, Associate Professor

Daniel Reisman, Associate Professor

Tzvee Zahavy, Assistant Professor

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 354): ANEJ 1502, 1503, 1504, 3502, 3503, 3504.

IC 0141 ART AND ARCHITECTURE OF THE JEWISH PEOPLE. No credit. Chiat.

(See Informal Courses, page 212).

JwSt 1034 INTRODUCTION TO JUDAISM. 4 degree credits, \$3034, \$ReIS 1034. \$66. (◆\$33)

◆ Concepts, movements, and institutions in the evolution of classical Judaism, as manifested in the literature and festivals of the Jewish people from Second Commonwealth times to the present. (No prereq. Meets concurrently with 3034 and ReIS 1034)

Fall Qtr Sec 1 **W**—6:20-8:50, FolH 202, Zahavy

ANEJ 1502, 1503 ANCIENT ISRAEL: BACKGROUND OF THE BIBLE. 4 degree credits each quarter, \$3502, 3503. \$66 each quarter. (◆\$33)

◆ The study of Biblical civilization places it in the cultural, historical, and religious milieu of its origin and life. The impact of other ancient civilizations on Israel, as well as the unique aspects of Israelite civilization—from earliest times through the inter-testamental period—will be traced through lecture and classroom discussion. Colored slides will be used to help illustrate the contribution of archaeology to Biblical studies. 1502: The divided kingdom. Classical prophecy. Destruction, exile. 1503: The period of Ezra and Nehemiah; the Samaritans; apocalyptic and other eschatological types; the Maccabean period; Sadducees, Pharisees, Zealots, Christians, the Dead Sea Sect; Philo; Josephus; Jewish rights in the Roman Empire. Emphasis will be placed on techniques of evaluating sources for their historical reliability. (No prereq. Meet concurrently with 3502, 3503)

Winter Qtr 1502 Sec 1 **W**—6:20-8:50, FolH 204, Reisman

Spring Qtr 1503 Sec 2 **W**—6:20-8:50, FolH 204, Zahavy

ANEJ 1504 PAGAN MYTHS AND THE BIBLE. 4 degree credits, \$66. (◆\$33)

◆ Examines the Bible in its Ancient Near Eastern historical context. Through lectures and discussions, attention will be focused on the early chapters of Genesis dealing with pre-Israelite history, and on Mesopotamian mythologies offering parallels. Among the subjects are: the Creation, the Garden of Eden, Cain and Abel, the Flood and the Tower of Babel. Readings will consist primarily of relevant portions of Genesis in translation, and parallel pagan myths. Meets concurrently with 3504. (No prereq. May be applied toward the CLA foreign language requirement, Route II, for Hebrew [see page 354])

Spring Qtr Sec 1 **T**—6:20-8:50, FolH 204, Reisman

JwSt 3034 INTRODUCTION TO JUDAISM. 4 degree credits, \$1034. \$70.

See description for 1034. Meets concurrently with 1034. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, FolH 202, Zahavy

ANEJ 3502, 3503 ANCIENT ISRAEL: BACKGROUND OF THE BIBLE. 4 degree credits each quarter, \$1502, 1503. \$70 each quarter.

See descriptions for 1502, 1503. Meet concurrently with 1502, 1503. (No prereq)

Winter Qtr 3502 Sec 1 **W**—6:20-8:50, FolH 204, Reisman

Spring Qtr 3503 Sec 2 **W**—6:20-8:50, FolH 204, Zahavy

ANEJ 3504 PAGAN MYTHS AND THE BIBLE. 4 degree credits, \$70.

See description for 1504. Meets concurrently with 1504. (No prereq. May be applied toward the CLA foreign language requirement, Route II, for Hebrew [see page 354])

Spring Qtr Sec 1 **T**—6:20-8:50, FolH 204, Reisman

music (Mus)

(See also music courses in General College)

Maury Bernstein, Lecturer in Music
 Paul Fetler, Professor of Music
 Dorothy Gross, Assistant Professor of Music
 Dwayne Jorgenson, Assistant Professor of Music
 Thomas Lancaster, Associate Professor of Music
 Adrian Lauritzen, Associate Professor of Music
 Richard Massmann, Professor of Music
 Gwen Perun, Assistant Professor of Music
 Johannes Riedel, Professor of Music
 Everett Sutton, Associate Professor of Music
 John Tartaglia, Assistant Professor of Music
 Edgar Turrentine, Professor of Music Education

Noncredit Courses

Applicants who wish to enroll for non-credit instruction in applied music should contact the MacPhail Center—telephone 373-1925—for information about availability of instruction, and tuition and fee costs.

★**Mus 0051C-0052C PIANO PLAYING FOR PLEASURE.** 2 certificate credits each semester, \$33 each semester.

Designed primarily for the person with no piano background. Keyboard fundamentals such as sight-reading, transposition, harmonization, improvisation, repertory building. Individual practice outside the class period necessary for successful completion of the course. (No prereq for 0051C; 0051C or # for 0052C. Each section limited to 12 students)

Fall Sem 0051C Sec 1 T—6:15-7:30, MusEd 200, Lauritzen
 0052C Sec 2 T—7:30-8:45, MusEd 200, Lauritzen
Spring Sem 0051C Sec 3 T—6:15-7:30, MusEd 200, Lauritzen
 0052C Sec 4 T—7:30-8:45, MusEd 200, Lauritzen

★**Mus 1171-1172-1173 GUITAR: CLASS LESSONS.** 2 degree credits each quarter, \$33 each quarter.

Fundamentals for the beginning folk-guitarist. Progressive development of skills; **1171:** basic strumming techniques, harmonizations in basic keys; **1172:** advanced strumming techniques, bass runs, finger-picking strums; **1173:** melodic techniques, advanced harmonizations. (Student must furnish own guitar.) (No prereq for 1171; 1171 for 1172; 1172 for 1173. Limited to 20 students)

Fall Qtr 1171 Sec 1 M—6:20-8:20, ScH 103
 Sec 2 T—6:20-8:20, ScH 103
Winter Qtr 1171 Sec 3 T—6:20-8:20, ScH 103
 Sec 4 W—6:20-8:20, ScH 103
 1172 Sec 5 M—6:20-8:20, ScH 103
Spring Qtr 1171 Sec 6 W—6:20-8:20, ScH 103
 1172 Sec 7 T—6:20-8:20, ScH 103
 1173 Sec 8 M—6:20-8:20, ScH 103

group performance

Students must audition for all of the group performance music classes. Auditioning should be arranged with the instructor in advance of the class opening.

Mus 1410 BAND. 1 degree credit, \$16.50.

Rehearsals and appearances cover standard band literature; several appearances each quarter. (Prereq #. Class meets 2, 3 or 4 days a week by arrangement. Students are advised to arrange auditions and class meeting days with Professor Bencriscutto, telephone 373-3431, prior to registration)

Fall Qtr Sec 1 **Days arr.** 3:15-5:05, NMA 4

Winter Qtr Sec 2 **Days arr.** 3:15-5:05, NMA 4

Spring Qtr Sec 3 **Days arr.** 3:15-5:05, NMA 4

Mus 1420 ORCHESTRA. 1 degree credit, \$16.50.

Standard orchestral literature performed. Open to players of orchestral instruments from Twin Cities. Those enrolled with consent of chairman of Music Department are given the opportunity of rehearsing with the University Symphony and participating in a concert given in Northrop Auditorium. (Prereq #)

Fall Qtr Sec 1 **MTTh**—3:15-5:00, WuH 320, Massmann

Winter Qtr Sec 2 **MTTh**—3:15-5:00, WuH 320, Massmann

Spring Qtr Sec 3 **MTTh**—3:15-5:00, WuH 320, Massmann

Mus 1430 UNIVERSITY CHORUS. 1 degree credit, \$16.50.

Performances of major symphonic-choral works with the Minnesota Orchestra, University Symphony Orchestra, and University Concert Band. (Prereq #. Extension students may choose whether or not to attend one of the MWF daytime sections, but must attend the evening section)

Fall Qtr Sec 1 **MWF**—11:15-12:05, NMA 4, Jorgenson

Sec 2 **MWF**—1:15-2:05, NMA 4, Jorgenson

Sec 3 **T**—7-9:30, SciCB 325, Jorgenson

Winter Qtr Sec 4 **MWF**—11:15-12:05, NMA 4, Jorgenson

Sec 5 **MWF**—1:15-2:05, NMA 4, Jorgenson

Sec 6 **T**—7-9:30, SciCB 325, Jorgenson

Spring Qtr Sec 7 **MWF**—11:15-12:05, NMA 4, Jorgenson

Sec 8 **MWF**—1:15-2:05, NMA 4, Jorgenson

Sec 9 **T**—7-9:30, SciCB 325, Jorgenson

Mus 1430 MEN'S CHORUS. 1 degree credit, \$16.50.

Rehearsals and performances cover standard men's glee club material as well as special arrangements. Group appears for on- and off-campus functions. (Prereq #)

Fall Qtr Sec 10 **MWF**—12:15-1:05, NMA 4, Jorgenson

Winter Qtr Sec 11 **MWF**—12:15-1:05, NMA 4, Jorgenson

Spring Qtr Sec 12 **MWF**—12:15-1:05, NMA 4, Jorgenson

Mus 1430 ST. PAUL CAMPUS CHORUS. 1 degree credit, \$16.50.

Prepares for at least one public appearance each quarter as well as for special events connected with the St. Paul Campus. (Prereq #)

Fall Qtr Sec 13 **TTh**—4:30-6:00, AlderH 310

Winter Qtr Sec 14 **TTh**—4:30-6:00, AlderH 310

Spring Qtr Sec 15 **TTh**—4:30-6:00, AlderH 310

Mus 5490 CHAMBER SINGERS. 2 degree credits, \$37.

A small mixed vocal ensemble of select voices. Sacred and secular music from 16th century to contemporary composers prepared for concert presentation. (Prereq #.

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **MWF**—4:15-5:30, WuH 7A, Lancaster

Winter Qtr Sec 2 **MWF**—4:15-5:30, WuH 7A, Lancaster

music theory, history, literature, pedagogy

Mus 1001 FUNDAMENTALS OF MUSIC. 4 degree credits, \$66.

Study of basic musical symbols, vocabulary, rhythm, design, scale structures, intervals, chords. The development of basic piano skills; the playing of simple accompaniments. Required of students in elementary, primary, kindergarten, and nursery school education; also recommended for the layman interested in a basic introduction to music; not for music majors. (No prereq)

Fall Qtr Sec 1 **M**—6-9:20, WuH 320, Lauritzen

Winter Qtr Sec 2 **M**—6-9:20, WuH 320, Lauritzen

Spring Qtr Sec 3 **M**—6-9:20, WuH 320, Lauritzen

Mus 1014 INTRODUCTION TO MUSIC. 4 degree credits, \$66. (◆\$33)

Basic elements of music, such as notation and characteristics of musical tone, fundamental musical concepts of rhythm, melody, harmony, polyphony, form; demonstrated by recordings and performance of music of all types in Western civilization. Outside music listening required. (No prereq)

Winter Qtr Sec 1 **T**—6:10-9:30, ScH 3, Turrentine

Mus 1501-1502-1503 MATERIALS AND STRUCTURE OF MUSIC I. 2 degree credits each quarter, \$33 each quarter. (◆\$16.50) (IS 1501)

1501: Clefs, transposition, modes, meter and rhythm, triads, part writing, cadences, dominant seventh chord. **1502:** Nonchord tones, modulation, secondary dominants, design and elaboration of harmonic progressions. **1503:** Diatonic seventh, secondary diminished seventh, augmented sixth and Neapolitan chords, variation and ternary forms. (No prereq for 1501; 1501 for 1502; 1502 for 1503. Students with very limited musical experience may be interested in Mus 1001, a more elementary course in music)

Fall Qtr **1501** Sec 1 **T**—6:20-8:30, ScH 4, Gross

Winter Qtr **1502** Sec 2 **T**—6:20-8:30, ScH 4, Gross

Spring Qtr **1503** Sec 3 **T**—6:20-8:30, ScH 4, Gross

Mus 1511-1512-1513 EAR TRAINING AND SIGHT-SINGING I. 2 degree credits each quarter, \$33 each quarter. (IS 1511)

Melodic, harmonic, and rhythmic dictation; sight-singing; clef-reading; musicianship drills. (No prereq for 1511; 1511 for 1512; 1512 for 1513. Concurrent registration with Mus 1501-1502-1503 recommended)

Fall Qtr **1511** Sec 1 **Th**—6:20-8:30, ScH 4, Gross

Winter Qtr **1512** Sec 2 **Th**—6:20-8:30, ScH 4, Gross

Spring Qtr **1513** Sec 3 **Th**—6:20-8:30, ScH 4, Gross

Mus 3021 INTRODUCTION TO MUSIC. 5 degree credits, \$87.50. (◆\$43.75)

Introduction to music in the repertory of our culture, exploring selected forms and styles from the 17th through 20th centuries. Aural analyses, relationships of large units of musical form. (No prereq)

Fall Qtr Sec 1 **W**—6:10-9:30, ScH 4, Sutton

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Mus 3584 MUSIC: ITS MEANING AND STRUCTURE. 4 degree credits, \$70. (◆\$35)

A study of musical creativity. Discussion and examination of a selected number of works from various periods including most recent developments. The student will be asked to look for purpose, meaning, continuity, and direction in the works analyzed. The instructor will demonstrate how composers manipulate and develop materials to achieve certain desired aesthetic results; how they work on the one hand with spontaneous musical ideas, and on the other hand with all kinds of structures and theories. (No prereq)

Fall Qtr Sec 1 **W**—6:10-9:30, ScH 103, Fetler

Mus 3801, 3802 FOLK MUSIC OF ENGLAND, IRELAND, AND SCOTLAND. 3 degree credits each quarter, \$52.50 each quarter. (◆\$26.25)

Folk music traditions of the British Isles; influence on American folk music; vocal and instrumental traditions, including balladry, lyric songs, dance tunes, rebel songs, British gypsy music. (No prereq)

Fall Qtr 3801 Sec 1 **W**—6:20-8:50, WuH 7A, Bernstein

Winter Qtr 3802 Sec 2 **W**—6:20-8:50, WuH 7A, Bernstein

★Mus 5051-5052-5053 PIANO PEDAGOGY. 3 degree credits each quarter, \$55.50 plus \$12.80 special fee. Total \$68.30 each quarter.

Observation, discussion, research and supervised teaching in piano. Emphasis on conceptual learning through discovery. Focus on early and intermediate levels of instruction. (Prereq 12 credits in applied piano or equiv for 5051; 5051 for 5052; 5052 for 5053. Limited to 20 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5051 Sec 1 **F**—10 a.m.-12, MacP 221, Perun

Winter Qtr 5052 Sec 2 **F**—10 a.m.-12, MacP 221, Perun

Spring Qtr 5053 Sec 3 **F**—10 a.m.-12, MacP 221, Perun

Mus 5361-5362-5363 VIOLIN PEDAGOGY I. 2 degree credits each quarter, \$37 each quarter.

Teaching private violin students at beginning, intermediate, and advanced levels. Discussion and demonstration of pedagogical techniques. (Prereq 12 cr in violin or viola or # for 5361; 5361 for 5362; 5362 for 5363. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5361 Sec 1 **W**—4:15-6, 321½ SE 14 Ave; West, Tartaglia

Winter Qtr 5362 Sec 2 **W**—4:15-6, 321½ SE 14 Ave; West, Tartaglia

Spring Qtr 5363 Sec 3 **W**—4:15-6, 321½ SE 14 Ave; West, Tartaglia

Mus 5950 TOPICS IN MUSIC: MUSIC IN MINNESOTA I. 4 degree credits, \$74. (◆\$37)

History of early music in Minnesota. Music of the Black, Chicano and Native Americans in the Twin Cities area and in the state, through folk, popular and classical music. Scandinavian music and music of other ethnic groups. Music in small town communities. Old time music. Music of various church denominations. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—6:20-8:50, WuH 320, Reidel

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Piano Technician

A special course in piano tuning and repairing will be offered at MacPhail Center, the Fall Session beginning in September, the Winter Session beginning in January and the Spring Session beginning in May. (Call MacPhail Center for exact starting dates.) No credit will be given for the course. The fee of \$325 for each 12-week session includes professional equipment and text. Prerequisites for the course are a secure musical background, although piano playing itself is not necessary. A minimum of 6 hours tuning practice outside the class is required each week, with pianos available at MacPhail Center for these purposes. A certificate is awarded after the completion of the course and one season of experience. The student is required to tune a piano for testing by panel of judges before the certificate is awarded. All inquiries regarding this course should be directed to the MacPhail Center, telephone 373-1925.

music education (MuEd)

(Department of Curriculum and Instruction)

Joanna Cortright, Instructor in Music Education

★**MuEd 5750 WORKSHOP: MUSIC EDUCATION**, 2 degree credits (maximum 12 cr) \$37.

Selected topics in music education. **Emphasis this offering: Music for early childhood.** Designed to meet the needs of nursery school teachers and others working in the area of early childhood education. A class with participants experiencing the activities and using the techniques of music—learning to take back to their classrooms. The course will be concerned with how to help children develop lasting musical concepts, methods and materials to use in the pre-school music lesson, and how other arts relate to music in a pre-school music lesson. **May not be taken S-N.** (No prereq. Spring quarter is repetition of fall quarter offering. Qualified students may register for graduate credit at the University of Minnesota) Limited to 25 students.

Fall Qtr Sec 1 T—7-9, Anoka-Ramsey Community College,
11200 Mississippi Blvd., Coon Rapids, Cortright

Spring Qtr Sec 2 T—7-9, MacP, Cortright

A wide variety of workshops in music education is available to local school districts who wish to jointly design a continuing education experience to meet unique local needs.

For further information in regard to planning an individually designed workshop for a particular district or building staff contact: Chairman, Department of Music Education, 104 Scott Hall, University of Minnesota, Minneapolis, Minnesota 55455; or telephone 373-3452.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.



natural science and technology (NSci)

(See also General College natural science courses)

Lawrence E. Conroy, Associate Professor of Chemistry

William Franta, Assistant Professor of Computer, Information, and Control Sciences

Richard J. Goldstein, Professor of Mechanical Engineering

Robert F. Lambert, Professor of Electrical Engineering

Gary M. Schneider, Assistant Professor of Computer, Information, and Control Sciences

Kenneth T. Whitby, Professor of Mechanical Engineering

NSci 3201 PERSPECTIVES ON COMPUTERS AND SOCIETY. 4 degree credits, §CSci 3001, \$70 plus \$4 special fee. Total \$74. (◆\$35 plus \$4 special fee. Total \$39)

The impact of computers on society. Partnership or confrontation. History of development. Potential for use. Computer utility. Privacy in a computer society. The future of computers. The ultimate machine. Computers in business, industry, art, music, the home. Meets concurrently with CSci 3001. (Prereq sophomore or #)

Spring Qtr Sec 1 **W**—6-8:30, Arch 55

near and middle eastern studies

(See page 251)

noncredit classes

(See Informal Courses, page 210)

norwegian

(See Scandinavian Languages)

nursing (Nurs)

(See also Phsl 5094-5095, Human Physiology)

Helen Hansen, Assistant Professor of Nursing

Mary Jackle, Director, Critical Care Education Project

Dorothy Moe, Assistant Professor of Nursing

Elizabeth Mullin, Instructor of Nursing

Mariat Snyder, Instructor of Nursing

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Evening courses offered by the School of Nursing provide opportunities for registered nurses who are interested in continuing their education. The course numbers ending in "C" indicate certificate credit and are job related courses. They help the nurse to maintain a high level of nursing competence and, where necessary, provide evidence of continuing education for license renewal and/or promotion opportunities.

The course numbers prefaced by a "3" or "5" indicate credits which may be applied toward the requirements of a bachelor of science in nursing. These credits are applicable toward the nursing degree only if the student enrolls in the School of Nursing within 3 years of the date of course completion.

Course numbers prefaced by an "8" indicate graduate credit and may be applied toward a master's degree in nursing.

There are also many general education courses offered in extension classes which may be taken for degree credit. Final decision as to the applicability of these credits toward a degree offered by the School of Nursing is the responsibility of the School's Admission Committee.

Registered nurses who wish to continue their studies toward a degree program in nursing are urged to contact the School of Nursing, 3313 Powell Hall (telephone 373-3462) and ask for an appointment.

Nurs 5201 ROLE OF NURSING WITHIN HEALTH CARE. 2 degree credits, \$37.

Introduction to nursing within content of health and health care delivery systems. Exploration of philosophies of nursing with implications for nursing practice and nursing education. (No prereq. May not be taken for graduate credit)

Spec Term Sec 1 M—6-8:30, Sept. 26-Oct. 24 (five weeks), PoH 2309

Nurs 5202 SYSTEMATIC PROCESS I. 2 degree credits, \$37.

Rationale for systematic approach to goal achievement. Development of steps to systematic achievement of identified goals. (Prereq 5201. May not be taken for graduate credit)

Spec Term Sec 1 M—6-8:30, Oct. 31-Nov. 28 (five weeks), PoH 1326

Nurs 5203 ADAPTATION I. 2 degree credits, \$37.

Adaptation as a fundamental context of health. Examination of: factors influencing adaptation, adaptive responses, levels of adaptation, components of adaptation and their relationship to concepts of holism and health. (Prereq 5201. May not be taken for graduate credit)

Winter Qtr Sec 1 M—6-8:30, PoH 1326

★Nurs 5204 HELPING RELATIONSHIPS I. 2 degree credits, \$37.

Helping relationships as a fundamental context of nursing. Basic concepts, related to establishing goal-directed contractual relationships. Designed to increase competence in utilizing interpersonal skills in helping individuals. (Prereq 5201, Psy 1001 or *Psy 1001. Limited to 14 students. May not be taken for graduate credit)

Spring Qtr Sec 1 Th—6-8:30, PoH 2309

★Nurs 5700 CRITICAL CARE NURSING. 5 degree credits, see registration and tuition information below.

A Metropolitan Medical Center and University of Minnesota School of Nursing course offered through Extension Classes. Intended for the registered nurse, this course covers biophysical and psychological crises. Topics include circulation, respiration, metabolism, integration and control, stress, and threat appraisal. Methods of instruction will include group meetings, supervised clinical experiences, and individualized instruction. (Prereq RN and employment in hospital for past 6 months.

Must be taken S-N. Each section limited to 20 students. May not be taken for graduate credit.)

(continued next page)

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| Spec Term | <p>Sec 1 Sept. 12-Oct. 14, 1977 MTh—8:30 a.m.-2:30 group meetings;
TWF—open schedule to accommodate clinical experience, individualized instruction, work and family obligations
(Registration and late-fee information follows.)</p> <p>Sec 2 Jan. 16-Feb. 17, 1978 same time schedule as above
(Registration and late-fee information follows.)</p> <p>Sec 3 Apr. 10-May 12, 1978 same time schedule as above
(Registration and late-fee information follows.)</p> <p>Sec 4 July 24-August 25, 1978
same time schedule as above
(Registration late-fee information follows.)</p> <p>Sec 5 Sept. 18-Oct. 20, 1978 same time schedule as above
(Registration late-fee information follows.)</p> |
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All sections held at Metropolitan Medical Center, Minneapolis

Tuition:

\$92.50 plus \$180 special fee, total \$272.50. Tuition may be reduced if an application for support is approved. Information regarding arrangements for payment of tuition will be sent with registration materials.

Registration:

By mail, write to CRITICAL CARE EXTENSION CLASSES, 202 WESBROOK HALL, UNIVERSITY OF MINNESOTA, 77 Pleasant Street S.E., Minneapolis MN 55455.

In person at the above address.

Late registrations received later than two weeks prior to the first day of the class will be charged \$10 late fee.



obstetrics

(See Family Planning Administration)

ojibwe and dakota

(See American Indian Studies)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

operations analysis and management (OAM)

John C. Anderson, Assistant Professor of Operations Analysis and Management
Thomas R. Hoffmann, Professor of Operations Analysis and Management
Roger G. Schroeder, Associate Professor of Operations Analysis and Management

★**OAM 3000 INTRODUCTION TO OPERATIONS MANAGEMENT.** 4 degree credits, \$70.

Concepts and principles related to the management of operating functions. Examples from service industries, nonprofit organizations, and manufacturing are utilized. Relationships to other business functions and the environment are stressed. The subject is taught from a managerial point of view. Topics include: an overview of operations, planning operating processes, productivity measurement, standards, allocation of resources, forecasting, concepts of quality, inventory management, principles of scheduling, and operational control information systems. (No prereq. Limited to 50 students.)

Fall Qtr Sec 1 W—5:30-8:50, BlegH 425, Schroeder

OAM 3055 Introduction to Management Sciences replaced by QA 3055.

★**OAM 5056 APPLICATIONS OF ANALYTICAL METHODS AND COMPUTERS IN OPERATIONS MANAGEMENT AND ANALYSIS.** 4 degree credits, \$74 plus \$4 special fee. Total \$78.

The application of forecasting methods, optimization techniques; simulation, product and project management methods; inventory models, quality control techniques and computer technology problems encountered in operations management. Specific laboratory sessions will include problem solving and case analysis. (Prereq 3000, OAM 3055 or QA 3055 or #. Limited to 40 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—5:30-8:50, BlegH 230, Schroeder

ophthalmology

(See page 397)



personal orientation

(See Study Skills)

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

pharmacognosy (Phcg)

(See also IC 0231, Current Issues in Nutrition: Fallacies and Facts)

John Staba, Professor of Pharmacognosy

★Phcg 1800 NATURE'S REMEDIES. 3 degree credits, \$49.50.

Evaluation of those substances obtained from nature that are medicinally used. Chemical and physiological terms defined. History and literature; vitamins and enzymes; drugs from animals (hormones); drugs from the sea and microorganisms (antibiotics and vaccines); spices and herbs; tranquilizing plants; stimulating and hallucinogenic plants; poisonous plants and mushrooms. (No prereq. Limited to 50 students)

Spring Qtr Sec 1 T—6:20-8:50, AH 150, Staba

pharmacy

For information on noncredit conferences or workshops in pharmacy, please contact Thomas M. McKennel, Continuing Education in Pharmacy, 318 Harvard St. S.E., Minneapolis, Minnesota 55455 (376-5313).

philosophy (Phil)

Norman O. Dahl, Associate Professor of Philosophy

John Dolan, Associate Professor of Philosophy

Keith Gunderson, Professor of Philosophy

William H. Hanson, Associate Professor of Philosophy

Herbert Hochberg, Professor of Philosophy

Jasper Hopkins, Professor of Philosophy

Douglas Lewis, Associate Professor of Philosophy

H.E. Mason, Professor of Philosophy

Grover Maxwell, Professor of Philosophy

Mischa Penn, Assistant Professor in University College

Michael D. Root, Associate Professor of Philosophy

C. Wade-Savage, Associate Professor of Philosophy

John Wallace, Professor of Philosophy

A MAJOR IN PHILOSOPHY CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered yearly. Interested students should discuss their plans with an Extension counselor (373-3905).

B.A. Major Sequence

Required Preparatory Courses

1001 or 3201; 1002

Major Requirements

Minimum of 35 3xxx-5xxx-level cr, including: 3003 or 3003H and at least 5 additional cr in history of philosophy.

At least 15 cr at the 5xxx level

You need not be majoring in Philosophy to register for these classes.

Phil 1001 LOGIC. 5 degree credits, \$82.50. (◆\$41.25) (IS)

Application of formal techniques for evaluating arguments. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, ForH 120, Lewis

Sec 2 W—6:20-8:50, ForH 120

Winter Qtr Sec 3 W—6:20-8:50, ForH 120

Spring Qtr Sec 4 Th—6:20-8:50, ForH 115

Phil 1002 INTRODUCTION TO PHILOSOPHY. 5 degree credits, \$82.50. (◆\$41.25) (IS)

Introduction to permanent problems; principal methods and schools of philosophy; historical and contemporary views. (No prereq)

◆ **Fall Qtr** Sec 1 **W**—6:20-8:50, ForH 349

Winter Qtr Sec 2 **Th**—6:20-8:50, ForH 285

Spring Qtr Sec 3 **T**—6:20-8:50, ForH 349

Phil 1003 ETHICS. 5 degree credits, \$82.50. (◆\$41.25)

Examination of problems that arise when human beings attempt to think systematically about conduct and values. (No prereq)

◆ **Fall Qtr** Sec 1 **Th**—6:20-8:50, ForH 285

Spring Qtr Sec 2 **W**—6:20-8:50, ForH 285

Phil 1011 SCIENCE AND RELIGION. 5 degree credits, \$82.50. (◆\$41.25) (IS)

Inquiry into nature of science and religion as currently interpreted; attempt to find grounds of conflict and/or reconciliation. (No prereq)

◆ **Spring Qtr** Sec 1 **M**—6:20-8:50, ForH 175, Penn

Phil 1410 SELECTED TOPICS IN MORAL AND POLITICAL PHILOSOPHY: ETHICS, SCIENCE AND TECHNOLOGY. 5 degree credits, \$82.50. (◆\$41.25)

◆ What are the moral responsibilities of the scientist? Are scientists responsible for the uses to which their discoveries are put? If not, should they engage in scientific research? Is it justifiable to engage in research and development of technology for the benefit of society if a few members of society will suffer from the resulting technology? These are examples of some of the most agonizing kinds of moral problems that present themselves in the area of science and technology. In this course an attempt will be made to marshal our best ethical theories in an attempt to clarify our moral intuitions about these kinds of questions. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:50, ForH 175, Maxwell

Phil 1410 SELECTED TOPICS IN MORAL AND POLITICAL PHILOSOPHY. 5 degree credits, \$82.50 (◆\$41.25)

◆ Moral and political philosophy seen through study of a single topic—nonviolence, justice, social choice, anarchy, medical ethics. (No prereq)

Winter Qtr Sec 2 **T**—6:20-8:50, ForH 175

Phil 3001 GENERAL HISTORY OF WESTERN PHILOSOPHY. 5 degree credits, \$87.50 (◆\$43.75) (IS)

◆ Survey of major developments in Western philosophic thought: Greek philosophy, pre-Socratics, Socrates, Plato, Aristotle. (No prereq. May be applied toward the CLA foreign language requirement, Route II for Greek and Latin [see page 354])

Fall Qtr Sec 1 **W**—6:20-8:50, ForH 175, Dahl

Phil 3003 GENERAL HISTORY OF WESTERN PHILOSOPHY. 5 degree credits, \$87.50. (◆\$43.75) (IS)

◆ Survey of major developments in Western philosophic thought: early modern philosophy from Descartes through Hume; impact of science; backgrounds of contemporary philosophical problems. (No prereq)

Winter Qtr Sec 1 **W**—6:20-8:50, ForH 175, Lewis

Phil 3004 GENERAL HISTORY OF WESTERN PHILOSOPHY. 5 degree credits, \$87.50. (◆\$43.75) (IS)

Survey of major developments of Western philosophic thought: later modern philosophy from Kant through 19th century. (No prereq)

Spring Qtr Sec 1 **M**—6:20-8:50, ForH 285, Mason

Phil 3201 ELEMENTS OF SYMBOLIC LOGIC I. 5 degree credits, \$5201, \$87.50 (◆\$43.75)

Development of a formalized language. Syntax and semantics of sentential and first-order predicate logic. Deductive systems. (No prereq. Meets concurrently with 5201)

Fall Qtr Sec 1 **T**—6:20-8:50, ForH 130, Hanson

Phil 3302 MORAL PROBLEMS OF CONTEMPORARY SOCIETY. 5 degree credits, \$87.50 (◆\$43.75)

Problems growing out of attempts to arrive at a proper appreciation of ourselves and others as persons. Implications of this for an understanding of a seemingly diverse range of social issues will be explored. Such issues will include aspects of racism, sexism, "speciesism," etc., as well as such questions as "What is the meaning of life?" "Is suicide ever rational?" "Is mental illness a myth?" "What is sexual perversion?" Links between these specific topics and fundamental issues in the philosophy of mind will be emphasized. (No prereq)

Winter Qtr Sec 1 **Th**—6:20-8:50, ForH 120, Gunderson

Phil 3456 PHILOSOPHY OF PSYCHOLOGY. 5 degree credits, \$87.50 (◆\$43.75)

Selected philosophical issues arising from psychological theories of thinking, learning, motivation, perception, and measurement. The construction and confirmation of such theories. Relation to other sciences. Behaviorism vs. cognitivism. Computer modeling and the mind-body problem. Psychology and human freedom. (Prereq 5 cr in philosophy and 4 cr in psychology or #)

Winter Qtr Sec 1 **M**—6:20-8:50, ForH 170, Savage

Phil 3502 INTRODUCTION TO AESTHETICS. 5 degree credits, \$87.50 (◆\$43.75)

Development of aesthetic theories from Plato to Tolstoy. (No prereq)

Fall Qtr Sec 1 **M**—6:20-8:50, ForH 130, Hochberg

Phil 3521 PHILOSOPHY OF RELIGION. 5 degree credits, \$5521, \$87.50 (◆\$43.75)

Discussion of grounds and sanctions of religion, according to various philosophies. (No prereq)

Spring Qtr Sec 1 **T**—6:20-8:50, ForH 130, Hopkins

Phil 5054 KIERKEGAARD. 5 degree credits, \$92.50 (◆\$46.25)

Major philosophical works. (No prereq. May be applied toward the CLA foreign language requirement, Rt II for Scandinavian [see page 354]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **M**—6:20-8:50, ForH 175, Mason

Phil 5076 THOREAU. 5 degree credits, \$92.50. (◆\$46.25)

Study of **Walden** and selected essays. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-8:50, ForH 170, Dolan

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Phil 5201 ELEMENTS OF SYMBOLIC LOGIC I. 5 degree credits, \$3201. \$92.50 (◆\$46.25)

Development of a formalized language. Syntax and semantics of sentential and first-order predicate logic. Deductive systems. (No prereq. Meets concurrently with 3201. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:20-8:50, ForH 130, Hanson

Phil 5601 PHILOSOPHY OF SCIENCE. 5 degree credits, \$92.50. (◆\$46.25)

Meaning, methods, and implications of modern science. Basic concepts, presuppositions, and procedures. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-8:50, ForH 285, Maxwell

Phil 5611 PHILOSOPHY OF THE SOCIAL SCIENCES I. 5 degree credits, \$92.50 (◆\$46.25)

Criteria for describing and explaining human actions; problems of objectivity, reduction, freedom. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6:20-8:50, ForH 150, Root

Phil 5615 MINDS, BODIES AND MACHINES. 5 degree credits, \$92.50. (◆\$46.25)

Philosophical relevance of cybernetics, artificial intelligence, and computer simulation. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—6:20-8:50, ForH 130, Gunderson

Phil 5760 SELECTED TOPICS IN PHILOSOPHY: MEDICAL ETHICS. 5 degree credits, \$92.50 (◆\$46.25)

An exploration of some of the moral problems confronting physicians, patients and others concerned with medical treatment and public health policy. Among the topics and questions that will be discussed are the following: The Management of Death (When should a physician stop or omit treatment? Are "mercy killings" ever justified?). The Supply of Blood (Should the blood needed in modern medicine be bought or received as a gift or exacted as a tax or what?). Confinement and Mental Illness (Is the notion of "mental illness" one that can be clarified and defended in an objective and scientific manner? Is it ever right to incarcerate someone who has not been convicted of a crime but who has been judged mentally ill?). This course is intended to serve medical and nursing students, philosophy majors, pre-med students and others interested in medical ethics. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 Th—6:20-8:50, ForH 255, Dolan

Phil 5781 CONTEMPORARY EXISTENTIALISM. 5 degree credits, \$92.50. (◆\$46.25)

Selected topics in writings of existentialist philosophers since Kirkegaard. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6:20-8:50, ForH 130, Hochberg

photography

(See Arts, Studio; General College; and Journalism)

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

physical education (PE)

(See also Recreation, and School Health Education)

John F. Alexander, Professor of Physical Education
Bruce Anderson, Associate Professor of Physical Education
Nina Chenault, Lecturer in Physical Education
John Conrad, Instructor in Physical Education
Carol French, Assistant Professor of Physical Education
Robert Fusaro, Instructor in Physical Education
Elizabeth Griffin, Instructor in Recreation
Nadine Jette, Assistant Professor of Physical Education
Mary B. Lampe, Associate Professor of Physical Education
James LaPoint, Assistant Professor of Physical Education
James Marshall, Lecturer in Physical Education
Andrea Marvy, Lecturer in Physical Education
G. Robert Mowerson, Associate Professor of Physical Education
Glenn Renick, Instructor in Physical Education
Luly Santangelo, Lecturer in Physical Education
Michael Tracy, Instructor in Physical Education
Drid Williams, Lecturer in Physical Education

School of Physical Education, Recreation, and School Health Education CONTINUING EDUCATION

A wide variety of programs in school health education, physical education, and recreation are available to local school districts who wish to jointly design a continuing education experience to meet unique local staff needs. For further information in regard to individually designed programs for a particular district or building staff contact: Mary Lampe, Coordinator, Continuing Education for the School of Physical Education and Recreation, Norris Hall, University of Minnesota, Minneapolis, Minnesota 55455; or call (612) 373-3206.

Some physical education classes carry no credit and, except for scuba, require no prerequisite. A health examination is required for admission to all children's physical education classes. It is assumed that the health of adults registering for recreation classes will be equal to the demands of the activities in which they are to participate.

Registration for physical education classes may be made by mail or in person. If you register by mail please read carefully the information on Limited Class Registration (page 22).

Limited class card requests for fall classes should be received during the dates specified for Fall Quarter and Fall Semester. Requests for winter classes should be received during the dates specified for Winter Quarter. Requests for spring classes should be received during the dates specified for Spring Quarter.

Non-professional physical education courses (numbered through 1499) may be taken S-N.

★**PE 1024 MODERN DANCE.** 1 degree credit, \$16.50.

Introduction to fundamental techniques of modern dance. (No prereq. Limited to 25 students)

Fall Qtr Sec 1 **M**—6-8, NorrisH 68, Marvy

Winter Qtr Sec 2 **M**—7-9, NorrisH 68, Marvy

Spring Qtr Sec 3 **M**—7-9, NorrisH 68, Marvy

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

- ★**PE 1035 KARATE.** 1 degree credit, \$16.50 plus \$3 course fee. Total \$19.50.
Emphasis on learning basic stances, blocks, and attacks in addition to hand and foot techniques and practice in first form. Students must attend first class meeting. (No prereq. Limited to 40 students)
Fall Qtr Sec 1 **T**—7-9, StadN 205, Fusaro, Chenault
Winter Qtr Sec 2 **T**—7-9, StadN 205, Fusaro, Chenault
- ★**PE 1036 PADDLEBALL-RAQUETBALL.** 1 degree credit, \$16.50.
Basic fundamentals of skills and shots; rules and game strategy are stressed. (No prereq. Limited to 22 students)
Winter Qtr Sec 1 **Sa**—8 a.m.-10, StadN 208, Conrad
Spring Qtr Sec 2 **Sa**—8 a.m.-10, StadN 208, Conrad
- ★**PE 1056 NORDIC, CROSS COUNTRY SKIING.** 1 degree credit, \$16.50.
Basic techniques in Nordic skiing. Participation in an exercise and conditioning program preparatory to skiing. Students supply own skis. (No prereq. Limited to 30 students)
Spec Term Jan 7-Feb. 18 Sec 1 **Sa**—9 a.m.-12, Gym Classroom, StP Campus, Tracy
- ★**PE 1074 VOLLEYBALL.** 1 degree credit, \$16.50.
Fundamental skills and rules of volleyball as well as basic team play and strategy. (No prereq. Limited to 26 students)
Winter Qtr Sec 1 **M**—5-7, NorrisH 151, Renick
- ★**PE 1124 MODERN DANCE.** 1 degree credit, \$16.50.
Basic techniques of modern dance and improvisation. (Prereq 1024. Limited to 25 students)
Winter Qtr Sec 1 **Th**—6-8, NorrisH 68, Marvy
- ★**PE 1135 KARATE.** 1 degree credit, \$16.50 plus \$3 course fee. Total \$19.50.
Basic concepts from PE 1035 expanded and developed. Basic Ippon Kumite (one attack sparring), Juippon Kumite (semi-free sparring), Kumite (free sparring) will be explored. Combination techniques for both arms and legs and basic form Heion #1 and #2 will also be included. (Prereq 1035 or equivalent. Limited to 40 students)
Spring Qtr Sec 1 **T**—7-9, StadN 205, Fusaro, Chenault
- ★**PE 1224 MODERN DANCE.** 1 degree credit, \$16.50.
Modern dance techniques and its relationship to form, design and exploration of movement. (Prereq 1124 or equivalent. Limited to 25 students)
Spring Qtr Sec 1 **Th**—6-8, NorrisH 68, Marvy
- ★**PE 3114 PREVENTION AND CARE OF INJURIES.** 3 degree credits, \$52.50.
Policies for conditioning athletes in interscholastic and intercollegiate sports; safety controls. **May not be taken S-N.** (Prereq 3110 or Anat 1027. Limited to 30 students)
Fall Qtr Sec 1 **T**—7:30-9:30 (one additional hour arr.), BFAB 125, Marshall
- ★**PE 3115 PHYSIOLOGICAL APPLICATION TO SPORTS.** 3 degree credits, \$PubH 3385, \$PubH 3386. \$52.50.



Consideration of muscular contraction for strength development programs; contributions of training programs to endurance, speed, and skill acquisition; influence of

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

training on the cardiovascular system; fatigue and recovery; early season training, pregame meals and ergogenic aids in athletics. Required for the Minnesota Coaching Certificate. **May not be taken S-N.** (No prereq. Limited to 30 students.)

Winter Qtr Sec 1 T—6-8 (one additional hour arr.), CH 206, Alexander

- ★**PE 3143 ORGANIZATION AND MANAGEMENT OF SPORT.** 3 degree credits. \$52.50. Principles, policies and procedures involved in the coaching of interscholastic sports. **May not be taken S-N.** (Prereq 2 credit coaching course. Limited to 30 students)

Winter Qtr Sec 1 M—6-8 (one additional hour arr.), NorrisH 201, LaPoint

See TV course, PE 3143, *Organization and Management of Sport*, page 379.

- ★**PE 3181 DANCE THERAPY.** 2 degree credits, \$35.

For students and teachers interested in dance therapy as a means of communication and interaction for the emotionally disturbed and/or handicapped person. **May not be taken S-N.** (No prereq. Limited to 25 students)

Winter Qtr Sec 1 T—6-8, NorrisH 68, Jette

- ★**PE 5181 WORKSHOP: DYNAMICS OF THERAPEUTIC DANCE/MOVEMENT.** 1 degree credit (maximum 9 cr) \$18.50 plus \$10 special fee. Total \$28.50.

Movement laboratory integrating theory and experience in therapeutic dance; individual movement behavior and its relationship to verbal communication and the ongoing process; includes field work observation. **May not be taken S-N.** (Prereq 3181 or #. Limited to 14 students. Qualified students may register for graduate credit at the University of Minnesota)

All registration is by mail at least 2 weeks in advance of the class. Write Dynamics of Therapeutic Dance Workshop, 202 Westbrook Hall, 178 SE 15 Ave, University of Minnesota, Minneapolis, MN 55455.

Spec Term Oct 13, 14, 15 Sec 1 **ThFsa**—1-4, NorrisH 68, Santangelo

Sec 2 **ThFsa**—6-9, NorrisH 68, Santangelo

Spec Term Jan 26, 27, 28 Sec 3 **ThFsa**—1-4, NorrisH 68, Santangelo

Sec 4 **ThFsa**—6-9, NorrisH 68, Santangelo

Spec Term Apr 27, 28, 29 Sec 5 **ThFsa**—1-4, NorrisH 68, Santangelo

Sec 6 **ThFsa**—6-9, NorrisH 68, Santangelo

- ★**PE 5620 PRACTICUM: PREVENTION AND CARE OF ATHLETIC INJURIES.** 3 degree credits, \$55.50 plus \$5 course fee. Total \$60.50.

An overview of problems (recognition, principles, responsibilities) related to athletic injuries in secondary and college programs; demonstration and practice in training techniques and familiarity with use of instruments for athletic rehabilitation. (The course is open to men and women teachers who wish to qualify for the Minnesota Public Secondary Athletic Coaching Certification.) **May not be taken S-N.** (Prereq Anat 1027 or equiv. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—7-9:30, BFAB 125, Marshall

- ★**PE 5700 WORKSHOP: DANCE IN EDUCATION.** 3 degree credits (maximum 12 cr) \$55.50.

History, principles, instructional techniques and materials for teaching dance in schools and recreational agencies. (**Focus this offering: Dance Therapy**) **May not be taken S-N.** (No prereq. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:30-9:30, NorrisH 68, Williams

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

PE 5710 WORKSHOP: PHYSICAL EDUCATION FOR THE ELEMENTARY SCHOOL CHILD. 3 degree credits (maximum 12 cr). \$55.50.

Current trends, instructional techniques and resource materials. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

new

Fall Qtr Sec 1 **W**—4-6 (one additional hour arr.),
Creek Valley Elementary School, Edina; Lampe

For information on non-credit conferences and workshops in physical education, please contact the Department of Conferences and Institutes, 131 Nolte Center for Continuing Education; telephone 373-3151.

A health examination is required of all boys and girls taking swimming classes. Each child must bring a letter from his (her) physician to the first class meeting stating approval of the activity in which he (she) is registered.

★PE 0001 SWIMMING FOR CHILDREN. No credit, \$27 plus \$3 course fee. Total \$30.

A course in swimming for children between the ages of 6 and 14 years. Each child must furnish his (her) own towel and swimming suit; (also a cap). Sections are classified as follows: **Beginners**—non-swimmers; **Intermediates**—those who can swim 25 yards of two or more strokes; **Competitive Techniques**—same as Advanced Intermediates plus preparation for competitive swimming. (The first meeting will be used for the purpose of reclassifying swimmers where necessary. Each section limited to 20 students)

Spring Qtr	Sec 1	BEGINNERS	Sa —8:45 a.m.-9:30, NorrisH 51, Lampe
	Sec 2	INTERMEDIATES	Sa —9:30 a.m.-10:15, CH 15, Mowerson
	Sec 3	COMPETITIVE TECHNIQUES	Sa —10:15 a.m.-11, CH 15, Mowerson

★PE 0100 SPRINGBOARD DIVING FOR BOYS AND GIRLS. No credit, \$27 plus \$3 course fee. Total \$30.

A course in beginning diving for boys and girls between the ages of 10 and 16 years. (Prereq ability to perform a running front dive from the one meter (low) board. Instruction will be limited primarily to the low diving board. Each child must furnish own suit and towel and cap. Limited to 12 students)

Spring Qtr Sec 1 **Sa**—11 a.m.-11:45, CH 15

★PE 0150 GOLF. No credit, \$33 plus \$3 course fee. Total \$36.

The fundamentals of golf. Open to men and women and all ninth grade through senior high students regardless of experience. Development of a swing pattern and putting stroke. All sessions will be held in the golf gymnasium. Students furnish their own clubs; bring only a 5 iron to the first meeting. (No prereq. Limited to 20 students)

Spring Qtr	Sec 1	M —6-7, StadS 267, LaPoint
	Sec 2	M —7-8, StadS 267, LaPoint
	Sec 3	W —6-7, StadS 267, Anderson
	Sec 4	W —7-8, StadS 267, Anderson
	Sec 5	Th —6-7, NorrisH 60, French

★PE 0250 SWIMMING FOR MEN AND WOMEN. No credit. \$49.50 plus \$3 course fee. Total \$52.50.

Class and individual instruction for beginners in all swimming strokes and in diving. (No prereq. Limited to 25 students)

Spring Qtr Sec 1 **M**—8-9, CH 10, LaPoint

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★**PE 0255 SCUBA FOR MEN AND WOMEN.** No credit, \$49.50 plus \$3 course fee. Total \$52.50.

The course covers all of the techniques and safety features of scuba. Upon satisfactory completion of this course, the student will be certified by the National Association of Underwater Instructors and will receive a wallet card so stating. (Prereq ability to swim 440 yards free style, float as motionless as possible for 10 minutes, tread water without hands for 3 minutes, swim 75 feet under water, recover 10-pound object in 10 feet of water from surface dive, tow a quiescent victim 50 yards, and be at least 15 years of age. Limited to 18 students)

Spring Qtr Sec 1 **W**—7:30-9:30, CH 15, Mowerson

physical medicine and rehabilitation (PMed)

(See also Anatomy; Physiology; GC 1132, Biological Science: The Human Body; GC 3615, The Rehabilitation Process)

★**PMed 5182 FUNCTIONAL NEUROANATOMY AND NEUROPHYSIOLOGY.** 3 degree credits. \$55.50 plus \$4 course fee. Total \$59.50.

A study of the neuroanatomic structures as functional systems and the basic neuro-physiologic concepts with emphasis on application for understanding and treating physical dysfunction. (Prereq Occupational Therapist, Physical Therapist, Speech Therapist or #. Limited to 50 students. May not be taken for graduate credit.)

Spring Qtr Sec 1 **T**—6:20-8:50, ChRC 208

physics (Phys)

Hans Courant, Professor of Physics

Phys 1031-1032 INTRODUCTORY PHYSICS: MEASUREMENT AND APPLICATIONS. 5 degree credits each semester, \$82.50 plus \$10 special fee. Total \$92.50 each semester. (◆\$41.25 plus \$10 special fee. Total \$51.25) (IS)

◆ Demonstration lectures, problem sessions and laboratory exercises on topics in physics. Application of physics will be emphasized. Topics include mechanics, random processes, gases and fluids, electric circuits, feedback and control, waves, light, optical instruments, atoms and spectra, nuclei, and radioactivity. Primarily for students interested in those topics useful in various technical areas, but also for CLA distribution requirements. Laboratory sections will meet for 2 hours on Saturday morning or Thursday evening. Sections will be assigned at the first class period and will meet eight times during the semester. (Prereq HS algebra and plane geometry for 1031; 1031 for 1032)

Fall Sem 1031 Sec 1 **T**—6-8:30, Ph 133 (lab hours arr.)

Spring Sem 1032 Sec 2 **T**—6-8:30, Ph 133 (lab hours arr.)

Phys 1271 GENERAL PHYSICS. 4 degree credits, \$66. (◆\$33)

◆ Calculus-level general physics course. Mechanics. (Prereq Math 1221 or #1221 or Math 1321 or #Math 1321 or equiv; may be taken with or without Phys 1275 lab)

Fall Sem Sec 1 **T**—6-9, Ph 170

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Phys 1275 GENERAL PHYSICS LABORATORY. 1 degree credit, \$16.50 plus \$10 course fee. Total \$26.50.

Laboratory exercises in mechanics. **This course offered S-N only.** (Prereq 1271 or ¶1271)

Fall Sem Sec 1 Lab meets for 2 hours Th evening or Sat morning for total of 8 mtgs. Sections will be assigned at the first class meeting of 1271.

Phys 1281 GENERAL PHYSICS. 4 degree credits, \$66. (◆\$33)

Calculus level general physics course. Heat, electricity. (Prereq 1271 and Math 1231 or # or equiv)

Spring Sem Sec 1 T—6-9, Ph 131

Phys 1285 GENERAL PHYSICS LABORATORY. 1 degree credit, \$16.50 plus \$10 course fee. Total \$26.50.

Laboratory exercises in electricity. **This course offered S-N only.** (Prereq 1281 or ¶1281)

Spring Sem Sec 1 Lab meets for 2 hours Th evening or Sat morning for total of 8 mtgs. Sections will be assigned at the first class meeting of 1281.

Phys 1291 GENERAL PHYSICS. 4 degree credits, \$66.

Magnetism, optics. (Prereq 1281; may be taken with or without Phys 1295 lab)

Fall Sem Sec 1 T—6-9, Ph 166, Courant

Phys 1295 GENERAL PHYSICS LABORATORY. 1 degree credit, \$16.50 plus \$10 course fee. Total \$26.50.

Laboratory exercises in magnetism and optics. **This course offered S-N only.** (Prereq 1291 or ¶1291)

Fall Sem Sec 1 Lab meets for 2 hours on Th evening or Sat morning for total of 8 mtgs. Sections will be assigned at the first class meeting of 1291.

Phys 3011 OSCILLATIONS. 4 degree credits, \$70.

Physical and mathematical study of the harmonic oscillator. Transient behavior; resonance; impedance; mechanical and electrical examples; coupled systems; traveling and standing waves in one dimension; Fourier series. (Prereq 1291, Math 3211 or equiv)

Fall Sem Sec 1 W—6-9, Ph 133

new

physiology (Phsl)

Gordon Kepner, Assistant Professor of Physiology

★**Phsl 1001 HUMAN PHYSIOLOGY.** 4 degree credits. \$66 plus \$10 course fee. Total \$76.

Human organ systems, normal and pathological functions, feedback regulation and control. Everyday aspects of body function and health. (Prereq high school biology, high school chemistry or #. Limited to 40 students)

Fall Qtr Sec 1 **Lect** M—6-7:45, HSUnitA 3-110, Kepner, others
Dis W—6-8, HSUnitA 3-110

★Phsl 5094-5095 **HUMAN PHYSIOLOGY.** 4 degree credits each quarter. \$74 each quarter.

Survey from a regulatory and control system point of view, with emphasis on pathophysiology and regulatory imbalances in disease. (Prereq biochemistry, human or mammalian anatomy. Primarily for medical-surgical and public health nurses. Limited to 40 students. Students interested in graduate credit should inquire at time of registration)

Fall Qtr 5094 Sec 1 W—6-9, MlrDH 307

Winter Qtr 5095 Sec 2 W—6-9, MlrDH 307

plant pathology (PIPa)

(See also Agriculture, Botany and Horticulture)

Bill W. Kennedy, Professor of Plant Pathology

David H. MacDonald, Associate Professor of Plant Pathology

Elwin Stewart, Assistant Professor of Plant Pathology

★PIPa 1000 **AN INTRODUCTION TO PLANT PATHOLOGY.** 2 degree credits, \$1001. \$33.

new

An introduction to the characteristics of some of the more common diseases affecting annual and perennial ornamentals, foliage plants, fruits and vegetables; the pathogens that cause those diseases and their control. (No prereq. Limited to 25 students)

Fall Qtr Sec 1 M—6:20-9:20, StakH 103, 105, StP Campus, MacDonald

★PIPa 1002 **INTRODUCTORY PLANT PATHOLOGY—PATHOGENS.** 2 degree credits, \$1001, 5003. \$33.

An introduction to the characteristics of the most important biotic and abiotic causes of plant diseases. (Prereq 9 cr plant science. Meets concurrently with 5003. PIPa 1002 and 1003 are equivalent to PIPa 1001. Limited to 20 students)

Winter Qtr Sec 1 M—6:20-9:20, StakH 103, 105, StP Campus, MacDonald

★PIPa 1003 **INTRODUCTORY PLANT PATHOLOGY—REPRESENTATIVE PLANT DISEASES.** 3 degree credits, \$1001, 5004. \$49.50.

A study of representative plant diseases that are of significance in Minnesota. (Prereq PIPa 1002. Meets concurrently with 5004. Limited to 20 students)

Spring Qtr Sec 1 Th—6:20-9:20, StakH 103, 105, StP Campus, MacDonald

★PIPa 3104 **FUNDAMENTALS OF MUSHROOM IDENTIFICATION.** 3 degree credits, \$52.50.

Designed for the students seeking a popular treatment of fleshy fungi, especially edible and poisonous mushrooms. Emphasis will be on identification, structure, ecology, and techniques of preservation. Instruction will include laboratory studies and field trips. (No prereq. Limited to 32 students)

Fall Qtr Sec 1 T—6:20-9:20, StakH 103, 105, StP Campus, Stewart

★PIPa 5003 **INTRODUCTORY PLANT PATHOLOGY FOR ADVANCED STUDENTS—PATHOGENS.** 1 degree credit, \$1002, 5001. \$18.50.

See course description for 1002. (Prereq 14 credits plant science or #. Meets concurrently with 1002. PIPa 5003 and 5004 are equivalents to PIPa 5002. Qualified students may register for graduate credit at the University of Minnesota. Limited to 10 students)

Winter Qtr Sec 1 M—6:20-9:20, StakH 103, 105, StP Campus, MacDonald

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

★**PIPa 5004 INTRODUCTORY PLANT PATHOLOGY FOR ADVANCED STUDENTS—REPRESENTATIVE PLANT DISEASES.** 2 degree credits, §1003, 5001. \$37.

See course description for 1003. (Prereq 5003. Meets concurrently with 1003. Qualified students may register for graduate credit at the University of Minnesota. Limited to 10 students)

Spring Qtr Sec 1 **Th**—6:20-9:20, StakH 103, 105, StP Campus, MacDonald

★**PIPa 5702 PRINCIPLES OF PLANT DISEASE CONTROL.** 3 degree credits, \$55.50 (◆\$27.75)

Emphasis will be placed on three areas: 1) survey and evaluation of control methods (biological, chemical, regulatory—including changes imposed by the times); 2) consideration of new ideas that have suspected potential and/or predictive value; 3) observation and discussion related to selected greenhouse, laboratory, and field experiments which demonstrate principles of prevention or control of specific plant diseases. (Prereq fundamental course in plant pathology recommended; or course in bacteriology, mycology or basic botany and #. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:20-9:20, StakH 103, StP Campus, Kennedy

polish

(See Slavic and East European Languages)

political science (Pol)

(See also IR 3000, 8000, Organized Labor and the Political Process; and noncredit Informal Courses)

Charles Backstrom, Professor of Political Science
Terence W. Ball, Assistant Professor of Political Science
Roger W. Benjamin, Associate Professor of Political Science
Harold W. Chase, Professor of Political Science
Raymond Duvall, Assistant Professor of Political Science
Robert B. Eyestone, Associate Professor of Political Science
William H. Flanigan, Professor of Political Science
Edwin Fogelman, Professor of Political Science
Milda Hedblom, Assistant Professor of Political Science
P. Terrence Hopmann, Associate Professor of Political Science
Brian Job, Assistant Professor of Political Science
Robert B. Kvavik, Assistant Professor of Political Science
William D. Morris, Assistant Professor of Political Science
August H. Nimtz, Jr., Assistant Professor of Political Science
Thomas M. Scott, Professor of Political Science
L. Earl Shaw, Jr., Assistant Professor of Political Science
John E. Turner, Professor of Political Science
Gary W. Wynia, Associate Professor of Political Science

All graduate students can use only 8001 through 8998 level seminars to satisfy major requirements; they should take lower-level political science courses only to correct deficiencies in background when directed to do so by advisers.

A MAJOR IN POLITICAL SCIENCE CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered every 2 years. Interested students should discuss plans with an Extension counselor (373-3905).

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

BA Major Sequence

Required Preparatory Courses

1001, 1051

Major Requirements

At least 36 cr in 3xxx- or 5xxx-level political science courses (not more than 16 cr in any one field nor more than 28 cr in any two fields). The recognized fields are shown by subheads among the course descriptions.

You need not be majoring in Political Science to register for these classes.

general education

Pol 1001 AMERICAN GOVERNMENT AND POLITICS. 5 degree credits, \$82.50. (◆\$41.25) (IS)

Analysis of principles, organization, processes, functions of government and the interplay of political forces in United States—national, state and local. Attention given throughout to current issues. (No prereq)

◆ **Fall Qtr** Sec 1 T—6:30-9:45, AndH 250, Shaw

Fall Sem ★Sec 2 W—7-9:15, Minnetonka HS 226; Benjamin
(Limit 35 students)

Spring Qtr Sec 3 M—6:30-9:45, AndH 210, Backstrom

Pol 1025 WORLD POLITICS. 4 degree credits, \$66. (◆\$33) (IS)

◆ Introduction to contemporary international relations, forms of state interaction; problems of conflict and cooperation. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, BlegH 150, Job

Pol 1027 URBAN POLITICS. 4 degree credits, \$66. (◆\$33)

◆ Urban politics and issues facing American cities. Emphasis on political conflicts over economic and social problems. (No prereq)

Winter Qtr Sec 1 T—6:20-8:50, BlegH 130, Nimtz

(See also Urban Studies; GC 1212, Urban Problems; GC 3285, Anthropology of the City; Soc 5601, Urban Sociology; Soc 3601, Urban Community)

Pol 1041 CONTEMPORARY POLITICAL IDEOLOGIES. 4 degree credits, \$66. (◆\$33)

◆ Major modern and contemporary ideologies, such as liberalism, democracy, conservatism, socialism, communism, fascism, nationalism, imperialism, racism. Emphasis on adequacy of alternative ideologies for the analysis and solutions of current political and social issues. (No prereq)

Winter Qtr Sec 1 M—6:20-8:50, BlegH 425, Fogelman

Pol 1051 INTRODUCTION TO POLITICAL ANALYSIS. 5 degree credits, \$82.50. (◆\$41.25)

◆ Topics such as formation of political communities, political participation, policy making, compliance, legitimacy, political development, types of political systems. Emphasis on empirical and normative problems. Applications to major contemporary systems. (No prereq)

Spring Qtr Sec 1 W—6:30-9:45, BlegH 150, Wynia

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

american governmental systems and processes

Pol 3306 THE AMERICAN PRESIDENCY. 4 degree credits, \$70. (◆\$35)

The office and individual Presidents; organizational characteristics of the Executive Office and individual qualities of decision making; relationships with Congress, the bureaucracy, parties, interest groups, media and public opinion. (Prereq 1001 or #)

Spring Qtr Sec 1 T—6:20-8:50, AndH 230, Eystone

Pol 3308 THE UNITED STATES CONGRESS. 4 degree credits, \$70. (◆\$35)

Internal organization, committee system, party leadership, norms, recruitment; legislative policy making; relationship with the President and bureaucracy; interest groups; political party, and constituency influences on the congressional process. (Prereq 1001 or #)

Winter Qtr Sec 1 Th—6:20-8:50, BlegH 10, Morris

Pol 5309 JUDICIAL PROCESS. 4 degree credits, \$74. (◆\$37)

Structure of American judiciary; selection of judges; process of litigation; influences on judicial decisions; impact of and compliance with decisions; role of Supreme Court in American political system. (Prereq 1001 or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—6:20-8:50, BlegH 10

Pol 5323 AMERICAN DEFENSE POLICY. 4 degree credits, \$74. (◆\$37)

Major policy issues such as American strategic theory and war capabilities; limited war theory and capabilities; arms control and disarmament. Defense policy-making process in the executive office, Congress, Department of Defense, military services, private sector. Implications of American defense policies for foreign and domestic policy. (Prereq 1025 or 1026 or 3825 or 3826. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-8:50, BlegH 150, Chase

comparative government and politics

Pol 5444 GOVERNMENT AND POLITICS OF SCANDINAVIAN COUNTRIES. 4 degree credits, \$74 (◆\$37)

Scandinavian political institutions and behavior; Scandinavian party politics, interest groups, and legislative behavior. Voting patterns and voter alignments. (Prereq 12 cr in social science. May be applied toward the CLA foreign language requirement, Route II for Scandinavian languages [see page 354]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—6:20-8:50, AndH 230, Kvik

Pol 5454 CHINESE GOVERNMENT AND POLITICS. 4 degree credits, \$74. (◆\$37) (IS)

Traditional Chinese society; fragmentation of China, rise of the Communist power; sources and nature of Communist Chinese ideology; institutional character of the Communist party system; sources of power; role of the party and functional groups; patterns of change. (Prereq 1051 or 12 cr in social science or #. May be applied toward the CLA foreign language requirement, Rt II [see page 354]. May not be taken for graduate credit)

Fall Qtr Sec 1 M—6:20-8:50, BlegH 425, Turner

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

political theory

Pol 3661 PROBLEMS OF DEMOCRACY. 4 degree credits, \$70. (◆\$35)

Postulates and implications; moral foundations; democratic theory and the economic order; liberty and authority; equality; representation; participation; majority rule; critics of democracy; social science and democratic theory. (No prereq)

Fall Qtr Sec 1 Th—6:20-8:50, BlegH 415, Ball

politics and behavior

Pol 5741 POLITICAL BEHAVIOR OF WOMEN. 4 degree credits, \$74. (◆\$37)

Women as political actors. Mass political behavior, women's political movements; women in political parties and elective office, the status of women in different societies. (Prereq 1001 or 1051 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—6:20-8:50, BlegH 155, Hedblom

international relations

Pol 3826 AMERICAN FOREIGN POLICY. 4 degree credits, \$70 (◆\$35)

Selected topics concerning contemporary American foreign policy and behavior of major governmental and nongovernmental actors; the prediction, planning, and evaluation of foreign policy outcomes. (Prereq 1025 or 1026 or 8 cr in political science.)

Fall Qtr Sec 1 W—6:20-8:50, AndH 370, Duvall

Pol 5884 THE INTERNATIONAL SYSTEM. 4 degree credits, \$74 (◆\$37)

Structure of the international system: balance of power, bipolar systems, other international systems; theories of stability, change, conflict, and cooperation as related to contemporary international system. (Prereq 1025 or 1026 or 3825 or 3826. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—6:20-8:50, BlegH 10, Hopmann

The following are day school classes in Political Science for which Extension students may register. Registration for these is the same as for Extension classes. For course descriptions, see the current College of Liberal Arts Bulletin available from the Bulletin & Service Bureau (373-2153) room 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis 55455. Check for day, time, and room in a day school class schedule, or call Extension Classes at 373-3949.

Pol 3080 INTERNSHIP. 4 degree credits per quarter, \$70 each quarter. (Prereq #)

Fall Qtr Sec 1 F—3-5, Backstrom

Winter Qtr Sec 2 F—3-5, Backstrom

Spring Qtr Sec 3 F—3-5, Backstrom

Pol 3085 INTRODUCTION TO POLITICAL RESEARCH. 4 degree credits, \$70. (Prereq 1051 or #)

Spring Qtr Sec 1 MWF—3-4, Morris

Pol 3306 THE AMERICAN PRESIDENCY. 4 degree credits, \$70. (Prereq 1001 or #)

Fall Qtr Sec 2 MWF—2-3, AndH 370

day/extension classes

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

- Pol 3308 THE UNITED STATES CONGRESS.** 4 degree credits, \$70. (Prereq 1001 or #)
Winter Qtr Sec 2 MWF—2-3, Shaw
- Pol 3352 FIELDWORK IN THE LEGISLATURE.** 4 degree credits, \$70. (Prereq 1001)
Winter Qtr Sec 1 TTh—3-5, Backstrom
- Pol 3353 FIELDWORK IN LOCAL GOVERNMENT.** 4 degree credits, \$70. (Prereq 1001)
Spring Qtr Sec 1 TTh—3-5, Backstrom
- Pol 3751 FIELDWORK IN POLITICS.** 4 degree credits, \$70. (Prereq 1001)
Fall Qtr Sec 1 T—3-5, SocSci 860, Backstrom
- Pol 3765 POLITICAL SOCIALIZATION.** 4 degree credits, \$70. (Prereq 1001 or #)
Fall Qtr Sec 1 TTh—2:15-3:30, AndH 230, Sullivan
- Pol 3825 INTERNATIONAL POLITICS.** 4 degree credits, \$70. (Prereq 1025 or 1026 or 8 cr in political science or #)
Spring Qtr Sec 1 MWF—2-3, Job
- Pol 5327 LOCAL GOVERNMENT AND POLITICS.** 4 degree credits, \$74. (Prereq 1001 or #. Qualified students may register for graduate credit at the University of Minnesota)
Fall Qtr Sec 1 TTh—2:15-3:30, BlegH 155, Scott
- Pol 5328 METROPOLITAN GOVERNMENT AND POLITICS.** 4 degree credits, \$74. (Prereq 1001 or #. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 TTh—2:15-3:30, Scott
- Pol 5659 AMERICAN POLITICAL THOUGHT.** 4 degree credits, \$74. (Prereq 1059 or 9 cr in social science or #. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 MWF—3-4, Ball
- Pol 5881 INTERNATIONAL LAW.** 5 degree credits, \$92.50. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)
Winter Qtr Sec 1 TTh—2-4

portuguese

(See Spanish and Portuguese)

psychological foundations (PsyF)

(See also Education)

Carol S. Aneshensel, Assistant Professor of Educational Psychology

Russell Burris, Professor of Educational Psychology

David W. Johnson, Professor of Educational Psychology

Paul Johnson, Professor of Educational Psychology

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Ardyth Norem-Hebeisen, Assistant Professor of Educational Psychology
James R. Rest, Associate Professor of Educational Psychology
S. Jay Samuels, Professor of Educational Psychology
John Stecklein, Professor of Educational Psychology
James S. Terwilliger, Professor of Educational Psychology

PsyF 5110 INTRODUCTORY STATISTICAL METHODS. 3 degree credits, \$55.50.

Basic statistical techniques; comprehension of literature using elementary concepts and methods. **May not be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:20-8:50, Arch 50, Terwilliger

Winter Qtr Sec 2 **W**—6:20-8:50, Bu 120, Stecklein

PsyF 5120 EDUCATIONAL MEASUREMENT IN THE CLASSROOM. 4 degree credits, \$74.

Principles and methods for construction, evaluation, and improvement of classroom measures; techniques for describing results statistically; use of measurement in evaluating instruction and student performance; assignment of grades. **May not be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—6:20-8:50, Bu 123, Terwilliger

★PsyF 5148 PSYCHOLOGY AND PEDAGOGY OF READING. 3 degree credits, \$55.50.

Physiological, psychological, and linguistic factors influencing beginning and fluent reading and their implications for instruction. **May not be taken S-N.** (No prereq. A joint Day/Extension class limited to 15 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:30-8:30, Bu 123, Samuels

PsyF 5153 INTRODUCTION TO THE PSYCHOLOGY OF INSTRUCTION. 3 degree credits, \$55.50.

Survey of psychological factors important in the design of instruction; performance criteria, strategy, and sequence in the context of research; development and implementation activities in instructional techniques, technologies, and delivery systems; psychological processes relevant to measures of effectiveness in teaching-learning environment. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—6:20-8:50, FolH 105, Burriss

PsyF 5162 PERSONALITY AND SOCIAL DEVELOPMENT. 3 degree credits, \$55.50.

Major concepts and research findings in adjustment and development with special emphasis on educational implications. **May not be taken S-N.** (Prereq 5 cr in introductory psychology. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **TTTh**—4:15-5:45, CD 218, Rest

Spring Qtr Sec 2 **M**—6:20-8:50, Pt 214, Rest

PsyF 5170 SOCIAL PSYCHOLOGY OF EDUCATION. 4 degree credits, \$74.

Concepts and theories in the field applied to educational problems and settings. Laboratory sessions to make applications and develop skills in group behavior. A joint Day/Extension class. **May not be taken S-N.** (No prereq. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **T**—4:15-7:15, Bu 120, D Johnson

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

PsyF 5176 PSYCHOLOGY OF DRUG ABUSE. 3 degree credits, \$55.50.

Psychological and sociological problems of drug abuse, with special reference to schools, teachers, and students. A joint Day/Extension class. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6-9, Bu 123, Norem-Hebeisen

Spring Qtr Sec 2 **W**—6-9, Bu 123, Norem-Hebeisen

PsyF 5182 LEARNING AND EDUCATIONAL PRACTICE: THE CHILD AND ADOLESCENT. 3 degree credits, \$55.50.

Survey of psychological methods and principles; models of the learner; topics in development, creativity, intelligence, and motivation; implications for teaching and curriculum design in preschool elementary, and secondary education; professional training with children and adolescents as clients. A joint Day/Extension class. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

new

Fall Qtr Sec 1 **T**—4:30-6:30, WuH 130

PsyF 5183 ADULT LEARNING AND EDUCATIONAL PRACTICE. 4 degree credits, \$74.

Survey of psychological methods and principles in human learning; models of the adult learner, topics in motivation, creativity, achievement, intelligence; implications for teaching and curriculum design in higher education, continuing education, and professional training. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

new

Fall Qtr Sec 1 **W**—6-9, Pt 214, P. Johnson

PsyF 5305 WORKSHOP IN HUMAN RELATIONS. 6 degree credits (maximum 6 cr), §CSPP 5305, Educ 5305. \$111 plus \$12 special fee. Total \$123.

An experientially based course including simulation activities, curriculum writing, and supervised practice in basic human relations skills emphasizing individual, cultural, and ethnic differences and their implications for educational practice. (No prereq. **Must be taken S-N.** Approved to meet State Department of Education Edu 521 requirement for recertification. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—4:30-9:30, Arch 60, Aneshensel

Spring Qtr Sec 2 **M**—4:30-9:30, Arch 60, Aneshensel

PsyF 5900 DIRECTED STUDY: NEW THEORIES OF COMPREHENSION AND THEIR APPLICATION FOR IMPROVING THE TEACHING OF READING. 1 degree credit, \$18.50.

Emphasis this offering: Explanations of how prior experiences and knowledge influence what we learn, comprehend and recall, and what we can do to facilitate input, storage, and retrieval information. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Spec Term Sec 1 **Friday**, Oct. 7, 6-8, Bu 120

Saturday, Oct. 8, 10 a.m.-4, Bu 123, Samuels

Sec 2 **Friday**, Nov. 18, 6-8, Bu 120

Saturday, Nov. 19, 10 a.m.-4, Bu 123, Samuels

PsyF 5900 DIRECTED STUDY: ISSUES IN BEHAVIORAL DEVIANCE. 4 degree credits, \$74.

Social processes relating to behaviorally variant groups: relativity of deviance; social aspects of identification, labeling and treatment; socialization into careers as deviants; role of schools and teachers. Content areas include: drug use and abuse, counter-culture groups, delinquency, and sexuality. Course includes experiential as

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

well as theoretical and empirical components. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 3 M—6-9:20, Pt 214, Aneshensel

PsyF 5900 DIRECTED STUDY: DYNAMICS OF SOCIAL CONFLICT. 3 degree credits, \$55.50.

An experientially based course dealing with interpersonal dynamics of group conflict: types and origins; psychological processes; positive and negative aspects of conflict; types and strategies of conflict resolution. The course further explores the social, political and economic aspects of conflict between groups categorized of the following criteria: sex, lifestyle, race, ethnicity, religion. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 4 W—6-8:30, Pt 214, Aneshensel

PsyF 5900 DIRECTED STUDY: DRUG ABUSE PREVENTION AND EARLY INTERVENTION METHODS FOR EDUCATORS. 3 degree credits, \$55.50.

A joint Day/Extension course. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 5 W—6-9, Bu 123, Norem-Hebeisen

psychology (Psy)

(See also Child Psychology, Counseling and Student Personnel Psychology; General College; Informal Courses; Psychology in the Schools Training Program; Women's Studies; and Psychological Foundations)

Duane Boelter, Instructor in Psychology

Rene V. Dawis, Professor of Psychology

Robert L. Jones, Professor of Journalism, and Psychology

Mary Ann Mattoon, Clinical Assistant Professor

Mary J. Meadow, Instructor in Psychology

Roy W. Pickens, Professor of Psychology

Vera M. Schletzer, Professor of Psychology

Auke Tellegen, Professor of Psychology

Travis Thompson, Professor of Psychology

Milton A. Trapold, Professor of Psychology

Robert G. Warnken, Clinical Professor of Psychology

A MAJOR IN PSYCHOLOGY CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered yearly. If you decide to major, it is important to discuss your plans with an Extension counselor (373-3905).

B.A. Major Sequence

Required Preparatory Courses

1001, 1004-1005**

**Should be taken as soon as possible after completion of 1001.

Major Requirements:

2 courses chosen from 3011, 3031, 3051, 3061, 5011, 5012-5013, 5014, 5015, 5017, 5018, 5019, 5031, 5054, 5061, 5062, 5071

2 courses chosen from 3101, 3124, 3201, 3604, 5141, 5501, 5701, 5702, 5703, CPsy 5303

3801**

**Should be taken as soon as possible after completion of 1001.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

4 elective 3xxx-5xxx-level psychology. 1 to 4 optional elective 3xxx-5xxx-level psychology or child psychology courses or psychological foundations or counseling and student personnel psychology courses. Students choosing electives in PsyF or CSPP must contact an adviser in the Psychology Department (373-5658) before registering.

Psychology courses at the 3xxx-5xxx-level must total at least nine, with a minimum total of 32 credits (CPsy 5303 may be included), but all 3xxx-5xxx-level courses chosen for the major must not exceed 52 credits.

Psychology majors, especially those considering graduate work, are urged to elect courses in mathematics and in the natural, social, and physical sciences. Prospective graduate students should take further work in statistics and computer programming. Students not planning graduate work in psychology may, with adviser assistance, design programs that prepare for such paraprofessional services as interviewing, personnel work, mental health work, counseling, and research technician work.

Those interested in child psychology are encouraged to elect courses offered through the Institute of Child Development. They may consider majors in that area—double majors in psychology and child psychology are not permissible. Psychology majors are restricted in the number of child psychology courses acceptable for the major.

You need not be majoring in Psychology to register for these classes.

Psy 1001 GENERAL PSYCHOLOGY. 5 degree credits, \$82.50. (◆\$41.25) (IS)

Introduction to study of human behavior. Prerequisite for all advanced courses in psychology. (No prereq)

- Fall Sem** Sec 1 **M**—6:20-8:50, SciCB 125, Pickens
 Sec 2 **T**—6:20-8:50, NH 211, Warnken
 Sec 3 **W**—6:20-8:50, NH 211
 ★Sec 4 **W**—7-9:30, Richfield HS 141 (Limit 30 students)
 ★Sec 5 **Th**—7-9:30, Irondale HS 310, New Brighton (Limit 35 students)
- Spring Sem** Sec 6 **M**—6:20-8:50, Ph 133, Pickens
 Sec 7 **T**—6:20-8:50, SmithH 325

Psy 1003 APPLICATION OF PSYCHOLOGY TO LIVING. 4 degree credits, \$66. (◆\$33)

Psychology in personal relationships and in the achievement of mental health, centering, for the most part, around our fundamental needs; and exploration of principles highly applicable in the life of every person. (No prereq. May be taken before or after Psy 1001)

- Fall Qtr** Sec 1 **M**—6:20-8:50, LindH 305, Paulson
 Sec 2 **T**—6:20-8:50, WuH 230, Dorset
 ★Sec 3 **W**—7-9:30, Ramsey HS 131-133, Roseville
 (Limit 60 students), King
- Winter Qtr** Sec 4 **M**—6:20-8:50, WuH 230, Hendel
 Sec 5 **T**—6:20-8:50, WuH 230, Buckley
 ★Sec 6 **W**—7-9:30, Minnetonka HS 120 (Limit 40 students), Weiszhaar
 Sec 7 **W**—7-9:30, Woodbury JHS 101 (Limit 40 students), King
- Spring Qtr** Sec 8 **M**—6:20-8:50, WuH 230, Weiszhaar
 Sec 9 **W**—7-9:30, Sandburg JHS 213, Golden Valley
 (Limit 45 students), Warnken

(See also GC 1282, Applied Psychology)

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

★**Psy 1004-1005† INTRODUCTORY LABORATORY PSYCHOLOGY.** 4 degree credits each quarter, \$66 plus \$14 special fee plus \$1.50 course fee. Total \$81.50 each quarter.

Experiments illustrating contemporary subject matter such as human and animal learning, problem solving, visual perception, measurement of general and special abilities and personality traits. (Prereq 1001 or ¶1001 for 1004; 1004 for 1005. Limited to 24 students)

Fall Qtr 1004 Sec 1 **M**—6:20-9:50, EltH 50-60
Sec 2 **T**—6:20-9:50, EltH 50-60
Winter Qtr 1004 Sec 3 **T**—6:20-9:50, EltH 50-60
1005 Sec 4 **Th**—6:20-9:50, EltH 50-60
Sec 5 **W**—6:20-9:50, EltH 50-60
Spring Qtr 1005 Sec 6 **M**—6:20-9:50, EltH 50-60

Psy 3011 INTRODUCTION TO THE PSYCHOLOGY OF LEARNING. 4 degree credits, \$70. (◆\$35)

Survey of the basic methods in the study of learning. Development of fundamental concepts and principles governing the learning process. (Prereq 1001)

Fall Qtr Sec 1 **M**—6:20-8:50, EltH N119, Trapold
Spring Qtr Sec 2 **M**—6:20-8:50, EltH N119

★**Psy 3031 SENSATION AND PERCEPTION.** 4 degree credits, \$70.

Roles of stimulus, receptor organ and brain, and of learning and motivation, in man's perception of his world. Lectures and demonstrations. (Prereq 1004 or #. Limited to 40 students)

Winter Qtr Sec 1 **T**—6:20-8:50, EltH 50-60

Psy 3051 INTRODUCTION TO COGNITIVE PSYCHOLOGY. 4 degree credits. **To be offered 1978-79.**

Basic research problems and theoretical concepts in study of cognitive factors in perception, memory, and concept formation. (Prereq 1005 or ¶1005)

Psy 3061 INTRODUCTION TO PHYSIOLOGICAL PSYCHOLOGY. 4 degree credits, \$70. (◆\$35)

Survey of neural mechanisms of motivation, emotion, sleep-wakefulness cycle, learning, and communication in animals and humans. (Prereq 1005 or Biol 1011 or #)

Winter Qtr Sec 1 **Th**—6:20-8:50, EltH N119

Psy 3101 INTRODUCTION TO PERSONALITY. 4 degree credits, \$70. (◆\$35) (IS)

An overview of the field of personality, with discussions of personality theory, (e.g. the theories of Freud, Jung and Adler), of selected topics of empirical research in the field of personality, and of personality assessment. (Prereq 1001)

Fall Qtr Sec 1 **T**—6:20-8:50, EltH N119, Tellegen
Spring Qtr Sec 2 **T**—6:20-8:50, EltH N119, Tellegen

Psy 3124 PSYCHOLOGY OF INDIVIDUAL DIFFERENCES. 4 degree credits, \$70. (◆\$35)

Differential method in study of human behavior. Impact and importance of individual differences in modern society; instruments of measurement and behavior prediction in differential psychology; major determinants of individuality. (Prereq 3801)

Winter Qtr Sec 1 **T**—6:20-8:50, EltH N119, Dawis

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Psy 3201 INTRODUCTION TO SOCIAL PSYCHOLOGY. 4 degree credits, \$70. (◆\$35)

Survey of theories and research in social psychology. Includes the effects upon the individual's attitudes and behavior of other persons, mass communications, and group membership. (Prereq 1001)

Fall Qtr Sec 1 **M**—6:20-8:50, Pt 214, Boelter

Psy 3604 INTRODUCTION TO ABNORMAL PSYCHOLOGY. 4 degree credits, \$70. (◆\$35) (IS)

The field of abnormal psychology. Etiologies of behavior disorders; discussion of available treatments. (Prereq 1001)

Fall Qtr Sec 1 **W**—6:20-8:50, Ph 170

Spring Qtr Sec 2 **W**—6:20-8:50, Ph 170

Psy 3801 INTRODUCTION TO STATISTICAL METHODS. 4 degree credits, \$Soc 3801. \$70.

The data of psychology and their statistical analysis. Univariate and bivariate descriptive statistics, principles of estimation and hypothesis testing. Examples from differential and experimental psychological research. (Prereq 1001 or equiv)

Fall Qtr Sec 1 **Th**—6:20-8:50, AndH 210

Winter Qtr Sec 2 **Th**—6:20-8:50, AndH 210

Spring Qtr Sec 3 **Th**—6:20-8:50, AndH 210

Psy 3911 PERSONALITY AND RELIGION. 4 degree credits, \$70. (◆\$35) (IS)

Topical approach to the study of religious behavior. Areas covered include guilt, alienation, transcendence, altered states of consciousness, impulse control, conscience, values and beliefs, symbolic behavior, self-actualization, psychopathology, and the psychological interpretation of religious scriptures. (Prereq 1001 or 1911 or #)

Winter Qtr Sec 1 **T**—6:20-8:50, FolH 308, Meadow

Psy 3970 DIRECTED STUDIES: PRACTICUM. 4 degree credits each quarter, \$70 each quarter.

Practical experience applying behavioral intervention techniques and principles in at least three applied settings. Practicum experiences must be arranged with participating faculty members, and typically will involve a minimum of eight hours of practicum work, plus one to two hours of supervisory contact with an instructor. Practicum experience is available in adult mental health, emotionally disturbed children, developmental disability, chemical dependency and study skills. For assignment to a faculty member, contact Prof. Travis Thompson, coordinator of the Behavior Analyst Certificate Program, 628 Diehl Hall, 373-5033. Students must have a directed studies form signed by instructor. Special term dates must be indicated on this form. (Prereq #. Should be taken concurrently with 5024-5025-5026.)

Fall Qtr Sec 1 **Arr.**

Winter Qtr Sec 2 **Arr.**

Spring Qtr Sec 3 **Arr.**

Psy 5024-5025-5026 TOPICS IN PSYCHOLOGY: INTRODUCTION TO BEHAVIOR ANALYSIS. 4 degree credits each quarter, \$74 each quarter.

An introduction to principles of behavior analysis and therapy. Surveys of behavioral approaches to assessment and intensively discusses behavioral intervention principles and techniques. The last half of the course will deal with applications of behavior modification and applications of therapeutic methods for an array of client

populations, including adult mental health, emotionally disturbed children, developmental disability, chemical dependency and study skills. (Prereq 1001 or # for 5024; 5024 or # for 5025; 5025 or # for 5026. Graduate credit by permission of adviser only. Should be taken concurrently with 3970)

Fall Qtr 5024 Sec 1 **W**—3:30-6, WuH 230, Thompson, et al

Winter Qtr 5025 Sec 2 **M**—3:30-6, WuH 230, Thompson, et al

Spring Qtr 5026 Sec 3 **T**—3:30-6, WuH 130, Thompson, et al

Psy 5054 PSYCHOLOGY OF LANGUAGE. 4 degree credits. **To be offered 1978-79.**

The theories and experimental evidence involved in past and present conceptions of psychology of language. (Prereq 3011, except for students in Honors sequence and grads. Qualified students may register for graduate credit at the University of Minnesota)

Psy 5105 THE ANALYTICAL PSYCHOLOGY OF C.G. JUNG. 4 degree credits, \$74. (◆\$37)

Major Jungian psychological theories: extroversion-introversion, function types, complexes, ego, persona, shadow, animus, anima, self, personal and collective unconscious, symbolism, psychic energy, individuation, dream interpretation, psychotherapy. Relevant empirical research and clinical material. (Prereq 3101 or 5101 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:20-8:50, NH 213, Mattoon

Psy 5141 PSYCHOLOGY OF WOMEN. 4 degree credits, \$74. (◆\$37)

Psychological and physical sex differences, stressing developmental and environmental influences on dependency, aggression, achievement motivation, and achievement. Sex roles and sexuality during various life phases. (Prereq 1001. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-8:50, NH 213, Schletzer

(See also Women's Studies; and Continuing Education for Women, page 381)

Psy 5501 VOCATIONAL PSYCHOLOGY. 4 degree credits, \$74. (◆\$37)

Individual differences analysis of the work personality and the work environment; vocational development and vocational choice; work adjustment; work motivation and performance; work satisfaction and satisfactoriness; psychological problems connected with work. (Prereq 3801 or equiv. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-8:50, ForH 115, Warnken

See TV course, Psy 5604, **Understanding Behavioral Problems**, page 379.

Psy 5701 PERSONNEL AND INDUSTRIAL PSYCHOLOGY. 4 degree credits. \$74. (◆\$37)

Application of principles of individual differences and psychological measurement to problems of recruiting, selecting, evaluating, and training members of ongoing organizations. Job behavior description, performance measurement, selection and placement strategies, minority group employment, measurement of job satisfaction, strategies for training and development. (Prereq 1001, one course in statistics or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—6:20-8:50, WuH 230

(See also Industrial Relations)

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Psy 5751 PSYCHOLOGY OF ADVERTISING. 4 degree credits, Jour 5251, \$74.

Psychological analysis of the basic principles underlying advertising and selling. Consumer research is stressed. Research techniques for investigating advertising problems and the analysis of consumer wants are considered in detail. Meets concurrently with Jour 5251. (Prereq 1001. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:20-8:50, WuH 230, Jones

For information on non-credit workshops or conferences in psychology, please contact the Department of Conferences, Registrar, Nolte Center for Continuing Education; telephone 373-3151.

psychology in the schools training program (SchP)

(See page 307)

public affairs (PA)

(See also IC 0511, Alternative Energy Resources)

John S. Adams, Professor of Public Affairs and Geography
Nancy N. Anderson, Associate Professor of Public Affairs
John R. Borchert, Professor of Public Affairs
John E. Brandl, Professor of Public Affairs
Willard W. Cochrane, Professor of Agricultural Economics
William Copeland, Lecturer in Public Affairs
Charles Dayton, Lecturer in Public Affairs
Thomas Dewar, Assistant Professor of Public Affairs
Robert C. Einsweiler, Lecturer in Public Affairs
Donald Geesaman, Professor of Public Affairs
Michael E. Gleeson, Assistant Professor of Public Affairs
Byron Gold, Lecturer in Public Affairs
Jay Greenberg, Research Fellow for Public Affairs
Walter W. Heller, Regents Professor of Economics
James L. Hetland, Professor of Public Affairs and Law
Stephen Hoenack, Associate Professor of Public Affairs
James E. Jernberg, Associate Professor of Public Affairs
Martin H. Kreiger, Assistant Professor of Public Affairs
Robert T. Kudrle, Assistant Professor of Public Affairs
C. Theodore Mitau, Visiting Professor
Arthur Naftalin, Professor of Public Affairs
Sharon Patten, Lecturer in Public Affairs
Julius Smith, Lecturer in Public Affairs
John Sullivan, Assistant Professor of Public Affairs
George Warp, Professor of Public Affairs

PA 3011 ADMINISTRATION. 4 degree credits, \$70.

Theory and practice of administration. The administrative process; administrative theory; administrative behavior. (No prereq)

Fall Qtr Sec 1 **T**—7-9:30, BlegH 240, Warp

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

PA 3151 INTRODUCTION TO ENERGY POLICY. 4 degree credits, \$5151. \$70 plus \$5 special fee. Total \$75. (◆\$35 plus \$5 special fee. Total \$40)

Analysis of what has come to be called the "energy crisis." Basic data on energy supply and demand, alternative energy sources, energy conservation possibilities, environmental and social implications of alternative policies. Particular attention given to current energy policy issues. (No prereq. Meets concurrently with 5151)

Spring Qtr Sec 1 M—6:20-8:50, BlegH 340, Geesaman

PA 5151 ENERGY AND ENERGY POLICY. 4 degree credits, \$74 plus \$5 special fee. Total \$79.

Fuel and energy supply and demand; environmental, social and economic implications of alternative energy policies; means to affect changes in use patterns; political and institutional factors; relations of energy policies to economic, foreign and environmental policies. (No prereq. Meets concurrently with 3151; additional research. Qualified students may register for graduate credit at the University of Minnesota.)

Spring Qtr Sec 1 M—6:20-8:50, BlegH 340, Geesaman

PA 5319 INTERGOVERNMENTAL RELATIONS. 4 degree credits, \$74.

Examination and analysis of the evolution of intergovernmental relations in the United States and of special administrative and fiscal problems and issues—with particular attention to the fields of human resources and services. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—6:20-8:50, BlegH 335, Jernberg

PA 5691 PROFESSIONALS, SERVICES, AND PUBLIC POLICY. 4 degree credits, \$74.

Goals, operation, and impacts of service organizations compared and contrasted; general patterns and critical issues; incentives and disincentives in organizational or bureaucratic settings; role of professionalism; the experience of clients. Fieldwork. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—7-9:30, BlegH 440, Dewar

The following are day school classes in Public Affairs in which Extension students may register. Registration for these is the same as for Extension classes. For course descriptions, see the current College of Liberal Arts Bulletin available from the Bulletin & Service Bureau (373-2153) room 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, 55455.

These courses are subject to frequent changes; times and rooms are not listed. Check for current information in a day school class schedule or call the School of Public Affairs (373-2653) or Extension Classes (373-3949).

—Fall Quarter—

★**PA 3011 ADMINISTRATION.** 4 degree credits, \$70. (No prereq. A joint Day/Extension class limited to 8 Extension students)

Fall Qtr Sec 2 **MWF—Warp**

★**PA 3970 DIRECTED STUDIES.** Credits arr. \$17.50 per credit. (Prereq #. A joint Day/Extension class limited to 8 Extension students)

Fall Qtr Sec 1 **Arr.**

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★PA 5161 **TECHNOLOGY PLANNING I.** 4 degree credits, \$74. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 TTh—Geesaman

★PA 5505 **HOUSING POLICY.** 4 degree credits, \$74. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 MWF—Gleeson

★PA 5550 **PLANNING PROSEMINAR.** 2 degree credits, \$37. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 Introduction to Planning M—Einsweiler
 Sec 2 Planning Theory M—Krieger
 Sec 3 Plan Making T—Einsweiler
 Sec 4 Private Sector Development F—Smith

★PA 8201 **POLICY ANALYSIS I.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota graduate school)

Fall Qtr Sec 1 TF—Brandl, Kudrle

★PA 8216 **POLICY PROCESS I.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota graduate school)

Fall Qtr Sec 1 MTh—Naftalin, Adams

★PA 8220 **PUBLIC BUDGETING.** 4 degree credits, \$114. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota graduate school)

Fall Qtr Sec 1 TTh—Jernberg, Brandl

★PA 8251 **PUBLIC AFFAIRS WORKSHOPS.** Credits arr. \$28.50 per credit. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota graduate school)

Fall Qtr Sec 1 Planning Workshop F
 Sec 2 Training Workshop T

★PA 8321 **INTERGOVERNMENTAL ADMINISTRATIVE RELATIONS.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota graduate school)

Fall Qtr Sec 1 W—Jernberg

★PA 8601 **ISSUES IN AGING.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota graduate school)

Fall Qtr Sec 1 Th

★PA 8690 **HUMAN SERVICES SYSTEMS.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota graduate school)

Fall Qtr Sec 1 WF—Copeland

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

★PA 8971 **INDIVIDUAL READINGS AND RESEARCH.** Credits arr. \$28.50 per credit. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota graduate school)

Fall Qtr Sec 1 Arr.

—————Winter Quarter—————

★PA 3970 **DIRECTED STUDIES.** Credits arr. \$17.50 per credit. (Prereq #. A joint Day/Extension class limited to 8 Extension students)

Winter Qtr Sec 2 Arr.

★PA 5121 **PUBLIC INTEREST RESEARCH AND PRACTICE.** 4 degree credits, \$74. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 MW—Geesaman

★PA 5162 **TECHNOLOGY PLANNING II.** 4 degree credits, \$74. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 Tth—Geesaman, Dewar

★PA 5401 **DEVELOPMENT ADMINISTRATION.** 4 degree credits, \$74. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 MWF—Warp

★PA 5502 **LOCAL ADMINISTRATION.** 4 degree credits, \$74. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 TTh—Gleeson

★PA 5506 **TOPICS IN HOUSING POLICY.** 4 degree credits, \$74. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 W—Gleeson

★PA 5550 **PLANNING PROSEMINAR.** 2 degree credits, \$37. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified Students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 5 Planning Methods W—Lukermann

Sec 6 F

Sec 7 Plan Making M—Einsweiler

★PA 5601 **PLANNING THEORY SEMINAR.** 4 degree credits, \$74. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 MW—Krieger

★PA 5691 **PROFESSIONAL SERVICES AND PUBLIC POLICY.** 4 degree credits, \$74. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 2 F—Dewar

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

- ★PA 8121 **POLICY PROCESS II.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
 Winter Qtr Sec 1 TF—Dayton
- ★PA 8204 **THE PUBLIC ECONOMY.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
 Winter Qtr Sec 1 Th—Heller
- ★PA 8205 **QUANTITATIVE METHODS.** 4 degree credits, \$114. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
 Winter Qtr Sec 1 MTh—Sullivan
- ★PA 8252 **PUBLIC AFFAIRS WORKSHOPS.** Credits arr. \$28.50 per credit. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
 Winter Qtr Sec 1 Planning Workshop F
 Sec 2 Training Workshop T
 Sec 3 Title XX Workshop F—Copeland
 Sec 4 Budgeting and Financial Aid T—Jernberg
 Sec 5 Policy, Politics and Governance of Higher Education T—Mitau
- ★PA 8311 **LEGAL ENVIRONMENT OF PUBLIC ADMINISTRATION.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota graduate school)
 Winter Qtr Sec 1 Th—Warp
- ★PA 8526 **URBAN PUBLIC POLICY.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
 Winter Qtr Sec 1 W—Naftalin
- ★PA 8540 **SEMINAR: LAND USE PLANNING.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
 Winter Qtr Sec 1 T—Borchert
- ★PA 8602 **ISSUES IN AGING.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
 Winter Qtr Sec 1 M
- ★PA 8606 **SEMINAR: AGING POLICY.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
 Winter Qtr and Spring Qtr Sec 1 Alternate Saturdays, Gold
- ★PA 8610 **HEALTH CARE POLICY.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
 Winter Qtr Sec 1 W—Kudrle

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

★PA 8630 **INCOME MAINTENANCE SEMINAR.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr Sec 1 Th—Patten

★PA 8981 **INDIVIDUAL READINGS AND RESEARCH.** Credits arr. \$28.50 per credit. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr Sec 1 Arr.

————Spring Quarter————

★PA 3970 **DIRECTED STUDIES.** Credits arr. \$17.50 per credit. (Prereq #. A joint Day/Extension class limited to 8 Extension students)

Spring Qtr Sec 3 Arr.

★PA 5151 **ENERGY AND ENERGY POLICY.** 4 degree credits, \$74. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 2 TTh—Geesaman

★PA 5301 **MULTINATIONAL CORPORATION.** 4 degree credits, \$74. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 TTh—Kudrle

★PA 5602 **PLANNING THEORY SEMINAR.** 4 degree credits, \$74. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 MW—Krieger

★PA 8202 **POLICY ANALYSIS II.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 TF—Hoenack

★PA 8210 **POLICY PROCESS III.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 MTh—Gleeson, Jernberg

★PA 8216 **POLICY ANALYSIS III.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 TTh—Dewar

★PA 8253 **PUBLIC AFFAIRS WORKSHOPS.** Credits arr. \$28.50 per credit. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 Evaluation Workshop W—Greenberg

Sec 2 Training Workshop T

Sec 3 Title XX Workshop F—Copeland

Sec 4 Policy, Politics and Governance of Higher Education T—Mitau

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

- ★PA 8262 **SOCIAL WELFARE ADMINISTRATION.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota graduate school)
Spring Qtr Sec 1 M—Copeland, Brandl
- ★PA 8315 **PUBLIC MANPOWER POLICY.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 1 Th—Warp
- ★PA 8330 **INFORMATION AND INCENTIVES: IMPROVED DECISION MAKING BUREAUS.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 1 W—Hoenack
- ★PA 8403 **COMPARATIVE PUBLIC ADMINISTRATION.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 1 F—Warp
- ★PA 8410 **AGRICULTURAL DEVELOPMENT PLANNING.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 1 Th—Cochrane
- ★PA 8511 **LAW AND URBAN AFFAIRS.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 1 M—Hetland
- ★PA 8521 **DEVELOPMENT MANAGEMENT SYSTEMS.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 1 M—Einsweiler
- ★PA 8527 **SEMINAR: URBAN PUBLIC POLICY.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 1 W—Naftalin
- ★PA 8531 **PLANNING IN A POST-INDUSTRIAL SOCIETY.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 1 M—Krieger
- ★PA 8540 **SEMINAR: LAND USE PLANNING.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 2 T—Borchert
- ★PA 8603 **ISSUES IN AGING.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 1 M

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

- ★PA 8606 **AGING POLICY SEMINAR.** See PA 8606, Winter Quarter.
- ★PA 8611 **HEALTH CARE POLICY.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 1 W—Kudrle, Anderson
- ★PA 8752 **FIELD WORK IN PUBLIC AFFAIRS.** 3 degree credits, \$85.50. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 1 M—Dewar
- ★PA 8991 **INDIVIDUAL READINGS AND RESEARCH.** Credits arr. \$28.50 per credit. (Prereq #. A joint Day/Extension class limited to 8 Extension students. Open only to students admitted to the University of Minnesota Graduate School)
Spring Qtr Sec 1 Arr.

public health (PubH)

(See also General College natural science courses; PsyF 5176, Psychology of Drug Abuse)

- Daniel Anderson, Adjunct Assistant Professor, Chemical Dependency Counseling Program*
Dennis A. Armstrong, Instructor and Director, Chemical Dependency Counseling Program
Donald Barber, Professor of Environmental Health
James Boen, Professor of Biometry and Chemical Dependency Counseling Program
Bright Dornblaser, Professor of Hospital and Health Care Administration
G. Kenneth Gordon, Assistant Professor of Hospital and Health Care Administration
Carl B. Heggstad, Professor of Anatomy
Richard O. Heilman, Assistant Professor of Psychiatry and Public Health
Walter H. Jopke, Assistant Professor of Environmental Health and Safety
James Kincannon, Associate Professor of Interdisciplinary Studies in Chemical Dependency and Clinical Associate Professor of Psychiatry and Psychology
Daniel McInerney, Adjunct Assistant Professor in Public Health, Minnesota Department of Health
William A. O'Brien, Clinical Associate Professor of Medicine and Associate Professor of Public Health
Richard J. Oszustowicz, Assistant Professor of Hospital and Health Care Administration
Harold J. Paulus, Professor of Environmental Health
Vincent C. Pletcher, Adjunct Instructor, Chemical Dependency Counseling Program
James Rothenberger, Instructor, Chemical Dependency Counseling Program
Gustave L. Scheffler, Assistant Professor of Environmental Health and Safety
Robert W. Schwanke, Assistant Professor of Public Health and Director, Interdisciplinary Studies and Associated Programs
Conrad P. Straub, Professor of Environmental Health
Robert tenBensel, Professor and Director in Maternal and Child Health
Trude Turnquist, Instructor in Maternal and Child Health
Maurine Venters, Instructor in Maternal and Child Health
Vernon Weckwerth, Professor in Hospital and Health Care Administration

- PubH 3001 PERSONAL AND COMMUNITY HEALTH.** 3 degree credits, \$3004. \$52.50.
 Fundamental principles of health conservation and disease prevention. (No prereq)
Winter Qtr Sec 1 T—7-9:30, Mayo 100, O'Brien

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

PubH 3005 INTRODUCTION TO ANATOMY AND MEDICAL TERMINOLOGY. 3 degree credits. \$52.50.

Presentation of a method of medical terminology by body systems; review of anatomy including the regions and systems of the body. (No prereq)

Spring Qtr Sec 1 **T**—6:30-8:30, JacH 74, Heggstad

(See also Anatomy; Classics; Physiology)

PubH 3034 TOPICS IN ALCOHOL AND DRUG ABUSE. 2-5 degree credits, \$17.50 a credit.

Selected readings in alcohol and drug abuse with discussion based on these readings. (Prereq #. Requests for admission should be made to James Rothenberger, School of Public Health, 1305 Mayo, Box 197 Mayo, 412 Union Street S.E., Minneapolis MN 55455, or to Dennis A. Armstrong, Chemical Dependency Counseling Program, School of Public Health, University of Minnesota, 226 University Park Plaza, 2829 University Avenue, Minneapolis MN 55414)

★PubH 5010 INTERPERSONAL BEHAVIOR IN HEALTH ORGANIZATIONS. 4 degree credits, \$HSU 5010, \$74.

Designed to assist the participant in observing, analyzing and interpreting behavior patterns in human service organizations. Topics covered include communication skills (listening, feedback, empathy, nonverbal cues); group behavior (agenda setting, decision making, leadership roles); conflict resolution (causes of conflict, strategies for working through conflict). (No prereq. A joint Day/Extension class limited to 10 Extension students. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Qtr Sec 1 **MW**—4:15-6, HSUnit A 2-530, Gordon

★PubH 5013 INTERDISCIPLINARY TEAM TRAINING IN HEALTH SERVICES DELIVERY. 3 degree credits, \$HSU 5001, 5300. \$55.50.

Basic elements of interpersonal and group communications. Interdisciplinary student team assignment involves individual and group analysis and critiquing of process used by selected community health services or health care delivery teams. Includes teams with a specific single disease or problem, complex socio-political health problems, broad primary care programs, and community problem-solving efforts. (Prereq #. A joint Day/Extension class limited to 12 Extension students from health or helping professions. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6-9, HSUnitA 2-585/2-571, Schwanke, others

Spring Qtr Sec 2 **W**—6-9, HSUnitA 2-585/2-571, Schwanke, others

See TV course, PubH 5025, Health and the Consumer, page 379.

PubH 5032 EDUCATIONAL ASPECTS OF DRUG USE AND ABUSE. 3 degree credits, \$5033, 3033, Health 5400. \$55.50.

Basic background information on alcohol and other drugs and chemicals, with emphasis on curriculum concepts, teaching methodology, materials, and referral procedures appropriate for the elementary, junior, and senior high school. (Prereq education seniors, certified teachers, school nurses or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:30-9, HSUnitA 2-530, Rothenberger, Kincannon

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

PubH 5034 TOPICS IN ALCOHOL AND DRUG ABUSE. 2-5 degree credits, \$18.50 a credit.

Selected readings in alcohol and drug abuse with discussion based on these readings. (Prereq advanced application or #. Requests for admission should be made to Professor James Kincannon, School of Public Health, 1305 Mayo, Box 197 Mayo, 412 Union Street S.E., University of Minnesota, Minneapolis MN 55455. Qualified students interested in graduate credit should inquire at time of registration)

chemical dependency counseling program

YOUR ATTENTION IS ALSO CALLED TO THE CHEMICAL DEPENDENCY COUNSELING CERTIFICATE PROGRAM, page 396.

Registration forms for all courses offered by the Chemical Dependency Counseling Program (see page 396) are available *only* through the Chemical Dependency Counseling Program, School of Public Health, University of Minnesota, 226 University Park Plaza, 2829 University Avenue, Minneapolis MN 55414.

The application process must be completed by August 1 for Fall Quarter enrollment and by January 15 for Spring Quarter enrollment. To obtain a formal application or any further registration information, write to the above address or call the program office at 373-8175.

A personal screening interview may be requested. In this instance, a non-refundable \$15 screening interview fee will be required prior to the start of the interview process.

PubH 3030 FUNDAMENTAL ASPECTS OF DRUG ABUSE AND DEPENDENCY. 3 degree credits, \$52.50 plus \$10 course fee. Total \$62.50.

Series of lectures with emphasis on the historical and cultural perspectives of drug use and abuse and the principles of pharmacology as applied specifically to the various classifications of mood altering chemicals. (Prereq advance application or #. Under special circumstances this course may be taken for graduate credit; check at time of application for admission. Requests for admission should be made to the Chemical Dependency Counseling Program)

Fall Qtr Sec 1 T—6:30-9, HSUnitA 2-530

Spring Qtr Sec 2 Th—6:30-9, HSUnitA 2-530

PubH 3031 THE DISEASE PROCESS AND SOCIAL IMPLICATIONS OF DRUG DEPENDENCY. 3 degree credits, \$52.50 plus \$10 course fee. Total \$62.50.

Series of lectures and discussions with emphasis on theoretical views of the nature of dependency and drug use problems and approaches to diagnosis and/or assessment. Legal and social implications related to drug use will also be explored. (Prereq 3030 or #. Under special circumstances this course may be taken for graduate credit; check at time of application for admission. Requests for admission should be made to the Chemical Dependency Counseling Program)

Fall Qtr Sec 1 Th—6:30-9, HSUnitA 2-530

Winter Qtr Sec 2 T—6:30-9, HSUnitA 2-530

PubH 3032 COUNSELING THE ALCOHOLIC AND OTHER DRUG DEPENDENT PERSONS. 3 degree credits, \$52.50 plus \$10 course fee. Total \$62.50.

This course emphasizes the application of theory and techniques of diagnosing/assessing of drug use problems in small group settings as well as various theoretical approaches to providing counseling and treatment services. (Prereq 3031 or #.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Under special circumstances this course may be taken for graduate credit; check at time of application for admission. Requests for admission should be made to the Chemical Dependency Counseling Program)

Winter Qtr Sec 1 Th—6:30-9, HSUnitA 2-530

Spring Qtr Sec 2 T—6:30-9, HSUnitA 2-530

PubH 3035 INTERNSHIP IN ALCOHOL AND DRUG ABUSE. 3-12 degree credits, \$17.50 a credit.

A six-month (125 working days) rotating clinical internship in approved and affiliated institutions or agencies under professional supervision. (Prereq 3032 and #. Requests for admission should be made to the Internship Program Coordinator in the Chemical Dependency Counseling Program office)

PubH 3036 BASIC HELPING SKILLS. 4 degree credits, \$70 plus \$10 course fee. Total \$80.

Utilizes individual and group exercises to increase the student's level of competency in the area of basic helping skills that facilitates the establishment of an effective helper-helpee relationship. (Prereq #. Requests for admission should be made at the Chemical Dependency Counseling Program office.) Offered Fall, Winter and Spring Quarters on a Special Term basis.

PubH 3037 HELPING THE CHEMICALLY DEPENDENT FAMILY. 3 degree credits, \$52.50 plus \$10 course fee. Total \$62.50.

Lectures, small groups, and role playing aimed at providing an introduction to marriage and family counseling with particular application to the chemically dependent family. (Prereq #. Under special circumstances this course may be taken for graduate credit; check at time of application for admission. Requests for admission should be made to the Chemical Dependency Counseling Program office.) Offered Fall and Spring Quarters on a Special Term basis.

PubH 3038 ADVANCED HELPING SKILLS. 4 degree credits, \$70 plus \$10 course fee. Total \$80.

Designed to enable students to facilitate client's exploration of self and understanding of the problem, assist in setting appropriate therapeutic goals, and facilitate implementation of action programs. Views to the helping process from the frameworks of: 1) Systematic skills training; 2) Social-influence theory; and 3) Learning theory. Extensive use of video tape assists students in obtaining feedback. (Prereq 3036 and #. Requests for admission should be made to the Chemical Dependency Counseling Program office.) Offered Fall, Winter and Spring Quarters on a Special Term basis.

new

PubH 5036 GROUP COUNSELING IN CHEMICAL DEPENDENCY. 3 degree credits, \$55.50 plus \$10 course fee. Total \$65.50.

Primary focus on the small group and the role it plays in the recovery process. Process variables in facilitating group interaction both in therapy and staff meetings are considered. **Must be taken S-N.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. Requests for admission should be made to the Chemical Dependency Counseling Program office.) Offered Fall, Winter and Spring Quarters on a Special Term basis.

environmental health

PubH 5151 ENVIRONMENTAL HEALTH. 3 degree credits, \$55.50.

Methods for promoting man's health and comfort by controlling the environment. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—7-9:30, Mayo 1250, Straub

PubH 5159 SEMINAR: ENVIRONMENTAL HEALTH. 1 degree credit, \$18.50.

To be offered alternate years. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—7-8:30, HSUnit A 2-580, Straub

PubH 5171 ENVIRONMENTAL MICROBIOLOGY. 3 degree credits.

To be offered **Spring Quarter 1979** and alternate years thereafter.

PubH 5181 INTRODUCTION TO AIR POLLUTION PROBLEMS. 3 degree credits, \$55.50.

History, sources, controls, effects, surveys, legal aspects, and administration of air pollution programs. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 **M**—6:20-8, Mayo 1250, Paulus

PubH 5182 AIR POLLUTION CONTROLS AND SURVEYS. 3 degree credits.

To be offered **Spring Semester 1979** and alternate years thereafter.

PubH 5201 MEASUREMENT AND APPLICATION OF IONIZING RADIATION. 3 degree credits.

To be offered **Winter Quarter 1979** and alternate years thereafter.

PubH 5223 FOOD SERVICE SANITATION FOR THE HOSPITALITY INDUSTRY. 3 degree credits, \$55.50.

Designed for dietitians, managers, supervisors, and other individuals employed in a supervisory capacity in the hospitality industry. Basic principles of food sanitation are reviewed, with strong emphasis on developing an educational program for the food service worker in each food establishment. Emphasis will be placed on microbial implications in food-borne disease outbreaks and personal hygiene of the food service worker. Considerable time will be spent on the many teaching aids available to the industry. Public Health implications of food preparation and service are covered, as well as the basic health aspects of regulatory control by official public health agencies. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—7-9:30, HSUnit A 2-533, Jopke

(See related courses in Food Science and Nutrition)

PubH 5241 ENVIRONMENTAL HEALTH ASPECTS OF WATER SUPPLY. 3 degree credits.

To be offered **Spring Quarter 1979** and alternate years thereafter.

PubH 5244 ENVIRONMENTAL HEALTH ASPECTS OF WASTE WATER SYSTEMS. 3 degree credits, \$55.50.

Role of liquid wastes in health of man; physical, chemical, and biological characteristics; evaluation of source, treatment, and disposal facilities. To be offered alternate years. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—7-9:30, Mayo 1250, Straub

maternal and child health

★**PubH 5610 PRINCIPLES, PROBLEMS, AND ISSUES IN MATERNAL AND CHILD HEALTH.** 3 degree credits, \$55.50.



This course is designed for students (undergraduate, graduate, or continuing education) and professionals in health and other disciplines who are either currently

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

working or planning to work in programs which deliver services to families. More specifically the course provides a general introduction to maternal and child health with emphasis on current terminology, principles, and concepts of primary care, health maintenance, preventive care, organization, and evaluation. This course forms the background for other MCH courses which are offered later in the academic year. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 50 students)

Fall Qtr Sec 1 **M**—6:30-8, HSUnit A 2-530, Venters

★**PubH 5616 RIGHTS OF CHILDREN AND YOUTH: ABUSE AND NEGLECT.** 4 degree credits, \$74.

This course is designed for students (undergraduate, graduate or continuing education) who wish to have a more in depth learning experience dealing with the needs and rights of children and parents and with the neglect and abuse of children. The course will draw from several disciplines and will cover the historical aspects of the problem, the legal aspects, identification and reporting procedures, family assessment and treatment modalities, follow-up processes, research, prevention and the implications for societal action. (No prereq. A joint Day/Extension class limited to 100 Extension students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **MW**—4:15-6, HSUnit A 2-620, tenBensel

★**PubH 5622 WOMEN'S HEALTH: ISSUES AND CONTROVERSIES.** 4 degree credits, \$74.

This course will explore current issues and controversies affecting women's health care from an historical perspective and public health vantage point. It will contrast methods of health care delivery, professional and consumer education, and address current literature. It will include specific health needs of underserved women in the population (i.e. single parents, battered women, etc.). Guest speakers from the community will be an integral part of the discussion periods. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40 students)

Spring Qtr Sec 1 **Th**—7-9:30, HSUnit A 2-520, Turnquist

hospital and health care administration

★**PubH 5764 PRINCIPLES OF FINANCIAL MANAGEMENT IN HEALTH SERVICES ORGANIZATIONS.** 4 degree credits, \$74.

Principles of financial management including basic accounting and statistical tools; analysis of hospital financial statements; sources and uses of operating and capital funds; long-term finances; audits and internal control; cost finding; budgeting; hospital rates, rate setting, and relationships with third-party payers. (Prereq MHA degree, currently employed. Qualified students may register for graduate credit at the University of Minnesota. Limited to 10 extension students)

Winter Qtr Sec 1 **MF**—8:15-10 a.m., HSUnit A 2-520, Oszustowicz

PubH 8760 SELECTED TOPICS IN HOSPITAL AND HEALTH CARE ADMINISTRATION IN COST CONTAINMENT. 5 degree credits. **To be offered first five-week term, summer 1978.**

Independent study and tutorial guidance on selected problems and current issues in the field of health and health care. (Prereq MHA degree, currently employed. Open only to students admitted to the University of Minnesota graduate school)

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

PubH 8761 READINGS IN THEORY AND PRACTICE OF HOSPITAL AND HEALTH CARE ADMINISTRATION—IN COST CONTAINMENT. 2 degree credits, \$57.



(Prereq MHA degree, currently employed. Open only to students admitted to the University of Minnesota graduate school)

Fall Qtr Sec 1 Room & Time arranged, Weckwerth, Dornblaser.

PubH 8762 CONTEMPORARY PROBLEMS (IN COST CONTAINMENT) OF HOSPITAL AND RELATED HEALTH SERVICES. 4 degree credits, \$114.



Current concepts, problems, principles, and future developments in health and hospital care. (Prereq MHA degree, currently employed. Open only to students admitted to the University of Minnesota graduate school)

Winter Qtr Sec 1 Room & time arranged, Weckwerth, Dornblaser

Spring Qtr Sec 2 Room & time arranged, Weckwerth, Dornblaser

public health administration

★PubH 5711 PUBLIC HEALTH LAW. 4 degree credits, \$74.



Introductory course for those with little or no legal background. Basic concepts of the law, legislative process, legal cases for the existence and administration of public health programs. Legal aspects of current public health issues and controversies and the regulatory role of the government in the health services system. (Prereq Public Health student, baccalaureate degree or #. Limited to 40 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6-9, HSUnitA 2-520, McInerney

public policy

For information on noncredit conferences or workshops in Public Policy, please contact William C. Rogers, 306 Westbrook Hall; telephone 373-3709.

(See also related courses in Public Affairs, History, Informal Courses, Political Science)



quantitative analysis (QA)

Carl R. Adams, Associate Professor of Quantitative Analysis

John C. Anderson, Assistant Professor of Quantitative Analysis

P. George Benson, Assistant Professor of Quantitative Analysis

Norman Chervany, Professor of Quantitative Analysis

Arthur V. Hill, Assistant Professor of Quantitative Analysis

★QA 1050 ELEMENTARY MANAGERIAL STATISTICS. 4 degree credits, \$66 plus \$4 special fee. Total \$70.

Introduction to quantitative decision making. Probabilistic and statistical techniques in decision making, data analysis, and management information systems, e.g., laws of probability, sampling, estimation, and regression. (Prereq Math 1141, 1131 or equiv. Limited to 50 students)

- Fall Qtr** Sec 1 **M**—5:30-8:50, AndH 330, Benson
 Sec 2 **T**—5:30-8:50, AndH 270
 Sec 3 **W**—5:30-8:50, AndH 310
 Sec 4 **Th**—5:30-8:50, AndH 350
 Sec 5 **Sa**—9 a.m.-12:20, AndH 270
- Winter Qtr** Sec 6 **M**—5:30-8:50, AndH 350, Benson
 Sec 7 **T**—5:30-8:50, AndH 350
 Sec 8 **W**—5:30-8:50, AndH 350
 Sec 9 **Sa**—9 a.m.-12:20, AndH 350
- Spring Qtr** Sec 10 **M**—5:30-8:50, AndH 310, Benson
 Sec 11 **T**—5:30-8:50, AndH 350
 Sec 12 **W**—5:30-8:50, AndH 270
 Sec 13 **Sa**—9 a.m.-12:20, AndH 350

★QA 3053 QUANTITATIVE METHODS FOR ADMINISTRATION. 4 degree credits, \$70.

Statistical estimation and prediction, statistical decision making, introduction to design of experiments, regression and correlation, and time series analysis. (Prereq 1050. Limited to 45 students.)

- Spring Qtr** Sec 1 **W**—6-9:20, BlegH 230, Chervany

★QA 3055 INTRODUCTION TO MANAGEMENT SCIENCES (replaces OAM 3055). 4 degree credits, \$70 plus \$4 course fee. Total \$74.

First course in the use of analytical approaches and techniques within business contexts. Emphasis on the role of mathematical models, statistical techniques related to data acquisition, and the use of computers and computer techniques in solving organizational problems. Examples will illustrate the use of both deterministic and stochastic models. Laboratory session will include problem solving and case analysis. (Prereq 1050, Math 1142 or equiv. Limited to 50 students.)

- Fall Qtr** Sec 1 **M**—5:30-8:50, AndH 350, Adams
 Sec 2 **T**—5:30-8:50, AndH 370
 Sec 3 **W**—5:30-8:50, AndH 250
- Winter Qtr** Sec 4 **M**—5:30-8:50, AndH 250, Adams
 Sec 5 **T**—5:30-8:50, AndH 250, Hill
 Sec 6 **W**—5:30-8:50, AndH 250
- Spring Qtr** Sec 7 **M**—5:30-8:50, AndH 370, Adams
 Sec 8 **T**—5:30-8:50, AndH 250
 Sec 9 **W**—5:30-8:50, AndH 250

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.



real estate (RE)

(See also BLaw 0098C, Real Estate Law; and GC 3582, Legal Studies; Real Estate)

Marcella Anderson, Broker, Realty Center, Inc.
William D. Balsiger, Northland Mortgage Co.
Russell Brackett, Chase-Brackett Company
Gerald Carroll, Wurst, Bundlie, Carroll & Crouch, Attorneys
Sampson Child, Clifford R. Johnson & Associates
Dan Diebold, Broker, Southwest Gallery of Homes
Gary Elliott, Elliott Realty, Inc.
James Griebel, Lybrand, Ross Bros. and Montgomery
Jack Hicks, Minneapolis Star and Tribune
Richard Hafner, Northland Mortgage Company
Ernest O. Hartwick, broker, Hartwick Realty, Inc.
Arthur Helland, Appraiser-Consultant
Clifford Johnson, real estate appraisals, Clifford R. Johnson & Associates
Wayne Johnson, Finance Records Dept., Hennepin County
Charles B. Knudsen, Broker, Knudsen Realty Co.
Fred Kueppers, Jr., Attorney, Kueppers, Kueppers, Von Feldt, and Salmen
Larry Laukka, Laukka and Associates
Ray N. McCloughan, Minnesota State Highway Dept.
Linus F. Munger, Munger Insurance Agency
Thomas C. Munger, Munger Insurance Agency
Kenneth O. Parke, Thorpe Bros., Inc.
Paul F. Resberg, broker, Variety Homes, Inc.
Jack Rice, broker, The Rice Co.
Bernard G. Rice, Executive Vice President, Minnesota Association of Realtors
Peter Rosko, Associate Professor of Finance and Insurance
Howard Shenehon, Shenehon-Goodlund & Associates, Inc.
Gerald Smedberg, broker, Smedberg & Associates
Russell C. Smith, Russell Smith Associates, Inc.
James Wadsworth, The Griffin Companies, Inc.

The University of Minnesota cooperates with the Minnesota Association of Realtors in a program of educational training leading toward competence in the professional aspects of real estate practice. Instructional staff for each course will be made up of a number of practicing realtors in the Twin Cities. Coordinator for the Real Estate Boards is Bernard G. Rice, 8200 Normandale Blvd., Suite 420, Minneapolis, Minnesota 55437.

Successful completion of RE 0001C and RE 0011C, Fundamentals of Real Estate Practice and Advanced Real Estate, meets the requirement of the Real Estate License Law of the State of Minnesota for 60 hours of approved study within two years of initial licensing as a salesperson. Each salesperson shall be required to complete both courses successfully. RE 0001C must be completed before RE 0011C. They may not be taken concurrently.

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★**RE 0001C FUNDAMENTALS OF REAL ESTATE PRACTICE.** 3 certificate credits, \$49.50.

The basics of various aspects of the real estate business—appraisal, property management, sales brokerage, financing, real estate investments, land development and preparation of essential contracts. A basic course: should be taken prior to other courses in real estate curriculum. Approved by the Commissioner of Securities pursuant to Minnesota statute section 82.22. **May not be taken concurrently with 0011C.** (No prereq. Limited to 100 students)

Fall Qtr Sec 1 **Th**—6-9, AndH 310, Rice

Spring Qtr Sec 2 **W**—6-9, AndH 310, Rice

★**RE 0002C PRINCIPLES OF COMMERCIAL AND INDUSTRIAL REAL ESTATE.** 4 certificate credits, \$66.

Fundamentals of analyzing and evaluating investments in income-producing real estate properties. Operating statement; financing effects; depreciation methods; tax analysis; exchanging properties; valuation. Collection and analysis of investment data from a current field of study. (Prereq open to persons having completed one or more RE courses, or persons experienced in real estate. Limited to 30 students)

Spring Qtr Sec 1 **W**—5:30-8, BlegH 245, Rosko

RE 0004C REAL ESTATE APPRAISAL. 3 certificate credits, \$49.50.

Primarily for the consideration of principles and practices in the valuation of residential real estate; the approaches to value, capitalization and depreciation, a case study, and summation and the appraisal report. Secondary consideration only to specialized income appraisal reports. (No prereq but real estate experience or RE 0001C is desirable)

Spring Sem Sec 1 **Th**—6:20-8, AndH 250, Rice

RE 0006C REAL ESTATE FINANCING AND INSURANCE. 3 certificate credits, \$49.50.

Kinds and types of insurance necessary and advisable to adequately cover property of all kinds, residential real estate financing—F.H.A., V.A., conventional contract for deed—determining degree of risk and extending the loan, sources of money available and procedures and policies of same. (No prereq)

Fall Sem Sec 1 **T**—6:20-8, AndH 310, Rice

★**RE 0011C ADVANCED REAL ESTATE.** 3 degree credits, \$49.50 plus \$10 special fee. Total \$59.50.

Advanced appraising, financing, marketing, real estate law; sale of special properties—condominiums, town houses, land; real estate advertising; real estate securities; state and federal taxation, real property taxation property insurance and customer communication. **May not be taken concurrently with 0001C.** Approved by the Commission of Securities pursuant to Minnesota Statute section 82.22. (Prereq RE 0001C or real estate experience. Limited to 75 students)

Fall Qtr Sec 1 **M**—6-9, AndH 270, Rice

Spring Qtr Sec 2 **M**—6-9, BlegH 130, Rice

recreation, park and leisure studies (Rec)

(School of Physical Education, Recreation, and School Health Education)

Elizabeth A. Griffin, Instructor in Recreation, Park and Leisure Studies

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★**Rec 5300 FOUNDATIONS OF OUTDOOR EDUCATION.** 3 degree credits, \$55.50.

Investigations of the philosophical, historical and educational foundations of outdoor education. (Prereq senior, 1520 or 5100 or #. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—7-9:30, CH 214, Griffin

(See also IC 0381, Sports in America)

★**Rec 5900 WORKSHOP: CONTEMPORARY ISSUES IN LEISURE SERVICES.** 3 credits (maximum 12 cr). \$55.50 plus \$5 lab fee. Total \$60.50.

Contemporary issues emphasizing administrative and supervisory functions for recreation and allied professionals; individual offerings will focus on special issues and/or professional groups. An interdisciplinary approach to outdoor education concepts, ideas and experiences will be presented in a variety of settings. Emphasis will be placed on outdoor education leadership. Intended for school teachers, recreation leaders and college juniors, seniors and graduate students and adult education students. (Focus this offering: **Programming in Outdoor Education.**) (Prereq Δ. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Spec Term Sec 1 **Oct. 7, 14,** 6-10 p.m.

Oct. 8, 15, 8-6 p.m.

Nov. 10, 7-10 p.m.

Belwin Outdoor Education Lab

1553 Stagecoach Trail South Afton (436-5243), Griffin

(Transportation for St. Paul public school teachers will be provided from Harding High School to Belwin)

Spring Qtr Sec 2 **W**—5:30-8, Dodge Nature Center,

1797 Charlton, West St. Paul (455-4531), Griffin

religious studies (ReIS)

(See also IC 0141, Art and Architecture of the Jewish People; Near and Middle Eastern Languages; Hist 5279, Religious History of Modern Europe; GC 1357, World Religious Beliefs; GC 3354, Philosophy, Science and Religion; Phil 1011, Science and Religion; Psy 3911, Personality and Religion; Soc 5151, Religion as a Social Institution)

Alf Thomas Kraabel, Professor of Classics

ReIS 1032 RELIGIONS OF EAST ASIA. 4 degree credits, \$EAL 1032, \$EAS 1032. \$66 (◆\$33)

Religious aspects of Confucianism, Taoism, Buddhism, and Shintoism as practiced in East Asia; Christian missions in East Asia. (No prereq. Meets concurrently with EAL 1032)

Fall Qtr Sec 1 T—6:20-8:50, FolH 201

ReIS 1034 INTRODUCTION TO JUDAISM. 4 degree credits, \$JwSt 1034, 3034. \$66. (◆\$33)

See description for JwSt 1034, page 252. Meets concurrently with JwSt 1034, 3034. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, Fol H 202, Zahavy

ReIS 1036 THE RELIGION OF ISLAM. 4 degree credits, \$MidE 1036. \$66. (◆\$33)

The rise of Islam. The role of Muhammad, Koran, traditions; fundamentals and observances of the faith; sectarian movements; the spread of Islam into Asia and Africa: Baha'i and Black Muslim components; reformist movements and change. (No prereq. Meets concurrently with MidE 1036)

Fall Qtr Sec 1 **M**—6:20-8:50, FolH 201, Chejne



rhetoric (Rhet)

(Technical Communication Program)

(See also Study Skills; General College and English Communications courses; and other study helps, page 377)

James E. Connolly, Professor of Rhetoric

Richard W. Ferguson, Instructor in Rhetoric

Warren Y. Gore, Assistant Professor of Rhetoric

John F. Griffin, Lecturer in Rhetoric

James R. Holloway, Associate Professor of Rhetoric

Richard O. Horberg, Associate Professor of Rhetoric

William M. Marchand, Professor of Rhetoric

Starling W. Price, Professor of Rhetoric

Lyman K. Steil, Assistant Professor of Rhetoric

Arthur E. Walzer, Assistant Professor of Rhetoric

★**Rhet 1147 EFFICIENT READING.** 3 degree credits in Business Administration, General College, and Agriculture. \$49.50 plus \$2 special fee. Total \$51.50. (IS)

Designed for students, business, or professional people of average or above-average reading ability who wish to improve their reading speed and comprehension. Emphasizes reading techniques useful in achieving or maintaining scholastic or professional status. A suggested follow-up for PO 1001, How to Study. (No prereq. Limited to 30 students)

Fall Qtr	Sec 1	M —6:20-8:50, ForH 115
	Sec 2	T —6:20-8:50, ForH 115, Price
	Sec 3	W —6:20-8:50, ForH 115, Horberg
	Sec 4	Th —7-9:30, Irondale, HS 105, New Brighton; Gore
Winter Qtr	Sec 5	M —6:20-8:50, ForH 115, Marchand
	Sec 6	T —6:20-8:50, ForH 115
	Sec 7	W —6:20-8:50, Richfield HS 142, Horberg
Spring Qtr	Sec 8	M —6:20-8:50, ForH 115, Marchand
	Sec 9	T —7-9:30, Minnetonka HS 119
	Sec 10	W —6:20-8:50, ForH 115, Holloway
	Sec 11	W —7-9:30, Ramsey HS 239, Roseville

★**Rhet 3551 PROFESSIONAL WRITING.** 4 degree credits. \$70.

Projects and reports in professional communication: the resume, application letter, interview; study of professional journals; the review of literature; specialized bibliographic tools; the feature article. (Prereq jr standing. Limited to 23 students)

Fall Qtr	Sec 1	T —6:20-8:50, ForH 447, Griffin
Spring Qtr	Sec 2	M —6:20-8:50, ForH 447, Walzer

★**Rhet 3562 SCIENTIFIC AND TECHNICAL WRITING.** 4 degree credits. \$70.

Methods of exposition in scientific and technical writing; types of reports; audience analysis; continuous practice in report writing. (Prereq jr standing. Limited to 23 students)

Winter Qtr	Sec 1	T —6:20-8:50, ForH 130, Ferguson
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(See also technical writing courses in English and in Informal Courses)

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

★**Rhet 5170 MANAGERIAL COMMUNICATIONS.** 4 degree credits, \$74.

Systematic analysis of communication techniques and procedures for the manager. Emphasis on manager's ability to achieve vertical and horizontal understanding and acceptance. Class activities include readings, guest speakers, and a term project. (No prereq. Limited to 25 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6:20-8:50, ForH 447, Steil

russian

(See Slavic and East European Languages)



salesmanship

See Marketing; Journalism; and General College marketing sequence.

Sal 0001C Now GC 1053, **Selling Approaches and Techniques.** See page 158.

scandinavian languages (Scan)

(See also IC 0121, *Fantasy and Imagination: Scandinavian Literature in Translation*; Pol 5444, *Government and Politics in Scandinavian Countries*)

Anatoly Lieberman, Associate Professor of Scandinavian

William Mishler, Associate Professor of Scandinavian

Göran Stockenström, Associate Professor of Scandinavian

Börje Vähämäki, Assistant Professor of Scandinavian

Language laboratory fees are charged for courses in which use of the lab is required or recommended. Cassette tapes are available to extension classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

The following non-language classes may be applied toward the CLA foreign language requirement, Route II for Danish, Finnish, Norwegian, Swedish (see page 354): Scan 1504, 5503, 5601.

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

finnish (Fin)

Fin 1103 BEGINNING FINNISH. 5 degree credits, \$82.50.

This course, intended for students who have little or no previous knowledge of Finnish, stresses spoken Finnish, but provides, in addition, the essentials of grammar and some practice in simple composition. (Prereq 1102 or #)

Fall Sem Sec 1 **T**—6:20-9:05, FolH 208, Vähämäki

swedish (Swed)

Swed 1101-1102-1103 BEGINNING SWEDISH. 5 degree credits each quarter, \$82.50 plus \$5 course fee. Total \$87.50 each quarter. (**IS 1101**)

This sequence, intended for students who have little or no previous knowledge of Swedish, stresses fundamentals of grammar, correct pronunciation, reading, practice in conversation, and simple composition. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr 1101 Sec 1 **M**—6-10:05, FolH 302, Stockenström

Winter Qtr 1102 Sec 2 **M**—6-10:05, FolH 302, Stockenström

Spring Qtr 1103 Sec 3 **M**—6-10:05, FolH 302, Stockenström

Scan 1504 SCANDINAVIAN IMMIGRANT CULTURE AND ITS BACKGROUND. 4 degree credits, \$66. (◆\$33)

A study of the background, reasons and nature of Scandinavian immigration to America, with special study of Scandinavian culture in the Midwest. May be applied toward the CLA foreign language requirement, Route II for Danish, Finnish, Norwegian, Swedish (see page 354). (No prereq)

Spring Qtr Sec 1 **Th**—6:20-8:50, FolH 304, Stockenström

Scan 3501 INTRODUCTION TO SCANDINAVIA. 4 degree credits, \$70. (◆\$35)

Cultural, social, and political developments; major cultural figures. Readings in translation. Does not count toward major. (No prereq. May be applied toward the CLA foreign language requirement, Rt II [see page 354])

Winter Qtr Sec 1 **W**—6:20-8:50, FolH 205, Mishler

Scan 3602 THE TALES OF HANS CHRISTIAN ANDERSEN. 4 degree credits, \$70. (◆\$35)

Andersen's stories and tales. In English. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, FolH 205, Mishler

Scan 3604 FINNISH LITERATURE IN TRANSLATION. 4 degree credits, \$70. (◆\$35)

Major literary works from the 1800s to the present. (No prereq)

Fall Qtr Sec 1 **M**—6:20-8:50, FolH 208, Vähämäki

Scan 5503 SCANDINAVIAN FOLKLORE. 4 degree credits, \$74. (◆\$37)

Literary and folkloristic investigation of Scandinavian ballad and folktale. Readings in translation for nonmajors. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 354]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-8:50, FolH 303, Lieberman

(See also Ger 3541, Folklore)

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Scan 5601 INGMAR BERGMAN IN THE CONTEXT OF MODERN SCANDINAVIAN LITERATURE. 4 degree credits, \$74 plus \$5 special fee. Total \$79. (◆\$37 plus \$5 special fee. Total \$42)

Viewing of several of Ingmar Bergman's films, readings of film scripts and discussion. May be applied toward the CLA foreign language requirement, Route II for Danish, Finnish, Norwegian, Swedish (see page 354). (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:20-8:50, NH 45, Mishler

(See other film courses in American Studies, German; General College, Informal Courses)

school health education (Hlth)

(School of Physical Education, Recreation and School Health Education)

Lyle E. Lewis, Lecturer in Health Education

Frank C. Thissen, Lecturer in Health Education

★**Hlth 5100 DRIVER EDUCATION I.** 4 degree credits, \$74 plus \$12 special fee. Total \$86.

Materials and methods for driver education; building a plan for driver education for a specific school; behind-the-wheel training. Valid Minnesota driver's license required. **May not be taken S-N.** (Additional time arranged for behind-the-wheel instruction.) (No prereq. Limited to 32 students. Qualified students may register for graduate credit at the University of Minnesota. May not be used in a graduate program at the University of Minnesota)

Fall Qtr Sec 1 **W**—7-10, Richfield HS 116, Lewis

★**Hlth 5101 DRIVER EDUCATION II.** 4 degree credits, \$74 plus \$12 special fee. Total \$86.

See course description for Hlth 5100. Second of 3 courses to meet Minnesota certification requirements after September 1, 1966. **May not be taken S-N.** (Prereq 5100. Limited to 32 students. Qualified students may register for graduate credit at the University of Minnesota. May not be used in a graduate program at the University of Minnesota)

Winter Qtr Sec 1 **W**—7-10, Richfield HS 116, Lewis

★**Hlth 5130 SAFETY EDUCATION.** 4 degree credits, \$74.

Scope and nature of the accident problem in our society; study of curricular areas leading to accident prevention. **May not be taken S-N.** (Prereq senior. Limited to 32 students. Qualified students may register for graduate credit at the University of Minnesota. May not be used in a graduate program at the University of Minnesota)

Spring Qtr Sec 1 **T**—7-10, NorrisH 201, Thissen

★**Hlth 5602 THE DRIVER SIMULATOR.** 4 degree credits, \$74 plus \$12 special fee. Total \$86

Working with the simulator program to improve, expand, and reduce the cost of conventional driver education. **May not be taken S-N.** (Prereq 5100. Limited to 19 students. Qualified students may register for graduate credit at the University of Minnesota. May not be used in a graduate program at the University of Minnesota)

Spring Qtr Sec 1 **W**—7-10, Richfield HS 116, Lewis

Special Workshops (Hlth 5300 Contemporary Problems in School Health Education) in the area of chemical addictions in the secondary school student may be offered during the school year. For information, call or write Dr. Robert Cobb (373-3403) 101 Norris Hall, University of Minnesota, Minneapolis MN 55455.

psychology in the schools training programs (SchP)

V. Lois Erickson, *Assistant Professor of Psychoeducational Studies*
James Ysseldyke, *Associate Professor of Psychoeducational Studies*

SchP 5100 SCHOOL PSYCHOLOGICAL SERVICES. 3 degree credits, \$8100. \$55.50.

Psychological services in school settings; functions of psychologists in school-community contexts; assessment and treatment of educational and psychological disabilities. Not intended to meet certification requirements in school psychology. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **W**—7-9:30, Sandburg JHS 214, Golden Valley; Ysseldyke

SchP 5550 SEMINAR: PSYCHOLOGICAL EDUCATION. 3 degree credits, (maximum 9 cr). \$55.50.

Review of curriculum programs in psychological/affective education including achievement training, sensitivity groups, psychological and moral education. Not intended to meet certification requirements in school psychology. For teachers and psychologists in the schools whose professional work includes applications of psychology to the classroom setting. Emphasis will be on applications of developmental psychology to curriculum programs in affective education. **Emphasis will be programs in achievement training, ego development, and moral education.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6-8:30, EltH N508, Erickson

secondary education (SeEd)

(curriculum and instruction)

Gerald J. Brunetti, *Associate Professor*

David B. O'Fallon, *Assistant Professor, Continuing Education in the Arts*

Judith Youngers, *Instructor*

SeEd 5325 IMPROVISATIONAL DRAMA TECHNIQUES IN THE CLASSROOM. 3 degree credits (maximum 6 cr). \$55.50.

Experiences in improvisation, including training in beginning theatre games, sound and motion, characterization and plot structure; development of improvisational activities based on themes and literature of subject interest and suited to the needs of students. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

new

Spec Term Sec 1 **W**—7-10, Mar. 29, Apr. 5, 12, 19, 26, May 10;

Sa—9 a.m.-12, Apr. 8, May 6;

PeikH 325, Brunetti, O'Fallon, Youngers

slavic and east european languages

Irina Corten, *Assistant Professor of Slavic Languages*

Adele Donchenko, *Associate Professor of Slavic Languages*

Leonard A. Polakiewicz, *Instructor in Slavic Languages*

Tatiana Prokopov, *Professor of Slavic Languages*

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Language laboratory fees are charged for courses in which use of the lab is recommended or required. Cassette tapes are available to extension classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

The following non-language classes may be applied toward the CLA foreign language requirement, Rt II for Russian [see page 354]: Russ 3503.

polish (Plsh)

Plsh 1104-1105 INTERMEDIATE POLISH. 5 degree credits, \$82.50 plus \$5 course fee. Total \$87.50.

Grammar review, advanced texts, practice in speaking. (Prereq 1103 or # for 1104; 1104 or # for 1105)

Fall Sem 1104 Sec 1 F—6:20-9:05, FolH 302, Polakiewicz

Spring Sem 1105 Sec 2 F—6:20-9:05, FolH 302, Polakiewicz

russian (Russ)

(See also Hist 5264, Modern Russia; and Geog 3181, Soviet Union)

The following non-language classes may be applied toward the CLA foreign language requirement, Route II (see page 354): Hist 5264, 5265, 5266; Geog 3181; Russ 3503.

Russ 1101-1102-1103 BEGINNING RUSSIAN. 5 degree credits each quarter, \$82.50 plus \$5 course fee. Total \$87.50 each quarter. (IS 1101, 1102)

Grammar, pronunciation, reading, and practice in speaking. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr 1101 Sec 1 T—6:20-10:05, FolH 205, Donchenko

Winter Qtr 1102 Sec 2 T—6:20-10:05, FolH 205, Donchenko

Spring Qtr 1103 Sec 3 T—6:20-10:05, FolH 205, Donchenko

Russ 3503 TWENTIETH CENTURY RUSSIAN CIVILIZATION AND CULTURE. 4 degree credits, \$70. (◆\$35)



Aspects of Russian culture—land, peoples, languages, institutions, intellectual and artistic trends and achievements. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 354])

Fall Qtr Sec 1 T—6:20-8:50, FolH 207

serbo-croatian

(See Foreign Studies)

social and behavioral sciences

(See General College)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

social science (SSci)

SSci 3101 AN INTRODUCTION TO MARXISM. 4 degree credits, \$70. (◆\$35)

Marxist philosophy of science, knowledge, and social development; evolutionary and revolutionary processes of change; formation of class societies; capitalism, imperialism, paths to socialism; transition from socialism to communism. A team of 10 to 15 faculty members with varying interests presents Marxism from an interdisciplinary perspective. Class format includes lectures, discussions and debate on a variety of topics, including Marxist philosophy, sexism, social and political change, socialism, and aesthetics. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, VH 113



social work (SW)

James Goodman, Director
Beulah Compton, Professor of Social Work
Charles Hogan, Lecturer in Social Work
Donald Maypole, Associate II in Social Work
Manuel Miranda, Associate Professor of Social Work
Connie Philipp, Assistant Professor of Social Work
Annalee Stewart, Assistant Professor of Social Work
Michael Frumkin, Assistant Professor of Social Work

A MAJOR IN SOCIAL WELFARE CAN BE COMPLETED IN THE EVENING.

Those courses required in the Bachelor of Arts major are offered yearly. Interested students should discuss plans with an Extension counselor (373-3905).

B.A. Major Sequence

Required Preparatory Courses

SW 1001

1 course each from 4 of the 6 following categories: (1) Soc 1001; (2) Psy 1001; (3) Anth 1102; (4) Econ 1001, 1014, 3001, 3002; (5) Pol 1001, 1027, 1031, 1041, 1051; (6) CPsy 1301.

Major Requirements

SW 1001, 3004, 3005, 3101, 3984

32 cr from the following areas (specific courses listed at undergraduate adviser's office): 1 course in racial and ethnic diversity, 1 in organization theory; remaining cr from communication; social problems; human growth, development, and change; social history; law and social policy.

You need not be a majoring in Social Work to register for these classes.

SW 1001 INTRODUCTION TO SOCIAL WELFARE AND COMMUNITY SERVICES. 5 degree credits, \$82.50.

Fields of community-based social services, representative of societal responses to needs. Characteristics of such services reviewed historically, dynamically, and comparatively. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, ForH 60, Maypole

★SW 3004 SOME CONCEPTS OF HUMAN DEVELOPMENT AND CHANGE. 4 degree credits, \$5201. \$70.

Concepts of human development and change from various schools of thought: Erikson, Skinner, Maslow, and Jung. Relevance and implications for practice in the human services. (Prereq 1001. Limited to 45 students)

Winter Qtr Sec 1 **Th**—6:20-8:50, ForH 70, Miranda

SW 3005 SOCIAL WORK PROCESSES: METHODS OF INTERVENTION. 4 degree credits, \$5401. \$70.

The function of values and knowledge in social work practice; the meaning of giving and receiving help; the process in intervention; some social work principles. (Prereq 1001)

Spring Qtr Sec 1 **Th**—6:20-8:50, ForH 120, Stewart

SW 3101 SOCIAL WELFARE: A FRAMEWORK FOR ANALYSIS. 4 degree credits, \$5101. \$70.

Historical development, legislative enactments, administrative policy, and program structure under which federal, state, and local governmental programs of income maintenance, medical care, and public housing operate. (Prereq jr or sr)

Winter Qtr Sec 1 **T**—6:20-8:50, ForH 150, C. Hogan

★SW 3984 INTRODUCTION TO COMMUNITY DEVELOPMENT. 4 degree credits, \$70.

Trends, pace, and dynamics that dominate urban communities; strategies used to achieve neighborhood goals; factors that control and influence change in planning; action on the community level. (Prereq 1001 or #. Limited to 75 students)

Spring Qtr Sec 1 **W**—6:20-8:50, ForH 155, Frumkin

SW 5101 INTRODUCTION TO SOCIAL POLICY: SOCIAL WELFARE PERSPECTIVES. 3 degree credits, \$3101. \$55.50.

Open to students who lack undergraduate social work education in the social welfare institutional structure. Basic concepts and perspectives necessary for understanding and analyzing social welfare programs. (Qualified students may register for graduate credit at the University of Minnesota. Prereq # for undergrad)

Fall Qtr Sec 1 **M**—6:20-8:50, ForH 170, Hogan

SW 5201 THEORIES OF HUMAN GROWTH AND CHANGE: IMPLICATIONS FOR SOCIAL WORK. 3 degree credits, \$3004. \$55.50.

Open to students who lack undergraduate social work education in the social welfare institutional structure. Beginning synthesis of concepts of human growth and change. Review of various theories of human behavior and their implications for social work practice. A frame of reference within which the student may view the individual in his life's cycle will be developed. (Prereq # for undergrad. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—6:20-8:50, ForH 70, Philipp

★SW 5401 INTERVENTIVE METHODS IN SOCIAL WORK PRACTICE. 3 degree credits, \$3005. \$55.50.

Open to students who lack undergraduate social work education in the social welfare institutional structure. General concepts, functional concepts, strategies, and actions of social work practice. Introduction to the "problem-solving approach" as a framework for analyzing and dealing with situations of concern to social work. (Prereq # for undergrad. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—6:20-8:50, ForH 285, Compton

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

social work, continuing education in

(see also Adult Psychiatry, page 63; Early Childhood Studies Certificates, page 390; and Foster Care Education Certificate, page 392; and Youth Studies, page 337)

Mark Anderson, Chaplain, Metropolitan Medical Center, Minneapolis

Barbara Braham, Lindbergh High School SAIL Project, Hopkins Public Schools: formerly Psychiatric Social Worker, Community Mental Health Center

Willis Bright, Assistant Professor, Center for Youth Development and Research

Keith Buckley, Assistant Professor and Associate Director, Continuing Education and Extension Counseling

Miriam Cohn, Professor of Social Work

Simon Davidson, Family Counselor, Jewish Family and Children's Service, Minneapolis

William Hoffman, Director of Continuing Education in Social Work and Professor of Social Work

Lynn Kiely, Social Worker, Hopkins Public Schools; formerly Therapist, Bach Institute, Minneapolis

Clara Kanun, Professor and Director, Continuing Education and Extension Research Department

Ronald Kyllonen, M.D., Psychiatrist, Private Practice, Edina

Lew Linde, Executive Officer, Juvenile Releases, Minnesota Department of Corrections

Richard Obershaw, Counselor/Consultant, Werner Bros., and Private Practice, Grief Center, Minneapolis

Carole Olson, Family Life Educator, Family and Children's Service

Frank Quisenberry, Vice President, Educational Resources Health Central Institute, Minneapolis

Murray Reed, Chief Psychologist, Wilder Child Guidance and Development Center, St. Paul

Courses offered through Continuing Education in Social Work (CESW) complement and supplement social work courses currently being taught in the School of Social Work. They are specialized, refresher and/or introductory courses designed to enhance professional competence and practice in social work and related helping professions at *all levels of practice* (including post-MSW). Although most courses require no prerequisites and are not arranged sequentially, a student may package offerings which constitute a coherent program applicable to agency and/or individual needs, both short and long term (consultation is readily available through departmental staff). All courses carry certificate as distinguished from degree credit and are recorded on a transcript available at the University's Admissions and Records Office. Certificate credits may be accepted as meeting degree requirements at the discretion of other colleges and universities.

Some courses may require a B.A. degree (check individual course descriptions) with current employment in a social welfare agency. However, special consideration will be given to others with volunteer experience who have no B.A. degree and/or those who wish to pursue an interest in social work. Such prospective students are encouraged to apply to the Director of Continuing Education in Social Work.

For the CESW brochure, listing possible additions and/or changes in the program, please write to: *Continuing Education in Social Work, 338 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis 55455; or call (612) 373-5831*. For information regarding social work degree programs, write to the School of Social Work, 400 Ford Hall, 224 Church Street S.E., Minneapolis 55455; or call (612) 373-2632.

SW 0215C WORKING WITH THE AGED IN THE COMMUNITY. 3 certificate credits, \$49.50.

An examination of the aging process and the attendant needs and problems of the older person(s). The focus of the course will be directed towards understanding and support of individuals who are able to remain relatively independent in their own

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

homes, including public housing facilities. At least two of the sessions will be held in nursing homes and public housing projects. The course is recommended for paraprofessionals as well as others interested in a new career. (No prereq)

Spring Qtr Sec 1 **Th**—6:30-9, FolH 204, Hoffman

(See related courses in Child Psychology, Sociology)

SW 0217C DYNAMICS OF DEATH, DYING AND GRIEF COUNSELING. 3 certificate credits, \$49.50.

Designed for those professionals (social workers, nurses, physicians, funeral directors, clergy) whose work brings them into close contact with death, dying and grief. The course will explore the student's sensitivity and self-awareness concerning these topics along with an investigation of how death, dying and grief are viewed in our society today. Particular attention will be paid to the dynamics of loss and the reactions of loss. Loss and grief therapy, children and death, the problems of dying, support groups for the bereaved, the funeral as therapy as well as other pertinent areas revolving around death will be discussed and studied. Counseling emphasis will be on grief and bereavement. (No prereq)

Spring Qtr Sec 1 **M**—6:30-9, FolH 201, Obershaw

SW 0222C WORKING WITH GROUPS. 3 certificate credits, \$49.50.

Will examine the principles which guide the direct practitioner in organizing groups, developing interaction among the members and helping members to achieve goals. Planned primarily for staff in neighborhood houses and other group work oriented agencies and organizations. (No prereq. May be taken singly or as a total 9-credit program, along with 0223C & 0224C)

Fall Qtr Sec 1 **M**—9:30 a.m.-12, SocSci 1383, Cohn

SW 0223C PRINCIPLES OF STAFF SUPERVISION. 3 certificate credits, \$49.50.

An examination of principles which are most applicable to staff development. Methods and techniques to help staff identify needs and establish priorities, develop staff abilities, and help staff to monitor and evaluate actions will be examined and discussed. Planned primarily for staff in neighborhood houses and other group work oriented agencies and organizations. (No prereq. May be taken singly or as a total 9-credit program, along with 0222C & 0224C)

new

Winter Qtr Sec 1 **M**—9:30 a.m.-12, Cohn

SW 0224C PROCESS CONSULTATION. 3 certificate credits, \$49.50.

An examination of principles of process consultation, including the use of staff as consultants to each other, for improving individual actions and interactions, and changing climate and behavior within organizations. Planned primarily for staff in neighborhood houses and other group work oriented agencies and organizations. (No prereq. May be taken singly or as a total 9-credit program, along with 0222C & 0223C)

new

Spring Qtr Sec 1 **M**—9:30 a.m.-12, Cohn

SW 0510C APPROACHES TO COUNSELING THE ADOLESCENT. 3 certificate credits, \$49.50.

To provide social workers and other professionals who work with adolescents and their families with an increased understanding of adolescence and approaches to counseling with this age group. The course will explore the dynamics and function of the adolescent, the adjustment and emotional problems that adolescence presents, and techniques of helping adolescents communicate, relate, gain self-understanding and modify adjustment patterns. How to deal with interactional problem patterns

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

between adolescents and their peers and parents will also be discussed. This course is limited to individuals with prior experience in counseling or child care. (No prereq)

Fall Qtr Sec 1 **M**—7-9:30, RarigC 616, Kyllonen

(See also Youth Studies)

SW 0511C ADVANCED COUNSELING SEMINAR: ADOLESCENT PSYCHOTHERAPY TECHNIQUES. 3 certificate credits, \$49.50.

Course is open to experienced professionals who desire an investigation into counseling techniques and growth as a therapist. This will be a seminar and each participant should have an active case load for longitudinal study. (Prereq Master's level background of training or experience).

Winter Qtr Sec 1 **M**—7-9:30, BlegH 440, Kyllonen

SW 0512C CORRECTIONS: AN OVERVIEW OF LAWS, CONCEPTS AND TREATMENT PROGRAMS. 3 certificate credits, \$49.50.

Basic principles of corrections' relationship to the other criminal justice components, non-criminal approach to victimless crime, the four discretionary points of the criminal justice system, recent due process requirements of parole and institutional disciplinary hearings and current correctional legislation. Special emphasis will be placed upon community corrections programs such as youth service bureaus, diversion projects, restitution centers, half-way houses, jails and workhouses, and chemical dependency treatment programs. (No prereq)

Fall Qtr Sec 1 **W**—6-8:30, Jones 1, Linde

SW 0514C TECHNIQUES OF PSYCHOTHERAPY BEYOND THEORY. 3 certificate credits, \$49.50.

For those in search of "how to do it", theory may become a "dead end". It is often implied that theory is like the tip of an iceberg and that techniques and strategies are like the submerged portion of the iceberg—"so extensive that there just isn't enough time to deal with all of them". Recently, however, at least three authors and some researchers have begun to suggest that all of those "theoretical iceberg tips" may really be connected to the same submerged set of pragmatic therapeutic strategies and techniques. These techniques and strategies which appear to be the common denominators among a number of theoretical (or atheoretical) schools will be the main content of this course. (No prereq)

Fall Qtr Sec 1 **T**—7-9:30, WuH 130, Buckley

SW 0515C INTERVIEWING: INDIVIDUAL AND FAMILY. 3 certificate credits, \$49.50.

For all persons employed in the helping professions whose assignment includes interviewing and counseling. Attention will be given to the purpose of the interview and to the utilization of interviewing principles as well as roles and functions of social workers and other related disciplines in counseling individuals and families. This is prerequisite to 0518C. (No prereq)

Fall Qtr Sec 1 **W**—7-9:30, FolH 104, Olson

SW 0524C RACE RELATIONS: UNDERSTANDING DIFFERENT STATES OF REALITY. 3 certificate credits, \$49.50.


Deals with the impact that race and racial history and cultural experiences have upon communication between racial groups in American society, i.e., Black and White peoples. Topics such as racism, affirmative action, the effects of mass media, and the socio-economic status of non-White people will be analyzed in terms of their impact on the perceptions and behaviors of both White and non-White people. Strategies which might lead to better understanding of and problem solving in inter-racial

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

relations will be discussed. Staff, volunteers, and others who work in human service agencies or those interested in interracial relations will benefit from the course. (No prereq)

Fall Qtr Sec 1 **Th**—6-8:30, FolH 105, Bright

SW 0532C COUNSELING FROM A FEMINIST PERSPECTIVE. 3 certificate credits, \$49.50.

 Designed to stimulate the thinking of mental health professionals about their treatment of women. Existing theories of therapy will be examined for their implicit biases and assumptions about women in an effort to move toward the development of a theory of feminist therapy. Current knowledge and theories about women as taken from existing feminist literature will be reviewed in attempting to develop a theory of feminist therapy that is applicable and useful for working with clients. The course will also include an experiential component designed to teach new techniques and models for implementing a feminist perspective when working with clients. Open to individuals actively involved in or in training for, the helping professions. (No prereq)


Fall Qtr Sec 1 **M**—6-9, FolH 107, Braham, Kiely

SW 0533C FEMINIST THERAPY. 3 certificate credits, \$49.50.

Sequels SW 0532C, held Fall Qtr. *Limited to mental health professionals currently working with clients.* The course has a two-pronged purpose: working toward further development of theory based on a feminist perspective; and toward practical application of that theory. This course will provide a creative atmosphere to further develop techniques, provide case consultation and to continue a support base for feminist therapists. (No prereq)

Spring Qtr Sec 1 **M**—6-9, FolH 202, Braham, Kiely

SW 0534C CHILD AND ADOLESCENT PSYCHOLOGY FOR PRACTITIONERS I. 3 certificate credits, \$49.50.

 Directed to those many practitioners who have advanced in their human service work through personal experience and capability but want to broaden the base of understanding directly related to their work. Such people might be in corrections, residential treatment, drug counseling, crisis counseling, etc. Not research or academic in focus, the course does try to build connections between application and the wider knowledge in child and adolescent development and personality because most applied skills are limited in development without grasp of the broader fields on which they operate. (No prereq)


Winter Qtr Sec 1 **Th**—7-9:30, FolH 202, Reed

SW 0535C CHILD AND ADOLESCENT PRACTICE AND PSYCHOLOGY II. 3 certificate credits, \$49.50.

May be taken separately from 0534C but is addressed to the same group who are dealing in applied settings with children, youth or families and want to extend their knowledge in practice. Focus is on the procedures, techniques, problems, in dealing with behavior problem children, adolescents and their families. 0534C would be helpful but some practitioners may have sufficient background to move directly to this course. (No prereq)

Spring Qtr Sec 1 **Th**—7-9:30, FolH 107, Reed

★SW 0537C RESIDENTIAL TREATMENT—THE ART AND DISCIPLINE OF LIVING WITH OTHER PEOPLE'S CHILDREN IN NEED OF TREATMENT. 3 certificate credits, \$49.50.

 Deals with programming for children who are no longer able to function adequately in our family-structured environments; who have been designated emotionally disturbed and/or are not making a reasonable social adaptation. The focus shall be on the total environment as well as its component parts. All modalities will be viewed in

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

an effort to increase our critical faculties for 24 hour-a-day care and treatment. (Prereq: designed for all workers engaged in working with emotionally disturbed and socially maladapted children in residence out of their parental homes, as well as personnel in special settings, such as correctional institutions, group homes, half-way houses, and special foster homes. Limited to 30 students)

Fall Qtr Sec 1 W—6:30-9, FolH 204, Davidson

SW 0539C SOCIAL RESEARCH APPLICATION TO SOCIAL SERVICE. 3 certificate credits, \$49.50.

new
now

Planned to expand the knowledge of and ability to apply the findings of current social research to social work practice. Emphasis will be placed on the development of reading and analysis skills of social studies. Course work will include participation of students in identifying basic practice questions and developing research projects designed to find the answers. (No prereq)

Fall Qtr Sec 1 M—6:30-9, FolH 102, Kanun

Three sequential Youth Studies (YoSt) 5000-level Special Term courses (Work with Youth-Individual/Family/Groups) are being held throughout the year in cooperation with the Center for Youth Development and Research. Registration forms are available only through the Department of Continuing Education in Social Work. To obtain a copy of the special brochure, listing course descriptions, dates and registration procedures, call (612) 373-5831 or write to Continuing Education in Social Work, 331 Nolte Center, 315 Pillsbury Drive S.E., University of Minnesota, Minneapolis 55455.

management in human service agencies program

Continuing Education in Social Work is offering a three-course sequence, currently in its fifth year, designed to provide supervisory and management personnel working in human service agencies with a background in modern management concepts and practices. The sequence is especially intended for the manager or supervisor who has not had the benefit of formal management training and for staff who may be moving into such positions in the near future. The courses are also designed to introduce students to relevant theory and practice in the administration and management of agencies and to broaden their understanding of day-to-day agency life. **These courses may be taken singly or as a total 9-credit program, as outlined.**

SW 0310C INTRODUCTION TO MANAGEMENT. 3 certificate credits, \$49.50.

To give the supervisor and the administrator of the human service agency an introduction to the management of human and material resources necessary to accomplish agency objectives. Topics will include: definition of management, planning, organizing, leadership, decision making, management philosophy, communication, and the role of the manager as a change agent. The emphasis will be on practical application. (No prereq)

Fall Qtr Sec 1 W—6:30-9, FolH 108, Quisenberry

SW 0311C MANAGEMENT TECHNIQUES APPLIED TO HUMAN SERVICE AGENCIES. 3 certificate credits, \$49.50.

To acquaint the administrator and supervisor of human service agencies with some of the tools and techniques available to better enable them to accomplish agency objectives. Topics will include: industrial engineering techniques, planning techniques, financial management, the computer, and other management tools. The emphasis will be on practical application. (No prereq)

Winter Qtr Sec 1 W—6:30-9, FolH 103, Quisenberry

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

SW 0312C PERSONNEL MANAGEMENT IN HUMAN SERVICE AGENCIES. 3 certificate credits, \$49.50.

To focus on the management of human resources in human service agencies. Topics will include: methods of employee selection, employee evaluation, work group behavior, employee development, theories of employee motivation, legal environment of supervision, industrial relations, and methods of supervision. The emphasis will be on practical application. (No prereq)

Spring Qtr Sec 1 **W**—6:30-9, FolH 105, Quisenberry

sociology (Soc)

(See also General College courses in social and behavioral sciences; and Informal Courses)

Robert Alexander, Instructor in Sociology
Jan Benson, Instructor in Sociology
Leslie Brown, Instructor in Sociology
Michael Carter, Instructor in Sociology
Roy E. Carter, Professor of Sociology
Tom Chapel, Instructor in Sociology
Philip J. Cunnien, Instructor in Sociology
Rhoda Estep, Instructor in Sociology
Harold Grasmick, Assistant Professor of Sociology
Carla Howery, Instructor in Sociology
Gary Jurek, Instructor in Sociology
David McKee, Instructor in Sociology
Ed Mack, Instructor in Sociology
Allan Malkis, Instructor in Sociology
Paul Mattessich, Instructor in Sociology
Peter Parilla, Instructor in Sociology
Richard E. Sykes, Assistant Professor of Sociology
M. Tavakoliyazdi, Instructor in Sociology

A MAJOR IN SOCIOLOGY CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered yearly. Interested students should discuss plans with an Extension counselor (373-3905).

B.A. Major Sequence

Major Requirements

3505, 3506

3801, 3802, 3803 (should be taken soph yr)

A theory course from 5305, 5701, 5705, 5711

16 additional 3xxx- or 5xxx-level sociology cr

You need not be majoring in Sociology to register for these classes.

Soc 1001 INTRODUCTION TO SOCIOLOGY. 4 degree credits, \$66. (◆\$33) (IS)

The main substantive fields of sociology and current social problem areas. (No prereq. Usually not for sociology majors; however, prospective sociology majors wishing to apply 1001 to a degree program should contact the undergraduate adviser in the department of Sociology)

Fall Qtr Sec 1 **M**—6-8:30, AndH 210, Mattessich

Sec 2 **W**—6:20-8:50, AndH 270

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Sec 3 **W**—6:20-8:50, AndH 350

★Sec 4 **Th**—6:20-8:50, Richfield HS 242 (Limit 30 students)

Winter Qtr Sec 5 **M**—6:20-8:50, BlegH 245, Estep

Sec 6 **T**—6:20-8:50, RarigC 616, Chapel

Sec 7 **W**—6:20-8:50, Ramsey HS 131-133, Roseville

Spring Qtr Sec 8 **W**—6:20-8:50, BlegH 155, Brown

Sec 9 **Sa**—9 a.m.-11:30, BlegH 155, Brown

Soc 1002 AMERICAN COMMUNITY. 4 degree credits, \$66. (◆\$33) (IS)

Sociological analysis of modern American society. Topics include distribution of population, urban-rural differences, social factors in business systems, occupational groups, determination of social status, and minority group adjustment. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, BlegH 230

Winter Qtr Sec 2 **Th**—6:20-8:50, AndH 230

Spring Qtr Sec 3 **M**—6:20-8:50, BlegH 155

Soc 3103 ELEMENTS OF CRIMINOLOGY. 4 degree credits, \$3101. \$70. (◆\$35)

General survey of field of criminology. (Prereq 1001 or equiv; 3102 rec)

Fall Qtr Sec 1 **T**—6:20-8:50, BlegH 235, Parilla

Winter Qtr Sec 2 **T**—6:20-8:50, BlegH 235

(See also Criminal Justice Studies)

Soc 3405 INEQUALITY: INTRODUCTION TO STRATIFICATION. 4 degree credits, \$70. (◆\$35)

Inequality—causes and consequences. Inequality in American society. Related concepts of class, class cultures, status, aggregates; the social forms of inequality, their consequences for life changes and life styles. (Prereq 1001)

Fall Qtr Sec 1 **Sa**—9 am.-11:30, BlegH 135, Carter

Soc 3501 THE FAMILY SYSTEM. 4 degree credits, \$70. (◆\$35) (IS)

Evolution of family, development of unity or disunity, roles of the several members of the family, methods of investigation of family. (Prereq 1101 or 3505 and 3506)

Spring Qtr Sec 1 **T**—6:20-8:50, BlegH 155, Mattesich

Soc 3503 SEX, ROMANCE AND RELATIONSHIPS. 4 degree credits, \$70. (◆\$35)

Sociological perspectives on sexual socialization; ideas of masculinity and femininity; history and functions of love and romance; characteristics of romantic relationships, intimacy, emotionality, sexuality, exclusivity; investigation of sexual deviance for light it sheds on sexual norms. (Prereq 1001)

Winter Qtr Sec 1 **T**—6:20-8:50, AndH 270, Howery

Soc 3505 PRINCIPLES OF SOCIAL ORGANIZATIONS. (replaces 1505) 5 degree credits, \$5401. \$87.50.

Develop understanding of basic concepts, substantive materials, and general issues in the area of social organization. (Prereq 1001 and 3801 or equivalent)

Spring Qtr Sec 1 **T**—6:20-8:50, BlegH 150, Mack

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Soc 3506 PRINCIPLES OF SOCIAL PSYCHOLOGY. (replaces 1506) 5 degree credits, \$5201. \$87.50.

Knowledge of the ideas and findings related to social psychology and experience with the activities involved in developing empirically based knowledge in social science. (Prereq 1001 and 3801 or equivalent)

Winter Qtr Sec 1 W—6:20-8:50, SocSci 860, Cunnien

◆ **★Soc 3601 URBAN COMMUNITY.** 4 degree credits, \$70. (◆\$35)

Urban community patterns. Comparison of social interaction in neighborhood, city and metropolis—across societies. Review of community studies. Urban power structures. Analysis of settlement patterns, organization of social life and urban problems. (Prereq 1001 or 1002. Limited to 50 students)

Winter Qtr Sec 1 M—6:20-8:50, BlegH 145

◆ **Soc 3551 WORLD POPULATION PROBLEMS.** 4 degree credits, \$70. (◆\$35)

new Population policy, both historical and present day, in Europe, Asia and other selected areas but with special emphasis on the U.S. Some discussion given to the field of population and power politics. (No prereq.)

Fall Qtr Sec 1 M—6-8:30, BlegH 628, Tayakoliyazdi

(See also Family Planning Administration)

Soc 3801 SOCIOLOGICAL METHODS I: DESCRIPTIVE STATISTICS. 5 degree credits, \$87.50 plus \$4 course fee. Total \$91.50.

Descriptive statistics as utilized in analysis of sociological data, measures of central tendency, deviation, correlation and regression graphs, simple treatment of three and four variables, probability. (Prereq beginning algebra or Math 0009)

Fall Qtr Sec 1 TTh—6-8, RarigC 616, Howery

Soc 3802 SOCIOLOGICAL METHODS II: STATISTICAL INFERENCE. 5 degree credits, \$87.50 plus \$4 course fee. Total \$91.50.

Statistical inferences, probability, hypothesis tests, use of statistical reasoning in analysis of sociological data. (Prereq 3801 or #)

Winter Qtr Sec 1 TTh—6-8, BlegH 155, Benson

Soc 3803 SOCIOLOGICAL METHODS III: RESEARCH METHODS. 5 degree credits, \$87.50 plus \$4 course fee. Total \$91.50.

Survey of data collection methods, including advantages of major methods and limitations when applied to specific types of problems. (Prereq 3802 or #)

Spring Qtr Sec 1 TTh—6-8, AndH 310, 370

◆ **Soc 5125 POLICING IN AMERICA.** 4 degree credits, \$74. (◆\$37)

Analysis of police organizations and operations from a social science perspective. Formal and informal policing; role and functions; legal bases, accountability and restraints; relations with policed populations with special emphasis upon minorities, youth and recognized violators; use of violence, unethical and illegal practices; civil liberties, intra- and interorganizational relations; social theory and change. (Prereq 3102, 3103 or #; CJS 5101, 5102 rec. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6-8:30, AndH 370, Sykes

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Soc 5135 WHITE-COLLAR CRIME. 4 degree credits, \$74. (◆\$37)

Analysis of various types of white-collar crime, broadly construed; roots in American society; responses by theoreticians, amateur and professional politicians. (Prereq 3102, 3103 or #; CJS 5101, 5102 rec. Qualified students may register for graduate credit at the University of Minnesota.)

Winter Qtr Sec 1 **Th**—6:20-8:50, BlegH 145, Parilla

Soc 5141 JUVENILE DELINQUENCY. 4 degree credits, \$74. (◆\$37)

Advanced study of the definition and origins of juvenile delinquency and societal response to it through regulatory agencies; particularly the special characteristics of juvenile justice institutions. (Prereq 3102, 3103 or #; CJS 5101, 5102 rec. Qualified students may register for graduate credit at the University of Minnesota.)

Spring Qtr Sec 1 **W**—6-8:30, BlegH 235

Soc 5151 RELIGION AS A SOCIAL INSTITUTION. 4 degree credits, \$74. (◆\$37)

Structure and function of religious organizations in various types of societies, nature of religious leadership, type of religious participations and relationship of religion to other social institutions. (Prereq 3505 or 5401 or equiv or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **M**—7-9:30, BlegH 340

Soc 5201 INTRODUCTION TO SOCIAL PSYCHOLOGY. 4 degree credits, \$3506. \$74. (◆\$37) (IS)

Research and theory regarding relation of individual to social groups. Emphasis on socialization processes; effects of social interaction and isolation; individual behavior under conditions of social organization and disorganization; cultural influence and its limits. No credit for Soc majors. (Prereq 8 cr in sociology, anthropology, economics, political science, psychology. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **M**—5:30-8:00, BlegH 360, McKee

Soc 5401 SOCIAL ORGANIZATION. 4 degree credits, \$3505. \$74. (◆\$37)

Organization and structure of social groups; basic culture patterns of economic, political, and social institutions. Integration and disintegration of social groups and institutions. Essentials of social dynamics. Not for soc majors (Prereq 8 cr in soc, anth, psy, pol, or econ. Qualified students may register for graduate credit at the University of Minnesota.)

Spring Qtr Sec 1 **Th**—6-8:30, BlegH 245, Howery

Soc 5601 URBAN SOCIOLOGY. 4 degree credits, \$74. (◆\$37)

Cities, urban ecology; urban institutions and urban way of life. (Prereq 3405 or 3505 or 5401 or equiv or #. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Qtr Sec 1 **T**—6:20-8:50, BlegH 350, Alexander

(See related courses in Political Science; Public Affairs; Urban Studies; History; and General College)

Soc 5701 ANALYTICAL SOCIAL THEORY. 4 degree credits, \$74. (◆\$37)

Major problems of sociological theory; main types: positivistic, rationalistic, idealistic; major theoretical concepts. (Prereq 3505, 3506, or 5201, 5401 or equiv or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **W**—6:20-8:50, BlegH 350

Soc 5956 SOCIOLOGY OF DEATH. 4 degree credits, \$74. (◆\$37) (IS)

Issues and problems that mortality presents in contemporary society. (Prereq jr or sr, 8 cr in sociology or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-8:50, BlegH 415

(See related courses in Child Psychology and Social Work)

Soc 5957 SOCIOLOGY OF AGING. 4 degree credits, \$74. (◆\$37)

Survey of situations and problems facing aging people in modern societies and of the devices these societies have developed or might develop to change situations and solve problems. (Prereq 3505, 3506, or 5201, 5401 or equiv or #. Qualified students may register for graduate credit at the University of Minnesota.)

Fall Qtr Sec 1 Th—6:20-8:50, BlegH 245

Spring Qtr Sec 2 W—7-9:30, Ramsey HS 254, Roseville

soil science (Soil)

(See also Agriculture)

Russell S. Adams Jr., Professor of Soil Science

Alfred C. Caldwell, Professor of Soil Science

Harold F. Arneman, Professor of Soil Science

Lowell Hanson, Professor of Soil Science and Extension Specialist

Soil 0100C GARDEN SOIL MANAGEMENT. 3 certificate credits, \$49.50. (◆\$24.75)

Designed for the home gardener or hobby farmer. Lectures give a description of soils and the factors that make them suitable or unsuitable for productive gardens. Topics include effects of different methods of fertilizer, tillage, mulching, water use and their influence on plant growth. Deficiency symptoms are examined briefly. (No prereq)

Winter Qtr Sec 1 T—6:20-8:50, So 215, StP Campus, Adams, Hanson

★Soil 1122 INTRODUCTORY SOIL SCIENCE. 4 degree credits, \$5022, \$66.

Basic physical, chemical and microbiological properties of soils. Soil genesis, classification, and principles of soil fertility. (Prereq Chem 1001 or 1004 or equiv. Meets concurrently with 5022. Limited to 14 students combined)

Fall Qtr Sec 1 **Lect TTh**—6:20-7, So 115, StP Campus, Arneman

Lab T—7:05-10, So 130

Sec 2 **Lect TTh**—6:20-7, So 115, StP Campus, Arneman

Lab Th—7:05-10, So 130

Soil 3420 FERTILIZER PROPERTIES AND PRACTICES. 3 degree credits, \$52.50.

Chemical and physical properties of commercial fertilizer materials; reaction of fertilizers in soils; fertilizer use on crops—kinds, amounts, application methods, and effects on yield and quality. (Students desiring graduate credit may with instructors permission register for Soil 5114 Special Problems in Soils) (Prereq 1122)

Winter Qtr Sec 1 Th—6:20-8:50, So 115, StP Campus, Caldwell

★Soil 5022 BASIC SOIL SCIENCE FOR TEACHERS. 4 degree credits, \$1122, \$74.

Basic physical, chemical and microbiological properties of soils. Soil genesis, classification and principles of soil fertility. (Prereq one course in college chemistry and a

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

degree in education or #. Meets concurrently with 1122. Limited to 14 students combined. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Lect TTh**—6:20-7, So 115, StP Campus, Arneman
 Lab T—7:05-10, So 130, StP Campus
 Sec 2 **Lect TTh**—6:20-7, So 115, StP Campus, Arneman
 Lab Th—7:05-10, So 130, StP Campus

SPAN

(Student Project for Amity Among Nations) see page 329.

spanish and portuguese

(See also IC 0342, The New Cuba; Chicano Studies; Hist 1401, Survey of Latin American History)

Bridget Aldaraca, Lecturer in Spanish
Edward Baker, Instructor in Spanish
Robert Estelle, Assistant Professor of Spanish
Rodolfo O. Floripe, Professor of Spanish
Larry M. Grimes, Associate Professor of Spanish
Russell Hamilton, Professor of Portuguese
Ruth E. Jones, Associate Professor of Spanish
Lawrence Mantini, Associate Professor of Spanish
Ricardo Narváez, Professor of Spanish
Antonio Ramos, Associate Professor of Spanish
Ileana Rodriguez, Assistant Professor of Spanish
Ronald Sousa, Associate Professor of Spanish and Portuguese
Nicholas Spadaccini, Associate Professor of Spanish
Constance Sullivan, Associate Professor of Spanish
Hernan Vidal, Professor of Spanish
Anthony N. Zahareas, Professor of Spanish

spanish (Span)

There are two sequences of courses in beginning Spanish from which the prospective student may select the one best suited to his needs. Within the 1101-1103 sequence, one group of courses meets for two hours twice a week, and the other is an intensive session which meets for four hours once a week. Students may select the appropriate section depending on their weekly schedule.

Span 1101-1102-1103 BEGINNING SPOKEN SPANISH: ORAL APPROACH, carrying 5 degree credits per unit, comprises the standard course in first-year Spanish. The principal aim of the course is to teach the student to understand and speak Standard Spanish so that he can communicate in Spain, Spanish America and among U.S. Spanish-speaking minority groups. As the student progresses through the 1101-1103 sequence more emphasis will be placed each quarter on reading and writing, in that order. This sequence is recommended for those planning to travel in Spanish-speaking nations, to continue the study of Spanish or to satisfy college language requirements.

BEGINNING SPANISH: MODIFIED ORAL APPROACH, **Span 1201-1202-1203-1204-1205**, carrying 3 degree credits per unit. This sequence is recommended for those who desire a general introduction to the language, but who wish to proceed at a slower pace than required for the standard 5-credit units. Students wishing further Spanish after completing 1205, register for 1104.

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

Language laboratory fees are charged for courses in which use of the lab is required or recommended. Cassette tapes are available to Extension Classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resource Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

The following non-language courses may be applied toward the CLA foreign language requirement, Route II for Spanish (see page 354); Span 1501, 1502, 3601, 3602, 3614.

Span 1101-1102-1103 BEGINNING SPOKEN SPANISH: ORAL APPROACH. 5 degree credits each quarter. \$82.50 plus \$5 course fee each quarter. Total \$87.50. (IS)

Intensive work in understanding and speaking Spanish. See note above. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr 1101★ Sec 1 **TTh**—6-8:05, FolH 204 (Limit 25 students)

★Sec 2 **TTh**—6-8:05, FolH 302 (Limit 25 students)

Sec 3 **W**—6-10:05, FolH 208

Winter Qtr 1102 Sec 4 **TTh**—6-8:05, FolH 103

Sec 5 **W**—6-10:05, FolH 208

Spring Qtr 1103 Sec 6 **TTh**—6-8:05, FolH 208

Sec 7 **W**—6-10:05, FolH 205

Span 1104 INTERMEDIATE SPANISH, ORAL APPROACH: INTERPRETATION OF MODERN PROBLEMS. 4 degree credits, \$66. (IS)

Intensive review of the spoken language, coupled with continued development of reading, comprehension and writing skills, with an emphasis on active use of readings dealing with modern social and cultural problems in Spain and Spanish America to build vocabulary and to model compositions. (Prereq 1103 or 1205 or #)

Fall Qtr Sec 1 **Th**—6-9:20, FolH 107

Span 1105 INTERMEDIATE SPANISH, ORAL APPROACH: DISCUSSIONS OF MODERN LITERATURE AND THE PRESS. 4 degree credits, \$66. (IS)

Intensive advanced review of the spoken language, coupled with continued development of reading, comprehension and writing skills, with an emphasis on active use of readings from modern Spanish and Spanish-American literature and the press. (Prereq 1104 or #)

Winter Qtr Sec 1 **Th**—6-9:20, FolH 203

Span 1201-1202-1203-1204-1205 BEGINNING SPANISH: MODIFIED ORAL APPROACH. 3 degree credits each quarter, \$49.50 plus \$5 course fee. Total \$54.50 each quarter.

Comprehension, speaking, reading and practice in pronunciation. See note above for details of this modified course. (No prereq for 1201; 1201 or # for 1202; 1202 or # for 1203; 1203 or # for 1204; 1204 or # for 1205)

Fall Qtr 1201★ Sec 1 **T**—6-8:30, FolH 103 (Limit 25 students)

★Sec 2 **T**—6-8:30, FolH 203 (Limit 25 students)

1204 Sec 3 **T**—6-8:30, FolH 107

Winter Qtr 1202 Sec 4 **T**—6-8:30, FolH 108

1205 Sec 5 **T**—6-8:30, FolH 203

Spring Qtr 1203 Sec 6 **T**—6-8:30, FolH 103

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

Span 1501 CULTURE, CIVILIZATION OF SPAIN, PORTUGAL: THE ROOTS OF MODERN SPAIN, PORTUGAL. 4 degree credits, \$66. (◆\$33)

Designed to introduce the culture and civilization of Spain and Portugal. The course will include the presentation of audio-visual materials such as art, architecture and music. Knowledge of Spanish not necessary. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 354]. Not to be used for Spanish or Portuguese major credit)

Fall Qtr Sec 1 **M**—6-8:30, NH 211

Span 1502 CULTURE, CIVILIZATION OF LATIN AMERICA: INDIAN, EUROPEAN-COLONIAL, AFRICAN ROOTS. 4 degree credits, \$66. (◆\$33) (IS)

Culture and civilization of Mexico, Central America, and the Spanish Islands of the Caribbean; the influences and fusing of the Spanish with the Indian or the African cultures. Taught in English. (No prereq. May be applied toward the CLA foreign language requirement, Route II [see page 354])

Winter Qtr Sec 1 **M**—6-8:30, FolH 303

Span 3014 SPANISH COMPOSITION AND COMMUNICATION SKILLS: EVERYDAY SPEECH, ARGOT AND DIALOGUE. 5 degree credits, \$87.50.

A course taught in Spanish and designed to improve the student's ability to comprehend, speak and write Spanish through the use of everyday, high frequency expressions and speech patterns drawn from the living language of Spain and Spanish America. (Prereq 1105 or #)

Spring Qtr Sec 1 **T**—6-10:05, FolH 202

Span 3021 ADVANCED COMPOSITION, COMMUNICATION SKILLS: POLISHING SPEECH, WRITING SKILLS. 5 degree credits, \$87.50.

Oral and written expression in Spanish. Works of outstanding Spanish and Spanish-American authors serve as models for weekly compositions. (Prereq 3014 or #)

Fall Qtr Sec 1 **T**—6-10:05, FolH 209

Span 3601 SPANISH AMERICA: REVOLUTION AND THE NEW LITERARY CONSCIOUSNESS. 4 degree credits, \$70. (◆\$35)

Avant-garde movements in the fiction of the Latin American continent; correspondence to revolutionary trends in Spanish speaking countries. Famous novels. Taught in English. (No prereq. May be applied toward the CLA foreign language requirement, Rt II for Spanish and Portuguese [see page 354])

Fall Qtr Sec 1 **T**—6:20-8:50, FolH 304

Span 3602 THE PICARESQUE WAY OF LIFE IN SPAIN AND EUROPE: LITERATURE AND THE DELINQUENT. 4 degree credits, \$70. (◆\$35)

Designed to introduce the major picaresque novels of Europe and Latin America by concentrating on the Spanish origins of the genre, XVI Century, its zenith, XVII Century, and its evolution to the present day. The course stresses the literary and sociological examination of picaresque novels and traces the new directions of the picaresque genre in modern times. The course will concentrate on famous Spanish and Latin American novels translated into English. Knowledge of Spanish not necessary. May be applied toward the CLA foreign language requirement, Route II for Spanish [see page 354]. (No prereq. Not to be used for Spanish or Portuguese major credit)

Spring Qtr Sec 1 **W**—6-8:30, FolH 103

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Span 3614 DON QUIJOTE: STUDY OF LOST ILLUSIONS. 4 degree credits, \$70. (◆\$35)

The Spanish classic *Don Quijote de la Mancha* by Miguel de Cervantes in English. The humor, pathos, and philosophy of *Don Quijote*, as well as Cervantes' style. (No prereq. May be applied toward the CLA foreign language requirement, Route II, for Spanish or Portuguese [see page 354]. Not to be used for Spanish or Portuguese major credit)

Winter Qtr Sec 1 W—6-8:30, FolH 102

reading spanish

Span 0221 is specifically designed for individuals who desire only a reading knowledge of the language. The Spanish language requirements for a graduate degree also may be satisfied by successfully passing an examination given at the end of the course. Graduate students should check with their advisers for specific language requirements in their field of study.

Span 0221 READING SPANISH. No credit, \$49.50. (IS)

This course is designed solely to impart a basic reading knowledge of the Spanish language; full time is devoted to intensive reading and translation of a variety of texts. Since this approach deals with only one aspect of the language—reading—great skill can be acquired in a short time. At the end of the one quarter the student may take the equivalent of the Spanish Graduate Reading Examination. The department will certify to the Graduate School a reading knowledge of Spanish upon successful completion of this examination. **Must be taken S-N.**(No prereq)

Winter Qtr Sec 1 Th—6:20-8:50, FolH 107

Spanish 0221 is offered as a Summer Extension Class.

portuguese (Port)

Cassette tapes are available to extension classes students on a take-home basis. Students can pick up tapes at the Learning Resources Center on the second floor of Walter Library or the second floor of Temporary South of Coffey on the St. Paul Campus. Students must present a fee statement when checking out tapes. Rental costs are covered by the special fees paid with tuition.

Learning Resources Center hours are: 8 a.m.-10 p.m., Monday-Thursday; 8 a.m.-6 p.m., Friday; 9 a.m.-6 p.m., Saturday; Sunday hours being planned.

The following non-language classes may be applied toward the CLA foreign language requirement, Route II for Portuguese: Span 1501, 1502, 3601, 3614. (See page 354).

Port 1001-1002-1003 BEGINNING PORTUGUESE. 5 degree credits each quarter. \$82.50 plus \$5 course fee. Total \$87.50 each quarter.

Aural comprehension, pronunciation, basic grammar; practical reading knowledge. Brazilian speech stressed; Lusitanian forms also studied. (No prereq for 1001; 1001 or # for 1002; 1002 or # for 1003)

Fall Qtr 1001 Sec 1 T—6-10:05, FolH 203

Winter Qtr 1002 Sec 2 T—6-10:05, FolH 209

Spring Qtr 1003 Sec 3 T—6-10:05, FolH 209

special education (SpEd)

(Department of Psychoeducational Studies)

Bruce E. Balow, Professor of Special Education

Stanley R. Deno, Associate Professor of Special Education

Guynel Reid, *Instructor in Special Education*
 John E. Rynders, *Professor of Special Education*
 H. Uwe Stuecher, *Assistant Professor of Special Education*
 Grace J. Warfield, *Visiting Associate Professor*

★SpEd 5101 **EDUCATION OF EXCEPTIONAL CHILDREN.** 3 degree credits, \$55.50.

Introduction to field of special education for classroom teachers and other school personnel. **May not be taken S-N.** (No prereq. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota).

Fall Qtr Sec 1 W—6:20-8:50, PeikH 315

Winter Qtr Sec 2 W—7-9:30, Irondale HS 123, New Brighton, Reid

★SpEd 5105 **IMPLEMENTING COURT DECISIONS ON EDUCATION OF THE HANDICAPPED.** 2, 3 or 4 degree credits, \$37, \$55.50, or \$74.

Analysis of recent litigation and legislation; emphasis on implementation of right to education, right to treatment, labeling, due process, and related issues. **May not be taken S-N.** (No prereq. Limited to 40 students. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6-8:30, CD 216, Balow

★SpEd 5112 **EDUCATION OF LEARNING-DISABLED CHILDREN.** 3 degree credits, \$55.50.

Analysis of considerations in design and conduct of services for learning-disabled children; approaches to education of such children. **May not be taken S-N.** (No prereq. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-8:50, Pt 102, Balow

SpEd 5120 **INTRODUCTION TO MENTAL RETARDATION.** 4 degree credits, \$Cpsy 5315. \$74.

Issues which relate to educational practices; community planning; educational philosophy, administration and organization, and programming. **May not be taken S-N.** (Prereq SpEd 5101. Meets concurrently with CPsy 5315. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr ★Sec 1 W—7-9:30, Richfield HS 242, Warfield (Limit 30 students)

Spring Qtr Sec 2 Th—6:20-8:50, Pt 215, Warfield

★SpEd 5155 **PSYCHOEDUCATIONAL INTERVENTIONS: PSYCHOTIC CHILDREN.** 3 degree credits, \$55.50.

Introduction into psychopathology of children with psychotic characteristics; emphasis on psychoeducational intervention programs and teaching strategies. **May not be taken S-N.** (Prereq 12 cr in Psy, CPsy, or SpEd. Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota).

Winter Qtr Sec 1 W—6:20-8:50, Pt 102, Stuecher

★SpEd 5302 **WORKSHOP: SPECIAL EDUCATION.** 2 degree credits, \$37.

Laboratory approach provides opportunities for school personnel to study specific problems related to special education. **May not be taken S-N.** (Prereq #. Limited to 30 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 Th—7-9:30, Pt 102, Rynders

new

Symbols, abbreviations, off-campus class locations begin on page 413.
 Courses and sections in red have limits on enrollment. See page 23.

★SpEd 5303 **BEHAVIORAL PROCEDURES WITH MILDLY AND MODERATELY HANDICAPPED STUDENTS.** 4 degree credits, \$5301. \$74.

new

Behavioral approaches to improving the academic and personal-social behavior of mildly and moderately handicapped students in mainstream and resource programs. (Prereq PsyF 5149. Psy 5017 recommended. **May not be taken S-N.** Limited to 35 students. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **M**—7-9:30, Richfield HS 249-250, Deno

speech-communication (Spch)

(See also English, General College, Informal Courses, Linguistics, Journalism, and Rhetoric)

Leonard D. Bart, Associate Professor of Speech-Communication

Ernest G. Bormann, Professor of Speech-Communication

Paul H. Cashman, Professor of Speech-Communication

Karen J. Garvin, Assistant Professor of Speech-Communication

Ronald S. Geizer, Assistant Professor of Speech-Communication

Sheldon Goldstein, Professor of Speech-Communication

William S. Howell, Professor of Speech-Communication

Harold A. Miller, Professor of Speech-Communication

George L. Shapiro, Professor of Speech-Communication

Donald Z. Woods, Professor of Speech-Communication

★Spch 0001C **BEGINNING SPEECH-COMMUNICATION.** 3 certificate credits, \$49.50 plus \$5.50 special fee. Total \$55

Designed particularly for the adult student who wants a practical application of speech-communication techniques to his professional business and social needs. Planned to develop confidence and effectiveness in day-to-day speaking situations. Individual attention is given to every student. Each student speaks before the class each meeting. When possible, a session before live television cameras is provided each student. (No prereq. Limited to 25 students)

Fall Qtr Sec 1 **M**—6:20-8:50, NH 216, Woods

Winter Qtr Sec 2 **M**—6:20-8:50, NH 216, Woods

Spring Qtr Sec 3 **M**—6:20-8:50, NH 216, Woods

★Spch 1101 **FUNDAMENTALS OF SPEECH COMMUNICATION: ORAL COMMUNICATION.** 4 degree credits, \$66.

Basic understanding of oral communication processes. Study and application of essential elements in oral communication. Consideration of criticism and response to oral discourse. Opportunities for individual speaking. (No prereq. Limited to 25 students)

Fall Qtr Sec 1 **W**—6:20-8:50, FolH 306, Bart

Winter Qtr Sec 2 **T**—6:20-8:50, FolH 306, Garvin

Sec 3 **W**—6:20-8:50, Sandburg JHS 205, Golden Valley

Sec 4 **Th**—6:20-8:50, Woodbury JHS 101

Spring Qtr Sec 5 **W**—6:20-8:50, FolH 306

Spch 1102 **FUNDAMENTALS OF SPEECH-COMMUNICATION: COMMUNICATION PROCESS.** 4 degree credits, \$66. (◆\$33)

◆ Introduction to the identification and analysis of variables in intrapersonal, interpersonal, and group communication. (No prereq)

Spring Qtr Sec 1 **T**—6:20-8:50, FolH 107, Garvin

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Spch 1104 FUNDAMENTALS OF SPEECH-COMMUNICATION: THE CREATIVE PROCESS AND THE MASS MEDIA. 4 degree credits, \$66. (◆\$33)

Presentation of film, television and radio material to highlight historical and critical understanding of these media. Problems faced by artists involved in the production-presentation process. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, Arch 45, Bart

★Spch 3201 INTRODUCTION TO BROADCASTING PRODUCTION. 4 degree credits, \$70.

Fundamentals of practice and theory in radio and television. Emphasis on projects and exercises in performance and scripting; introduction to studio equipment and procedures. Historical and sociological aspects of broadcasting. (No prereq. Limited to 25 students)

Winter Qtr Sec 1 W—6:20-8:50, RarigC 616, Bart

★Spch 5204 WRITING RADIO AND TELEVISION DRAMA. 4 degree credits, \$74.

Physical, psychological and sociological aspects of radio and television and their influence on the writer. Scriptwriting in various forms from dramatic commercials to dramas and documentaries. (Prereq 3201, #. A joint Day/Extension course limited to 4 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 TTh—4:15-6, RarigC 610, Goldstein

★Spch 5405 NONVERBAL COMMUNICATION: THEORY AND RESEARCH. 4 degree credits, \$74.

Study of the nonverbal (extra-linguistic) elements and dimensions of interpersonal communication. Nonverbal categories examined to include gesture, facial expression, posture, clothing, and environment. (No prereq. A joint Day/Extension course limited to 10 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 MW—4:15-6, FolH 202, Geizer

★Spch 5411 SMALL GROUP COMMUNICATION. 4 degree credits, \$74.

Study of communication and dynamics within the small, task-oriented group. Cohesiveness, leadership, role structure, information processing and decision making. **A-N registration only.** (Prereq 3641 or #. Limits indicated below. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:20-8:50, FolH 306, Bormann (Limit 25 students)

Spring Qtr Sec 2 MW—4:15-6, FolH 306, Cashman (A joint Day/Extension class limited to 8 Extension students [plus day school registrants])

★Spch 5414 AUTHORITY AND POWER IN TASK-ORIENTED COMMUNICATION. 4 degree credits, \$74.

Authority and power in task-oriented groups. Tavistock-type small group, intergroup and large group laboratory experiences. Verbal and nonverbal processes which operate in and among groups to facilitate or inhibit effective leadership and followership. **S-N registration only.** (A joint Day/Extension course limited to 10 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 TTh—4:15-6, FolH 209, Howell

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★Spch 5421 QUANTITATIVE RESEARCH IN COMMUNICATION. 4 degree credits, \$74.

Review and discussion of experimental and descriptive research; analysis of research and design and procedures; individual research projects. (Prereq 3401 or 5403, or #. A joint Day/Extension course limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **MW**—4:15-6, FolH 306, Geizer

★Spch 5422 INTERVIEWING AND COMMUNICATION. 4 degree credits, \$74.

Theory and practice of communication in the information interview. Role of interpersonal perception, empathy, and cognitive structure in dyadic communication. Experience in interviewing and communication analysis. Applications to research in interpersonal and mass communication. (Prereq 1101, 6 cr social science or #. A joint Day/Extension course limited to 8 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **TTh**—4:15-6, FolH 306, Miller

★Spch 5431 THE PROCESS OF PERSUASION. 4 degree credits, \$74.

Theories of modern motivational communication. Analysis of the process of social control through persuasive speech. (Prereq 1102 or Psy 1001. A joint Day/Extension class limited to 10 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **TTh**—4:15-6, FolH 306, Howell

★Spch 5441 COMMUNICATION IN HUMAN ORGANIZATIONS. 4 degree credits, \$74.

Analysis of functions of communication in organizational settings. Organizational structure and dynamics and their effect upon communication process. Collateral readings and individual projects. (Prereq 1102 or 3401, 3641 or 5411, or grad. A joint Day/Extension course limited to 10 Extension students [plus day school registrants]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **MW**—4:15-6, FolH 308, Shapiro

★Spch 8411 SEMINAR: SMALL GROUP COMMUNICATION. 3 degree credits, \$85.50.

Research problems and methods in small group communication. (Prereq 1101, 5411. A joint Day/Extension course limited to 4 Extension students [plus day school registrants]. Open only to students admitted to the University of Minnesota Graduate School)

Winter Qtr Sec 1 **Th**—4:15-6, FolH 307, Bormann

★Spch 8423 SEMINAR: SEXUAL COMMUNICATION. 3 degree credits, \$85.50.

Designed for persons who will work in professional settings in which significant sexual communication is likely to occur. Human sexual communication in interpersonal, management and various professional settings will be examined. (No prereq. A joint Day/Extension course limited to 4 Extension students [plus day school registrants]. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 **W**—4:15-6, FolH 305, Cashman

★Spch 8431 SEMINAR: PERSUASION. 3 degree credits, \$85.50.

Contemporary public address. Literature of persuasion, methods in study of persuasion. (Prereq 5431. A joint Day/Extension course limited to 4 Extension students [plus

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

day school registrants]. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 **Th**—4:15-6, FolH 307, Howell

★**Spch 8441 SEMINAR: ORGANIZATIONAL COMMUNICATION.** 3 degree credits, \$85.50.

Directed projects in the study of organizational communication. Emphasis placed on studies conducted in real or simulated organizations. (Prereq 5441 or #. A joint Day/Extension course limited to 4 Extension students [plus day school registrants]. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 **W**—4:15-6, FolH 406, Shapiro

★**Spch 8606 SEMINAR: RHETORICAL ANALYSIS OF CAMPAIGNS AND MOVEMENTS.** 3 degree credits, \$85.50.

Literature and methodology in the study of historical and contemporary rhetorical campaigns and movements. (Prereq 5431, 5617, 10 cr in social sciences or #. A joint Day/Extension course limited to 4 Extension students [plus day school registrants]. Open only to students admitted to the University of Minnesota Graduate School)

Fall Qtr Sec 1 **Th**—4:15-6, FolH 306, Bormann

new

student project for amity among nations (SPAN)

Language courses offered by SPAN are listed under Foreign Studies. SPAN provides unusual opportunities for undergraduate study abroad through a unique summer research project conducted in three or four different countries each year. In 1977, four groups, each with an academic adviser who is an expert on the country concerned, will go to Israel, Mexico, Taiwan, Yugoslavia. Participants are selected a year prior to their summer abroad and undergo a nine-month orientation in the language and culture of their selected country. For further information, contact SPAN, 103 Nolte West, University of Minnesota, Minneapolis, Minnesota 55455 (373-3793).

study skills

(See also Rhetoric; General College; and other study helps, page 377)

personal orientation (PO)

A student who does not attend the first class meeting of a PO course will not be allowed to continue. A written verification of non-attendance must be obtained from the instructor for a student to receive a 100% tuition refund.

★**PO 1001 HOWTO STUDY.** 2 degree credits. (Credits do not count toward a B.A. degree; however, grades are included in the over-all grade point average.) \$49.50 plus \$2 course fee. Total \$51.50. (IS)

Practical assistance to the student in developing efficient study habits, organizing materials, preparing for examinations, and improving the speed and comprehension of reading. Diagnosis and practice in basic skill areas such as reading, spelling, vocabulary and elementary composition are also provided. (No prereq. Limited to 30 students)

Fall Qtr Sec 1 **T**—6:20-8:50, EdH 102

Fall Sem Sec 2 **M**—6:20-8, EdH 102

(continued next page)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

Winter Qtr Sec 3 **W**—6:20-8:50, EdH 102
Spring Sem Sec 4 **T**—6:20-8, Minnetonka HS 116
Spring Qtr Sec 5 **M**—6:20-8:50, EdH 102
Sec 6 **Th**—6:20-8:50, Woodbury JHS 101

swedish

(See Scandinavian Languages)



textiles and clothing (TexC)

(See also Home Economics)

Robert F. Johnson, Professor of Textiles and Clothing

TexC 5622 ISSUES, TRENDS IN TEXTILE CONSUMER PROBLEMS. 3 degree credits, \$55.50.

The needs of the textile consumer for protection from deception and hazard; critical analysis of federal, state, and local legislation as well as voluntary industrial systems; case histories; change mechanisms. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-8:50, McNH 33, Johnson

theatre arts (Th)

(See also Engl 5910, Plays of the Guthrie Season; IC 0111, Movie Criticism as if Audiences Mattered; SeEd 5325, Improvisational Drama Techniques in the Classroom; and WoSt 3910, Drama—Focus on Women)

Arthur H. Ballet, Professor of Theatre Arts
James Harris, Visiting Instructor in Theatre Arts
Ron Herst, Instructor in Theatre Arts
Barbara McIntyre, Assistant Professor of Theatre Arts
Elizabeth Nash, Assistant Professor of Theatre Arts
Frank Pike, Instructor in Theatre Arts
Mimi Vanderberg, Instructor in Theatre Arts

Th 1101 INTRODUCTION TO THE THEATRE. 4 degree credits, \$66. (◆\$33)

History and theory of plays and playwrights. (No prereq)

Fall Qtr Sec 1 **T**—6-8:50, SciCB 175, Ballet

Spring Qtr Sec 2 **M**—6-8:50, SciCB 125, Ballet

★Th 1321 BEGINNING ACTING: CREATIVE APPROACH. 4 degree credits, \$66.

Creation and presentation of original scenes and exercises. Ability to respond to the imaginative situation with individuality and effectiveness stressed. (Prereq 1504 or ¶1504. Limited to 24 students)

Fall Qtr Sec 1 **Sa**—9:15 a.m.-12, RarigC 10, Harris

Th 1502 MAKEUP FOR THE ACTOR. 2 degree credits, \$33.

Clean-shaven face theory and practice in the art of stage make-up. (Prereq 1504)

Spring Qtr Sec 1 **Th**—6:20-10:30, RarigC 45, Vanderberg

Th 1504 ELEMENTS OF TECHNICAL THEATRE. 4 degree credits, \$66.

The practice of the arts and crafts of the theatre; scenery and particularly construction and painting, stage operation, theatre lighting, costuming. (Prereq 1101 or ¶1101. Further sessions will be scheduled at first class meeting)

Winter Qtr Sec 1 **W**—6:30-10:30, RarigC 275, Herst

Th 3115 INTRODUCTION TO PLAYWRITING. 4 degree credits, \$70.

Techniques of playwriting; completion of original one-act play. (Prereq 1101, 1504, 1321 or #)

Winter Qtr Sec 1 **Th**—6:20-8:50, RarigC 610, Pike

Th 3311-3312 VOICE PRODUCTION FOR THE THEATRE. 2 degree credits each quarter.

\$35 plus \$4 special fee. Total \$39 each quarter.

Speech and vocal exercises to free the human voice from inhibitions and tensions. Work on prose, poetry, and drama and song. (Prereq 1321 or ¶1321 for 3311; 3311 for 3312)

Winter Qtr 3311 Sec 1 **T**—6:30-8, RarigC 20, Nash

Spring Qtr 3312 Sec 2 **T**—6:30-8, RarigC 20, Nash

Th 3321 ADVANCED ACTING CHARACTERIZATION. 4 degree credits, \$70.

Presentation of scenes from plays with emphasis on characterization. (Prereq 1326)

Spring Qtr Sec 1 **Sa**—9:15 a.m.-12, RarigC 90, McIntyre

Th 5950 TOPICS IN THEATRE: WOMEN IN THE THEATRE. 2 degree credits, \$37.

Historical survey of the outstanding actresses, singers, playwrights, directresses and manageresses in the western world from 500 BC to the present. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:30-8, BlegH 240, Nash

transportation (Tran)

Frederick J. Beier, Associate Professor of Transportation and Logistics

Keith H. Clark, Lecturer in Transportation and Logistics

Donald V. Harper, Professor of Transportation and Logistics

James P. Rakowski, Assistant Professor of Transportation and Logistics

Transportation courses may not be taken S-N.

★Tran 3054 FUNDAMENTALS OF TRANSPORTATION. 4 degree credits, \$8154, \$70.

Organization and economic aspects of the transportation system of the United States including rail, highway, air, pipeline, and water transportation. Administration of

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.

transportation by users of transportation, providers of transportation (carriers), and government. **May not be taken S-N.** (Prereq Econ 1002 or equiv. Limited to 40 students)

- Fall Qtr** Sec 1 **M**—5:30-8, BlegH 135, Harper
Sec 2 **W**—5:30-8, BlegH 240, Rakowski
- Winter Qtr** Sec 3 **M**—5:30-8, BlegH 155, Harper
Sec 4 **W**—5:30-8, BlegH 150, Rakowski
- Spring Qtr** Sec 5 **M**—5:30-8, BlegH 435, Harper
Sec 6 **W**—5:30-8, BlegH 220, Rakowski

Tran 3064 BUSINESS LOGISTICS. 5 degree credits, \$8264, \$87.50.

Control of the flow of physical product by the firm. Topics include rate negotiation, transportation alternatives, logistics information systems, inventory control, warehouse operations and location, and logistics system design. Meets concurrently with 8264. **May not be taken S-N.** (Prereq 3054. For graduate credit register in 8264)

- Fall Sem** Sec 1 **W**—5:30-8:00, AndH 330, Beier

Tran 3084 CARRIER MANAGEMENT. 5 degree credits, \$8284, \$87.50.

Managerial problems of carriers by rail, highway, air, and water. Topics include problems associated with carrier organization, operations, traffic and sales, finance and control, labor relations, public policy issues, and shipper-carrier interface. **May not be taken S-N.** (Prereq Tran 3054. Meets concurrently with 8284. For graduate credit register in 8284)

- Spring Sem** Sec 1 **W**—5:30-8:00, AndH 330, Beier

Tran 5134 TRANSPORTATION AND BUSINESS LOGISTICS TOPICS: INDUSTRIAL TRAFFIC MANAGEMENT. 4 degree credits, \$74.

Managerial problems associated with the shipper's use of transportation services. Topics: problems concerning organization for traffic management, transportation pricing, service alternatives, documentation, routing, consolidation, equipment utilization, warehousing, government regulation, use of private transportation, and others. (Prereq 3054 or 8154. **May not be taken S-N.** Not available for graduate credit.)

new

- Fall Qtr** Sec 1 **T**—5:30-8, BlegH 440, Clark

Tran 8264 BUSINESS LOGISTICS. 5 degree credits, \$3064, \$142.50.

See course description for 3064. Meets concurrently with 3064. **May not be taken S-N.** (Prereq 3054 or 8154. Open only to students admitted to the University of Minnesota Graduate School)

- Fall Sem** Sec 1 **W**—5:30-8, AndH 330, Beier

Tran 8284 CARRIER MANAGEMENT. 5 degree credits, \$3084, \$142.50.

See course description for 3084. Meets concurrently with 3084. **May not be taken S-N.** (Prereq 3054 or 8154. Open only to students admitted to the University of Minnesota Graduate School)

- Spring Sem** Sec 1 **W**—5:30-8:00, AndH 330, Beier

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.



university college (UC)

Mischa Penn, Assistant Professor

UC 3302 SCIENCE AND SOCIETY. 4 degree credits, \$5302. \$70.

This is the first in a two quarter sequence focused upon the alleged conflict between the sciences and the humanities. Consists of a detailed examination of what can be meant by "interdisciplinary knowledge," with the problematic relationship between the "scientific" and "humanistic" sectors as a case in point. An attempt is made to achieve clear and decisive statements of the assumed conflict. We then turn to broad-scale "solutions" of the "two culture" problem, i.e., Bronowski, *Science of Human Values*; A. Huxley, *Literature and Science*; Polyani, *Personal Knowledge*; Pirsig, *Zen and the Art of Motorcycle Maintenance*; and other works. Meets concurrently with 5302. (No prereq)

Fall Qtr Sec 1 T—6:20-8:55, Ph 157, Penn

UC 3303 SCIENCE AND SOCIETY. 4 degree credits, \$5303. \$70.

Examines selected issues raised by the relation between science and its social problems: on the one hand, the "Bronowski-Snow" thesis which argues that the social and ethical values of scientists derive from their intrinsic activities as scientists, while on the other hand, the view of e.g., Mills, Rose and Rose, etc., that independent political and economic factors shape their value orientations. Readings include Ravetz, *Scientific Knowledge and the Social Problems*, Mills, *The Cultural Apparatus*, Snow, *The Moral Un-Neutrality of Science*; Glass, *The Ethical Basis of Science*; Rose & Rose, *The Myth of The Neutrality of Science*; and other works. Meets concurrently with 5303. (No prereq)

Winter Qtr Sec 1 T—6:20-8:55, Ph 157, Penn

UC 5302 SCIENCE AND SOCIETY. 4 degree credits, \$3302. \$74.

See description for 3302. (No prereq. Meets concurrently with 3302. May not be taken for graduate credit)

Fall Qtr Sec 1 T—6:20-8:55, Ph 157, Penn

UC 5303 SCIENCE AND SOCIETY. 4 degree credits, \$3303. \$74.

See description for 3303. (No prereq. Meets concurrently with 3303. May not be taken for graduate credit)

Winter Qtr Sec 1 T—6:20-8:55, Ph 157, Penn

urban affairs

(See Public Policy)

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.



college of veterinary medicine (VM)

James O. Hanson, Director of Veterinary Medicine Continuing Education

George W. Mather, Professor of Veterinary Medicine

VM 1100 CARE, MANAGEMENT, SHOWING AND DISEASES OF HORSES. 3 degree credits, \$49.50.

Lectures and demonstrations by faculty members of the College of Veterinary Medicine and qualified well-known authorities on horses and horsemanship from the metropolitan area. (No prereq)

Spec Term Sec 1 **Th**—Jan 5-April 27, 7:30-9:30, AnSci-VetMed 125, Hanson, Mather (coordinators)
(See Winter quarter registration dates, page 17.)
No late fee through Dec. 31)

vocabulary building

(See General College communication skills)

vocational and technical education

Continuing education courses for in-service vocational and practical arts teachers are offered on campus during late afternoons and off-campus through Continuing Education and Extension in the following programs:

- Agricultural Education
- Business Education
- Distributive Education
- Home Economics Education
- Industrial Education
- Vocational Education

Late afternoon classes are scheduled each quarter and are listed in the day school **Class Schedule**. Continuing Education and Extension courses for vocational certification and degree programs are scheduled at the request of and in cooperation with vocational program administrators. Requests for information about specific courses to be provided through Continuing Education and Extension should be directed to Special Services, 125 Peik Hall, University of Minnesota, Minneapolis, Minnesota 55455 (373-5050).

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.



women's studies (WoSt)

(See also Clas 5017, *Women in the Greek World*; FSoS 3015, *Life-Styles of Educated American Women*; IC 0535, *Creating Choices, Balancing Work and Personal Life*; IC 0536, *Women and Power*; IC 0537, *Personal Growth for Professional Women*; Th 5950, *Women in the Theatre*; Pol 5741, *Political Behavior of Women*; SW 0532C, *Counseling from a Feminist Perspective*; SW 0533C, *Feminist Therapy*; IC 0451, *Women and Language Workshop*; Psy 5141, *Psychology of Women*)

Pat Faunce, Associate Professor of Psychology
Judith Bennett, Lecturer in Women's Studies
Meri Golden, Lecturer in Women's Studies
Roxanne Gudeman, Lecturer in Women's Studies
Etta Magnusen, Lecturer in Women's Studies
Ellen McVeigh, Lecturer in Women's Studies
Judith Modell, Lecturer in Women's Studies
Elizabeth Reed, Assistant Professor in Women's Studies
Sheila Reiser, Lecturer in Women's Studies
Judy Wanhala, Lecturer in Women's Studies
Gayle Graham Yates, Coordinator of Women's Studies

WoSt 1005, 1006 INTRODUCTION TO WOMEN'S STUDIES. 4 degree credits each quarter, \$66 plus \$3 course fee. Total \$69 each quarter. (◆\$33 plus \$3 course fee. Total \$36 each quarter) (IS 1005)

Brief history of feminism, nationally and locally; survey of women's issues; survey of biological and/or learned behaviors. (No prereq)

Fall Qtr 1005 Sec 1 M—6:20-8:50, ForH 120, Magnusen, McVeigh
Winter Qtr 1006 Sec 2 M—6:20-8:50, ForH 120, Magnusen, McVeigh

WoSt 1977 THE PSYCHOLOGICAL ENVIRONMENT OF WOMEN. 4 degree credits, \$66. (◆\$33) (IS)

An examination of psychological principles and theories which have a unique application to the development, growth, and behavior of women; to inform and to contribute to the woman's awareness of where she is now and how she got there; to foster self-actualization of the young woman. (No prereq)

Winter Qtr Sec 1 W—6:20-8:50, ForH 130, Faunce

WoSt 3001 WOMEN: BIOLOGY AND BEHAVIOR. 4 degree credits, \$70 plus \$3 course fee. Total \$73. (◆\$35 plus \$3 course fee. Total \$38)

Course to educate women and men about biological aspects of being a woman. Combines material from several disciplines rather than following any specific disciplinary approach. (Prereq Biol 1011 or Phsl 1001 or Psy 1001)

Fall Qtr Sec 1 T—6:20-8:50, ForH 285, Reed

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.

★**WoSt 3103 THE MODERN FEMINIST NOVEL.** 4 degree credits, \$70. (◆\$35)

Selected twentieth-century novels by British and American women. (Prereq English comp or equiv. Limited to 30 students)

Spring Qtr Sec 1 **W**—6:20-8:50, ForH 349, Wanhala

WoSt 3300 COMPARATIVE STUDY OF WOMEN: SUB-CULTURAL VARIATIONS IN AMERICAN FEMALE EXPERIENCE. 4 degree credits, \$70. (◆\$35)

A comparison of the life experiences of White, Black, Native-American, Chicana and Asian-American women. Emphasis will be on the social history of, present perception of, expectations for, and socialization of females in each, viewed from inside and outside the specified group. (Prereq 2 courses in Women's Studies, 2 courses in the social sciences, or #)

Spring Qtr Sec 1 **M**—6:20-8:50, ForH 120, Gudeman

WoSt 3910 TOPICS: DRAMA—FOCUS ON WOMEN. 4 degree credits, \$70. (◆\$35)

Selected modern and contemporary plays of the western world by and/or about women. Exploration of international and historical roles of women in theater. (No prereq)

Fall Qtr Sec 1 **Th**—6:20-8:50, ForH 120, Reiser, Golden

(See also Th 5950, Women in the Theatre)

WoSt 3910 TOPICS: THE MOTHER-CENTERED FAMILY—AN ANTHROPOLOGICAL PERSPECTIVE. 4 degree credits, \$70. (◆\$35)

A cross-cultural study of the concept and the phenomenon of the mother-centered family, examination of it in relation to social and cultural factors where it occurs, its bearing upon questions of women's position and power in groups. (No prereq)

Winter Qtr Sec 2 **T**—6:20-8:50, ForH 120, Modell

WoSt 3910 TOPICS: WOMEN AND WORK. 4 degree credits, \$70. (◆\$35)

Effect of occupational structure upon women's self concept, life chances, place in social order. Topics include: American occupational structure, work and self, occupational choice, congruence and incongruence of sex roles and feminine life cycle with structural characteristics of occupations. (Prereq Soc 1001 or Anth 1002 or #)

Spring Qtr Sec 3 **T**—6:20-8:50, ForH 115, Bennett

WoSt 5311 WOMEN AND THE LAW. 4 degree credits, \$74. (◆\$37)

Course intends to make students more aware of the areas of the law that affect women, while providing, through the use of several local women lawyers, a model to all the students of women functioning well within a traditionally male-oriented profession. Areas of law covered include criminal, employment, welfare, labor, corporate, legal education. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:20-8:50, ForH 115

world affairs

For information on non-credit conferences or workshops in world affairs, please contact William C. Rogers, 306 Westbrook Hall; telephone 373-3709.

Symbols, abbreviations, off-campus class locations begin on page 413.

Courses and sections in red have limits on enrollment. See page 23.



youth studies (YoSt)

(See also Education and Continuing Education in Social Work)

Dan Conrad, Teacher, Hopkins Eisenhower High School

Diane Hedin, Instructor in Youth Studies

Miriam Pew, A.C.S.W.

Miriam Seltzer, Assistant Professor and Coordinator for Youth Studies

YoSt 5120 INDEPENDENT STUDY IN YOUTH STUDIES. Cr arr. (maximum 12 cr). \$18.50 per credit.

Independent reading and/or research under faculty supervision. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Arr.**, Seltzer

Winter Qtr Sec 2 **Arr.**, Seltzer

Spring Qtr Sec 3 **Arr.**, Seltzer

YoSt 5132 ACTION LEARNING FOR YOUTH. 3 degree credits, \$55.50.

Course will cover (1) purposes of service and action-learning in schools and youth-serving agencies. (2) the development and implementation of programs in which adolescents are performing valued service and work in their communities and (3) Evaluation of action-learning programs. A Minneapolis school setting will be selected at the first meeting. A joint Day/Extension class. (Prereq SW 5131, HEd 3090, CPsy 5303, #. YoSt 5131 recommended. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—1-3, first mtg ClaOff 31, StP Campus, Hedin, Conrad

Three courses will be offered in 3-day intensive workshops by Continuing Education in Social Work: **YoSt 5230, 5231, 5232—Work With Youth: Individual, Families and Groups.** Specific information is available at 321 Nolte Center, University of Minnesota, Minneapolis, MN 55455 (373-5831).

Symbols, abbreviations, off-campus class locations begin on page 413.
Courses and sections in red have limits on enrollment. See page 23.



general information

contents	page
faculty	340
funding of extension classes	340
campus activities, services and facilities	340
student representation, university of minnesota senate	345
student board (extension classes)	346

faculty

The teaching staff in Extension Classes consists primarily of University of Minnesota faculty. In some instances, faculty members from other educational institutions and specialists in professional and business fields have been selected to teach courses. All Extension Classes instructors are approved by the academic departments through which classes are offered.

Additional staff—Faculty other than those listed under each department may be assigned to teach certain courses.

funding of the extension classes program

While the state legislature has begun to help fund Continuing Education and Extension, the Extension Classes program—including instructional, administrative and staff costs, and related costs—is supported mainly by students' tuition. Therefore, depending on overall enrollments, program adjustments are sometimes necessary, as is the cancellation of classes in which enrollment is low.

campus activities, services and facilities

art rentals, university gallery

The University Art Gallery maintains a rental collection of framed original prints, watercolors, and drawings. Extension students may rent art works for use in the home or current place of residence. Original posters may be purchased for \$1.04 each. Rental office is open the first one or two weeks of each quarter 9 to 11 a.m. and 2 to 4 p.m., Monday through Friday, and 5:30 to 7:30 p.m. on the first night of each quarter. The Rental Office is located in M-16 Northrop Auditorium (one flight up from the northwest corner of Northrop). The cost is \$1.35 a composition plus sales tax a quarter. After the open rental period, students may rent compositions by appointment. Telephone 373-5685 for further information.

The University Gallery, located on the third and fourth floors of Northrop, has the following exhibit hours:

Monday, Wednesday, Friday	11 a.m. to 4 p.m.
Tuesday, Thursday	11 a.m. to 8 p.m.
Sunday	2 to 5 p.m.

All exhibits are free and open to the public.

athletic facilities

A Continuing Education and Extension student may use the athletic facilities of the University during scheduled recreation hours by paying a fee equivalent to that paid by day school students. The current fee is \$5 a quarter or \$7.50 a semester, but is subject to change without notice. The fee can be paid at the time of registration.

The athletic facilities include pools, gymnasiums, skating rink, tennis courts, fields, diamonds, track, and golf courses. However, there is a separate user charge for the ice rink, tennis courts and golf courses. Separate locker and towel rental is also available.

Payment of the fee entitles the student to use the facilities during the term for which he or she is registered, except that students registered for Spring Quarter or Spring Semester may use the facilities during the summer until the opening date of Welcome Week (September 19, 1977). Since facilities are heavily used, often to capacity, their use may be restricted occasionally.

The fee is paid in the Extension Classes office and will be entered on a receipt separate from the fee statement. Students must present this receipt when they wish to use the facilities. If students cancel classes, they must surrender the facility fee receipt at the time of cancellation.

The athletic facilities fee will not be refunded after the second week of classes. No refund will be made without surrender of the athletic facilities fee statement.

For further information about athletic facilities and fees, telephone 373-4200.

athletic tickets

University students carrying 3 credits or more are eligible to purchase student athletic tickets for men's intercollegiate athletic events. The football ticket, which includes swimming, wrestling, track, gymnastics and baseball, is \$19.50. The first home game is on September 10 with Western Michigan and will be reserved seating. Reserved tickets with specific seat assignments will be assigned for all seven home games. Tickets will be available for pick up beginning September 5 at Bierman Field Athletic Building.

Hockey season tickets will go on sale starting in September. Reduced-rate reserved and general admission season tickets will be available.

Basketball season tickets will be reduced-rate reserved or general admission. Tickets go on sale late in September.

For details on purchasing student tickets, please call the Athletic Ticket Office, Bierman Field Athletic Building, 373-3181. Hours are 9 a.m. to 5 p.m. Monday through Friday.

Any student enrolled for at least 3 credits in Extension Classes may purchase one student athletic ticket under any or all of the following plans:

Plan No. 1—\$19.50 FOOTBALL TICKET. Admits to all home varsity football games (seven games); all games will have reserved seats. Also admits to all regularly scheduled home baseball, gymnastics, swimming, track and wrestling home intercollegiate events—general admission seating. Alternative plans will be available. For information call 373-3181.

Plan No. 2—BASKETBALL TICKET. Admits to all home, regularly scheduled intercollegiate basketball games. General admission and reserved seating are available. Prices not established at press time.

Plan No. 3—HOCKEY TICKET. Admits to all home, regularly scheduled intercollegiate hockey games. General admission and reserved seating are available. Prices not established at press time.

Plan No. 4—SWIMMING, GYMNASTICS, TRACK, WRESTLING AND BASEBALL TICKET. Admits to all home, regularly scheduled intercollegiate games in these five sports. Seating is general admission. Prices not established at press time.

Married students may purchase a second athletic ticket, for use by spouse only, through any or all of the above four plans. Note that spouse's ticket need not be the same plan(s) as the student's own ticket.

All tickets purchased are nontransferable. If a student's classes are canceled by either the University or the student, athletic tickets must be returned to the Athletic Ticket Office. Partial refund, if ticket is canceled, will be made, based on the refund schedule noted on the ticket.

When and Where to Purchase Football (Plan No. 1) Tickets in the Fall: At Bierman Field Athletic Building lobby, 15th Ave. at 5th St. S.E. starting Monday, Sept. 5. A ticket sale is also held each spring for the upcoming fall season. Call 373-3181 for details.

Hours—9 a.m. to 5 p.m. daily, except Saturdays.

Sale of Plans No. 2, 3, and 4: The special plans will be on sale in September. Call 373-3181 for details at that time.

Regulations governing purchase, transfer, and cancellation of the above tickets are available on request to the Athletic Ticket Office, Bierman Field Athletic Building (373-3181).

1977 Home Football Schedule:

September 10 Western Michigan
September 24 UCLA
October 1 Washington
October 15 Northwestern

October 22 Michigan
November 5 Michigan State
November 19 Wisconsin

Advance Spring Sale: Each spring an advance sale is conducted whereby students may apply for athletic tickets under Plan No. 1, to be picked up at Bierman Field Athletic Building during Welcome Week in September. No proof of enrollment is required to order in the spring. Some form of proof of student status, such as a completed registration form, however, must be presented to claim ticket in the fall. NOTE: After Sept. 25, a paid fee statement will be required for all student ticket transactions. Students who register by mail will receive their fee statements by return mail in the order in which registrations are processed. If the adjacent seat is purchased for the spouse, proof of marriage is required. Application may be made by mail in the spring sale. For an application, call the Athletic Ticket Office (373-3181).

Extension students may NOT pick up fee statements in advance at Westbrook Hall. All fee statements will be mailed to students once payments have been recorded. No exceptions will be made.

handicapped facilities

The Office of Physical Planning at the University of Minnesota has available special maps designed to help disabled students get around the Minneapolis and St. Paul campuses.

The maps, **Guide for the Handicapped**, indicate handicapped parking areas, building entrance levels, elevators, curb cuts, and accessible buildings. Also listed are rest rooms modified for the handicapped and accessible buildings with campus telephones.

Those who would like copies of the guides should telephone Rehabilitation Services at 376-3143. Information about Unicorns, a student group interested in the needs of disabled and offering mutual support, is also available at 376-3143.

health service

Extension Classes students registered for six or more Extension credits (or Extension and day credits) may enroll for the Boynton Health Service benefits. The cost of the service (\$35 a quarter or \$52.50 a semester) entitles students to use the Boynton Health Service (see East Bank campus map in this *Bulletin*).

Health Service hours: 8 a.m. to 7 p.m., Monday through Friday; Saturday, 8 a.m. to 6 p.m. Closed Sunday and holidays. **During the summer** the Health Service is open 8 a.m. to 4:30 p.m. Monday through Friday only; closed Saturdays, Sundays, and holidays.

Medical care and health counseling are provided to students who pay the above fee. No charge is made for general care or for consultations with a specialist on physical or mental health problems. Intensive investigation and/or treatment of pre-existing, chronic conditions are **not** covered by the Health Service; however, such services may be arranged for, but at the student's expense.

Fee-paying students also receive diagnostic laboratory and x-ray services up to \$100 a quarter; needed diagnostic procedures costing more than this amount which are not collectable from the student's private insurance are the student's obligation. Physical therapy and x-ray therapy are provided up to a limit of \$250 a quarter. Charges are made for prescription drugs, glasses, dental services, and routine physical examinations.

The Boynton Health Service fee does not include hospitalization benefits nor coverage for services related to hospitalization including surgery. Students who have this type of coverage will be expected to provide the name of the insurance carrier along with their group and contract numbers at the time of registration. Students who do not have private hospital-medical-surgical coverage must complete an application form for this coverage at the time of registration; the premium for this coverage, along with the Health Service fee of either \$35 or

\$52.50, will be paid in Extension Classes and will be entered on a receipt separate from the fee statement. This receipt (available in 101 Wesbrook Hall) must be presented when using the Health Service.

Students who cancel their registration before the first week of classes will receive a 100% refund of the health service fee upon surrender of the health service receipt. Students wishing a refund of the health service fee during the first two weeks of classes must present a statement from the health service stating they have not used any of the facilities, in addition to the health service receipt. The health service fee is not refundable after the second week of classes.

Students interested in enrolling in the Health Service Plan should do so at the time of registration and may not enroll in the plan after the first week of the term.

For additional information on these and other benefits, call 373-3195 and request the booklet, "Your Health Service," or pick it up at 101 Wesbrook Hall.

library

The library resources of the University of Minnesota are housed in 35 separate units located on the Minneapolis and St. Paul campuses. The library units which are generally open in the evening and on weekends are the St. Paul Campus Library, Walter Library (East Bank), and Wilson Library (West Bank). If you have questions about library resources, hours, services, etc., call GENERAL LIBRARY INFORMATION (373-2424).

Continuing Education and Extension students are entitled to use University library facilities and to borrow books from the University of Minnesota libraries. Extension students are subject to all library regulations, including those covering loan periods, fines on overdue books, and recalls of books needed by other patrons or for course reserves. **Presentation of a current fee statement is required when borrowing books.**

locker rental service

The rental rate is 60 cents for a half locker or \$1 for a full locker a term. Padlocks are provided (without charge) while the locker is in use. Locker rental offices for East Bank campus locations are located in B-78 Coffman Memorial Union (**Lost and Found Desk**); 110 Anderson Hall (for West Bank lockers); and 212 McNeal Hall (for St. Paul lockers). Further information available at B-78 Coffman (376-3003).

lounges and study areas

There are many lounges, libraries, and classrooms open during the evening to Extension students who want to study, relax, or talk with classmates and friends.

parking facilities

Parking is available for Extension students at a nominal charge. (See maps in the back of this **Bulletin**.) Call 376-7500 to request a parking and campus map. Parking is most difficult on the West Bank. For parking information telephone 373-4190.

Parking for handicapped students—Handicapped students can purchase quarterly or daily parking permits for parking in several on-campus locations, enabling them to move from class to class by car. For information on costs and parking locations, call 373-4190.

phones

Campus-only phones (free of charge) are located at several convenient indoor and outdoor locations on the Minneapolis and St. Paul campuses. They can be used around the clock for communication with University Police and the emergency operator. Calls can be made to University Information from 7:30 a.m. to 6:30 p.m. (373-2002). After 6:30, the phone number of a staff member who is on call will be given. Campus phones **cannot** be used for placing off-campus calls. For a map showing phone locations, call 373-1234. A phone is located in the lobby of Wesbrook Hall.

police assistance

University Police provides assistance to Extension students—whether the problem is a locked car or closed University garage. Free ambulance service is provided to all students and staff while they are on campus. Students should make note of the University Police number, 373-3550.

publications

Info

Info, a newsletter for University Extension students, is published monthly (except June and July). It contains information important to Extension students, faculty, and persons interested in learning more about University Extension Classes. Issues include articles on new courses, activities and facilities open to Extension students, registration information, faculty, and timely University policy decisions which affect Extension students.

Info is mailed automatically to all Extension students who have registered for classes within the past two years. To place someone's name on the mailing list, call 376-7500.

Student-Staff Directory

A University student-staff directory is available at Twin Cities campus bookstores to Extension students with a current fee statement. The directory contains phone numbers and addresses of all University offices, faculty and staff members, and day students.

The Minnesota Daily

The University of Minnesota student newspaper, the **Minnesota Daily**, is available by mail subscription. The **Daily** covers campus and community news and has a books section on Mondays, an entertainment calendar on Thursdays, and an arts and entertainment section on Fridays. Subscription rates are \$6 a quarter (50 issues), and \$18 a year (180 issues). **Minnesota Daily**, University of Minnesota, 10 Murphy Hall, 206 Church Street S.E., Minneapolis MN 55455 (373-3385).

Connect

Connect, a handbook on student organizations and activities (printed by the Student Activities Center and Orientation Office) may be picked up at the Student Activities Center, 317 17th Ave. S.E.

Individual Learning Opportunities in Extension

A convenient handbook, **Individual Learning Opportunities in Extension**, is available to help students develop their own projects and/or study on their own to receive credit. The handbook focuses on the following ways to obtain credit: extra credit (X) registration, credit by examination, (Y) registration (course content learned without attending classes), directed studies (working independently in areas not covered in regular departmental offerings) and directed instruction (credit for helping to teach a course). Students may pick up this free handbook at 101 Wesbrook hall or call (373-3195).

Field Experience Information (OSLO)

Field experience learning opportunities are available to University students in several areas. The Office for Special Learning Opportunities (OSLO) maintains a file on an enormous range of resources available to those who wish to earn a portion of their academic credits through community-based learning experiences. The file is designed for student use. Advisers are available to provide supplementary information. For more information, call 373-7550, or visit the OSLO office, 201a Wesbrook Hall.

Calendar

A Twin Cities campus **Calendar** is available to all Extension students. The quarterly calendar lists University concerts, athletic events, theatre offerings, U Film Society, art exhibits, music performances, and other cultural activities. University Relations (373-2126).

theatre, artists course, and special lectures

Educational and cultural events are continually offered on the University campuses. Many are open to the student body and to the public without charge. University Theatre Ticket Office (373-2337); Department of Concerts and Lectures (373-2345).

Also check the local newspapers' **entertainment sections** for events.

bus transportation between campuses

Bus transportation between the Minneapolis and St. Paul campuses is available Monday through Friday on special buses labeled "Univ. of Minn.:" and numbered 13. The Minneapolis campus terminal is at Jones Hall (intersections of 15th Avenue and Pillsbury Drive). The St. Paul terminal is at the St. Paul Student Center on Buford at Eckles. Buses leave these terminals at 10-minute intervals until 6:25 p.m. and at 20-minute intervals from 6:25 to 7:25 p.m. Service after 7:25 is as follows:

Leave Jones Hall: 7:45 p.m., 8:25, 9:05, 9:45, 10:25, 11:05.

Leave St. Paul Student Center: 8:05 p.m., 8:45, 9:25, 10:05, 10:45.

There is no charge for riding the bus unless one enters or exits at bus stops located off campus (see **Student-Staff Directory** for route map and bus stops).

Buses stop at 29th and Como, at Carter and Eckles, and at Fitch and Gortner for students using parking lots near those locations. Parking is free at the 29th and Como lot, although there is a charge to board or exit the bus. Bus fare discount cards can be obtained at the Bursar's office, 145 Williamson Hall, for \$5. One card allows 20 rides.

The West Bank bus runs Monday through Friday from 7:15 a.m. to 6:25 p.m. The West Bank terminal is in front of Blegen Hall. On the East Bank the bus terminal is on the N.W. corner of Pillsbury Drive and 15th Avenue (across from Eddy Hall). Bus schedules and further information are available at the student unions and at the University Transit Services office, room 216, Printing and Graphic Arts Building, 2818 Como Ave. S.E. (telephone 373-0374)

student representation, university of minnesota senate

University of Minnesota students are entitled to serve in the University Senate. The University of Minnesota is one of the few universities in the country in which students may be elected to the academic governing body. So far as is known, it is one of only a few universities whose Extension students also serve in that body.

The University Senate considers matters of importance to the academic governance of the University, including the internal affairs of the institution as well as the role of the University in the community. Student representatives are elected from 19 colleges, schools, or other academic units within the University, including Continuing Education and Extension which, in 1978-79 is entitled to elect eight senators and eight alternates to the Senate. Students elected to the University Senate automatically become members of the Extension Classes Student Board.

Eligibility for candidacy—A candidate for election from Continuing Education and Extension must have earned a minimum of 12 University of Minnesota credits in the last 5 years and be carrying, at the time of election, 3 credits in Extension Classes (semester, quarter and special

term registrations count equally). Students wishing to become candidates may file for candidacy at 180 Westbrook Hall, Minneapolis campus; or call 376-7500 to have filing forms mailed.

Dates for filing are February 6 through March 5, 1978.

Upon application for candidacy, the candidates must provide proof of their eligibility: transcripts indicating they are in good standing and meet the credits-earned requirement, and a fee statement showing credit load. Once certified as a candidate, the student is free to campaign in a manner in harmony with the guidelines (available at time of filing) established by the Assembly Committee on Student Affairs.

Extension Classes students will be provided with a brief sketch of each candidate's qualifications.

The eight candidates receiving the greatest number of votes will be elected senators. Alternates will be the group of eight candidates receiving the next highest number of votes.

Election of Extension Classes senators and alternates will be held April 10-16. Please read the following carefully:

Eligibility for voting—To be eligible to vote in the election a student must be registered in Extension Classes and present a current fee statement when voting.

Polling places—Students may vote by mail or via ballot information distributed in the classroom.

Students voting by mail must send paid fee statement with ballot. Fee statement will be returned by mail immediately. For ballot or information call 376-7500.

student board (extension classes)

The Extension Classes Student Board was formed to serve Extension students, faculty, and the administration in the exchange of ideas and information pertaining to the Department of Extension Classes.

It is composed of the student senators and alternates *elected* to the University Senate, *appointed* Extension students, the dean of Continuing Education and Extension (or a representative) and an Extension Classes faculty member. Any Extension student is eligible to be appointed to the Student Board. Eligibility is registration in any Extension class. There is no credit requirement.

All students are urged to communicate their ideas, suggestions, and concerns to their Student Board. Students interested in joining the Student Board, or in talking with members about a particular concern, should call 376-7500.

degrees & certificates

For further information
about degrees and certificates,
telephone Extension Counseling:
373-3905

Contents	page
undergraduate degrees.....	348
graduate degrees.....	383
certificates.....	386

degrees

undergraduate degrees

associate in arts (A.A.), General College

The General College of the University offers a two-year program of liberal and general studies leading to the Associate in Arts degree. The academic requirements for the A.A. degree are: (1) 90 passing credits and (2) passing the General College Degree Comprehensive Examination.

Of the 90 credits required for the degree, 45 must be taken in University of Minnesota courses; 30 of these credits must be taken in General College courses, including those offered through the Department of Extension Classes. (A list of General College courses offered through Extension Classes is found in **Course Offerings**.)

There are no required courses in the program of the college, nor are there requirements for broad groups of courses. Instead, a comprehensive examination is used to measure breadth of learning in the college's general education program. This exam covers the main curriculum areas of the college—natural sciences, social sciences, humanities and communication skills. It centers on the relationships that exist among these areas and is designed to measure the extent to which a student demonstrates a general knowledge in the liberal arts.

The Degree Comprehensive Examination usually is taken when the student nears completion of the required 90 credits. Arrangements for taking the test can be made in the General College office, 106 Nicholson Hall, telephone 373-4104.

bachelor of applied studies (B.A.S.), General College bachelor of general studies (B.G.S.); General College

Students admitted to baccalaureate programs in General College work toward the bachelor of general studies (B.G.S.) or bachelor of applied studies (B.A.S.) degrees. The basic requirement for admission is an associate in arts (A.A.) degree or its equivalent. Prospective students prepare their own curriculum in consultation with an advisor. They may be asked to defend and justify their proposals before a faculty-student admissions committee.

It is anticipated that most, if not all, of the credits required for both of these baccalaureate degrees in the General College can be completed through Extension. Persons holding A.A. degrees or nearing completion of A.A. degrees may learn more about General College baccalaureate programs by making an appointment with a General College counselor, 10 Nicholson Hall, 373-4400; or an Extension Counselor, 314 Nolte Center, 373-3905.

general college occupational options

(For more information on the following programs, call the Counseling Department 373-3905)

Occupational programs in the General College provide for a variety of arrangements toward their completion. In a few of them, acceptance by a supervisor or advisory committee is necessary before the occupational specialty courses may be taken. In some, the specialty courses are available only in day classes, but much of the general education course work is available in Extension Classes. Some of the options leading to General College degrees are combinations of course work in another post-high school institution and the General College; in most of these cases the General College component can be taken exclusively through Extension. Further information about any of the following programs may be obtained by making an appointment with a counselor in the General College Student Personnel Office, 10 Nicholson Hall, 373-4400, or in the Extension Counseling Office, 314 Nolte Center, 373-3905.

DENTAL ASSISTING: The General College and the University of Minnesota School of Dentistry jointly sponsor a program leading to certification in dental assisting. Credits earned in the 10-month technical sequence (day only) may be applied toward the A.A. degree. Students planning to work toward a degree are urged to attend General College classes the first year and spend the second year in the dental assistant program. Students admitted to the Dental Assistant program are expected to complete the General College classes prior to starting the technical sequence.

HUMAN SERVICES GENERALIST TRAINING: A two-year program leading to the A.A. degree is jointly sponsored by the General College and the Department of Psychiatry of the University of Minnesota Medical School. The program is designed to help paraprofessionals already employed in a mental health setting to increase their knowledge, skills and abilities. Supervised on-the-job experience provides students with opportunities to relate classwork to employment situations.

LEGAL PARAPROFESSIONAL EDUCATION: Two sequences are offered for students interested in working in legal offices or agencies. The Legal Assistant sequence requires 90 quarter credits of course work. The Legal Administrator is a four-year (180-credit) curriculum leading to the B.A.S. degree. At all levels the program includes basic legal courses and classes aimed at essential business and communication skills. The Legal Assistant and Legal Administrator programs include legal specialty courses and internships in law offices or legal agencies.

RADIOLOGIC TRAINING: A program jointly sponsored by the General College and the University of Minnesota Hospitals School of Radiologic Technology, leads to certification and registration in Radiologic Technology and to the A.A. degree. The 27-month program includes 45 credits in technical training and 45 credits in general education. Candidates for the B.A.S. may be granted additional credits for their technical training.

MARKETING: The marketing sequence combines general education courses, technical/professional skills courses, and a directed internship in a Twin Cities business establishment.

RECREATION FOR SPECIAL GROUPS: A program jointly sponsored by the General College and the School of Physical Education and Recreation is designed to prepare students to direct the recreation activities of special populations in health care facilities and community centers. The course of study includes field work, general education and courses in recreation theory and skills.

VOCATIONAL TEACHER EDUCATION: A program sponsored by the General College and the College of Education prepares qualified trade, technical and business persons for entry into vocational-technical training positions, and provides an opportunity for current vocational-technical teachers to further their general education. Credit toward either an A.A. or a baccalaureate degree may be granted for previous technical, trade or business training from accredited schools and for related work experience.

VOCATIONAL-TECHNICAL COOPERATIVE PROGRAMS: In order to provide a wide range of opportunities in occupational programs, the General College grants blanket credit toward its degree programs for courses of study completed at all Minnesota public and some private vocational technical schools. The purpose of these arrangements is to combine college courses in general education with specific vocational preparatory programs.

associate in liberal arts (A.L.A.), College of Liberal Arts

The Associate in Liberal Arts degree, administered by the College of Liberal Arts, is awarded to students who complete 90-credit programs devoted largely to general education. Students who wish to transfer to professional or other education find the degree useful as evidence of achievement in the liberal arts. It is equivalent to about half of the bachelor's degree program. Students seeking the A.L.A. through Continuing Education and Extension should arrange early consultation with a member of the Counseling Department (373-3905).

Part of the degree program may also be met with credits transferred from other accredited colleges and universities.

The current A.L.A. degree requirements:

1. 90 credits acceptable to CLA, 45 of them on A-N grading.
2. At least 45 University of Minnesota CLA credits.
3. Satisfaction of CLA English composition requirement.
4. Satisfaction of four of the following: (a) Foreign language study through the college 3rd-quarter level, or exemption based on 3 or more years of high school work (one language only), or exemption by examination; (b) 8 to 10 credits in Group A of the B.A. Group Distribution requirements (see page 354); (c) 12 to 15 credits in Group B; (d) 16 to 20 credits in Group C; (e) 12 to 15 credits in Group D.

A copy of "Procedures for Obtaining the A.L.A. Degree Through Extension" may be obtained from Extension Classes, 101 Wesbrook Hall, or the Counseling Department, 314 Nolte Center.

For the **CLA Bulletin**, call 373-2153. For a list of CLA courses that meet Group Distribution requirements offered through Continuing Education and Extension, call 373-3905.

bachelor of arts (B.A.), College of Liberal Arts

The Bachelor of Arts degree may be earned from the College of Liberal Arts in 19 major fields through Continuing Education and Extension. Part of the degree program may also be met with credits transferred from other accredited colleges and universities. Students wishing to earn the B.A. degree through Continuing Education and Extension should talk with a member of the Counseling Department (373-3905) as soon as the decision has been reached.

Candidates for the B.A. degree must complete 180 credits with grades of A, B, C, or S, 75 of them in 3000 and 5000 level courses (45 awarded in CLA courses) and must also satisfy the English composition, second language, and Group Distribution requirements. These are defined in statements of graduation requirements, page 353. Finally, B.A. candidates must complete a major sequence in the field selected and complete at least 30 credits in 3000 or 5000 level courses from areas outside their major.

Most students try to meet the English composition, second language, and Group Distribution requirements in their first two years, leaving the last two years free for work in their major field and electives. Though it is usually desirable to meet these requirements as early as possible, it is not necessary to complete them before applying for admission to a major program. Sophomores in good standing may apply for admission to majors.

The majors that may be completed entirely in Extension Classes are:

American Studies	History
Architecture	Humanities
Art History	Interdepartmental
Arts, Studio	Journalism (advertising sequence)
Child Psychology	Philosophy
Classical Civilizations	Political Science
Economics	Psychology
English	Social Welfare
Geography	Sociology

Majors in four other departments—Anthropology, Computer Science (the B.S. degree is available in the Institute of Technology), Mathematics, Speech-Communication—may be nearly completed through Extension classes. A few courses must be taken in day classes (the department concerned sometimes permits substitution).

Condensed descriptions of major requirements for these degrees are given with course listings under department headings in this **Bulletin**; a copy of the 1976-1978 **CLA Bulletin** is essential to the CLA degree candidate. It may be obtained by calling the Bulletin Bureau, 373-2153. Degree requirements are described in its Section I. In addition, a copy of the "Procedures for Obtaining the Bachelor of Arts Degree Through Extension" should be obtained from Extension Classes, 101 Westbrook Hall, or the Counseling office, 314 Nolte Center.

changes in graduation plans

CEE B.A. candidates usually follow the graduation requirements in use at the time of their admission to CLA (requirements have been altered several times in recent years). Those entering degree programs in or after Fall 1972 must meet the requirements described above, which differ from 1970 requirements principally in specifying A, B, C, or S grade records instead of C averages. Details of other requirements of 1970 and 1972 plans are shown here. A student may usually follow a plan more recent than that under which he became a degree candidate, but the reverse is not permitted. (Students admitted to CLA and registered in classes before Summer Session 1967 follow 1957 requirements unless they choose a later plan, as do those with 39 previously earned credits who were thus admitted and registered before Summer Session 1969. The 1967 requirements apply to those admitted and registered between Summer Session 1967 and Summer Session 1970.)

english, language and distribution requirements

English Composition 1001-1002 or Communication 1001-1002 or equivalent or exemption

Second Language—Route I or Route II

Route I: Complete a minimum of 23 credits or validation at that level by the appropriate language department. Background from high school usually relates to this requirement as follows:

High school study

- 4 years
- 3 years
- 2 years
- 1 year

Additional study in college

- at least 3 cr at higher level in same language
- at least 8 cr at higher level in same language
- at least 13 cr at higher level in same language
- at least 18 cr at higher level in same language

Students with two or more years of Latin in high school may satisfy this requirement by continuing in Latin on the above schedule to the 23 credit minimum or by taking 15 credits in another language; high school study in the other language may also count, in accordance with the schedule in II A below.

Route II. Complete a minimum of 27 credits in the following combination:

A. At least 15 credits in a single second language. Background from high school usually relates to this requirement as follows:

High school study	Additional study in college
3 years	none in college
2 years	5 credits at higher level in same language
1 year	10 credits at higher level in same language

B. At least 12 credits (7 for those with 4 years high school study in one language) in courses concerned with the country or countries that use the language in which the student completes 15 credits. (Further study in the language beyond the 15-credit level counts as part of the 12-credit requirement.) A list of eligible courses is available in CLA offices and in the Counseling Department, 314 Nolte Center. Courses elected for this purpose may not be used to satisfy the group distribution requirements.

group distribution requirements

At least 48 credits in four groups, distributed as follows:

Group A—Communication, Language, Symbolic Systems

8-10 credits (normally 2 courses)

Group B—Physical and Biological Sciences

12-15 credits (normally 3 courses, one with laboratory)

Group C—Man and Society

16-20 credits (normally 4 courses)

Group D—Artistic Expression

12-15 credits (normally 3 courses)

special notes on group distribution requirements.

1. A maximum of 12 credits from any one department may be used to meet its requirements, even though courses from some departments may be used in different groups. No course may be used in two groups.
2. Courses used for English composition and for language requirements (including courses used for Route II, part B) may not be used for Group Distribution requirements.
3. The College will offer opportunities to meet Distribution requirements by examination except the Group B laboratory requirement. (The CLEP examinations may be used for partial fulfillment.) Extension students may call the Counseling Department (373-3905) for this information.
4. Honors courses or sections may be substituted for regular courses or sections (unless otherwise specified).
5. At least one group B course must include a laboratory.
6. Extension students may call 373-3905 for a copy of CLA courses meeting Group Distribution requirements offered through Extension Classes.

A copy of "Procedures for Obtaining the Bachelor of Arts Degree Through Extension" may be obtained from Extension Classes, 101 Wesbrook Hall, or the Counseling Office, 314 Nolte Center.

bachelor of science (B.S.), College of Liberal Arts

The Bachelor of Science degree is offered by the Departments of Communication Disorders, Economics, the School of Social Work, and the Urban Studies program. Its requirements are substantially those of the B.A. program except that the second language requirement is not included and the major concentration may be more extensive.

For further information call the Counseling Office, 373-3905.

college of liberal arts honors program

The College of Liberal Arts (CLA) Honors Program, which provides special educational opportunities to highly motivated and academically accomplished students, is open to Extension students. Many of the program's opportunities are available in the late afternoons or evenings; many involve independent research or tutorial projects.

Honors opportunities—including honors courses and colloquia (small discussion groups for freshmen and sophomores focused on selected topics)—are open to all students, whether or not the students are enrolled in CLA or in the program. Other opportunities (College Honors Seminars for juniors and seniors) are restricted to students enrolled in the program. Extension students who meet the program's requirements are eligible to graduate with one of the traditional Honors designations, *cum laude*, *magna cum laude*, *summa cum laude*.

Interested Extension students should call the Honors Division Office (373-5116), and arrange to talk with a staff member. A special honors curriculum can be developed for each Extension student, depending on his or her availability to participate.

Mainly, the Honors Program's purpose is to provide special educational opportunities to students who want and need them; certification for graduation with honors is a secondary function. Thus, admission standards to the program are designed to identify those who are genuinely interested in the offerings, rather than only those whose claim is based on above average grades.

bachelor of science in business (B.S.B.), College of Business Administration

The Bachelor of Science in Business degree from the College of Business Administration may be earned through Continuing Education and Extension. Students wishing to complete the B.S.B. degree through Extension should talk with a member of the Extension Counseling Department (373-3905) as soon as they have made this decision.

Candidates for the degree complete a minimum of 180 credits, part of which may be earned in other accredited colleges or universities. Usually the first 90 credits involve the completion of certain prebusiness requirements through Extension courses or while registered in the College of Liberal Arts of the University of Minnesota. After completion of the prebusiness requirements, it is necessary that formal application be made to the College of Business Administration for admission. Under any circumstances, a minimum of 40 credits must be earned after such application and admission.

ADMISSION REQUIREMENTS FOR CEE STUDENTS WHO ENTER THE COLLEGE OF BUSINESS ADMINISTRATION FALL 1976 OR LATER.

To be considered for admission to CBA, each of the following requirements must be met by the time application is made.

1. Completion of 80 transferable college credits.
2. Have earned a minimum grade point average of a 2.5 for the BSB-Regular program and a 2.7 for the BSB-Accounting program.
3. Completed all but three of the courses listed below. It is preferable to complete all prereqs before admission. All must be completed by the end of the second quarter after CBA admission.
4. Effective Fall, 1978, and thereafter, admission consideration will be given only to students who have completed the above three requirements and who have completed Math 1142, Econ 1001, Econ 1002, Acct 1050, Acct 1051 and QA 1050. These courses must be completed by the time application is made.

The application deadline for Fall Quarter 1977 is July 15; for Winter Quarter 1977-78 October 15; and for Spring Quarter January 15, 1978.

NOTE—Acct 1050-1051; Econ 1001, 1002; Math 1131 or 1111 or 1201, 1142; Psy 1001; Soc 1001; QA 1050, the core requirement for the B.S.B.; and the 20 credits of C.B.A. elective courses cannot be taken on S-N grading.

Students are referred to the **College of Business Administration Bulletin** for full information on prebusiness requirements and B.S.B. requirements. The bulletin may be obtained by calling 373-2153.

A copy of "Procedures for Obtaining the Bachelor of Science in Business Degree Through Extension" should be obtained from Extension Classes, 101 Wesbrook Hall, or the Counseling Department, 314 Nolte Center.

pre-business requirements

All the courses listed below are generally available through CEE.

I. Communication, Language, Symbolic Systems

- A. Freshman English—8 credits
Comp 1001, 1002 or Comm 1001, 1002 or equivalent
- B. Mathematics—10 credits—including Calculus (A-N grade required)
Math 1111 or 1131 or 1201—College Algebra
Plus Math 1142 or Math 1211 and 1221—Calculus
Students with inadequate Math preparation may desire to complete Math 0009—Intermediate Algebra—prior to enrollment in Math 1111 or 1131. High school trigonometry or Math 1008 are prerequisite for Math 1201.

II. Physical and/or Biological Sciences—8 credits (to include one laboratory class [designated by *])

- Anat 1004
- Ast 1008, 1009
- Biol 1011*, 1103*, 1105, 1106*, 3051
- Bot 1009, 1012
- Chem 1004*, 1005*, 1006*, 3100, 3301, 3302, 3305*, 3306*
- EBB 3001
- GC 1111, 1112, 1113, 1132, 1178

GCB 3002, 3022
Geog 1425
Geol 1001*, 1002*, 1008, 3103, 3401, 5002, 5004, 5151
NSci 1005, 3301
Physics 1031*, 1032*, 1271, 1281, 1291, 1275*, 1285*, 1295*, 3801*
Phsl 1001, 5094, 5095
Soil 3122*

III. Man & Society (A-N grade required) All four courses.

Econ 1001, Econ 1002
Soc 1001, Psych 1001

IV. Artistic Expression—8 credits

Afro-American Studies 3108, 5301
American Indian Studies 5211
American Studies 1101, 1102, 1103, 3111, 3112, 3113
Arch 1021, 1022, 1023, 5053, 5055, 5056
Art History—all courses
Arts, Studio—all courses
GC 1311, 1363, 3335, 3374, 3616
Dsgn 1521
Engl Comp 1111, 1113, 1114, 1115, 3101, 3104
Eng Lit—all courses
Foreign Lit—all courses
Humanities—all courses
Music—all courses
Phil—3502
Spch—1104, 3201
Theater—all courses
WoSt 3103

V. Business Courses—12 credits (A-N grade required)

Acct 1050—Principles Financial Accounting
Acct 1051—Principles Managerial Accounting
QA 1050—Managerial Statistics

VI. Comp 1027 is required of all students intending to pursue the BSB Accounting Program.

VII. Electives to complete at least 80 credits required for admission.

VIII. OVERALL GPA of 2.50 (C+) required for admission to regular program; 2.70 (C+) for accounting program.

Requirements for Graduation

UPPER DIVISION REQUIREMENTS

For graduation from the College of Business Administration, students are required to:

1. Complete a minimum of 180 quarter credits of which a minimum of 45 credits must be taken at the University of Minnesota (of which a minimum of 40 credits in Business Courses must be taken after admission to the College of Business Administration). The 45 credits which must be taken at the University of Minnesota are in residence and are normally the last 45 credits in the degree program.

2. Have a minimum grade **average** of C (2.00): (a) overall, (b) on all work taken after admission to the College of Business Administration, and (c) on all Upper Division business administration courses.
3. Complete Upper Division course requirements for the appropriate degree program as listed below. Prebusiness course requirements as listed above must also be completed and cannot be used to satisfy the Upper Division requirements listed below.

Honors—Students with the appropriate grade point average may graduate with “distinction” or “high distinction.” For more information, call the College of Business Administration (373-3701) or the Extension Counseling Office (373-3905).

Bachelor of Science in Business—Regular Program

- 1A. 24 credits of fixed core group courses (A-N grading system required):
 - Mgmt 3001—Fundamentals of Management
 - BFin 3000—Finance Fundamentals
 - Mktg 3000—Principles of Marketing
 - BGS 3002—Business and Society
 - Econ 3101—Microeconomic Theory
 - QA 3055—Introduction to Management Sciences
- 1B. Elective Core (16-17 credits). Any four courses from the following: (no more than one course from any one department will be allowed for this requirement). (A-N grading system required.)
 - OAM 3000—Introduction to Operations Management
 - Tran 3054—Fundamentals of Transportation
 - IR 3002—Industrial Relations Systems: Labor Markets and the Management of Human Resources
 - Mgmt 3004—Business Policy: Strategy Formulation and Implementation
 - Ins 3100—Risk Management and Insurance
 - BLaw 3058—Introduction to Law, and the Law of Contracts and Agency
 - MIS 5100—Introduction to Computers and Computer Data Processing or
 - MIS 5101—Introduction to Management Information Systems
2. 20 credits of business administration electives. These must be at the Upper Division level (numbered 3000 and above) and must be in at least two different subject areas in the College of Business Administration. (A-N grading system required.)
3. 8 credits of course work numbered 3000 and above in one of the following departments: economics, mathematics, psychology, or sociology.
4. 8 credits of course work numbered 3000 and above in any department of the University outside of the College of Business Administration. These need not be all in one area.
5. Additional electives (Upper Division or Lower Division) to complete the 180 quarter-credit requirement for graduation.

Bachelor of Science in Business—Accounting Program

- 1A. 24 credits of fixed core group courses (A-N grading system required):
 - Mgmt 3001—Fundamentals of Management
 - BFin 3000—Finance Fundamentals
 - Mktg 3000—Principles of Marketing
 - BGS 3002—Business and Society
 - Econ 3101—Microeconomic Theory
 - QA 3055—Introduction to Management Sciences
- 1B. 12-13 credits (three courses) from the following (A-N grading system required):
 - OAM 3000—Introduction to Operations Management
 - Tran 3054—Fundamentals of Transportation

IR 3002—Industrial Relations Systems: Labor Markets and the Management of Human Resources

Mgmt 3004—Business Policy: Strategy Formulation and Implementation

Ins 3100—Risk Management and Insurance

BLaw 3058—Introduction to Law, and the Law of Contracts and Agency

2. 19 credits of specified accounting courses (A-N grading system required):
Acct 3105-3106-3107—Intermediate Accounting
Acct 3220-3221—Cost Accounting
Acct 5125—Auditing Principles and Procedures
3. 8 credits (two courses) of accounting elective courses (Acct 3199 and 3299 may not be used to satisfy this requirement). (A-N grading system required.)
4. 5 credits in management information systems courses (A-N grading system required):
MIS 3099—Programming Computers Using Fortran
MIS 5100—Computers and Systems Design
5. 8 credits of course work numbered 3000 and above in one of the following departments: economics, mathematics, psychology, or sociology.
6. 8 credits of course work numbered 3000 and above outside of accounting. May be either inside or outside College of Business Administration.
7. Additional electives (Upper Division or Lower Division) to complete the 180 quarter-credit requirement for graduation.

institute of technology (B.S.)

Through registration in Extension Classes students may earn a Bachelor's degree in Computer Science, Civil Engineering, and Electrical Engineering, and all but approximately 12 to 16 credits towards a Bachelor's degree in Mechanical Engineering. The degree may then be completed after a limited amount of day school attendance or through University-Industry Television for Education (UNITE). Students seeking to complete degrees in the above fields primarily through evening study should contact an adviser in the appropriate department at an early date and should apply for admission to the Institute of Technology after the completion of approximately 39 to 45 credits. For specific degree requirements please consult the **Institute of Technology Bulletin** (for CSci see page 105 of this Bulletin).

Honors—Students with the appropriate grade point average may graduate with "distinction" or "high distinction." For more information, call the Institute of Technology (373-3227) or the Counseling Office (373-3905).

The following are tentative schedules designed to assist students in Civil Engineering, Computer Science, Electrical Engineering and Mechanical Engineering in planning a program of studies leading toward the completion of a certificate or degree program. Every effort will be made to adhere to the schedules on pages 359-364, but they are subject to change without notice owing to unforeseen circumstances. Courses in addition to those listed may also be offered.

electrical engineering

(See course offerings section)

civil engineering

(see **Institute of Technology Bulletin** for full course descriptions)

The following courses will be available on a rotating basis over a four-year cycle:

3100 Introduction to Surveying and Mapping

3200 Introduction to Transportation Engineering

3300 Elements of Soil Mechanics
 3400 Fluid Mechanics
 3500 Introduction to Environmental Engineering Problems and Analysis
 3700 Introduction to Construction Materials
 5002 Engineering Economics
 5100 Land Surveying
 5102 Site and Route Engineering
 5103 Land Planning and Subdivision Design
 5200 Geometric Design of Highways
 5201 Highway Traffic Characteristics & Operations
 5210 Introduction to Transportation Planning
 5310 Design of Foundations
 5312 Design of Slopes and Embankments
 5320 Geomechanics I
 5321 Geomechanics II
 5401 Water Resources Engineering
 5405 Hydrology & Hydrologic Design
 5410 Open Channel Hydraulics
 5420 Introduction to Water Resources Management
 5500 Analysis and Design of Water Supply Systems
 5501 Analysis and Design of Waste Water Systems
 5505 Water Quality and Treatment
 5600 Linear Structural Systems
 5610 Design of Metal Structures
 5611 Design of Reinforced Concrete Structures
 5701 Cemented Materials
 5702 Manufacture and Quality Control of Construction Materials

computer science (CSci)

(see Institute of Technology Bulletin for full course descriptions)

To be offered 1978-79:

CSci 1100 Introduction to FORTRAN Programming I 2 credits
 CSci 1101 Introduction to FORTRAN Programming II 2 credits
 CSci 3001 Perspectives on Computers and Society 4 credits
 CSci 3101 A FORTRAN Introduction to Computer Programming 4 credits
 CSci 3105 Fundamentals of Algorithms and Languages I 4 credits
 CSci 3106 Fundamentals of Algorithms and Languages II 4 credits
 CSci 3107 Introduction to Assembly Language Programming 4 credits
 CSci 5101 Structure and Programming of Software Systems I 4 credits
 CSci 5102 Structure and Programming of Software Systems II 4 credits
 CSci 5103 Introduction to Assemblers 4 credits
 CSci 5122 Advanced Data Structures 4 credits
 CSci 5502 Introduction to Operating Systems 4 credits
 CSci 5503 Introduction to Compiler Construction 4 credits

To be offered 1979-80:

CSci 1100 Introduction to FORTRAN Programming I 2 credits
 CSci 1101 Introduction to FORTRAN Programming II 2 credits
 CSci 3101 A FORTRAN Introduction to Computer Programming 4 credits
 CSci 3104 Introduction to Programming and Problem Solving 4 credits
 CSci 3105 Fundamentals of Algorithms and Languages I 4 credits
 CSci 3106 Fundamentals of Algorithms and Languages II 4 credits
 CSci 5101 Structure and Programming of Software Systems I 4 credits
 CSci 5102 Structure and Programming of Software Systems II 4 credits
 CSci 5121 Introduction to Data Structures 4 credits
 CSci 5201 Fundamentals of Logic System Design 4 credits

- CSci 5301 Numerical Analysis 4 credits
- CSci 5302 Numerical Analysis 4 credits
- CSci 5400 Introduction to Automata Theory 4 credits
- CSci 5503 Introduction to Compiler Construction 4 credits
- CSci 5504 Formal Methods in Compiler Construction 4 credits

To be offered 1980-81:

- CSci 1100 Introduction to FORTRAN Programming I 2 credits
- CSci 1101 Introduction to FORTRAN Programming II 2 credits
- CSci 3001 Perspectives on Computers and Society 4 credits
- CSci 3101 A FORTRAN Introduction to Computer Programming 4 credits
- CSci 3104 Introduction to Programming and Problem Solving
- CSci 3105 Fundamentals of Algorithms and Languages I 4 credits
- CSci 3107 Introduction to Assembly Language Programming 4 credits
- CSci 5101 Structure and Programming of Software Systems I 4 credits
- CSci 5102 Structure and Programming of Software Systems II 4 credits
- CSci 5121 Introduction to Data Structures 4 credits
- CSci 5201 Computer Engineering 4 credits

ELECTRICAL ENGINEERING CURRICULUM GUIDE

(See also 1977-79 I.T. BULLETIN)

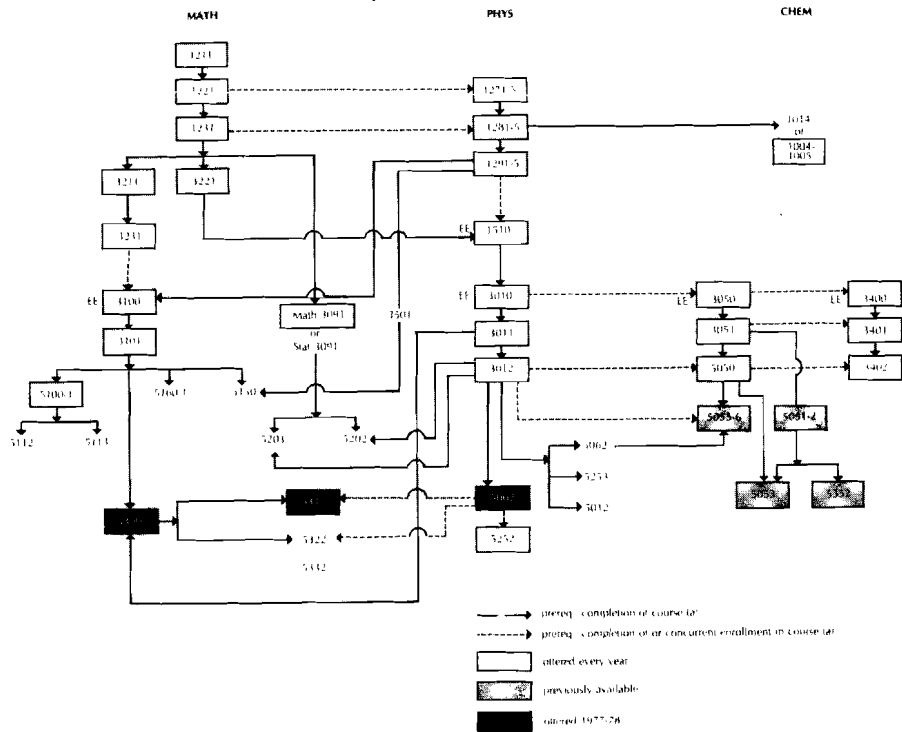
LOWER DIVISION—General

The general requirements listed below apply to students enrolled in the lower division and planning to qualify for the B.E.E. degree. Sample program schedules for the Lower Division follow.

	Credits
Liberal Education Electives, including 8 cr Freshman Composition or Communication	18
Mathematics (Math 1211, 1221, 1231 Analysis I/II/III; Math 3211, 3221, 3231 Analysis IV/Intro: Linear Algebra and Differential Equations/Vector Analysis)	29
Natural Science	
General Physics (Phys 1271, 1281, 1291)	12
Physics Laboratory (Phys 1275, 1285, 1295)	3
General Chemistry (Chem 1014 or Chem 1004, 1005)	4-10
Natural Science Elective (Modern physics or chemistry recommended)	4
Introduction to Electrical Engineering (EE 1000)	1
FORTRAN Programming (CSci 1100, 1101)	4
Engineering Science	
Elements of Electrical Engineering (EE 1510)	5
Engineering Science Elective (AEM 3036 or Stat 3091 or ME 3301)	4
Electives	10
TOTAL	94

Electives—to be selected in consultation with adviser; courses in subjects related to the environment or to business or economics or additional engineering or natural sciences are suggested. The 10 credits include any balances over the minimum number indicated for the other required categories.

Electrical Engineering Department University of Minnesota Prerequisite Flow Chart



UPPER DIVISION—General

Minimum requirements are listed, and alternative schedules for the Upper Division follow. Guidelines are given for the Senior Technical Program along with the special requirements of the Honors Program and the EE Intern Program. Study programs have been prepared for students with interest in several specialized areas.

	<i>Credits</i>
Circuits, Signals and Systems I-II-III (EE 3010, 3011, 3012)	12
Electronics I-II (EE 3050, 3051)	8
Electromagnetic Fields I-II (EE 3100, 3101)	8
Junior EE Laboratory (EE 3400, 3401, 3402)	8
Nonlinear Electronic Circuits (EE 5050)	4
Electromagnetic Fields III (EE 5100)	4
Electromagnetic Fields Lab (EE 5101)	1
Conf. Course; Adv. Comp (Comp 3085)	3
Senior Technical Program	28
Electives (including Liberal Education courses to complete the CLE requirements in IT)	20
TOTAL	<hr/> 96

MINIMUM TOTAL CREDITS REQUIRED FOR GRADUATION:

189: Through Winter 1980

190: Effective Spring 1980

Senior Technical Program

Courses selected to satisfy the requirements entitled "Senior Technical Program (28 cr)" are to conform to the guidelines of the following *Basic Program*. You are referred to the specialized Study Programs for further detail and information to guide your selection of electives not only for the Senior Technical Program but also for other flexible requirements that appear earlier in the curriculum.

Basic Program*

- (a) At least 8 credits selected from the following:
 - EE 5002 Methods of Network and System Analysis
 - EE 5051/52 Introduction to Logic Design
 - EE 5055/56 Instrumentation and Control Electronics
 - EE 5150 Electrical Engineering Materials
 - EE 5300 Electromechanics
- (b) Additional EE senior elective courses to provide, together with the courses taken from (a), a total of 20 credits.
- (c) Additional 5000-level IT courses or courses from the list below, to provide, including the credits taken from (a) and (b), a total of 28 credits.

*For other senior technical program options see "Registration and Curriculum Guide-Electrical Engineering" published in May of each year.

Stat 5131 Theory of Statistics
 Physl 3055/6 Principles of Physiology
 Geog 5372/3 Metropolitan Planning
 CDis 5704 Noise and Man
 Chem 3301/2 Elementary Organic Chemistry

mechanical engineering

The following table indicates in a general fashion how a program of study leading ultimately to the award of a Bachelor's degree in Mechanical Engineering might be approached. The courses listed are required courses which are offered through Extension. They do not include all requirements for the Bachelor's degree in Mechanical Engineering.

Year	Course Numbers	Quarter (F W S)	Semester (F S)	Total Hours
1	Math 1211, 1212, 1231 Chem 1004, 1005	5 5 5	5 5	25
2	Phys 1271 (1275), 1281 (1285) Math 3221 CSci 3101 Comp 1001 or Comm 1001	5 4 4	5 5	23
3	Phys 1291, 1295 AEM 1011 or 1015 (or equivalent) AEM 3036, 3016 EG 1025 Comp 1002 or Comm 1002	4 or 4 4	5 2 4 4	23
4	CE 3400 EE 1510 EE 3010 Liberal Education	4 4 4 5 5		22
5	ME 3201, 3203, 3205 ME 3301, 5342, 3303	4 4 4 4	4 4	24
6	ME 3900, IEOB 5000 **ME 3701 **ME 3702 *Liberal Education	2 2	4 4 4 4	20

*Additional Liberal Education may be taken by Extension or Correspondence to complete 36 total credits required.

**ME 3701 and 3702 meet concurrently fall quarter; 3701 is a prerequisite for 3702.

University College (B.A., B.S.)

The name University College means many things to many people because under this single unit are several programs, each of which has its own particular set of goals and procedures. This unusual situation is the result of University College's unique mission within the larger University of Minnesota: to house undergraduate experimental programs. With the exception of the Inter-College Program, all of University College's specific programs are experimental and are not permanent features in the college. From year to year new programs can be added, and programs which have completed their experimental phase will either transfer to some other auspices or be phased out.

The oldest of the degree programs is the **Inter-College Program** (321 Walter Library). Its B.A. or B.S. degree program has no fixed curriculum and draws upon the entire University for its courses. Its purpose is to provide flexibility in the educational program of the undergraduate who finds none of the standard curricula of the other schools and colleges suited to his or her interests or particular objectives. ICP is a student-designed, credit-based degree program, requiring major areas of concentration in at least two colleges, faculty approval of the student's program, and a demonstration that the student's educational goals cannot be met in another University of Minnesota college. To gain admittance to the program, students also must show a clear conception of their educational objectives. An applicant for admission should have completed 80 credits, 15 at the University of Minnesota.

University Without Walls, based in the Twin Cities (201 Wesbrook Hall), and Morris (236 Community Services Building), campuses, serves students who are unable to pursue traditional undergraduate programs. With the assistance of the U.W.W. staff, students define their own learning goals and achieve them through a variety of learning resources: University classes, seminars, and workshops; independent study projects; and community-related learning activities. A student is granted either a B.A. or B.S. degree following approval by a graduation committee and the dean of the college.

The University Scholars Program (105 Walter Library) provides a student the flexibility to construct a baccalaureate degree program based on individually tailored learning experiences. To be eligible, a student must have completed two years of college work and must be nominated by a faculty sponsor who agrees to serve as the student's primary adviser in the program.

The Foreign Studies Program (1507 University Avenue S.E.), through a specialization, allows students with majors in University of Minnesota Twin Cities Campus undergraduate colleges to integrate an international study experience into their education. The program emphasizes preparing for the foreign study experience and integrating the experience once the student has returned to the University of Minnesota. Interested students should contact the Foreign Studies Program well in advance of their planned international study.

The Students' College on the Duluth Campus (111 Library) gives students the opportunity to create, implement, and manage human services programs while earning college credit.

University College sponsors other experimental programs and cross-college course work. Students seeking a review of their prior learning experiences may find assistance from the Learning Assessment Program. Upper division or graduate students desiring to improve their writing or polish their prose for possible publica-

tion may want to avail themselves of the Writing Center. Credit courses linking the sciences and humanities are offered under a U.C. rubric and may be found in the Twin Cities campus quarterly class schedule.

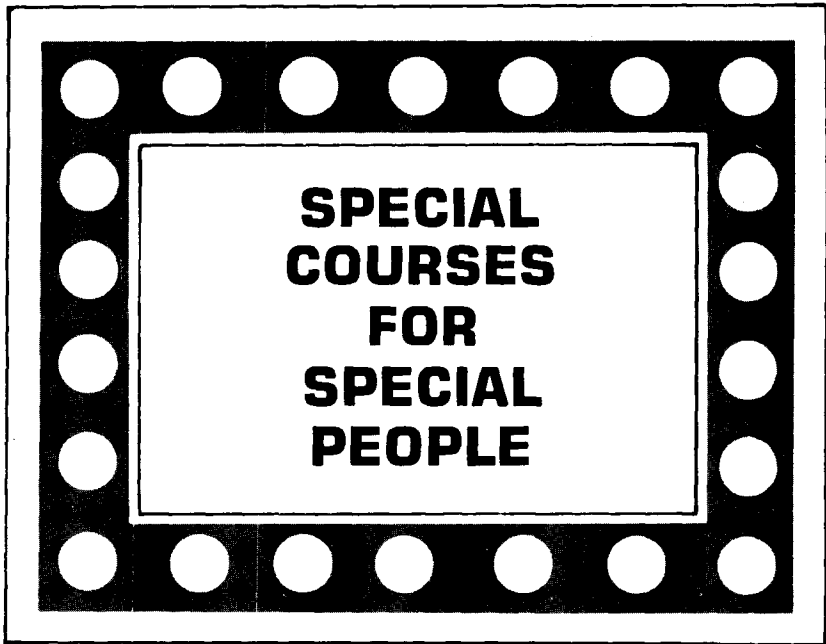
Intercollegiate Independent Study (UC 3075) ranging from 3 to 15 credits is available to students who find an appropriate faculty supervisor. Information on any of the above programs may be obtained at 105 Walter Library (telephone 373-4638).

Read about **graduate degrees** available through Extension beginning on page 383.

Read about **University of Minnesota certificates** available through Extension beginning on page 386.

of special interest

contents	page
off-campus and special classes	368
noncredit and reduced-tuition classes	369
neighborhood centers	370
counseling and program advising	371
travel-study opportunities	372
athletic opportunities	373
weekend classes	374
student government	375
fall 77 open house	376
study skills	377
digital information access line (DIAL)	378
television classes	379
continuing education in the arts	380
continuing education for women	381
bookstore information	382



Your group can study together in a University class.

Almost any existing Extension course may be scheduled off campus in a location convenient for you (in a business, school, church or other neighborhood meeting place).

Both credit classes and special noncredit classes are available. Special noncredit courses to meet your group's needs can be developed upon request.

In all cases, your group must be large enough to make the classes self-supporting.

Interested? Telephone 373-5166 for information; or come to 202 Westbrook Hall on the Minneapolis campus.

(An information brochure about the noncredit Continuing Education Unit [CEU] is available from the Department of Conferences, 131 Nolte Center, Minneapolis. Telephone 373-4894. The CEU, a nationally recognized unit of measurement awarded to participants in qualifying non-credit continuing education programs, can become part of your permanent University record.)

SAVE \$ FOUR WAYS



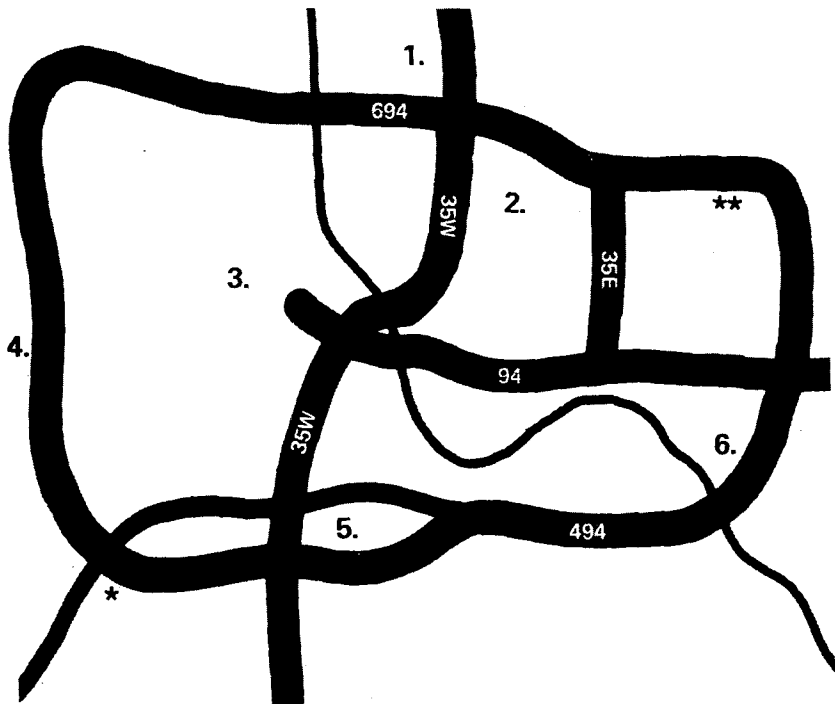
NONCREDIT INFORMAL COURSES: Discover the fun of learning without the pressure of grades, tests, credits and transcripts. Anyone may take Informal Courses; there are no educational requirements for admission. See the Course Offerings Section of this **Bulletin** for details.

\$1 LECTURES: Hundreds of people participate in University Sampler Lectures each year. Samplers are self-contained lectures which faculty present as part of their regular evening classes. Admission to each lecture is only \$1, and persons 62 and older register free. For a Sampler brochure listing exciting lecture topics, call 373-3039.

HALF-PRICE TUITION: Regular credit classes with no limitations on enrollment are open to adults on a reduced-tuition basis for no credit. They are indicated in the Course Offerings Section of this **Bulletin** with a ♦ symbol in the margin. No-credit participants keep up with readings and may participate in class discussions, but do not submit work for evaluation or take examinations (no transcript or registration record is kept). Youth age 12 to 16 pay only \$3 for ♦ classes when accompanied by an adult registered for the same course.

SENIOR CITIZEN RATES: If you're 62 or older you can register *free* for no credit in regular nonlimited-enrollment credit classes. You may also register free for no credit in limited-enrollment classes on a space-available basis if you wait until the first week of telephone registration, and then register by mail or in person. Classes may be taken for credit for only \$2 a degree or certificate credit hour.

TAKE A CLASS NEAR HOME OR WORK



1. **Irondale High School**, 2425 Long Lake Rd (New Brighton)
2. **Alexander Ramsey High School**, 1261 W. Highway 36 (Roseville)
3. **Sandburg Jr High School**, 2400 Sandburg Lane (Golden Valley)
4. **Minnetonka Sr High School**, 18301 Hwy 7 (Minnetonka)
5. **Richfield High School**, 7001 Harriet Ave S. (Richfield)
6. **Woodbury Jr High School**, 3200 Lower Afton Rd (Woodbury)

***B. Dalton Bookseller** (Eden Prairie Center)

****B. Dalton Bookseller** (Maplewood Mall)

Check the **Neighborhood Centers** section near the back of this Bulletin for complete information. Check the **Index** for page number.

314 NOLTE
314 NOLTE
314 NOLTE
314 NOLTE
314 NOLTE

EXTENSION SERVICES: HELP YOURSELF!

Continuing Education and Extension's professional staff of program advisers and counselors is ready to help you identify your interests, and to assist you in formulating your educational and vocational goals.

If you ask . . .

How do I choose a career or major that will be consistent with my abilities and interests?

When should I apply for admission to a degree program and how do I go about it?

What additional training would I need for a new career?

In what order should I take courses?

. . . then stop by 314 Nolte Center or call 373-3905.

Advisers and counselors are available without appointment during registration hours and during regular daytime hours, 8 a.m. to noon and 1 to 4 p.m., Monday through Friday. Counselors are available evenings (by appointment only) Monday through Thursday from 5 to 8 p.m. Because of parking problems during the day, students who have appointments with counselors should allow an extra half hour to find a parking space. (See parking maps in the back of this **Bulletin**.)

Also ask about:

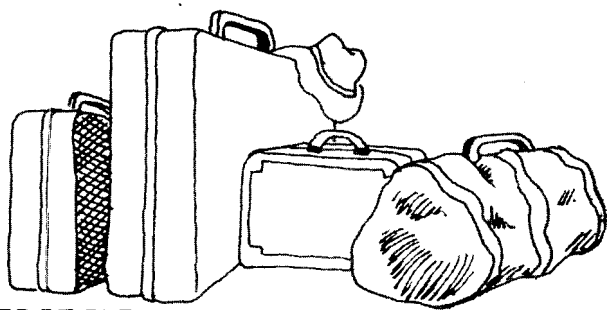
Individual appointments with advisers from the General College, Colleges of Education and Business Administration, and the Institute of Technology. Telephone 373-3905.

Veterans' counselor available at 314 Nolte Center:

Vocational and personal counseling, program advising and testing are among the services available to veterans. The office also helps put veterans in touch with other assistance centers. The Veterans Affairs Counselor for Extension Classes can be reached at 373-3905 or 373-3973 during office hours (9 a.m. to 12 noon, and 1 to 4 p.m.) Monday through Friday.

A battery of tests is available by appointment to help you learn more about your abilities and interests. There is a \$35 charge for students, and \$60 for nonstudents.

TRAVEL AND STUDY OPPORTUNITIES



UNIVERSITY IN LONDON—During spring quarter 1978 (March 27 to June 10), travel to England and study the life and culture of the British while earning University credit. Courses taught by University of Minnesota faculty have in the past included art history, theater, family social science, and English literature. The program includes visits to London theaters, Stratford-on-Avon, and many other landmarks of the London area.

Approximate cost for the term is \$850, which includes 12 credits of tuition and lodging (including full English breakfast). Students must arrange their own transportation. Fall Quarter 1978 in London is also tentatively planned. For more details, call Extension Classes at 373-3926.

DIRECTED STUDY ABROAD—The student of architecture who would like, in his or her studies, to include travel and the observation of the world's great and influential architecture will be interested in this program offered through the School of Architecture. Register for Architecture 5970 through Extension, and combine architectural research with local or foreign travel. The specific course content and number of credits will be arranged in consultation with the School of Architecture. For further information, telephone 373-2198.

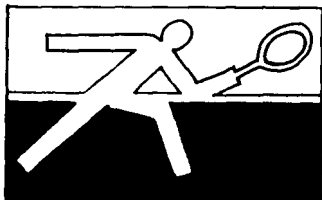
SUMMER ARTS ON LONG ISLAND—Courses in painting, drawing, and art history will be offered in conjunction with the 1978 summer program at Southampton College at Long Island University in New York. (Approximate dates July 10 to August 5.) For more information on the four-week course, call 376-4815 in March.

INTERNATIONAL STUDY AND TRAVEL CENTER—For information on special reduced airline fares and other overseas study programs, call the **Study and Travel Center** in Coffman Union (373-0180).

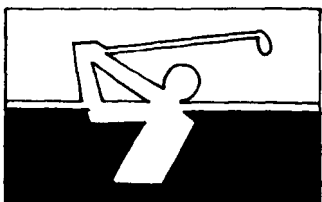
SUMMER ARTS STUDY CENTER—This series of one- and two-week courses of study and creativity meets at Quadna Mountain Lodge, Hill City, Minnesota, from June through August, 1978. It is an "arts community" of faculty and students who share ideas and discuss subjects such as studio arts, crafts, music, theater, writing, and literature. For information, call the **Summer Arts Study Center** at 373-4947.

BE A SPORT!

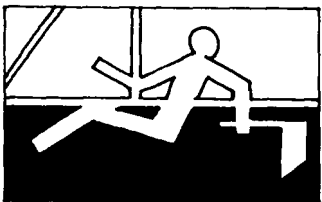
ACTIVITIES FOR MEN AND WOMEN



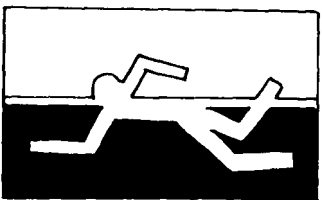
Enjoy sports activities of all kinds to help you keep in shape and to unwind from work or studies.



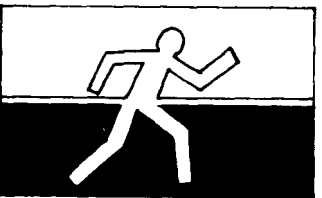
By paying an athletic services fee of \$5 a quarter or \$7.50 a semester—the same fee day students pay (*fee subject to change without notice*)—you may participate in organized sports and use athletic facilities.



The **individual, dual, and team sports** include **badminton, basketball, bowling, fencing, handball, swimming, and touch football**. Extramural competition involves intramural champions as well as individual players and teams representing various sports clubs.

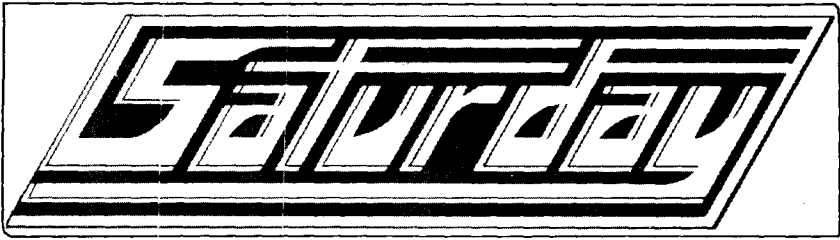


For men and women, **clubs** are organized for **aquatics, badminton, dance, field hockey, golf, horsemanship, judo, team sports, tennis, archery, bowling, cricket, fencing, gymnastics, judo, karate, rowing, rugby, scuba, soccer, weight lifting, whitewater canoe, and yoga**.



For further information about these programs and activities, telephone 373-4200.

Note: Intercollegiate athletic tickets are available to students and their spouses at discount rates. Telephone 373-3181 for information.



HAVE A BUSY WEEK ? TRY A WEEKEND COURSE

If you want to put your weekends to full use, you may want to take advantage of Saturday class offerings at the University. A number of departments are offering Saturday courses both for degree and certificate credit, and for personal enrichment.

For a detailed description of the degree and certificate programs, consult the *Degrees and Certificates* section of this Bulletin. Check the **Index** in the back of this Bulletin for page number.

Departments which sometimes offer classes on Saturday include these:

Accounting
Architecture
Art Education
Arts, Studio
Foreign Study
Forest Products
Forest Resources
General College
Industrial Relations
Marketing
Mathematics

Physical Education
Physics
Political Science
Psychological Foundations
Psychology
Public Affairs
Quantitative Analysis
Recreation, Park and Leisure Studies
Sociology
Theatre Arts

For full descriptions, see the **Course Offerings** section of this Bulletin.

GET INVOLVED IN STUDENT GOVERNMENT



Providing legislators with information about Extension programs. Improving campus parking and lighting. Seeking more graduate-level Extension classes. Finding financial aid. Solving bookstore problems.

These are the kinds of concerns, problems, and opportunities the Extension Classes Student Board tackles every year as a vital force in the University community.

To accomplish its work, the Board voices its concerns in open discussions and rewarding sessions with University administrative officials and regents. You can join the Board any time during the year when you're a registered Extension student.

Extension students can also be elected to the University Senate, the primary academic governing body of the University. Students on the Senate also serve on the Student Board.

If you would like to be a part of these groups, telephone 376-7500 for information.



**FALL 1977
OPEN HOUSE:
WEDNESDAY,
SEPTEMBER 7**

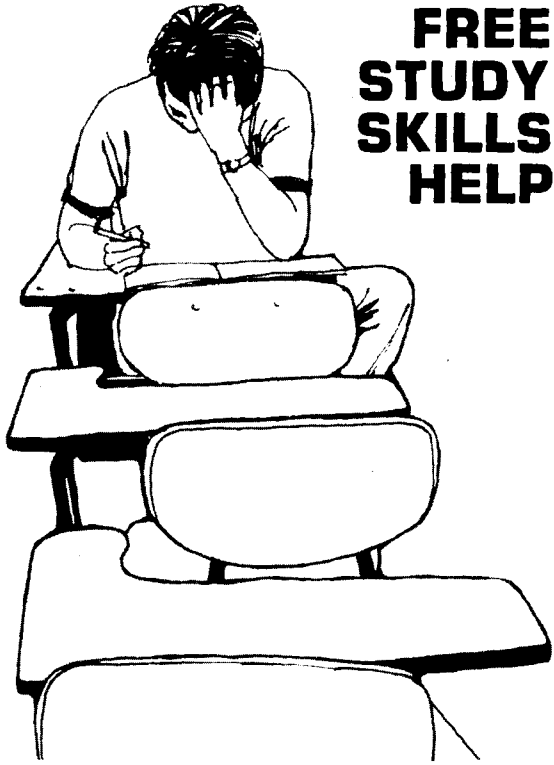
Where to go for help. Whom to ask for what. How to decide what to do and when. These are some problems you might have if you're a new student and unfamiliar with the campus, or if you are thinking about taking an Extension class.

If you think you might have one of these or other problems, or if you simply wish to get to know Extension, come to our coffee-and-talk informal open house. It will be held from 5 to 8 p.m., Wednesday, September 7, in the Nolte Center lounge (315 Pillsbury Drive S.E.) on the Minneapolis campus.

Counselors and program advisers will be on hand to answer your questions. Even if you have no specific questions or problems, drop by for a cup of coffee or cider and let us get to know you. Lots of helpful literature about the University will be available for you to pick up and take along.

A free baby-sitting service will be offered in Nolte if you need it. Park in University lot #35, 17th Avenue S.E. at Fourth Street S.E. For a free campus and parking map of the University, telephone 376-7500.

FREE STUDY SKILLS HELP



The **Extension Classes Reading and Writing Skills Center** provides the help you need in note-taking, outlining, theme writing, research writing, reading, grammar, footnoting, preparation of bibliographies, vocabulary, spelling, and book review. There's no phone, so just walk in at **109 Nicholson Hall** any weekday except Friday 9 a.m. to 3 p.m., or 5 to 8 p.m. Friday's hours are 9 a.m. to 3 p.m.

Students with physical or emotional disabilities should contact **Extension Counseling** at 373-3905 (314 Nolte Center), or **Student Counseling Bureau Rehabilitation Services** at 376-3143 for special-help information.

Credit courses (at regular tuition rates) are offered in communication skills. See, for example, **FUNDAMENTALS OF USAGE AND STYLE** (*General College 1405*) and **COMMUNICATION SKILLS: INDIVIDUAL STUDY** (*General College 1409*). For other credit courses, see the Communication Skills section of **General College** in the alphabetical Course Offerings Section of this **Bulletin**. Also see **HOW TO STUDY** (*Study Skills, Personal Orientation 1001*) and **EFFICIENT READING** (*Rhetoric 1147*).

NEED INFORMATION ABOUT THE UNIVERSITY?



Just use your phone. Try the University **Digital Information Access Line (DIAL)** from your home or a campus phone. Obtain your information in two short easy steps:

1. **DIAL 373-1857** between 8 a.m. and 8 p.m. Monday through Friday; or between noon and 5 p.m. Saturday and Sunday.
2. **Request by number** the tape you wish to hear. The list below is only partial. Pick up a brochure listing all available tapes at 107 Temporary North of Mines on the Minneapolis campus; or call 373-1234 to request that one be sent to you.

- 1113 **Getting Extension grades on your day school transcript**
- 1400 **Locations and hours of University bookstores**
- 1401 **Book refunds, resale, and other bookstore policies**
- 1801 **University Child Care Center**
- 1802 **Child care facilities near the campus**
- 2100 **Extension registration information**
- 2101 **Program advising**
- 2102 **Counseling**
- 2103 **Independent study**
- 2104 **Extension evening classes**
- 2105 **Transfers to Extension; admission to degree programs**
- 2106 **Noncredit reduced-tuition and \$1 Sampler Lectures**
- 2107 **Certificate programs**
- 2109 **Earning credit without attending classes**
- 2110 **Continuing Education for Women**
- 2111 **Independent study courses about women**
- 2113 **Extension classes in neighborhood centers**
- 2114 **Financial aid for Extension students**
- 2206 **Campus Assistance Center**
- 2903 **On-campus evening study spaces**
- 3101 **University health service**
- 3901 **Inter-campus bus schedule**
- 4201 **Wilson Library revealed**
- 5100 **What's happening: a calendar of social events**
- 5103 **Athletic ticket information**
- 5801 **Veterans' assistance and outreach**



fall winter spring

RADIO TELEVISION & NEWSPAPER COURSES

Independent Study brings the University to YOU . . . right in your own living room over KTCA-TV Channel 2, KUOM Radio 770AM, and in *The Minneapolis Star* and other newspapers.

Registration, texts, coursework, and exams can all be done by mail. Call (612) 376-4925 for information, or write:

Extension Independent Study, 27E Westbrook Hall, 77 Pleasant St. S E,
Minneapolis, MN 55455

FALL 1977

*THE AGE OF UNCERTAINTY: A HISTORY OF ECONOMIC THOUGHT

History 3970, 4 credits. Prof. George Green Television

UNDERSTANDING DIVORCE

Family Social Science 5240, 4 credits. Prof. Richard Hey Television

HOME LANDSCAPE GARDENING

Horticultural Science 1010, 4 credits. Prof. C. Gustav Hard Television

PSYCHICAL PHENOMENA IN RELIGIONS AND CULTURES

Religious Studies 3521, 4 credits. Prof. Mulford Sibley Radio

**CRIME AND PUNISHMENT IN AMERICA

General College 1236, 4 credits. Profs. Forrest Harris and Peter Kahn Newspaper

WINTER 1978

UNDERSTANDING BEHAVIORAL PROBLEMS

Psychology 5604, 4 credits. Prof. James Butcher Television

WOOD: THE MATERIAL FOR TODAY AND TOMORROW

Forest Products 5408, 4 credits. Prof. James Bowyer Television

PSYCHOLOGY OF ADVERTISING

Journalism 5251/Psychology 5751, 4 credits. Prof. Robert Jones Radio

CONSUMER PROBLEMS: PERSONAL FINANCE

General College 1731, 4 credits. Prof. Patrick Kroll Radio

POPULAR CULTURE: MIRROR OF AMERICAN LIFE AND MANNERS

Details not yet available. Newspaper

SPRING 1978

HEALTH AND THE CONSUMER

Public Health 5025, 4 credits. Prof. V.W. Greene Television

ORGANIZATION AND MANAGEMENT OF SPORTS

Physical Education and Recreation 3143, 4 credits. Prof. James LaPoint Television

THE FAMILY IN WORLD PERSPECTIVE

Family Social Science 5210, 4 credits. Prof. Sheila Henry Radio

*September 19-December 11, 1977

**September 12-December 19, 1977



If it's been a while since you last sat down at the piano, thought about the musical instrument you used to play, or opened up your sketch pad, then now's the time to do it again! In addition to art, music and theatre classes listed in this **Bulletin**, there are other opportunities waiting for you:

- **Activities at MacPhail Center** (1128 LaSalle Avenue, in downtown Minneapolis)—MacPhail is home to nearly 100 teachers of music, dance, theatre and art on all levels of instruction.

- **Summer Arts Study Center**—in Minnesota's north woods, artists, theatre people, musicians, poets and teachers attend one- and two-week workshops in all areas of the arts (*from June through August*). 30 different workshops, credit and noncredit. Plan a workshop at Quadna Mountain in the summer of 1978. Brochure available in March.

- **Circulating exhibitions**—your community can sponsor one of the University's circulating art exhibitions. Call for information.

- **Tour of "Ouroboros"**—there is a new twist to Architecture these days. Glass walls, sealed windows, and year-round air conditioning are out, and ecology consciousness is in. Call for a tour of the University's experimental laboratory houses.

- **Loan Play Library**—many of the over 1,000 school, community and professional theatres in Minnesota select their plays from the 16,000 scripts on file in the Loan Play Library (located in 305 Wesbrook Hall). The only charge is for postage.

- **Consultation in the Arts**—we have staff members trained in art, music and theatre ready to help you find the actor, director, conductor, or technical information you need. If we can't help, we will find the expert you need, or even set up a workshop or training session for your group.

Our telephone number is 373-4947. Or, write Continuing Education in the Arts, 320 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis 55455.

continuing education for Women



For people continuing their education after an interval away from school, and for part-time students who find daytime classes convenient, **Continuing Education for Women** offers:

- University accredited courses for degree programs
- Short, noncredit courses in response to specific requests
- Workshops: study skills, speech
- Over 100 courses each quarter
- Career planning classes and workshops
- Weekly or bi-weekly meetings, often 9:30 to noon
- Math Anxiety classes
- Brown Bag classes during the noon hour
- Convenient locations

1977-78 LIBERAL ARTS SEMINARS

For the intellectually curious, year-long seminars to sharpen critical abilities, provide for some in-depth study and the re-evaluation of beliefs and values. Interdisciplinary faculty. Morning meetings from 9:30 to noon, weekly or bi-weekly.

Because registration is limited, students registered for any one of the seminars listed below are expected to complete the entire sequence to earn credit. (Seminars may also be audited.) Advance application and CEW departmental approval are required. Registration is only through **Continuing Education for Women**. For complete information about the seminars or for a bulletin listing all fall courses call 373-9743.

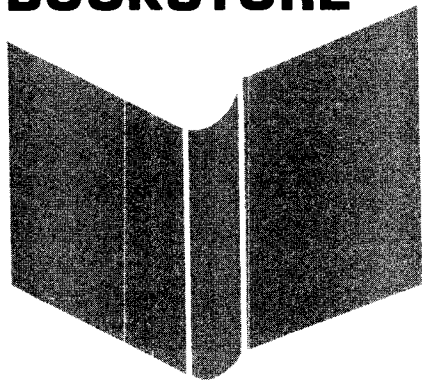
Engl 5910-10-10 **Major Women Writers**, 12 credits for 3 quarters, Tuesday, MacPhail Center, Julie Carson, Faculty Coordinator

Hum 5021-22-23 **New Worlds of Knowledge**, 9 credits for 3 quarters, Thursday, MacPhail Center, J. Dennis Hurrell, Faculty Coordinator

WoSt 5701-02-03 **Woman in America**, 9 credits for 3 quarters, Wednesday, Minneapolis Campus, Gayle Graham Yates, Faculty Coordinator

FOR INFORMATION: Continuing Education for Women
200 Wesbrook Hall
77 Pleasant Street S.E.
University of Minnesota
Minneapolis, MN 55455
(612) 373-9743

TO GET THE BOOK YOU NEED, GO TO THE RIGHT BOOKSTORE



After registering for classes, purchase your books as early as possible to be assured of getting the materials you need. Each bookstore posts lists of required textbooks for each Extension course. (Check the **Index** in the back of this **Bulletin** for the page number where you may read more about bookstores and their hours.)

ON CAMPUS:

The Minnesota Book Center in Williamson Hall (373-3688): courses in the College of Liberal Arts (*except for those CLA departments listed below at the Smith bookstore*), General College, College of Education, and the Institute of Technology.

Harold D. Smith on the West Bank (373-4450): College of Business Administration, and College of Liberal Arts in *history, political science, geography, sociology, criminal justice studies, American Indian studies, theatre arts, studio arts, economics, and family social science.*

Coffey Hall (373-0800): books for courses taught on the St. Paul campus.

Health Sciences (376-4007): College of Medicine, College of Dentistry, College of Pharmacy, School of Nursing, and School of Public Health.

OFF CAMPUS:

B. Dalton Bookseller at Maplewood Mall (770-3901) and Eden Prairie Center (941-8126): books for classes scheduled at many neighborhood centers. Books for these classes are also available at campus bookstores.

degrees and certificates (Continued from page 366)

graduate degrees

master of arts (M.A.) in english

The Department of English, in cooperation with the Graduate School, offers a Master of Arts through Continuing Education and Extension. This program is designed to provide an opportunity for extending a student's knowledge of British and American literature and the English language.

requirements for the master of arts degree in english (plan B)

COURSEWORK: (44 credits): No fewer than seven courses in British and American literature and the English language; 8 credits in one or more "Related Fields;" one quarter of seminar work. For further details, consult the English Department section of the current **Graduate School Bulletin**.

EXAMINATION: A written examination for the M.A. is given in the fall and spring quarters and during the first term of Summer session. It will emphasize close analysis and explication. For further details, consult the Director of Graduate Study in the Department of English.

LANGUAGE: A reading knowledge of one classical or modern language approved by the Director of Graduate Study. The requirement may be satisfied in one of two ways, either by examination, or by completing at the college level at least 15 quarter credits in the language with a grade of A or 20 quarter credits with an average grade of B. There are special programs of course work satisfying the requirement in French, German, Italian, Spanish, and some other languages. For details, consult the Director of Graduate Study.

ADMISSIONS PROCEDURES: The standards for admission to the M.A. program are listed in the current **Graduate School Bulletin** under the General Information and English Department sections. The bulletin and necessary application forms for admission to the Graduate School may be obtained from the Graduate School Office in 310 Johnston Hall (373-5442).

Candidates will be admitted fall and winter quarters. In the appropriate space on the application form, the applicants should indicate that they are applying for the M.A. program offered through CEE. In addition, the Department of English requires applicants to submit the following: the applicant's scores on the aptitude portion of the Graduate Record Examination, and three letters of recommendation from persons in a position to comment on the applicant's academic ability and promise for success in graduate study.

Applicants to the Graduate School should make their own arrangements to take the Graduate Record Examination, which will be offered on the University of Minnesota, Minneapolis campus. Application forms are available at the Student Counseling Bureau, 101 Eddy Hall (373-4193) and should be mailed to the Educational Testing Service, Princeton, N.J., at least four weeks in advance of the testing date.

Applicants should request to have their Graduate Record Examination scores and letters of recommendation sent directly to the Director of Graduate Study in the Department of English, 205 Lind Hall, by August 15, 1977, for fall quarter, 1977; and by November 25, 1977, for winter quarter, 1978. (Students wishing to apply for fall, 1978, candidacy may take the Graduate Record Examination on the University of Minnesota Minneapolis campus in October or December 1977, or January, February, April or June, 1978.)

Candidates are admitted for the M.A. program with the clear understanding that satisfactory completion of the M.A. requirements will not necessarily, or even probably, result in admission to the Ph.D. program. A Graduate Advisor in English will be available for advising candidates and prospective candidates for the M.A. in English offered through Extension.

The Graduate School will accept up to 12 applicable credits earned through Extension before admission, once the student is admitted to the Graduate School (see Graduate Credit, page 46).

For further information on the M.A. degree in English, contact the Counseling Office at 314 Nolte Center (373-3905).

master of arts (M.A.) in speech-communication

(late afternoons and evenings)

Recognizing the importance of communication in a great variety of professional settings, increasing numbers of persons working in business, education, industry, government, and service organizations have asked that work in speech-communication be made available to them. As a result, the Department of Speech-Communication in cooperation with the Graduate School and Continuing Education and Extension is offering a series of courses scheduled late afternoons (4:15-6 p.m. on a M-W and a T-Th basis). These courses, added to graduate level courses offered in the evening through Extension Classes, should make it possible for graduate students to finish a Master's degree, Plan B, in two academic years. See this year's **Course Offerings Section** for speech-communication classes. Students may register in these courses either through Extension or through the Graduate School. (**But see note page 385 on twelve credit transfer limit.**)

requirements for the master of arts degree in speech-communication (plan B)

COURSEWORK: Students must take a minimum of 20 quarter credits in Speech-Communication and a minimum of 8 quarter credits in one or more related fields outside the major. The balance of the credits to be taken to meet the 44 credit minimum requirement for the degree will be chosen by agreement between the adviser and the student.

EXAMINATION: Students must pass a final comprehensive written examination. This examination is composed by the individual student's faculty committee, who follow an outline developed by the student and his or her adviser.

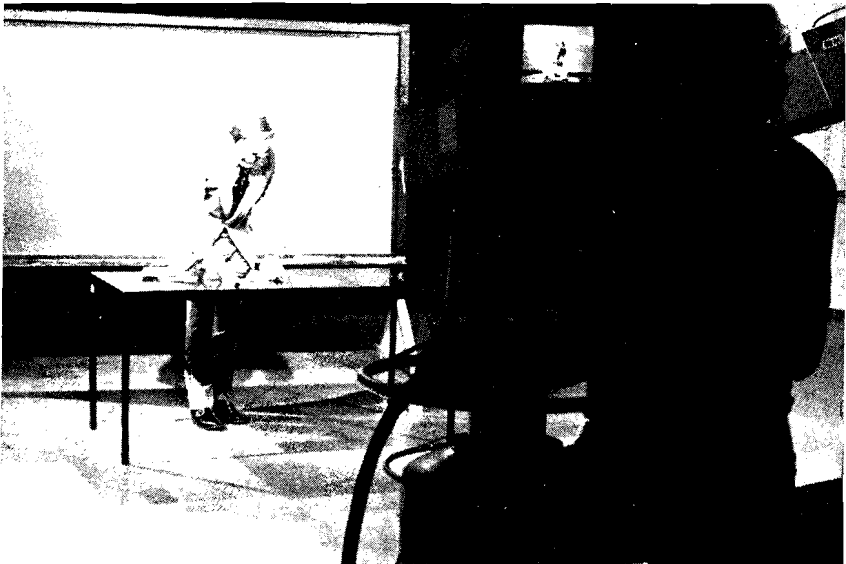
LANGUAGE: There is no language requirement for the M.A. degree in Speech-Communication.

PLAN B PROJECT: Students must submit a "Plan B Project." The Project should demonstrate the student's ability to complete relevant research or to report that research in a useful form. It may represent an application of the student's academic work to his or her professional field. Each student registers for 4 credits of Independent Study (Spch 5970), which may be included on the student's degree program, in order to **plan** the Project. The Graduate School indicates that it should take approximately 120 clock hours to **complete** the Project. A student should not expect to complete the project during the Independent Study course.

ADMISSIONS PROCEDURES: All students seeking to pursue the M.A. degree in Speech-Communication must be admitted to the Graduate School. The Graduate School Bulletin and application forms may be obtained in 306 Johnston Hall, or by calling 373-5542. Applicants are expected to take the Miller Analogies Test. This one-hour test is administered on most college campuses, and at the University of Minnesota it is available at the Student Counseling Bureau, 101 Eddy Hall. Call 373-4193 for information. Please read the instructions on the Graduate School application carefully. It is best to apply early, and application (official transcripts, MAT, etc.) must be complete in every way at least four weeks before the opening of the quarter in which the applicant wishes to begin graduate study.

TWELVE CREDIT TRANSFER RULE: At present, graduate students may transfer to a graduate program no more than twelve credits of coursework registered for through Extension Classes (CEE).

For further information on the M.A. degree in Speech-Communication, contact William S. Howell (373-2569) or George L. Shapiro (373-2568), or contact the CEE Counseling Office at 314 Nolte Center (373-3905). A brochure is available from the Department of Speech-Communication, 317 Folwell Hall.



certificates

Students not certain they can devote the time necessary to earn a college degree are urged to consider seriously a certificate program. These programs are generally regarded by business and industry as valuable professional and technical preparation for employment and promotion in areas requiring extensive knowledge. With careful planning, a certificate can be, if the student wishes, a stepping stone to a degree.

Thirty-two certificate programs are conducted by Continuing Education and Extension (CEE). The curricula are described in detail in the following pages. Certificate programs are organized at the collegiate level; students entering them should have adequate educational preparation or other experience to work effectively with college materials. Certificate programs consist of degree credit courses or a combination of degree and certificate credit courses. Certificate credit courses are college level in quality, and represent an accelerated and specialized approach to subject matter in the areas represented. Certificate credit classes are not, however, usually transferable to a degree program.

Work on a certificate may be done in Extension Classes, Extension Independent Study, day school, summer session, or any combination of these. (Certificate programs marked with **(IS)** are available entirely through Extension Independent Study.) A student may transfer credit from other accredited institutions of higher education, although a minimum of 25 percent of credits required for any certificate must be earned at the University of Minnesota. In those certificates requiring 12 or fewer credits, all work must be done at the University of Minnesota. Courses need not be taken in order, except as prerequisites make it necessary.

Certificate requirements may be modified from time to time. Although there is no time limit on the use of credits, no certificate will be granted that represents a certificate program more than 7 years out of date. No student may apply for more than three certificates.

A student interested in pursuing a certificate program is urged to secure a copy of Procedures for Obtaining a Continuing Education and Extension Certificate and to complete an Application for Admission to Certificate Programs at the earliest possible time so proper counseling can be given. Both forms are available at the Minneapolis Campus Office, 101 Westbrook Hall; or the Extension Counseling Department, 314 Nolte Center. Advice and information about the various programs, including transfer of credits, may be secured from the Extension Counseling Office.

Students interested in taking courses toward certificate programs on the S-N grading system should first consult an Extension Counselor at 314 Nolte Center, 373-3905.

A student nearing completion of the required work and expecting to receive a certificate must file a Certificate Completion form at the beginning of the term in which the certificate is to be awarded.

Upon completion of a specified program with at least a C average, the student is awarded a certificate. Certificates are awarded by CEE (not by individual University of Minnesota colleges). All certificates are dated and awarded as of each quarter of the academic year. Students receiving senior certificates may participate in the June commencement exercises.

continuing education and extension honors

All Extension Certificates may now be earned with Honors. A student earning a 3.00 to 3.49 grade point average, overall, will be awarded a certificate "with distinction." A student earning a 3.50 grade point average, or better, overall, will be awarded a certificate "with high distinction." At least 60 percent of the requirements for a certificate with honors must be earned at the University of Minnesota and must be taken on the A-N grading system. The Honors Program is not retroactive.

Colleges at the University of Minnesota retain the right to determine honors requirements for a degree; therefore, earning a certificate with honors does not automatically gain a student entry into a college's honors program.

For further information concerning the Honors Program for certificate students, call the Counseling Department, 373-3905.

guide to certificates offered

through continuing education and extension

adult psychiatry	387	information systems analysis	
accounting	397	and design	402
art, commercial	389	interior design	394
arts, liberal	395	junior accounting	397
associate in management of		junior business administration	399
administrative services	403	liberal arts	395
behavior analyst	388	management of	
business administration	398	administrative services	403
chemical dependency counseling ..	396	mathematics and science	395
civil engineering	409	mechanical engineering	412
commercial art	389	mental health	388
computer science	405	ophthalmology technician certificate	397
counseling, chemical dependency ..	396	psychiatry, adult	387
credit and financial management ...	400	science, engineering and	407
design, interior	394	science, mathematics and	395
early childhood studies	390	senior accounting	398
electrical engineering	410	senior business administration	399
engineering	407	training program for	
fellow in management of		mental health workers	388
administration services	403	undergraduate development	
financial management	400	certificates	404
fire protection	391	in computer science	405
foster care education	392	in engineering and science	407
general studies	392	in civil engineering	409
human services	393	in electrical engineering	410
industrial engineering	411	in industrial engineering	411
industrial relations	401	in mechanical engineering	412

adult psychiatry certificate

(Training Program for Mental Health Workers)

The Adult Psychiatry Certificate was developed cooperatively by the Department of Continuing Education in Social Work and the Metropolitan Medical Center.

training program for mental health workers

(9 Credits)

This is a highly personalized clinically-oriented program designed to upgrade knowledge relevant to practice for persons employed in the field of mental health. Course content will deal with individual behavior, groups, family and current modes of treatment. The program will extend over three quarters.

Faculty is from the the Metropolitan Medical Center along with other professionals from the community. All classes will be held at the Metropolitan Medical Center, 900 South 8th Street, Minneapolis.

The program will be limited to 75 students. Preference will be given to those currently employed in the field of mental health or upon special permission from the program coordinator, Mark Anderson, 347-4216.

The program must be taken in its entirety at the University of Minnesota.

Ad Py 0101C Training Course for Mental Health Workers (3 credits)

Ad Py 0102C Training Course for Mental Health Workers (3 credits)

Ad Py 0103C Training Course for Mental Health Workers (3 credits)

behavior analyst certificate

(36 to 44 credits)

The Behavior Analyst Certificate program was developed in response to the growing need for persons trained at the post-graduate level in behavior modification and analysis. Designed for persons holding an M.A., B.A., B.S., R.N. or equivalent degree, it involves approximately one year of full-time study, including a practicum, but requires no formal research. Training is geared to the specific type of clients or patients with whom the student wishes to work.

While graduates are not qualified as clinical or counseling psychologists, psychometricians or psychotherapists at the doctoral level, they are trained for positions in the following areas: state or county agencies (such as state hospitals or county welfare agencies); mental health clinics; special schools (such as those for the educable or trainable mentally retarded); private psychiatric or psychological treatment facilities as therapists working with psychiatrists or psychologists; special education classrooms; sheltered workshops; schools for the physically handicapped; day activity centers and private residential facilities for the mentally ill or retarded. The positions graduates might hold, which are usually designated "counselor," "social worker," "occupational therapist," "physical therapist" or "psychiatric nurse" would depend on their prior training, the area of concentration in the course of certificate training, and the specific regulations of their agency.

Prerequisites:

A master's degree bachelor's degree, R.N. or equivalent from an accredited college.

Preferred majors: social work, education, nursing, psychology.

Specific courses required: introductory psychology, learning (operant and classical conditioning), individual differences, personality development and abnormal behavior.

Students lacking any of these prerequisite courses may be required to include them in their program work. Students claiming competence in the above areas may be required to pass qualifying examinations.

Grade-point average of 3.25. Factors such as experience, current responsibilities, and date of graduation will also be considered in admitting students to the program.

Admission procedure: Applications should be submitted to: **Behavior Analyst Certificate Program, University of Minnesota, Continuing Education and Extension Counseling Department, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis 55455. Applications for fall will be accepted July 15 through August 25, 1977.** Preference will be given to people with practical experience dealing with the client population with whom they intend to work. Final review of applications will be made by the Behavior Analyst Certificate Program Committee. Applicants will be notified by September 15 of their acceptance into the program. Admission to the program is limited.

Core Requirement: 24 credits

Psy 5024-5025-5026 Topics, and Psy 3970 Directed Studies (total of 12 credits), which start in fall and continue through winter and spring quarters, form the core of the program. **Students who have not started Psy 5024 in the fall may not enter the series in winter or spring quarters, but must wait until the following fall.** Ideally, Psy 5024-5025-5026 and 3970 (total 12 credits) should be taken concurrently.

Psy 5024-5025-5026 Topics in Psychology: Introduction to Behavior Analysis
Psy 3970 Directed Studies: Practicum in Behavior Analysis

A student may select one of four areas of concentration—Developmental Disabilities, Emotionally Disturbed Children, Adult Mental Health Management or Chemical Dependency—but individualized programs are also possible. (25% of which must be University of Minnesota credits.) A minimum of 36 to 44 credits will be required for the certificate.

For a more complete description of the program, including a list of courses applicable in each area of concentration, call 373-3905, or write **Behavior Analyst Certificate Program, University of Minnesota, Continuing Education and Extension Counseling Department, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis 55455.**

commercial art certificate

(60 credits)

The Commercial Art Certificate was developed by the Department of Studio Arts for students wishing to specialize in the area of commercial art. Students may choose either an illustration or lay-out emphasis.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 15 credits at the University of Minnesota.

x2xx courses may not apply to CLA Group Distribution Requirements or to Studio Arts major requirements.

Core requirements (28-32 credits):

ArtS 1201 Introduction to Commercial Art
ArtS 1101 Basic Drawing
ArtS 1104 Color
ArtS 3202 Commercial Drawing I
ArtS 3203 Commercial Drawing II
ArtS 3220 Commercial Art Media and Studio Techniques
Dsgn 3450 Perspective and Presentation Sketches

Concentration Requirement:

A. Illustration Emphasis Requirements (20-28 credits):

- ArtS 3110 Drawing (Life)
- ArtS 3231 Commercial Illustration I
- ArtS 0240C Commercial Illustration II

B. Lay-out Emphasis Requirements (20-24 credits):

- ArtS 3251 Advertising Design I
- ArtS 3252 Advertising Design II
- ArtS 0260C Advertising Design III

General Requirements (4-12 credits):

ArtS 0280C Portfolio and Visual Presentation Techniques

Electives (8 credits):

Studio Arts course chosen from 1XXX, 3XXX and 5XXX levels, selected Home Economics and Journalism courses. ArtS 1701 (Introduction to Photo Medium) is recommended.

For further information, call the Extension Counseling Office, 373-3905.

early childhood studies certificates

The Early Childhood Studies Certificates were developed in response to the increasing demand for specialized training for child care employees in the area of Early Childhood Studies and are offered by General College through Continuing Education and Extension.

It is possible for a student to move from a course of study for a certificate into a planned program leading to the General College Bachelor of Applied Studies Degree or a Bachelor of General Studies Degree. Anyone who contemplates such long-range objectives should consult an Extension advisor before proceeding further so as to avoid any loss of credits or possible future rejection from the degree program.

For more information on the program call Extension Counseling (373-3905).

early childhood studies certificate

(45 credits)

This certificate, requiring the satisfactory completion of 45 credits of course work, is the equivalent of one academic year of full-time study. All of the credits received in completing the Early Childhood Studies Certificate—45 credits are automatically credited toward the Early Childhood Studies Certificate—90 credits and represents half of its required work load. Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

Group I—General Education (30 Credits)

Group II—Career-Related (12 Credits)

Group III—Supervised Practicum or Field Work (3 Credits)

early childhood studies certificate

(90 credits)

The Early Childhood Studies Certificate—90 credits is a continuation of the Early Childhood Studies Certificate—45 credits, expanding the General Education, Ca-

reer-Related and Field Work requirements to provide a broader base of general knowledge and an opportunity for specialization. The completion of the certificate of 90 credit-hours represents the equivalent of two academic years of full-time university-level study. Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits at the University of Minnesota.

Group I—General Education (60 Credits)

Group II—Career-Related (24 Credits)

Group III—Supervised Practicum or Field Work (6 Credits)

fire protection certificate (IS)

(48—51 credits)

The Fire Protection Certificate program was planned by the Fire Information Research and Education Center, Agricultural Extension Service and Continuing Education and Extension, and other members of the public and business sector responsible for fire protection. It is designed to expand the educational opportunities for persons employed by or concerned with municipal, institutional, and industrial fire protection; insurance inspection or rating bureaus; and manufacturers of protective equipment and systems.

Fire Protection Certificate credits are accepted as degree credits toward the Associate in Arts degree in the General College of the University of Minnesota. These credits also are accepted as degree credits toward the Bachelor of Applied Studies and the Bachelor of General Studies degrees if they are an integral part of a student's individual proposal at the time of admission to a baccalaureate program.

The Fire Protection (FPro) courses will be available only through the Department of Extension Independent Study. Courses currently or soon available are marked with an asterisk(*). Equivalent courses may be transferred to this program from other institutions accredited by the University of Minnesota, but a total of 25 percent of the credits for this certificate must be earned at the University of Minnesota.

English Requirement (3-4 credits)

Comm 1001 or Comp 1001* or Spch 0001C or Spch 1101

Core Requirement (33 credits)

IR 0001C—Supervision: Elements of Supervision I

FPro 0001C—Introduction to Fire Protection*

FPro 0002C—Hazardous Materials I*

FPro 0003C—Hazardous Materials II

FPro 0004C—Hazardous Materials III

FPro 0005C—Fire Prevention and Control*

FPro 0006C—Fire Protection and Life Safety Systems in Building Design*

FPro 0007C—Private Fire Protection Systems: Elements*

FPro 0008C—Private Fire Protection Systems: Applications

FPro 0009C—Fire Department Administration*

FPro 0010C—Organization for Fire Protection

Spread Requirement (12-14 credits)

Psy 1001—General Psychology * or Psy 1003—Application of Psychology to Living

Pol 1001—American Government and Politics* or

Pol 1031—American Public Policy*
Soc 1001—Introduction to Sociology* or
Soc 1002—American Community*

foster care education certificate

(15 credits)

The overall objectives of this certificate program are to improve services to children in foster homes by recognizing the importance of, and helping to increase the competency and clarity of, the role definition of foster parents. There is no presumption of developing an "ideal" foster parent role (or social worker); rather, the foster parent is viewed as an extension of the legal responsibility and service vested by the court under the auspices of a recognized social agency. Both the foster parent and social worker are expected to develop a greater understanding of, and sensitivity to, the stresses experienced by foster children and to clarify their own role in assisting foster children and their parents to cope with these stresses.

This program has been *revised* and *expanded* to accommodate the kinds of needs, in terms of courses, foster parents and agencies have been seeking. It has become more flexible but still uses core courses as a foundation for the additional credits.

The Program must be taken in its entirety at the University of Minnesota.

Core Requirements (7 credits)

(listed in *recommended* order)

- SW 0010C New Directions in Foster Care—1 credit
- SW 0013C The Child and the Community—2 credits
- SW 0011C Child and Adolescent Development—2 credits
- SW 0012C Challenges to the Foster Parent—2 credits

Electives (8 credits)

The additional courses needed to complete the 15 credits required for the certificate may be chosen from one- and/or two-credit courses covering such topic areas as: abused child, retarded child, human sexuality, behavior management, and moral development. (These courses are listed in the department's quarterly announcements.)

For further information on this program and a list of quarterly offerings, write to the Department of Continuing Education in Social Work, 338 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis 55455; or call (612) 373-5831.

general studies certificate (IS)

(45 credits)

The General Studies Certificate program is designed to recognize students' achievement after the completion of the equivalent of one year of college course work. There are no required courses in the program but students are encouraged to take advantage of courses in most of the general education curriculum areas of the General College—natural sciences, social sciences, business studies, humanities, and communications. Of the 45 credits required for the certificate, a minimum of 30 credits must be taken in General College courses. (A list of General College courses offered through Extension is found in the **Course Offerings** section.)

Students wishing to continue their education toward the Associate in Arts degree from the General College will find that all credits from this program will be accepted. For AA degree requirements, see University Degree Programs; Associate in Arts (AA) on page 348.

human services certificate

(47 credits)

The Human Services Certificate was developed in response to the increasing demand for specialized certificates for paraprofessional staff in community service. Paraprofessionals engaged in the human services and in community development efforts in agencies such as public and private schools, nursery school, neighborhood health clinics, poverty agencies, housing authorities, social agencies, and community libraries may find the certificate useful for their personal development as well as their certification needs for advancing employment opportunities.

The certificate provides both background knowledge and career-related course work. Students have 22 to 27 credits of core requirements, generic to all fields of human services and 3 to 8 credits of elective choices within the basic social sciences. The remaining 16 credits (the concentration requirement) are approved supervised work experience and/or related credits planned by the student and the counselor, depending upon student interest and job requirements. The certificate is flexible and should provide a variety of educational opportunities for the paraprofessional.

Students interested in following a degree program may, with careful planning, transfer credits earned for this certificate toward a degree in General College or the College of Liberal Arts.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

Students should consult an Extension counselor before taking courses in the Concentration Requirement. Appointments may be arranged by calling 373-3905.

Core Requirements (27 credits):

- GC 1421 Writing Lab: Personal Writing or Comp 1001 Introductory Composition; or Comm 1001 Communication
- GC 1461 Oral Communication: Basic Principles or Spch 1101 Fundamentals of Speech
- GC 1471 Creative Problem Solving
- SW 1001 Introduction to Social Welfare and Community Services
- GC 1283 Psychology of Human Development or Psy 1003 Application of Psychology to Living
- GC 1211 Man in Society: Development of Human Societies or Soc 1001 Introduction to Sociology
- PubH 3001 Personal and Community Health

Concentration Requirement (GC 1627 Human Services Practicum and/or approved related courses) in one of the following fields (16 credits):

Education	Welfare	Minority Studies—American
Urban Problems	Family Nutrition	Indian
Community Library	Community Health	Minority Studies—Afro-
Community Organizer	Day Care	American
Family Work	Youth Care	Minority Studies—Chicano

Electives: Additional courses from the following areas to make a minimum of 47 credits total for the certificate.

- GC 1285 Social Science: Cultural Anthropology or Anth 1002 Introduction to Anthropology: Cultural Anthropology
- GC 1295 Economic Perspectives—General View
- GC 1722 Home Life: Parent-Child Relationships or FSoS 1025 Parenthood
- Geog 1301 Human Geography

GC 1233 United States: Problems of Government or Pol 1001 American Government and Politics
GC 1281 Psychology of Modern Society or Psy 1001 General Psychology
CPsy 1301 Child Psychology
SSci 3203 Structure and Dynamics of Poverty
Rhet 1147 Efficient Reading
Up to 6 credits in art, music, literature, humanities, in either General College or Liberal Arts courses

interior design certificate

(60 credits)

Note: All of the Interior Design courses for the Certificate are now assigned to the Design Department in the College of Home Economics. The courses involved are essentially the same in content. Moving them from the Studio Art Department facilitated relationships with the 4-year degree program in Interior Design. Some classes offered as part of the Interior Design program may, upon petition, be used in a degree program. See page 110 for old and new numbers.

All courses used in the certificate program will be in the x4xx series with the exception of Dsgn 1521, to better differentiate from the degree program courses which will be in the x5xx series.

Students wishing to transfer from the certificate to the degree program will need to follow the usual procedure for transfer of credit evaluation and to submit materials for portfolio review as required for all degree applicants.

The Interior Design Certificate is awarded upon successful completion of a program of courses in interior design and related fields. The interior design courses have been approved by the American Society of Interior Designers. Completion of the certificate should indicate a background of proficiency in the field of home furnishings and decorating.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 15 credits at the University of Minnesota.

Core Requirement (47-48 credits)

Dsgn 1450 Drafting; Basic Drafting Techniques
Dsgn 1455 Interior Design I
Dsgn 1456 Interior Design II
Dsgn 1521 Color and Design I
Dsgn 3450 Perspective and Presentation Sketches
Dsgn 3451 Interior Design Rendering
Dsgn 3455 Seminar in Interior Design
Dsgn 3456 Seminar in Interior Design
Dsgn 3477 Contract Design Seminar
ArtH 1001 Introduction to the Visual Arts
Comp 1001 Introductory Composition or Comm 1001 Communication or Comp 0004C Business Correspondence
Psv 1003 Application of Psychology to Living

Spread Requirement: Additional courses selected from the following groups to make a minimum of 60 credits total for the certificate.

1. History of Art, Foreign Language, Humanities, Literature, Social Sciences

2. Ceramics, Drawing and Painting, Sculpture, Printmaking, Photography
3. Dsgn 0400C Home Design and Planning
 - Dsgn 0437C Crafts Material
 - Dsgn 1428 Interior Design Layout
 - Dsgn 3412 History of Traditional Furniture
 - Dsgn 3463 Interior Design: Housing, and the Urban Environment
 - Dsgn 3467 Interior Design: Housing, and Dynamics and Policy
 - Dsgn 3460-3461 Interior Design Clinic
4. Dsgn 3459 Interior Design Business
 - Saf 0001C Salesmanship
 - GC 1513 Principles of Small Business Operations
 - Comp 0004C Business Correspondence
 - Spch 0001C Beginning Speech: Communication or Spch 1102 Communication in the Modern World

liberal arts certificate (IS)

(45 credits)

The program of the Liberal Arts Certificate is offered to students who wish an introduction to a liberal arts education. It is the equivalent of 1 full-time year of university-level study. With careful planning, the certificate may constitute the freshman year of a degree program in arts or business fields. Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

English Requirement (8 credits):

Comp 1001-1002—Introductory Composition or Comm 1001-1002—Communication or equivalent

Spread Requirement (32 credits) 8 credits in each of the following groups:

Group A Communication, Language, Symbolic Systems: accounting, computer science, composition (other than freshman English requirement) journalism, language, philosophy, mathematics, speech, statistics

Group B Physical and Biological Sciences: astronomy, biology, botany, chemistry, ecology, geology, physics

Group C Man and Society: anthropology, economics, family studies, geography, history, political science, psychology, social science, sociology

Group D Artistic Expression: art, architecture, classics, humanities, literature, music, theatre arts

Electives: Additional liberal arts courses to make a minimum of 45 credits total for the certificate.

Students interested in the Liberal Arts Certificate should be sure to call 373-3905 for a copy of CLA courses meeting the Group Distribution requirements offered through Extension before taking any courses.

mathematics and science certificate (IS)

(45 credits)

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

Prerequisite: 2 years of algebra and 2 years of geometry including trigonometry.

Core Requirement (24 credits):

Comp 1001 Introductory Composition or Comm 1001 Communication
Math 1211 Analysis I
Math 1221 Analysis II
Math 1231 Analysis III
Math 3211 Analysis IV

Electives: Additional courses to make a minimum total of 45 credits, selected from the following areas:

Astronomy
Chemistry
Engineering
Geology
Aerospace Engineering and Mechanics
Physics

chemical dependency counseling certificate

(26 to 35 credits including completion of internship)

The basic courses for this program are offered by the School of Public Health through Continuing Education and Extension. Requirements for the certificate include completion of the basic and specialized courses, plus a successful internship program. Additional coursework may also be available on an invitational basis.

The courses are designed to train individuals to assist professional counselors working with alcoholism and other forms of drug abuse. While planned specifically for persons interested in chemical dependency counseling careers, the courses are also offered on a limited basis to educators, clergymen, nurses, law enforcement personnel, social workers, psychologists, and other professional persons who feel this additional special training would help them in dealing with or disseminating information about alcoholism and other drug abuses. The sequence is not to be considered in lieu of a professional degree in counseling, nor does successful completion guarantee employment.

A separate rotating internship experience in approved and affiliated institutions under professional supervision will be provided on the basis of the availability of placements for selected applicants who have successfully completed the basic courses. Successful completion of the internship program will lead to the certificate. Prior or concurrent institutional experience may be submitted in part by petition to the Internship Program Coordinator. Details of the internship program will be provided to students applying for enrollment in the courses.

Persons wishing to apply for admission to the program should write to the Chemical Dependency Counseling Program, 226 University Park Plaza, 2829 University Avenue S.E., Minneapolis MN 55414. An application blank will be sent to the applicant. Deadline for application for the Fall Quarter is August 1 and January 15 for the Spring Quarter.

Students interested in continuing their education at the University of Minnesota may wish to use their Public Health credits toward the Human Services Certificate offered through Extension, the Human Services Generalist Program offered through General College, or other degrees and certificates offered by the University.

No credits may be transferred to this program from other institutions, except for possible experience substitution on the internship, outlined above.

Requirements (23 credits and completion of internship):

- PubH 3030 Fundamental Aspects of Drug Abuse and Dependency
- PubH 3031 The Disease Process and Social Implications of Drug Dependency
- PubH 3032 Counseling the Alcoholic and Other Drug Dependent Persons
- PubH 3036 Basic Helping Skills
- PubH 3038 Advanced Helping Skills
- PubH 3035 Internship in Alcohol and Drug Abuse
- PubH 3037 Helping the Chemically Dependent Family
- PubH 5036 Group Counseling in Chemical Dependency

ophthalmology technician certificate

The Ophthalmology Technician Certificate was planned by the Department of Ophthalmology and Continuing Education and Extension. The objective of the certificate program is to provide individuals with technical and mechanical skills and knowledge required in the treatment and diagnosis of eye diseases so that they may qualify for employment under the supervision of ophthalmologists as ophthalmic technicians.

Requirements for the certificate will include completion of four special ophthalmology courses (totaling 30 credits), during one year of full-time day attendance at St. Paul-Ramsey Hospital. In addition, a one-year externship will be required.

Applications to the program will be accepted until August 1. Notification of acceptance will be given in late August. Interested students wishing to receive more information about the program should write to: Program Director, Educational Study Association, 1575 University Avenue, St. Paul MN 55104.

accounting certificates

The Junior Accounting Certificate program is of value to individuals in junior accounting positions in industry, to management personnel who are required to deal with common finance and accounting data, and to businessmen who wish to have a basic grounding and understanding of the elementary principles of accounting and corporation finance.

The courses required for the Senior Accounting Certificate provide very nearly the same background in accounting practice and theory as is available to students who graduate with a four-year degree with specialization in this field. The full program forms a sound background for the continuation of independent study in preparation for the Certified Public Accountant examinations.

junior accounting certificate

(57-58 credits)

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 14 credits in accounting courses at the University of Minnesota.

Requirements:

Comp 1001-1002 Introductory Composition or Comm 1001-1002 Communication or equivalent	Acct 3105-3106, 3107 Intermediate Accounting
Econ 1001, 1002 Principles of Economics	Acct 3220-3221 Cost Accounting
Math 1131 Finite Mathematics or Math 1111 College Algebra and Analytic Geometry or equivalent	BFin 3000 Finance Fundamentals
Acct 1050-1051 or Acct 1024-1025, 1026 Principles of Accounting	QA 1050 Elementary Managerial Statistics
	QA 3055 Introduction to Management Science
	MIS 3099 Elementary FORTRAN

senior accounting

(93-94 credits)

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits in accounting courses at the University of Minnesota.

Requirements:

Comp 1001-1002 Introductory Composition or Comm 1001-1002 Communication or equivalent	Sixteen credits from the following:
Comp 1027 Advanced Writing	Econ 3101 Microeconomic Theory
Econ 1001, 1002 Principles of Economics	BGS 3002 Business and Society
Math 1131 Finite Mathematics or Math 1111 College Algebra and Analytic Geometry or equivalent	IR 3002 Industrial Relations Systems
Math 1142 Introduction to Calculus of One and Several Variables	Ins 3100 Risk Management and Insurance
QA 1050 Elementary Managerial Statistics	OAM 3000 Introduction to Operations Management
Acct 1050-1051 or Acct 1024-1025, 1026 Principles of Accounting	QA 3055 Introduction to Management Science
Acct 3105-3106, 3107 Intermediate Accounting	Tran 3054 Fundamentals of Transportation
Acct 3220-3221 Cost Accounting	Mktg 3000 Principles of Marketing
12 credits of accounting electives	Mgmt 3001 Fundamentals of Management
BFin 3000 Finance Fundamentals	Mgmt 3004 Business Policy: Strategy Formulation and Implementation
BLaw 3058 Business Law	MIS 3099 Elementary FORTRAN

business administration certificates

These certificate programs have been approved by the College of Business Administration and arranged under the supervision of members of the faculties concerned. They are designed to present integrated, high quality, university-level courses of study of shorter length and scope than the full four-year degree programs. They are designed especially for students who wish to obtain a general grounding in the basic principles and theories of business administration and for those who want training or an opportunity for advancement in some specific field of business.

It is possible for a student to move from a course of study for a certificate into a planned program leading to a bachelor of science in business degree. Anyone who contemplates such a long-range objective should consult an Extension adviser before proceeding further so as to avoid any loss of credits or possible future rejection from the degree program.

junior business administration certificate

(45-46 credits)

This certificate, requiring the satisfactory completion of 45-46 credits of course work, is the equivalent of one academic year of full-time study. It offers a firm grounding in most of the basic fields of business administration. All of the credits received in completing the Junior Certificate are automatically credited toward a Senior Certificate and represent half of its required work load.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits of Business courses at the University of Minnesota.

Prebusiness Requirement (33-34 credits)

Comp 1001-1002 Introductory Composition or Comm 1001-1002 Communication or equivalent
Econ 1001, 1002 Principles of Economics
QA 1050 Elementary Managerial Statistics

Acct 1050-1051 or Acct 1024-1025, 1026 Principles of Accounting
Math 1131 Finite Mathematics or Math 1111 College Algebra and Analytic Geometry or equivalent

Core Requirement (12 credits)

Econ 3101 Microeconomic Theory
BGS 3002 Business and Society
QA 3055 Introduction to Management Science
MIS 5100 Introduction to Computers and Computer Data Processing
IR 3002 Industrial Relations Systems
Ins 3100 Risk Management and Insurance
Tran 3054 Fundamentals of Transportation

BFin 0001C Introduction to Investments
BFin 3000 Finance Fundamentals
Mktg 3000 Principles of Marketing
BLaw 3058 Business Law
Mgmt 3001 Fundamentals of Management
Mgmt 3004 Business Policy: Strategy Formulation and Implementation
Math 1142 Introduction to Calculus of One and Several Variables
MIS 3099 Elementary FORTRAN

senior business administration certificate

(90-91 credits)

The Senior Business Administration Certificate is a continuation of the Junior Certificate, expanding the core and spread requirement to provide a broader base of general knowledge and an opportunity for specialization. The completion of the certificate requirement of 90-91 credit-hours represents the equivalent of two academic years of full-time university-level study. The course program may be considered to be roughly that of the sophomore and junior years of a four-year degree program with particular emphasis on the basic principles and theories of business administration.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits of Business courses at the University of Minnesota.

Prebusiness Requirement (38-39 credits):

Comp 1001-1002 Introductory Composition, or Comm 1001-1002 Communication or equivalent
Econ 1001, 1002 Principles of Economics
Acct 1050-1051 or Acct 1024-1025, 1026 Principles of Accounting
QA 1050 Elementary Managerial Statistics

Math 1131 Finite Mathematics or Math 1111 College Algebra and Analytic Geometry or equivalent
Math 1142 Introduction to Calculus of One and Several Variables

Core Requirement (24 credits):

OAM 3000	Introduction to Operations Management	BLaw 3058	Business Law
QA 3055	Introduction to Management Science	IR 3002	Industrial Relations Systems
MIS 5100	Introduction to Computers and Computer Data Processing	Ins 3100	Risk Management and Insurance
BFin 0001C	Introduction to Investments	Tran 3054	Fundamentals of Transportation
BCS 3002	Business and Society	Mgmt 3001	Fundamentals of Management
BFin 3000	Finance Fundamentals	Mgmt 3004	Business Policy: Strategy Formulation and Implementation
Mktg 3000	Principles of Marketing	MIS 3099	Elementary FORTRAN

Electives in the College of Business Administration: At least 16 additional credits in courses in business administration. These may be selected from the core group above or from other courses.

Other Electives: Non-business courses from areas such as physical and biological science, man and society, and artistic expression to make a minimum of 90 credits for the certificate.

Note: Students contemplating continuing toward a degree from the College of Business Administration should select electives which could become part of the degree program. These students are therefore urged to complete the prebusiness degree requirements.

credit and financial management certificate

(63-65 credits)

The Credit and Financial Management Certificate program was developed cooperatively by Continuing Education and Extension and the College of Business Administration of the University of Minnesota and the North Central Credit and Financial Management Association. The program is directed to students seeking careers in trade credit management, commercial bank and finance company loan management, and ultimate senior executive positions in financial management.

Specialized training and skills are necessary in the administration of accounts receivable in today's business. The Trade Credit Manager must often function as adviser to his customers. Analyzing lines of credit requires that he be familiar with all financial and marketing aspects of his customer's business. He must also be able to communicate and work with top management of his company toward the integration of sales and financial goals, and thus is in a unique position to advance to senior management positions.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 16 credits at the University of Minnesota.

Completion of the certificate qualifies the student for the Associate and Fellow Awards of the National Institute of Credit. Persons interested should telephone or write Mr. E. Norman Eck, 330 Plymouth Building, Minneapolis MN 55402, telephone 371-3951.

Core Requirement (55-57 credits):

Acct 1050-1051 or Acct 1024-1025,
1026, Principles of Accounting
Acct 3160 Analysis of Financial
Statements
BLaw 3058-3078, 3088 Business
Law
Econ 1001, 1002 Principles of
Economics
BFin 0002C Credit and Financial
Management Problems

IR 0001C Supervision I: Elements
of Supervision
Mgmt 3002 Psychology in Management
Mktg 3000 Principles of Marketing
Mktg 0087C Credits and Collections
Comp 0004C Business Correspondence
or GC 1531 Business Writing
Spch 0001C Beginning Speech—
Communication

Electives (8 credits):

Acct 3105 Intermediate
Accounting
Acct 3220 Cost Accounting
Econ 3751 Money and Banking
BFin 0001C Introduction to
Investments
BFin 3000 Finance Fundamentals
BFin 3100 Financial Management
Ins 3100 Risk Management and Insurance

Mgmt 3001 Fundamentals of Management
Mktg 3080 Industrial and Governmental
Procurement
Tran 3054 Fundamentals of
Transportation
Comp 0003C Review of Business
English

Industrial relations certificate

(45 credits)

This program of study is arranged and coordinated by the Department of Industrial Relations of the College of Business Administration. It is designed to provide technical training in the field of industrial relations and in the use of specialist techniques. Advanced professional training in Industrial Relations is available only through the M.A. and Ph.D. programs. See **Graduate School Bulletin**.

Caution: Courses at the 3xxx level are taught primarily for juniors and seniors. Courses taught at the 5xxx level are taught primarily for juniors, seniors, and graduate-level students.

Students transferring to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

Core Requirement (33 credits):

Econ 1001, 1002 Principles of Economics
IR 3002 Industrial Relations Systems:
Labor Markets and the Management of
Human Resources
IR 3007 Collective Bargaining Negotia-
tions and Modern Labor Relations

IR 3010 Human Relations and Applied
Organization Theory
Psy 1001 General Psychology
Psy 3801 Introduction to Statistical
Methods
Soc 1001 Introduction to Sociology

Electives (12 credits):

Econ 3501 Labor Economics
Econ 5541 Contemporary Labor Issues
Econ 3551 Labor Economics
Econ 5537 Labor Market Behavior and
Regulation

Econ 5534 Economic Security
Econ 5561 Wages and Employment
GC 1081, 1082 Personnel Selection
Techniques
IR 3000 Topics in Industrial Relations

(Continued next page)

IR 0007C Occupational Safety and Health
IR 0001C, 0002C Supervision I, II
MIS 5101 Introduction to Management Information Systems
Psy 3124 Psychology of Individual Differences
Psy 3011 Introduction to the Psychology of Learning
Psy 5501 Vocational Psychology
Psy 5701 Personnel and Industrial Psychology

QA 3055 Introduction to Management Science
Soc 5201 Introduction to Social Psychology
Soc 5411 Formal Organization
IEOR 0100C Industrial Engineering and Management
IEOR 0210C Motion and Time Study
IEOR 0408C, 0409C Corporate Standard Data I, II
Mgmt 3002 Psychology in Management

information systems analysis and design certificate

(51 credits)

The Information Systems Analysis and Design Certificate program was developed cooperatively by Continuing Education and Extension, the College of Business Administration, and leading Minnesota firms. The program is directed toward students planning careers in information processing and toward those already working in the field who wish to improve their skills. The course sequence is arranged so that it is applicable to students entering with a high school or vocational-technical school diploma and to students who have completed college degrees.

Beginning with introductory computer programming courses, the student works toward the development of analysis and design skills useful in the field of Management Information Systems and Information Processing. The Information Systems Analysis and Design Certificate Program provides education and training which can open the way to responsible positions in computer information processing.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 15 credits at the University of Minnesota.

Students deficient in Mathematics should take MIS 0140C, Mathematical Foundations of Systems Analysis, prior to the Certificate courses.

Students with no computer experience or training should take MIS 3040, Organizational Use of Computers, before beginning the Certificate courses.

Core Requirement (20 credits)

MIS 5100 Introduction to Computers and Computer Data Processing
Acct 1050 Principles of Accounting I
Acct 1051 Principles of Accounting II
QA 1050 Elementary Managerial Statistics
Mgmt 3001 Fundamentals of Management

Programming Requirement (3 credits):

MIS 3098 Elementary COBOL
MIS 3099 Elementary FORTRAN
MIS 5098 Intermediate COBOL

Concentration Requirement (28 credits):

- MIS 5101 Introduction to Management Information Systems
- MIS 5102 Introduction to Information Systems Analysis
- MIS 5103 Data Structures and File Processing
- MIS 3131 Database Management Systems
- MIS 3132 Data Communication Systems
- MIS 3151 Administration and Control of Management Information Systems
- QA 3055 Introduction to Management Science

management of administrative services certificates

The Management of Administrative Services Certificate program has been developed by Continuing Education and Extension in cooperation with the College of Business Administration and the Administrative Management Society.

These university-level certificate programs are designed especially for those management employees who have not received such training in schools of business or commerce, in order to assist them in becoming more competent in their present positions and to improve their opportunities for advancement. In completion of the prescribed programs, the student may be entitled to certificates of the Administrative Management Society. Persons interested in the latter certificates may telephone or write John Collins, C.A.M., 8320 36 Avenue N., Minneapolis MN 55427, telephone 544-6472.

associate in management of administrative services certificate

(45-47 credits)

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits of Business courses at the University of Minnesota.

Core Requirement (41-43 credits):

- | | |
|--|---|
| Comp 0003C Review of Business English or Comp 0004C Business Correspondence, or Comp 1001 Introductory Composition, or Comm 1001 Communication or equivalent | Math 1131 Finite Mathematics or Math 1111 College Algebra and Analytic Geometry or equivalent |
| Econ 1001, 1002 Principles of Economics | BLaw 3058 Business Law |
| Acct 1050-1051 or Acct 1024-1025, 1026 Principles of Accounting | MIS 5100 Introduction to Computers and Computer Data Processing |
| | Psy 1001 General Psychology |
| | Psy 3801 Introduction to Statistical Methods or QA 1050, Elementary Managerial Statistics |

Electives: Additional courses to be selected from the list of requirements or electives for the senior certificate to make a minimum of 45 credits total for the certificate.

fellow in management of administrative services certificate

(90-91 credits)

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits of Business courses at the University of Minnesota.

Core Requirement (41-43 credits):

Comp 0003C Review of Business English and Comp 0004C Business Correspondence or Comp 1001-1002 Introductory Composition or Comm 1001-1002 Communication or equivalent
Econ 1001, 1002 Principles of Economics
Acct 1050-1051 or Acct 1024-1025, 1026 Principles of Accounting

BLaw 3058 Business Law
MIS 5100 Computers and Systems Design
Math 1131 Finite Mathematics or Math 1111 College Algebra and Analytic Geometry or equivalent
Psy 1001 General Psychology
Psy 3801 Introduction to Statistical Methods or QA 1051, Elementary Managerial Statistics

Group Requirements (36 credits):

Group I—At least four courses from the following (16 credits):

IR 3002 Industrial Relations Systems
Mgmt 3002 Psychology in Management
BFin 0001C Introduction to Investments

BFin 3000 Finance Fundamentals
Ins 3100 Risk Management and Insurance
Mktg 3000 Principles of Marketing

Group II—At least five courses from the following (20 credits):

BFin 3100 Financial Management
Tran 3054 Fundamentals of Transportation
Acct 3160 Analysis of Financial Statements

Acct 3255 Managerial Costs or Acct 3220 Cost Accounting
Mgmt 3001 Fundamentals of Management
BLaw 3088 Business Law

IR 3010 Human Relations and Applied Organization Theory

Electives: Additional courses from the following list of courses or areas to make a minimum of 91 credits total for the certificate.

IR 0001C, 0002C Supervision I, II
Psy 5751 Psychology of Advertising
Accounting
Economics
Finance
Production Management
Industrial Relations
Insurance

Marketing
Office Management
Real Estate
Transportation
English
Humanities
Social Science
Speech

undergraduate development certificates

(UDC Series in Engineering and Science)

The technical progress of American industry has reached its high level of production through engineering teamwork. The engineering team is a three-part team:

- Engineers and scientists who formulate ideas and create new products and services.
- Engineering technicians who help develop, test, and apply these ideas and creations.
- Skilled workers who make the products and perform routine services.

It is the responsibility of our colleges and universities to provide training opportunities for persons capable of becoming professional engineers, scientists and engineering technicians. Vocational and trade schools have the responsibility of training the skilled worker.

The Department of Extension Classes of Continuing Education and Extension offers a variety of certificates for the part-time student who has the ability to carry college-level courses leading to a career both at the engineer and engineering technician level. Interested students should study these certificate programs carefully and select the program best suited to their interests, abilities, present and future employment, and ultimate educational goal.

The UDC Series in Engineering and Science, represents a unification and expansion of previous Continuing Education and Extension Certificate programs offered in cooperation with the Institute of Technology of the University of Minnesota. Students already pursuing programs in this area should have no difficulty in identifying the new title of their certificate objective. Any question may be directed to the Continuing Education and Extension Counseling Department, 314 Nolte Center for Continuing Education, University of Minnesota: 373-3905.

The UDC is intended to provide a focus to the planning of continuing education activities in particular disciplines, and recognition of completion of clearly identified segments of an educational program indicative of increasing levels of technical capability. Degree credit courses offered in certificate programs may be applied toward a subsequent baccalaureate degree with departmental approval. If a later degree is anticipated, early contact with the academic department and application for admission to the Institute of Technology is important.

In general, 45-credit certificates indicate familiarity with the topical area equivalent to that of a first year in a collegiate program. An important feature of the UDC Series is that the credit content, i.e., 45, 90, 135, will be included as a part of the title of the certificate. (For example, UDC in Electrical Engineering—90 credits). This feature will be of considerable value when the certificate is later presented by the individual to an employer or agency for consideration. An application for admission to certificate programs should be completed by students so that advisers can give effective counseling. This blank is available at any Extension office.

undergraduate development certificate in computer science—45 credits

The initial Undergraduate Development Certificate in Computer Science (UDC) is designed to provide maximum exposure to computer science in a 45-credit program. It should be recognized, however, that this concentration is achieved at the expense of related scientific and general non-technical topics. Students subsequently pursuing degree programs will be required to make up these deficiencies. Potential degree students should make early contact with the Department of Computer Science.

The UDC in Computer Science—45 credits can represent a first step for a student with college-level ability into a field of technical and scientific computer application. It can also provide a means of broadening the perspectives and skills of persons already employed at the programmer or technician level.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

Core Requirement (27 credits):

Math 1311-1321-1331 Computer
Calculus I-II-III or
Math 1211-1221-1231 Analysis I-II-III

Comp 1001-1002 Introductory Composi-
tion or equivalent
CSci 3001 Perspectives on Computers
and Society

Concentration Requirement (16 credits):

CSci 1100-1101 Introduction to Fortran
Programming I-II or
CSci 3104 Introduction to Programming
and Problem Solving

CSci 3105-3106 Fundamentals of
Algorithms and Languages I-II
CSci 5101 Structure and Programming
of Software Systems I

Electives:

††Non-Technical electives to make a minimum of 45 credits for the certificate.

undergraduate development certificate in computer science—90 credits

This certificate continues the development of the undergraduate core curriculum begun in the Undergraduate Development Certificate in Computer Science—45 credits. The CSci courses provide a base for later specialization while related technical electives give exposure to at least one technical discipline of particular interest to the student.

If a student's objective is an undergraduate degree, planning of the completion of this certificate should include early consultation with a CSci adviser.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Computer Science—45 credits.

Prerequisite: Completion of the UDC in Computer Science—45 credits.

Core Requirement (17 credits):

Math 3211 Analysis IV
Math 3221 Introduction to Linear Algebra
and Linear Differential Equation

Math 3091 Elementary Probability and
Statistics with Applications
CSci 5102 Structure and Programming
of Software Systems II

Concentration Requirement (12 credits in one area):**AREA A**

CSci 5103 Introduction to Assemblers
CSci 5503 Introduction to Compiler
Construction
CSci 5504 Formal Methods in Compiler
Construction or
CSci 5505 Optimization in Compilers

AREA B

CSci 5121 Introduction to Data
Structures
CSci 5122 Advanced Data Structures
Plus 4 additional credits relating to data
structure

AREA C

CSci 5400 Introduction to Automata
Theory
CSci 5401 Introduction to Formal
Languages
CSci 5501 Artificial Intelligence and
Heuristic Programming

Related Technical Requirement (8 credits):

Courses chosen in this group should reflect areas in which students see potential application of personal computer science skills. Some examples of related technical areas include health sciences, transportation, and environmental engineering. Course selection should be worked out with an adviser in the field selected.

Tightening job markets and shifting national priorities often call for an interdisciplinary orientation. Upon successful petition, up to 8 additional credits may be taken from this area in place of the non-technical electives group requirement (see below) in order to form a coherent, expanded related technical area.

Electives: (8 credits)

Courses from non-technical or biological science electives††, to make a minimum of 90 credits, including those from the 45 credit UDC in Computer Science.

undergraduate development certificate in engineering and science—45 credits

The UDC in Engineering and Science—45 credits is designed to provide students with the fundamentals of mathematics, physics, and broad technical communications skills which will enable them to handle certain engineering support assignments in any engineering field and will give them the necessary background for more specialized or advanced study either as engineers or as engineering technicians. All courses in the UDC in Engineering and Science—45 credits program carry degree credit, representing the first year of required course work for an engineering degree, and are applicable to a baccalaureate degree upon admission of the student to the Institute of Technology.

Refer to the introductory statement of the UDC at the beginning of this section.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 12 credits at the University of Minnesota.

Prerequisite: High school graduate or equivalent; 2 years of algebra and 2 years of geometry, including trigonometry.

Core Requirement (37 credits):

Math 1211	Analysis I	Phys 1271-1275-1281-1285	General
Math 1221	Analysis II		Physics and Lab
Math 1231	Analysis III	Comp 1001-1002	Introductory
EG 1025	Engineering Graphics; or CSci 1100-1101		Composition or equivalent
	Introduction to Fortran Programming I-II or CSci 3101 A Fortran Introduction to Computer Programming		

Electives: Courses from nontechnical electives†† to make a minimum of 45 credits for the certificate.

††Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, biological sciences, botany, classics, economics, geography, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology and others.

undergraduate development certificate in engineering and science—90 credits

(Includes 45 credits from Undergraduate Development Certificate in Engineering and Science)

This certificate is designed for students who have an engineering degree objective and who wish to continue working toward one of the engineering curriculums of the Institute of Technology. It will also be of value to technicians who desire to widen and deepen their technical role.

This approach involves interweaving into one expanding pattern the elements of basic science, engineering science, professional engineering work, and design. To build the sound foundation required in engineering work, the first two years of all engineering curriculums emphasize the basic sciences of mathematics, physics, and chemistry.

Work in nontechnical and biological science electives is also required throughout the entire engineering program. This is intended to broaden viewpoints and to add to perspective.

All classes in the UDC in Engineering and Science—90 credits carry degree credit and are transferable to the Institute of Technology when admission requirements are satisfied. Refer to the introductory statement on the UDC at the beginning of this section.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Engineering and Science—45 Credits.

Prerequisite: Completion of the UDC in Engineering and Science—45 credits.

Core Requirement (25 credits):

Math 3211 Analysis IV	Phys 1291-1295 General Physics and Laboratory
Math 3221 Introduction to Linear Algebra and Linear Differential Equations	Chem 1004-1005† General Principles of Chemistry

Spread Requirement: A minimum of 8 credits from the following courses:

Math 3231 Vector Analysis	CE 3400 Fluid Mechanics
AEM 1015 Statics	Stat 3091 Probability and Statistics or ME 3900 Introduction to Engineering Statistics
AEM 3016 Deformable Body Mechanics	
AEM 3036 Dynamics	
EE 1510 Elements of Electrical Engineering	

Electives: Courses from nontechnical or biological science electives††, or mathematics or chemistry or physics or Comp 3031 or Engl 3085 (I.T.) or additional courses from the spread requirement to make a minimum of 90 credits total for the certificate.

††Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, biological sciences, botany, classics, economics, geography, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology and others (see 1977-1979 I.T. bulletin).

undergraduate development certificate in civil engineering—90 credits

(Includes 45 credits from Undergraduate Development Certificate in Engineering and Science)

The Undergraduate Development Certificate in Civil Engineering—90 credits, enables a student to continue the Undergraduate Development Certificate work in courses normally required in Civil Engineering degree programs and establishes the prerequisite work needed to pursue courses at the third-year level. Elective credits may be chosen from third year offerings in civil engineering. It is designed to help engineering technicians assume a role of increased responsibility in working with civil engineers. It also represents a coherent body of study in helping determine whether further work toward a civil engineering degree should be pursued. Upon acceptance by the Institute of Technology, a student may transfer appropriate work completed in a certificate program to a bachelor's degree program.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Engineering and Science—45 credits.

Prerequisite: Completion of the UDC in Engineering and Science—45 credits.

Core Requirement (25 credits selected from the following):

Math 3211	Analysis IV	Phys 1291-1295	General Physics and Laboratory
Math 3221	Introduction to Linear Algebra and Linear Differential Equations or	AEM 1015	Statics
Math 1250	Calculus V	AEM 3016	Deformable Body Mechanics
Chem 1004-1005† or 1031-1032	General Principles of Chemistry	AEM 3036	Dynamics
		CE 3400	Fluid Mechanics

Concentration Requirement (20 credits): Select courses from the list below in the fields desired.

CE 3100	Introduction to Surveying and Mapping
CE 3103	Field Surveying
CE 3200	Introduction to Transportation Engineering
CE 3300	Elements of Soil Mechanics
CE 3400	Fluid Mechanics (if not taken in core requirement)
CE 3500	Introduction to Environmental Engineering Problems and Analysis
CE 3700	Introduction to Construction Materials
CE 5405	Hydrology and Hydrologic Design

undergraduate development certificate in electrical engineering—90 credits

(Includes 45 credits from Undergraduate Development Certificate in Engineering and Science)

The Undergraduate Development Certificate in Electrical Engineering—90 credits enables a student to continue the Undergraduate Development Certificate work in mathematics and physics with an opportunity to choose technical elective courses at the third-year level of an electrical engineering curriculum. It is designed to help engineering technicians assume a role of increased responsibility in working with

electrical engineers. It also represents a coherent body of study in helping determine whether further work toward an electrical engineering degree should be pursued. Upon acceptance by the Institute of Technology, a student may transfer appropriate work completed in a certificate program to a bachelor's degree program.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Engineering and Science—45 credits.

Prerequisite: Completion of the UDC in Engineering and Science—45 credits.

Core Requirement (minimum of 36 credits selected from the following):

Math 3211	Calculus IV	Phys 1291-1295	General Physics and Laboratory
Math 3221	Introduction to Linear Algebra and Linear Differential Equations		Third Year Electrical Engineering courses (3XXX-5XXX)
Math 3231	Vector Analysis		
EE 1510	Elements of Electrical Engineering		

Electives: Courses from nontechnical or biological science electives^{††}, to make a minimum of 90 credits, including those from the UDC in Engineering and Science—45 credits.

undergraduate development certificate in electrical engineering—135 credits

(Includes 90 credits from Undergraduate Development Certificate in Electrical Engineering)

An increasing number of employers are recognizing the value of an individual who has completed the course work that is central to the third year of an electrical engineering bachelor's program together with supporting topics. The objective may either be demonstration of ability to participate more actively in the engineering team or in some cases arrangements may be made upon completion of this certificate for the individual to pursue the remainder of the work toward a Bachelor of Electrical Engineering Degree on an accelerated basis. Course sequences at the fourth year level may also serve either of the above two purposes.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 36 credits at the University of Minnesota, including those taken for the UDC in Electrical Engineering—90 credits.

Prerequisite: Completion of the UDC in Electrical Engineering—90 credits.

^{††}Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, biological sciences, botany, classics, economics, geography, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology and others (see 1977-1979 I.T. bulletin).

Core Requirement (minimum of 30 credits selected from the following):

EE 3050 Electronics I	EE 3400-3401-3402 Junior Electrical Engineering Laboratory
EE 3051 Electronics II	EE 5051 Introduction to Logic Design
EE 5050 Nonlinear Electronic Circuits	EE 5053 Design: Digital Circuits
EE 3100 Electromagnetic Fields I	EE 5055 Linear Electronic Circuits
EE 3101 Electromagnetic Fields II	Comp 3031 Technical Writing for Engineering Students
EE 5100 Electromagnetic Fields III	Math 3061 Operation Methods for Linear Systems
EE 5000 Linear System Analysis	EE 5552 Design: Digital Systems
EE 5001 Linear System Analysis	
EE 3010-3011-3012 Circuits, Signals and Systems I-II-III	

NOTE: Students working toward a degree should check with an I.T. adviser before choosing electives.

Electives: Courses from nontechnical (maximum 6 credits)†† or technical electives (including fourth year courses in electrical engineering) to make a minimum of 135 credits for the Certificate.

undergraduate development certificate in industrial engineering—90 credits

(Includes 45 credits from Undergraduate Development Certificate in Engineering and Science)

The Undergraduate Development Certificate in Industrial Engineering—90 credits enables a student to continue the Undergraduate Development Certificate work in courses normally required in Industrial Engineering degree programs and establishes the prerequisite work needed to pursue courses at the third-year level. It is designed to help engineering technicians assume a role of increased responsibility in working with industrial engineers. It also represents a coherent body of study in helping determine whether further work toward an industrial engineering degree should be pursued. Upon acceptance by the Institute of Technology a student may transfer appropriate work completed in a certificate program to a bachelor's degree program.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Engineering and Science—45 credits.

Prerequisite: Completion of the UDC in Engineering and Science—45 credits.

Core Requirement (26 credits):

CICS 3101 A Fortran Introduction to Computer Programming
Math 3221 Introduction to Linear Algebra Equations and Linear Differential Equations
Stat 3091 Probability and Statistics or
ME 3900 Introduction to Engineering Statistics
IEOR 5000 Introduction to Industrial Engineering Analysis
Comp 3031 Technical Writing for Engineering Students
Phys 1291-1295 General Physics and Laboratory

††Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, biological sciences, botany, classics, economics, geography, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology and others (see 1977-1979 I.T. bulletin).

Concentration Requirements: Select at least four courses from those listed below:

- IEOR 0210C Motion and Time Study
- IEOR 0330C Manufacturing Cost Analysis
- IEOR 0360C Inventory and Production Control
- IEOR 0408C, 0409C Corporate Standard Data I and II
- IEOR 0410C Introduction to Operations Research
- IEOR 0510C Statistical Quality Control
- IEOR 0511C Advanced Statistical Quality Control
- IEOR 0610C Statistics and Process Improvement
- IEOR 0611C Statistical Process Control

undergraduate development certificate in mechanical engineering—94-96 credits

(Includes 45 credits from Undergraduate Development Certificate in Engineering)

The Undergraduate Development Certificate in Mechanical Engineering—94-96 credits enables a student to continue the Undergraduate Development Certificate work in courses normally required in Mechanical Engineering degree programs and establishes the prerequisite work needed to pursue courses at the third-year level. It is designed to help engineering technicians assume a role of increased responsibility in working with mechanical engineers. It also represents a coherent body of study in helping determine whether further work toward a mechanical engineering degree should be pursued. Upon acceptance by the Institute of Technology a student may transfer appropriate work completed in a certificate program to bachelor's degree program.

Students transferring credits to this program from other institutions accredited by the University of Minnesota must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Engineering and Science—45 credits.

Prerequisite: Completion of the UDC in Engineering and Science—45 credits.

Core Requirement (40 or 42 credits):

- CSci 3101 A FORTRAN Introduction to Computer Programming
- Math 3221 Introduction to Linear Algebra and Linear Differential Equations
- AEM 1015 Statics or 1011 Statics (or equivalent)
- AEM 3016 Deformable Body Mechanics
- AEM 3036 Dynamics
- Phys 1291-1295 General Physics and Laboratory
- ME 3201 Mechanical Engineering Systems Analysis
- ME 3203 Analysis of Mechanism Systems or
ME 3205 Engineering Systems Design
- ME 3301 Thermodynamics
- ME 3303 Applied Thermodynamics or
ME 5342 Heat Transfer

Electives: Additional electives from the following courses to make a minimum of 96 credits including credits from UDC in Engineering and Science—45 credits.

- ME 3205 Engineering Systems Design
- ME 5342 Heat Transfer
- ME 5344 Thermodynamics of Fluid Flow

Note: EG 1025 Engineering Graphics is required if not already taken in the UDC Engineering and Science—45 credits.

numbering / symbols / maps / **abbreviations**

contents	page
course numbering	414
symbols	414
abbreviations and addresses for	
off-campus classes	415
department abbreviations	416
campus building abbreviations	418
maps	419

course numbering

All University courses for 1977-78 will carry course numbers of four-digit numerals. The first digit indicates the credit level of the course. See sample below:

OXXXC	Certificate course
OXXX	No credit course
1XXX	Degree credit course primarily for freshmen and sophomores
3XXX	Degree credit course, primarily for juniors and seniors. Also open to other students with at least C averages overall and in all prerequisite work
5XXX	Degree credit course primarily for juniors, seniors, and graduate-level students
8XXX	Degree credit course open only to students who have been <i>admitted</i> to the University of Minnesota Graduate School

To take a course beginning with the numeral 5 (indicating a degree credit course intended primarily for juniors, seniors, and graduate students) or beginning with the numeral 8 (indicating a course intended only for students *admitted* to the University of Minnesota Graduate School) for graduate credit, see **graduate credit**, page 46.

symbols

The following symbols are used throughout this Bulletin:

- A hyphen between numbers indicates a sequence course, the units of which must be taken in order, unless otherwise indicated.
- ★ Enrollment space limited. See instructions on registration in limited-enrollment classes and sections, page 23. Limited-enrollment classes or sections are printed in red in this **Bulletin**.
- † All courses listed before dagger must be completed before credit may be received.
- § No credit is given if credit has been received for equivalent course listed after section mark.
- † Means "concurrent registration in" (i.e., course must be taken simultaneously).
- # Consent of instructor.
- (IS) Course also available through Department of Extension Independent Study.
- ◆ Regular credit course open for registration on a reduced, no-credit, tuition plan (see page 49).
- △ Consent of division, department, or school offering course is required.

cr Credit

Qtr Quarter

Sem Semester

Spec Special Term

S/N Satisfactory/No credit grading system. See page 44.

A/N Letter grading system. See page 44.

abbreviations for off-campus classes

The following abbreviations for off-campus class sites are used throughout this Bulletin:

Irondale HS, New Brighton	Irondale High School 2425 Long Lake Rd., New Brighton 55112
Minnetonka HS	Minnetonka High School 18301 Highway No. 7, Minnetonka 55343
Ramsey HS, Roseville	Alexander Ramsey High School 1261 W. Highway 36, Roseville 55113
Richfield HS	Richfield Senior High School 7001 Harriet Ave. S., Richfield 55423
Sandburg JHS, Golden Valley	Carl Sandburg Junior High School 2400 Sandburg Lane, Golden Valley 55427
Woodbury JHS	Woodbury Junior High School 3200 Lower Afton Road, Woodbury MN 55119

See course listings for these locations beginning on page 429.
See maps on pages 370; 425-428.

department abbreviations

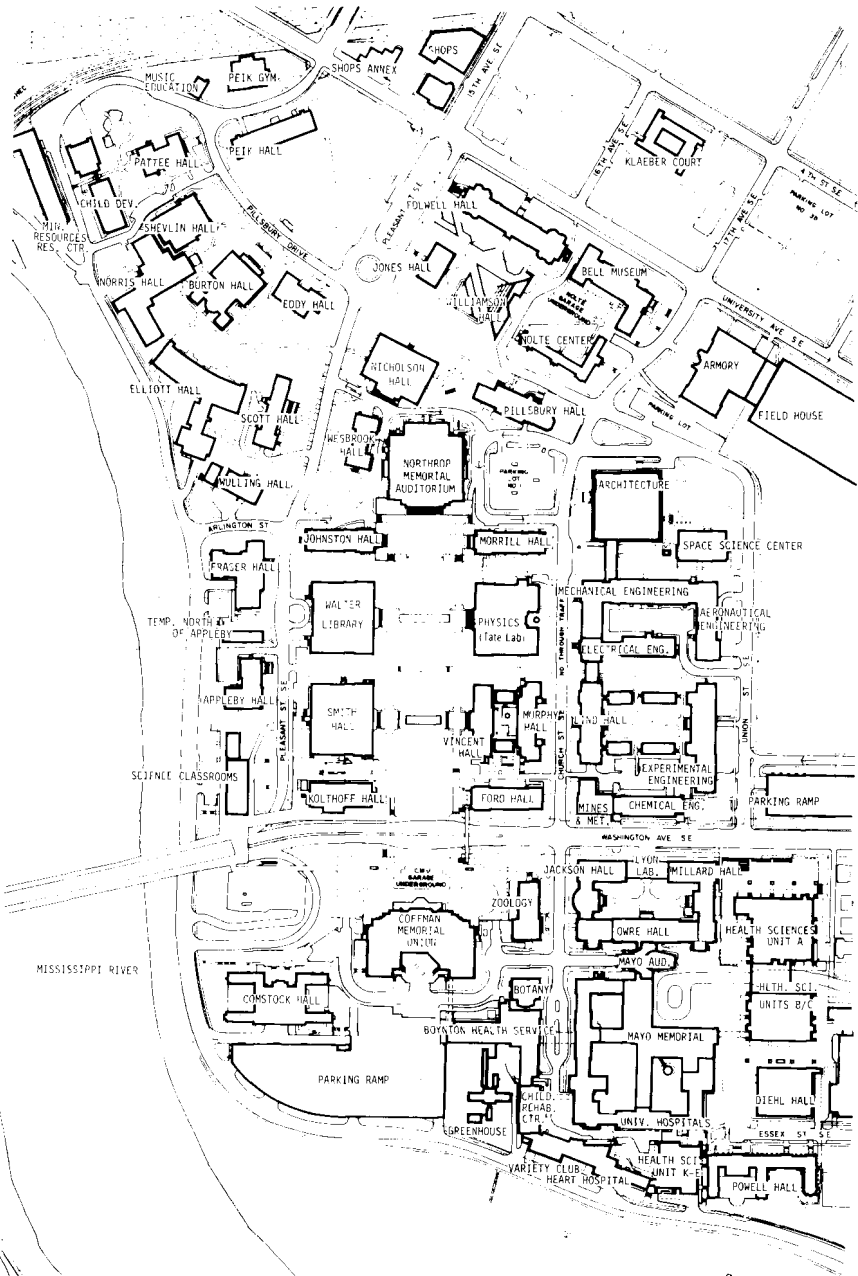
- Acct, Accounting
AdPy, Adult Psychiatry
AEM, Aerospace Engineering and Mechanics
Afro, Afro-American Studies
AgEc, Agricultural and Applied Economics
Agro, Agronomy and Plant Genetics
AmIn, American Indian Studies
AmSt, American Studies
Anat, Anatomy
ANEJ, Ancient Near Eastern and Jewish Studies
Anth, Anthropology
Arab, Arabic
Arch, Architecture
ArEd, Art Education
Arth, Art History
ArtS, Art, Studio
Ast, Astronomy
BioC, Biochemistry
Biol, Biology
Bot, Botany
BFin, Finance
BGS, Business, Government, and Society
BLaw, Business Law
Chem, Chemistry
Chic, Chicano Studies
CPsy, Child Psychology
Chn, Chinese
CE, Civil and Mineral Engineering
Clas, Classics
Comm, Communication (English)
Comp, English Composition
CSci, Computer Science
CSPP, Counseling and Student Personnel Psychology
CJS, Criminal Justice Studies
Dan, Danish
Dsgn, Design
Dtch, Dutch
EAL, East Asian Languages
EBB, Ecology and Behavioral Biology
Econ, Economics
Educ, Adult, Higher, and Teacher Education
EdAd, Educational Administration
EE, Electrical Engineering
Elem, Elementary Education
EG, Engineering Graphics
Engl, English
Ent, Entomology, Fisheries, and Wildlife
FPAd, Family Planning Administration
FSoS, Family Social Science
BFin, Finance (business)
Fin, Finnish
FScN, Food Science and Nutrition
FoSt, Foreign Study
ForP, Forest Products
FR, Forest Resources
Fren, French
GC, General College
GCB, Genetics and Cell Biology
GeoE, Geo-Engineering
Geog, Geography
Geo, Geology and Geophysics
Ger, German
Hebr, Hebrew
Hist, History
Hlth, School Health Education
HMed, History of Medicine
Hort, Horticultural Science
HSci, History of Science and Technology
HSU, Health Science Unattached
Hum, Humanities
Ind, Industrial Relations
Indc, Indic
IC, Informal Courses
IEOR, Industrial Engineering/Operations Research
IR, Industrial Relations
I of T, Institute of Technology
Ins, Insurance
IIA, Insurance Institute of America
CLU, American College of Life Underwriters
Ital, Italian
Jpn, Japanese
JwSt, Jewish Studies
Jour, Journalism and Mass Communication
LMed, Laboratory Medicine
LA, Landscape Architecture
LAS, Latin American Studies
Lat, Latin

Lib, *Library Science*
Ling, *Linguistics*
Math, *Mathematics*
MatS, *Metallurgy-Materials Science*
Mgmt, *Management*
MIS, *Management Information Systems*
Mktg, *Marketing*
ME, *Mechanical Engineering*
MedT, *Medical Technology*
MetE, *Metallurgical Engineering*
MicB, *Microbiology*
MidE, *Middle Eastern and Islamic Studies*
MinE, *Mineral Resources Engineering*
MdGk, *Modern Greek*
Mus, *Music*
MuEd, *Music Education*
NSci, *Natural Science and Technology*
Nor, *Norwegian*
Nurs, *Nursing*
OAM, *Operations Analysis and Management*
PO, *Personal Orientation*
Phil, *Philosophy*
PE, *Physical Education*
Per, *Persian*
PMed, *Physical Medicine and Rehabilitation*
Phcg, *Pharmacognosy*
Phys, *Physics*
Phsl, *Physiology*
PIPa, *Plant Pathology*
Plsh, *Polish*

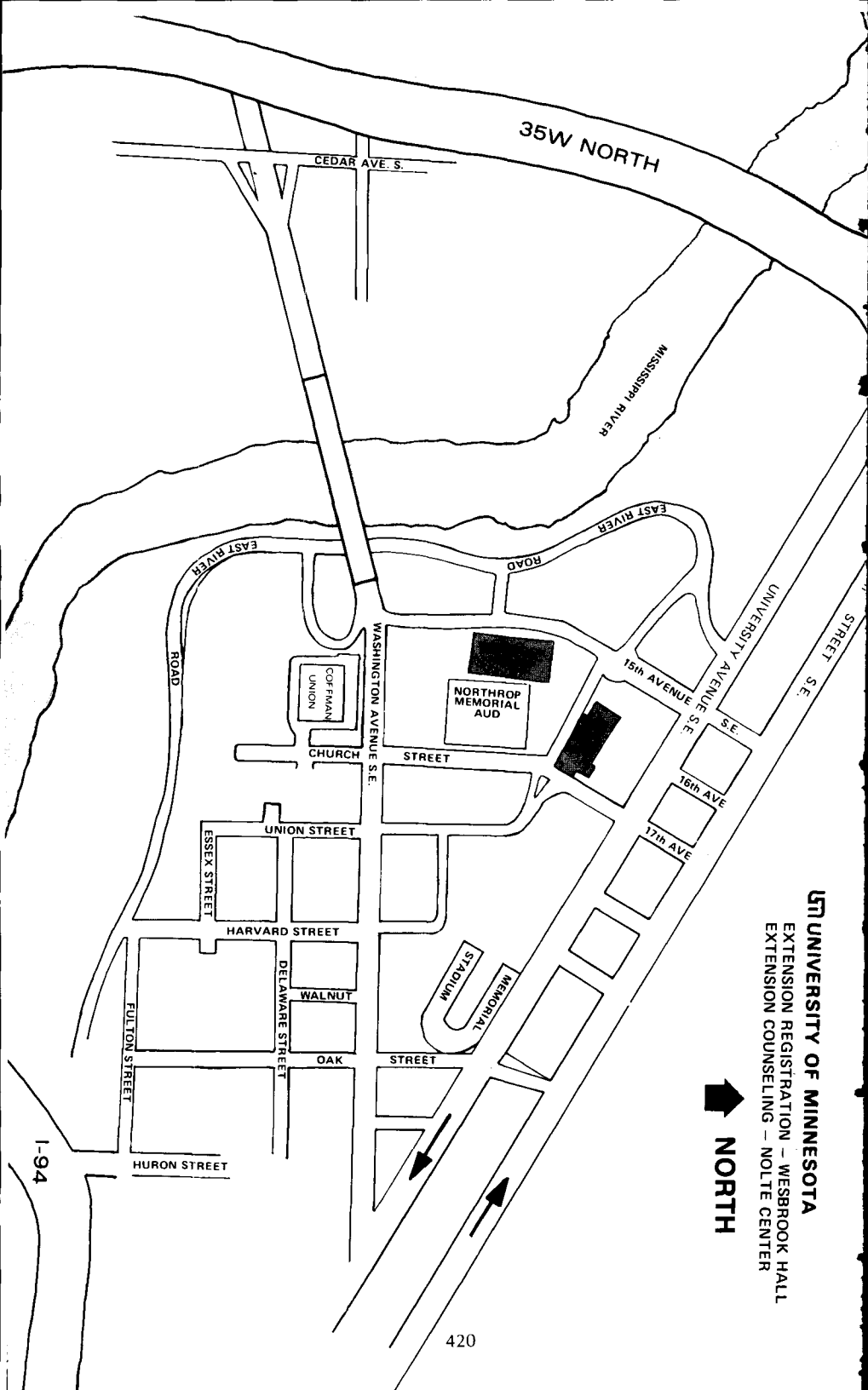
Pol, *Political Science*
Port, *Portuguese*
PsyF, *Psychological Foundations*
Psy, *Psychology*
PubH, *Public Health*
QA, *Quantitative Analysis*
RE, *Real Estate*
Rec, *Recreation, Park and Leisure Studies*
RelS, *Religious Studies*
Rhet, *Rhetoric*
Russ, *Russian*
Scan, *Scandinavian Languages*
Hlth, *School Health Education*
SchP, *Psychology in the Schools Training Program*
SeEd, *Secondary Education*
Serb, *Serbo-Croatian*
Slav, *Slavic and East European Languages*
SSci, *Social Science*
SW, *Social Work*
Soc, *Sociology*
Soil, *Soil Science*
Span, *Spanish and Portuguese*
SpEd, *Special Education*
Spch, *Speech-Communication*
Swed, *Swedish*
TexC, *Textiles and Clothing*
Th, *Theatre Arts*
Tran, *Transportation*
UC, *University College*
UrbS, *Urban Studies*
VM, *Veterinary Medicine*
WoSt, *Women's Studies*
YoSt, *Youth Studies*

campus building abbreviations

- ACBLMS (StP), Andrew C. Boss
Laboratory of Meat Sciences
Aero, Aeronautical Engineering
AgEng(StP), Agricultural Engineering
AH, Appleby Hall
AlderH (StP), Alderman Hall
AndH, Anderson Hall
Arch, Architecture
Armory, Armory Bldg.
ArtB, Art Building (2020 Washington
Ave. So., Minneapolis)
BA, Business Administration Bldg.
BFAB, Bierman Field Athletic Bldg.
BioSci(StP), Biological Sciences
Center
BlegH, Blegen Hall
Bo, Botany
BoB, Botany (basement)
Bu, Burton Hall
CD, Child Development
CH, Cooke Hall
ChRC, Children's Rehabilitation
Center
CMU, Coffman Memorial Union
ClaOff (StP), Classroom Office
Building
CofH(StP), Coffey Hall
DiehlH, Diehl Hall
DinC(StP), Dining Center
EDH, Eddy Hall
EltH, Elliott Hall
Ex, Experimental Engineering
FolH, Folwell Hall
ForH, Ford Hall
FP(StP), Forest Products
FraH, Fraser Hall
FScN(StP), Food Science & Nutrition
GH (StP), Greenhouse
HckrH(StP), Haecker Hall
HodsonH (StP), Hodson Hall
HolB, Holman Building (2035
University Ave.)
Hr(StP), Horticulture (old building)
HrG(StP), Horticulture Greenhouse
HS, Health Service
HSUnitA, Health Sciences Unit A
Jach, Jackson Hall
JohH, Johnston Hall
Jones, Jones Hall
KlaCt, Klaeber Court
KoltH, Kolthoff Hall
Law, Law Building (West Bank)
LindH, Lind Hall
MacP, MacPhail Center (1128
LaSalle Ave., Minneapolis)
Mayo, Mayo Memorial Hospital
McNH(StP), McNeal Hall
MechE, Mechanical Engineering
MinMet, Mines & Metallurgy
MlrdH, Millard Hall
MMA, Mayo Memorial Auditorium
MNH, Bell Museum of Natural
History
MRRC, Mineral Resources Research
Center
MurH, Murphy Hall
MusEd, Music Education
NCCE, Nolte Center for Continuing
Education
NorrisH, Norris Hall
NH, Nicholson Hall
NMA, Northrop Memorial
Auditorium
NorH(StP), North Hall
OMWL, O Meredith Wilson Library
Owre, Owre Hall
PeikH, Peik Hall
Ph, Physics, Tate Laboratory of
PillsH, Pillsbury Hall
PoH, Powell Hall
PolDB, Police Department Bldg.
Pt, Pattee Hall
RarigC, Rarig Center
SBkSt, Smith Bookstore
ScH, Scott Hall
SciCB, Science Classroom Bldg.
ShopsB, Shops Bldg.
SmithH, Smith Hall
So(StP), Soils
SocSci, Social Sciences Bldg.
Stad, Stadium
StakH(StP), Stakman Hall of Plant
Pathology
TNM, Temporary North of Mines
VetC(StP), Veterinary Clinic
VH, Vincent Hall
WaLib, Walter Library
WeH, Wesbrook Hall
Willey, Willey Hall (formerly West
Bank Auditorium-Classroom
Building)
WmsonH, Williamson Hall
(admissions and records/bookstore
building)
WuH, Wulling Hall
Z, Zoology



EAST BANK CAMPUS



35W NORTH

CEDAR AVE. S.

MISSISSIPPI RIVER

EAST RIVER ROAD

EAST RIVER ROAD

WASHINGTON AVENUE S.E.

15th AVENUE S.E.

UNIVERSITY AVENUE S.E.

STREET S.E.

COFFMAN UNION

NORTHROP MEMORIAL AUD

CHURCH STREET

STREET

16th AVE

17th AVE

UNION STREET

ESSEX STREET

HARVARD STREET

DELAWARE STREET

WALNUT

OAK

STADIUM

MEMORIAL

STREET

FULTON STREET

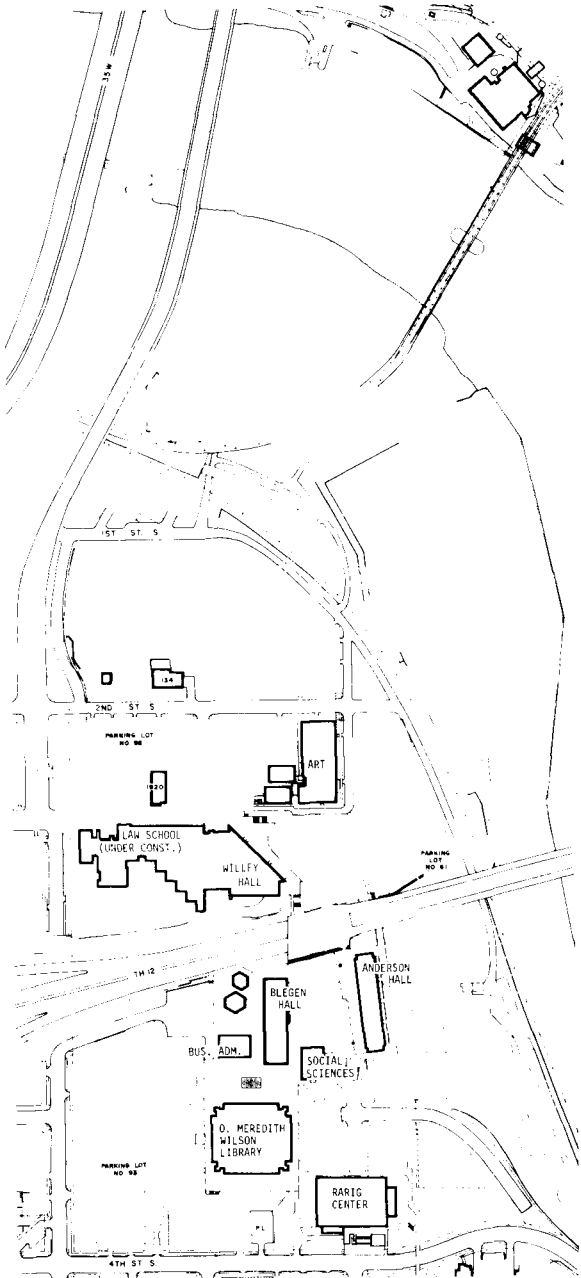
HURON STREET

I-94



NORTH

UNIVERSITY OF MINNESOTA
 EXTENSION REGISTRATION - WESBROOK HALL
 EXTENSION COUNSELLING - NOLTE CENTER



WEST BANK CAMPUS

PARKING FACILITIES (East and West Bank)

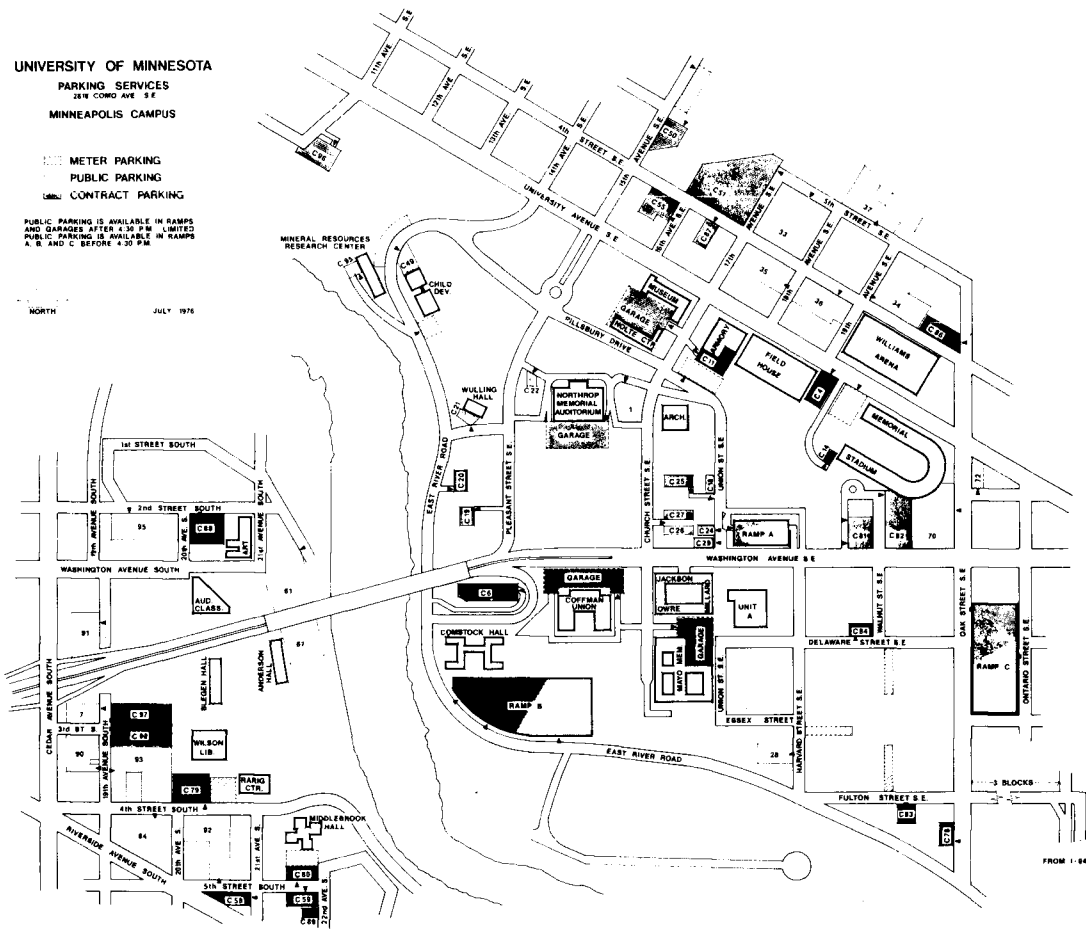
UNIVERSITY OF MINNESOTA

PARKING SERVICES
28 1/2 CONRO AVE S.E.
MINNEAPOLIS CAMPUS

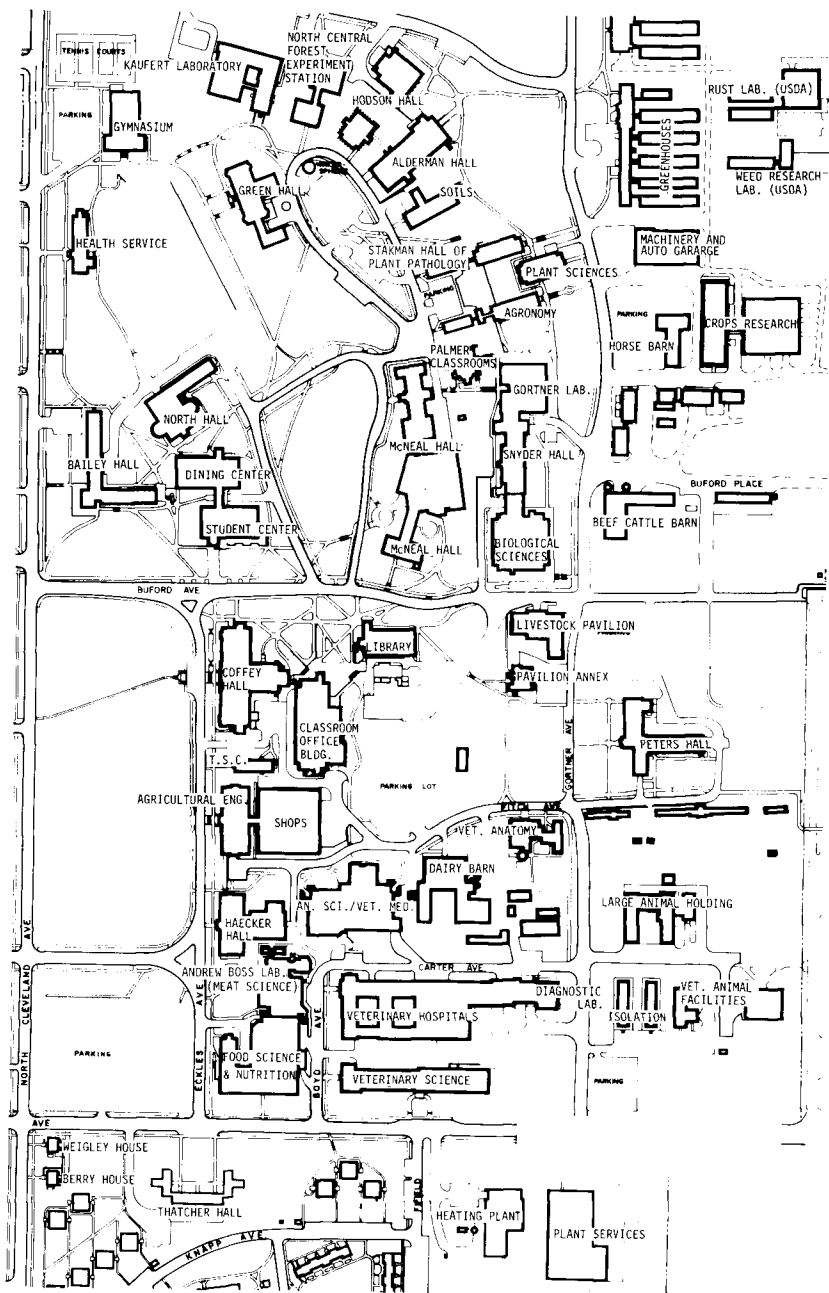
-  METER PARKING
-  PUBLIC PARKING
-  CONTRACT PARKING

PUBLIC PARKING IS AVAILABLE IN RAMPS AND GARAGES AFTER 4:30 P.M. LIMITED PUBLIC PARKING IS AVAILABLE IN RAMPS A, B, AND C BEFORE 4:30 P.M.

NORTH JULY, 1976






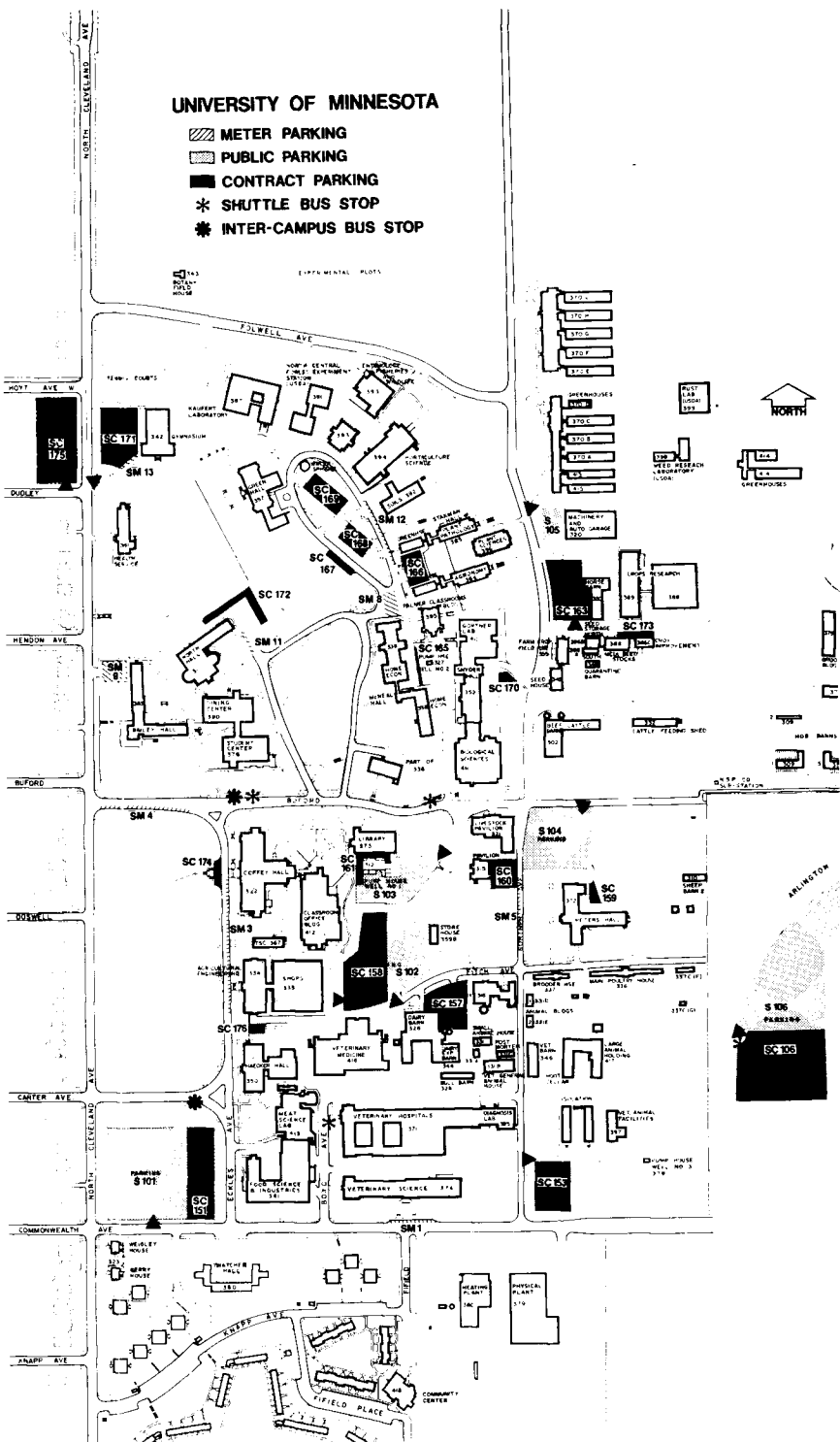
FROM 1-84



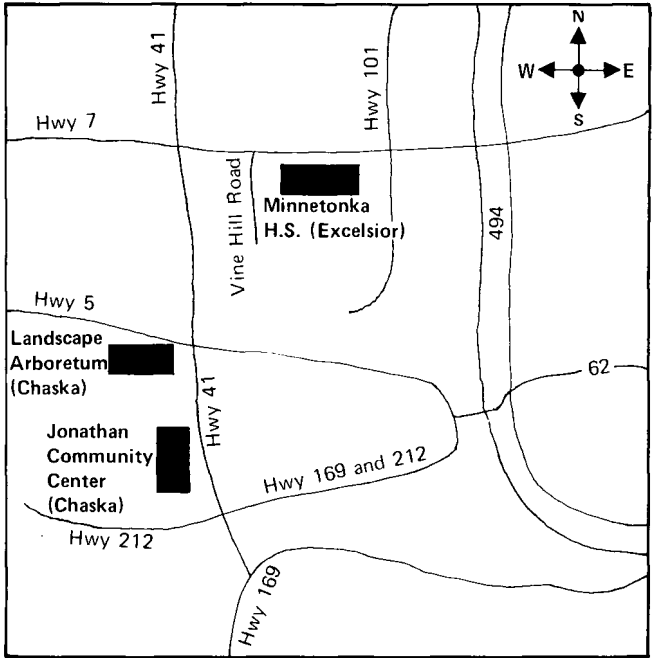
ST. PAUL CAMPUS MAP

UNIVERSITY OF MINNESOTA

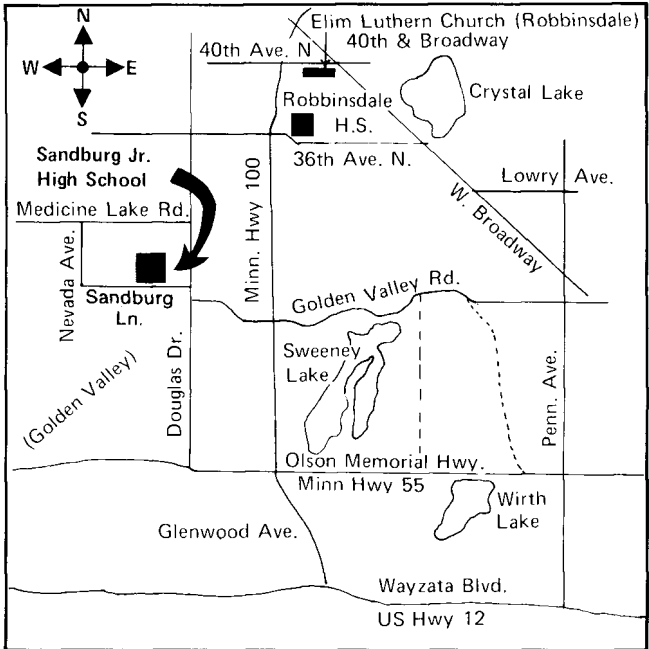
-  METER PARKING
-  PUBLIC PARKING
-  CONTRACT PARKING
- * SHUTTLE BUS STOP
- * INTER-CAMPUS BUS STOP



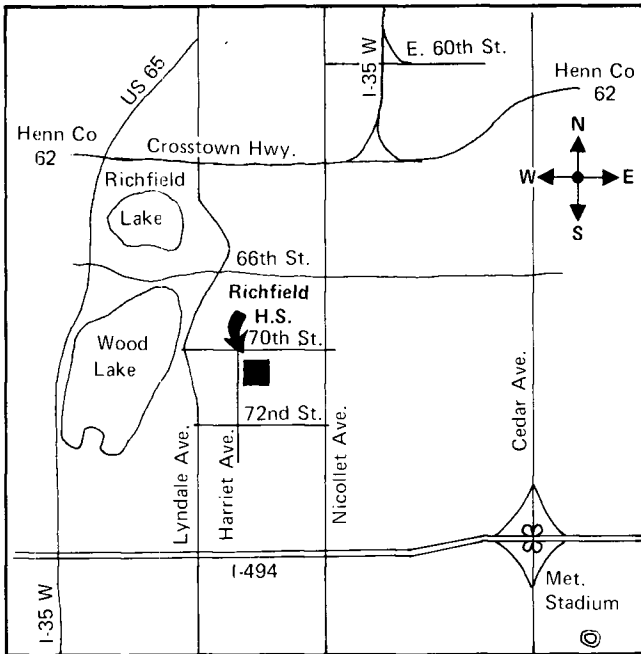
ST. PAUL CAMPUS PARKING



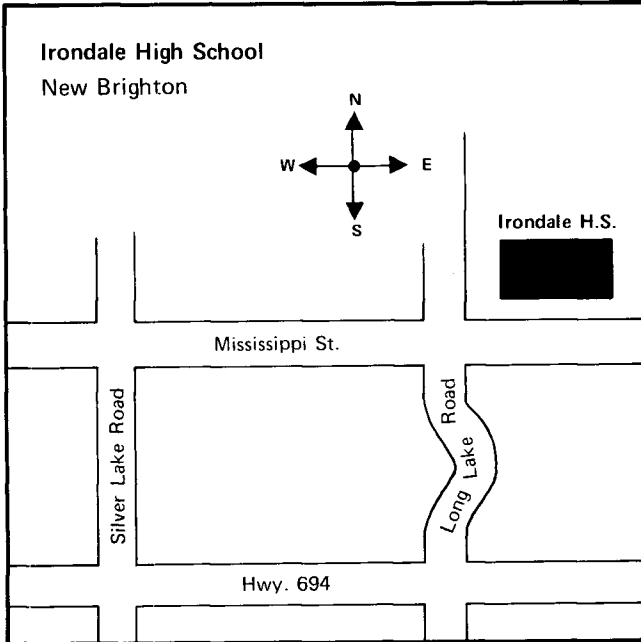
Minnetonka High School
18301 Hwy. 7, Minnetonka 55343



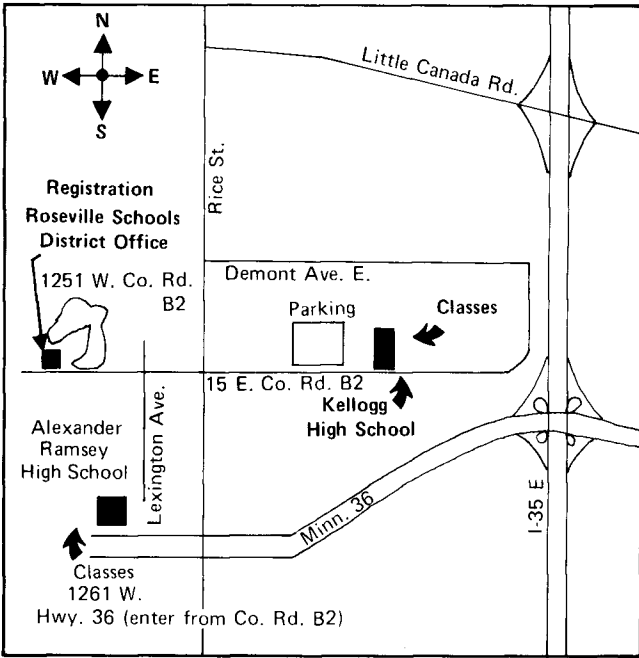
Sandburg Junior High
2400 Sandburg Ln., Golden Valley 55427



Richfield High School
7001 Harriet Ave. S., Richfield 55423

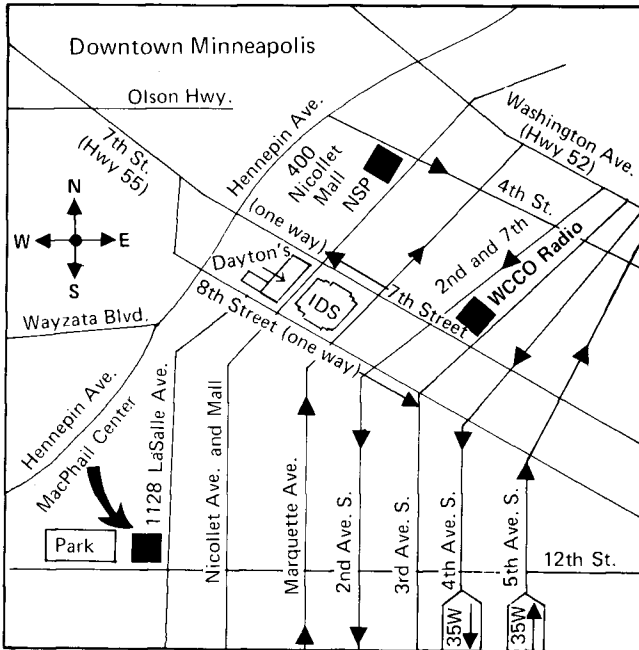


Irondale High School
2425 Long Lake Rd., New Brighton 55112



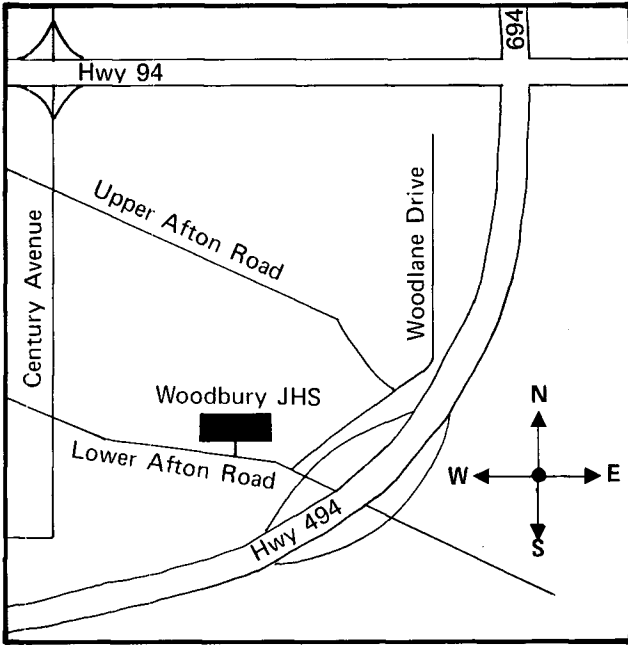
Ramsey High School

1261 W. Hwy. 36, Roseville 55113



MacPhail Center

1128 LaSalle Ave., Minneapolis 55403



Woodbury Jr. High School
3200 Lower Afton Road, Woodbury 55119

neighborhood centers

classes for neighborhood centers

The courses listed (by term) below will be held at off-campus, neighborhood centers in and around the Twin Cities area and on the St. Paul campus.

See the maps on pages 425-428.

See the course listings section of this **Bulletin** (arranged alphabetically by department) for course descriptions.

See page 415 for addresses and abbreviations of neighborhood centers.

See page 416 for departmental abbreviations.

See the **When and How to Register** section of this **Bulletin** for registration locations and dates.

Books for classes at neighborhood centers will be available both at campus bookstores and at B. Dalton bookstores at Maplewood Mall and Eden Prairie Center shopping centers. For details, be sure to read the **Bookstores** section of this **Bulletin**.

Disclaimer: courses listed at the locations below were correct at the time material was submitted for publication. Check the course listings section for more complete and accurate information. However, courses may be deleted or added by Extension Classes during the academic year without notification. Read **INFO** for Bulletin changes.

If you are registering for a limited class (one whose course number and title are preceded by a ★ and printed in red ink in the course listings section of this **Bulletin**), be sure to read the registration information about limited classes on page 23 of this **Bulletin**.

The list below is not all inclusive; other courses in this Bulletin are held at these and other off-campus locations and at the MacPhail Center, downtown Minneapolis. They are described in the **Course Offerings** section.

Some courses listed below may have prerequisite courses which must be satisfactorily completed before the listed course may be taken. Students are urged to check the course description before attempting to register for any course.

irondale high school (new brighton)

(Registration materials available at the Community Education Department, 2959 N. Hamline Ave., St. Paul; at 101 Wesbrook Hall on the Minneapolis campus; or by mail—telephone 376-3000)

Fall Quarter

Comp 1001	Introductory Composition
BFin 3000	Finance Fundamentals
GC 1534	Practical Law
IR 3002	Industrial Relations Systems: Labor Markets and the Management of Human Resources
Rhet 1147	Efficient Reading

Fall Semester

Econ 1001	Principles of Economics
Psy 1001	General Psychology

Winter Quarter

CPsy 1301	Introductory Child Psychology
Comp 1002	Introductory Composition
GC 1111	Science in Context: Weather and Climate
Mgmt 3001	Fundamentals of Management
SpEd 5101	Education of Exceptional Children

Spring Semester

Econ 1002	Principles of Economics
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Spring Quarter

ArtS 1101	Basic Drawing
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alexander ramsey high school (roseville)

(For registration information, see page 26)

Fall Quarter

ArtS 1101	Basic Drawing
BLaw 3058	Business Law
CPsy 5345	Language Development
Comm 1001	Communication
IC 0571	Individual and Family Budget Planning
Math 1201	Pre-Calculus
Psy 1003	Application of Psychology to Living

Fall Semester

Acct 1050	Principles of Accounting
Econ 1001	Principles of Economics
Econ 1002	Principles of Economics

Winter Quarter

CPsy 3303/5303	Adolescent Psychology
Comm 1002	Communication
GC 1282	Fields of Applied Psychology
IR 3010	Human Relations and Applied Organization Theory
Ins 3100/8100	Risk Management and Insurance
Math 1211	Analysis I
Soc 1001	Introduction to Sociology

Spring Semester

Acct 1050	Principles of Accounting
Acct 1051	Principles of Accounting
Econ 1001	Principles of Economics
Econ 1002	Principles of Economics
IC 0372	Minnesota Pioneers

Spring Quarter

AmSt 1101/3111	American Life
BFin 3000	Finance Fundamentals
Hum 1004	Humanities in the Modern World IV
Mktg 3000	Principles of Marketing
Rhet 1147	Efficient Reading
Soc 5957	Sociology of Aging

minnetonka high school

(For registration information, see page 26)

Fall Quarter

ArtS 1101	Basic Drawing
IR 3010	Human Relations and Applied Organization Theory

Fall Semester

Econ 1001	Principles of Economics
Pol 1001	American Government and Politics

Winter Quarter

CPsy 3347	Children's Learning and Intellectual Skills
Comp 1001	Introductory Composition
BFin 3000	Finance Fundamentals
IR 3002	Industrial Relations Systems: Labor Markets and the Management of Human Resources
Psy 1003	Application of Psychology to Living

Spring Semester

Econ 1002	Principles of Economics
PO 1001	How to Study

Spring Quarter

Arch 1021	History of Environmental Development: Architecture
Comp 1002	Introductory Composition
Rhet 1147	Efficient Reading

richfield senior high school

(For registration information, see page 26)

Fall Quarter

Acct 5125	Auditing Principles and Procedures
AmSt 1101/3111	American Life
Comp 1001	Introductory Composition
GC 1221	Minnesota History
Hum 1004	Humanities in the Modern World IV
IC 0231	Current Issues in Nutrition: Fallacies and Facts
Mktg 3000	Principles of Marketing
Math 1201	Pre-Calculus
Math 1211	Analysis I
Hlth 5100	Driver Education I
Soc 1001	Introduction to Sociology

Fall Semester

Acct 1050	Principles of Accounting
Econ 1001	Principles of Economics
Psy 1001	General Psychology

Winter Quarter

AmSt 1102/3112	American Life
BLaw 3058	Business Law
CPsy 5315/	
SpEd 5120	Introduction to Mental Retardation
Comp 1002	Introductory Composition
FR 5402	Interpretation and Management of Forest Environments
IR 0001C	Supervision I: Elements of Supervision
Math 1211	Analysis I
Math 1221	Analysis II
Rhet 1147	Efficient Reading
Hlth 5101	Driver Education II

Spring Semester

Acct 1050	Principles of Accounting
Acct 1051	Principles of Accounting
Econ 1002	Principles of Economics

Spring Quarter

AmSt 1103/3113	American Life
CPsy 1301	Introductory Child Psychology
CPsy 5343	Cognitive Development
CSPP 5110	Counseling Procedures
GC 1401	Vocabulary Building: How to Expand Your Word Power
IR 3002	Industrial Relations Systems: Labor Markets and the Management of Human Resources
Math 0009	Intermediate Algebra
Math 1221	Analysis II
Math 1231	Analysis III
Hlth 5602	The Driver Simulator
SpEd 5303	Behavioral Procedures with Mildly and Moderately Handicapped Students

sandburg junior high school (golden valley)

(For registration information, see page 26)

Fall Quarter

Anth 1102	Introduction to Anthropology
CPsy 3331/5331	Processes of Socialization of Children
Ins 3100/8100	Risk Management and Insurance
Mgmt 3001	Fundamentals of Management
Math 0009	Intermediate Algebra
Math 1221	Analysis II

Fall Semester

Acct 1050	Principles of Accounting
Econ 1001	Principles of Economics
Econ 1002	Principles of Economics

Winter Quarter

ArtS 1101	Basic Drawing
Comp 1001	Introductory Composition
BFin 3000	Finance Fundamentals
IR 3007	Collective Bargaining Negotiations and Modern Labor Relations
Math 1201	Pre-Calculus
SchP 5100	School Psychological Services
Spch 1101	Fundamentals of Speech Communication: Oral Communication

Spring Semester

Acct 1050	Principles of Accounting
Acct 1051	Principles of Accounting
Econ 1001	Principles of Economics
Econ 1002	Principles of Economics

Spring Quarter

CPsy 3311/5311	Behavioral and Emotional Problems
Comp 1002	Introductory Composition
GC 1235	The Law in Society
Mktg 3000	Principles of Marketing
Math 1211	Analysis I
Psy 1003	Application of Psychology to Living

woodbury junior high school (woodbury)

(Registration materials available at Woodbury Junior High School, 3200 Lower Afton Road; Woodbury Senior High School, 2665 Woodlane Drive; Park Senior High School, 8040 South 80th Street, Cottage Grove; Oltman Junior High School, 1020 Third Street, St. Paul Park; St. Paul Park Junior High School, 900 Third Street, St. Paul Park; at 101 Westbrook Hall on the Minneapolis campus; or by mail—telephone 376-3000)

Fall Quarter

AmSt 1103/3113	American Life
CPsy 1301	Introductory Child Psychology
IC 0552	Altered States of Consciousness
IR 0001C	Supervision I: Elements of Supervision

Winter Quarter

ArtS 1101	Basic Drawing
Psy 1003	Application of Psychology to Living
Spch 1101	Fundamentals of Speech Communication: Oral Communication

Spring Quarter

BLaw 3058	Business Law
CPsy 5310	Topics in Child Psychology
Comp 0003C	Review of Business English
IR 3010	Human Relations and Applied Organization Theory
PO 1001	How to Study



st. paul campus class offerings

The following courses will be offered this year on the St. Paul campus of the University of Minnesota. See the **Course Offerings** section of this **Bulletin** (arranged alphabetically by department) for course descriptions.

Buy books for classes offered on the St. Paul campus at the Coffey Hall bookstore. See the **How and When to Register** section of this **Bulletin**.

Fall Quarter

AgEc 1400	Agricultural Markets and Prices
Agro 1010	Principles of Agronomy
BioC 5001/ Biol 3021	Biochemistry
Dsgn 1523	Drawing and Design I
Dsgn 1533/3533	Metalsmithing
EdAd 8201	Formal Organizations in Education
FSoS 5200	Family Relationship
FSoS 5219	Problems in Family Financial Management
FScN 1012	Food For Thought—For Food
FScN 1102	Technology of Food Processing
FScN 3742	Hospitality Facility Planning and Design
FScN 5135	Food Process Engineering I
FScN 5360	Sensory Evaluation of Food Quality
FScN 5662	Clinical Nutrition
FScN 5663	Clinical Nutrition Laboratory
Hort 1010	Home Landscape Gardening and Design
Hort 1011	Horticultural Crop Evaluation
Hort 3077	Floral Design
IC 0161	Color and Design Workshop
IC 0241	Fall Gardening Indoors and Out
LA 1024	Theory of Landscape Design
Mus 1430	St. Paul Campus Chorus
PIPa 1000	An Introduction to Plant Pathology
PIPa 3104	Fundamentals of Mushroom Identification
Soil 1122/5022	Introductory Soil Science
TexC 5622	Issues, Trends in Textile Consumer Problems

Fall Semester

Acct 1050	Principles of Accounting I
ArtS 0001C	Color Photography I
Dsgn 1450	Drafting—Basic Drafting Techniques
Dsgn 1455	Interior Design I
Dsgn 1521	Color and Design I
Dsgn 1525	Two Dimensional Design I
Dsgn 1532	Structure Fabric Design I
Dsgn 3450	Perspective and Presentation Sketches
Dsgn 3451	Interior Design Rendering
Dsgn 3455	Seminar in Interior Design
Dsgn 3459	Interior Design Business
Econ 1001	Principles of Economics

Winter Quarter

AgEc 5480	Commodity Markets and Futures Trading
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(continued next page)

Dsgn 5565	Homes of the World
EdAd 5128	Workshop: Educational Administration
FScN 3622	Food and Nutrition in the Life Cycle
FScN 5136	Food Process Engineering II
FScN 5523	Technology of Fermented Dairy Products
FScN 5740	Design and Layout of Food Services
Hort 1036	Plant Propagation
Hort 3026	Residential Landscape Design
Hort 3031	Fruit Science
Hort 3076	Arboriculture
Mus 1430	St. Paul Campus Chorus
PE 1056	Nordic, Cross Country Skiing
PIPa 1002/5003	Introductory Plant Pathology—Pathogens
Soil 0100C	Garden Soil Management
Soil 3420	Fertilizer Properties and Practices

Spring Semester

Acct 1051	Principles of Accounting
ArtS 0001C	Color Photography I
Dsgn 1450	Drafting—Basic Drafting Techniques
Dsgn 1521	Color and Design I
Dsgn 3450	Perspective and Presentation Sketches
Dsgn 3451	Interior Design Rendering
Econ 1002	Principles of Economics
Econ 3601	Industrial Organization and Anti-Trust Policy
Ent 3020	Principles of Beekeeping
Hort 3072	Turf Management

Spring Quarter

AgEc 3820	Farm Management Economics
Biol 1103	General Botany
Dsgn 1531	Surface-Fabric Design
Dsgn 3415	20th-Century Interiors and Furnishings
Dsgn 5561	Housing Management
EdAd 8218	Seminar: The Social Organization of Schools
FSoS 5240	Special Topic: Developmental Stage Theory
FScN 3400	Food Demonstration Techniques
FScN 3790	Food Service Marketing, Advertising and Promotion
FScN 5350	Food Formulation, Product Development
FScN 5530	Industrial Processing of Fruits and Vegetables
FScN 5622	Human Nutrition
FScN 5752	Food and Hospitality Operations: Corporate Application of Computer Systems
Hort 1022	Plant Materials II
Hort 5020	Horticulture Techniques for Education Majors
IC 0242	Spring Garden Planning and Planting
Mus 1430	St. Paul Campus Chorus
PIPa 1003/5004	Introductory Plant Pathology—Representative Plant Diseases
PIPa 5702	Principles of Plant Disease Control
YoSt 5132	Action Learning for Youth

index

- a**
- Abbreviations413
 - Accounting59, 160
 - Accounting, Special Examinations60
 - Accounting Certificates397
 - Acting331
 - Addresses For Neighborhood Centers .415
 - Administrative Officers of Continuing Education and Extension9
 - Admission Requirements36
 - Adult Psychiatry Certificate387
 - Adult Psychiatry63
 - Advertising
 - Design80
 - Journalism230
 - Marketing163, 241
 - Psychology285
 - Studio Arts85
 - Advising and Counseling36, 371
 - Aerospace Engineering and Mechanics64
 - Afro-American Studies65
 - Aging97, 171, 287, 311, 320
 - Agriculture, College of65
 - Agricultural Education66
 - Agricultural and Applied Economics66
 - Agronomy and Plant Genetics66
 - Air Pilots Ground School64
 - Air Pollution296
 - Alcoholism207, 279, 293, 396
 - Alexander Ramsey High School .429, 430
 - American Indian Studies67
 - American Studies67
 - A-N Grades44
 - Anatomy69, 169, 170, 270, 271, 293
 - Anthropology70
 - Arabic251
 - Archaeology71
 - Architecture71
 - Armed Forces40
 - Art
 - Commercial80, 157
 - Commercial Certificate389
 - Education74
 - Expression156
 - History75
 - Rentals340
 - Continuing Education380
 - Statewide77
 - Studio78
 - Institute, Minneapolis76
 - Associate in Arts (A.A.)348
 - Associate in Liberal Arts (A.L.A.)352
 - Astronomy88, 169, 215
 - Athletics
 - Tickets341
 - Courses266
 - Facilities340, 373
 - Officiating268
 - Auditors49
 - Aviation Courses64
- b**
- Baccalaureate Programs, General College348, 349, 156
 - Bachelor of
 - Applied Studies (B.A.S.)349
 - Arts (B.A.)352, 365
 - Fine Arts (B.F.A.)78
 - General Studies (B.G.S.)349
 - Science (B.S.)355, 365
 - Science in Business (B.S.B.)355
 - Science (I.T.)359
 - Band254
 - Basic Educational Opportunity Grant .39
 - Basketball Tickets341
 - B. Dalton Bookstores33
 - Beekeeping141
 - Behavioral Sciences171
 - Behavior Analyst Certificate388
 - Bergman, Ingmar306
 - Bible103, 138, 252
 - Biochemistry89
 - Biology90, 117
 - Bird Identification213
 - Black Studies65
 - Bookstores31, 382
 - Botany90
 - Boynton Health Service342
 - Broadcasting230, 327
 - Budget Planning221
 - Building Abbreviations (campus)418
 - Buses, Campus345
 - Business
 - Administration91
 - Administration Certificates398
 - Education334
 - English135

Finance	144
Government, and Society	92
Law	92
Master's Degree	91
Studies	158
Writing	135, 136, 166, 167, 303

C

Calendar	
Campus	345
Registration	11-21
Campus Activities	340
Campus Bus Service	345
Campus, St. Paul, Courses at	435-436
Cancellation of, or Change in, Scheduled Classes	54
Cancellations (how to cancel or drop a course)	53
Carl Sandburg Junior High School, Golden Valley	429, 433
Ceramics	82
Certificates, Extension	386
C.E.U.	368
Changes in Course Information	52
Chemical Dependency	
Courses	207, 279, 293, 396
Counseling Certificate	396
Chemistry	94
Chicano Studies	96
Child Psychology	96
Childhood Studies Program	390
Chinese	117
Chorus (men's, women's, University)	254
Civil Engineering	99
Civil Engineering Certificate	409
Class Attendance	52
Classes at Neighborhood Centers	370, 429
Classical Civilization, interdepartmental major	101
Classics	101
Closed Classes	25
Coaching	268
Coffey Hall Bookstore	32
Cold War Veterans	40
College-Level Examination Program (CLEP)	48
College of Agriculture	65
College of Education	123
College of Home Economics	198
College of Liberal Arts Honors Program	355
College of Life Underwriters (CLU) Curriculum	225
Commercial Art	80
Commercial Art Certificate	389
Committee on Student Relations and Academic Standing	56
Communication	
English	131

Family	217, 317
General College	164
Journalism	228
Rhetoric	303
Social Work	313
Speech	326
Community Programs	10
Composition	131
Computer Science	105
Certificates	405
Computer-Related Courses	105, 160, 161, 237, 258, 261, 299
Continuing Education and Extension	9
Continuing Education for Women	381
Continuing Education in the Arts	380
Continuing Education Unit (CEU)	368
Correspondence Courses	48
Counseling	36, 371
Counseling and Student Personnel Psychology	108
Course Offerings	57
Course Numbering	414
Crafts	74, 78, 110, 158, 213
Credit and Financial Management Certificate	400
Credits	45, 47, 49
Crime	109, 317, 319
Criminal Justice Studies	109
Cross-Country Skiing	267
Cross Disciplinary Studies	109
Cuba	215

d

Dalton Bookstores	33
Dance	266
Danish	304
Day School Students	36
Death	312, 320
Degree Programs	348, 383
Dental Assisting	350
Dentistry	110
Department Abbreviations	416-417
Design	110
DIAL system	378
Directed Study	47
Distribution Requirements	354
Diving	269, 270
Drafting	111
Drama	140, 327, 330
Drawing	78, 110, 131, 157, 213
Driver Education	306
Drop-in Study Skills Center	377
Drug Abuse	
Courses	207, 279, 293, 396
Certificate	396

e

Early Childhood Studies Certificate	390
Early Childhood Studies Program	115
East Asian Languages	116
East Bank (Minneapolis) Campus	
Map	419
Parking	422
Ecology	117
Economics	117
Education, Alternatives in	156
Education, Adult	126
Education, College of	123
Educational Administration	126
Efficient Reading	303
Elections, Student Board	346, 375
Electrical Engineering	
Courses	127
Certificates	410
Elementary Education	130
Energy	72, 286
Engineering and Science	
Certificates	407
Engineering	
Departments	130
Graphics	131
Writing for	136
England, Courses in	372
English	
Business	135, 166
Composition and Communication	131
Engineering	136
Freshman	133
Grammar	135
Literature	137
Major	132
Master's Degree	383
Enrollment Information	36
Enrollment Verification	38
Entomology, Fisheries and Wildlife	141
Environmental Courses	72, 92, 114, 117, 122, 150, 168, 187, 218, 232, 258, 262, 286
Environmental Health	72, 295
Ethics	263
Experimental College	365
Extension Classes	9
Extension Honors	387
Extra Credit Registration	47

f

Faculty	340
Family	65, 142, 143, 163, 173, 215-217, 295, 313, 317, 336
Family Planning Administration	142
Family Social Science	142
Fees	37
Fee Statements	52
Field Experience Catalog	344

Film courses	69, 86, 157, 158, 189, 212, 306
Finance	144
Financial Aids and Loans	37
Finnish	304
Fire Protection Certificate	391
Flight Training	64
Floral Design	201
Food Science and Nutrition	146
Football Tickets	341
Foreign Language Requirement	353
Foreign Study	149, 372
Forest Products	149
Forest Resources	150
Foster Care Education Certificate	392
French	151
Freshman English	133

g

Gardening	200, 214
General College	
Courses	152
Occupational Options	350
General Information	339
General Studies Certificate	392
Genetics and Cell Biology	175
Geography	176
Geology and Geophysics	170, 186, 214
German	187
Golden Valley (Sandburg Junior High School)	429, 433
Golf	269
Government	92, 109, 172, 190, 215, 242, 273, 285
Grade Point Average	45
Grade Reports and Transcripts	45
Grades	44
Graduate Credit	46
Graduate Degrees	383
Graduation	353, 354, 357
Grammar	135
Graphic Arts	230
Greek	101
Grief Therapy	312
Grievance Procedures	56
Ground School Courses	64
Group Distribution Requirements	354
Guitar	253
Guthrie Theatre	140

h

Half-Price Courses	49
Handicapped Students	
Facilities	342
Financial Aid	39
Parking	343
Hatha Yoga	70

Health, Environmental	170, 295
Health and Related	
Occupations	110, 166, 170, 174, 250, 258, 266, 271, 285, 292, 306, 309, 311, 334, 350, 387, 388, 393, 396
Health and Safety, Occupational	206
Health, Public	292
Health Education	306
Health Sciences Bookstore	32
Health Service	342
High School Students	
(reduced rates)	49
History	190
History, Art	75
History of Medicine	197
History of Science and Technology	198
Hockey Tickets	341
Home Economics, College of	198
Honors, CEE	387
Honors Program (CLA)	355
Horticultural Science	199
Hospital Administration	202
Hours, Office	29
House Plants	170
Housing (Interior Design)	110
How and When To Register	11
How to Study	329
Human Relations	208, 279
Human Rights	10
Human Services Agencies Program	315
Human Services Certificate	393
Humanities	202

i

Incomplete Grades	44
Income Tax	63, 162, 221, 226
Independent Study Courses	48, 379
Independent Study, "Y" Registration	47
Indian, American	67
Individual Learning Opportunities in	
Extension	344
Industrial Education	334
Industrial Engineering Certificate	411
Industrial Engineering/Operations	
Research	204
Industrial Psychology	284
Industrial Relations	205
Industrial Relations Certificate	401
Info (Extension Newsletter)	344
Info Newsletter (change of address)	1
Informal Courses	210, 369
Information, General	339
Information Systems Analysis and	
Design Certificate	402
In-person Registration	24
Institute of Arts, Mpls.	76
Institute of Technology (I.T.)	223, 359
Insurance	223

Inter-College Program	365
Interior Design Certificate	394
Interviewing	174, 313
Intramural and extramural	
activities	340, 373
Irondale High School,	
New Brighton	370, 429, 430
Islamic	251
Israel	251
Italian	227

j

Japanese	117
Jewish Studies	251
Journalism and Mass Communications	228

k

Karate	267
--------	-----

l

Labor	
Education	232
Relations	205
Laboratory Medicine	232
Landscape Arboretum	200
Landscape Architecture	232
Language Requirement (CLA)	354
Languages and Studies	
Afro-American	65
American Indian	67
Arabic	251
Chicano	96
Chinese	117
English	131
Finnish	304
French	151
German	187
Islamic	251
Italian	227
Japanese	117
Latin	233
Mandarin	117
Polish	308
Portuguese	324
Russian	308
Scandinavian	304
Serbo-Croatian	149
Slavic	307
Spanish	321
Swedish	304
Late Registrations and Additions	25
Latin	233
Law, Business	92
Law Enforcement Education Program	38
Legal Administrator	350
Legal Assistant	350
Legal Studies, General College	161

Liberal Arts Certificate	395
Libraries	343
Library Science	233
Limited-Enrollment Classes	23
Linguistics	234
Literature	137
Loans	37
Locker Rental	343
London, Credit courses in	372
Logic	262
Lounges and Study Areas	343

m

MacPhail Center	29
Mail Registration Information	23
Management	235
Management Information Systems	237
Management of Administrative Services	
Certificates	403
Mandarin	117
Maps	419
Marketing	163, 241
Marriage	142
Marxism	309
Masculinity	215
Master of Arts Degrees (M.A.)	383
Master of Business Administration,	
Executive (evening) (E.M.B.A.)	91
Maternal and Child Health	296
Mathematics	243, 167, 220
Mathematics and Science Certificate	395
Math Anxiety Program	221
Mechanical Engineering	248
Mechanical Engineering Certificate	412
Mechanics, Airplane	64
Medical Laboratory Assistant	350
Medical Ethics	265
Medical Terminology	103
Medicine	197, 250
Metallurgy and Materials Science	250
Metalsmithing	114
Meteorology	168, 183
Metrics	220
Microbiology	250
Middle Eastern Studies	251
Military information	40-41
Minerals	168, 186
Minneapolis Institute of Arts	76
Minnesota Book Center	32
Minnesota, Courses on	91, 158, 170, 171, 174, 195, 212, 213, 216, 256
Minnesota Daily	344
Minnetonka High School	429, 431
Minorities	65, 67, 96
Money Management	143, 145, 221
Music	157, 253
Music Education	257

Mythology	
Greek and Roman	102
Scandinavian	212

n

Natural Science	72, 92, 114, 117, 122, 150, 168, 187, 218, 232, 258, 262, 286
Natural Science and Technology	258
Near and Middle Eastern Studies	251
Neighborhood Centers	370, 429
Newspaper Courses	379
New Brighton	
(Irondale High School)	429, 430
Noncredit Courses	49, 210, 369
Nonlimited Class Registration	23
Nonresidents	37
Nordic Skiing	267
Norwegian	304
Numbering of Courses	414
Nursing	258
Nutrition	146, 214

o

Occult	102, 220
Occupational Health and Safety	206
Occupational Programs, General	
College	350
Off-Campus Course	
Locations	368, 370, 429
Office Hours, Registration	12-21
Office Hours, Regular	29
Office of Special Learning	
Opportunities (OSLO)	344
Ojibwe	67
Open House (Fall)	376
Operations Analysis and Management	261
Ophthalmology Technician Certificate	397
Orchestra	254
Orientation	376
Ornithology	213

p

Paddleball	267
Painting	81
Paper	150
Paraprofessional Programs, General	
College	350
Parenthood	143, 215, 392
Parking Facilities	343
Parks, State and National	169
Personal Orientation	329
Persons 62 and Over	50
Pharmacognosy	262
Pharmacy	262
Philosophy	262
Phones (Campus)	343

Photography79, 83, 157
 Physical Education and Recreation ...266
 Physical Medicine and Rehabilitation .270
 Physics270
 Physiology ..69, 169, 170, 270, 271, 293
 Piano253, 257
 Pilot Training64
 Placement Test, Accounting60
 Plant Pathology272
 Plants90, 91, 170, 200, 214, 272
 Poetry137
 Police Assistance344
 Polish308
 Political Science273
 Population142, 318
 Portuguese324
 Pottery82
 Prerequisites43
 Probation36
 Procedures, Registration22
 Professional Development
 Recognition Program in Engineering
 and Science130
 Program Advising36
 Psychiatry, Adult63, 387
 Psychical Phenomena220
 Psychological Foundations277
 Psychology280
 Psychology in Management ...236, 284
 Psychology in the Schools
 Training Program307
 Publications344
 Public Affairs285
 Public Health292
 Public Policy298
 Puppetry74

q

Quadra Mountain
 Resort Summer Study380
 Quantitative Analysis298

r

Radio Courses48, 379
 Radiologic Technology350
 Ramsey High School (Roseville) .429, 430
 Raquetball267
 Reading, Efficient303
 Real Estate300
 Recreation301
 Recreation for Special Groups350
 Recreation, Park and
 Leisure Studies301
 Records53
 Reduced-tuition plans49
 Refresher courses
 Civil Engineering100

Electrical Engineering128
 Engineering Fundamentals223
 Mathematics244
 Refunds55
 Regents' Scholarships40
 Registration Dates12-21
 Registration Hours12-21
 Registration Procedures22
 Reincarnation220
 Religious Studies302
 Remington Scholarship38
 Reports, Grade45
 Reservations for Limited-Enrollment
 Classes23
 Rhetoric303
 Richfield Senior High School ...429, 432
 Richfield, Woodlake Nature Center ..151
 Robbinsdale Courses429, 433
 Roseville Courses429, 430
 Russia
 Culture308
 Geography176
 History195
 Language308

S

S-N Grades44
 Safety Education306
 Safety, Occupational206
 St. Paul Campus
 Bookstore32
 Campus Map423
 Courses at435
 Parking424
 Sales164, 241
 Sampler50
 Sandburg Junior High School,
 Golden Valley429, 433
 Saturday Classes374
 Scandinavian Languages and
 Culture304, 212, 275
 Scholar's Program365
 Scholarships38
 School Health Education306
 School Psychology307
 Science and Mathematics Certificate .395
 Scuba270
 Sculpture81
 Secondary Education307
 Second Language Requirement353
 Semester-Basis Classes58
 Senate Representation345
 Senior Citizens, Special Rates50
 Serbo-Croatian149
 Sex109, 115, 142, 173, 215,
 317, 328, 335
 Shakespeare138

Skiing	267
Slavic Languages and Culture	307
Smith Bookstore	32
Social and Behavioral Science	162
Social Science	309
Social Work	309
Social Work, Continuing Education in	311
Sociology	316
Soil Science	320
Solar System	89
Soviet Union	176, 195, 308
Spanish, Language and Culture	321
Special Courses	368, 345
Special Education	324
Special Examination	48
Speech-Communication	326
Speech-Communication (Master of Arts)	383
Sports	
Athletic Facilities	340, 373
Athletic Tickets	341
Recreation	266
Officiating	268
Sports in America	216
Stars and Galaxies	89
Statistics	168, 247, 250, 278, 283, 299, 318
Student Board	346, 375
Student Project for Amity Among Nations (SPAN)	329
Student Representation	345
Studio Arts	78
Study Areas	343
Study Skills	329
Study Skills Center	377
Summer Extension	
Classes	inside back cover
Summer Arts Study	380
Supervision	163, 206
Swedish	304
Swimming	269
Symbols and Abbreviations	413

t

Taxation	63, 162, 221, 226
Tax-Deductible Educational Expenses	56
Telephones (campus)	343
Telephone numbers	Inside Front Cover
Telephone Requests for Registration	24
Television Courses	48, 379
Textiles and Clothing	330
Theatre, Artists Course, and Special Lectures	345
Theatre Arts	330
Transcripts (Grade Reports)	45
Transferring classes	52

Transportation	331
Transportation Between Campuses	345
Travel-Study Opportunities	372
Tuition and Fees	37
Tuition Assistance	37
Tuition Plans, Reduced	49
Tutorial Assistance	42
Twelve Credit Rule (Graduate School)	385

u

Undergraduate Development	
Certificates	404
Unions, Labor	205
University College	48, 333, 365
University College Independent Study	48
University Gallery	340
University Sampler	50, 369
University Scholar's Program	365
University Senate	345
University Without Walls	365
Urban Affairs	333

v

Verification of Enrollment	38
Veterans, Cold War	41
Veterans Information	41
Veterinary Medicine	334
Visual Arts	75
Vocabulary Building	158
Vocational and Technical Education	344
Vocational Counseling and Tests	36, 371
Vocational Planning	173, 284
Vocational Rehabilitation	43
Vocational Teacher Education	334
Vocational-Technical Cooperative Program	334
Volleyball	267

w

Watergate	216
Weaving	74, 213
Weather	168
Weekend Classes	374
West Bank Campus	
Bookstore (Harold D. Smith)	32
Campus Map	421
Parking	422
When and How to Register	11
Williamson Hall Bookstore	32

Witchcraft	102
Women's Studies	335
Women, Continuing Education for ..	381
Woodbury Junior High School ..	429, 434
Wood Products	149
Woodlake Nature Center, Richfield ..	151
World Affairs	336
Writing Classes	133, 165, 167, 217, 229, 303, 327, 331

Y

Yoga	70
Youth Plan (reduced tuition)	49
Youth Studies	337

Z

Zoology	90
---------------	----



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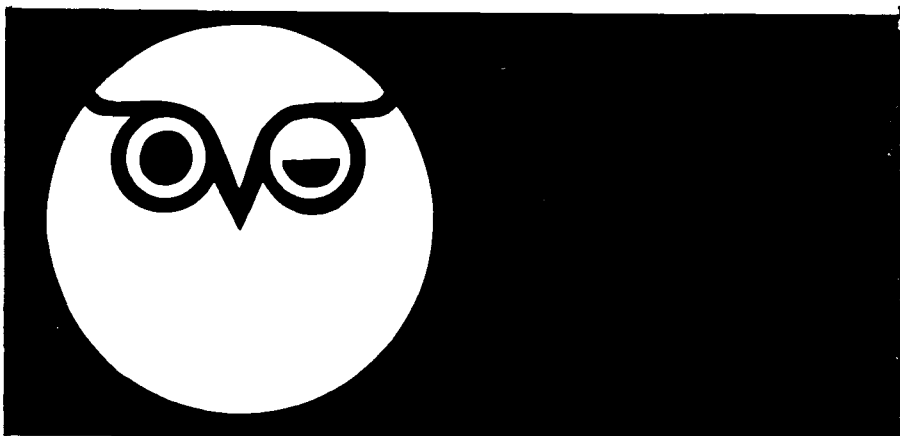
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Write or call us for a copy of our new General Information Bulletin describing our programs and services for the part-time student.

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University of Minnesota
Minneapolis, MN 55455

373-3917



Extension Students have all this available to see where to read complete information about these opportunities, check the **Index** in the back of this **Bulletin**

- University degrees & certificates
- advising and counseling
- neighborhood centers
- athletic tickets & facilities
- financial aids & loans
- mail registration
- campus activities
- student board
- veterans benefits

EXTENSION CLASSES

- telephone registration
- tuition-reduced plans
- graduate credit
- special classes
- art rentals
- health service
- libraries
- informal courses
- bookstores
- weekend classes
- youth & senior citizens' rates
- study skills help
- travel opportunities
- sampler lectures (\$1)



Register by MAIL

We want to help you register for Extension Classes in the easiest manner possible. The simplest is by mail. Please refer to **how to register by mail, page 23.**

This is a request card not a registration card. Its purpose is to request to have registration materials mailed to you.

Registration can be made only for the current term. Request the number and kinds of registration forms by filling in completely and mailing the card below. Do not enclose check with this card.

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449

Please send me _____ registration forms

OFFICE USE ONLY

PLEASE PRINT

Name

Street Address

City

State

Zip Code

TELEPHONE:

HOME

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- Please send G.I. Bill form
- Please send Athletic Facilities Forms
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**Don't waste your time waiting
in long registration lines...**

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Please send me _____ registration forms

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Name

Street Address

City

State

Zip Code

TELEPHONE:

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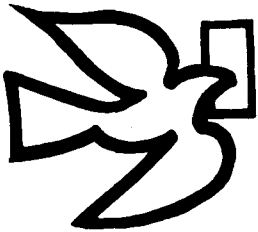
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Request postcard



PLEASE DETACH AND MAIL . . .

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PLEASE PRINT

Name

Street Address

City State Zip Code

- Please send G.I. Bill form
- Please send Athletic Facilities Forms
- Please send Health Service Forms

OFFICE USE ONLY

TELEPHONE:

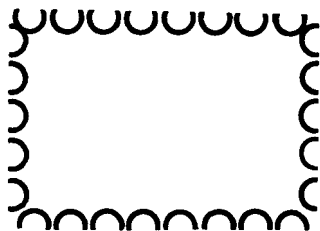
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BUSINESS

EXTENSION

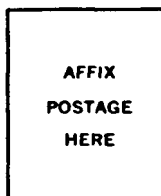
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is to REGISTER BY MAIL



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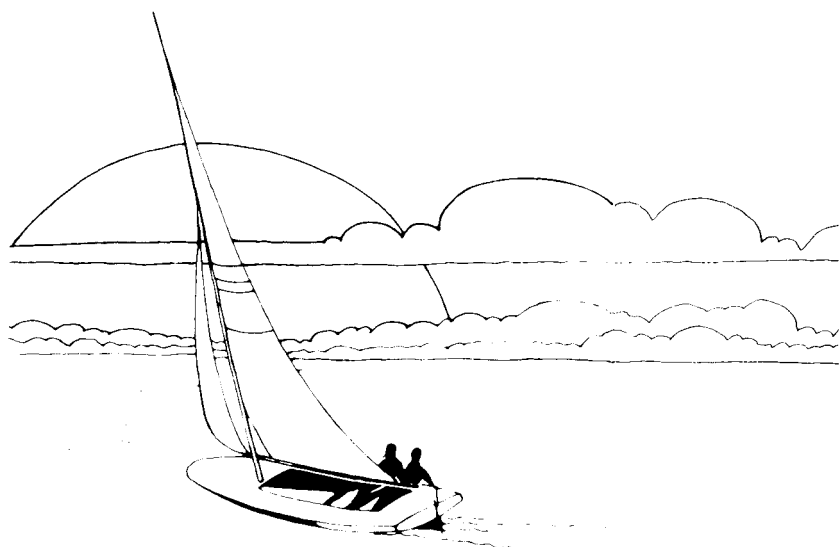


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SUMMER '78

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Summer is an especially pleasant time on the University campus—quiet and casual. Enroll for five- or 10-week summer evening Extension classes. Courses are scheduled in over 40 departments. A descriptive bulletin will be available late in March.

Call 376-3000 for your copy during April, 1978.

Terms (tentative):

First 5-week term:	June 12 to July 14
Second 5-week term:	July 17 to August 18
Ten-week term:	June 12 to August 18

Registration Dates (tentative):

In-person:	May 23 to July 6
By Mail:	Beginning May 8
By Telephone:	May 15 to June 30
	Limited-enrollment class cards will not be mailed out after June 23

101 Wésbrook Hall
University of Minnesota
77 Pleasant Street S. E.
Minneapolis, MN
55455

Fall Quarter September 26 to
 December 14

Fall Semester September 26 to
 January 21

Winter Quarter January 3 to
 March 18

Spring Semester February 13 to
 June 10

Spring Quarter March 27 to
 June 10

**Extension
Classes
1977-78**

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University of Minnesota Bulletin

**Extension
Independent
Study**

1977-78

July 27, 1977
Continuing Education
and Extension
University of Minnesota



Cover Art

This year's cover art is a reproduction of one of the paintings in the "Wild Rice" series by Esther Remington. Last year's bulletin cover featured another of the paintings in this series. Mrs. Remington is a noted Minnesota artist and a friend of Continuing Education and Extension. Her husband, Professor Gilford A. Remington, served as Director of Evening Classes for the General Extension Division (now called Continuing Education and Extension) in Duluth. Continuing Education and Extension was given a scholarship by Mrs. Remington in memory of her husband.

Diversified Independent Study

This bulletin contains information on a variety of Independent Study methods available through Continuing Education and Extension at the University of Minnesota. These methods include correspondence study, broadcast television credit courses, radio credit courses, video cassette credit courses, and audio cassette credit courses. They are designed to meet the need for flexibility of Independent Study students. Please use the Table of Contents and the Index to find those methods of study and courses that are particularly interesting to you.

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

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street SE, University of Minnesota, Minneapolis, Minnesota 55455, (612) 373-7969, or, for Title IX compliance, to the Director of the Office of Civil Rights, Department of Health, Education, and Welfare, Washington, D.C. 20201.

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The contents of this bulletin and other University bulletins, publications, or announcements are subject to change without notice.

Table of Contents

Selecting a Course	6-7
Registering in Independent Study	7
Learning Through Independent Study	8
Rules and Regulations	8-9
Course Descriptions	11-48, 61-64
Ways to Earn Credit Through Independent Study	49-60
General Information	65-79
Extension Certificate Programs	81-92
Degree Programs	93-98
Faculty	99-104
Index	105-107



I think it is fair to say that we are only beginning to see and appreciate the true potential of continuing, or as I prefer to call it, lifelong education. When I say "we," I make no distinction between educators and students.

For many reasons — economic, demographic, and social — increasing numbers of people are enrolling in these programs. I expect this trend to continue and grow. This is an encouraging development because it is an educationally stimulating one, both for our universities and for our students.

I look forward to the continued vitality of the University of Minnesota's Continuing Education and Extension programs, and wish you luck in your educational endeavors.

C. Peter Magrath
President
University of Minnesota

Students who elect to continue their education through Independent Study are very special people. They have a definite idea of what they want out of their educational experience. They are self-motivated enough to keep going with no set schedule but their own, and they are mature enough to work independently, with their instructor's guidance, on what interests them most. We're proud of our Independent Study students.

Harold A. Miller
Dean
Continuing Education and Extension



University of Minnesota

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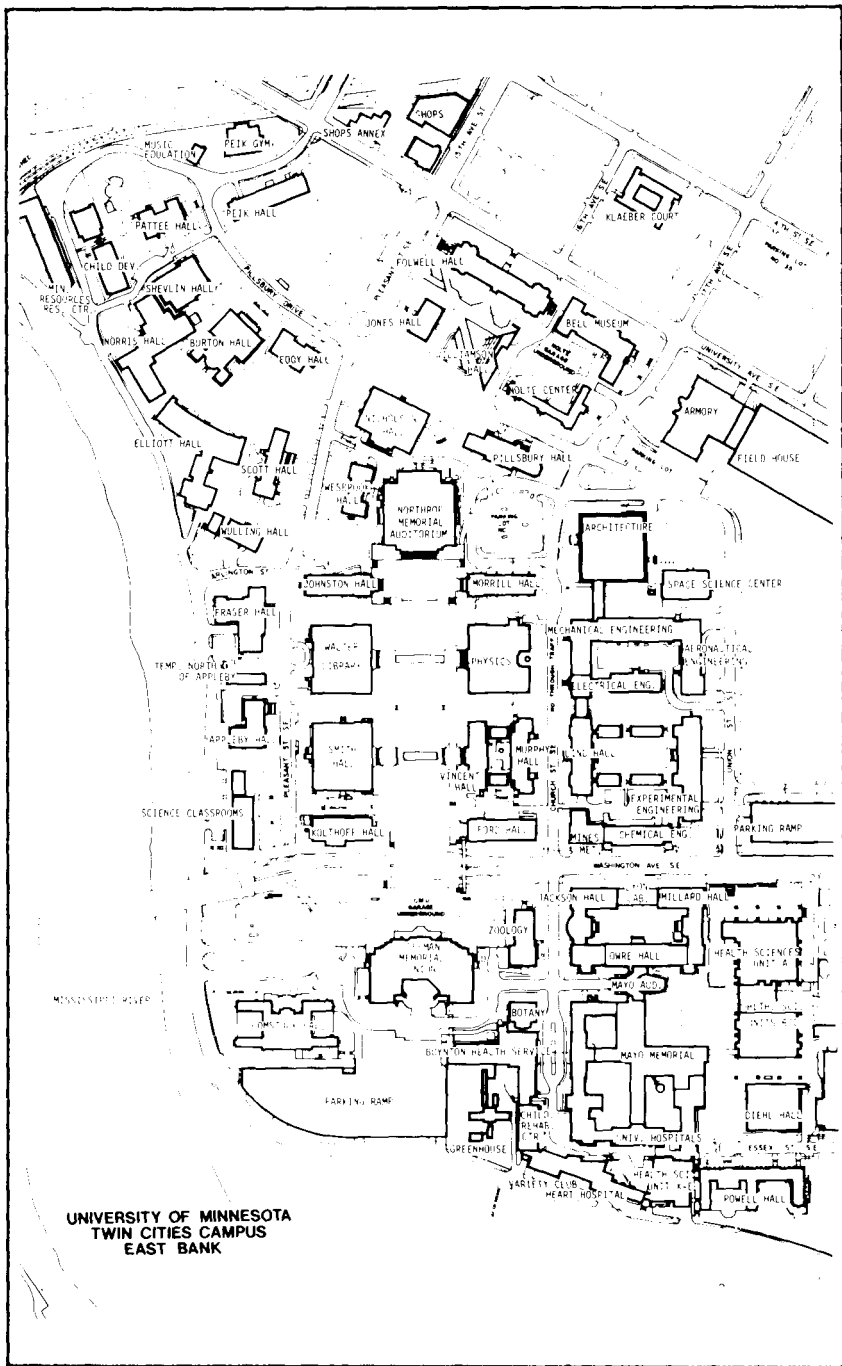
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Selecting a Course

It is important to understand the course description format used in this bulletin; it can help you choose a course appropriate to your abilities.

- Courses are listed under departmental or subject headings, alphabetically arranged. Where other classifications are possible, cross references are given. Refer to the index also.
- The course description below indicates the information that is found in all course descriptions in this bulletin.

1 2 3
Engl 5261 MILTON (3692)

9 lessons — \$74 — 4 degree credits — text price \$11-13 — McNaron
4 5 6 7 8

Course covers the following poems: Comus, Lycidas, Aeropagitica, Paradise Lost, and Samson Agonistes. (Prerequisite: Freshman English and 5 additional credits in English or consent of instructor) 9

1. Department designation and course number
2. Course title
3. Department of Independent Study reference number (for office use only)
4. Number of lesson assignments to be evaluated (excluding exams)
5. Tuition cost
6. Number and kind of credits offered (i.e., degree or certificate)
7. Approximate price of texts and materials
8. Instructor's last name (see Faculty list for title)
9. Course content and prerequisites, if any

- Additional information about a course can be obtained by writing to the Department of Independent Study. Use the form included at the end of this bulletin. Course study guides are also available for inspection at the Independent Study office.
- The University uses the following course numbering system.

- | | |
|--------------|--|
| 0001 to 0998 | Noncredit or certificate courses; certificate credit course numbers are followed by a "C" |
| 1000 to 1998 | Lower division courses primarily for freshmen and sophomores |
| 3000 to 3998 | Upper division courses primarily for juniors and seniors; also open to other students with at least a C average and necessary prerequisites |
| 5000 to 5998 | Graduate level courses for juniors, seniors, and graduate students (credits earned through Independent Study, except for television courses, are not accepted as graduate credit in the University of Minnesota Graduate School) |

- Generally, 3000 and 5000-level courses are more difficult than 1000-level courses. However, you may register in any course you believe you can successfully complete and for which you meet the prerequisites. If you have any questions about course difficulty, contact the instructor (in care of the Department of Independent Study) or the Extension Counseling Office.

- If you need or want a course not listed in the Course Description section, it may be available from one of the other 73 member institutions of the National University Extension Association (N.U.E.A.). The N.U.E.A.'s **Guide to Independent Study Through Correspondence Instruction** lists the courses that are offered by these institutions. The cost of this publication is \$2. It is available from the National University Extension Association, One Dupont Circle, Suite 360, Washington, D.C. 20036.

Registering in Independent Study

- You can register for most Independent Study courses at any time.
- Using the Course Description section of this bulletin, select the course or courses you want to register in.
- Complete the registration form at the center of this bulletin.
- Mail or bring in your completed registration form with full or partial-payment tuition (including any special fees) to
 Department of Independent Study
 45 Wesbrook Hall
 77 Pleasant St. SE
 University of Minnesota
 Minneapolis, MN 55455
 Make checks or money orders payable to the University of Minnesota.
- If you are registering under the G.I. Bill, please indicate this when you register.
- To avoid delay, you may wish to send one check for tuition and books (approximate book prices are given with the course description). Indicate that you are including payment for texts and add a \$1.50 service charge. Overpayments of \$1 or more will be refunded.
- After you register, you will receive a comprehensive study guide, lesson submission forms, mailing labels, and a book order form.
- If you choose to purchase your texts after you receive your study guide, you can obtain them in person from your local library, bookstore, or the Minnesota Book Center on the Minneapolis Campus of the University. You may also order texts by mail through the Department of Independent Study by using the book order form enclosed with your lesson materials. There is a \$1.50 service charge for ordering texts by mail.

Learning Through Independent Study

- The study guide tells you how to proceed in a course. Read the study guide introduction carefully to understand the course format and study procedures.
- Most Independent Study courses require you to prepare lesson assignments based on required readings (in the texts and study notes). The average time required to complete a lesson is between six and ten hours. Assignments are submitted to the Department of Independent Study, evaluated by the instructor, and returned to you.
- You should wait until one lesson assignment has been returned before submitting another. By doing this, you may consider any comments from your instructor and recognize your mistakes and strengths.
- Most Independent Study courses require you to take midcourse and final exams. All preceding lesson assignments must be completed before you take an exam. Specific exam information is given in the course study guide.
- Exams may be taken at the offices of Independent Study or under the supervision of an acceptable proctor.
- It is best to set a study schedule and submit lesson assignments on a regular basis.
- Expect to spend a minimum of three months to complete an Independent Study course (excluding grade recording).

Rules and Regulations

You are responsible for all rules and regulations and information given in this bulletin. The most significant rules are listed here; also see the General Information section.

- You must assume full responsibility for enrolling in courses appropriate to your needs and educational level.
- Some colleges and universities set restrictions governing the acceptance of Independent Study credits. Contact your college or department.

ment office before enrolling in a course if you plan to apply it to a specific program. If you have any questions concerning the applicability of credits, contact

Extension Counseling Office
314 Nolte Center
315 Pillsbury Drive SE
University of Minnesota
Minneapolis, MN 55455
Telephone (612) 373-3905

- To earn credit in a course, you must complete all required assignments and exams in the sequence given in the study guide (unless special arrangements have been made with the instructor and approved by the Department of Independent Study).
- You are responsible for meeting grade recording deadlines. Allow at least three weeks after course completion for your final grade to be officially recorded. Check with the Department before enrolling if you have credit deadlines.
- The University of Minnesota Graduate School does not permit Independent Study credits (except television courses) to be applied toward a Master's or Doctor's degree. Independent Study credits may be applied toward the graduate language requirement or used as prerequisites, however. See University Degree Programs section, Graduate School.
- You have one year from the date of registration to complete most Independent Study courses. Reinstatements (renewals) of one year are permitted; see General Information section, Tuition.
- If requested within 90 days of the date of registration, cancellations are accepted and partial refunds can be made. No portion of the tuition will be refunded after 90 days or after one-half of the lesson assignments have been evaluated. See General Information section, Tuition, for the refund schedule.
- If requested within 90 days of registration, transfers from one course to another are permitted. There is a service charge for this privilege. You must complete your course within a year from the date of your original registration. No transfers are permitted after 90 days or after one-half of the lesson assignments have been evaluated. See General Information section, Transferring to Another Course.



Willard L. Thompson, Professor of Journalism and Mass Communication and Director of Summer Sessions, developed PRINCIPLES OF ADVERTISING (Jour 1201) as both a television course and a correspondence course for Independent Study. The television course (shown on KTCA-TV Channel 2, Spring 1977) is now available on video cassettes in the Learning Resources Center in Walter Library.

Course Descriptions

Accounting

Acct 1024 PRINCIPLES OF ACCOUNTING I (1524)

16 lessons — \$49.50 — 3 degree credits — text price \$17-19 — Lund

Recording, reporting, and interpreting business events. Use of accounting as a tool of business management. Topics: financial statements; journal, ledger, and trial balance; adjusting process; receivables, payables, and interest; merchandise inventory; plant assets and intangibles.

Acct 1025 PRINCIPLES OF ACCOUNTING II (1525)

16 lessons — \$49.50 — 3 degree credits — text price \$21-23 — Lund

Continuation of Acct 1024. Topics: control over cash; bank reconciliation; petty cash; voucher system, payroll records; partnership accounting; corporation accounting; manufacturing statements; process cost systems; job order cost systems; fund statement; cash-flow statement and financial statement analysis. (Prerequisite: Acct 1024 or introductory college accounting course)

Acct 1026 PRINCIPLES OF ACCOUNTING III (1526)

16 lessons — \$49.50 — 3 degree credits — text price \$13-15 — Lund

Use of accounting data in making managerial decisions. Topics: job order cost systems, manufacturing overhead variance; process cost accounting; standard cost accounting; variable costing; cost-volume-profit relationships; budget-sales-production relationships; financial planning; managerial decision making; capital investment decision making and price decision making. (Prerequisite: Acct 1025 or equivalent)

Acct 5135 INCOME TAX ACCOUNTING (1586)

16 lessons — \$74 — 4 degree credits — text price \$18-20 — Lassila

The more common and important provisions of the federal income tax system as applied to individuals and corporations. Begins with a consideration of which types of income are taxable and which are not. Consideration is then given to gains and losses, dividends, and deductions. (Prerequisite: Acct 1025 or Acct 1050 or equivalent)

Adolescent Psychology

See Child Psychology

Aerospace Engineering and Mechanics

AEM 3016 DEFORMABLE BODY MECHANICS (3237)

11 lessons — \$70 — 4 degree credits — text price \$17-19 — Moran

The determination of forces and moments on and within structures in static equilibrium. The concepts of stress and strain. Relations between stress and strain for elastic and other

Course Descriptions

materials. Analysis of beam-like structures under axial, torsional, or transverse loading. An unusual grading system will be employed; to get a C, students need only pass short-answer quizzes on each lesson. Performance in problem solving, as evidenced in three more difficult exams, determines who gets A's and B's. (Prerequisite: Calculus through integration and partial derivatives)

Agricultural Economics

AgEc 3800 FARM RECORDS AND BUSINESS ANALYSIS (1080)

16 lessons — \$52.50 — 3 degree credits — text price \$13-15 — Persons

Forms and procedures for recording inventories, cash receipts and expenses, crop acreages and yields, feed consumed by livestock, and other information concerning the farm business. Calculation of measures of farm earnings and factors affecting earnings.

Agriculture

See the following departmental listings for course offerings:

Agricultural Economics

Animal Science

Entomology

Food Science and Nutrition

Horticultural Science

American Studies

AmSt 1101 INDIVIDUALISM IN AMERICAN LIFE (1401)

13 lessons — \$66 — 4 degree credits — text price \$25-27 — Stuart

The core of American Studies 1101 is the study of individualism in America. Individualism, in the minds of some, is our most admirable national trait; in the minds of others, it is our most notorious. To acquire a critical understanding of this crucial issue in American culture, students will work with poetry, essays, fiction, historical documents, music, art, architecture, and the writings of both laymen and experts in economics, politics, sociology, and philosophy. In addition to providing ways of understanding individualism, the course is designed to introduce students to the use of materials from several disciplines as they relate to and illuminate a particular aspect of American culture.

AmSt 1102 RELIGION IN AMERICAN LIFE (1402)

14 lessons — \$66 — 4 degree credits — text price \$23-25 — Stuart

The most immediate aim of the course is to introduce the student to the study of religion in American thought and experience. To this end, materials from several disciplines will provide multiple perspectives on certain major currents in American belief systems which seem to have been particularly important in the development of American culture as a whole. The course's interdisciplinary approach will continuously allow students to raise questions about the interrelationships between these belief systems and developments in politics, economics, science, art, music, and literature.

Animal Science

AnSc 1600 HORSE PRODUCTION (1041)

12 lessons — \$66 — 4 degree credits — text price \$16-18 — Jordan

Breeds and selection, inheritance and reproduction, nutrition and management of the weanling, mare, and stallion; farriery, tack and equipment, diseases and health; and business aspects of stable management.

Anthropology

Anth 1102 INTRODUCTION TO ANTHROPOLOGY: CULTURAL ANTHROPOLOGY (1102)

15 lessons — \$82.50 — 5 degree credits — text price \$27-29 — Cohen

Study of cultures in all parts of the world, directed toward a broad understanding of how men view their world, cope with their environments, and organize their lives. **This course is now in preparation; please inquire before enrolling.**

Anth 3211 INDIANS OF NORTH AMERICA (1180)

18 lessons — \$87.50 — 5 degree credits — text price \$16-28 — Cohen

Focuses on the traditional culture of the Indians of North and Middle America. A survey of native life-ways in different regions. Opportunities for student-selected in-depth study of specific cultures are also provided. Primary emphasis is on the Indian cultures prior to extensive contacts with Europeans, but some attention is also directed toward the history of Indian-white contact and toward the contemporary Indian living on reservations or in cities. (Prerequisite: Anth 1102)

Anth 5141 CULTURE AND PERSONALITY (1196)

16 lessons — \$92.50 — 5 degree credits — text price \$30-32 — Cohen

Role of culture in formation of personality. Cross-cultural patterns of child rearing. Problems of individual adjustments to demands of culture. Psychological approach to culture. (Prerequisite: Anth 1102)

Art History

ArtH 1015 ART IN WESTERN CIVILIZATION (1205)

13 lessons — \$66 — 4 degree credits — text price \$19-21 — Waldfoegel

A concise history of Western art and culture, the course is based on Lord Clark's **Civilisation**, first shown by the British Broadcasting Corporation in the late sixties. The content of the 13 films is provided verbatim in a text prepared by Lord Clark. It is profusely illustrated (partly in color), as is a second book employed in the course because of its excellence in establishing the historical setting of the art discussed by Lord Clark.

GC 1048 BASIC CRAFT SKILLS (1247)

10 lessons — \$66 — 4 degree credits — text price \$11-13 — Nelson and Strother

A beginning course that explores the components of crafts. No kits; no "how-to-do-it-in-10-steps-or-less"; none of that. Instead, the course will teach you how to deal with the larger concept of crafts — design, motivation, media, and color. This concept will allow you to develop a new attitude toward a self-exploration of craft ideas. Some of the media introduced are fibers, fabrics, paper, printing, clay, and found objects. **This course is now in preparation; please inquire before enrolling.**

Astronomy

GC 1161 PHYSICAL SCIENCE: SOLAR ASTRONOMY (1312)

16 lessons — \$82.50 — 5 degree credits — text price \$16-18 — Policoff

An introductory survey of the solar system, including a study of the earth, planets, satellites, asteroids, comets, and meteorites. Topics include the celestial sphere, coordinate systems, time intervals, motions and physical attributes of planets in the solar system, and instruments used by the astronomer. Observations of the night sky will be required.

GC 1162 PHYSICAL SCIENCE: STELLAR ASTRONOMY (1313)

15 lessons — \$82.50 — 5 degree credits — text price \$14-16 — Policoff

An introductory survey of the large scale structure of the universe including the definition of certain properties of stars, such as magnitude, luminosity, and brightness. Topics include the sun, the spectral classification of the stars, clusters, nebulae, galaxies, quasars, cosmology, and cosmogony. Observations of the night sky will be required. Knowledge of high school algebra helpful.

Course Descriptions

Beekeeping

See Entomology

Biology

Biol 1011 GENERAL BIOLOGY (1600)

16 lessons — \$82.50 — 5 degree credits — text price \$15-20 — lab kit \$5-7 — Swart
An introduction to the general principles of biology. The topics of heredity, cells, chemistry and biological molecules, metabolism development, ecology, and evolution are discussed. Simple laboratory exercises are performed.

Biol 1101 HEREDITY AND HUMAN SOCIETY (V161)

Video Cassette Course — \$66 — 4 degree credits — text price \$7-9 — study guide \$5 — Benson and Fan

The principles of heredity and their social implications. Emphasis is placed on man. Topics covered include how genes can be altered, how this alteration can cause diseases, and how genetic information is inherited. Also discussed are the genetic basis of sex, evolution, genetic engineering and virus-caused diseases. (For students in programs not directly related to biological sciences; no credit if taken after GCB 3022 or Biol 3032.) **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

Business

See the following departmental listings for course offerings:

Accounting

Business Law

Business Studies (General College)

Educational Administration ("Personal Time Management")

Industrial Relations

Insurance

Marketing

Business Law

BLaw 3048 INTRODUCTION TO LAW, AND THE LAW OF CONTRACTS AND AGENCY (1858)

12 lessons — \$70 — 4 degree credits — text price \$20-22 — Donnelly
Study of the origin of law, its place in and effect upon society; the history and development of law; the systems of courts; and legal procedure. An extensive study of the law of contracts as the basic law affecting business transactions. Also a study of law affecting the relationship between principal and agent, master and servant, and employer and employee.

BLaw 3078 PARTNERSHIPS, CORPORATIONS, AND LAW OF REAL PROPERTY (1878)

12 lessons — \$70 — 4 degree credits — text price \$20-22 — Donnelly
A study of the partnership and corporate forms of business entities, including the methods of creating the relationships, and the law developed to regulate and control these organizations and their members. Also a study of the basic concepts and principles of real property law; transfers of ownership, control of and encumbering such interests. (Prerequisite: BLaw 3058)

BLaw 3088 LAW OF PERSONAL PROPERTY, SALES CONTRACTS, COMMERCIAL PAPER, AND WILLS AND ESTATES (1888)

12 lessons — \$70 — 4 degree credits — text price \$20-22 — Donnelly
Study of the basic concepts of personal property, including rights of possessors, bailee, finders and holders of security interests. An extensive study of the law affecting sales of goods contracts and contracts referred to as commercial papers (negotiable instruments) with

Course Descriptions

emphasis on effect of the Uniform Commercial Code. Concludes with a brief study of the law of wills and estates in passing rights to property in event of death. (Prerequisite: BLaw 3058)

Business Studies (General College)

Also see Data Processing

GC 1235 LAW IN SOCIETY (1615)

13 lessons — \$82.50 — 5 degree credits — text price \$12-14 — Hower
In order to give students an appreciation of the role of law in our changing society, the legal aspects of current topics are discussed. Topics include: court and court systems; grand and petit juries; corrections; welfare and domestic problems; consumer issues including insurance (no-fault auto and life); wills and probate procedures. A civil law suit, from beginning to end, is explained. Each student is required to complete a project paper. This course is a prerequisite for admission to the University of Minnesota paralegal program.

GC 1511 INTRODUCTION TO MODERN BUSINESS (1616)

15 lessons — \$82.50 — 5 degree credits — text price \$12-14 — Hower
Intended for both business and general education; provides an overview of economic environment in which business operates. Major functions of a business organization are surveyed, including production, finance, personnel, and marketing. A useful introductory course for students planning to do more work in business, but also recommended for those who want to survey the field without studying it in detail.

GC 1513 PRINCIPLES OF SMALL BUSINESS OPERATIONS (1617)

14 lessons — \$66 — 4 degree credits — text price \$16-18 — Ludlow
Designed for those who plan to purchase or begin some form of small business in a marketing-related field, i.e., nonmanufacturing. The course revolves around the basic areas of inquiry necessary to start the business. Topics include: identification of the market and business location, organizational structure and management of employees, financial resources and projecting financial needs, record keeping, and developing advertising-promotional plans. The approach used is to familiarize the student with resources available to aid him in making decisions to open the business. The student will complete all assignments relating to a business area of his choosing. Essentially, completion of assignments involves the investigation of various resources to aid in making the decisions and the following of logical steps necessary to open a business operation.

GC 1534 PRACTICAL LAW (1620)

18 lessons — \$82.50 — 5 degree credits — text price \$15-17 — Hower
Designed to acquaint students with common legal problems. Topics include: definition and sources of law; formation and discharge of contracts; torts (personal injury and property damage suits); criminal law; bailments; nature and classification of real and personal property; joint ownership and tenancy. This course is a prerequisite for admission to the University of Minnesota paralegal program.

GC 1537 SALESMANSHIP (1621)

10 lessons — \$49.50 — 3 degree credits — text price \$9-11 — Goodnough
Designed for the student in a sales position or interested in a sales career. Topics include: attitudes, knowledge, and skills needed for success in selling; consumer motivation; pre-sales planning and approach; determining wants and needs; answering objections and completing the sale. Emphasis is on a customer-oriented approach using a problem-solving method. (Concurrent employment in a selling or sales-related occupation is recommended but not required.)

GC 1731 CONSUMER PROBLEMS (1618)

15 lessons — \$82.50 — 5 degree credits — text price \$12-14 — Kroll
Consumer Problems is for anyone who feels the need to improve his understanding of how our economy functions, what challenges he faces, and what can be done to function more efficiently in our marketing-oriented system. The assignments include reading, field work, and writing, and they will help the student: identify consumer problems and where to get

Course Descriptions

help in dealing with them; understand how the marketing system affects the consumer's ability to make appropriate decisions; develop skill in managing time and budgeting financial resources; and make decisions in such specific purchasing areas as food, housing, insurance, saving, etc.

GC 1731 CONSUMER PROBLEMS: PERSONAL FINANCE (K161)

\$66 — 4 degree credits — Kroll

Same as above. **This course will be broadcast on KUOM Radio 770, Winter 1978.**

Business Writing

See English Composition

Child Psychology

Also see Psychology

CPsy 1301 CHILD PSYCHOLOGY (8280)

14 lessons — \$66 — 4 degree credits — text price \$13-15 — Dickison

Designed to provide an understanding of children and their development, the methods used by child psychologists, and the critical evaluation of research. Topics include: personality and social behavior, biological bases and cognitive development, and the work of Jean Piaget. (Prerequisite: 5 credits introductory psychology)

CPsy 5303 ADOLESCENT PSYCHOLOGY (8282)

12 lessons — \$74 — 4 degree credits — text price \$20-22 — Keating

Survey of the behavior and psychological development of the adolescent including: biological considerations, cognition and creativity, moral development, parent-child relations, peers, ego identity, sexual development, school adjustment, social-cultural considerations, and the adolescent subculture. (Prerequisite: 5 credits introductory psychology)

Chinese

See East Asian Languages

Civil Engineering

CE 0001C SOILS ENGINEERING (2855)

13 lessons — \$66 — 4 certificate credits — text price \$16-18 — Kersten

Intended for engineers and students who wish to become familiar with the basic principles of soil behavior. Texture and mechanical analysis; weight-volume-moisture relationships; compaction; soil constants and engineering classification; permeability; shear strength; stresses due to boundary loads. Lateral pressures; compressibility and consolidation; frost action.

CE 0302C CONCRETE AND CONCRETE MATERIALS (2896)

16 lessons — \$49.50 — 3 certificate credits — text price \$4-6 — Skok

Includes a study of materials from which concrete is made, methods of designing a concrete mixture, the principles of air-entrained concrete, methods of measuring and controlling the air content, the chemical constitution of cement, properties of concrete, the practical aspects of proportioning, mixing, placing, and curing concrete and other special related topics. (Prerequisite: Basic knowledge of algebra, physics, and chemistry)

Classics

Classics

Course Descriptions

Clas 1048 TECHNICAL TERMS OF SCIENCE, MEDICINE, AND THE HUMANITIES (5248)

16 lessons — \$49.50 — 3 degree credits — text price \$1 — Sinopoli

Presentation in English contexts of Greek and Latin prefixes, suffixes, and root words in modern technical vocabularies; special attention to medical terminology. No previous study of Greek or Latin required.

Clas 3071 RELIGION IN ANTIQUITY: GREEK, HELLENISTIC (A521)

Audio Cassette Course — \$70 — 4 degree credits — text price \$15-17 — 15 audio cassettes \$21 — Wigtil

The course focuses on the Greek religion of the Archaic, Classical, and Hellenistic periods. Some of the specific topics examined include: death, sexuality, time, heroes, goddesses, and rituals. These topics are examined in the broader context of the non-Greek religion and philosophies of that period. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Clas 5005 MADNESS AND DEVIANT BEHAVIOR IN GREECE AND ROME (A522)

Audio Cassette Course — \$74 — 4 degree credits — text price \$14-16 — 15 audio cassettes \$21 — Erickson

Definitions of madness in Greece and Rome and theories of its etiology; assessment of predisposing factors in Greece and Rome; examples of madness from mythology, legend, and history; cross-cultural comparison with contemporary United States. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Clas 5145 CLASSICAL MYTHOLOGY: MYTHS AND THE MODERN WORLD (V591)

Video Cassette course — \$74 — 4 degree credits — text price \$19-21 — study guide \$5 — Hershbell

Investigates the successive interpretations of selected Greek and Roman myths and their influence on our literature, art, and music. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

Greek

Grk 1101 BEGINNING CLASSICAL GREEK I (5901)

15 lessons — \$82.50 — 5 degree credits — text price \$11-13 — Anderson

An introduction to Homeric and Classical Greek language: alphabet, vocabulary, and idioms. Selected readings from *Iliad* and *Odyssey* of Homer and Classical Greek selections of moderate difficulty. Written translation exercises, oral exercises, and introduction to scansion and meter. After the successful completion of two courses in Homeric Greek, the student may continue readings in the *Iliad* and *Odyssey*, or go on to Classical Drama, Hesiod, Xenophon, The New Testaments, etc.

Latin

Lat 1101 BEGINNING LATIN I (6201)

15 lessons — \$82.50 — 5 degree credits — text price \$11-13 — Armbrust

Basic grammar and vocabulary, practice in reading and writing Latin, workbook exercises, easy Latin readings, and Roman legends.

Lat 1102 BEGINNING LATIN II (6207)

17 lessons — \$82.50 — 5 degree credits — text price \$11-13 — Armbrust

Continuation of Lat 1101. Similar in content and method, leading to connected reading in *Fabulae Faciles* (Easy Stories). (Prerequisite: Lat 1101 or equivalent)

Lat 1103 BEGINNING LATIN III (6208)

15 lessons — \$82.50 — 5 degree credits — text price \$11-14 — Armbrust

A review of the elements of Lat 1101 and Lat 1102, with a shift of emphasis to longer passages of continuous reading on Roman life. A considerable amount of historical and literary background is presented in English to orient the student to the material. (Prerequisite: Lat 1102 or equivalent)

Lat 1104 LATIN READINGS (6209)

15 lessons — \$82.50 — 5 degree credits — text price \$4-6 — Gulino
Selections from Cicero, Livy, and Ovid will be read. In addition to the review of Latin grammar, which will be incorporated in the readings, the selections will familiarize the student with the legends of Rome's founding and early heroes, the defeat of her army by Hannibal at Cannae, the first important speech of her most brilliant orator, Cicero, and his correspondence after the assassination of Julius Caesar, and Ovid's poetic interpretation of several Greek myths. Literary and historical background material is provided in English with each lesson.

Lat 3471 CICERO (6206)

16 lessons — \$52.50 — 3 degree credits — text price \$2-4 — Gulino
Readings from the most famous humanistic essays. (Prerequisite: Lat 1103 or equivalent)

Composition

See English Composition

Data Processing

GC 1535 INTRODUCTION TO DATA PROCESSING (1966)

9 lessons — \$49.50 — 3 degree credits — text price \$20-22 — Folz
Designed to acquaint students with fundamentals of data processing. The following topics are covered: history of data processing; computer and data processing terminology; description and structure of computers; number systems; description, characteristics, data format, and applications of secondary storage devices; block diagramming; elementary programming in **BASIC** and **COBOL**; systems analysis in accounts receivable, payroll, and invoicing.

GC 1572 INTRODUCTION TO BLOCK DIAGRAMMING AND PROGRAMMING (1972)

14 lessons — \$82.50 — 5 degree credits — text price \$14-16 — Folz
Designed to provide an orientation to the technique of problem definition and analysis, including the formulation and use of a block diagram (flow chart). Programming techniques such as switches, branching, and use of input/output devices are examined. Also emphasized are basic elements of computers such as computer number systems, languages, various storage devices, their use in specific applications, and how they are linked to the computer. (Prerequisite: GC 1535 or equivalent, or consent of instructor)

Design

Dsgn 1525 DESIGN I (2001)

10 lessons — \$49.50 — 3 degree credits — text price \$14-16 — Selkurt
Principles of design applied to a series of interesting and practical problems using a variety of techniques; a basic course useful in elementary or junior high school teaching and as a foundation for other art courses.

East Asian Languages

Chinese

Chin 1011 BEGINNING CHINESE I (5501)

20 lessons — \$82.50 — 5 degree credits — text price \$16-18 — Na
Prepares for the reading and speaking of conversational Chinese. Introduces 312 characters and the basic structure of the Chinese sentence. A series of cassette tapes, corresponding to the lessons, is provided. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Course Descriptions

Chin 1012 BEGINNING CHINESE II (5502)

17 lessons — \$82.50 — 5 degree credits — text price \$16-18 — Na
A continuation of Chin 1011. Basic grammatical points and paragraph structures. Introduces 329 new characters. (Prerequisite: Chin 1011)

Chin 1013 BEGINNING CHINESE III (5503)

15 lessons — \$82.50 — 5 degree credits — text price \$21-23 — Na
A continuation of Chin 1012. Final five lessons study simplified characters used today in mainland China. (Prerequisite: Chin 1012)

Chin 3501 ASIAN CIVILIZATION: CHINA (5520)

16 lessons — \$52.50 — 3 degree credits — text price \$14-16 — Na
A course of readings to introduce students to selected materials in the fields of Chinese history, philosophy, religion, literature, and art. Students are required to submit brief essays on specific problems designed to focus on the dynamics of Chinese intellectual history. A longer paper at the end of the course is also required.

Japanese

Jpn 1011 BEGINNING JAPANESE I (6104)

20 lessons — \$82.50 — 5 degree credits — text price \$9-11 — Matsumoto
An introduction to reading, writing, and speaking modern Japanese. Provides the basic grammar and vocabulary for learning to read modern fiction, newspapers, and magazines, and for learning conversational Japanese.

Jpn 1012 BEGINNING JAPANESE II (6105)

15 lessons — \$82.50 — 5 degree credits — text price \$9-11 — Matsumoto
A continuation of Jpn 1011. (Prerequisite: Jpn 1011 or equivalent)

Jpn 1013 BEGINNING JAPANESE III (6106)

15 lessons — \$82.50 — 5 degree credits — text price \$9-11 — Matsumoto
A continuation of Jpn 1012. (Prerequisite: Jpn 1012 or equivalent) **This course is now in preparation; please inquire before enrolling.**

Ecology and Behavioral Biology

Also see Forestry

EBB 3001 INTRODUCTION TO ECOLOGY (2010)

12 lessons — \$70 — 4 degree credits — text price \$33-35 — Swain
A survey of the basic concepts in ecology dealing with the organization, development, and functioning of ecosystems; population growth and regulation. Man's impact on such systems will be considered throughout.

Economics

Also see Agricultural Economics

Econ 1001 PRINCIPLES OF MACROECONOMICS (2101)

16 lessons — \$66 — 4 degree credits — text price \$22-24 — Gupta
Economic principles and their relation to the functioning of the economy. Topics include: gross national product with its measurement, components, and weaknesses; government fiscal policy; monetary policy and the creation of money; and the coordination of monetary and fiscal policy.

Econ 1002 PRINCIPLES OF MICROECONOMICS (2102)

16 lessons — \$66 — 4 degree credits — text price \$22-24 — Staff
Principles of underlying economic activity and the way these principles work through the different market structures of American capitalism. Demand and supply, competition and monopoly, the price system and its operation, and the pricing and employment of economic resources are also examined.

Course Descriptions

Econ 3102 MACROECONOMIC THEORY (2166)

14 lessons — \$70 — 4 degree credits — text price \$17-19 — Gupta
Income and employment. Determinants of national income, employment, and price level, with particular attention to aggregate consumption and investment. (Prerequisite: Econ 1001 or equivalent)

Econ 3751/5721 MONEY AND BANKING (2168/2169)

14 lessons — \$70/\$74 — 4 degree credits — text price \$13-15 — Yunker
Money, banks, and financial intermediaries as economic institutions; the mechanics of monetary transactions; the value of money; international monetary relationships; issues relating to monetary policy. (Prerequisite for 5721: Econ 3102 or equivalent; economics majors must register for 5721 and will not receive credit for 3751)

Econ 5534 ECONOMIC SECURITY (2183)

13 lessons — \$74 — 4 degree credits — text price \$11-13 — Turnbull
Origins and development of economic and social problems of the individual worker, public and private attempts to deal with these issues; economic and social implications. **Also see Ins 3210. Students may not receive credit for both Econ 5534 and Ins 3210.**

Econ 5534 ECONOMIC SECURITY (A211)

Audio Cassette Course — \$74 — 4 degree credits — text price \$11-13 — 14 audio cassettes \$19.75 — Williams
Same as above; lectures available on audio cassettes. **Also see Ins 3210. Students may not receive credit for both Econ 5534 and Ins 3210.** See **Tapes and Tape Recorders** for information on renting cassette recorders.

Econ 5537 LABOR MARKET BEHAVIOR AND REGULATION (2173)

16 lessons — \$74 — 4 degree credits — text price \$12-14 — Turnbull
Employer-employee-union relationships and their social control; legislative, executive, and judicial attempts to deal with these issues; economic and social implications. (Prerequisite: Econ 3501 or Econ 5531 or equivalent, or consent of instructor)

Education

Also see Child Psychology; Recreation and Park Administration

Educational Administration

EdAd 5128 PERSONAL TIME MANAGEMENT AND EFFECTIVE ADMINISTRATION (2680)

8 lessons — \$37 — 2 degree credits — 6 audio cassettes \$14.25 — Hoyt
This course is designed for any individual who "doesn't have enough time." It teaches practical, pragmatic approaches — using examples and samples of proven techniques — to the problems of scheduling, organizing work, delegating, setting priorities, handling interruptions and meetings, doing the distasteful and the difficult, setting up filing systems that work, and finding the time to do those things that you really want to do, but don't have the time for. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Social, Psychological, and Philosophical Foundations of Education

HEd 1004 INTRODUCTION TO PHILOSOPHY OF EDUCATION (2604)

21 lessons — \$66 — 4 degree credits — text price \$4-5 — Dupuis
A study of the ideas influencing contemporary education in the United States. An effort will be made to show how these ideas might influence the day-to-day work of the teacher. Helps teachers clarify their thinking in respect to the many conflicting viewpoints in educational philosophy.

Ed 5141 CRITICAL ISSUES IN CONTEMPORARY EDUCATION (2691)

9 lessons — \$55.50 — 3 degree credits — text price \$13-15 — Dupuis
The principal aim is to answer the following question: What are the outstanding points of view in education today? Such practical questions as discipline, freedom, indoctrination, teacher-pupil relations, and progressive methods will be treated as they relate to underlying

Course Descriptions

theory, but the central objective will be to appreciate the crucial agreements and differences among leading thinkers in contemporary education.

Psyf 3102 INTRODUCTION TO STATISTICS (2660)

16 lessons — \$52.50 — 3 degree credits — text price \$14-16 — Giese
Elementary statistical methods and their application to behavioral science and educational problems. The commonly used statistical terms and methods such as mean, median, mode, percentiles, graphs, standard deviation, correlation, standard scores, and test analysis are considered. An attempt is made to give the student a thorough understanding of statistics, including an introduction to inferential statistics. Emphasis is placed on the intelligent use of statistical methods so that the student may interpret behavioral science data correctly. (Prerequisite: 6 credits in psychology or permission of instructor)

Engineering

See the following departmental listings for course offerings:

Aerospace Engineering and Mechanics
Civil Engineering
Industrial Engineering/Operations Research

English

Composition

Comp 0001 PREPARATORY COMPOSITION (3500)

16 lessons — \$66 — no credit — text price \$17-19 — Klemz
Intensive drill on grammatical forms, structure, and theme writing. Recommended for students whose primary need is organization and development of themes; any passing grade admits students to Comp 1001.

Comp 0002 GRAMMAR REVIEW (3505)

11 lessons — \$49.50 — no credit — text price \$6-8 — O'Connell
A step-by-step review and explanation of grammatical forms, punctuation, spelling, and vocabulary. Recommended for anyone who needs to start with English composition fundamentals, or for the student who requires a thorough review of grammar. Additional exercises provided when lessons indicate the student should do extra work. No theme or letter writing required in this course.

Comp 0011 THE WRITING OF POETRY (3509)

12 lessons — \$49.50 — no credit — text price \$16-18 — Carson
The student will be given an opportunity to write both traditional and free verse. The student's work will be evaluated by the instructor. Designed to develop an appreciation of poetry and the student's ability in the writing of poetry. (Prerequisite: Consent of instructor)

Comp 0012 THE ADVANCED WRITING OF POETRY (3510)

12 lessons — \$49.50 — no credit — text price \$16-18 — Carson
The student will have complete independence to submit work for evaluation by the instructor. Designed to provide the student with a sympathetic yet critical appraisal of his work. (Prerequisite: Consent of instructor)

Comp 0017 INDEPENDENT WRITING (3580)

16 lessons — \$49.50 — no credit — no required text — Sandell
Consists of manuscript criticism. The instructor will read approximately 16,000 words divided into lessons as the student wishes. Poetry is not covered in the course. S/N grading only. (Prerequisite: Consent of instructor)

Comp 0018 SHORT MANUSCRIPT CRITICISM (3581)

6 lessons — \$33 — no credit — no required text — Sandell
There are no assignments or lesson materials. The student submits up to 8,000 words for

Course Descriptions

criticism and suggestions. The maximum of 8,000 words may be in one to six submissions. S/N grading only.

Comp 1001 INTRODUCTORY COMPOSITION (3511)

12 lessons — \$66 — 4 degree credits — text price \$10-12 — Sandell

Concentrates on developing the student's skill in expository writing through a close examination of the principles of organization, coherence, and unity, particularly at the paragraph level. Subject matter for essays drawn chiefly from student's personal experience. (The English Placement Test is available to students who wish to test their level of competency, but the test is not a prerequisite for enrollment in Comp 1001.)

Comp 1002 INTRODUCTORY COMPOSITION (3512)

10 lessons — \$66 — 4 degree credits — text price \$16-18 — Sandell

Continuation of Comp 1001 with emphasis on style, tone, and such larger strategies as argumentation and analysis. Subject matter for essays drawn from assigned readings of nonfictional prose. (Prerequisite: Comp 1001)

Comp 1027 INTERMEDIATE COMPOSITION: EXPOSITION (3527)

12 lessons — \$66 — 4 degree credits — text price \$14-16 — Klemz

Mastery of the techniques of expository writing. Attention to rhetorical modes, logic, and organization; analysis of assigned essays to develop skill in critical reading; emphasis on reader awareness, language, and style. (Prerequisite: Comp 1002 or equivalent)

GC 1531/3531 BUSINESS WRITING/Writing FOR BUSINESS AND THE PROFESSIONS (3513/3515)

14 lessons — \$66/\$70 — 4 degree credits — text price \$14-16 — Warren

A course in effective business writing, emphasizing the relationship between creative writing and successful management; the course will focus on various challenging business situations, all calling for a knowledge of human needs and the ability to write complete, concise, clear, correct, and convincing business letters, memorandums, and, at the 3000-level, informal reports. In writing, the student will learn to understand and use aspects of human psychology; tone; correct letter, memorandum, and report formats; and the fundamentals of grammar, punctuation, and sentence structure. **The 3000-level course is now in preparation; please inquire before enrolling.**

Literature

Engl 1016 INTRODUCTION TO AMERICAN LITERATURE: SOME MAJOR FIGURES AND THEMES (3671)

12 lessons — \$66 — 4 degree credits — text price \$15-17 — Griffin

Examination of a few selected themes that recur in American writing. Not a survey of literary history. Main emphasis on the fate of innocence in American fiction with some attention to the ways several writers treat the problem of establishing a distinctively "American" identity. (Prerequisite: Comp 1002 or equivalent)

Engl 1017 INTRODUCTION TO MODERN LITERATURE: POETRY (3676)

14 lessons — \$66 — 4 degree credits — text price \$12-14 — Furia

A study of modern British and American poetry organized around themes (war, the city, nature, death, love, etc.) and including such writers as Yeats, Thomas, Auden, Eliot, Frost, Cummings, and Stevens.

Engl 1018 INTRODUCTION TO MODERN LITERATURE: PROSE FICTION (3638)

16 lessons — \$66 — 4 degree credits — text price \$20-22 — Basham

The British and American novel in the 20th century: Dreiser, Lawrence, Joyce, Huxley, Faulkner, Hemingway, Steinbeck, Cary, and Bellow. (Prerequisite: Comp 1002 or equivalent)

Engl 1821 INTRODUCTION TO LITERATURE I (3621)

15 lessons — \$66 — 4 degree credits — text price \$15-17 — Warren

A chronological study of the leading English writers in poetry and prose and of their historical backgrounds, including an introduction to types of literature and literary ideas. Includes: Chaucer, Marlowe, Spenser, Shakespeare, and Milton. (Prerequisite: Comp 1002 or equivalent)

Course Descriptions

Engl 3241 SHAKESPEARE I (3655)

16 lessons — \$70 — 4 degree credits — text price \$14-16 — Shaw

The development of Shakespeare's dramatic art is traced chronologically from the earliest plays to two of the mature tragedies. The student becomes familiar with the various types of Shakespeare's drama: comedy, tragedy, and history. (Prerequisite: Comp 1002 or equivalent and 5 additional credits in English, or consent of instructor)

Engl 3242 SHAKESPEARE II (3656)

16 lessons — \$70 — 4 degree credits — text price \$14-16 — Shaw

Continuation of Engl 3241. Shakespeare's later career from 1600 to 1611. Tragedies, romantic comedies, romances, and one problem comedy. (Prerequisite: Engl 3241 or consent of instructor)

Engl 3411 AMERICAN LITERATURE I (3672)

16 lessons — \$70 — 4 degree credits — text price \$16-18 — Kurak

The development of American literature and thought from the beginnings through the early American Renaissance. Authors studied include some from the colonial and early national periods and such major figures as Poe, Emerson, Melville, and Hawthorne. (Prerequisite: Comp 1002 or equivalent and 5 additional credits in English, or consent of instructor)

Engl 3412 AMERICAN LITERATURE II (3673)

16 lessons — \$70 — 4 degree credits — text price \$22-24 — Kurak

Continuation of Engl 3411. American literature from the American Renaissance to the end of the 19th century. Among the authors studied are Thoreau, Whitman, Dickinson, Twain, James, and Crane. (Prerequisite: Engl 3411 or consent of instructor)

Engl 3413 AMERICAN LITERATURE III (3674)

16 lessons — \$70 — 4 degree credits — text price \$12-14 — Kurak

Continuation of Engl 3412. American literature from the end of the 19th century to the 1960's. Authors studied include Dreiser, Frost, Eliot, O'Neill, Cather, Fitzgerald, Faulkner, and Hemingway, as well as a selection of contemporary poets. (Prerequisite: Engl 3411 or consent of instructor)

Engl 5153 TWENTIETH CENTURY ENGLISH NOVEL (3660)

15 lessons — \$74 — 4 degree credits — text price \$16-18 — P. Reed

A study of the British novel in the 20th century, emphasizing some of its main ideas, techniques, and relationships to the history of the novel. Selected authors of historical or representative importance include Forster, Joyce, Lawrence, Woolf, Waugh, Cary, Amis, Sillitoe, Murdoch, and Burgess. (Prerequisite: Comp 1002 or equivalent and 5 additional credits in either English or Humanities)

Engl 5221 CHAUCER (3675)

21 lessons — \$74 — 4 degree credits — text price \$11-13 — Ferris

A study of *The Canterbury Tales* by Geoffrey Chaucer, the last and greatest work of the first major English poet. The course emphasizes Chaucer's varied artistry in characterization, narrative, and humor, his presentation and criticism of the society he lived in, and his relation to the great authors, such as Dante and Shakespeare, who preceded and followed him. Opportunity is given for additional reading and original critical writing. The reading is done in the original early English, but only such emphasis is put on the language as serves to illuminate the quality and meaning of the poetry. (Prerequisite: Comp 1002 or equivalent and 5 additional credits in either English or Humanities)

Engl 5261 MILTON (3692)

9 lessons — \$74 — 4 degree credits — text price \$13-15 — McNaron

Course covers the following poems: *Comus*, *Lycidas*, *Areopagitica*, *Paradise Lost*, and *Samson Agonistes*. (Prerequisite: Comp 1002 or equivalent and 5 additional credits in English, or consent of instructor)

GC 3352 PHILOSOPHY THROUGH LITERATURE (3606)

12 lessons — \$70 — 4 degree credits — text price \$10-12 — Kurak

Readings in literary forms such as the novel, short story, poetry, and drama provide instances of broad philosophical problems including individualism and responsibility, free will

Course Descriptions

and determinism, knowledge and values, and the status of the artist in society. Essays in philosophy will be read to acquaint students with various philosophic perspectives and to illustrate the contrast between Western and Oriental world views.

Entomology

Ent 0004C PRINCIPLES OF BEEKEEPING (1004)

16 lessons — \$49.50 — 3 certificate credits — text price \$9-11 — Furgala
Useful to both the nonexperienced and experienced beekeeper. History of beekeeping, life history and behavior of honey bees; colony and apiary management; pollination and hive products; honey bee diseases and their control.

Family Studies

FSoS 1001 THE DYNAMICS OF DATING, COURTSHIP, AND MARRIAGE (4101)

10 lessons — \$49.50 — 3 degree credits — text price \$22-24 — R. Bell
Designed to improve interpersonal relations and self-understanding. Includes a discussion of communication, dating and love involvement, changing sex roles, human sexuality, mate selection and engagement, marital interaction, marital conflict, parenthood and the family in American society.

FSoS 5001 HUMAN SEXUAL BEHAVIOR (4103)

12 lessons — \$74 — 4 degree credits — text price \$11-15 — Engel
Examination of biological, psychological, and social aspects of human sexuality. Topics include: sex education; sexual communication; sex in literature, history, and religion; sexual anatomy and physiology; birth control; pregnancy and childbirth; childhood sexuality, adolescent sexuality, adult sexuality, and sexuality in old age; sexual attitudes and behaviors of today, the sexual revolution; sexual motivation, attraction, arousal, and stimulation; sexual intercourse, orgasm, and satisfaction; sexual problems and dysfunction; homosexuality; pornography, prostitution, and rape; human liberation, sex roles and sexism. Goals of the course include increased awareness and acceptance of oneself and others as sexual human beings; and increased comfort in dealing with and talking about sexuality. (Prerequisite: Introductory course in psychology, sociology, or equivalent, or consent of instructor)

FSoS 5210 FAMILY IN WORLD PERSPECTIVE (4105)

15 lessons — \$92.50 — 5 degree credits — text price \$17-19 — Henry
The course will emphasize comparison of kinship, marriage, family organization, the family life cycle, and modes of family functioning across cultures. It will also concern itself with the relationship of the family to the economic, the political, the religious, and other social institutions, with particular attention being addressed to the adaptive techniques of the family to industrialization and urbanization. It is hoped that the student will be stimulated to an appreciation of the essential similarities among peoples and kinship groupings across cultures.

FSoS 5210 FAMILY IN WORLD PERSPECTIVE (K413)

\$74 — 4 degree credits — Henry
Same as above. This course will be aired on KUOM Radio 770, Spring 1978.

FSoS 5240 UNDERSTANDING DIVORCE (T413)

\$74 — 4 degree credits — Nevaldine, Hey
This course is designed to help individuals, couples, families, and professionals achieve an understanding of both the legal/civil process of divorce and the personal affective/emotive processes of divorce, including the troubled marriage and marital breakdown, the social context of divorce, social-psychological aspects of divorce, the child and divorce, legal and economic perspectives of divorce, reentry into the single life and post-divorce adjustment, counseling for divorced and divorcing individuals, and remarriage. This course will be broadcast over KTCA-TV Channel 2, Fall 1977, and will be available as a video cassette course Winter 1978.

GC 1722 PARENT-CHILD RELATIONSHIPS (A411)

Audio Cassette Course — \$66 — 4 degree credits — text price \$12-14 — 13 audio cassettes \$18.25 — Latts

An interdisciplinary course aimed at helping students to develop their own philosophy of child rearing — attitudes, principles, and perspectives that will guide them in their relations to their children and performance of their parental responsibilities. Focus is on helpful information related to crises of parenthood. Relevant research is used to emphasize principles of parent-child relations and to prepare students for tasks of parenthood. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Finnish

See Scandinavian Languages

Fire Protection

FPro 0002C HAZARDOUS MATERIALS AND PROCESSES I (5002)

10 lessons — \$49.50 — 3 certificate credits — text price \$25-27 — Berg

The first course of a three-course sequence is designed to give the student an understanding of the basic physical and chemical laws underlying the behavior of matter. The behavior and reactions of water to other substances are critically discussed. Terminologies and regulations given in various handbooks are explained so that the student attains fast and easy access to the data. **This course is now in preparation; please inquire before enrolling.**

FPro 0003C HAZARDOUS MATERIALS AND PROCESSES II (5003)

10 lessons — \$49.50 — 3 certificate credits — text price \$14-16 — Berg

The second course in the sequence is a continuation of the study of the physics and chemistry of matter and its relation to fire situations. It enlarges on the study of metals, plastics, and oxidizing materials. Means of fire suppression are also studied. (Prerequisite: FPro 0002C) **This course is now in preparation; please inquire before enrolling.**

FPro 0004C HAZARDOUS MATERIALS AND PROCESSES III (5006)

10 lessons — \$49.50 — 3 certificate credits — text price \$15-17 — Berg

Explosion hazards and handling of unusual materials, e.g., rocket fuels and radioactive materials, are studied. The physiological implications of hazardous materials are analyzed. (Prerequisite: FPro 0003C) **This course is now in preparation; please inquire before enrolling.**

FPro 0005C FIRE PREVENTION AND CONTROL (5004)

11 lessons — \$49.50 — 3 certificate credits — text price \$25-50 — Buresh

In addition to the traditional fire prevention methods that govern the maintenance of buildings and premises, the course develops an interrelationship between the design and construction features that relate to maintaining the protection provided through the enforcement of a building code; in short, the built-in control that keeps a small fire small. The course is designed to expose the student to the many aspects of fire prevention and control and provide the background for recognizing, researching, and developing practical solutions to fire prevention and control problems. S/N grading only.

FPro 0006C FIRE PROTECTION AND LIFE SAFETY SYSTEMS IN BUILDING DESIGN (5005)

9 lessons — \$49.50 — 3 certificate credits — text price \$6-8 — Bose

The major systems for protecting the occupants of modern buildings from the hazards of fire, smoke, and similar unsafe conditions are studied here. Offered as a professional development course of study, it can be helpful to members of the fire services, architects, engineers, building inspectors, and others with life safety responsibilities within buildings. While a certain amount of technical subject matter is included, a minimal technical background is sufficient for a good comprehension of the subject.

FPro 0007C PRIVATE FIRE PROTECTION SYSTEMS — ELEMENTS (5008)

10 lessons — \$49.50 — 3 certificate credits — text price \$44 — Anderson

A nonmathematical examination of the elements of private fire protection, including portable

Course Descriptions

extinguishers, fixed carbon dioxide and halon systems, water supplies and automatic sprinklers. Coordination of private and public fire response.

FPro 0008C PRIVATE FIRE PROTECTION SYSTEMS — APPLICATIONS (5009)

10 lessons — \$49.50 — 3 certificate credits — text price \$13-17 — Anderson

Students will study quantitative applications of the elements of private fire protection. Simplified mathematical treatment of preliminary design layout presented as a course project. (Prerequisites: FPro 0007C and intermediate algebra) **This course is now in preparation; please inquire before enrolling.**

FPro 0009C FIRE DEPARTMENT ADMINISTRATION (5007)

10 lessons — \$49.50 — 3 certificate credits — text price \$21-23 — J. Bell

Analysis of objectives, organization, and management of municipal fire departments, including a brief historical review. The relationships the fire department has with associate municipal departments, the municipal organizational structure, and the community are examined. A variety of administrative areas will be considered to strengthen the fire officer's knowledge and skill in the decision-making process.

Food Science and Nutrition

FScN 1010 MAN'S FOOD (4301)

16 lessons — \$66 — 4 degree credits — text price \$32-34 — Morris

This course concentrates on such topics as man's nutritional needs, food composition, world food supply, consumption patterns, food acceptance, food fads, quality programs and regulations, food preservation, commercial processes, packaging, marketing, national and international food programs.

Forestry

FR 1201 CONSERVATION OF NATURAL RESOURCES (4201)

16 lessons — \$49.50 — 3 degree credits — text price \$7-9 — Scholten

Current status, utilization, and sound management of natural resources with emphasis on the ecological approach. Conservation principles and their application to soil, water, forests, grasslands, wildlife, minerals, and energy sources.

ForP 5408 WOOD: THE MATERIAL FOR TODAY AND TOMORROW (T421)

\$74 — 4 degree credits — Bowyer, Erickson, Gertjeansen, Haygreen and Hendricks

Softwood, hardwood, old wood, new wood. Wood in its many uses is the subject of this course whether you're interested in home products or industrial uses. Topics to be discussed include the nature of wood and various wood by-products; wood in construction; proper use and maintenance of wood-based materials; supply and demand for wood; wood and the U.S. forest policy; and wood products of the future. **This course will be broadcast over KTCV-TV Channel 2, Winter 1978.**

French

Fren 0001 FRENCH FOR GRADUATE STUDENTS (5717)

16 lessons — \$49.50 — no credit — text price \$6-8 — Akehurst

Fundamentals of grammar; reading of appropriate prose. Prepares for graduate reading examination in French.

Fren 1101 BEGINNING FRENCH I (5704)

16 lessons — \$82.50 — 5 degree credits — text price \$14-16 — 7 audio cassettes \$10.25 —

Akehurst

An audio-lingual approach to elementary French, adapted for home use. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Course Descriptions

Fren 1102 BEGINNING FRENCH II (5705)

16 lessons — \$82.50 — 5 degree credits — text price \$14-16 — 13 audio cassettes \$18.25 — Akehurst

Continuation of French 1101. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Fren 1103 BEGINNING FRENCH III (5706)

17 lessons — \$82.50 — 5 degree credits — text price \$8-10 — 7 audio cassettes \$10.25 — Akehurst

Continuation of French 1102. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Gardening

See Horticultural Science

General College

As nearly as possible, General College courses are planned to be complete in themselves. Emphasis is on relationships within and among fields of knowledge rather than intensive study of isolated segments. Most courses do not have prerequisites.

Please refer to the following pages for General College course offerings:

- GC 1048 Basic Craft Skills, p. 13
- GC 1071 Introduction to Aging, p. 47
- GC 1161 Solar Astronomy, p. 13
- GC 1162 Stellar Astronomy, p. 13
- GC 1221 Minnesota History, p. 33
- GC 1222 People Power: The World of Practical Politics, p. 43
- GC 1235 Law in Society, p. 15
- GC 1283 Psychology of Human Development, p. 47
- GC 1355 Ethics, p. 41
- GC 1404 Vocabulary Building, p. 62
- GC 1445 Mathematics: Intermediate Algebra, p. 38
- GC 1511 Introduction to Modern Business, p. 15
- GC 1513 Principles of Small Business Operation, p. 15
- GC 1531/3531 Business Writing/Writing for Business and the Professions, p. 22
- GC 1534 Practical Law, p. 15
- GC 1535 Introduction to Data Processing, p. 18
- GC 1537 Salesmanship, p. 15
- GC 1572 Introduction to Block Diagramming and Programming, p. 18
- GC 1631 The Helping Process in the Social Services, p. 47
- GC 1637 Supervised Work Experience in the Social Services, p. 47
- GC 1722 Parent-Child Relationships, p. 25
- GC 1731 Consumer Problems, pp. 15, 16
- GC 3238 Power and the Individual, p. 43
- GC 3292 Geographic Perspectives of Urban Problems of the Twin Cities, p. 28
- GC 3352 Philosophy Through Literature, p. 23
- GC 3355 Moral Choices in Contemporary Society, p. 41
- GC 3841 Minnesota Resources, p. 28

Course Descriptions

Geography

Geog 1973/3973 GEOGRAPHY OF THE TWIN CITIES (V441/V442)

Video Cassette Course — \$66/\$70 — 4 degree credits — text price \$5-7 — study guide \$6 — Lukermann

The development of the Twin Cities as a metropolitan regional center: evolution of the urban settlement and the regional economy; role and function of Minneapolis, St. Paul, and the neighborhoods as separate entities; future of the Twin Cities as a regional and national metropolis. **Students may not receive credit for both Geog 1973 and Geog 3973. Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

Geog 3101 GEOGRAPHY OF THE UNITED STATES AND CANADA (4453)

14 lessons — \$70 — 4 degree credits — text price \$13-15 — Steinhauser

Provides an opportunity to study and evaluate the character and diversity of the various regions of the United States and Canada. The influence of both cultural and physical environments upon people and their use of the land is emphasized. Cities are observed as the dominant feature of the technological-industrial complex. Problems are considered on both a national and regional basis.

Geog 3111 GEOGRAPHY OF MINNESOTA (4407)

14 lessons — \$70 — 4 degree credits — text price \$8-10 — Steinhauser

The quality of life in Minnesota is observed within the context of the American Dream and the Good Life. Minnesota's resources — its people, physical environment and economic activities — provide the materials necessary for gaining knowledge and understanding of the state. The development of Minnesota's urban service centers is studied. **Also see GC 3841. Students may not receive credit for both Geog 3111 and GC 3841.**

Geog 3121 GEOGRAPHY OF SOUTH AMERICA (4450)

14 lessons — \$70 — 4 degree credits — text price \$17-19 — Steinhauser

Provides an opportunity to study and evaluate the character and diversity of the South American continent. Individual countries and major regions within them are analyzed. The influence of both cultural and physical elements upon people and their use of the land is emphasized. Problems are considered on both a national and regional basis.

Geog 3181 GEOGRAPHY OF THE U.S.S.R. (4452)

14 lessons — \$70 — 4 degree credits — text price \$17-19 — Steinhauser

Provides an opportunity to study and evaluate the character and diversity of the regions of the Soviet Union. The major regions are observed from a cultural, physical, and economic viewpoint. Following the study of the regions, the Soviet Union is presented by topical analysis of cultural and economic phenomena including foreign trade, aid, and international relations.

GC 3292 GEOGRAPHIC PERSPECTIVES OF URBAN PROBLEMS OF THE TWIN CITIES (4408)

14 lessons — \$70 — 4 degree credits — text price \$8-10 — Steinhauser

The focus of this course is on the Twin Cities Metro Area, with emphasis on the two central cities of Minneapolis and St. Paul. The historical development of the Twin Cities is perceived within the context of the physical environment. Efforts to centralize decision making and a number of current problems are studied. Selected communities are included. **This course is now in preparation; please inquire before enrolling.**

GC 3841 MINNESOTA RESOURCES (4407)

14 lessons — \$70 — 4 degree credits — text price \$3-5 — Steinhauser

See Geog 3111. Course available for credit in either Geography or General College. **Students may not receive credit for both Geog 3111 and GC 3841.**

Geology and Geophysics

Geo 1001 PHYSICAL GEOLOGY (4501)

18 lessons — \$82.50 — 5 degree credits — text price \$12-14 — Sloan

An introduction to general geology. Survey of the main features of the physical world and

Course Descriptions

the processes that have evoked them. Topics include: maps, rock formation, weathering, soils, deserts, oceans, and the phenomena of earthquakes, glaciers, and volcanoes.

Geo 1006 HISTORICAL GEOLOGY (4502)

16 lessons — \$49.50 — 3 degree credits — text price \$10-12 — Sloan
Evolution of the earth from its origin to the present, with special attention to the succession of physical and biological events of the past 600 million years; emphasis on the geological history of the North American continent. (Prerequisite: Geo 1001 or Geo 1111)

Geo 5151 INTRODUCTION TO PALEONTOLOGY (4551)

18 lessons — \$92.50 — 5 degree credits — text price (including fossil kit) \$41-43 — Sloan
An introduction to morphology and classification of major fossil groups. The use of fossils in the study of evolution, along with methods of collection and identification, are emphasized. (Prerequisite: Geo 1002 or Geo 1112, or introductory college biology)

German

Ger 0221 GERMAN FOR GRADUATE STUDENTS I (5817)

16 lessons — \$49.50 — no credit — text price \$9-11 — Menze
Designed to help graduate students acquire a reading knowledge of basic German as rapidly as possible. (Not intended to be preparation for the Graduate German Reading Examination, but the first step toward that objective.) Assumes no knowledge of German on the part of the student. Grammar is reduced to an essential minimum. Progresses from intensive reading of simple, graded material to selections of moderate difficulty. Vocabulary building and word formation are emphasized.

Ger 0222 GERMAN FOR GRADUATE STUDENTS II (5818)

21 lessons — \$66 — no credit — text price \$6-8 — Menze
Designed to give graduate students experience in intensive reading of German literary texts. Students may satisfy the German language requirement for an advanced degree by achieving a grade of "B" or better on the final examination. (Prerequisite: Ger 0221 or 2 years of high school German)

Ger 1101 BEGINNING GERMAN I (5805)

16 lessons — \$82.50 — 5 degree credits — text price \$11-13 — Conant
Grammar and easy composition. Intended to give a student a knowledge of the elements of German grammar and the facility to read and to write German sentences.

Ger 1102 BEGINNING GERMAN II (5806)

16 lessons — \$82.50 — 5 degree credits — text price \$11-13 — Conant
Continuation of Ger 1101. (Prerequisite: Ger 1101 or 1 year of high school German) **This course is now in preparation; please inquire before enrolling.**

Ger 1103 BEGINNING GERMAN III (5803)

27 lessons — \$82.50 — 5 degree credits — text price \$10-12 — Menze
Grammar and composition continued; selected readings in easy prose. (Prerequisite: Ger 1102 or 2 years of high school German)

Ger 1301 INTERMEDIATE GERMAN (5804)

26 lessons — \$82.50 — 5 degree credits — text price \$9-11 — Menze
Reading of 11 short stories of medium difficulty and one drama; composition continued. (Prerequisite: Ger 1103 or 3 years of high school German)

Ger 3011 ELEMENTARY COMPOSITION I (5857)

11 lessons — \$35 — 2 degree credits — text price \$8-10 — Menze
A review of the fundamentals of German grammar with particular attention to the idioms and characteristics of written German. Practice in writing original compositions. (Prerequisite: Ger 1301)

Course Descriptions

Ger 3012 ELEMENTARY COMPOSITION II (5858)

11 lessons — \$35 — 2 degree credits — text price \$8-10 — Menze
Continuation of Ger 3011; grammar, idioms, and characteristics of written German. Further practice in writing original compositions. (Prerequisite: Ger 3011)

Ger 3013 ELEMENTARY COMPOSITION III (5859)

11 lessons — \$35 — 2 degree credits — text price \$5-7 — Menze
Intensive practice in the use of conversational and written German and in the writing of original compositions. (Prerequisite: Ger 3012)

Ger 3311 DRAMA: THE CLASSICAL PERIOD (5873)

16 lessons — \$70 — 4 degree credits — text price \$11-13 — Menze
Selected plays of Lessing, Schiller, and Goethe, with assigned readings and one report. (Prerequisite: Ger 1301 or consent of instructor)

Ger 3312 DRAMA: THE 19TH CENTURY (5874)

16 lessons — \$70 — 4 degree credits — text price \$10-12 — Menze
Selected plays of Kleist, Grillparzer, and Hebbel, with assigned readings and one report. (Prerequisite: Ger 3311 or consent of instructor)

Ger 3313 DRAMA: THE MODERN PERIOD (5875)

16 lessons — \$70 — 4 degree credits — text price \$11-13 — Menze
Selected plays representing the more recent movements in German literature — naturalism, impressionism, expressionism. Includes assigned readings and one report. (Prerequisite: Ger 3312 or consent of instructor)

Ger 3321 GERMAN PROSE OF THE 19TH CENTURY (5876)

16 lessons — \$70 — 4 degree credits — text price \$4-6 — Menze
Selected novellen by Grillparzer, Stifter, Keller, and Storm. (Prerequisite: Ger 1301 or consent of instructor)

Ger 3322 GERMAN PROSE OF THE 19TH AND 20TH CENTURIES (5877)

16 lessons — \$70 — 4 degree credits — text price \$9-11 — Menze
Selected novellen by Gerhart Hauptmann, Arthur Schnitzler, Thomas Mann, Richarda Huch, Wilhelm Schafer, and Hermann Hesse. (Prerequisite: Ger 3321 or equivalent)

Ger 3323 GERMAN PROSE OF THE 20TH CENTURY (5878)

16 lessons — \$70 — 4 degree credits — text price \$9-11 — Menze
Selected novellen by Franz Kafka, Robert Musil, Wolfgang Borchert, Heinrich Böll, and other renowned mid-century prose writers. (Prerequisite: Ger 3322 or equivalent)

Greek

See Classics

History

Hist 1001 INTRODUCTION TO MODERN EUROPEAN HISTORY I (4701)

12 lessons — \$66 — 4 degree credits — text price \$20-22 — Harris
A survey of European history to the 18th century. Emphasis is on the rise of the nation state and the role of Christianity and exploration in its development.

Hist 1002 INTRODUCTION TO MODERN EUROPEAN HISTORY II (4702)

12 lessons — \$66 — 4 degree credits — text price \$20-22 — Harris
A survey of European history in the 18th and 19th centuries. Emphasis is on the struggle for control of the state, the Age of Reason, the French Revolution.

Hist 1003 INTRODUCTION TO MODERN EUROPEAN HISTORY III (4703)

12 lessons — \$66 — 4 degree credits — text price \$20-22 — Harris
A survey of European history in the 19th and 20th centuries. Emphasis is on the impact of

Course Descriptions

industrialization on 19th-century civilization and the development of the international problems of the 20th century.

Hist 1051 HISTORY OF ANCIENT CIVILIZATION I (4714)

16 lessons — \$49.50 — 3 degree credits — text price \$16-18 — Jones

Survey of the rise and flowering of the Ancient Near East from the earliest times to 500 B.C. Emphasis is on the origin of culture and its development in complexity from the primitive to the civilized stage. Special attention is given to the civilizations of Babylonia, Egypt, Indus Valley, Syria, Palestine, and Crete. **Also see Hist 1061.**

Hist 1052 HISTORY OF ANCIENT CIVILIZATION II (4715)

16 lessons — \$49.50 — 3 degree credits — text price \$22-24 — Jones

History of the rise and flowering of Greek civilization from the earliest times to the death of Alexander the Great in 323 B.C. Special emphasis is placed on Greek civilization in the fifth century (Age of Pericles) with attention to the political, social, literary, artistic, and philosophic achievements of that period. (No prerequisite; Hist 1051 helpful in providing background for the Greek period) **Also see Hist 1062.**

Hist 1053 HISTORY OF ANCIENT CIVILIZATION III (4716)

16 lessons — \$49.50 — 3 degree credits — text price \$31-33 — Jones

The climax of ancient civilization during the Hellenistic Age (323-133 B.C.) and the Roman Imperial Period followed by the decline of Rome and of ancient civilization (to about A.D. 300). The three main topics to be considered are civilization of the ancient world at its peak, rise and flowering of Roman culture, and reasons for the decline of ancient civilization. Special attention will be paid to political institutions, art, literature, economics and society, philosophy, and ancient science. (No prerequisite; Hist 1051 and 1052 recommended for background) **Also see Hist 1063.**

Hist 1061 BASIC READINGS IN ANCIENT CIVILIZATION I (4717)

12 lessons — \$33 — 2 degree credits — text price \$9-11 — Jones

An introduction to ancient history as a discipline: the principles of historical analysis and criticism as well as the methods and techniques used in the reconstruction of the past. Among the topics considered are archaeological excavation; use of evidence provided by pottery, coins, and other artifacts; type problems posed by literary sources; ancient Near Eastern literature, the Greek epic, and the meaning of the Old Testament as a literary and historical document. (Prerequisite: Hist 1051 or concurrent registration)

Hist 1062 BASIC READINGS IN ANCIENT CIVILIZATION II (4718)

12 lessons — \$33 — 2 degree credits — text price \$16-18 — Jones

An introduction to the major authors of the Classical Greek period. Selections from poets, dramatists, Herodotus, Thucydides, Xenophon, orators, Plato, and Aristotle. (Prerequisite: Hist 1052 or concurrent registration)

Hist 1063 BASIC READINGS IN ANCIENT CIVILIZATION III (4719)

12 lessons — \$33 — 2 degree credits — text price \$20-22 — Jones

An introduction to the literature of the Hellenistic and Roman periods. Selections from poetry, drama, history, biography, science, philosophy, oratory, and letters. The New Testament and early Christian writings will be considered in their relation to pagan literature. (Prerequisite: Hist 1053 or concurrent registration)

Hist 1101/3101 MEDIEVAL AND RENAISSANCE HISTORY I (4731/4732)

12 lessons — \$66/\$70 — 4 degree credits — text price \$29-31 — B. Bachrach

This is a three-course sequence, and part one (1101/3101) covers the period from the fall of the Roman Empire to circa 900. Students enrolling in the 3000-level course will be expected to do additional work.

Hist 1102/3102 MEDIEVAL AND RENAISSANCE HISTORY II (4733/4734)

12 lessons — \$66/\$70 — 4 degree credits — text price \$26-28 — B. Bachrach

Part two of this three-course sequence covers the High Middle Ages. Students enrolling in the 3000-level course will be expected to do additional work.

Hist 1103/3103 MEDIEVAL AND RENAISSANCE HISTORY III (4735/4736)

12 lessons — \$66/\$70 — 4 degree credits — text price \$42-44 — B. Bachrach

Course Descriptions

Part three of this three-course sequence covers the later Middle Ages and the Renaissance. Students enrolling in the 3000-level course will be expected to do additional work.

Hist 1151/3151 ENGLISH HISTORY I (4709/4710)

12 lessons — \$66/\$70 — 4 degree credits — text price \$25-27 — D. Bachrach

Part one of a two-part sequence covers the history of England from earliest times to the death of Queen Elizabeth I. Students enrolling in the 3000-level course will be expected to do extra work.

Hist 1152/3152 ENGLISH HISTORY II (4711/4712)

12 lessons — \$66/\$70 — 4 degree credits — text price \$25-27 — D. Bachrach

Part two of this two-part sequence covers the period from the Stuart Accession through the Cold War. Students enrolling in the 3000-level course will be expected to do additional work.

Hist 1301 AMERICAN HISTORY I (4728)

12 lessons — \$66 — 4 degree credits — text price \$14-16 — Pearson

United States history from colonial times to Reconstruction. A survey course emphasizing political, economic, social, and diplomatic history of the U.S. to 1877.

Hist 1302 AMERICAN HISTORY II (4729)

12 lessons — \$66 — 4 degree credits — text price \$14-16 — Pearson

United States history survey course from 1865 to the present.

Hist 1451/3451 ASIAN CIVILIZATIONS I (4741/4744)

15 lessons — \$66/\$70 — 4 degree credits — \$21-23 — Kopf

Ancient societies in East, South, and West Asia. Students enrolling in the 3000-level course will be expected to do extra work.

Hist 1452/3452 ASIAN CIVILIZATIONS II (4742/4745)

12 lessons — \$66/\$70 — 4 degree credits — text price \$34-36 — Kopf

Fifth through the 18th centuries. Students enrolling in the 3000-level course will be expected to do extra work.

Hist 1453/3453 ASIAN CIVILIZATIONS III (4743/4746)

15 lessons — \$66/\$70 — 4 degree credits — text price \$21-23 — Kopf

The modern era. Students enrolling in the 3000-level course will be expected to do extra work.

Hist 3611 JEWISH-CHRISTIAN RELATIONS IN MEDIEVAL EUROPE I (4747)

12 lessons — \$70 — 4 degree credits — text price \$35-40 — B. Bachrach

An examination of the Jewish community in medieval Europe from the dissolution of the Roman Empire until 877 A.D., with particular emphasis on relations between Jews and Christians, the formulation of Jewish policy, Jewry Law, and the implementation of such policies and laws. **This course is now in preparation; please inquire before enrolling.**

Hist 3612 JEWISH-CHRISTIAN RELATIONS IN MEDIEVAL EUROPE II (4748)

12 lessons — \$70 — 4 degree credits — text price \$35-40 — B. Bachrach

An examination of the Jewish community in medieval Europe from the dissolution of the Carolingian Empire until the eve of the Reformation. Particular emphasis will be placed on relations between Jews and Christians, the formulation of Jewish policy, Jewry Law, and the implementation of such policies and laws. **This course is now in preparation; please inquire before enrolling.**

Hist 3970 THE AGE OF UNCERTAINTY (T472)

\$70 — 4 degree credits — Green

A personal view by economist and best-selling author John Kenneth Galbraith of the history of social thought and political economy during the last 200 years. A 13-part discussion of the origins of modern capitalism as reflected in contemporary institutions such as the multi-national corporation, the military-industrial complex, and the crises of our cities, continuing inflation, and recession. Coordinated locally by Professor George Green. **This course will be broadcast over KTCA-TV Channel 2 and other educational television stations, Fall 1977.**

Course Descriptions

Hist 5051 HISTORY OF THE ANCIENT NEAR EAST I (4783)

16 lessons — \$55.50 — 3 degree credits — text price \$26-29 — Jones

The first civilization in the Ancient Near East. Main topics: archaeology; the beginnings of agriculture and the advent of civilization in the great river valleys; the Old Kingdom in Egypt and the Sumerian period in Mesopotamia; the Egyptian Middle Kingdom; the Age of Hammurabi; characteristics of ancient Near Eastern civilization. (Prerequisite: Junior or Senior, or 9 credits in history)

Hist 5052 HISTORY OF THE ANCIENT NEAR EAST II (4784)

16 lessons — \$55.50 — 3 degree credits — text price \$5-7 — Jones

The Age of Empires: 1600-1000 B.C. Main topics: the New Kingdom (Empire) in Egypt; the Hittite Empire; developments in Syria and Palestine with special attention to the Canaanites, Philistines and Hebrews; the spread of civilization to Asia Minor and Aegean lands. (Prerequisite: Junior or Senior, or 9 credits in history)

Hist 5266 MODERN RUSSIA III (4790)

9 lessons — \$55.50 — 3 degree credits — text price \$31-33 — Stavrou

Russia in the 20th century: the fall of the Russian monarchy, the 1917 revolutions, and the Soviet regime.

Hist 5274 THE MODERN NEAR EAST: THE OTTOMAN EMPIRE AND THE SUCCESSOR STATES (4799)

16 lessons — \$74 — 4 degree credits — text price \$7-9 — Stavrou

Covers the period from the Treaty of Jassy (1792) to the Congress of Berlin (1878).

Hist 5284 DIPLOMATIC HISTORY OF EUROPE IN THE 19TH AND 20TH CENTURIES I (4801)

12 lessons — \$74 — 4 degree credits — D. Bachrach

This course covers European diplomatic history from the Congress of Vienna to the unification of Germany and Italy. **This course is now in preparation; please inquire before enrolling.**

GC 1221 MINNESOTA HISTORY (4708)

15 lessons — \$82.50 — 5 degree credits — text price \$13-15 — Moen

An introduction to the people and institutions of the state. Topics surveyed are geography, exploration, frontier settlement, changes forced upon Indian people, statehood, economic development, parties and politics, and education, arts, and letters.

Horse Production

See Animal Science

Horticultural Science

Hort 1010 HOME LANDSCAPE GARDENING AND DESIGN (5151)

13 lessons — \$49.50 — 3 degree credits — text price \$20-22 — Phillips

Working knowledge of propagation and culture of common landscape materials: turf, flowers, trees, and shrubs. Principles and practices of gardening; prepared for beginners, but also valuable for the advanced or experienced gardener. Textbook assignments and home projects in propagating plants for the garden. Topics include: planting, transplanting, seeds, soils, fertilizers, preparing beds and planting areas, selecting a good garden site, controlling insects and diseases, weeding, watering, cultivating, pruning, tools and equipment. Also discusses varieties of annuals, perennials, bulbs, and roses recommended for northern gardens.

Hort 1010 HOME LANDSCAPE GARDENING (T511)

\$66 — 4 credits — Hard

Basic introduction to a working knowledge of home landscape gardening and design. Topics include propagation and culture of common house plants and landscape materials — turf, flowers, trees, and shrubs. Illustration of various techniques to enable the home gardener to gain confidence in planning and caring for indoor and outdoor plants. Assumes little or no previous experience with plants. **This course will be broadcast over KTCA-TV Channel 2, Fall 1977.**

Course Descriptions

Hort 3026 RESIDENTIAL LANDSCAPE DESIGN (5162)

13 lessons — \$70 — 4 degree credits — text price \$15-17 — Phillips
Principles of landscape design with special reference to their practical application in planning residential landscapes. Relationships of landscape design, architectural design, and interior design. Students will study landscape drafting techniques with the aim of developing a practical home landscape plan, assisted by guidance and suggestions by the instructor. This course is designed for home owners, prospective home owners, nurserymen, florists, and teachers of technical courses in ornamental horticulture and landscaping, vocational agriculture, vocational horticulture, and gardening.

Hospital Administration

See Special Courses and Programs (General Information section)

How to Study

See Study Skills

Humanities

Hum 1001 FROM ENLIGHTENMENT TO REVOLUTION: OUR 18TH CENTURY HERITAGE (V521)

Video Cassette Course — \$82.50 — 5 degree credits — text price \$17-19 — study guide \$5 — Krauss-Christensen

Explores culture of 18th century Europe and its impact on colonial America. Investigates important works of philosophy, literature, music, art, and architecture. **Enrollment is restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

Hum 1011 EUROPEAN HERITAGE (5209)

15 lessons — \$82.50 — 5 degree credits — Ouren

This course deals with Greek culture and Greece as the birthplace of Reason. The course traces the development of Greek thought and literature from the Homeric epic, through Greek tragedy and comedy, to the Dialogues of Plato. **This course is now in preparation; please inquire before enrolling.**

Hum 1101 HUMANITIES IN THE MODERN WORLD I (5201)

16 lessons — \$49.50 — 3 degree credits — text price \$11-14 — Ouren

This course deals with the Enlightenment and Romanticism as 18th century responses to the Modern World. The first part of the course centers on a discussion of reason, human nature, and the problem of evil in Pope, Voltaire, and Rousseau. Goethe's *Faust* and Tolstoy's *War and Peace* represent later German and Russian reactions to these perennial themes. Note: A 5-credit revision of this correspondence course is now in progress. You may enroll immediately in the 3-credit course described above or write for information on the new course.

Hum 1002 HUMANITIES IN THE MODERN WORLD II (5202)

16 lessons — \$82.50 — 5 degree credits — text price \$12-14 — Bisztry

Industrial Revolution, romanticism, socialism, individualism. Selected documents of economic and socialist theory and the romantic movement; representative works by Zola, Ibsen, Dostoevsky, Tolstoy.

Hum 1103 HUMANITIES IN THE MODERN WORLD III (5203)

16 lessons — \$49.50 — 3 degree credits — text price \$17-19 — Kanun

The impact of science — especially Darwinism — on philosophy, religion, and the prevailing values of western Europe from about the middle of the 19th century to the opening of World War I. Intellectual roots of existentialism. Writings by influential scientists and philosophers of the age. Note: A 5-credit revision of this course is now in progress. You may enroll immediately in the 3-credit course described above or write for information on the new course.

Hum 1104 HUMANITIES IN THE MODERN WORLD IV (5204)

16 lessons — \$49.50 — 3 degree credits — text price \$14-16 — Kanun
Civilization between two wars; the impact of psychoanalysis; a critique of communism; a prediction of the future. Covers the period from World War I to the present. Authors studied include: Huxley, Bellamy, Freud, O'Neill, Lenin, Malraux, Koestler. Note: A 5-credit revision of this course is now in progress. You may enroll immediately in the 3-credit course described above or write for information on the new course.

Industrial Engineering/Operations Research

IEOR 0210C MOTION AND TIME STUDY ENGINEERING (3118)

27 lessons — \$82.50 — 5 certificate credits — text price \$15-17 — Gunderson
Efficient plant operation and accurate wage determination; the skeletal structure of methods analysis, process analysis, operation analysis, micromotion study, motion study problems; the skeletal structure of time study, breakdown of job into elements, determination of time consumed, job rating; personal, fatigue, and delay allowances; timing techniques for typical industrial operation; time study problems.

Industrial Relations

IR 0001C SUPERVISION I (2231)

11 lessons — \$49.50 — 3 certificate credits — text price \$12-14 — Hundley
A general discussion of basic principles of supervision in the office and factory. Survey of principles for the handling of day-to-day problems of supervisors with emphasis on human relations aspects of such problems. Deals with selection, induction, and training of new employees, role of the supervisor, communication, employee appraisal, giving orders, handling grievances, discipline, and employee morale.

IR 3002 SYSTEMS OF INDUSTRIAL RELATIONS: LABOR MARKETING (2252)

12 lessons — \$70 — 4 degree credits — text price \$24-26 — Roberts
Introductory analysis of employment relationships, emphasizing economic analysis. Fundamentals of application and conservation of human resources in employment with consideration of related social and economic problems. Labor marketing, collective bargaining, unions and employer associations, industrial unrest and conflict, employment and unemployment, wage problems. (No prerequisite; introductory courses in the principles of economics [Econ 1001, 1002] will be helpful.)

IR 3012 SYSTEMS OF INDUSTRIAL RELATIONS: MANPOWER MANAGEMENT (2272)

13 lessons — \$70 — 4 degree credits — text price \$16-18 — Scarpello
Introductory analysis of personnel management and labor relations. The strengths and weaknesses of current practices in recruiting, testing, interviewing, training, and compensation. An examination of the influence of manpower management on the organization and the individual.

Insurance

Ins 3100 RISK MANAGEMENT AND INSURANCE (2353)

20 lessons — \$70 — 4 degree credits — text price \$14-16 — Williams
How to recognize and evaluate the property, liability, and personnel risks facing a business firm, a family, or some other economic unit. The tools of risk management — retention, loss control, and insurance — and the conditions under which they should be used. How to select and deal with an insurer. Public policy issues — government regulation and social insurance.

Ins 3210 ECONOMIC AND SOCIAL SECURITY (A211)

Audio Cassette Course — \$70 — 4 degree credits — text price \$11-13 — 14 audio cassettes \$19.75 — Williams
See Econ 5534. Course available for credit in either Economics or Insurance. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Course Descriptions

Japanese

See East Asian Languages

Journalism and Mass Communication

Journalism majors should follow requirements for pre-journalism major as shown in the **College of Liberal Arts Bulletin**.

Jour 1001 INTRODUCTION TO MASS COMMUNICATIONS (3701)

6 lessons — \$33 — 2 degree credits — text price \$7-9 — Sim

The nature, functions, and responsibilities of communications media and agencies from the point of view of professional journalists. News, opinion, entertainment, and persuasion functions; specialized communication; aspects of advertising. (Prerequisite: Comp 1002 or equivalent)

Jour 1101 REPORTING (3714)

16 lessons — \$82.50 — 5 degree credits — text price \$14-16 — Sim

Fact gathering and journalistic writing. Many exercises in straight news and types of news features. Problems in judgment and handling of news and feature values, interviews. (Prerequisite: Jour 1001)

Jour 1201 PRINCIPLES OF ADVERTISING (3715)

16 lessons — \$66 — 4 degree credits — text price \$14-16 — Thompson

Survey course covering basic theory of advertising, its social and economic effects; its role in marketing products, ideas, and services; the media of advertising, their uses, strengths, and limitations; basic concepts in the preparation of advertisements; budgeting and management of campaigns; forms of regulation.

Jour 1201 PRINCIPLES OF ADVERTISING (V371)

Video Cassette Course — \$66 — 4 degree credits — text price \$14-16 — study guide \$6 — Thompson

Same as above. Ten half-hour programs available on video cassettes. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

Jour 5251 PSYCHOLOGY OF ADVERTISING (K371)

\$74 — 4 degree credits — Jones

See Psy 5751. You may receive credit for this course either in Journalism or Psychology. **This course will be broadcast over KUOM Radio 770, Winter 1978.**

Jour 5501 COMMUNICATION AND PUBLIC OPINION I (3792)

12 lessons — \$74 — 4 degree credits — text price \$13-15 — Carter and Dennis

A study of theories of communication, public opinion, and attitude change as well as an examination of research findings about communication, opinion, and persuasion, and some of the methods and methodological problems with which consumers of such research should be familiar.

Jour 5601 HISTORY OF JOURNALISM (3791)

12 lessons — \$74 — 4 degree credits — text price \$20-22 — Emery

Development of American newspapers and periodicals from beginnings in Europe to present day; rise of radio and television; relation of communications developments to political, economic, and social trends; current press-government credibility crises.

Jour 5721 MASS MEDIA IN A DYNAMIC SOCIETY (3793)

12 lessons — \$74 — 4 degree credits — text price \$12-14 — Dennis

Economic, political, and social determinants of character and content of mass communications. Patterns of operations, effect on content, and relative social utility. Theory of mass society.

Latin

See Classics

Law

See Business Law

Library Science

The courses in library science do not earn credit in the University of Minnesota Library School, which is a graduate program leading to a Master's degree. The credits are acceptable in other undergraduate colleges at Minnesota, usually as electives. Most states will accept the credits for teacher certification. If you have questions about the transfer of credits, write to your state's Department of Education or similar agency. Because of the difficulties in shipping the texts that must be loaned with these courses, no registration can be accepted from students overseas.

Lib 1401 DESCRIPTIVE CATALOGING (7152)

16 lessons — \$49.50 — 3 degree credits — text price \$19-21 — Stahl
The forms and principles involved in making a dictionary card catalog. Based primarily on **Akers Simple Library Cataloging**. Directions for the use of printed cards by the Wilson Company and the Library of Congress. **This course is now in preparation; please inquire before enrolling.**

Lib 1402 ELEMENTARY CLASSIFICATION AND SUBJECT HEADING (7154)

16 lessons — \$49.50 — 3 degree credits — text price \$32-34 — Stahl
Based on the abridged edition of the **Dewey Decimal Classification and Sears List of Subject Headings for Small Libraries**. Aims to give an understanding of methods of classification and the principles of assigning subject headings to books in a library. Attention is given to modifications and adaptations useful in school or small public libraries. Includes use of Cutter-Sanborn author numbers and preparation of a shelf list. (No prerequisite: Lib 1401 recommended) **This course is now in preparation; please inquire before enrolling.**

Management

See Industrial Relations

Marketing

Mktg 3075 SALES MANAGEMENT (2523)

14 lessons — \$70 — 4 degree credits — text price \$13-15 — Lewis
Management of the personal selling function, including sales organization; selection, training, compensation, motivation, supervision and control of the field sales force; sales forecasting; sales budgets; sales and cost analysis. Case materials used.

Mktg 3098 CONSUMER BEHAVIOR (2522)

14 lessons — \$70 — 4 degree credits — text price \$14-16 — Walker
Applications of the behavioral sciences to understanding human behavior in the marketplace. Topics include perception, learning, attitude theory and measurement, motivation, personality, social and cultural influences, family decision making, social influence processes, consumer decision-making strategies, managerial implications of consumer research, and "consumerism."

Mathematics

It is essential that students have the prerequisite knowledge for each course as well as credit for the courses listed as prerequisites. If there

Course Descriptions

has been a time lapse since the previous course in mathematics, students should review thoroughly or repeat the prerequisite. It is impossible to make progress in mathematics without a sound knowledge of previous concepts and applications.

Note: In addition to the following noncredit courses in mathematics, certain courses available through the high school program of the Department of Independent Study also fulfill entrance requirements of I or T and other colleges. For Independent Study courses in high school mathematics, write for the bulletin, **Independent Study for High School Students**, University of Minnesota, Department of Independent Study, 25 Westbrook Hall, 77 Pleasant St. SE, Minneapolis, MN 55455.

Math 0001 BASIC MATHEMATICS REVIEW I (7201)

16 lessons — \$49.50 — no credit — text price \$8-10 — Giese

A thorough review of arithmetic and a good foundation in elementary algebra, including the fundamental operations involving positive and negative numbers, fractions, the solution of simple equations and fractional equations, exponents, symbols of grouping, special products and factoring, and simplification of fractional expressions.

Math 0002 BASIC MATHEMATICS REVIEW II (7203)

16 lessons — \$49.50 — no credit — text price \$9-11 — Giese

Continuation of the development of algebra and an introduction to the numerical part (measurement) of plane geometry, solid geometry, and trigonometry. In algebra: simultaneous linear equations; exponents and radicals; solution of quadratic equations, irrational equations; ratio, proportion, variation; graphical representation of statistical data and of equations; and the use of formulas. In geometry: formulas from plane and solid geometry and how to apply them. In trigonometry: logarithms and how to use them; the trigonometric functions; and solution of right and oblique triangles. (Prerequisite: Math 0001 or equivalent)

GC 1445 MATHEMATICS: INTERMEDIATE ALGEBRA (7205)

16 lessons — \$82.50 — 5 degree credits — text price \$12-14 — Giese

Concepts and manipulative skills of algebra necessary for student to compete in a college algebra course. Topics include: discussion of the real number system, special products and factoring, exponents and radicals, linear equations in one and two variables, quadratic equations in one variable, progressions, inequalities, variation, and logarithms. (Prerequisite: Math 0002 or equivalent)

Math 1111 COLLEGE ALGEBRA AND ANALYTIC GEOMETRY (7215)

27 lessons — \$82.50 — 5 degree credits — text price \$8-10 — Ekstrand

Functions and graphs, quadratic equations in one and two variables, progressions, complex numbers, inequalities, theory of equations, permutations and combinations, binomial theorem probability, mathematical induction, determinants. (Prerequisites: Math 0009 or GC 1445 or high school higher algebra, and Math 1008 or high school trigonometry)

Math 1142 INTRODUCTION TO CALCULUS (7240)

16 lessons — \$82.50 — 5 degree credits — text price \$12-14 — Varadachari

For students in pre-business administration, pre-pharmacy, and others requiring a minimal amount of calculus; students who plan to take several quarters of mathematics should register for the sequence Math 1211-1221-1231. (Prerequisite: Math 1111 or Math 1131 or Math 1201 or mathematics placement score)

Math 1211 ANALYSIS I (7224)

16 lessons — \$82.50 — 5 degree credits — text price \$14-16 — Varadachari

Analytical geometry and calculus of functions of one variable. (Prerequisite: Math 1111 [with a grade of C or better] or 4 years of high school mathematics including trigonometry within the last 2 years)

Math 1221 ANALYSIS II (7225)

16 lessons — \$82.50 — 5 degree credits — text price \$14-16 — Varadachari
A continuation of Analysis I. (Prerequisite: Math 1211)

Math 1231 ANALYSIS III (7226)

16 lessons — \$82.50 — 5 degree credits — text price \$14-16 — Varadachari
A continuation of Analysis II. Infinite series and power series. (Prerequisite: Math 1221)

Math 3066 DIFFERENTIAL EQUATIONS (7296)

16 lessons — \$70 — 4 degree credits — text price \$10-12 — Marchand
Equations of first order, singular solutions; linear equations with constant coefficients, simultaneous equations, integration in series. (Prerequisite: Math 1231 or equivalent)

Math 3211 ANALYSIS IV (7234)

16 lessons — \$87.50 — 5 degree credits — text price \$14-16 — Varadachari
Partial differentiation, chain rule, implicit functions, applications. Multiple integrals in two and three dimensions. (Prerequisite: Math 1231 or equivalent)

Math 3221 INTRODUCTION TO LINEAR ALGEBRA AND LINEAR DIFFERENTIAL EQUATIONS (7236)

16 lessons — \$87.50 — 5 degree credits — text price \$11-13 — Varadachari
Vectors, systems of linear equations, matrices, determinants, bases, eigenvalues. Linear differential equations and systems with constant coefficients, initial value problem and general solution, variation of parameters for inhomogeneous equations. (Prerequisite: Math 1231 or equivalent)

Metric System

IoT 3501 MEASUREMENT AND THE METRIC SYSTEM (7204)

10 lessons — \$70 — 4 degree credits — text price \$8-10 — Wenberg
Brief history of measurement systems. Discussion of the importance of measurement in various technological and communicative aspects of work and everyday life. Introduction to the international metric system (SI). Investigation of particular aspects of metric transition in the United States compared with current experience in other countries. The above is a bulletin description. Mostly, you will be given a series of learning experiences through which you may become personally aware of the implications to you of U.S. conversion to the worldwide SI system of metric measurement. An investigation of your own choosing will let you develop and apply your understanding of SI and evaluate the impact of metric transition on your life.

Motion and Time Study Engineering

See Industrial Engineering/Operations Research

Music

Mus 1501/1511 MATERIALS AND STRUCTURE OF MUSIC I/EAR TRAINING AND SIGHT SINGING I (7311)

12 lessons (90-minute cassettes) — \$66 — 4 degree credits — text price \$21-23 — 25 audio cassettes \$34.50 — Oberg
An integrated course in music theory incorporating sight singing, spelling, writing, and playing of melodic and harmonic patterns. Topics include notation, aural perception, playing of rhythms in simple and compound time, and the basic rules for four-voice part writing. Can be taken by music and music education majors (for whom it is required) and by high school students or adults who wish to augment their private music study, enhance their participation in a musical ensemble, or increase their understanding and listening enjoyment of music. Also covers the rudiments of music required of all elementary education majors. Much of the course material is on audio tapes rather than in the traditional written format. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Course Descriptions

Mus 5439 KEYBOARD SIGHT-READING (V732)

Video Cassette Course — \$74 — 4 degree credits — Guhl and Perun

For keyboard teachers and performers who want to improve their own sight-reading and that of their students. Ten video cassette programs give specific examples and commentary; reading materials in the study guide will help the teacher to understand the nature of the reading process and to implement this process in teaching and performing. Included also are guidelines and a resource list of sight-reading materials. **Enrollment restricted to students who can view the cassettes at one of these locations:** 1. the Learning Resources Center, Walter Library, Minneapolis Campus; 2. MacPhail Center for the Performing Arts, 1128 LaSalle Avenue, Minneapolis; 3. University of Minnesota, Rochester Center, 2120 East Center St., Bldg. 4, Rochester.

Mus 5711 AMERICAN POPULAR MUSIC (V731)

Video Cassette Course — \$74 — 4 degree credits — no required texts — study guide with one audio cassette \$7 — Riedel

Examines music that is significant for our community life, with emphasis on ethnic and black music, social dance and theatre music, parlor songs, barber shop quartets, Civil War music, and technology of music. Ten one-hour programs available on video cassettes. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

Mus 5950 TOPICS IN MUSIC: MUSIC APPRECIATION (A732)

Audio Cassette Course — \$74 — 4 degree credits — text price \$14-16 — 12 audio cassettes \$17 — Sutton

Analyzes music in the repertory of our culture — forms and styles from the 17th century to the present. Discusses the basic musical elements of rhythm, tonality, melody, and texture. The course is intended to increase the listener's musical vocabulary and skills in analyzing and appreciating musical forms such as: symphonies, concertos, chamber, keyboard and choral music, opera and song. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Norwegian

See Scandinavian Languages

Nursing

Nurs 5201 THE ROLE OF NURSING WITHIN HEALTH CARE (7341)

11 lessons — \$37 — 2 degree credits — text price \$12-14 — Snyder

This course is designed to provide students with an introduction to nursing within the context of health and the delivery of health care to an individual and to a community. The philosophies of nursing and the goals derived from these philosophies are explored, with a focus on their implications for nursing practice.

Orientation to Independent Study

See Study Skills

Parliamentary Procedure

See Rhetoric

Philosophy

Phil 1001 LOGIC (7602 and 7605)

10 lessons — \$49.50 — 3 degree credits (or 18 lessons — \$82.50 — 5 degree credits) — text price \$12-14 — Zanoni

Rules and procedures of sound argument and valid inference. Relationship of formal pat-

Course Descriptions

terms of reasoning to such uses of ordinary language as argument, propaganda, and persuasion. How formal logic can be employed as a tool for critical thinking. Course can be taken for either 3 or 5 credits. Students who take the 3-credit course can register later for the additional 2 credits, pay the \$33 fee, and complete eight more lessons and a final examination.

Phil 1002 PROBLEMS OF PHILOSOPHY (7604)

15 lessons — \$82.50 — 5 degree credits — text price \$15-17 — Dana

An examination of some important problems in epistemology and metaphysics. Epistemological questions include: What is the rational foundation of belief? Is knowledge possible, or is each person's opinion ultimate? The metaphysical topics are the Mind-Body problem and the problem of Free Will vs. Determinism. The aim of the course is to introduce the student to some of the basic concerns of philosophy and, through the study of how several important philosophers have dealt with them, to introduce him or her to the process of activity of philosophy itself.

Phil 1011 SCIENCE AND RELIGION (7610)

12 lessons — \$66 — 4 degree credits — text price \$5-7 — Zanoni

A philosophical inquiry into the conflict between modern science and religion. Designed to provide the student with a layman's orientation to the historical and philosophical development of the conflict, to the status of the conflict today, and to scientific and religious attitudes and emotions. By analysis of the logical and psychological consequences of religious and scientific worldviews, and through discussion of areas of possible reconciliation, the student gains an objective understanding of the various dimensions of the conflict. Students need not have had any previous course in science to benefit from this course.

Phil 3001 GENERAL HISTORY OF WESTERN PHILOSOPHY: GREEK PHILOSOPHY (7650)

20 lessons — \$87.50 — 5 degree credits — text price \$12-14 — Kielkopf

Greek philosophy, an introduction to early Western thought; emphasizes Socrates, Plato, and Aristotle.

Phil 3003 GENERAL HISTORY OF WESTERN PHILOSOPHY: DESCARTES THROUGH HUME (7652)

21 lessons — \$87.50 — 5 degree credits — text price \$6-8 — Kielkopf

Philosophical thought from Descartes through Hume. The impact of science; backgrounds of contemporary philosophical problems.

Phil 3004 GENERAL HISTORY OF WESTERN PHILOSOPHY: KANT THROUGH NIETZSCHE (7653)

21 lessons — \$87.50 — 5 degree credits — text price \$9-11 — Kielkopf

Philosophical thought from Kant through Nietzsche. Contains lessons on Hegel, Marx, Mill, Comte, Schopenhauer, and Kierkegaard.

GC 1355 ETHICS (7606)

12 lessons — \$66 — 4 degree credits — text price \$7-9 — Zanoni

The course aims at providing the student with an understanding of the development of moral thought in Western civilization and the problems generated by changing views about the nature of human beings and their behavior. The emphasis of the course is on showing how thinking clearly about the various factors in the development of moral thought in the West is relevant to contemporary moral practice.

GC 3352 PHILOSOPHY THROUGH LITERATURE

See English

GC 3355 APPLIED MORAL PHILOSOPHY: MORAL CHOICES IN CONTEMPORARY SOCIETY (7611)

16 lessons — \$70 — 4 degree credits — text price \$5-7 — study guide \$2.95 — Zanoni

An examination of the controversial moral dilemmas surrounding such issues as medicine, sexual conduct, crime and punishment, business and political law, science, technology, work, and race: the perennial problems of how we are to live. (Originally developed as a course by newspaper.)

Course Descriptions

Physical Education

PE 3143 ORGANIZATION AND MANAGEMENT OF SPORT (T832)

\$70 — 4 degree credits — LaPoint

Principles, policies and procedures involved in the operation of sports programs at the interscholastic and intercollegiate levels for both men and women. The focus of the course content is applicable also to nonschool and volunteer coaching situations. **This course will be broadcast over KTCV-TV Channel 2, Spring 1978.**

Physics

Phys 1031 INTRODUCTION TO PHYSICS: MEASUREMENT AND APPLICATIONS (7705)

15 lessons — \$82.50 — 5 degree credits — text price \$20-22 — Bargabus

Applications of physics will be emphasized. Topics include: graphical analysis, fundamental physical concepts, electricity and magnetism, waves, sound, light, and optics. Primarily for students interested in those topics useful in various technical areas. Some simple home laboratory exercises will be included. (Prerequisite: High school algebra and plane geometry)

Phys 1032 INTRODUCTION TO PHYSICS: MEASUREMENT AND APPLICATIONS (7706)

15 lessons — \$82.50 — 5 degree credits — text price \$20-22 — Bargabus

Applications of physics will be emphasized. Topics include: mechanics, properties of matter, random processes, thermodynamics, atoms and spectra, nuclei and radioactivity. Primarily for students interested in those topics useful in various technical areas. Some simple home laboratory exercises will be included. (Prerequisite: Phys 1031)

Polish

See Slavic and East European Languages

Political Science

Pol 1001 AMERICAN GOVERNMENT AND POLITICS (7903)

16 lessons — \$82.50 — 5 degree credits — text price \$18-20 — Scott

An introduction to world affairs. Development of the state system. The facts of power in the United States. The relationships of political forces and philosophies. Topics include: the Constitution, civil liberties, public opinion, interest groups and political parties, Congress, the judiciary, and the presidency.

Pol 1025 WORLD POLITICS (7925)

16 lessons — \$49.50 — 3 degree credits — text price \$13-15 — Rogers

An introduction to world affairs. Development of the state system. The facts of power in international relations. The causes of war and the forces that make for peace. Introduction to the foreign policies of the United States, the Soviet Union, and China.

Pol 1026 AMERICAN FOREIGN POLICY (7927)

12 lessons — \$66 — 4 degree credits — text price \$13-15 — Walcott

Goals and values in American foreign policy; traditional and post-World War II policies. The formulation and administration of foreign policy and the role of public opinion.

Pol 1031 AMERICAN PUBLIC POLICY (7931)

14 lessons — \$66 — 4 degree credits — text price \$12-14 — Eyestone

How American public policies are made — the development of issues, actors, and decision techniques; evaluation of policies. Analysis of current issues in the areas of civil rights, environmental concerns, foreign policy, welfare, and labor, business, and the economy. Emphasis throughout on the policy process and on alternative solutions to current policy problems, primarily at the national level.

Course Descriptions

Pol 5443 GOVERNMENT AND POLITICS OF THE SOVIET UNION (7955)

14 lessons — \$74 — 4 degree credits — text price \$26-28 — Noonan
Analysis of politics in the U.S.S.R., including the political heritage and environment, the impact of Marxism-Leninism, the principal institutions, historical development since 1917; the decision-making process; the roles of elites; major economic, political, and cultural issues. (Prerequisite: 12 credits in social sciences or consent of instructor)

Pol 5448 GOVERNMENT AND POLITICS OF AFRICAN COUNTRIES (7978)

12 lessons — \$74 — 4 degree credits — text price \$11-13 — Dodge
Political institutions and behavior of sub-Saharan African countries in their social and cultural settings; influence of class and tribal structure; parties and elections; source and nature of ideologies; economics and social policies. (Prerequisite: 12 credits in social sciences or consent of instructor)

Pol 5454 CHINESE GOVERNMENT AND POLITICS (7954)

12 lessons — \$74 — 4 degree credits — text price \$7-9 — Dodge
Analysis of the political system of Communist China with particular emphasis on Maoist ideology; party organization and behavior; developmental economic and social policies; foreign policy goals and strategies. (Prerequisite: 12 credits in social sciences or consent of instructor)

Pol 5503 THE CONSTITUTION: WHAT IT IS TODAY (V792)

Video Cassette Course — \$74 — 4 degree credits — text price \$23-25 — study guide \$5 — Chase

The focus of the course is on ascertaining the meaning of the United States Constitution. Particular attention will be paid to questions pertaining to the power of the Supreme Court, the President, and Congress, as well as to civil liberties and individual rights. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

Pol 5737 POLITICAL PARTIES (7987)

14 lessons — \$74 — 4 degree credits — text price \$12-14 — Eyestone
Party activities in the United States -- recruiting, nominating, and campaigning. Parties in power. Party organization and membership, party identification, third parties, and independents. Party reform and the functions of parties. Attention throughout to the impact of parties on democratic government. (Prerequisite: Pol 1001 or consent of instructor)

GC 1222 PEOPLE POWER: THE WORLD OF PRACTICAL POLITICS (V261)

Video Cassette Course — \$49.50 — 3 degree credits — text price \$5-7 — study guide \$4 — Oldendorf

Demonstrates through case histories and comments from experienced politicians how the individual can influence the political system. Revealing politics "as it is," the course emphasizes ways in which a citizen can become effectively involved in political actions and can make his participation count. Topics include: individual and group action, precinct caucuses, lobbying, political parties, and alternative action. Ten half-hour programs available on video cassettes. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

GC 3238 POWER AND THE INDIVIDUAL (A791)

Audio Cassette Course — \$70 — 4 degree credits — text price \$14-16 — 9 audio cassettes \$12.75 — Dodge and Kane

An interdisciplinary study of power using political science and literature, with emphasis on 20th century definitions and redefinitions. Topics to be considered include: presidential authority, legitimacy, citizen power and pressure groups, power and violence, and the process of power. See **Tapes and Tape Recorders** for information on cassette recorders.

Psychology

Also see Child Psychology

Psy 1001 GENERAL PSYCHOLOGY (8102)

18 lessons — \$82.50 — 5 degree credits — text price \$14-16 — Schletzer
Introduction to the study of human behavior. Prerequisite for all advanced courses in psy-

Course Descriptions

chology. Topics include biological and developmental processes, perception and awareness, learning and thinking, motivation and emotion, personality, conflict and adjustment, and social behavior. (Prerequisite: Sophomore, third quarter freshman with a B average, or consent of instructor)

Psy 1911 PSYCHOLOGY AND RELIGION (V811)

Video Cassette Course — \$66 — 4 degree credits — text price \$11-13 — study guide \$4.50 — Meadow

Explores religiousness from a psychological point of view. The opinions of major theorists on topics of belief, feeling, ritual, conversion, mysticism, faith healing, religious development, and related issues will be discussed. Emphasis is on helping the student understand his/her own and other people's religious expression, or lack of it, in the context of what is known about psychological processes likely to be involved in religious behavior. Ten half-hour programs available on video cassettes. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus. Students may not receive credit for both Psy 1911 and Psy 3911.**

Psy 3101 INTRODUCTION TO PERSONALITY (8188)

15 lessons — \$70 — 4 degree credits — text price \$12-14 — Meadow

This course is a basic introduction to the study of personality. It will discuss major theories, personality development, empirical research, personality assessment, and several selected topics in the field of personality. (Prerequisite: 5 credits introductory psychology)

Psy 3604 ABNORMAL PSYCHOLOGY (8197)

14 lessons — \$70 — 4 degree credits — text price \$14-16 — Dorset

The field of abnormal psychology. Etiologies of behavioral disorders; discussion of available treatments. (Prerequisite: 5 credits introductory psychology)

Psy 3911 PERSONALITY AND RELIGION (8196)

15 lessons — \$70 — 4 degree credits — text price \$16-18 — Meadow

This course studies religious behavior with a topical approach. Areas covered include origins and development of religiousness, religious practices, doubt and belief, guilt and alienation, self-management, altered states of consciousness, social influences, life crises, transcendence, and religious maturity. (Prerequisite: 5 credits introductory psychology or consent of instructor) **Students may not receive credit for both Psy 1911 and Psy 3911.**

Psy 5751 PSYCHOLOGY OF ADVERTISING (K811)

\$74 — 4 degree credits — Jones

Psychological principles, research techniques, and applications in advertising and selling. Consumer attitudes and behavior. Psychological mechanisms upon which advertising effectiveness depends. **This course will be broadcast over KUOM Radio 770 AM, Winter 1978.**

Psy 5604 UNDERSTANDING BEHAVIOR DISORDERS (T813)

\$74 — 4 credits — Butcher

Discussion of issues in defining and understanding behavioral disorders with some focus on etiology and assessment. A range of problem areas, causal factors, explanatory theories and case illustrations will be discussed in detail. A major part of the course deals with issues of prevention, early intervention, and contemporary treatment methods. **This course will be broadcast over KTCV-TV Channel 2, Winter 1978.**

Public Health

PubH 5025 HEALTH AND THE CONSUMER (T461)

\$74 — 4 degree credits — Greene

A discussion of the facts, fads, fables, and frauds associated with the purchase of health products and services in the marketplace. Topics include definitions of health; medicinal, nutritional and cosmetic quackery; patent medicines; unorthodox alternatives to scientific medicine; and consumer protection in health-related fields. **This course will be broadcast over KTCV-TV Channel 2, Spring 1978.**

Recreation, Park and Leisure Studies

Rec 5170 CAMP ADMINISTRATION (8487)

11 lessons — \$55.50 — 3 degree credits — text price \$10-12 — Chapman
Covers all aspects of administration for group camps: objectives, camp settings, organization and structure, facilities and equipment, the director, staff selection and supervision, programs, health and safety, and public relations. (Prerequisite: Organized camp experience desirable)

Rec 5210 INTRODUCTION TO THERAPEUTIC RECREATION (8491)

11 lessons — \$55.50 — 3 degree credits — text price \$9-11 — Chapman
Introductory principles of therapeutic recreation. Types of hospitals and their patients' activities programs. Philosophy and purposes of institutional recreation; program content. Beginning methods in the leadership and supervision of recreation programs for the ill and disabled.

Religion

See Classics; Humanities; Philosophy; Psychology

Religious Studies

ReIS 3521 PSYCHICAL PHENOMENA IN RELIGIONS AND CULTURES (K761)

\$70 — 4 degree credits — Sibley
Critical study of such alleged phenomena as telepathy, clairvoyance, psychokinesis, out-of-the body experiences, communication with the dead, healing; connections with religious experience and literature; implications for philosophy, social sciences, physics, etc. **This course will be aired on KUOM Radio 770, Fall 1977.**

Rhetoric

Also see Study Skills

Rhet 1226 PARLIAMENTARY PROCEDURE (7425)

6 lessons — \$16.50 — 1 degree credit — text price \$6-8 — Miller
Principles and practices of parliamentary procedures. Provides leadership training for presiding officers and members of various rural and urban organizations. How to open and close a meeting, draft a constitution, discuss unfinished business and introduce new business, entertain motions in order of their precedence, handle amendments, appoint committees, dispose of committee reports, and nominate and elect officers.

Russian

See Slavic and East European Languages

Salesmanship

See Business Studies (General College)

Scandinavian Languages

Finnish

Fin 1101 BEGINNING FINNISH (5617)

15 lessons — \$82.50 — 5 degree credits — text price \$9-11 — Lahti
For beginners with little or no previous knowledge of Finnish. Stresses fundamentals of grammar, the facility to read and write easy Finnish.

Course Descriptions

Norwegian

Nor 1101 BEGINNING NORWEGIAN I (6301)

27 lessons — \$82.50 — 5 degree credits — text price \$13-15 — Gundersen
A complete survey of Norwegian grammar, plus composition and the reading of easy prose.

Nor 1102 BEGINNING NORWEGIAN II (6302)

27 lessons — \$82.50 — 5 degree credits — text price \$7-9 — Gundersen
Continuation of Nor 1101, but with primary emphasis on reading and writing. Short stories and folk tales are used for reading assignments. (Prerequisite: Nor 1101 or equivalent)

Swedish

Swed 1101 BEGINNING SWEDISH I (6901)

27 lessons — \$82.50 — 5 degree credits — text price \$9-11 — McKnight
Grammar and composition; selected readings in easy prose and verse.

Slavic and East European Languages

Polish

Plsh 1101 BEGINNING POLISH I (6401)

27 lessons — \$82.50 — 5 degree credits — text price \$16-18 — Kondy
For beginners with no previous knowledge of Polish. Covers the fundamentals of grammar, the facility to read, understand, and write simple Polish.

Russian

Russ 1101 BEGINNING RUSSIAN I (6603)

17 lessons — \$82.50 — 5 degree credits — text price \$12-14 — 4 audio cassettes \$6 — Prokopov

Provides a reading and writing knowledge of the Russian language. Acquaints students with Russian script, pronunciation, and essentials of grammar; translations from Russian and into Russian. See **Tapes and Tape Recorders** for information on securing a cassette recorder.

Russ 1102 BEGINNING RUSSIAN II (6604)

17 lessons — \$82.50 — 5 degree credits — text price \$12-14 — 5 audio cassettes \$7.50 — Prokopov

Second part of the Beginning Russian sequence: reading, writing, pronunciation, and grammar. (Prerequisite: Russ 1101) See **Tapes and Tape Recorders** for information on securing a cassette recorder.

Russ 1103 BEGINNING RUSSIAN III (6605)

17 lessons — \$82.50 — 5 degree credits — text price \$12-14 — 5 audio cassettes \$7.50 — Prokopov

Third part of the Beginning Russian sequence: reading, writing, pronunciation, and completion of the study of Russian grammar. Poetry reading. (Prerequisite: Russ 1102) See **Tapes and Tape Recorders** for information on securing a cassette recorder.

Russ 1221 SCIENTIFIC RUSSIAN I (6624)

27 lessons — \$82.50 — 5 degree credits — text price \$5-7 — Prokopov
An introduction to the basic grammar and structure of the Russian language, using a vocabulary common to various sciences. Provides the ability to read Russian scientific texts.

Russ 1222 SCIENTIFIC RUSSIAN II (6625)

12 lessons — \$33 — 2 degree credits — text price \$4-6 — Prokopov
Directed reading and translation of Russian scientific texts in a field of the student's choice. Students may satisfy the graduate language requirement by passing Russ 1222 with a grade of B. (Prerequisite: Russ 1221)

Course Descriptions

Russ 1223 SCIENTIFIC RUSSIAN III (6626)

12 lessons — \$33 — 2 degree credits — no required text — Prokopov
Reading and translating scientific articles. (Prerequisite: Russ 1222)

Social Studies (General College)

GC 1071 INTRODUCTION TO AGING (8638)

12 lessons — \$66 — 4 degree credits — text price \$17-19 — Foy
Behavioral components, clinical aspects, and social organization of aging.

GC 1283 PSYCHOLOGY OF HUMAN DEVELOPMENT (A821)

Audio Cassette Course — \$49.50 — 3 degree credits — text price \$13-15 — 15 audio cassettes \$21 — Latts

Focuses on growth and development of the individual from conception through adolescence. Aspects of development emphasized include physical, motor, social, emotional, and psychological growth. Integration of facets of development is made in order to understand the human being as a complex organism functioning in a complex environment. Since the individual is born into and grows up in a family, discussion is sometimes focused on the family as the main environmental factor in early development of the individual. See **Tapes and Tape Recorders** for information on renting cassette recorders.

GC 1631 THE HELPING PROCESS IN THE SOCIAL SERVICES (8631)

12 lessons — \$49.50 — 3 degree credits — text price \$8-10 — Bloom

Dynamics of working effectively with people. Focuses on actual procedure of the helping process; includes development of frame of mind or attitude to help students communicate with others in more helpful ways. Also intended to help students develop beginning skills in the helping professions as well as to evaluate their own interests and potential in the field. (Prerequisite: Concurrent registration in GC 1637 or field experience in a human services setting)

GC 1637 SUPERVISED WORK EXPERIENCE IN THE SOCIAL SERVICES (8637)

10 lessons — \$66 — 4 degree credits — text price \$2-4 — 2 audio cassettes \$3.50 — Stewart

Course objective is to gain practical experience in developing goals and objectives, specific steps of implementation and evaluation procedures for the individual learning process of the student and his competence in working with others. The student will be jointly supervised by his University instructor and a supervisor in his area of work or "awareness" experience. Students must submit a description of their proposed experience before enrolling. May be repeated for credit. (Prerequisite: GC 1631 or concurrent registration) See **Tapes and Tape Recorders** for information on securing a cassette recorder.

Social Work

Also see Social Studies (General College)

SW 3001 INTRODUCTION TO AMERICAN SOCIAL WELFARE AND COMMUNITY SERVICES (8690)

15 lessons — \$87.50 — 5 degree credits — text price \$19-21 — Wiebler

Survey of social services and their components, including many fields of practice, multiple auspices and dependencies; numerous levels of participation, differing ideologies and methods of approach to social problems, and the dynamics of change from social movements to institutionalizations inherent in American social service delivery systems. Course is primarily about the "frames of reference" within which help is offered in American social services, public and private. The uneasy relationship between social service policies and professional social work practice. This course is equivalent to the regular course offered to on-campus students within the B.A. in Social Welfare Program. Course is seen as prerequisite for practice methods courses.

Course Descriptions

Sociology

Soc 1001 INTRODUCTION TO SOCIOLOGY (8602)

13 lessons — \$66 — 4 degree credits — text price \$13-15 — Parilla

A general introduction to a scientific analysis of social interaction, social structure, and socialization. Topics include: socialization and language, stratification, deviance and conformity, social integration and social change, and collective behavior. General theoretical perspectives will be examined and the conflict-consensus issue discussed. Emphasis will be placed on application of concepts and theories to everyday life.

Soc 1002 AMERICAN COMMUNITY (8604)

12 lessons — \$66 — 4 degree credits — text price \$14-16 — Thiel

What makes America tick? This course is intended to give students an opportunity to engage in an in-depth analysis of American urban life. By looking at such phenomena as the distribution of population, urban-rural differences, social factors in business systems, occupational groups, determination of social status, and minority group adjustment, American Community attempts to answer the questions: Is there an American "community," "culture," "value system," "way of life"?

Soc 3101 ELEMENTS OF CRIMINOLOGY (8654)

14 lessons — \$70 — 4 degree credits — text price \$11-13 — Milligan

A general introduction to the study of crime and its relationship to society, including: an in-depth look at the criminal justice system in America (the police, the courts, the prisons); an examination of historical and contemporary theories of criminal behavior; and a look at several types of crime and the roles they play in society.

Soc 5201 INTRODUCTION TO SOCIAL PSYCHOLOGY (8671)

13 lessons — \$74 — 4 degree credits — text price \$13-15 — Parker

An intensive examination of the major issues in social psychology. Covers substantive areas of socialization and language, personality, person perception, interpersonal attraction, prejudice, attitudes, social influence, prosocial behavior and aggression, small groups, and collective behavior. Emphasis will be placed on application of theories and concepts to everyday life. Three major theoretical perspectives (symbolic interactionism, exchange, and cognitive consistency) are used to organize course material.

Soc 3501 THE FAMILY (8681)

16 lessons — \$70 — 4 degree credits — text price \$11-13 — A. Johnson

Origin of family life; variability and change of family institutions and mating customs; contemporary parent-child relationships, adolescence, mate finding, marital adjustments; divorce and other family problems, prediction of marital success; theories of family reform. (Prerequisite: Soc 1001 or consent of instructor)

Soc 5951 MINORITY GROUP RELATIONS (8673)

12 lessons — \$74 — 4 degree credits — text price \$9-11 — Alexander

Examination of patterns of domination and subordination among racial and ethnic groups. Analyses of structures and operations of inequality, and sources and interrelations of prejudice and discrimination. Review and critique of racist thought, historical trends, and strategies of social and cultural change. The course focuses on American society, but includes cross-cultural comparisons. (Prerequisite: Soc 1001, or consent of instructor)

Soc 5956 SOCIOLOGY OF DEATH (V861)

Video Cassette Course — \$74 — 4 degree credits — text price \$29-31 — study guide \$4 — Fulton

Issues and problems that mortality presents in contemporary society. Topics covered include: death in American society; society's denial of death; the dying patient; grief; social recuperation; the funeral; death and the child; youth and suicide; the role of care-giving professionals; ethical issues. Ten one-hour programs available on video cassettes. Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.

10 Ways...

**..to Earn Credit
Through
Independent
Study**

1

Correspondence

Lessons

The lesson method is based on the traditional correspondence format. When you enroll under this method, you receive a study guide that includes a list of required texts and materials, study instructions, supplementary information, and specific lesson assignments. Using the study guide, textbooks, and other materials, you complete, at your own pace, a series of assignments for evaluation by your instructor. In most courses, you must successfully complete one or more midcourse examinations and a final examination to receive credit. The lesson method is most suitable for students wishing an organized program of study that closely approximates the content and format of daytime classes at the University of Minnesota. You will be enrolled automatically under this method unless you specifically request one of the following methods.

23

Contract Alternative Credit by Examination

These methods may be used only for courses listed in this bulletin. To enroll under contract alternative or credit by examination you should send, along with the registration form, a letter describing your background and reason for choosing this method, as well as a transcript of all college-level work to the Assistant Director, Department of Independent Study, 69A Westbrook Hall, 77 Pleasant St. SE, University of Minnesota, Minneapolis, MN 55455. The Assistant Director, in consultation with an appropriate instructor, will decide either to approve your special enrollment, to recommend lesson method enrollment, or, with contract alternative, to ask that you submit a trial number of regular lessons before a final decision is reached. As with other Independent Study methods, you will receive a study guide upon acceptance of your registration, even though you may not be required to follow the lesson assignments outlined there.

Contract Alternative

This method exempts you from submitting all of the lesson assignments. Instead, you propose a project that you will complete in lieu of lesson assignments. Enrollment for the contract alternative carries full tuition. To receive credit, you will be expected to pass a final examination and/or, in some other way chosen by the instructor, demonstrate your mastery of the course content.

Credit by Examination

The credit-by-examination method allows you to prepare on your own for a final examination. When you pass the final examination, you receive credit for the course. You will not be allowed to submit work for your instructor's evaluation before writing the examination. This

method is primarily for students who wish to earn credit for their extensive background in a specific area. It is recommended for students who have substantial prior knowledge in a subject area. The special examination fee is \$25 (\$20 for the examination, plus \$5 for materials). You should inform the Department of Independent Study of your proctor's name so that when you are ready to take the examination it may be sent to your proctor. Ten dollars plus \$5 for materials is nonrefundable.

4

Directed Study (Individual Study)

This method is suggested for courses not listed in this bulletin and not available through departmental readings courses. Projects requiring cross-disciplinary study are most appropriate for this method.

Directed study lets you undertake and complete academic work of your own design. Before registering for credits through directed study, you need to secure the approval of an instructor in whose field the course is relevant. To apply for approval, please request an Individual Study Proposal form, available by writing the Assistant Director, Department of Independent Study, 69A Westbrook Hall, 77 Pleasant St. SE, University of Minnesota, Minneapolis, MN 55455. The form will be mailed to you along with further instructions for directed study registration. You will have one year to complete your work before your registration expires.

5

Special Independent Study Programs

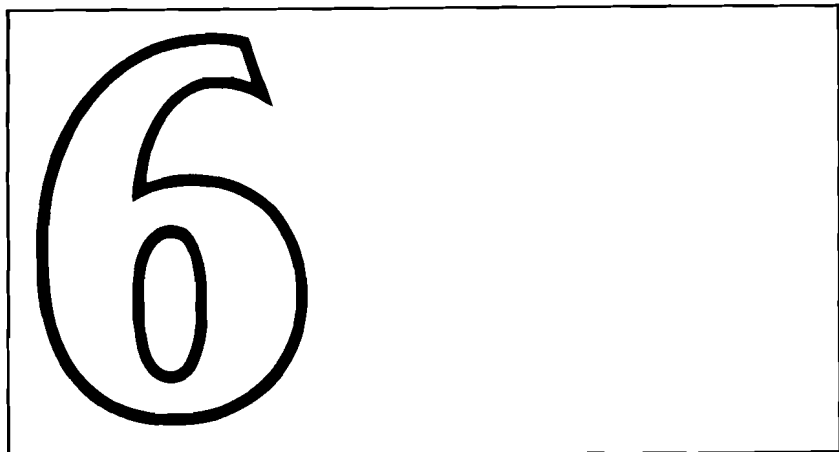
For groups of 20 or more students, the Department of Independent Study will, upon request, investigate the possibility of coordinating a group study program. Special Independent Study programs consist of the basic correspondence course supplemented by lectures by the instructor, video and/or audio tapes.

This method adds the dimension of group interaction without diminishing the flexibility or personal nature of Independent Study instruction. Group meetings will be arranged at a time and place convenient for the students involved.

Students wishing to discuss the possibility of special Independent Study programs should call or write the Assistant Director for Special Programs, Department of Independent Study, 27 Wesbrook Hall, 77 Pleasant St. SE, University of Minnesota, Minneapolis, MN 55455; telephone (612) 376-4987.

Media-Assisted Courses

Television Independent Study Tune in the University Each Week Fall, Winter, and Spring Quarters



Each week of the academic year University of Minnesota credit courses are broadcast over KTCA-TV Channel 2, the Twin Cities' educational television station. Each course is a "learning package" consisting of 10 weekly TV broadcasts, a study guide, tests, and instructor feedback. Television Independent Study is especially designed for the person who wishes to study at home — all of the course requirements can be completed by mail. Courses follow the University's academic quarter schedule, although an extension of three months is granted to those who require additional time to complete assignments. Call (612) 376-4925 for further information.

Fall 1977

THE AGE OF UNCERTAINTY: A HISTORY OF ECONOMIC THOUGHT

(Hist 3970, 4 credits, \$70)

A personal view by economist and best-selling author John Kenneth Galbraith of the history of social thought and political economy during the last 200 years. A 13-part discussion of the origins of modern capitalism as reflected in contemporary institutions such as the multinational corporation, the military-industrial complex, and the crises of our cities, continuing inflation, and recession.

Instructor: Coordinated locally by Professor George Green

TV Broadcasts: Sundays 8-9 p.m., September 18-December 11, 1977

UNDERSTANDING DIVORCE

(FSoS 5240, 4 credits, \$74)

Designed to help professionals, couples, and individuals achieve an understanding of the divorce process, including the troubled marriage and marital breakdown, legal aspects and implications, reentry into the single life, parent and person, the child and divorce, and coping with the psychological aspects of divorce.

Instructors: Professor Richard Hey, Anne Nevaldine

HOME LANDSCAPE GARDENING

(Hort 1010, 4 credits, \$66)

Basic introduction to a working knowledge of home landscape gardening and design. Topics include propagation and culture of common house plants and landscape materials — turf, flowers, trees, and shrubs. Illustration of various techniques to enable the home gardener to gain confidence in planning and caring for indoor and outdoor plants. Assumes little or no previous experience with plants.

Instructor: Professor C. Gustav Hard

Winter 1978

UNDERSTANDING BEHAVIOR DISORDERS

(Psy 5604, 4 credits, \$74)

Discussion of issues in defining and understanding behavioral disorders with some focus on etiology and assessment. A range of problem areas, causal factors, explanatory theories, and case illustrations will be discussed in detail. A major part of the course deals with issues of prevention, early intervention, and contemporary treatment methods.

Instructor: Professor James Butcher

WOOD: THE MATERIAL FOR TODAY AND TOMORROW

(ForP 5408, 4 credits, \$74)

Softwood, hardwood, old wood, new wood. Wood in its many uses is the subject of this course whether you're interested in home products or industrial uses. Topics to be discussed include the nature of wood and various wood by-products; wood in construction; proper use and maintenance of wood-based materials; supply and demand for wood; wood and the U.S. forest policy; and wood products of the future.

Instructors: Professors Bowyer, Erickson, Gertjeansen, Haygreen, and Hendricks

Spring 1978

HEALTH AND THE CONSUMER

(PubH 5025, 4 credits, \$74)

A discussion of the facts, fads, fables, and frauds associated with the purchase of health products and services in the marketplace. Topics include definitions of health; medicinal, nutritional and cosmetic quackery; patent medicines; unorthodox alternatives to scientific medicine; and consumer protection in health-related fields.

Instructor: Professor V. W. Greene

ORGANIZATION AND MANAGEMENT OF SPORT

(PE 3143, 4 credits, \$70)

Principles, policies, and procedures involved in the operation of sports programs at the interscholastic and intercollegiate levels for both men and women. The focus of the course content is applicable also to nonschool and volunteer coaching situations.

Instructor: Professor James LaPoint

Refund Policies for Television, Radio, and Newspaper Courses

1. A \$10.00 fee is withheld for withdrawal from a course before the first broadcast.
- *2. A refund of 75% of the tuition is granted if the request is postmarked or submitted in person through the second week of the course.
- *3. A refund of 50% of the tuition will be granted if the request is postmarked or submitted in person through the fourth week of the course. No refunds will be made beyond that date.
4. Cost of the study guide is not refundable; late fees are not refundable.

*Cancellations by mail are effective the date of postmark. For refund purposes the week starts on Monday. Saturday and Sunday postmarks are considered part of the previous week.

Video Cassette Courses



The following Independent Study courses consist of programs on video cassettes, a study guide, required texts and, in some cases, audio cassettes. The video cassettes can be viewed at the Learning Resources Center on the Minneapolis campus. Some courses are available at out-state learning centers and at selected public libraries.

University of Minnesota, Minneapolis Campus

Learning Resources Center, 204a Walter Library

Hours: Open days, evenings and weekends; call (612) 373-2538 for exact times.

Principles of Advertising (p. 36)

American Popular Music (p. 40)

Classical Mythology: Myths and the Modern World (p. 17)

The Constitution: What it is Today (p. 43)

Dynamics of Divorce (p. 24)

From Enlightenment to Revolution: Our Eighteenth Century Heritage (p. 34)

Geography of the Twin Cities (p. 28)

Heredity and Human Society (p. 14)

History of the American Theatre (p. 63)

Keyboard Sight-Reading* (p. 40)

People Power: The World of Practical Politics (p. 43)

Psychology and Religion (p. 44)

Sociology of Death (p. 48)

Introduction to Women's Studies (p. 63)

*This video cassette course is also available at the following viewing centers:

University of Minnesota, MacPhail Center for the Performing Arts

1128 LaSalle Ave., Minneapolis, MN 55403

Call (612) 373-1925 for viewing hours.

University of Minnesota, Rochester Center

2120 East Center Street, Building No. 4, Rochester, MN 55901

Call (507) 288-4584 for viewing hours.

8

Radio Independent Study

KUOM 770 AM, the University of Minnesota public radio station, in cooperation with Extension Independent Study, broadcasts degree-credit courses each academic quarter. Radio Independent Study is an integrated program of instruction especially designed for the independent learner — all of the course requirements can be completed by mail. Each "course package" consists of the radio broadcasts, study guide, texts, and instructor feedback. Courses are broadcast at 11:15 a.m. during the regular academic quarter on the days indicated below. For more information on broadcast times and dates, or to request a registration form, call (612) 376-4925.

Fall 1977

PSYCHICAL PHENOMENA IN RELIGIONS AND CULTURES (RelS 3521, 4 credits, \$70)

Critical study of such alleged phenomena as telepathy, clairvoyance, psychokinesis, out-of-the-body experiences, communication with the dead, healing; connections with religious experience and literature; implications for philosophy, social sciences, physics, etc.

Instructor: Professor Mulford G. Sibley

Radio Broadcasts: 11:15-11:45 a.m., Monday-Wednesday-Friday, Oct. 3-Dec. 2, 1977

Winter 1978

PSYCHOLOGY OF ADVERTISING (Jour 5251, Psy 5751, 4 credits, \$74)

Psychological principles, research techniques, and applications in advertising and selling. Consumer attitudes and behavior. Psychological mechanisms upon which advertising effectiveness depends.

Instructor: Professor Robert Jones

Radio Broadcasts: 11:15-12 noon, Thursday, January 12-March 16, 1978

CONSUMER PROBLEMS: PERSONAL FINANCE (GC 1731, 4 credits, \$66)

Consumer Problems is for anyone who feels the need to improve his/her understanding of how our market-oriented economy functions, what challenges he/she faces, and what can be done to function more efficiently. The assignments include text and supplemental reading, written assignments from the text, and practical, applied assignments that require the consumer to use what he/she has learned and apply these decision-making skills. The

student will be expected, for example, to make a financial budget, shop scientifically for a major product, analyze alternative life insurance policies, and identify community sources of consumer information and assistance. There will be a call-in program at the end of this course.

Instructor: Professor Patrick Kroll

Radio Broadcasts: 11:15-11:45 a.m., Monday and Wednesday, January 9-March 15, 1978

Spring 1978

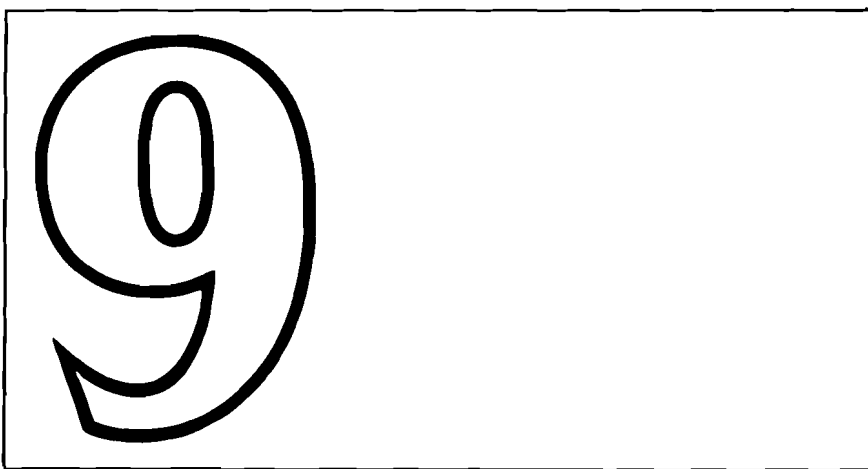
THE FAMILY IN WORLD PERSPECTIVE

(FSoS 5210, 4 credits, \$74)

The course will emphasize comparison of kinship, marriage, family organization, the family life cycle, and modes of family functioning across cultures. It will also concern itself with the relationship of the family to the economic, the political, the religious, and other social institutions, with particular attention being addressed to the adaptive techniques of the family to industrialization and urbanization. It is hoped that the student will be stimulated to an appreciation of the essential similarities between peoples and kinship groupings across cultures.

Instructor: Professor Sheila Henry

Radio Broadcasts: 11:15-11:45 a.m., Monday and Wednesday, March 27-May 31, 1978



Audio Independent Study

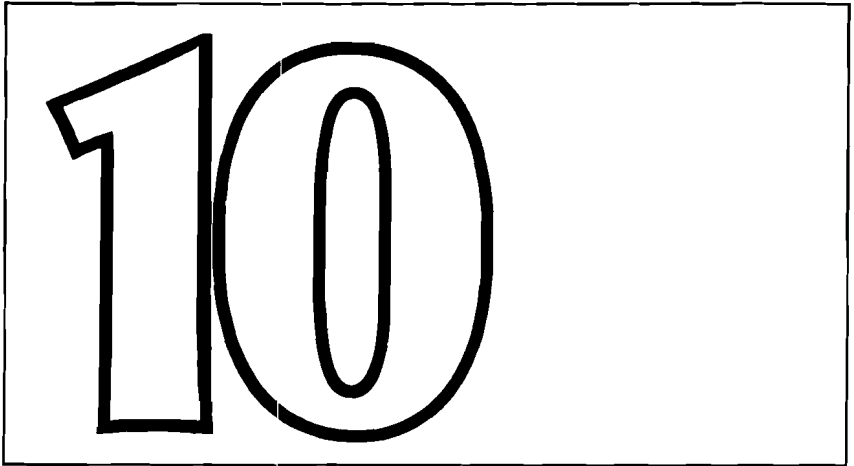
After a radio course has been broadcast on KUOM, it becomes available for individual or group study in audio cassette form. The following courses use lectures on audio cassettes as the primary source of instruction. A study guide and other readings accompany each course; texts must be purchased separately. The audio cassettes for a course can be purchased only through the Department of Independent Study. Students in the Twin Cities area can also listen to the audio cassettes at the Learning Resources Center, 204a Walter Library, Minneapolis Campus. The Learning Resources Center is open days, evenings, and weekends; call (612) 373-2538 for exact times. For information on rental of audio cassette recorders, see **Tapes and Tape Recorders**.

For a description of the courses listed below, see the page number in parentheses.

Economic and Social Security (p. 20)

History of the American Theatre (p. 63)

Madness and Deviant Behavior in Greece and Rome (p. 17)
Music Appreciation (p. 40)
Parent-Child Relationships (p. 25)
Power and the Individual (p. 43)
Psychological Environment of Women (p. 63)
Psychology of Human Development (p. 47)
Religion in Antiquity: Greek, Hellenistic (p. 17)
Women and Politics (p. 64)



University Without Walls (UWW)

The University Without Walls program is designed for people who have clear learning objectives, but who, for a variety of reasons, cannot realize their educational aims through existing programs. Students considering UWW can utilize learning derived from classroom, Independent Study courses, independent study projects, community resources and job-related activities to meet baccalaureate graduation requirements. UWW students can work with a UWW program advisor, University of Minnesota faculty, and community faculty in planning and implementing an individualized degree program. UWW provides an opportunity to complete a baccalaureate degree outside the confines of the classroom or college campus.

Spanish

Span 0221 SPANISH FOR GRADUATE STUDENTS (6817)

16 lessons — \$49.50 — no credit — text price \$7-20 — Estelle
 Prepares students primarily for reading, and especially for reading general and technical nonliterary prose. The Department will certify to the Graduate School a reading knowledge of Spanish upon successful completion of the final examination.

Span 1101 BEGINNING SPANISH I (6801)

22 lessons — \$82.50 — 5 degree credits — text price \$12-14 — Cuneo
 Fundamentals of Spanish grammar. Developing good ear training by means of records or tapes; learning to read and write simple Spanish. Question-and-answer method used in connection with the reader. Emphasis is on a cultural approach and a practical knowledge of Spanish.

Span 1102 BEGINNING SPANISH II (6802)

24 lessons — \$82.50 — 5 degree credits — text price \$12-14 — Cuneo
 Continues the conversational and cultural training begun in Span 1101. Completes the study of the essentials of Spanish grammar needed by beginning Spanish students. Emphasis on expanding Spanish vocabulary and question-and-answer composition in Spanish. (Prerequisite: Span 1101 or equivalent)

Span 1103 BEGINNING SPANISH III (6803)

18 lessons — \$82.50 — 5 degree credits — text price \$8-10 — Cuneo
 A review and more detailed study of the principles of written Spanish. More emphasis on composition. Reading a short play. Study of the Spanish-speaking nations. (Prerequisite: Span 1102 or equivalent)

Span 1104 INTERMEDIATE SPANISH (6825)

18 lessons — \$82.50 — 5 degree credits — text price \$10-12 — Cuneo
 Study of Spanish grammar and the process of thinking in Spanish. Emphasis on pattern; introduces the subjunctive. Questions and answers in Spanish. (Prerequisite: Span 1103 or equivalent)

Span 1105 READING AND COMPOSITION (6830)

17 lessons — \$82.50 — 5 degree credits — text price \$6-8 — Cuneo
 Concentrates on developing reading skills, expanding vocabulary, and improving written expression. Materials include a textbook containing articles from newspapers and magazines and a novel. (Prerequisite: Span 1104)

Span 1502 CULTURES AND CIVILIZATIONS OF LATIN AMERICA: PRE-COLUMBIAN TIMES TO 1825 (6843)

14 lessons — \$66 — 4 degree credits — text price \$8-9 — Cuneo
 Provides an opportunity to study and evaluate the cultures and civilizations of Latin America from pre-Columbian times, through the discovery of America by the Spaniards and its consequent explorations, conquest and colonization (15th to 18th centuries), to the movements of independence from Spain, Portugal, and France in the first quarter of the 19th century. It is intended to illuminate the problems and revolutionary changes of modern Latin America, which are a part of its complementary course, Span 1503. Readings in English. Knowledge of Spanish not necessary. Not to be used for Spanish or Portuguese major credit. May be used to satisfy Route II requirements.

Span 1503 CULTURES AND CIVILIZATIONS OF LATIN AMERICA: 1825 TO 1930 (6844)

12 lessons — \$66 — 4 degree credits — text price \$15-18 — Cuneo
 Completes the study and evaluation of the social, political, economic, and cultural transformation of Latin America from 1825 to 1930; from the Age of the "Caudillos" to contemporary social reform and revolution in the Tropical Plantation Zone, in the Mestizo Zone, in the European Commercial Zone, in the Indian Subsistence Zone, and in the Zone of Little Change. Readings in English. Knowledge of Spanish not necessary. Not to be used for Spanish or Portuguese major credit. May be used to satisfy Route II requirements. **This course is now in preparation; please inquire before enrolling.**

Course Descriptions

Statistics

See Education

Study Skills

SSk 0012 GUIDED READING (3901)

12 lessons — \$49.50 — no credit — no required text — Klohn

Offers a systematic plan of reading to help the average reader become better informed on subjects of current interest, such as science, art, history, biography. Instructions are provided on how to get the most from reading and how to discuss with others what one has read. Books may be borrowed from the University libraries.

SSk 0013 SELECTING BOOKS FOR CHILDREN (3902)

12 lessons — \$49.50 — no credit — text price \$11-13 — Klohn

An introductory course for parents, teachers, and others interested in guiding children's reading. It surveys the field of children's literature from preschool age through the teens.

PO 1001 HOW TO STUDY (3801)

6 lessons — \$33 — 2 degree credits — text price \$18-20 — 2 audio cassettes \$3.50 — Wark

Guided practice in developing an efficient approach to studying, founded on research in human learning. Using this background, students are taught to develop their concentration, improve their listening and note taking by using audio tapes, schedule their time effectively for study, prepare for and take exams, and prepare research papers. Qualified students may be exempt from parts of the last lesson. The course stresses practice in all the above skills, as well as in rapid reading, vocabulary development, effective underlining. (This course does not count as part of the 180-credit degree requirement at the University of Minnesota. However, grades are included in the overall grade point average.)

Rhet 1147 EFFICIENT READING (3947)

9 lessons — \$49.50 — 3 degree credits — text and materials \$70 — Brown

Designed to increase reading rate, comprehension, and vocabulary. Includes the use of cassette tapes for instruction and pacing activities. Useful for anyone who wants to achieve and maintain superior reading improvement. Not a remedial course. See **Tapes and Tape Recorders** for information on securing a cassette recorder.

UC 1201 ORIENTATION TO SELF-DIRECTED STUDY (3811)

4 lessons — \$49.50 — 3 degree credits — text price \$5-6 — J. Johnson

A module designed to provide both a structure for asking and examining questions and a broad theoretical framework relating to the question-asking approach to learning. Emphasizes the influence of media, "technocracy," and change on question-asking behavior. May be taken on S/N basis only.

GC 1404 VOCABULARY BUILDING (4002)

10 lessons — \$49.50 — 3 degree credits — text price \$9-11 — Kurak

A course designed for those who want to increase their active (speaking, writing) and passive (reading, listening) vocabularies by a variety of means. The lessons include drill in Latin and Greek word parts, practice in the use of vocabulary in context, and listening exercises on cassette tapes. Grades are based on a series of quizzes and a final exam.

Theatre Arts

Th 0001C INDEPENDENT PLAYWRITING (4080)

16 lessons — \$49.50 — no credit — no required text — Weinberg

Specifically designed for advanced students. Student is given complete freedom. Plays in any stage of development will receive detailed criticism. Course work consists of a full-length play or approximately the same amount of writing made up of shorter dramatic forms. (Prerequisite: Consent of instructor)

Course Descriptions

Th 5115 PLAYWRITING (4077)

14 lessons — \$74 — 4 degree credits — text price \$1-3 — Weinberg

Reading assignments as an introduction to dramatic form and content. Practice in writing dramatic plots, characters, themes, and dialogue. Writing exercises will include scenario, rough draft, and final revision of a one-act play (approximately 15 typed pages or 30 minutes in playing time). (Prerequisite: Th 1101 or equivalent or consent of instructor)

Th 5186 HISTORY OF THE AMERICAN THEATRE (A401)

Audio Cassette Course — \$74 — 4 degree credits — text price \$14-16 — 11 audio cassettes \$15.50 — Nolte and Driver

Examines the theatre from colonial days to the present as a mirror of our society. Playwrights, performers, and productions are seen in the context of our cultural, social, and political life. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Th 5186 HISTORY OF THE AMERICAN THEATRE (V401)

Video Cassette Course — \$74 — 4 degree credits — text price \$14-24 — study guide \$4 — Nolte

Same as above; ten half-hour programs available on video cassettes. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

Women's Courses

WOMEN: IS ANATOMY DESTINY? (8802)

5 lessons — \$33 — no credit — text price \$5-7 — E. Reed

Covers the material in the text **Our Bodies, Ourselves**. The lessons are on the basic biology of women (menstruation, childbirth, contraception and abortion, menopause) and also on the attitudes of women toward themselves and toward others. The objective is twofold: to increase the student's information about the biology of women and to raise the student's consciousness in regard to women and their sexuality.

WOMEN AND DRUG DEPENDENCY (8803)

8 lessons — \$33 — no credit — text price \$5-7 — Kimball

Deals with the core of drug dependence. Since prevention is the key to success in dealing with drug dependency, women must be informed in order to effectively help themselves and influence the young or uninitiated. Theories for drug taking, as well as an overview of prevalent usage, prejudices, biases and the stigma of "labeling," are examined from the woman's point of view. The course will present an idea of effective counseling for drug dependent women and the team approach in counseling. Nondrug ways of achieving alternative paths to intoxication are explored. The importance of interpersonal relationships, communication, and the utilization of the woman's innermost spiritual resources are stressed.

WoSt 1005 INTRODUCTION TO WOMEN'S STUDIES (V881)

Video Cassette Course — \$66 — 4 degree credits — text price \$15-17 — study guide with 3 audio cassettes \$7.75 — McNaron

Introduces several topics of basic concern to anyone trying to understand feminism. These topics include self-esteem and images of self, economics, politics, visual arts, history, religion, literature, the world of work, and the problem of multiple allegiance. The course will make tentative hypotheses about the implications of established theories and their challenges upon the lives of individual women (and men) presently and for the future. Eight programs available on video cassettes. **Enrollment restricted to students who can view the cassettes at the Learning Resources Center, Walter Library, Minneapolis Campus.**

WoSt 1977 PSYCHOLOGICAL ENVIRONMENT OF WOMEN (A885)

Audio Cassette Course — \$66 — 4 degree credits — text price \$44-46 — 12 audio cassettes \$17 — Faunce

An examination of behavioral and social science principles and theories which have a unique application to the development, growth, and behavior of women. See **Tapes and Tape Recorders** for information on renting cassette recorders.

Course Descriptions

WoSt 3302 WOMEN AND POLITICS (A881)

Audio Cassette Course — \$70 — 4 degree credits — text price \$19-21 — 15 audio cassettes \$21 — Arnaud

This course deals with the relationship of woman to her political culture and structures. Across cultures and time, women have had certain political roles closed to them. As a separate subgroup as seen by male politicians, women have also been the recipients of special political legislation and policy. We will investigate these patterns of political sexual discrimination in theory and in practice. Our goal is the achievement of a deeper understanding of the status of women in contemporary societies. See **Tapes and Tape Recorders** for information on renting cassette recorders.



Candido P. Zanoni, Associate Professor in the Arts, Communication, and Philosophy Division of the General College, is the instructor for SCIENCE AND RELIGION (Phil 1011), ETHICS (GC 1355), and MORAL CHOICES IN CONTEMPORARY SOCIETY (GC 3355).

General Information

Admission

There are no entrance requirements for admission to Extension Independent Study, although registration in specific programs or courses may require prerequisite study or experience. Prerequisites are noted in the course descriptions in this bulletin. An Independent Study course may be started at any time and should be completed within one year from the date of registration.

Audio Cassette Courses

See Ways to Earn Credit through Independent Study (center section)

Counseling and Advising Services

The Extension Counseling Office offers both counseling and program advising services, without fee, to all students registered or planning to register in courses offered by Continuing Education and Extension. Program advising can help you determine prerequisites and academic standing, evaluate transcripts, choose courses, and evaluate the applicability of Independent Study credits to specific degree and certificate programs.

In addition, personal, vocational, and educational counseling and testing services are available. A fee of \$35 is charged for students (\$60 for non-students) wishing to take a battery of tests. For counseling by mail or to make an appointment, contact

Extension Counseling Office
314 Nolte Center
315 Pillsbury Drive SE
Minneapolis, MN 55455
Telephone (612) 373-3905

Office hours:
9-12 noon, 1-4 p.m.
Monday-Friday
5-8 p.m. by appointment only
Monday-Thursday

General Information

Credits

The University of Minnesota uses the quarter hour as the basis of credit evaluation. A quarter hour equals approximately 2/3 of a semester hour. All credits listed in this bulletin are quarter-hour credits.

The following credit designations are used in the course descriptions:

Degree credit may be used in a degree program. Officials at colleges or universities determine which Independent Study courses will be accepted to fulfill degree requirements at their institutions. To receive credit for Independent Study courses, you should obtain approval from that institution before enrolling. University of Minnesota students should consult an advisor in their major department. (See University Degree Programs section.)

Certificate credit may be used in appropriate Continuing Education and Extension certificate programs. Certificate credit courses are college level but do not carry degree credit and have no counterpart in day classes at the University of Minnesota. (For more information, see Extension Certificate Programs section.)

No credit is given for some courses, although grades may be assigned. (Also see Enrolling in Credit Courses on a Noncredit Basis.)

Resident Credit

Degree courses described in this bulletin parallel or are equivalent to courses with the same title and course number offered in day sessions at the University of Minnesota. Through action of the University Senate, Extension Independent Study credits are considered resident credits.

Graduate Credit

See University Degree Programs section, Graduate School

Enrolling in Credit Courses on a Noncredit Basis

Any course listed in this bulletin may be taken on a noncredit basis by simply indicating "NC" in the "Credits" column of the registration form. Usually, instructors will expect the same quality of work and will grade both credit and noncredit students on the same basis. You may not change from a noncredit to a credit registration once you have begun submitting lessons.

DANTES

The Defense Activity for Non-Traditional Education Support (DANTES) was established in June 1974 to provide educational support for volun-

General Information

tary education programs for military organizations. Military personnel on active duty should contact their Education Officer for additional information concerning enrollment through this program.

Degree Candidates

See University Degree Programs

Discontinued Courses

The unavailability of materials, books, or instructors sometimes makes it necessary to discontinue accepting enrollments in an Independent Study course. If you mail in a registration form for a course that has been discontinued, your tuition will be returned or, if requested, applied to another course with the same tuition cost.

Examinations

Most Independent Study courses include a final examination and one or more midcourse examinations. They are usually supervised and may be taken at the following offices or under the supervision of the following individuals.

1. Department of Independent Study, 45 Wesbrook Hall, Minneapolis Campus of the University. Office hours are from 7:45 a.m. to 4:30 p.m., Monday through Friday. No appointment is necessary during regular hours. If you wish to take your examination on the first or second Tuesday evening of the month, you should call 373-3256. During July, August, and September, you can take an exam in the evening only on the first Tuesday of the month.

Students in the Twin Cities area are urged to take their examinations at the offices of the Department of Independent Study.

2. Continuing Education and Extension Offices (by appointment only):

Crookston: 209 Selvig Hall, 281-6510, ext. 243
Duluth: 431 Administration Building, 726-8113
Morris: 226 Community Services Building, 589-2482
Rochester: 2120 East Center St., Building 4, 288-4584
Wadena: 411 Colfax Ave. SW, 631-2413

3. The Independent Study department of any member institution of the National University Extension Association. (A list is available on request.)

General Information

4. A school superintendent, principal, or counselor; a college instructor or administrator; a head librarian.
5. A commissioned officer whose rank is higher than your own (for students in the military only).
6. A corporate education director.

The Department of Independent Study reserves the right to reject any supervisor. Regardless of academic qualifications, no relative may proctor an examination. No proctor fees are authorized.

A Request for Examination form for each exam is included in the study guide. To take your examinations at locations other than the offices of the Department of Independent Study, you must contact the individual who will proctor your examination before sending the Request for Examination form to the Department of Independent Study. Examinations are mailed directly to the supervisor at his or her business location.

Extension Certificates

See Extension Certificate Programs section

Faculty

Instructors for all Extension Independent Study courses are approved by the academic departments through which the courses are offered. In most cases, Independent Study instructors are faculty members of the University, although faculty members from other colleges and universities, or specialists in professional and business fields, also teach Independent Study courses. A complete faculty list appears at the end of this bulletin.

Fees

See Tuition, Postage

Financial Assistance

The following paragraphs describe some of the financial aid programs and methods available to Independent Study students. Full-time University students should also contact the Office of Student Financial Aid, 105 Armory, 15 Church St. SE, University of Minnesota, Minneapolis, MN 55455, regarding additional assistance opportunities. Basic Educational Opportunity Grants and Federally Insured Student Loans **cannot** be used for Independent Study courses, with the possible exception of admitted University Without Walls students enrolled in directed study courses.

Business Firms — Many business firms help subsidize the education of their employees. Before enrolling, you are urged to talk with your company's personnel or education officer about possible tuition assistance for Independent Study.

Handicapped Students — Rehabilitation funds for the education of disabled persons are available through most State Departments of Education. Applications for aid in Minnesota should be sent to the Division of Vocational Rehabilitation, State Department of Education, Capitol Square Building, 550 Cedar St., St. Paul, MN 55101; telephone (612) 296-5616.

Low-Income Adult Scholarships — Tuition assistance scholarships are available through the Continuing Education and Extension Tuition Assistance Program for low-income adults who wish to enroll in Independent Study courses. Applicants must reside in Minnesota, and eligibility for tuition assistance is based on monthly net income, number of dependents, and special expenses. For information, call (612) 376-4500 or write to the Extension Counseling Office.

The Remington Scholarship — The Gilford W. and Esther F. Remington Scholarship Fund has been established by Mrs. Remington to provide financial assistance each year to students enrolled through Continuing Education and Extension (CEE) on the Twin Cities campus and through the Duluth Extension Center on the UMD campus. Funds are administered through CEE's Tuition Assistance Program.

For an application form, write to the Extension Counseling Office. Preference will be given to students in the fields of history, education, art, and audio-visual education. Applications are considered each August for the academic year.

Cold War Veterans — (Chapter 34, Title 38, U.S. Code) A G.I. Bill providing educational benefits for eligible veterans became effective June 1, 1966. Eligibility is based on active military service on or after February 1, 1955. Maximum period of training is 45 months, but this period is reduced by training taken under other Veterans Administration programs. For further information on registration procedures, write or telephone the Department of Independent Study.

Grades

The University uses the A-N and the S-N grading systems. Indicate on your registration form which system you wish to be graded on. You may not change to another system after you begin submitting lessons. If there is a grading system restriction for a course, it is indicated in the course description. Your final grade is sent to you upon completion of each Independent Study course.

General Information

Grading procedures and requirements are left largely to the discretion of the instructor, who is in the best position to evaluate a student's skill, knowledge, and progress. Grading policies employed in specific courses are usually outlined in the study guide for each course. Questions or problems concerning grades earned in Independent Study should be sent to the Director, Department of Independent Study, 33 Westbrook Hall.

A-N Grading System

There are four passing grades in the A-N system: A, B, C, and D. A grade of N indicates unsuccessful completion of the course. A grade of D, while a passing grade, reflects substandard work and must be balanced by grades of A or B in order to maintain the C average required by the University.

S-N Grading System

The S-N system is an alternative to the A-N system. S represents achievement that is satisfactory to the instructor. (The standards for S may vary from one course to another.) The symbol N, which stands for no credit, is assigned when the student does not earn an S. Each college determines which courses or what proportion of courses may be taken on the S-N system. Students intending to apply Independent Study credits taken on the S-N system toward a degree at the University should contact their college office or the Extension Counseling Office before enrolling.

Students not working on a degree or certificate program, and not intending to apply credits toward such a program later, may use the S-N system for any number of courses.

Grade Point Average

To determine grade point average, grade points are assigned to course grades as follows: for each credit of A, four grade points; B, three grade points; C, two grade points; D, one grade point; N, no grade points. Your grade point average is determined by dividing the sum of grade points by the sum of credits attempted (both passed and failed). Credits earned in classes taken on the S-N grading system are not included in determining grade point average.

Withdrawals, Cancellations, and Incompletes

No grade will be recorded for students who do not complete their Independent Study course. Students who formally cancel will receive a grade of W (withdrawal). A grade report is issued from the Office of Admissions and Records only upon completion of all course requirements.

Course Completion

Students must take full responsibility for meeting graduation or certification deadlines. Allow at least three weeks from the date the course is completed for the final grade to be recorded on the transcript in the Office of Admissions and Records. Students with special time limitations should check with the Department of Independent Study **before** enrolling, about the feasibility of meeting their particular credit deadline.

Group Study

See Ways to Earn Credit through Independent Study (center section)

High School Students

Extension Independent Study offers approximately 50 high school credit courses approved by the State Department of Education, and they satisfy University of Minnesota entrance requirements. These courses are suitable for students who need specific credits for college entrance, students who have dropped out of school but wish to complete their diploma, handicapped students who cannot attend public high school, above-average students who have permission to accelerate their high school completion. For more information and a complete list of courses, write to the Department of Independent Study for a High School Bulletin.

Adults 19 years or older who have left school and are eligible to take the General Educational Development (GED) tests for high school equivalency may find Independent Study high school courses in English, mathematics, social studies, and other subjects can serve as a valuable review. For detailed information about the GED examinations in Minnesota, contact Coordinator, Community Education Section, State Department of Education, Capitol Square Building, 550 Cedar St., St. Paul, MN 55101; telephone (612) 296-4057.

High school students may, with permission of their local school authorities, take college-level Independent Study courses for credit.

Lesson Service

You should allow at least one week between the time an assignment is received by the Department of Independent Study and the time it is placed in the return mail. All assignments for a course should be completed at least two weeks before taking the final examination.

Insufficient postage, no zip code, or the submission of a large number of lessons at one time may delay the processing of lessons beyond the one-week period. You are urged to contact the Department of Independent Study regarding any lesson not returned within three weeks from the date on which it was submitted.

General Information

Library and Audio-Visual Facilities

In addition to the required textbooks you may purchase for your Independent Study course, you are urged to use the University libraries and your local public, school, or college library for supplemental and required reading.

University of Minnesota Libraries — Independent Study students can borrow books from University libraries. These include the St. Paul Campus Library and Walter Library (East Bank) and Wilson Library (West Bank) on the Minneapolis Campus. Independent Study students are subject to all library regulations including loan periods, fines, book recalls, and course reserves. Students borrowing books in person must present a current fee statement (the student's copy of the registration form). Students who reinstate in a course must present proof of reinstatement at the library to withdraw books. Students wishing to borrow by mail should fill out the request form included with their course materials and return it to the Interlibrary Loan Division, 179 Wilson Library, 309 - 19th Ave. S, University of Minnesota, Minneapolis, MN 55455. Library loans by mail are subject to all library regulations and must be returned on demand. No library books can be sent overseas.

Loan Library — Required and recommended books for some courses may be rented from the Department of Independent Study loan library. The study guide for each course indicates any books available from the loan library. Rental fee for three months is 25 percent of the new book price; the minimum charge is 50 cents. A book may be retained an additional month, if needed, for an additional 15 percent of the list price. Borrowers must return books when due so they may be used by other students. No library books can be sent overseas.

Audio-Visual Library Services — This office provides audio-visual materials as learning resources for student use on a fee basis. Limited preview facilities and equipment are available on the departmental premises. For information and a catalog of available resources, contact the Librarian, Audio-Visual Library Services, 3300 University Ave. SE, Minneapolis, MN 55414; telephone (612) 373-5452.

Learning Resources Center — The University of Minnesota Learning Resources Center, Minneapolis Campus, and the Instructional Resources Center, St. Paul Campus, have over 5,000 cassette and reel-to-reel tapes for use in languages, music, social sciences, and other disciplines. Independent Study students are eligible to use the language laboratory or to borrow materials on a long-term loan basis upon presentation of the student's copy of the completed registration form. Please call for information on relevant course materials and hours.

Learning Resources Center
204a Walter Library
Minneapolis Campus
Telephone (612) 373-2538

Instructional Resources Center
2nd Floor, Temporary South of Coffey
St. Paul Campus
Telephone (612) 373-1622

Minnesota College Libraries — Many Minnesota colleges and universities will extend library privileges to Independent Study students who show a fee statement (the student's copy of the registration form). Students must abide by the regulations of these libraries. Course grades will not be issued or transferred for students who fail to comply with library regulations.

MINITEX — Most Minnesota libraries are participants of MINITEX (Minnesota Interlibrary Telecommunications Exchange), a legislatively funded program that shares library resources. If the local library does not have a needed resource, it can generally be secured from another library. Students needing assistance in identifying or locating community library resources may call (612) 376-3925 or (800) 552-1138.

National University Extension Association (N.U.E.A.)

The Department of Independent Study is a member of the Independent Study Division of the National University Extension Association. The division publishes a Guide to Independent Study that lists Independent Study courses offered by 73 colleges. It is available from the National University Extension Association, One Dupont Circle, Suite 360, Washington, DC 20036. For single copies, the cost is \$2.

Office Hours

The Department of Independent Study office is open Monday through Friday, 7:45 a.m. to 4:30 p.m., throughout the calendar year. The Department does not observe regular academic holidays except for the following:

July 4, 1977	Independence Day
September 5, 1977	Labor Day
November 24, 1977	Thanksgiving Day
November 25, 1977	Friday after Thanksgiving
December 23, 1977	Friday before Christmas
December 26, 1977	Monday after Christmas
January 2, 1978	Monday after New Year's
May 29, 1978	Memorial Day

Overseas and Foreign Students

The Department of Independent Study accepts registrations from students living or traveling in foreign countries. Since courses are available only in English, students must have sufficient knowledge of English to be able to read and write assignments without difficulty.

General Information

The Department of Independent Study does not employ commercial agents abroad. You must pay all fees in American currency. The student must mail his/her registration form along with payment for fees, books, and other materials directly to the Department of Independent Study. Library materials, records, and certain other supplementary materials cannot be sent overseas. For complete information regarding overseas lesson service, see Postage.

Partial Payment Plan

See Tuition

Postage

Students pay postage on all mail sent to the Department of Independent Study. The Department pays for the return of corrected lessons at first class rates and the delivery of texts and materials at fourth class book rates. Overseas students should arrange for lessons, tests, and materials to be sent airmail by enclosing special fees with their registration. Overseas students who do not arrange for airmail postage will encounter considerable delay and possible loss in delivery. Students must assume financial responsibility for the loss of shipments of texts and materials sent overseas.

Overseas students who wish corrected lessons returned by airmail should remit \$6 per course. This fee is nonrefundable. Overseas students who wish texts and materials sent airmail should remit \$15 per course in addition to tuition and the \$6 airmail lesson service fee. Any balance under \$1, after postage has been paid, will not be refunded. INDICATE CLEARLY ON THE REGISTRATION FORM THE PURPOSE FOR WHICH ADDITIONAL PAYMENT OF POSTAGE IS INCLUDED.

Students in the United States and Canada who wish texts and supplies sent first class should remit an additional \$7 per course when ordering. (See Textbooks and Supplies for instructions on ordering.) Any balance under \$1, after postage has been paid, will not be refunded.

Purchase of Study Guides

Study guides for individual courses can be purchased. To obtain the price of a study guide, mail the name of the course to Office Supervisor, Department of Independent Study.

Radio Courses

See Ways to Earn Credit through Independent Study (center section)

Refunds

See Tuition

Reinstatement

See Tuition

Senior Citizens in Minnesota

Minnesota residents, 62 years of age or older, may register in Extension Independent Study noncredit courses at no tuition cost and in credit courses for a tuition fee of \$2 per credit. In either case, the registrant will be required to pay for the study materials. For further information, telephone (612) 373-3256 or write to the Department of Independent Study.

Special Courses and Programs

The Department of Independent Study administers a number of special programs in the health care field. For more information, contact the programs listed below.

Independent Study Program for Hospital and Health Care Facility Administrators, Project Coordinator, 2829 University Ave. SE, Suite 336, Minneapolis, MN 55414; telephone (612) 376-1544.

Independent Study Program in Patient Care Administration, Project Director, 2829 University Ave. SE, Suite 336, Minneapolis, MN 55414; telephone (612) 376-1517.

Center for Long Term Care Administration Education, Project Coordinator, 2829 University Ave. SE, Suite 336, Minneapolis, MN 55414; telephone (612) 376-3287.

Independent Study Program in Mental Health Administration, Project Coordinator, 2829 University Ave. SE, Suite 336, Minneapolis, MN 55414; telephone (612) 373-2447.

Student Services

Many student services are available to Independent Study students. Participation in some of these activities is dependent on credit load per academic quarter. A list of services is given here. For more information about participating in these programs, contact the Department of Independent Study. Students who are also enrolled in Extension Classes may count Independent Study credits as part of their total credit load.

General Information

- Recreational facilities
- Athletic tickets
- Health service
- Library (see Libraries)
- Parking and bus service (inter-campus)
- CEE student board University Senate
- Student employment

Tapes and Tape Recorders

The Department of Independent Study will loan cassette tape recorders for use with Independent Study courses. Cassette tape recorders may be borrowed for three months for a service fee of \$20 (\$15 is a non-refundable rental fee, and \$5 is refundable when the tape recorder is returned undamaged). The loan period may be extended for a renewal fee of \$5 per month; otherwise, students will be fined for use beyond the loan period. Students will be held responsible for any loss or damage to machines in their possession or in transit to the Department of Independent Study. Cassette tape recorders will not be sent overseas. Audio cassettes, used in some courses, can be purchased only from the Department of Independent Study.

For more information regarding the loan of cassette tape recorders or the purchase of audio cassettes, call or write the Department of Independent Study.

Teacher Certification

See University Degree Programs section, College of Education

Television Courses

See Ways to Earn Credit through Independent Study (center section)

Textbooks and Supplies

Textbooks and supplies needed for a course, and the procedure for ordering them, are explained in the study guide sent to you upon registering. Tuition does not cover the cost of books and materials. Course descriptions in this bulletin list approximate book prices. Exact prices are given in the study guide introduction. However, if you wish to order your textbooks when you register, add the amount for the texts (given in the course description) plus a \$1.50 service charge to your tuition check. Overpayments of \$1 or more will be refunded. Students who wish to sell their books should contact the Minnesota Book Center,

General Information

Williamson Hall, University of Minnesota, 231 Pillsbury Dr. SE, Minneapolis, MN 55455; telephone (612) 373-3688. Only books in current use will be purchased.

Transferring to Another Course

You may transfer from one Extension Independent Study course to another providing you do so within three months from the date of registration and prior to the completion of half the lessons in the course. The transfer fee is \$6, plus the cost of the study guide for the new course and \$2.75 for each lesson evaluated. The original tuition is applied to the tuition for the new course. The second course must be completed within one year from the original registration date unless the enrollment is reinstated (see Tuition, Reinstatements). When a transfer is recommended by the Department of Independent Study, you are charged only for lessons evaluated by the instructor.

Transfers are allowed only once per registration and cannot be made from one individual to another.

Transcripts

An unofficial transcript is sent to you upon completion of each course. An official transcript of work taken through Independent Study will be sent to other colleges and universities upon request. Send your name, address, and the name of that institution to:

Office of Registration and Student Records
Williamson Hall
231 Pillsbury Drive SE
University of Minnesota
Minneapolis, MN 55455

Tuition

Tuition for Independent Study courses is \$16.50 per credit for 0000 and 1000-level courses, \$17.50 per credit for 3000-level courses, and \$18.50 per credit for 5000-level courses. The tuition for each course is listed with the course description. Books and materials are not included in the tuition and must be purchased separately (see Textbooks and Supplies). Checks or money orders should be made payable to the University of Minnesota. (A \$2 handling fee is charged for all checks returned by a bank.) You must register for Independent Study courses directly with the Department of Independent Study; Independent Study has no commercial agents in this country or abroad. You must pay all fees in American currency.

General Information

Partial Payment Plan

The Department of Independent Study offers a partial payment plan for those who cannot pay full tuition at the time of registration. This plan applies only to courses with tuition of \$33 or more. Texts and materials ordered through the Department of Independent Study must be paid in full at the time of purchase.

Under this plan, one-third of the total tuition, plus a service charge of \$4 per course, is paid at the time of registration. The remaining two-thirds is payable in two equal monthly payments due 30 and 60 days after the date of registration.

Sample payment schedules (including \$4 service charge):

Tuition	1st pmt (at registration)	2nd pmt (30 days)	3rd pmt (60 days)
0000 and 1000-level courses			
\$33.00 (2 cr @ \$16.50/cr)	\$15.00	\$11.00	\$11.00
\$49.50 (3 cr @ \$16.50/cr)	\$20.50	\$16.50	\$16.50
\$66.00 (4 cr @ \$16.50/cr)	\$26.00	\$22.00	\$22.00
\$82.50 (5 cr @ \$16.50/cr)	\$31.50	\$27.50	\$27.50
3000-level courses			
\$35.00 (2 cr @ \$17.50/cr)	\$16.00	\$11.50	\$11.50
\$52.50 (3 cr @ \$17.50/cr)	\$21.50	\$17.50	\$17.50
\$70.00 (4 cr @ \$17.50/cr)	\$27.50	\$23.25	\$23.25
\$87.50 (5 cr @ \$17.50/cr)	\$33.50	\$29.00	\$29.00
5000-level courses			
\$37.00 (2 cr @ \$18.50/cr)	\$16.50	\$12.25	\$12.25
\$55.50 (3 cr @ \$18.50/cr)	\$22.50	\$18.50	\$18.50
\$74.00 (4 cr @ \$18.50/cr)	\$29.00	\$24.50	\$24.50
\$92.50 (5 cr @ \$18.50/cr)	\$35.00	\$30.75	\$30.75

Lessons will be accepted only through that third of the course for which tuition has been paid. For example, students enrolled in a 12-lesson course will not receive instruction beyond lesson four if they have made only the first payment.

Registration will be cancelled if the total tuition has not been paid within 90 days of the original registration date unless special permission has been obtained from the Director of the Department of Independent Study. Once registration has been cancelled, you may continue a course only by re-enrolling.

Students wishing to use the partial payment plan should fill in the appropriate spaces on the regular registration form and send it, along

General Information

with the service charge, the first payment, and any other special fees, to the Department of Independent Study.

Refunds

If you wish to cancel your course registration, part of your tuition can be refunded if you cancel within three months of the date of registration and prior to the completion of half the lessons in the course. Ten dollars plus the cost of the study guide and \$2.75 for each lesson evaluated are nonrefundable. This also applies to those students who use the partial payment plan.

Reinstatements

You will have one year from the date of registration to complete a course; if you cannot complete the course in that period, you may extend your enrollment for one additional year with a reinstatement fee of \$10. Reinstatements should be requested before enrollment expires, and the reinstatement fee must be paid before additional lessons can be submitted. If you do not reinstate within 30 days after expiration, you must pay full tuition fees to re-enroll.

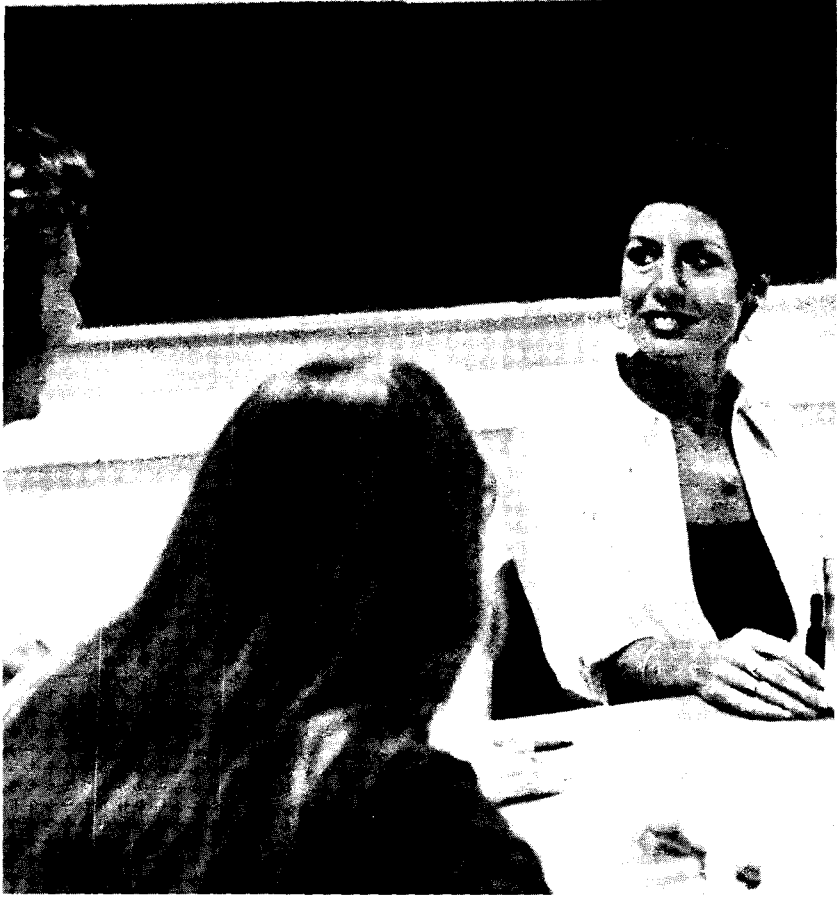
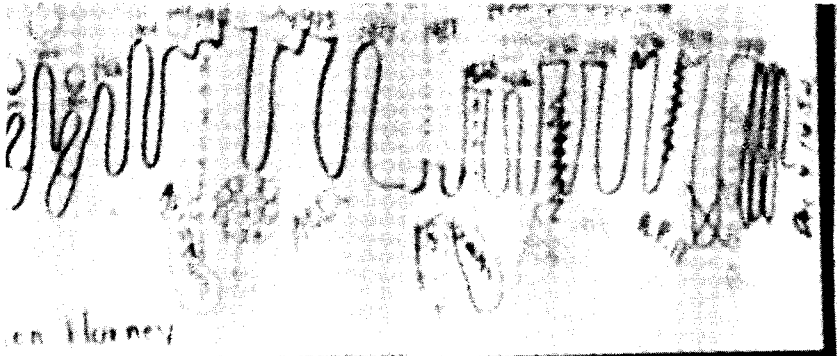
Video Cassette Courses

See Ways to Earn Credit through Independent Study (center section)

Withdrawals

See Tuition, Refunds

Students who wish to withdraw from a course after three months from the date of registration may do so by simply not submitting lessons for evaluation. No grade is recorded unless all work for the course is completed. If you formally cancel a course, a grade of W (withdrawal) is recorded.



Associate Professor of Psychology and Director of Measurement Services Center Patricia Faunce, right, is the instructor for PSYCHOLOGICAL ENVIRONMENT OF WOMEN (WoSt1977).

Extension Certificate Programs

Certificate programs are generally regarded by business and industry as valuable professional and technical preparation for employment and promotion. Students whose career plans require college training, but who cannot devote the time necessary to earn a degree, may consider a certificate program. With careful planning, a certificate can be a stepping-stone to a degree program.

Continuing Education and Extension offers 32 certificate programs consisting of degree-credit courses or a combination of degree and certificate-credit courses. Students entering these programs should have adequate educational preparation or other experience that qualifies them to work with college-level materials. The certificate-credit courses represent an accelerated and specialized approach to subject matter. They are not, however, usually transferable to a degree program.

Work on most certificates may be done through Extension Independent Study, Extension Classes, day school, summer session, or any combination of these. Students may transfer credits from other accredited institutions, although a minimum of 25 percent of the credits required for any certificate must be earned at the University of Minnesota. Core requirements must be completed by all applicants; the courses, however, need not be taken in order except as prerequisites make it necessary. Of the total credits required to complete an Extension Certificate program, only 25 percent may be taken on the S-N grading system.

Certificate requirements are subject to modification. Although there is no time limit on the use of credits, no certificate will be granted that represents a certificate program more than seven years out of date.

All Extension certificates may now be earned with honors. A student earning a 3.00 to 3.49 grade point average, overall, will be awarded a certificate "with distinction." A student earning a 3.50 grade point average, or better, overall, will be awarded a certificate "with high distinction." At least 60 percent of the requirements for a certificate with honors must be earned at the University of Minnesota and must be taken on the A-N grading system. The honors program is not retroactive

Extension Certificate Programs

to certificates that have already been granted. Colleges at the University retain the right to determine honors requirements for a degree, and therefore, earning a certificate with honors does not automatically gain a student entry into a college's honors program.

For advice and information about certificate programs, application, completion of forms, transfer of credits, grading systems, and honors, contact the Extension Counseling Office, 314 Nolte Center, 315 Pillsbury Drive SE, University of Minnesota, Minneapolis, MN 55455.

Group I certificates can be earned entirely through Extension Independent Study. Group II certificates can be partially completed through Independent Study, but require additional credits from day school, Extension Classes, or transferred credits.

Courses or course sequences available through Extension Independent Study are followed by an asterisk (*).

Extension Certificates — Group I

Fire Protection Certificate (48-51 credits)

The Fire Protection Certificate program was planned by the Fire Information, Research and Education Center, Agricultural Extension Service, Continuing Education and Extension, and others responsible for fire protection. It is designed for those employed by or concerned with municipal, institutional, and industrial fire protection, insurance inspection or rating bureaus, and manufacturers of protective equipment.

The Fire Protection core courses are available only through Extension Independent Study. Courses now or soon to be available are FPro 0001C, 0002C, 0003C, 0004C, 0005C, 0006C, 0007C, 0008C, and 0009C. Additional core courses will become available each year. Students may transfer credits for equivalent courses from other accredited institutions, although a minimum of 25 percent of the credits for this certificate must be earned at the University.

Fire Protection Certificate credits are accepted as degree credits toward the Associate in Arts degree in the General College of the University of Minnesota. These credits also are accepted as degree credits toward the Bachelor of Applied Studies and the Bachelor of General Studies degrees if they are an integral part of a student's individual proposal at the time of admission to a baccalaureate program.

English Requirement (3-4 credits)

Comm 1001 or Comp 1001*; or Spch 0001C or Spch 1101

Extension Certificate Programs

Core Requirement (33 credits)

IR 0001C—Supervision I*
FPro 0001C—Introduction to Fire Protection*
FPro 0002C—Hazardous Materials I*
FPro 0003C—Hazardous Materials II*
FPro 0004C—Hazardous Materials III*
FPro 0005C—Fire Prevention and Control*
FPro 0006C—Fire Protection and Life Safety Systems in Building Design*

FPro 0007C—Private Fire Protection Systems—Elements*
FPro 0008C—Private Fire Protection Systems—Applications*
FPro 0009C—Fire Department Administration*
FPro 0010C—Organization for Fire Protection

Spread Requirement (12-14 credits)

Psy 1001—General Psychology* or Psy 1003—Application of Psychology to Living
Pol 1001—American Government and Politics* or Pol 1031—American Public Policy*

Soc 1001—Introduction to Sociology* or Soc 1002—American Community*

General Studies Certificate (45 credits)

The General Studies Certificate program is designed to recognize students' achievement after the completion of one year of college coursework. There are no required courses in the program, but students are encouraged to take courses in most of the general education curriculum areas of the General College—natural sciences, social sciences, business studies, humanities, and communications. Of the 45 credits required, a minimum of 30 credits must be earned through General College courses. (A list of General College courses offered through Extension Independent Study is found in the Course Description section.)

All credits in this program will be accepted toward the Associate in Arts degree from General College. For A.A. degree requirements, see University Degree Programs section, General College.

Liberal Arts Certificate (45 credits)

The Liberal Arts Certificate program offers students an introduction to a liberal arts education and is equivalent to one year of University study. The certificate can constitute the freshman year of a degree program in liberal arts or business, if carefully planned.

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University.

English Requirement (8 credits)

Comp 1001-1002—Introductory Composition*, or equivalent

Spread Requirement (32 credits) Eight credits in each of the following groups.

Extension Certificate Programs

Group A

Communication, Language, Symbolic Systems: accounting, computer sciences, composition (other than freshman English), journalism, language, philosophy, mathematics, speech, statistics

Group B

Physical and Biological Sciences: astronomy, biology, chemistry, ecology, geology, physics

Group C

Man and Society: anthropology, economics, family studies, geography, history, political science, psychology, social science, sociology

Group D

Artistic Expression: art, architecture, classics, humanities, literature, music, theatre arts

Electives: Additional liberal arts courses are required for a total of 45 credits for the certificate. Before taking courses applicable to this certificate, students should obtain a copy of CLA courses offered through Continuing Education and Extension that meet the Group Distribution Requirements. Contact the Department of Independent Study, 45 Wesbrook Hall, 77 Pleasant St. SE, University of Minnesota, Minneapolis, MN 55455; telephone (612) 373-3256.

Mathematics and Science Certificate (45 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University.

Prerequisite: Two years of algebra and two years of geometry, including trigonometry

Core Requirement (24 credits)

Comp 1001 — Introductory Composition*,
or Comm 1001 — Communication
Math 1211 — Analysis I*

Math 1221 — Analysis II*
Math 1231 — Analysis III*
Math 3211 — Analysis IV*

Electives: Additional credits for a total of 45 credits, selected from the following areas

Astronomy
Chemistry
Engineering

Geology
Physics
Aerospace Engineering and Mechanics

Extension Certificates — Group II

At least half of the requirements for the following certificates can be met with Independent Study courses.

Accounting Certificates

The Junior Accounting Certificate program is useful to junior accounting

Extension Certificate Programs

personnel, management personnel, and others who need a basic understanding of the principles of accounting and corporate finance.

The requirements for the Senior Accounting Certificate are similar to those for a four-year accounting degree. This program provides a good background for the Certified Public Accountant examinations.

Junior Accounting Certificate (57-58 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 14 credits in accounting at the University.

Requirements

Comp 1001-1002 — Introductory Composition*, or Comm 1001-1002 — Communication, or equivalent
Econ 1001, 1002 — Principles of Macroeconomics and Microeconomics*
Acct 1024-1025-1026*, or Acct 1050-1051 — Principles of Accounting
Acct 3105-3106-3107 — Intermediate Accounting

Acct 3220-3221 — Cost Accounting
BFin 3000 — Finance Fundamentals
Math 1201 — Pre-Calculus, or Math 1131 — Finite Mathematics, or Math 1111 — College Algebra and Analytic Geometry*
QA 1050 — Elementary Managerial Statistics
QA 3055 — Introduction to Management Science
MIS 3099 — Elementary Fortran

Senior Accounting Certificate (93-94 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits in accounting at the University.

Requirements

Comp 1001-1002 — Introductory Composition*, or Comm 1001-1002 — Communication, or equivalent
Comp 1027 — Intermediate Composition: Exposition*
Math 1201 — Pre-Calculus, or Math 1131 — Finite Mathematics, or Math 1111 — College Algebra and Analytic Geometry*
Math 1142 — Introduction to Calculus of One and Several Variables*, or Math 1211-1221 — Analysis I-II*, or equivalent

QA 1050 — Elementary Managerial Statistics
Econ 1001, 1002 — Principles of Macroeconomics and Microeconomics*
Acct 1024-1025-1026*, or Acct 1050-1051 — Principles of Accounting
Acct 3105-3106-3107 — Intermediate Accounting
Acct 3220-3221 — Cost Accounting
12 credits of accounting electives
BFin 3000 — Finance Fundamentals
BLaw 3058 — Business Law: Contracts*

Electives (16 credits)

IR 3002 — Systems of Industrial Relations: Labor Marketing*
Ins 3100 — Risk Management and Insurance*
Tran 3054 — Fundamentals of Transportation
Mktg 3000 — Principles of Marketing
Mgmt 3001 — Fundamentals of Management

Mgmt 3004 — Business Policy: Strategy Formulation and Implementation
Econ 3101 — Microeconomic Theory
BGS 3002 — Business and Society
QA 3055 — Introduction to Management Science
MIS 3099 — Elementary Fortran

Extension Certificate Programs

Business Administration Certificates

The Business Administration Certificate programs have been approved by the College of Business Administration and arranged under the supervision of its faculty. They present integrated, high quality, university-level programs of shorter length and scope than four-year degree programs. They are designed for students who need an understanding of the principles and theories of business administration, and for those who want training or an opportunity for advancement in some specific field of business.

Junior Business Administration Certificate (45-46 credits)

This certificate represents the equivalent of one academic year of study in business. It offers a background in the basic fields of business administration. All of the credits received in completing the Junior Certificate are credited toward a Senior Certificate and represent half of its required work load.

Students transferring credits from other accredited institutions to this program must take a minimum of 12 credits in business courses at the University.

Pre-business Requirement (34 credits)

Comp 1001-1002—Introductory Composition*, or Comm 1001-1002—Communication, or equivalent

Econ 1001, 1002—Principles of Macroeconomics and Microeconomics*

Acct 1024-1025-1026*, or Acct 1050-1051—Principles of Accounting

Math 1201—Pre-Calculus, or Math 1131—Finite Mathematics, or Math 1111—College Algebra and Analytic Geometry*

QA 1050—Elementary Managerial Statistics

Core Requirement (12 credits) Three courses selected from the following

MIS 5100—Computers and Systems Design

IR 3002—Systems of Industrial Relations: Labor Marketing*

Ins 3100—Risk Management and Insurance*

Mgmt 3004—Business Policy: Strategy Formulation and Implementation

Econ 3101—Microeconomic Theory

BGS 3002—Business and Society

QA 3055—Introduction to Management Science

MIS 3099—Elementary Fortran

Mgmt 3001—Fundamentals of Management

Math 1211-1221—Analysis I-II*, or Math 1142—Introduction to Calculus of One and Several Variables*

Tran 3054—Fundamentals of Transportation

BFin 0001C—Introduction to Investments

BFin 3000—Finance Fundamentals

Mktg 3000—Principles of Marketing

BLaw 3058—Business Law: Contracts*

Senior Business Administration Certificate (90-91 credits)

The Senior Business Administration Certificate is a continuation of the Junior Certificate. The completion of the certificate approximates the second and third years of a four-year degree program, with emphasis on the basic principles and theories of business administration.

Extension Certificate Programs

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits in business courses at the University.

Pre-business Requirement (38-39 credits)

Comp 1001-1002 — Introductory Composition*, or Comm 1001-1002 — Communications, or equivalent
Econ 1001, 1002 — Principles of Macroeconomics and Microeconomics*
Acct 1024-1025-1026*, or Acct 1050-1051 — Principles of Accounting

Math 1201 — Pre-Calculus, or Math 1131 — Finite Mathematics, or Math 1111 — College Algebra and Analytic Geometry*
Math 1211-1221 — Analysis I-II*, or Math 1142 — Introduction to Calculus of One and Several Variables*
QA 1050 — Elementary Managerial Statistics

Core Requirement (24 credits) Six courses selected from the following

MIS 5100 — Computers and Systems Design
MIS 3099 — Elementary Fortran
IR 3002 — Systems of Industrial Relations: Labor Marketing*
Ins 3100 — Risk Management and Insurance*
Tran 3054 — Fundamentals of Transportation
QA 3055 — Introduction to Management Science
BGS 3002 — Business and Society

BFin 0001C — Introduction to Investments
BFin 3000 — Finance Fundamentals
Mktg 3000 — Principles of Marketing
BLaw 3058 — Business Law: Contracts*
Mgmt 3001 — Fundamentals of Management
Mgmt 3004 — Business Policy: Strategy Formulation and Implementation
Econ 3101 — Microeconomic Theory

Electives in the College of Business Administration: At least 16 additional credits in business administration. These may be selected from the Core Requirements or from other courses.

Other Electives: Satisfactory completion of pre-business degree requirements in Physical and Biological Sciences, Man and Society, or Artistic Expression, for a total of 90-91 credits.

Note: Students considering a degree from the College of Business Administration should choose electives that could become part of the degree program. Such students should complete the pre-business degree requirements listed in the Degree Programs section of this bulletin and should contact the Extension Counseling Office early in their program.

Credit and Financial Management Certificate (63-65 credits)

The Credit and Financial Management Certificate program was developed cooperatively by Continuing Education and Extension, the College of Business Administration, and the North Central Credit and Financial Management Association. The program prepares students for careers in trade credit management, loan management, and financial management.

Students transferring credits to this program from other accredited institutions must take a minimum of 16 credits at the University.

Completion of the certificate qualifies students for the Associate and Fellow Awards of the National Institute of Credit. Persons interested in these awards should contact E. Norman Eck, 330 Plymouth Building, Minneapolis, MN 55402; telephone (612) 371-3951.

Core Requirement (57 credits)

Acct 1024-1025-1026*, or Acct 1050-1051 — Principles of Accounting

IR 0001C — Supervision I*
Mgmt 3002 — Psychology in Management

Extension Certificate Programs

Acct 3160 — Analysis of Financial Statements

BFin 0002C — Credit and Financial Management Problems

Blaw 3058, 3078, 3088 — Business Law*

Econ 1001, 1002 — Principles of Macroeconomics and Microeconomics*

Mktg 3000 — Principles of Marketing

Mktg 0087C — Credits and Collections

Comp 0004C — Business Correspondence, or GC 1531 — Business Writing*

Spch 0001C — Beginning Speech: Communication

Electives (8 credits)

Acct 3105 — Intermediate Accounting

Acct 3220 — Cost Accounting

BFin 0001C — Introduction to Investments

BFin 3000 — Finance Fundamentals

BFin 3100 — Financial Management

Econ 3701 — Money and Banking*

Ins 3100 — Risk Management and Insurance*

Mgmt 3001 — Fundamentals of Management

Mktg 3080 — Industrial and Government Procurement

Tran 3054 — Fundamentals of Transportation

Comp 0003C — Review of Business English

Human Services Certificate (46 credits)

The Human Services Certificate program was developed in response to an increasing demand for specialized certificates for paraprofessionals in community service. Paraprofessionals in agencies such as libraries, schools, neighborhood health clinics, poverty agencies, and housing authorities may find this certificate useful for personal development and professional advancement.

This certificate provides general and career-related coursework. Core Requirements include 22-27 credits generic to all fields of human services, plus 3-8 credits of electives in the social sciences. The Concentration Requirement must be met with supervised work experience and/or career-related projects planned by the student and a counselor. The certificate provides a variety of educational opportunities.

Students may transfer credits earned for this certificate toward a degree in the General College or the College of Liberal Arts. Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University.

Students should consult an Extension counselor before taking courses in the Concentration Requirement. Appointments may be arranged by calling or writing the Extension Counseling Office.

Core Requirement (27 credits)

GC 1421 — Writing Lab: Personal Writing, or Comp 1001 — Introductory Composition*, or Comm 1001 — Communication

GC 1461 — Oral Communication: Basic Principles, or Spch 1101 — Fundamentals of Speech

GC 1471 — Creative Problem Solving

SW 3001 — Introduction to American Social and Community Services*, or SW 1001 — Introduction to Social Welfare and Community Services

GC 1283 — Psychology of Human Development*, or Psy 1003 — Application of Psychology to Living

GC 1211 — Man in Society: His Personal Role, or Soc 1001 — Introduction to Sociology*

PubH 3001 — Personal and Community Health

Concentration Requirement: GC 1627 — Human Services Practicum, and/or approved related courses in one of the following fields (16 credits)

Extension Certificate Programs

Education

Urban Problems
Community Library
Community Organizer
Day Care
Youth Care
Family Work

Welfare

Family Nutrition
Community Health
Minority Studies — American Indian
Minority Studies — Afro-American
Minority Studies — Chicano

Electives: Additional courses from the following areas for a total of 46 credits

GC 1285 — Cultural Anthropology, or Anth 1102 — Cultural Anthropology*

GC 1295 — Economic Perspectives: General View

GC 1722 — Parent-Child Relationships*, or FSoS 1025 — Parenthood

Geog 1301 — Human Geography

GC 1233 — United States: Problems of Government, or Pol 1001 — American Government and Politics*

GC 1281 — Psychology of Modern Society, or Psy 1001 — General Psychology*

CPsy 1301 — Child Psychology*

SSci 3203 — Structure and Dynamics of Poverty

Rhet 1147 — Efficient Reading*

Up to 6 credits in art, music, literature, or humanities from either the General College or the College of Liberal Arts

Industrial Relations Certificate (45 credits)

The Industrial Relations Certificate was developed by the Department of Industrial Relations of the College of Business Administration. It provides technical training in industrial relations and in the use of specialist techniques. Advanced professional training in industrial relations is available only through the M.A. and Ph.D. programs.

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University.

Note: Courses at the 3000-level are primarily for juniors and seniors. Courses at the 5000-level are primarily for juniors, seniors, and graduate students.

Core Requirement (33 credits)

Econ 1001, 1002 — Principles of Macroeconomics and Microeconomics*

IR 3002 — Systems of Industrial Relations: Labor Marketing*

IR 3007 — Collective Bargaining Negotiations and Modern Labor Relations

IR 3010 — Human Relations and Applied Organization Theory

Psy 1001 — General Psychology*

Psy 3801 — Introduction to Statistical Methods

Soc 1001 — Introduction to Sociology*

Electives (12 credits)

Econ 3501 — Labor Economics

Econ 3551 — Labor Economics

Econ 5541 — Contemporary Labor Issues

Econ 5534 — Economic Security*

Econ 5537 — Labor Market Behavior and Regulation*

Psy 3124 — Psychology of Individual Differences

Psy 5044 — Psychology of Motivation and Conflict

Psy 3011 — Introduction to Psychology of Learning

Extension Certificate Programs

Econ 5561 — Economics of Collective Bargaining
IR 0001C — Supervision I*
IR 3012 — Systems of Industrial Relations: Manpower Management*
IR 3000 — Topics in Industrial Relations
IR 0007C — Occupational Safety and Health
GC 1081, 1082 — Personnel Selection Techniques
MIS 5100 — Computers and Systems Design
Mgmt 3002 — Psychology in Management
QA 3055 — Introduction to Management Science

Psy 5501 — Vocational Psychology
Psy 5701 — Personnel and Industrial Psychology
Soc 5201 — Social Psychology*
Soc 5411 — Formal Organization
IEOR 0100C — Industrial Engineering and Management
IEOR 0210C — Motion and Time Study Engineering*
IEOR 0408C, 0409C — Corporate Standard Data I, II

Management of Administrative Services Certificates

The Management of Administrative Services Certificate programs have been developed by Continuing Education and Extension with the College of Business Administration and the Administrative Management Society.

These college-level certificate programs provide management training. Their purpose is to assist employees to become more competent in their present positions and improve their opportunity for advancement.

Students may be entitled to certificates of the Administrative Management Society in addition to the certificates granted by Continuing Education and Extension. Contact the Education Director, Administrative Management Society, 1414 Soo Line Building, Minneapolis, MN 55402.

Associate in Management of Administrative Services Certificate (45-47 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits in business courses at the University.

Core Requirement (41-43 credits)

GC 1531 — Business Writing*, or Comp 1001 — Introductory Composition*, or Comp 0003C — Review of Business English, or Comm 1001 — Communication, or equivalent
Econ 1001, 1002 — Principles of Macroeconomics and Microeconomics*
Math 1201 — Pre-Calculus, or Math 1131 — Finite Mathematics, or Math 1111 — College Algebra and Analytic Geometry*

MIS 5100 — Computers and Systems Design
Acct 1024-1025-1026*, or Acct 1050-1051 — Principles of Accounting
BLaw 3058 — Business Law*
Psy 1001 — General Psychology*
Psy 3801 — Introduction to Statistical Methods

Electives: Additional courses selected from the Requirements or Electives for the Fellow Certificate (below) for a total of 45 credits.

Extension Certificate Programs

Fellow in Management of Administrative Services Certificate (91 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits in business courses at the University.

Core Requirement (41-43 credits)

Comp 0003C — Review of Business English and GC 1531 — Business Writing*, or Comp 1001-1002 — Introductory Composition*, or Comm 1001-1002 — Communication, or equivalent
Econ 1001, 1002 — Principles of Macroeconomics and Microeconomics*
Acct 1024-1025-1026*, or Acct 1050-1051 — Principles of Accounting

BLaw 3058 — Business Law*
Math 1201 — Pre-Calculus, or Math 1131 — Finite Mathematics, or Math 1111 — College Algebra and Analytic Geometry*, or equivalent
MIS 5100 — Computers and Systems Design
Psy 1001 — General Psychology*
Psy 3801 — Introduction to Statistical Methods

Group Requirements (36 credits)

Group I: At least four courses from the following (16 credits)

IR 3002 — Systems of Industrial Relations: Labor Marketing*
Mgmt 3002 — Psychology in Management
BFin 0001C — Introduction to Investments

BFin 3000 — Finance Fundamentals
Ins 3100 — Risk Management and Insurance*
Mktg 3000 — Principles of Marketing

Group II: At least five courses from the following (20 credits)

BFin 3100 — Financial Management
Tran 3054 — Fundamentals of Transportation
Acct 3255 — Managerial Costs, or Acct 3220 — Cost Accounting
Acct 3160 — Analysis of Financial Statements

IR 3010 — Human Relations and Applied Organization Theory
IR 3012 — Systems of Industrial Relations: Manpower Management*
Mgmt 3001 — Fundamentals of Management
BLaw 3088 — Business Law*

Electives: Additional credits from the following courses or areas for a total of 91 credits

IR 0001C-0002C — Supervision I*-II
Psy 5751 — Psychology of Advertising*
Accounting
Economics
Finance
Production
Management
Industrial Relations
Insurance

Marketing
Office Management
Real Estate
Transportation
English
Humanities
Social Science
Speech

Undergraduate Development Certificate (UDC) Series

Developed with the Institute of Technology, the UDC Series provides a plan for continuing education in particular disciplines and recognizes completion of an educational program indicative of increasing levels of technical capability. With departmental approval, degree-credit courses offered in certificate programs may be applied toward a subsequent baccalaureate degree. This requires early contact with the aca-

Extension Certificate Programs

demic department and application for admission to the Institute of Technology.

The UDC in Engineering and Science — 45 Credits (described below) is the initial required program in the UDC Series. It indicates familiarity with basic science and engineering topics and is equivalent to the first year of college study. After completing the UDC in Engineering and Science — 45 Credits, students can continue in particular disciplines through the UDC — 90 Credits or the UDC — 135 Credits (for example, UDC in Electrical Engineering — 90 Credits).

Students interested in a listing of the Undergraduate Development Certificates or in additional information concerning them, should contact the Extension Counseling Office.

Undergraduate Development Certificate in Engineering and Science — 45 Credits

The UDC in Engineering and Science — 45 Credits provides students with the fundamentals of mathematics, physics, and broad technical communications skills that enable them to handle support assignments in any engineering field. In addition, it gives them background for more specialized or advanced study either as an engineer or engineering technician. All courses in the UDC in Engineering and Science — 45 Credits carry degree credit and are applicable to a baccalaureate degree.

Students transferring credits to this program from other accredited institutions must take minimum of 12 credits at the University.

Prerequisite: High school graduate or equivalent; 2 years of algebra and 2 years of geometry, including trigonometry.

Core Requirement (37 credits)

Math 1211 — Analysis I*

Math 1221 — Analysis II*

Math 1231 — Analysis III*

EG 1025 — Engineering Graphics, or CICS 1100-1101, Introduction to Fortran Programming I-II, or CICS 3101 — A Fortran Introduction to Computer Programming

Phys 1271-1275-1281-1285—General Physics and Lab

Comp 1001-1002 — Introductory Composition*, or equivalent

Electives: Courses from nontechnical electives for a total of 45 credits. Nontechnical electives may be chosen from the following fields: anthropology, art, biological sciences, botany, classics, economics, geography, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology, and others. (See the current bulletin of the Institute of Technology.)

University Degree Programs

Through Extension Independent Study, it is possible to work on a variety of degrees at the University. There may be limitations, however, on the use of Independent Study credits in degree programs in certain departments or individual schools. If you wish to apply credits earned through Independent Study to a University degree program, you are urged to consult an academic advisor or your college office before enrolling.

It is important to plan coursework and to follow University procedures when working on a degree. If you have never been admitted to the University but wish to work toward a University degree, you should contact the Extension Counseling Office early in your planning. It is also essential to read the official bulletin of the college to which you wish to be admitted. College bulletins can be obtained by writing the Bulletin Room, Williamson Hall, 231 Pillsbury Dr. SE, University of Minnesota, Minneapolis, MN 55455.

College of Education

1425 University Ave. SE

Because of the variety of programs offered in the College of Education, it is not possible to present a specific curriculum or to indicate appropriate Extension Independent Study courses.

Students can use the two-year program listed under the College of Liberal Arts as a guide in completing many of the preprofessional requirements of the College of Education. Some Extension Independent Study courses in education are acceptable in College of Education programs. For more information, write to the College of Education, 1425 University Ave. SE, Minneapolis, MN 55414.

Teacher's Certificate

Most Independent Study courses can be used in the acquisition and renewal of teachers' certificates. However, the Department of Independent Study **does not evaluate teaching or educational experience for a certificate or recommend courses.**

University Degree Programs

Questions concerning teacher certification should be directed to the State Department of Education or a similar agency (in Minnesota — Director of Certification and Placement, Capitol Square Building, 550 Cedar St., St. Paul, MN 55101).

General College

106 Nicholson Hall, Minneapolis Campus

Associate in Arts Degree (A.A.)

The General College offers a two-year program of liberal and general studies leading to the Associate in Arts degree. The academic requirements for the A.A. degree are 90 passing credits and passing the General College Degree Comprehensive Examination.

Of the credits required for the degree, 45 must be taken in University courses; 30 of these credits must be taken in General College courses, including those offered through the Department of Independent Study. The A.A. degree can be obtained through the Department of Independent Study, if carefully planned.

There are no required courses in this degree program. Instead, a comprehensive examination is used to measure breadth of learning in the College's general education program. This exam covers the main curriculum areas of the college — natural sciences, social sciences, humanities, and communication skills. It centers on the relationships that exist among these areas and is designed to measure the extent to which a student demonstrates a general knowledge in the liberal arts.

The Degree Comprehensive Examination usually is taken when the student nears completion of the required 90 credits. This test may be scheduled through the Department of Independent Study and taken either in its offices or under the supervision of an approved proctor in an outstate location.

Bachelor of Applied Studies (B.A.S.)

Bachelor of General Studies (B.G.S.)

Students admitted to baccalaureate programs in General College work toward the Bachelor of General Studies (B.G.S.) or Bachelor of Applied Studies (B.A.S.) degrees. The basic requirement for admission is an Associate in Arts (A.A.) degree or its equivalent. Prospective students prepare their own curriculum in consultation with an advisor. They may be asked to justify their curriculum before a faculty-student admissions committee.

Students holding A.A. degrees or nearing completion of A.A. degrees may learn more about General College Baccalaureate Programs by

University Degree Programs

making an appointment with a General College counselor, 10 Nicholson Hall, 373-4400, or with the Extension Counseling Office.

Graduate School

316 Johnston Hall, Minneapolis Campus

Credits earned through Extension Independent Study (except graduate-level television courses) are not accepted for graduate credit in the University of Minnesota Graduate School. They may be used, however, to satisfy undergraduate prerequisites for Graduate School admission, to complete the graduate language requirement, or to acquire additional background in particular subject areas.

Institute of Technology

105 Lind Hall, Minneapolis Campus

The Institute of Technology grants degrees in approximately 11 fields of engineering and architecture, plus geophysics, geology, chemistry, physics, mathematics, and environmental design. In addition to required mathematics and science courses, the Institute of Technology requires 36 credits of liberal education distributed as outlined in the **Institute of Technology Bulletin**. In addition to some of the technical courses, Independent Study may be used to satisfy the liberal education requirement.

Assistance in planning a course of study, and in securing acceptance or transfer of credits, is available from the Extension Counseling Office.

College of Business Administration

225 Business Administration Building, Minneapolis Campus

Most of the pre-business course requirements for the Bachelor of Science in business are available through the Department of Independent Study. The business requirements may be satisfied in part with courses through the Department of Independent Study. Interested students should arrange for early consultation by contacting the Extension Counseling Office.

Both the accounting and the regular business programs are outlined in the **College of Business Administration Bulletin**. For a list of the pre-business and business courses offered through Independent Study that meet the College of Business requirements, write to the Department of Independent Study.

A copy of Procedures for Obtaining the Bachelor of Science in Business Degree through Extension may also be obtained through the Department of Independent Study.

University Degree Programs

College of Liberal Arts

214 Johnston Hall, Minneapolis Campus

A copy of the **College of Liberal Arts Bulletin** is essential for students planning to earn an A.L.A., B.A., or B.S. degree. Students should contact the Extension Counseling Office for a list of Extension Independent Study courses that can be used to satisfy CLA distribution requirements or for further information on any of the CLA programs.

Associate in Liberal Arts (A.L.A.)

The College of Liberal Arts offers an Associate in Liberal Arts degree. The degree indicates the successful completion of a 90-credit program devoted largely to general education and is equivalent to two years of academic study.

With careful planning, the entire degree may be obtained through the Department of Independent Study.

The current A.L.A. degree requirements are:

1. 90 credits acceptable to CLA (at least 45 on A-N grading);
2. At least 45 University of Minnesota credits;
3. Satisfaction of the CLA English composition requirement;
4. Satisfaction of four of the following: (a) foreign language study through the college third quarter level, or exemption based on three or more years of high school work (one language only); (b) 8 to 10 credits in Group A of the B.A. Group Distribution Requirements; (c) 12 to 15 credits in Group B; (d) 16 to 20 credits in Group C; (e) 12 to 15 credits in Group D.

Bachelor of Arts (B.A.)

Candidates for the Bachelor of Arts degree must complete a minimum of 180 acceptable credits. The Department of Independent Study offers sufficient courses to earn at least the first 90 credits toward a B.A. degree. Candidates for the B.A. degree must complete the 180 credits with grades of A, B, C, or S; 75 credits must be earned in 3000 and 5000-level courses (45 credits in CLA courses). They must also satisfy the English composition, foreign language, and Group Distribution requirements. Finally, B.A. candidates must complete a major sequence in the field of their choice and complete at least 30 credits in 3000 and 5000-level courses from areas outside their majors.

Bachelor of Science (B.S.)

The Bachelor of Science degree is now offered in CLA by the Departments of Communication Disorders, Economics, the School of Social Work, and the Urban Studies Program. Its requirements are substantially those of the B.A. program except that the foreign language requirement

University Degree Programs

is not included, and the major may be more extensive and concentrated. For further information contact the Extension Counseling Office.

University College

105 Walter Library, Minneapolis Campus

University College includes several degree-granting units, each with its own set of goals and procedures. University College's mission within the University of Minnesota is to house undergraduate experimental programs of collegiate scope. By their nature, most of University College's programs are experimental and not permanent features in the college. Presently, University College has a variety of experimental programs: Inter-College Program, Foreign Studies Program, Learning Assessment Program, Cross-College Teaching Program, University Without Walls, Students' College on the Duluth Campus, and University Scholars Program.

Students interested in working toward a degree through one of these programs should contact the Extension Counseling Office. There are two exceptions. Persons interested in University Without Walls who live in West Central Minnesota should write in care of the Morris Learning Center, Room 236 Community Services Building, Morris, MN 56267; telephone (612) 589-1041. Persons interested in the Students' College on the Duluth Campus should write to 111 Library, University of Minnesota-Duluth, Duluth, MN 55812.

University Without Walls

201 Wesbrook Hall, Minneapolis Campus

The University Without Walls (UWW) is a program of University College that provides students with alternatives in higher education leading to the baccalaureate degree.

Minnesota's UWW program is intended to serve "educationally mature" students who have clear learning objectives, but, who, for a variety of reasons, cannot realize their educational aims through existing programs. Persons considering applying to UWW should consider the unusually high level of self-direction and freedom from customary external reinforcements that make UWW a very different type of educational process.

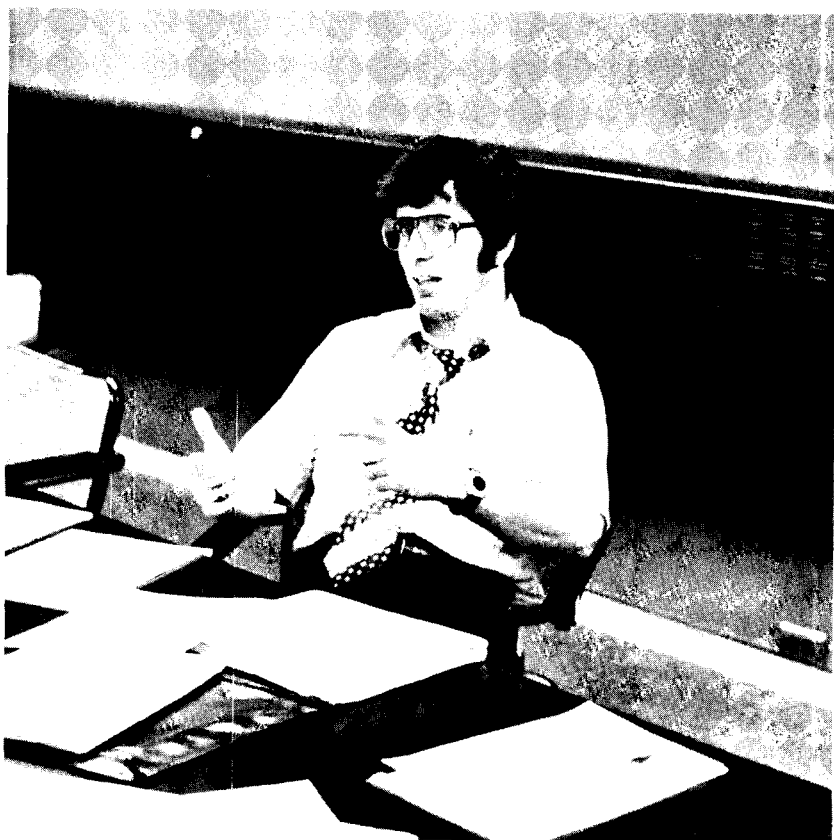
Learning can take place through the classroom, Independent Study courses, independent study projects, and the community. Students must be able to design their own proposals for study and carry out their own study projects. Detailed explanations of admission and graduation criteria are given in the **University Without Walls Brochure**.

University Degree Programs

There are no age or minimum educational level requirements for admission to UWW. Students are required to register on a full-time basis. Applications are accepted quarterly. A personal interview with the UWW staff is strongly recommended in order to ensure that proper action is taken on the individual's application for admission.

For additional information and applications contact University Without Walls, 201 Wesbrook Hall, 77 Pleasant St. SE, University of Minnesota, Minneapolis, MN 55455; telephone (612) 373-3919.

Persons living in West Central Minnesota, contact University Without Walls, c o Morris Learning Center, Room 236 Community Services Building, Morris, MN 56267; telephone (612) 589-1041.



Assistant Professor of Physical Education James D. La Point is now developing a course on the ORGANIZATION AND MANAGEMENT OF SPORT (PE 3143), which will be seen on KTCA-TV Channel 2, Spring 1978.

Faculty

University of Minnesota Faculty, Current and Emeritus

F.R.P. Akehurst, Ph.D.
Associate Professor of French

Robert Alexander, M.A.
Instructor of Sociology

John Armbrust, B.A.
Teaching Associate, Classics

Bernard S. Bachrach, Ph.D.
Professor of History

Katherine Basham, M.F.A.
Assistant Professor of English

John V. Bell, M.S.
Director, Admissions and Records
Institute of Technology

Richard O. Bell, M.A.
Teaching Assistant, Family Social Science

Marie H. Berg, Ph.D.
Research Associate
Department of Medicine

James L. Bowyer, Ph.D.
Assistant Professor of Forest Products

James I. Brown, Ph.D.
Professor of Rhetoric

James N. Butcher
Professor and Director of Clinical Training,
Psychology

Roy E. Carter, Jr., Ph.D.
Professor of Journalism and
Mass Communication

Jerald Carveth, B.A.
Teaching Associate, Classics

Frederick M. Chapman, Re.D.
Professor of Recreation,
Park, and Leisure Studies

Harold Chase, Ph.D.
Professor of Political Science

Jonathan B. Conant, Ph.D.
Associate Professor and
Head of German, Duluth

Santiago A. Cuneo, Ph.D.
Associate Professor Emeritus of Spanish

Dale C. Dahl, Ph.D.
Professor of Agricultural and Applied
Economics and Adjunct Professor of Law

Everette E. Dennis, Ph.D.
Associate Professor of Journalism
and Mass Communication

Helen Dickison, M.A.
Research Fellow, Institute of
Child Development

William Driver, M.A.
Teaching Assistant, Theatre Arts

David L. Ekstrand, M.A.
Instructor and Assistant to the Director
Dept. of Men's Intercollegiate Athletics

Edwin Emery, Ph.D.
Professor of Journalism
and Mass Communication

Gerald Erickson, Ph.D.
Associate Professor of Classics

Robert W. Erickson, Ph.D.
Professor of Forest Products

Robert F. Estelle, Ph.D.
Assistant Professor and
Director of Learning Resources Center

Robert Eyestone, Ph.D.
Associate Professor of Political Science

David P. Fan, Ph.D.
Associate Professor of Genetics

Faculty

Patricia Faunce, Ph.D.

Associate Professor of Psychology and
Director of Measurement Services Center

Karen Foy, M.A.

Instructor, Social and
Behavioral Sciences Division
General College

Robert L. Fulton, Ph.D.

Professor of Sociology

Basil Furgala, Ph.D.

Professor of Entomology,
Fisheries, and Wildlife

Philip Furia, Ph.D.

Assistant Professor of English

Roland O. Gertjanson, Ph.D.

Professor of Forest Products

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Index

Accounting	11	College of Business Administration	95
Accounting Certificates	84-85	College of Education	93-94
Admission	65	College of Liberal Arts	96-97
Adolescent Psychology	16	Composition, English	21-22
Advising Services	65	Computer Programming	18
Aerospace Engineering and Mechanics	11-12	Contract Alternatives	52
Agriculture Economics	12	Counseling and Advising	65
Agriculture	12	Course Completion	9, 71, 79
Airmail Postage	74	Course Numbering	6
American Studies	12	Credit and Financial Management Certificate	87-88
A-N Grading	70	Credit by Examination	52
Animal Science	12	Credits	66
Anthropology	13	DANTES	66-67
Art History	13	Data Processing	18
Associate in Arts Degree	94	Degree Candidates	93-98
Associate in Liberal Arts Degree	96	Degree Credit	6, 66
Astronomy	13	Degree Requirements	93-98
Audio Cassette Courses	59-60	Design	18
Audio Visual Facilities	72	Directed Study	53
Audio Visual Library Services	72	Discontinued Courses	67
Bachelor of Applied Studies	94-95	Ecology and Behavioral Biology	19
Bachelor of Arts Degree	96	Economics	19-20
Bachelor of General Studies	94-95	Education, College of	93-94
Bachelor of Science Degree	96-97	Education Courses	20-21
Beekeeping	24	Educational Administration	20
Biology	14	Engineering	21
Business	14	Engineering Certificates	91-92
Business Administration Certificates	86-87	English Composition	21-22
Business Administration, College of	95	English Literature	22-24
Business Law	14-15	Enrollment Procedures	7
Business Studies (General College)	15-16	Entomology	24
Business Writing	22	Ethics	41
Cancellations	70	Examination for Credit	52
Certificate Credit	6, 66, 81-92	Examinations	67-68
Certificates, Extension	81-92	Extension Certificates	81-92
Child Psychology	16	Extension Offices	3-4
Chinese	18-19	Faculty	99-104
Civil Engineering	16	Family Studies	24-25
Classics	16-17	Fees	74, 77-79
Cold War Veterans	69		

Index

Financial Assistance	68-69	Spanish	61
Finnish	45	Swedish	46
Fire Protection	25-26	Language Laboratory	72
Fire Protection Certificate	82-83	Latin	17-18
Food Science and Nutrition	26	Law, Business	14-15
Foreign Students	73-74	Learning Resources Center	72
Forestry	26	Learning Through Independent Study	8
French	26-27	Leisure Studies	45
Gardening	33-34	Lesson Service	71
General College	94-95	Lesson Submission	71
General College Courses	27	Liberal Arts Certificate	83-84
General Information	65-79	Liberal Arts, College of	96-97
General Studies Certificate	83	Liberal Arts Degrees	96-97
Geography	28	Library Facilities	72-73
Geology and Geophysics	28-29	Library Science	37
German	29-30	Literature, English	22-24
G.I. Bill	69	Literature, German	30
Grade Point Average	70	Loan Library	72
Grades	69-71	Logic	40-41
Graduate Credit	95	Long Term Care Administration	75
Graduate School	95	Management	35
Greek	17	Management of Administrative Services Certificates	90-91
Group Study	54	Marketing	37
High School Students	71	Mass Communications	36
History	30-33	Media-Assisted Courses	55-60
History, Art	13	Mathematics	37-39
Horse Production	12	Mathematics and Science Certificate	84
Horticultural Science	33-34	Mental Health Administration	75
Hospital Administration	75	Metric System	39
Hours, Office	73	MINITEX	73
How to Study	62	Motion and Time Study Engineering	35
Human Services Certificate	88-89	Music	39-40
Humanities	34-35	Noncredit Enrollment	66
Income Tax Accounting	11	Norwegian	46
Incompletes	70	National University Extension Association	7, 73
Industrial Engineering/Operations Research	35	Nursing	40
Industrial Relations	35	Nutrition	26
Industrial Relations Certificate	89-90	Office Hours	73
Institute of Technology	95	Orientation to Self-Directed Study	62
Insurance	35	Overseas and Foreign Students	73-74
Japanese	19	Park Studies	45
Journalism and Mass Communication	36	Parliamentary Procedure	45
Landscape Design	33-34	Partial Payment Plan	78-79
Languages		Patient Care Administration	75
Chinese	18-19	Philosophy	40-41
Finnish	45	Physical Education	42
French	26-27	Physics	42
German	29-30	Polish	46
Greek	17	Political Science	42-43
Japanese	19	Postage	74
Latin	17-18	Psychology	16, 43-44
Norwegian	46	Public Health	44
Polish	46	Purchase of Study Guides	74
Russian	46-47		

Radio Courses	58
Reading, Efficient	62
Reading, Guided	62
Recreation, Park and Leisure Studies	45
Refunds	56, 79
Registering	7
Reinstatements	79
Religion	45
Religious Studies	45
Resident Credit	66
Rhetoric	45
Rules and Regulations	8-9
Russian	46-47
Salesmanship	15
Scholarships	68-69
Selecting a Course	6-7
Senior Citizens	75
S-N Grading	70
Social Studies (General College)	47
Social Work	47
Sociology	48
Spanish	61
Special Courses and Programs	54, 75
Statistics	21
Student Services	75-76
Study Skills	62
Supervision	35
Supplies	76-77
Swedish	46
Tapes and Tape Recorders	76
Television Courses	55-56
Teacher Certification	93-94
Textbooks	76-77
Theatre Arts	62-63
Transcripts	77
Transferring to Another Course	77
Tuition	77-79
Undergraduate Development Certificate Series	91-92
Undergraduate Development Certificate in Engineering and Science	92
University College	97
University Degree Programs	93-98
University Without Walls	60, 97-98
Veterans, Tuition Assistance for	69
Video Cassette Courses	57
Vocabulary Building	62
Ways to Earn Credit	49-60
Withdrawals	70, 79
Women's Courses	63-64
Writing	21-22, 62-63



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Send For Information, Forms, Bulletins

Please use the form below in requesting information, forms, and bulletins. We'll be happy to send bulletins to your friends, too!

Send it to: Department of Independent Study
45 Wesbrook Hall
77 Pleasant St. SE
University of Minnesota
Minneapolis, MN 55455

Please send me:

- a high school bulletin a book order form
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 the introduction to the following course(s):

 additional information about: -----

Name -----

Address -----

Street, RR#, PO#

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Continuing Education for Women

1977 Fall Bulletin

Continuing Education and Extension
UNIVERSITY OF MINNESOTA



ORIENTATION DAY

A day for new or prospective students to ask questions, for liberal arts seminar registrants to meet classmates and seminar assistants, for CEW friends to come together.

Wednesday, September 21
MacPhail Center Annex
9:30 a.m.

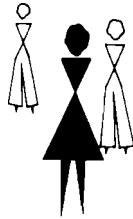
Program

Decision Making..... Marie Panger

The Great Juggling Act:
Balancing Education With
Home and/or Work..... to be scheduled

Coffee and Cookies

No Charge



FALL RETREAT

"Exploring Our Emotions"

Barbara Dorset

and

Orville Weiszhaar

Saturday and Sunday

Oct 1 and 2

Camp Chi Rho

see page 35 for details

FROM THE DIRECTOR

Thank you for looking at this Continuing Education for Women bulletin of the Continuing Education and Extension Division of the University of Minnesota. Your interest marks you as someone interested in learning, someone with intellectual curiosity.

For seventeen years Continuing Education for Women has been helping women realize personal, educational and career goals. We hope that you will find an answer to your needs within the pages of this bulletin.

If you are degree oriented you will find a variety of courses offering academic credit scheduled on a once a week basis. These courses may also be taken for noncredit.

If you are excited by new ideas and concepts and intrigued by the thought of sharing an educational experience with a group of women who study together all year, you may be interested in one of the liberal arts seminars.

If you are considering a mid-life career change, re-entry into college, or the labor market, you can find a sense of direction through interest, personality and scholastic tests, and courses in vocational planning. Courses in assertiveness training and communication skills contribute to personal growth for women in business, school or at home.

If you are seeking to develop work and study skills, note the workshops on reading and writing. And don't miss the Math Anxiety Program!

If you are interested in improving your critical thinking, expanding your horizons, or don't know what you want, look at the noncredit classes scheduled at convenient times and locations.

We are flexible. Courses are often scheduled in response to requests of our students. Comments and suggestions are invited, are always seriously considered. Feel free to call us at 373-9743.

Edith E. Mucke, Director
Continuing Education for Women

CALENDAR

Fall Quarter September 26-December 13
Fall Semester September 26-January 21

Aug 19 Last date for fall quarter applications
 for the Louise Roff Scholarship

Sept 7 Math Anxiety Diagnostic Clinics

Sept 15 Last day for payment of fees for fall
 quarter credit classes without penalty
 of late fee

Sept 15 Last day for payment of fees for fall
 semester credit classes without penalty
 of late fee

Sept 15-16 Message and Medium Workshop

Sept 19-22 Study Skills Workshop

Sept 21 Orientation Day

Sept 23 Everyone's Guide to the Whole Library

Oct 1-2 Retreat - "Exploring Our Emotions"

Oct 8 Strategies for Moving Up

CONTENTS

From the Director.....	1
Calendar.....	2
Contents.....	3
Admission.....	4
Advising and Counseling.....	4
Registration.....	4
Registration of Students 62 or Older.....	4, 5
Grades.....	5, 6
Financial Assistance.....	6
Continuing Education Units.....	6, 7
Cancellations.....	7
Cancellation of, or Change In, Scheduling.....	8
Refunds.....	8, 9
Symbols.....	9
CEW Math Anxiety Program.....	10, 11
Credit Courses and Descriptions..... Alphabetically listed	12-19
Noncredit Courses and Descriptions..... Alphabetically listed	20-39
Courses for Which CEU's Are Awarded.....	40
Location and Addresses of Courses..... Course titles appear under location	40-45
Registration Information and Form.....	46

ADMISSION

There are no entrance requirements for admission to classes offered through Continuing Education for Women. A few courses have prerequisites. Advance application and CEW Departmental approval are required for enrollment in the liberal arts seminars. (Courses marked (=) are liberal arts seminars.)

All persons have equal opportunity and access to facilities in any phase of University activity without regard to race, color, sex, age or national origin. Under this principle educational opportunities are available on an equal basis. Men are welcome in all classes.

ADVISING AND COUNSELING

Free program advising is available to select programs of study, determine prerequisites and standing, evaluate transcripts of previous college work, arrange for examinations for credit or advanced standing, and other academic matters. Students who want counseling for vocational or other problems may make appointments by calling 373-3905. Vocational, aptitude, and interest testing is available for a fee.

REGISTRATION

Registration may be made in person at 200 Westbrook Hall, Minneapolis campus or by mail. No registrations will be accepted at the MacPhail Center.

Registrations made by mail should be sent to Continuing Education for Women, 200 Westbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455, accompanied by a check made out to the University of Minnesota. Students are not registered until tuition has been paid. (See back cover.) No telephone registrations can be accepted.

REGISTRATION OF STUDENTS 62 OR OLDER

A state law provides that students 62 or older may take

courses free of charge "when space is available after all tuition-paying students have been accommodated." If credit is desired, there will be a \$2 per credit charge. This means in classes where enrollment is limited, students over 62 who have not paid tuition will not immediately be guaranteed a place, but must wait until the first week of the term to register. The enrollee is responsible for material, laboratory, or any special fees.

No mail registrations will be accepted for nonpaying students over 62. Call three days before the beginning of the class to confirm that the class will be held and that you can be accommodated.

GRADES

A - N Letter grading
S - N Satisfactory/No Credit

Choice of A-N or S-N grading system must be indicated for each credit course listed on the registration form at the time of registration and may not be changed after the second week of the quarter. (There is no fee for changing.) If the student does not indicate the grading system desired on the registration form the A-N system will apply.

A student who wants to attend classes, but does not wish to do all the required work, may register as an auditor. Most credit courses may be audited. Courses marked with an (*) may be taken for a nontranscript rate of \$50.

Requests for change from credit to audit registration are made in person or by writing Continuing Education for Women. Changes may not be made by telephone. After the sixth week of a quarter requests for change must be approved by the instructor, approval is granted only if the student is doing passing work at the time of the request. No changes can be made during the last two weeks of any term.

Changes from audit to credit will not be allowed after the second week of the quarter.

Only courses with first digits of 5 may be taken for graduate credit. If graduate credit is desired, please indicate by checking graduate credit on the registration form.

FINANCIAL ASSISTANCE

Low Income Scholarships. Tuition assistance scholarships are available through Continuing Education and Extension Tuition Assistance Program (TAP) for low-income adults who wish to enroll in CEW courses.

The Louise Roff Scholarship Fund. Awards from the Louise Roff Scholarship Fund are made on the basis of scholastic ability, motivation, previous achievement, financial need and realistic plans. Small awards are given serious consideration. The funds can be used only for classes offered through CEW. Closing date for fall quarter and fall semester applications is August 19th.

Application forms for financial assistance may be obtained by calling or writing Fran Van Slyke-Zaslofsky, 317 Nolte Center, 376-4500.

CONTINUING EDUCATION UNITS

The Continuing Education Unit is a nationally recognized standard unit of measurement awarded by colleges and universities throughout the country for participation in qualified continuing education programs. It is a means of verifying participation in a noncredit experience to serve both personal and professional needs of the adult student.

Under the CEU system, one unit is awarded for every ten contact hours of participation in an organized continuing education experience, under responsible sponsorship, capable direction and qualified instructor.

CEU's will be recorded on a permanent file at the University of Minnesota to permit the accumulation, updating, and transfer of continuing education records of individual participants. A student must complete

an application form to qualify for CEU's for designated classes. CEU's will be awarded only if a student is in attendance 80% of the class sessions.

Registration for CEU's will be handled at the first class session.

CANCELLATIONS

Students who wish to cancel a class or classes must do so officially, either in person or by writing to Continuing Education for Women, 200 Westbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455. By so doing, they will, if eligible, receive a refund (see refunds page 8), and in cases of a credit course, will insure entry of the appropriate symbol on their grade report. If students officially cancel the first two weeks of a term, the course they cancel will not appear on a transcript. If students officially cancel from a class before or during the ninth week of any semester, or the sixth week of any quarter, or mid-point of any special term, they will automatically receive a "W" (withdrawal) on the grade report. This symbol means "official cancellation without grade." If students cancel after the above-stated period, the instructor may give them a "W" if students are doing passing work. It is advisable that students inform their instructors of the reason for cancelling.

No student is permitted to cancel during the last two weeks of any term (this includes final examination week). Cancellations must be made in person or by letter (telephone calls not acceptable).

NO INSTRUCTOR IS AUTHORIZED TO ACCEPT CANCELLATION OF ANY STUDENT. The effective date of cancellation will be the day on which the cancellation is received in the CEW office, regardless of the date of the student's last attendance. (Cancellations by mail are effective the date of the postmark.) It is important, therefore, that whenever students stop attending a class, they should officially cancel by filling out the appropriate forms at the CEW office.

CANCELLATION OF, OR CHANGE IN, SCHEDULING CLASSES

While the Department sincerely regrets doing so, it is forced to cancel classes with insufficient enrollment. The Department reserves the right to cancel, postpone, limit enrollment, split, or combine classes, and to change instructors and/or locations of classes.

REFUNDS

Refunds for classes from which students withdraw will be made in accordance with the following schedule:

1. Full refund of all tuition and special fees will be made:
 - A. When a class is cancelled by CEW; when the hour or day of the class is changed by CEW after a student has registered in it, or when, in the opinion of the instructor the student does not have the necessary prerequisites. In the last case, the student must do the following:
 1. Ask the instructor for a note stating the above circumstances.
 2. Present this note in person at 200 Westbrook Hall, or by mail. It is the student's responsibility to obtain and present this note as above.
 - B. Students who have been ill or hospitalized and wish consideration for a full refund should obtain a doctor's statement (on his letterhead) indicating that in the opinion of the doctor the student was unable to continue for medical reasons.
2. A \$3 cancellation fee will be charged for cancellation of classes before the first class meeting in any semester, quarter, or special term. The balance of the tuition and special fees will be refunded.
3. Late fees and/or transfer fees are not refundable.

4. Refunds for cancellations of classes after the opening date of each semester, quarter, or special term (except as indicated in item 2) will be made as follows:

	<u>Semester</u>	<u>Quarter</u>
a. refund before second class	75%	75%
b. refund before third class	75%	50%
c. refund before fourth class	50%	25%
d. refund before fifth class	25%	none
e. refund after fifth class	none	none

5. Refunds requested for one or two day workshops or special events must be received in writing or in person at the CEW office three (3) working days in advance of the event. Registrants who fail to attend or to cancel properly are liable for the entire fee.

Refunds are paid by check only and are mailed to the student. A minimum of four weeks is required for processing a refund.

SYMBOLS

- A hyphen between numbers indicates a sequence course, the units of which must be taken in order.
- ‡ All courses listed before a dagger must be completed before credit may be received.
- * Courses marked with an asterisk may be taken for a special nontranscript rate of \$50 (plus any fees).
- BB Brown Bag School - noon hour courses
- = Indicates Liberal Arts Seminars
- CEU Continuing Education Units

$x - 2y$
$$\begin{array}{r} 134 \\ 891 \\ \hline \end{array}$$
$$\frac{p}{q+r}$$

THE CEW MATH ANXIETY PROGRAM

The CEW Math Anxiety Program is a program designed especially for people who encounter blocks in mathematics. Through a combination of coursework and supportive services, it can help students overcome their fear of mathematics and master the level of mathematics they want or need. The program helps students deal with their attitudes and feelings about math while they are working on their math skills.

The Math Anxiety Diagnostic Clinic is the introductory step in the Math Anxiety Program. The Clinic will explore math anxiety, how it develops and how it affects math performance. Tests and questionnaires are used to help participants identify math skills and level of math anxiety. Students will be advised of test results by mail. An overview of the math program and supportive services will be given.

The Math Anxiety Support Group will work with participants in examining their blocks in math, attitudinal changes, test anxiety, and mechanisms to deal with math anxiety. Participants must have participated in the Math Anxiety Diagnostic Clinic and are encouraged to enroll in a math class.

DAYTIME MATH PROGRAM

The Math Anxiety Diagnostic Clinic will be held on Wednesday, September 7, 8:30 - 12:00 at MacPhail Center. The fee is \$7.00. Advance registration is required.

The Math Anxiety Support Group will meet on Mondays, October 3 - November 7, 11:30 - 1:00 at MacPhail Center. The fee is \$15. Advance registration is required.

Classes: Four daytime classes taught by instructors attuned to the needs of people worried about their math ability will be offered this fall.

Arithmetic and Elementary Algebra (MacPhail) - page 21
Credit may be received through testing.

GC 1445 Mathematics: Intermediate Algebra - page 15
(MacPhail)

GC 1454 Statistics (MacPhail) - page 15

GC 1533 Financial Mathematics - page 16
(American Institute of Banking)

Free tutorial services will be available at MacPhail, Fridays, beginning October 7th, 12:00 - 3:00.

EVENING MATH PROGRAM

(In cooperation with Extension Classes)

The Math Anxiety Diagnostic Clinic will be held on Wednesday, September 7, 6:00 - 9:00 p.m. on the Minneapolis Campus. The fee for the clinic is \$7. Advance registration is required.

The Math Anxiety Support Group will meet on Mondays, October 3 - November 7, 7:00 - 8:30 p.m. on the Minneapolis Campus. The fee is \$15. Advance registration is required.

Classes:

Arithmetic and Elementary Algebra - page 21
(Minneapolis Campus)

Arithmetic and Elementary Algebra - page 21
(St. Louis Park)

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For further information on the CEW Math Anxiety Program call Margie Mathison, 373-9743.

CREDIT COURSES

- *ANEJ 3501 The Background of the Bible 4 cr \$70 The study of Biblical literature placed in the cultural, historical and religious milieu of its origin. The impact of the civilization of Egypt, Canaan, and Mesopotamia on the Ancient Hebrews, as well as the unique aspects of Israelite civilization will be traced through lecture and discussion. Colored slides will be used to help illustrate the contribution of archaeology to Biblical studies. The Bible's indebtedness to pagan literature, religion, and law. The formation of the Hebrew people. (No prereq) May be applied toward the CLA foreign language requirement, Route II.
Th 1:00-3:30 MacPhail Jonathan Paradise
- *Anth 1102 Introduction to Social and Cultural Anthropology 5 cr \$82.50 Varieties and range of human behavior as revealed through comparative study of cultures in all parts of the world. Particular attention will be paid to the status of women in those cultures. (No prereq)
M 9:30-12:00 MacPhail Barbara Dewald
- ArtEd 5001 Art Media Techniques: Creative Bookbinding 3 cr \$55.50 Lectures, demonstrations, discussions, critique sessions, exploring and learning various techniques and processes in creativity; handling specific media with each offering focusing on a single topic. This offering will focus on basic bookbinding techniques and skills including hard-cover and Japanese binding, design and layout. Assignments will include writing an original story, some poetry or adapting a classic folktale for children; designing jacket covers, end papers and illustrations for copy and binding results into a book. The designing of a book should be considered from the standpoint of the total production, for out of the assembling of the parts grow the harmony of the whole; there is a relation of good craftsmanship with fine feeling. May not be taken S-N. Maximum of 12 credits in this topic. (No prereq) Qualified students may register for graduate credit.
T 9:30-12:00 MacPhail George K. Olson

Explanation of symbols on page 9

ArtS 1701 Introduction to Photo Medium 4 cr \$66 + \$15 materials fee. Black and white photography for beginners. Camera techniques, film development. Time spent in darkroom. (No prereq) Limited.
T 9:00-12:00 MacPhail David Husom

ArtS 3710 Intermediate Photography 4 cr \$66 + \$15 materials fee. Continued work in photographic controls and processes. Introduction to related photosensitive media. Emphasis on creative process with attention to individual interests and requirements. This class may be taken three times for a total of 12 credits. (Prereq ArtS 1701) Limited.
M 9:00-12:00 MacPhail David Husom

Comp 1001 Introductory Composition 4 cr \$66 Writing clearly and convincingly for college courses. Emphasizes writing for specific goals, pre-writing, theses statement, principles of organization, coherence, argumentation, and paragraph development. Satisfies freshman English requirement and is a prerequisite for many language skills courses. (No prereq) It is not necessary to take Comp 1002 to receive credit for this course.
T 1:00-3:30 MacPhail Eugenie Klemz

*Comp 3030 Topics in Advanced Composition: Technical Writing 4 cr \$70 Analysis of and practice in technical writing. Assignments will include definitions, descriptions, abstracts, letters and memoranda, reports, and manuals. The following questions will be discussed: How does technical writing differ from other sorts of writing? How can the needs of various audiences be met? What kind of persona should a technical writer present? Are the conventions of technical writing ever a hindrance to communication? Is the use of jargon ever justified? Can writing be both sophisticated and coherent and yet have a low "fog-index"? How can figures and tables be integrated into a text? Students' writing will be discussed in class and with the instructors in at least two individual conferences. May be repeated for a maximum of 12 credits but no topic can be repeated. (Prereq fulfillment of English Composition requirement)

W 1:00-3:30 MacPhail Sara Graffunder & Sandra Sandell

Dsgn 0430C Introduction to Spinning, Dyeing and Feltmaking

3 cr \$49.50 The evolution of spinning techniques. Instruction will include the use of the drop spindle, Navaho floor spindle, Indian Charkha and Spinning Wheel. We will also explore feltmaking, the predecessor of spinning, along with some dyeing of wool fiber with commercial dyes and a discussion/demonstration of natural dyeing. Instruction in spinning will cover the washing and carding of wool, spinning of unusual fibers, fiber blends, plying, heathering and other techniques for designing handspuns. It is not required that you have a spinning wheel in order to take the class. (No prereq)

T & Th 9:30-12:00 MacPhail Pat Boutin Wald

Econ 1002 Principles of Microeconomics

Comp 3090 Projects in Advanced Composition

6 cr (4 cr in Econ 1002; 2 cr in Comp 3090) \$101

An experimental interdisciplinary course in Microeconomic Principles and English Composition. Essay assignments will help students to clarify and deepen their understanding of microeconomics, while the specific subject matter of microeconomics will set a foundation for disciplined written analysis. The Economics topics are supply and demand; monopoly and imperfect competition; factor markets and current issues (cases). The corresponding Composition techniques are definition, and exposition; argument; research. (Prereq Comp 1001-1002)

T 9:00-12:00 MacPhail Barton Galle & Garson Sher

=Engl 5910-10-10 ± Major Women Writers 12 cr year

\$74 + \$5 special fee per quarter. Seminar on major American and English women writers. English Department faculty coordinated by Julie Carson. Limited.

T 9:30-12:00 MacPhail Julie Carson, Faculty Coordinator

Fren 1104 Intermediate French 5 cr \$82.50 + \$4 special fee. Consolidation of basic structure and development of oral fluency through readings and discussion.

Systematic review of basic French grammar in a conversation course emphasizing French culture and French for travelers. Excellent course for those who have been away from the language for some time or who plan a trip to a French-speaking country. (Possibility of arranging a two-week noncredit trip to Paris in January.) (Prereq Fren 1103 or consent of instructor.)

T & Th 12:30-2:30 MacPhail Jan Solberg

FSoS 5240 Topics: Female Sexuality 3 cr \$55.50 + \$5 special fee. How women feel about their sexuality. Focus on women's sexuality, communication and power. Discussion topics include sexual development, sex roles and what they have to do with sexuality, basics of sexual function and dysfunction, biology, myths. What gets in the way of women being what they want to be, emotional and physical sexual growth areas. Lecture and discussion with audio visual support. Offered in cooperation with the Program in Human Sexuality. Qualified students may register for graduate credit. (No prereq) Limited.
Th 11:00-1:00 Program in Human Sexuality
Sally Maison and Noel Carlson

*GC 1445 Intermediate Algebra 5 cr \$82.50 Concepts and manipulative skills of algebra in preparation for college algebra course. Topics include real number system, special products and factoring, exponents and radicals, linear equations in one and two variables, quadratic equations in one variable, progressions, inequalities, variation and logarithms. (No prereq)

W 9:00-12:00 MacPhail

FALL SEMESTER Sept 28-Jan 18 George McCutcheon

*GC 1454 Statistics 4 cr \$66 Introduction to modern statistics, emphasizing problem solving through statistical decision making. Topics include organization and presentation of data, summary statistics, sampling, probability, distributions, simple estimation, and tests of hypotheses. Data presented will acquaint students with wide applicability of statistics. Attention is drawn to limitations of methods of presentation. Requires only a working knowledge of arithmetical skills. (No prereq)

Fri 9:00-12:00 MacPhail FALL SEMESTER Sept 30-Jan 20
Tom Ressler

*GC 1533 Financial Mathematics: Procedures and Applications 4 cr \$66 Using only basic mathematical skills, students solve problems with percentages, simple interest and discount, compound interest, annuities, corporate securities, and depreciation. Through study of practical business situations, students develop calculation skills to assist them in dealing with various financial problems. (No prereq)
T & Th 12:00-1:00 American Institute of Banking
FALL SEMESTER Sept 27-Jan 19 Roger Larson & Dave Giese

*Hist 3468 (5468) Twentieth Century China: The Chinese Revolution, 1900-1949 4 cr \$70 for 3468; \$74 for 5468
This course deals with the collapse of traditional Chinese society and the gradual development of alternatives. Confucianism, modernization, warlordism, fascism, and intercultural relations between West and East are among the topics explored. Films and other visual aids are used and every effort is made to acquaint students with the human meaning of the historical forces studied. Qualified students may register for graduate credit. (No prereq)
M 12:30-3:00 MacPhail Angus W. McDonald

Hist 5274 Modern Near East: Ottoman Empire and Successor States 4 cr \$74 The 19th and 18th century background and Ottoman institutions. From 1792 to Congress of Berlin. (This is the first of three courses to be taught by Professor Stavrou discussing the rise and decline of the Ottoman Empire, Ottoman institutions, disruptive forces such as nationalism and interaction with European ideas and institutions; concentration on the experience of a group of people who emerged from the former Ottoman Empire and went on to make their contributions.) Qualified students may register for graduate credit. (No prereq) Limited.
Th 9:30-12:00 MacPhail Theofanis Stavrou

=Hum 5021-22-23 ± New Worlds of Knowledge 9 cr year \$55.50 + \$5 special fee per quarter. Development in recent years in the sciences, music, literature and art with emphasis on common problems and unifying concepts. Interdisciplinary faculty. Qualified students may register for graduate credit. Limited.
Th 9:30-12:00 MacPhail J.D. Hurrell, Faculty Coordinator

*Jour 5615 Development of Photo-Journalism and Documentarty Film 5 cr \$92.50 History of these forms of visual communication and their use by the mass media. Principal contributors, visual styles, and changing evaluative criteria, 1839 to present. Analysis of important films, photographs from the period. Individual research projects involving primary data. Qualified students may register for graduate credit. (No prereq)
T 9:30-12:00 MacPhail Beverly Bethune

Mus 3971 The Lively Arts: Music and Drama in Opera 4 cr \$70 + \$5 special fee. Study of musical forms, drama, staging, costuming and scene design of operas scheduled for performance 1977-78 in the metropolitan area by the Minnesota Opera Company and the University Opera Workshop. Influence of opera on concert music forms such as sonata, concerto, symphony and suite. Lectures by specialists in composition, scene and costume design, lighting, stage direction and movement. Development of study routines for preparation to attend opera performances. (No prereq)
T 9:30-12:00 Hennepin Avenue Methodist Church
Arnold Caswell, Coordinator

*Psy 1001 General Psychology 5 cr \$82.50 Introduction to study of human behavior. Designed to orient the student to the field of psychology. Emphasis upon methods of investigating human behavior. Prerequisite for all advanced courses in psychology. (No prereq)
Fri 9:30-12:00 MacPhail
FALL SEMESTER Sept 30-Jan 20 Barbara Dorset

Span 1201 Beginning Spanish: Modified Oral Approach 3 cr \$49.50 + \$4 special fee. First of a sequence of courses designed for those who desire a general, basic introduction to the language. Understand, speak, read and write standard Spanish. Students interested in a degree program may satisfy language requirements by completing the 1201-1205 sequence for a total of 15 credits. (No prereq)
M 12:00-2:00 and Th 12:00-1:00 MacPhail
Janet Mobley

Explanation of symbols on page 9

*WoSt 1977 The Psychological Environment of Women 4 cr
\$66 An examination of psychological principles and theories which have a unique application to the development, growth, and behavior of women; to inform and to contribute to the woman's awareness of where she is now and how she got there; to foster self-actualization of the young woman. (No prereq)
T 1:00-3:30 MacPhail Patricia Faunce

*WoSt 3001 Biology and Behavior 4 cr \$70 A course to educate both women and men about the biological aspects of being a woman. This course will combine material from many disciplines rather than follow any specific disciplinary approach. It will include material on the life cycles of women from sex determination during fetal development to sex of assignment at birth. It will then follow the sequence of female development through puberty, childbirth and menopause. The ancillary problems of contraception, abortion, and sexual behavior will be considered in their implications for women in particular and society in general. (No prereq)
W 9:30-12:00 MacPhail Elizabeth Reed

WoSt 3301 (5301) Woman: A Sense of Identity 4 cr
Laboratory learning experience through active individual participation. Awareness through exercises to clarify old socialization rules, coping behaviors, and belief systems. Major emphasis will be on skill acquisition in several areas. Situation analysis, assertion, decision making, goal setting. The class deals with the concept of power, using exercises and role playing to help participants realize the availability of choice within every situation. An important focus is on the development of support systems for women through small group interactions. No audits. (No prereq) Limited.

The following two sections must be taken at the 3 level:

WoSt 3301 \$70 + \$3 special fee (Course begins Sept 21)
W 2:30-5:30 Normandale College

WoSt 3301 \$70 + \$3 special fee
Fri 9:00-12:00 MacPhail

- more sections listed on following page -

The following sections of Woman: A Sense of Identity may be taken either 3 level or 5 level (graduate credit):

WoSt 3301 \$70 + \$3 special fee
WoSt 5301 \$74 + \$3 special fee
T 6:00-9:00 p.m. Minneapolis Campus

WoSt 3301 \$70 + \$3 special fee
WoSt 5301 \$74 + \$3 special fee
Th 1:15-4:15 Minneapolis Campus

Arch
Em 5

*WoSt 3502 Women and Art 4 cr \$70 The position of women, white and non-white, as performing artists or subjects for others. Focuses will vary. Study of life and works of such artists as Artemisia Gentileschi, the colorful personality and artistic talent of the Baroque; Judith Leyster, follower of Hals; Angelica Kauffman; Elisabeth Vigee-LeBrun; Mary Cassatt; Kate Kollwitz; Sonia Delaunay; Romaine Brooks; and 20th century artists Louise Nevelson, Barbara Hepworth and Georgia O'Keefe. (Prereq introductory work in music, art, drama, film or other arts.)
Th 9:30-12:00 MacPhail Roslye Ultan

=WoSt 5701-02-03 ± Woman in America 9 cr year \$55.50 + \$5 special fee per quarter. Role of women in American history; women in social studies; perceptions of women in literature, art; human sexuality, male and female "character," choice of family and career, etc. Interdisciplinary faculty. Qualified students may register for graduate credit. Limited.
W 9:30-12:00 Coffman Memorial Union, Minneapolis Campus
Gayle Graham Yates, Faculty Coordinator

Explanation of symbols on page 9

NONCREDIT COURSES

Acting for Non-Actors \$30 A course for women over thirty designed to help them re-focus energies dissipated through fragmented lives. Through adaptations of acting techniques, improvisations, discussions and scenes from plays illustrating various dilemmas, students will explore ways of using the acting process to rejuvenate physical, intellectual, and emotional resources. Limited.

Th 1:00-3:00 Sept 29-Nov 17 (8 sessions)

MacPhail Julie Hutchison Driver

Advanced Assertiveness Training \$31 Continued work on personal situations calling for assertive behavior. Dealing with manipulation. Dealing with diverse reactions to your changing behavior. How to integrate your increasingly assertive behaviors in your interpersonal relationships. Building a continuing support system. Limited.

Th 6:00-8:00 p.m. Nov 3-Dec 8 (5 sessions-no class Nov 24)

229 Nolte Center, Minneapolis Campus Jan Dolejsi 1 CEU

B-Advanced Management Skills for Women \$26 A further in-depth approach to the area of management and the skills women need as they move into management. Special focus on strategy and planning as tools of the effective manager.

M 12:00-1:00 Sept 26-Nov 14 (8 sessions) .8 CEU

Burlington Northern, Training Room 100 Marie Panger

Alternative Energy Resources: Energy Efficient Housing--
Improving Our Living Space \$24 A practical course on

how to make our homes more energy efficient. Working examples of ways to improve existing structures. Cost effectiveness and procedures for installing energy efficient insulation, heating and ventilating systems, water/waste systems and solar collectors. For people who want to improve the efficiency of their homes.

(Winter and spring quarter: Energy Alternatives for New Homes; Creating an Energy Efficient Community.)

M 7:00-9:30 p.m. Sept 26-Oct 31 (6 sessions)

125 Animal Science, St. Paul Campus

Thayer, Wilson and staff

Arithmetic and Elementary Algebra Individualized instruction in basic arithmetic processes, fractions, decimals, exponents, percentages, setting up word problems into algebraic form. Students proceed at their own rate. Upon completion of course, students may receive credit through testing for GC 1431 Fundamentals of College Mathematics and by paying an additional \$20 fee.

M 9:00-11:30 Sept 26-Jan 16 (14 sessions) \$45
MacPhail Vivian McMorro and George McCutcheon

W 6:30-9:00 p.m. Sept 28-Jan 18 (13 sessions) \$45
Minneapolis Campus Douglas Robertson

Th 6:30-9:00 p.m. Sept 29-Jan 19 (13 sessions) \$45
St. Louis Park High School Markita Gulliver

Art and Architecture of the Jewish People \$32 Examples of important artistic and architectural monuments left by Jews throughout their known history. Historical and cultural context within which Jewish artistic monuments were created, lively artistic exchanges between Gentile and Jewish cultures, and Jewish attitudes toward art in historical periods from the times of Saul and the Temple of Solomon to the modern state of Israel will be discussed.

T 1:00-3:00 Sept 27-Nov 15 (8 sessions)
MacPhail Marilyn Chiat

Assertiveness Training Learning to express one's beliefs, feelings and opinions in an honest, direct and appropriate way. Discussion of what distinguishes assertive behavior from nonassertive and aggressive behavior. Self assertion as a means of increasing effectiveness in interpersonal relationships. Class will emphasize participation, role playing and group support. Limited.

BB-W 12:00-1:00 Sept 28-Nov 16 (8 sessions) \$26
American Institute of Banking .8 CEU

Th 6:00-8:00 p.m. Sept 29-Oct 27 (5 sessions) \$31
229 Nolte Center, Minneapolis Campus Jan Dolejsi 1 CEU

-More Assertiveness Training courses on following page-

Assertiveness Training continued

W 10:00-11:30 Oct 5-Nov 9 (6 sessions) \$26
Edina Senior Community Center Jan Taylor .8 CEU

W 7:00-9:00 p.m. Oct 5-Oct 26 (4 sessions) \$26
St. Louis Park High School Marty Lindall .8 CEU

At Home With the Victorians \$20 Aspects of the home life of the Victorians, emphasizing the Victorian personality, etiquette, table, preparation and service of food. Topics discussed include porcelain, glassware, silver, utensils and gadgets. Offered in cooperation with the Minnesota Historical Society. Limited.

Th 7:00-8:30 p.m. Sept 15-Oct 27 (7 sessions)
Alexander Ramsey House Edna Reasoner, Coordinator

Bulb Symposium \$5 Selection, planting and culture of peonies, lilies, day lilies, daffodils, tulips, flowering onions, wildflowers and minor bulbs. Bulb forcing. Bulb hardiness. Presentations by staff of the Arboretum, Department of Horticultural Science and Landscape Architecture. Commercial concerns and advanced amateurs. Lunch available in the tea room or bring a bag lunch and picnic.

W 9:00-2:30 Sept 14 (1 session)

Landscape Arboretum Merv Eisel, Coordinator

BB-Business, Ethics and Theater \$20 Exploration of business and personal ethics using current Guthrie productions, "Design for Living" and "The White Devil," as a starting point for discussion. Symposium is led by Guthrie Humanities coordinator John Slothower.

W 12:00-1:00 Oct 26-Nov 30 (6 sessions)

American Institute of Banking John Slothower

Camera \$30 If you have a camera and don't know how it works, if you hear phrases like "F stop," "depth of field," "shutter speed," and wonder what they mean, or if you have been borrowing a camera and would like to know something about taking pictures, this course is for you. Camera is a lecture-slide course for beginners on the makeup of a camera, how a camera works, the different types of color, black and white, slide films and other bits of practical information.

M 10:30-12:00 Oct 3-Nov 21 (8 sessions)

Edina Senior Community Center Mary Strother

Career Planning for Employed Women \$45 (includes testing)

A combination of lecture presentations, assessments (testing and self-evaluation techniques), exploration activities, class discussion and participation to examine the process of individual career planning for the employed person. Decision making, values and priority setting will be examined in the context of individual career concerns. Limited.

M 6:30-8:30 p.m. Sept 26-Nov 7 (6 sessions--no class Oct 31) 229 Nolte Center, Minneapolis Campus

Linda Jones

Career Planning for Women For women who are entering or re-entering the employment market or changing careers, with special focus on business. Designed to help each woman recognize her marketable talents, develop a realistic career goal, learn planning and decision making skills and identify current job alternatives. Includes self assessment techniques, personal goal setting, action plan for career development, interviews, resumes, employment outlook, EEO legislation, and information sources. Limited.

Sat 8:30-4:30 Oct 1 (1 session) \$35 (includes testing)
140 Nolte Center, Minneapolis Campus Arnold Kanarick
and Jenny Crowe-Innes

T 6:30-9:30 p.m. Nov 1-Nov 15 (3 sessions)
\$35 (includes testing) St. Louis Park High School
Arnold Kanarick

Color and Design I \$32 Creative activities that increase awareness of the importance of color and design on emotions, sense of beauty, and use in personal choice of clothes and interiors. Topics include fashion, interior design, clothing selection and fine arts. Bring a scissors and pencil to the first class. Limited.

T 1:00-3:30 Oct 4-Nov 1 (5 sessions)
MacPhail Pauline Vandergraft

Color and Design II \$32 Principles of design. Emphasis on harmony, balance, proportions and rhythm. (Prereq Color and Design I) Limited.

T 1:00-3:30 Nov 8-Dec 6 (5 sessions)
MacPhail Pauline Vandergraft

Communication: Speech Improvement, Speaking Skills \$25

Everyday good speech is stressed; no mannerism, no affectation. Outlining and delivery of the short speech. Value of reading aloud. Personal development through self-knowledge and sharing ideas.

Th 10:00-11:30 Oct 13-Dec 1 (7 sessions)

MacPhail Selma L. Toy

Creating Choices: Balancing Work and Personal Life

\$30 per person; \$55 per couple Exploration of decisions involved in balancing work and personal life. Clarifying personal identity as a working person and making decisions about mobility, promotions, and work environments. Learning how to create personal living space and a support system for the living style you choose. Class will involve self awareness exercises, speakers and small group discussions. The aim of this class is to create a dialogue between women and men as both sexes adjust to a changing work world. Attending with either a significant other or a business colleague is encouraged.

W 6:30-9:30 p.m. Sept 28-Nov 2 (6 sessions)

209 Folwell Hall, Minneapolis Campus

Bonnie Gray and Lee Colby

Creating With Cones \$8 + \$2 material fee. A lecture workshop on the use of cones to create items for home decoration. Includes small items such as cone flowers to larger items such as cone Christmas trees. A variety of cones will be used and different techniques for securing cones will be discussed and demonstrated. The making of wreaths and candle swags will also be included. Limited.

Th 9:30-12:00 Oct 20 (1 session)

Landscape Arboretum Merv Eisel

Creative Writing \$35 Basic elements of creative writing in a classroom situation without grades or heavy structure. Weekly reading and writing assignments will be made. Although these are optional, the course's success will depend largely on the amount of time people spend writing and revising, reading the work of others and sharing their responses with the class. Creative writing is defined broadly--fiction, imaginative non-fiction (narrative and descriptive prose).

Fri 1:00-3:00 Oct 14-Dec 2 (8 sessions)

MacPhail William DeLancey Adamson

The Culture of Italy I \$50 + \$3 special fee. Italian art masterpieces surveyed from early Greek through 20th century styles. Slide-lectures (plus a museum field trip) will concentrate on the enduring creativity of Italy. Religious, political, and social forces will be examined as they relate to Italian art over this time span. Fall sessions will begin with ways to look at art and man's uses of art, followed by discussions of the following periods: Greek colonial, Etruscan, Roman, early Christian, Italo-Byzantine, early Medieval, Romanesque, Gothic, proto-Renaissance. A field trip will conclude the series. Course will be organized to help tourists (and arm-chair tourists) design efficient, meaningful travel-study in Italy. Reading list available. Culture of Italy II will be offered winter quarter.

M 9:30-12:00 Oct 10-Nov 28 (9 sessions)

Universalist Church Barbara Kaerwer

W 9:30-12:00 Oct 12-Nov 30 (9 sessions)

Griggs House Barbara Kaerwer

Dealing With Anger \$36 Exploring beliefs, fears and feelings regarding anger. Learning to express anger assertively, to deal with one's own anger and with the anger of others. Awareness, communication skills, group participation.

W 1:00-3:00 Oct 5-Nov 9 (6 sessions)

MacPhail Jan Taylor

Don Quixote \$30 Exploration of the contrasts in this Spanish Baroque novel with emphasis on the conflicts it presents: inner ideal world/outer world of reality; authority/personal freedom; social mores/ethical conduct; imagination/reason; and the contrasting attitudes toward love. Complex patterns of social relationships of 17th century Spain.
Th 1:00-3:00 Oct 6-Dec 1 (8 sessions)
MacPhail Dorothy Rundorff

Dreams \$35 Investigation of dream interpretation methods from Ancient Egypt through today. How to use dreams to solve problems, develop creativity, and have psychic experiences using the Senoi Indian Dream Technique. Students will learn to remember their dreams and how to keep a journal.
W 1:00-3:00 Oct 5-Nov 9 (6 sessions)
MacPhail Eleanor McGill

Efficient Reading \$30 The workshop will offer practical assistance for improving comprehension techniques (locating main ideas, details, recognizing structural patterns in written material) and increasing rate and flexibility for both text and pleasure reading. Individualized projects, to be done outside of class, will be offered.
T & Th 10:00-12:00 Aug 2-Aug 18 (6 sessions)
MacPhail Corin Kagan

Emerging African Nations \$37.50 Africa, a continent often thought exotic and primitive, far from the concerns of American life, has figured increasingly in the news we read daily. This course will look at the aspirant nations of Africa to understand the process by which they came into being, investigate the legacy left by the colonial period, and outline the major directions of change taking place in the economics, political life, social institutions, national identities and foreign relations of the states. Questions such as the unfinished process of decolonization; meeting the challenges of drought, hunger and agricultural development; the continuing impact of the Western world and the great powers; prospects for regional or continental cooperation.
W 10:00-12:00 Oct 12-Nov 16 (6 sessions)
Woman's Club of Minneapolis James P. Johnson

Everyone's Guide to the Whole Library \$5 Introduction to basic components of a library with emphasis on the University libraries. An introduction and review of organization and a practical look at ways to exploit library resources.

Fri 9:30-12:00 Sept 23 (1 session)

115 Blegen Hall, West Bank Campus Marcia Pankake

Existentialist Novel \$33 The drama of human choice and the exercise of will as a mode of extential experience. The significance of choices and dilemmas facing modern men and women as reflected in, for example, The Flies and No Exit of Sarte and The Stranger and The Plague of Camus.

M 1:00-3:00 Oct 3-Nov 21 (8 sessions)

MacPhail Johanna Kheim

Fall Arrangements \$8 + \$4 material fee. A lecture workshop on the use of dried flowers, weeds, grasses and preserved foliages for fall and winter arrangements. Both materials that can be collected and materials purchased from a commercial florist will be included. Intended for the beginner flower arranger. Discussion of color, containers, anchorage, design and accessories. Students will make their own arrangements. Limited.

Th 9:30-12:00 Oct 6 (1 session)

Landscape Arboretum Merv Eisel

The Family and Adolescence \$24 per person; \$40 per couple Parenting the adolescent in the family. Qualities of healthy adolescents, obstacles to development of these qualities, what can be done to enhance growth. Other topics include keeping self esteem as parents, principles of conflict resolution, teaching responsible decision making, adolescent sexuality, special problem areas and importance of encouragement. Class members will be given ample opportunity for participation and suggestion of topics not listed.

T 7:00-9:00 p.m. Oct 4-Nov 8 (6 sessions)

St. Louis Park High School Susan Gebelein

BB-Fun With Plants and Flowers \$18 Basics of indoor plant care. New ways of arranging and using green plants, dried flowers and materials in arrangements and decorating. Flowers and gardens around the world.
M 12:05-12:50 Oct 3-Nov 14 (6 sessions-no class Oct 24)
MacPhail Lorraine Bergstrand

Futurism: Exploring Alternatives \$30 A workshop generating awareness of the various possible futures (global and local), many of which are positive. Introduction to techniques for considering and evaluating alternatives. Lecture, simulation games, and possible field trips. Limited.
T 9:00-11:00 Oct 11-Nov 15 (5 sessions-no class Oct 25)
St. Paul College Club Joel Barker

Genealogy \$15 Beginning steps in personal genealogical research guided by a past president of the Minnesota Genealogical Society and author of Genealogy Or Your Family Tree. Who are you? Where did your family come from? What did your ancestors do?
Fri 10:00-11:30 Oct 7-Oct 28 (4 sessions)
Edina Senior Community Center Donal Nelson

BB-The Golden Twenties: Fitzgerald and Hemingway \$11 Analysis of The Great Gatsby and The Sun Also Rises. The American Dream--its grandeur and pitfalls as seen by Fitzgerald. The Lost Generation as seen by Hemingway.
T 12:05-12:50 Oct 11-Nov 8 (5 sessions)
MacPhail Johanna Kheim

Growth Within Intimate Relationships \$35 For those who want to continue their own personal growth within the context of an intimate relationship. Discussion will include creative problem solving, communication techniques, age-related questions, a discussion of middleclass, priorities, advantages and disadvantages of marriage.
W 9:30-12:00 Oct 26-Nov 30 (6 sessions)
Minnetonka City Hall Miriam Pew

Holiday Creations \$8 A beginning flower arranging class featuring arrangements that can be used through the holiday season. Includes colors, containers, anchorage, design and tips on handling fresh materials and accessories. In addition to arrangements, wreaths and swags will be discussed.

Th 9:30-12:00 Dec 8 (1 session)

Landscape Arboretum Merv Eisel

BB-How to Communicate Metrically \$15 Speed limits will soon be posted in kilometers per hour; foods will be sold by the kilogram; and children will be coming home from school talking in centimeters and milliliters. Corporations, small business and government agencies are rapidly increasing their usage of metrics. Preparation for this change. Basics of the metric language and practice in working with the metric system.

W 12:05-12:50 Oct 19-Nov 23 (6 sessions)

MacPhail Larry Wenberg

How To Decide: New Perspectives \$55 (includes testing) A course for people who are entering or re-entering the employment market or changing careers. Designed to help participants identify existing and potential skills, develop short and long term goals, and make action plans for reaching their goals. Course includes vocational testing two weeks prior to beginning of course (Sept 26 at MacPhail) and interpretation of tests with one individual test interpretation session to be arranged with instructor. Limited.

M 9:30-12:00 Oct 10-Nov 14 (testing Sept 26)

(6 sessions + testing session) MacPhail Becky Johnson

BB-Human Relations in the Work Setting \$31 Introduction to effective human relations in the work setting. An experiential class aimed at fostering an exchange of ideas, points of view, attitudes, feelings and opinions in work relationships. Focus will be on increasing openness and generating higher trust in interpersonal relations in work settings.

Th 12:00-1:00 Sept 29-Dec 8 (10 sessions-no class

Nov 24) American Institute of Banking

Barbara Dorset 1 CEU

Images of Aging in Literature \$25 Through the reading and discussion of literary works, the course will focus on crises, losses, and compensations related to growing older and will deal with the following issues: aging and family relations, stereotypes and society's attitude toward the elderly. Authors will include Edna Ferber, Willa Cather, Katherine Mansfield and Bernard Malamud.

W 7:30-9:00 p.m. Oct 5-Nov 9 (6 sessions)
Edina Senior Community Center Geraldine Chavis

Indoor Gardening \$15 A seminar for indoor garden enthusiasts. Topics covered are plant requirements (soil, indoor lighting, fertilizers, watering, containers), specific plants, foliage, flowering, hanging baskets, forcing bulbs, plant propagation and pest control.

T 9:30-12:00 Sept 20, 27 (2 sessions)
Landscape Arboretum Leon Snyder

Interviewing Techniques \$24 Skills and techniques of interviewing for employment. What employers look for, how to best present one's self in an interview situation, how to handle impossible questions. Students will have the opportunity to practice techniques using videotape. Limited.

M 6:30-8:30 p.m. Nov 28-Dec 12 (3 sessions)
229 Nolte Center, Minneapolis Campus Linda Jones

Literary France \$37.50 A century by century look at the great French authors and their milieu: The Romance of Flamenco surrounded by courtly love and chivalry; the Renaissance of classical attitudes in Pléiade poetry; through the looking glass of 17th century theatre; Voltaire, Montesquieu and Diderot and considerations of time; femininity in the novel--Flaubert and Emma Bovary; the woman author and critic looks at herself and at art in the 1970's. Slides taken in France this summer will be shown.

Th 10:00-12:00 Oct 13-Nov 17 (6 sessions)
Woman's Club of Minneapolis Kathryn Murphy

Making Words Work For You \$20 A review of dictionary skills, word beginnings and endings, word functions, foreign phrases, vocabulary, and Latin and Greek roots. How to use language effectively and build word power with a minimum of effort. Use of everyday words.

T 10:00-11:30 Oct 11-Nov 8 (5 sessions)

Edina Senior Community Center Charlotte Howey

Management Skills for Women \$26 Overview of management principles and practices, organizational development, management by objectives. Special concerns of women moving into management. Various functions of the manager's role within an organization. Attitudes, habits, communication skills, and how these relate to one's role in an organization. Supplemented with practical experiences. Limited. (BREAKFAST SEMINAR)

T 7:30-8:30 a.m. Oct 4-Nov 22 (8 sessions)

Tudor Court Cafeteria Marie Panger .8 CEU

Math Anxiety Program see pages 10 & 11 for description

Message and the Medium \$45 (both days); \$30 (Sept 15 only) Two day workshop in journalistic writing, editing, lay-out and graphic processes. Includes practice and small workshop discussion. For those responsible for newsletters, program announcements, and publicity.

Th & Fri 8:00-3:00 Sept 15 and 16 (2 days)

Minneapolis Campus

Harold Wilson, Walter Brovald and others

Minneapolis in Transition \$20 An examination of the various components of city governmental structure beginning with the City Council, Office of the Mayor, City Coordinator's office. The various boards and commissions such as School, Library and Park Boards and Planning Commission that operate within local government. A look at the agencies responsible for economic development and their relationships with business and labor community.

- description continued on following page-

Minneapolis in Transition continued

The growing demand for increased human services such as health care, senior citizen problems, consumer affairs, day care and neighborhood and citizen participation. With changes from non-partisan to partisan leadership, erosion of the economic base, loss of population, the new and strengthened role of the Mayor's office, what kind of an urban policy for the future?

W 10:00-12:00 Oct 12-Nov 2 (4 sessions)

MacPhail Gladys Brooks

Money Matters \$23 Basic information for intelligent, financial decision-making. If you are not rich it is especially important to make informed choices. The course covers credit and charge accounts, taxes, pensions and social security, wills and lawyers, insurance, and how to complain when you have to. Investment course will be offered winter quarter.

W 1:00-3:00 Oct 5-Nov 2 (5 sessions)

MacPhail Jean Northrop Carey

Mothers and Daughters in Literature \$28 Examination of intergenerational relationships between women in literature, both American and French, in the light of Phyllis Chesler's opinion that modern women are "motherless children," inheriting a "legacy of capitulation" rather than one of "continuity and pride." Discussion will include works by Anne Sexton, Simon de Beauvoir, Colette, Eve Curie, Margaret Atwood, and Sylvia Plath. Readings will be selective.

Fri 12:00-2:00 Oct 7-Nov 11 (6 sessions)

MacPhail Helen Watkins

BB-Octoberfest Cultural Sampler \$4 (5 sessions); \$1 per per session. A noon-hour series highlighting performances/exhibitions of the most prominent Twin Cities' cultural centers. These centers include the Guthrie Theater, Walker Art Center, Minnesota Symphony Orchestra, Children's Theater, and the Minnesota Dance Theater. Tickets for events at later dates at each of these center: will be available to participants at reduced rates. Co-sponsored by the Downtown People's Committee on Education.

M 12:00-1:00 Oct 3-Oct 31 (5 sessions)

1st National Bank Auditorium

Oils and Acrylics \$30 + \$6 special fee Beginning and refresher course in oils and acrylic painting. Help with still life compositions. Some previous experience in drawing is helpful. Students furnish their own materials. Bring notebook and pencil to first class.

Th 1:00-3:30 Sept 29-Nov 17 (8 sessions)
Edina Senior Community Center Eleanor Conrad

Organizational Communication \$31 An overview of the process of human behavior and communication within the organizational context. Communication on three levels: employee to supervisor, supervisor to employee, peer to peer. Understanding what contributes to communication problems, concrete approaches to resolving conflict. The importance of communication in the work situation.

M 4:30-6:30 p.m. Oct 10-Nov 7 (5 sessions)
Jonathan Center Community Room Marie Panger 1 CEU

Orientation Day no charge See inside front cover for details.

W 9:30-11:30 Sept 21 MacPhail

Overview of Yoga Thought and Practice \$20 Origin and history of the tradition of Yoga science and philosophy. Demonstration of basic relaxation techniques, breathing and physical exercises. Discussion of therapeutic benefits, essence of Yoga lifestyle, attitudes and health practices. Offered in cooperation with the Meditation Center.

T 7:00-8:30 p.m. Oct 4-Nov 1 (5 sessions)
Edina Senior Community Center Mary Gail Peterson

BB-Parliamentary Procedure \$10 The rules and language of Roberts' Rules of Order. Parliamentary procedure designed to facilitate orderly expression of all group members (implementing the expression of the majority opinion while protecting the rights of minority sentiment) and to help arrive at group decisions. Sessions combine lecture and practice in effective participation in committees, meetings and conventions.

M 12:05-12:50 Oct 3-Oct 31 (5 sessions)
Minneapolis Campus Yvette Oldendorf

Period Architecture of the Twin Cities An in-depth study of historically important 'Twin Cities' Architectural Periods, including the appropriate interiors and decorative arts. The seminar will continue throughout the year and cover Greek Revival, Gothic Revival, Italianate, Second Empire, Queen Anne, Romanesque, Catalogue, Frank Lloyd Wright and Contemporary Architecture. Burbank-Livingston Griggs House, Alexander Ramsey House, and private homes will be used as resources. Offered in cooperation with the Minnesota Historical Society.

M 9:30-12:00 Sept 26-Nov 21 (8 sessions-no class Oct 10) \$36 Griggs House Charles Nelson and others

M 6:30-9:00 p.m. Sept 26-Nov 21 (8 sessions-no class Oct 10) \$36 Griggs House Charles Nelson and others

Physical Fitness and Relaxation \$18 + \$4 special fee
Concepts and techniques of current exercise programs. Development of a personal exercise program. Emphasis is given to posture, relaxation and suitable activities to help persons function more effectively. Limited.

Th 10:00-11:30 Sept 29-Nov 17 (8 sessions)
Edina Senior Community Center Alice Pickering

BB-Problem Solving \$26 An applied approach to problem solving: defining problems, suggesting and exploring possible solutions, choosing and implementing solutions. Class will also focus on increasing awareness and improving skills helpful in averting and resolving interpersonal problems.

Th 12:00-1:00 Sept 29-Nov 17 (8 sessions) . 8 CEU
Target-IDS Center, 7th Floor Training Room
George Lindall

Resumé Writing \$14 Skills and techniques of developing a resumé. Organizing experiences, both paid and unpaid. Class members will receive individual assistance and critique of their own resumé's.

M 6:30-8:30 p.m. Nov 14-Nov 21 (2 sessions)
229 Nolte Center, Minneapolis Campus Linda Jones

Retreat: Exploring Our Emotions \$52 An informal get together to explore the expression, communication and control of emotions. Focus on what emotions are, how they develop, how to relate them to others as well as how to manage them. The experience will include mini-lectures, discussion and exercises and should be of interest to individual and couple participants. For further information call instructors at 823-3615.

Sat and Sun Oct 1 and 2

Camp Chi Rho near Annandale, MN

Barbara Dorset and Orville Weiszhaar

Self Understanding Through Journal Writing \$42 A seminar exploring the scope of the personal journal for developing self-reliance and an awareness of the process of our lives. How such issues as privacy, the hidden audience, secrets and self-esteem affect our writing. Various approaches to journal keeping. Some examples are the roles of memory, the child within the adult, dreams, fantasies, problem solving and acceptance of change. The group will focus on discussion and sharing and is open to both present journal writers and those wishing to explore journals for the first time.

Fri 9:30-11:30 Oct 7-Dec 9 (10 sessions)

MacPhail Christina Baldwin

Strategies for Moving Up \$25 A one day conference for career-minded women. Men and women in executive positions will discuss the problems women encounter as they move into male dominated fields. University faculty and people from business will lead workshops on the political network in the organization (getting in and around it); managing stress; setting goals; time management (improving efficiency and effectiveness on and off the job); and decision making.

Sat 9:00-3:00 Oct 8 (1 session)

Women's Center, St. Paul YWCA

Stress Management Identifying and defining stressful aspects of a work setting including frustration, conflict and pressure. Exploring factors which influence the severity of stress both internally and externally. Examining means of minimizing stress through change of attitude and relaxation techniques.

BB-M 12:00-1:00 Sept 26-Nov 14 (8 sessions) \$26
American Institute of Banking Barbara Dorset

W 5:00-6:00 p.m. Sept 28-Nov 16 (8 sessions) \$26
St. Paul Capitol Area, Transportation Bldg, Room B-9
Barbara Dorset

Study Skills Workshop \$35 for morning or afternoon workshop and final all day session; \$45 for both workshops and final all day session (includes material fee) A short program of orientation and practice in college level reading and study techniques. I. Reading Workshop, Sept 19, 20, 21 (9:30-12:00) Visual training, paragraph interpretation, retention, critical reading, scanning, rate improvement. II. Study Skills Workshop, Sept 19, 20, 21 (1:00-3:00) Listening and notetaking practice, study methods. SQ3R and underlining, time scheduling, memorizing, goal setting, library techniques, preparing for and taking exams. III. Joint Session for Both Groups, Sept 22 (9:30-3:00) Skimming, improving concentration, self-reinforcing techniques.
M,T,W,Th 9:30-12:00 and 1:00-3:00 Sept 19-Sept 22
MacPhail David Wark

Terrarium Workshop \$8 + \$3 material fee Discussion of the history of terrariums, containers, moss, drainage material, soil, plants, design and construction of a terrarium in a bottle. Each student will make a terrarium in a gallon jug. The jug, soil, moss, drainage material and plants will be supplied. Limited.
W 9:30-12:00 Nov 16 (1 session)
Landscape Arboretum Merv Eisel

Woman: A Sense of Identity Follow-Up \$50 Defining and affirming self in areas of intimacy, sensuality and sexuality, anger and conflict, and spirituality. Class experiences in awareness and assertiveness. (Prereq Woman: A Sense of Identity) Limited.
Wed 6:00-9:00 p.m. Oct 5-Nov 9 (6 sessions)
Minneapolis campus

A Woman On Her Own \$35 An exploration of the three life-task areas of love, friendship and work; our responsibilities and questions regarding these tasks. Basic principles of problem solving which include looking at alternatives. Coping skills, Middlescense and what it means. A discussion approach encouraging presentation of material and input from participants. Limited.

Th 9:30-12:00 Oct 6-Nov 10 (6 sessions)

League of Catholic Women Miriam Pew

Women and Anger \$30 Exploring your beliefs, fears and feelings regarding anger. With whom and when do you express your anger? Where does it go when you don't? What do you do with others' anger? Awareness, communication skills, and group participation. (Bring bag lunch and beverage.) Limited.

Sat 8:30-5:00 Oct 22 (1 session)

Nolte Center, Minneapolis Campus Jan Taylor

Women and Depression \$15 The nature and types of depression, how to recognize depression (symptoms and disguises), selected theories of causation. Theories of learned helplessness, the pursuit of an illusion, and retroflexed anger as they apply to women and depression.

Sat 12:00-4:00 Oct 15 (1 session)

Nolte Center, Minneapolis Campus Jan Dolejsi

Women and Power \$25 The workshop will enable women to experience how they choose to use the power they have and will provide an opportunity to deal with their feelings about power. In addition the workshop will challenge each woman to re-examine her beliefs and values regarding power, to recognize the power she has, and to become more comfortable and effective in power situations. Limited.

W 6:30-9:00 p.m. Oct 19-Nov 2 (3 sessions)

406 Folwell, Minneapolis Campus Diane Johnson

Women in American Literature \$30 Two centuries of the poetry, journals, stories and novels by major women writers--works not to be overlooked in understanding the dramatic development of women writers in the 20th century. The dramatic details of Mary Rowlandson's capture by the Indians and Sarah Knight's hectic and humorous journey to New York; Louisa Alcott's touching account of her hours at the bedside of wounded Union soldiers; the sentimental shenanigans of the heroines and villains who entertained our great grandparents; the haunting portraits of Mary Freeman and the startling revelations of Kate Chopin.
M 9:30-11:30 Oct 10-Nov 21 (7 sessions)
MacPhail Joy King

Writing for Publication I \$36 Professional techniques of writing fiction and nonfiction for publication. Interviewing, approaching editors, marketing.
T 7:00-9:00 p.m. Sept 27-Nov 22 (9 sessions)
St. Louis Park High School Ruth Peterman

Writing for Publication \$33 The writing process and the publishing process; how to do both at once, how to make them compatible. How to use the publishing material--from Writer's Market, to query letters, to opening interviews with editors. Appearing professional while still being one's self. Writers' blocks: deadlines, expectations, self-esteem, building confidence article by article and expanding tasks after success. Editing: how to do it to one's own work, how to ask for it and how to accept it. Lecture, discussion, and between session experience. Limited.
Th 1:00-3:00 Oct 6-Dec 1 (8 sessions-no class Nov 24) MacPhail Christina Baldwin

BB-You and Your Financial Planning The four sessions will focus on problems which require planning (inflation, income taxes, estate taxes, loss of earning power); how to control your finances rather than letting them control you; wills, trusts, and estates; and real estate (appreciation, tax shelter, equity build-up). Each session will allow for questions and answers.

T 12:00-1:00 Oct 4-Oct 25 (4 sessions) \$8
Northwestern National Bank Southwest, Training Room B
John Fallon and Wayne Swenson

Th 12:00-1:00 Oct 20-Nov 10 (4 sessions) \$8
Women's Center, St. Paul YWCA
John Fallon and Wayne Swenson

COURSES FOR WHICH C.E.U.'S ARE AWARDED

- Advanced Assertiveness Training - Minneapolis Campus
- BB-Advanced Management Skills for Women - Burlington
- Assertiveness Training - American Institute of Banking
- Assertiveness Training - Minneapolis Campus
- Assertiveness Training - St. Louis Park High School
- BB-Human Relations in the Work Setting - American
Institute of Banking
- Management Skills for Women - Tudor Court Cafeteria
- Organizational Communication - Jonthan Center
Community Room
- BB-Problem Solving - Target - IDS Center
- Assertiveness Training - Edina Senior Community Center

LOCATIONS OF COURSES

Alexander Ramsey House, 265 South Exchange, St. Paul

At Home With the Victorians

*American Institute of Banking, WCCO Radio Building,
625 - 2nd Avenue South, Minneapolis*

GC 1533 Financial Mathematics: Procedures
and Applications

Assertiveness Training

BB-Business, Ethics and Theater

BB-Human Relations in the Work Setting

BB-Stress Management

Arboretum, State Highway 5, ½ mile W. of 41, Chaska

Bulb Symposium

Creating With Cones

Fall Arrangements

Holiday Creations

Indoor Gardening

Terrarium Workshop

Burlington Northern, 176 East 5th Street, St. Paul

BB-Advanced Management Skills for Women

Camp Chi Rho, Annandale, Minnesota

Retreat: Exploring Our Emotions

Edina Senior Community Center, 7151 York Ave. S., Minneapolis

Assertiveness Training

Camera

Genealogy

Images of Aging in Literature

Making Words Work For You

Oils and Acrylics

Overview of Yoga Thought and Practice

Physical Fitness and Relaxation

First National Bank, 120 South 6th Street, Minneapolis

Octoberfest Cultural Sampler

Griggs House (Burbank Livingston Griggs House) 432 Summit Avenue, St. Paul

The Culture of Italy I

Period Architecture of the Twin Cities (a.m.)

Period Architecture of the Twin Cities (p.m.)

Hennepin Avenue Methodist Church, Groveland and Lyndale Ave. Minneapolis

Mus 3971 The Lively Arts: Music and Drama in Opera

Jonathan Center Community Room, Lake Village Center, Chaska

Organizational Communication

League of Catholic Women, 207 South 9th Street, Minneapolis

A Woman On Her Own

MacPhail Center, 1128 LaSalle Avenue, Minneapolis

ANEJ 3501 The Background of the Bible

Anth 1102 Introduction to Social and Cultural Anthropology

-continued on next page-

MacPhail Center (continued from previous page)

ArtEd 5001 Art Media Techniques: Creative Bookbinding
ArtS 1701 Introduction to Photo Medium
ArtS 3710 Intermediate Photography
Comp 1001 Introductory Composition
Comp 3030 Topics in Advanced Composition: Technical
Writing
Dsgn 0430C Introduction to Spinning, Dyeing and
Feltmaking
Econ 1002/Comp 3090 Principles of Microeconomics;
Projects in Advanced Composition
Engl 5910 Major Women Writers
Fren 1104 Intermediate French
GC 1445 Intermediate Algebra
GC 1454 Statistics
Hist 3468 (5468) Twentieth Century China: The Chinese
Revolution, 1900-1949
Hist 5274 Modern Near East: Ottoman Empire and
Successor States
Hum 5021 New Worlds of Knowledge
Jour 5615 Development of Photo-Journalism and
Documentary Film
Psy 1001 General Psychology
Span 1201 Beginning Spanish: Modified Oral Approach
WoSt 1977 The Psychological Environment of Women
WoSt 3001 Biology and Behavior
WoSt 3301 Woman: A Sense of Identity
WoSt 3502 Women and Art
Acting for Non-Actors
Arithmetic and Elementary Algebra
Art and Architecture of the Jewish People
Color and Design I
Color and Design II
Communication: Speech Improvement, Speaking Skills
Creative Writing
Dealing With Anger
Don Quixote
Dreams
Efficient Reading
Existentialist Novel
BB-Fun With Plants and Flowers
BB-The Golden Twenties: Fitzgerald and Hemingway
BB-How to Communicate Metrically

-continued on next page-

MacPhail Center (continued from previous page)

How to Decide: New Perspectives
Math Anxiety Diagnostic Clinic
Math Anxiety Support Group
Math Anxiety Tutorial
Minneapolis in Transition
Money Matters
Mothers and Daughters in Literature
Orientation Day
Self Understanding Through Journal Writing
Study Skills
Woman: A Sense of Identity
Women in American Literature
Writing for Publication

Minnetonka City Hall, 14600 Minnetonka Blvd., Minnetonka

Growth Within Intimate Relationships

Normandale Community College 9700 France Ave. S., Mpls.

WoSt 3301 Woman: A Sense of Identity

*Northwestern National Bank Southwest, 7900 Xerxes Ave. S.,
Minneapolis*

BB-You and Your Financial Planning

Program in Human Sexuality, 2630 University Avenue, Mpls.

FSoS 5240 Topics: Female Sexuality

*St. Louis Park High School, 6425 West 33rd Street,
St. Louis Park*

Arithmetic and Elementary Algebra
Assertiveness Training
Career Planning for Women
The Family and Adolescence
Writing for Publication I

St. Paul College Club, 990 Summit Avenue, St. Paul

Futurism: Exploring Alternatives

State Capitol Area, Transportation Building, St. Paul

Stress Management

Target, IDS Center, 777 Nicollet Mall, Minneapolis

BB-Problem Solving

Tudor Court Cafeteria, Dain Tower, 527 Marquette Avenue,
Minneapolis

Management Skills for Women

Universalist Church, 50th & Girard Avenue South, Minneapolis

The Culture of Italy I

University of Minnesota - East Campus

WoSt 3301 (5301) Woman: A Sense of Identity (a.m.)

WoSt 3301 (5301) Woman: A Sense of Identity (p.m.)

WoSt 5701 Woman in America

Advanced Assertiveness Training

Arithmetic and Elementary Algebra

Assertiveness Training

Career Planning for Employed Women

Career Planning for Women

Creating Choices: Balancing Work and Personal Life

Interviewing Techniques

Math Anxiety Diagnostic Clinic

Math Anxiety Support Group

Message and the Medium

BB-Parliamentary Procedure

Resume Writing

Women and Anger

Women and Depression

Women and Power

University of Minnesota - St. Paul Campus

Alternative Energy Resources: Energy Efficient

Housing--Improving Our Living Space

University of Minnesota - West Bank Campus

Everyone's Guide to the Whole Library

*Woman's Club of Minneapolis, 410 Oak Grove Street,
Minneapolis*

Emerging African Nations
Literary France

YWCA - St. Paul, 65 Kellogg, St. Paul

Strategies for Moving Up
BB-You and Your Financial Planning

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

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455, (612) 373-7969, or, for Title IX compliance, to the Director of the Office of Civil Rights, Department of Health, Education, and Welfare, Washington, D.C. 20201.

Prompt registration is suggested. Please check bulletin descriptions for starting dates of all classes. Unless otherwise noted classes begin the week of September 26. Make checks payable to the University of Minnesota. No arrangements for partial payment will be made. Students are not registered until their tuition and fees are paid. To avoid confusion, please state location(s), starting date(s), and times of class(es) for which you are registering. For credit classes, please specify the type of grading preferred. Only courses marked with a first digit of 5 may be taken for graduate credit. If graduate credit is desired, please indicate by checking graduate credit on the form.

No mail registrations for nonpaying students over 62 will be accepted. See page _____ for registration procedures to follow.

Continuing Education for Women
200 Westbrook Hall, 77 Pleasant Street S.E.
University of Minnesota
Minneapolis, MN 55455
373-9743

Please register me for the following class(es):

LOCATION(S) _____

STARTING DATE(S) _____

TIME(S) _____

For credit class(es) only, check one of the following for each:

A-N _____ S-N _____ AUDIT _____ GRADUATE CREDIT _____

My check payable to the University of Minnesota for \$ _____ is enclosed.

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

SOCIAL SECURITY # _____ BIRTHDATE _____

HOME PHONE _____ WORK PHONE _____